City of St. Helena
Regular City Council Meeting
Tuesday, October 8, 2024 @ 6:00 PM
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. The Mayor may reduce the four minute time limit for all speakers in circumstances where a large number of citizens intend to make public comment.

Public comment **for meetings will be accepted via email to publiccomment@cityofsthelena.org. All public comments must be received three hours prior to the meeting. All other public comments received after the deadline will be attached to the item the next business day or soon thereafter. Public comments will not be read out loud but will be publicly available and attached to the on-line agenda.**

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/.

Page

1. CALL TO ORDER

2. ROLL CALL
   Mayor: Paul Dohring, Vice Mayor Eric Hall:, City Council Members: Anna Chouteau, Patrick Kenealy, Billy Summers

3. PLEDGE OF ALLEGIANCE

4. ADOPTION OF THE AGENDA

5. APPROVAL OF THE MINUTES

   Estimated start time: 6:05 p.m.

   5.1. Consideration and proposed approval of Regular Meeting Minutes of September 24, 2024. 7 - 15
   09-24-2024 Regular City Council - Minutes

6. PUBLIC FORUM:
   Members of the public are entitled to speak on matters of municipal concern not on the agenda during Public Forum. Each person's comments shall be limited to 4 minutes. Each person is entitled to speak on any non-agendized item only once at any meeting. Brief questions by Council Members for clarifications may be posed and answered, and Council Members may make requests that items be placed on future agendas, but in accordance with state law, no substantive discussion or action may take place unless and until the matter properly appears on the agenda.

   Estimated start time: 6:10 p.m.

7. REPORTS BY STAFF AND CITY COUNCIL, FUTURE AGENDA ITEMS, AND

AB 1234 REPORTS:
Reports by staff and/or Council Members on items of general interest. Brief questions for clarification may be posed and answered, and Council Members may request that items be placed on a future agenda. Except under certain circumstances, the Brown Act prohibits any other discussion or action by the City Council.

Estimated start time: 6:20 p.m.

8. PRESENTATIONS AND PUBLIC RECOGNITIONS

None

9. STAFF BRIEFING

9.1. Presentation of SMART water meter operation in preparation for project implementation by Joseph Leach, Public Works Director and Lesley Milton, Asst. Public Works Director 17 - 22

Estimated start time: 6:25 p.m.

Presentation

10. CONSENT ITEMS
Members of the Council or the public (present at the meeting) 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)

Estimated start time: 6:35 p.m.

10.1. Consideration and acceptance of a Public Utility Easement Deed between the City of St. Helena and 1804 Main LLC. 23 - 34

CEQA Determination: Not a CEQA project
Prepared By: Rebecca White, Administrative Assistant
Recommendation:
Staff recommends City Council approve the attached Resolution and accept the Public Utility Easement Deed between 1804 Main LLC and the City of St. Helena.

Staff Report - Pdf

10.2. Second reading to adopt ordinance amending Section 15.36.050(A)(3) of the St. Helena Municipal Code to allow for certain traffic calming measures, including speed cushions under the approval of the Fire Chief. 35 - 46

CEQA Determination: Not a CEQA project
Prepared By: Jose Calderon, Engineering Technician II
Recommendation:
City Council waive the second reading of the Ordinance to amend section 15.36.050(A)(3) of the St. Helena Municipal Code and adopt.

Staff Report - Pdf

10.3. Consideration and Proposed Approval of (1) A Resolution Establishing 47 - 52

a Water Filtration Device Rebate Program and (2) Appropriating Use of Water Enterprise Fund Balance of $50,000.

CEQA Determination: Not a CEQA project
Prepared By: Ian Dale, Environmental Services Tech
Recommendation:
Adopt attached Resolution.
Staff Report - Pdf

10.4. Consideration and adoption of a Resolution (1) acknowledging the establishment of Capital Improvement Program Project W25-03 and budget of $282,000 as adopted by Council at the 9/24/24 meeting to develop a water management plan; 2) Authorizing the City Manager to execute a Professional Services Agreement with Luhdorff & Scalmanini (L&S) for the Assessment of Water Supply Strategies for an amount of $45,500, along with a 9.67% contingency, for a total not-to-exceed amount of $49,901; and (3) Authorizing the City Manager to execute a Professional Services Agreement with West Yost for the development of a Water Management Plan for an amount of $211,628, along with a 9.67% contingency, for a total not-to-exceed amount of $232,099. 53 - 105

CEQA Determination: Not a CEQA project
Prepared By: Rebecca White, Administrative Assistant
Recommendation:
Staff recommends City Council approve the attached resolution.
Staff Report - Pdf

11. PUBLIC HEARINGS

11.1. Review of the City's Affordable Housing In-Lieu Fees and Nonresidential/Commercial Linkage Fee Options and provide guidance to staff regarding the appropriate fees. 107 - 229

CEQA Determination: Not a CEQA project
Prepared By: Mandy Kellogg, Administrative Services Director
Recommendation:
Receive direction from City Council on the recommended Affordable Housing Impact fees and Commercial Linkage fees to be adopted via Resolution on October 22, 2024.
Staff Report - Pdf
Prototype Sample Fees
Presentation
Public Comment.Holly Rogers
Public Comment. Lyndsey Harrison
Public Comment.Mary Stephenson

11.2. Discussion of and Direction on the Potential Activities and Projects for Inclusion in the 2024 Community Development Block Grant (CDBG) Applications. 231 - 278

CEQA Determination: Not a CEQA project

Prepared By: Martin Beltran, Senior Management Analyst
Recommendation:
Provide direction on the activities and projects to be considered for funding under the 2024 Community Development Block Grant program.
Staff Report - Pdf

12. OLD BUSINESS

None

13. NEW BUSINESS

13.1. Discussion Regarding Existing and Potential Shared Services with Napa County Agencies, and Presentation from Center for Public Safety Management (CPSM) of the Analysis of Fire and Emergency Medical Services (EMS). 279 - 470

CEQA Determination: Not a CEQA project
Prepared By: Mandy Kellogg, Administrative Services Director
Recommendation:
Receive and file.
Staff Report - Pdf
Presentation
CPSM Comprehensive Fire Department Study FINAL

13.2. Staff briefing regarding the process to rezone the Noble House Housing site 471 - 487

Estimated start time: 7:50 p.m.

CEQA Determination: Not a CEQA project
Prepared By: Maya DeRosa, Community Development Director
Recommendation:
Receive report and provide feedback.
Staff Report - Pdf
Presentation

14. CITY COUNCIL REPORTS:

14.1. A. Association of Bay Area Governments (ABAG) - Executive Board

B. Association of Bay Area Governments (ABAG) - General Assembly

C. Napa Valley Tourism Corporation (Umbrella for Napa County)

D. League of California Cities – North Bay Division

E. Napa County City Selection Committee

F. Napa County Flood Control and Water Conservation District

G. Youth Opportunities Commission

H. Napa County Local Agency Formation Commission (LAFCO)

I. Napa Valley Transportation Authority (NVTA)

J. Napa County Watershed Information Center & Conservancy (WICC)

K. Upper Valley Waste Management Agency

L. Napa County Groundwater Sustainability Plan Advisory Committee

M. Napa County Regional Climate Action Committee

N. Council Ad Hoc and Standing Committee Reports

15. ADJOURNMENT

The next Regular City Council meeting is scheduled for October 22, 2024, at 6:00 p.m.

This agenda was posted at City Hall, 1088 College Avenue, and at Vintage Hall, 465 Main Street, St. Helena, California on October 3, 2024.



Cindy Tzafopoulos, City Clerk

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 72 hours prior to the meeting as required by Section 202 of the Americans with Disabilities Act will enable the City to make reasonable arrangements to ensure accessibility to this 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 City Council regarding any item on this Agenda, after the posting of the Agenda, will be available for public review in the City Clerk's Office located at 1088 College Avenue, St. Helena, California, during normal business hours and by appointment. In addition, such writings or documents will be made available on the City's web site at https://sthelena.civicweb.net and will be available for public review at the respective meeting.

MINUTES
City of St. Helena
Regular City Council Meeting
Tuesday, September 24, 2024 @ 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: Mayor Paul Dohring, Vice Mayor Eric Hall, Council Member Anna Chouteau, and Council Member Patrick Kenealy

Absent: Council Member Billy Summers

1. CALL TO ORDER

1.1 Prior to roll call, Mayor Dohring asked for a moment of silence in honor of Brad Onorato, Deputy Chief of Staff for Congressman Mike Thompson who recently passed away. Flags at City Hall have been flown at half-staff on Monday and Tuesday at the request of Congressman Thompson.

2. ROLL CALL

3. PLEDGE OF ALLEGIANCE

4. ADOPTION OF THE AGENDA

4.1 City Clerk Tzafopoulos noted that items 11.1 and 11.4 would not be heard and would be continued to a date certain of October 8, 2024.

Council Member Anna Chouteau moved to adopt the amended agenda. The motion was seconded by Vice Mayor Eric Hall and on roll call carried by the following vote:

AYES: Mayor Paul Dohring, Vice Mayor Eric Hall, Council Member Anna Chouteau, and Council Member Patrick Kenealy
NOES: None
ABSENT: Council Member Billy Summers
ABSTAIN: None
RECUSE: None

5. APPROVAL OF MINUTES

5.1 Consideration and proposed approval of Regular Meeting Minutes of September 10, 2024.

Vice Mayor Eric Hall moved to approve the Regular Meeting Minutes of September 10, 2024. The motion was seconded by Council Member Anna Chouteau and on roll call carried by the following vote:

AYES: Mayor Paul Dohring, Vice Mayor Eric Hall, Council Member Anna Chouteau, and Council Member Patrick Kenealy
NOES: None
ABSENT: Council Member Billy Summers
ABSTAIN: None
RECUSE: None

6. PUBLIC FORUM:

Carlotta Sainato from the Napa County Bicycle Coalition addressed the City Council regarding upcoming active transportation events in St. Helena.

7. REPORTS BY STAFF AND CITY COUNCIL, FUTURE AGENDA ITEMS, and AB 1234 REPORTS:

7.1

Director of Community Services, Dave Jahns introduced new Deputy Director of Community Services - Library, Mara Strickler.

Acting City Manager, Joe Leach announced the promotion of Lesley Milton as the new Assistant Director of Public Works, Operations.

Vice Mayor Hall, with Council Member Kenealy agreeing, requested that staff bring an item to the October 8, 2024 City Council meeting to discuss the rezoning of the Noble House housing site to High Density Residential and how that process can be expedited by the City.

8. PRESENTATIONS AND PUBLIC RECOGNITIONS

8.1 Proclamation Recognizing National Hispanic Heritage Month September 15 – October 15, 2024 presented to Mr. Oscar De Haro, representing the St. Helena Multicultural Group along with other members of the community.

Estimated start time: 6:25 p.m.

Mayor Dohring read and presented certificate of proclamation to Rosaura Segura, declaring September 15 - October 15, 2024 as National Hispanic Heritage Month.

8.2 Domestic Violence Awareness Month October 2024 Proclamation presented to Danis Kreimeier, Immediate NEWS Domestic Violence & Sexual Abuse Services Past President of the Board of Directors

Estimated start time: 6:35 p.m.

Mayor Dohring proclaimed October 2024 as Domestic Violence Awareness Month.

8.3 Napa County Ground Water Technical Advisory Group (TAG) report out by City representative Lester Hardy

Estimated start time: 6:45 p.m.

City Representative, Lester Hardy provided an update from the recent Napa County Ground Water Technical Advisory Group (TAG) meeting.

9. STAFF BRIEFING

None.

10. CONSENT ITEMS

Members of the Council 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)

10.1 Consideration and adoption of a Resolution to (1) Award the Crinella Pump Station Upgrades S18-71 Project to Fort Bragg Electric in the amount of $1,200,022; (2) Authorize the City Manager to execute the Construction Contract with Fort Bragg Electric; (3) Authorize the Director of Public Works to approve Change Orders not to exceed 15% of the contract amount; and (4) Authorize a project Budget Amendment of $327,026 and a Budget Transfer from Fund 421 GO Bonds to Fund 773 Wastewater Capital of the same.

CEQA Determination: Class I Categorical Exemption under Section 15301 of CEQA
Prepared By: Rebecca White, Administrative Assistant
Recommendation:
Staff recommends approval of the attached resolution.

10.2 This item was pulled.
~~Consideration and proposed approval of a resolution authorizing 1) Flying the Italian flag on the City's ceremonial flagpole during the month of October 2024 for Italian Heritage Month; and 2) Authorizing temporary street parking closures on the westside of Railroad Avenue from the Fire Station to the end of Lyman Park, and the public parking lot between Lyman Park and the Fire Station during the Festa Italiana event; 3) Approval of wine and beer vendors in Lyman Park during the Festa Italiana event; and 4) Authorizing mobile food vendors to park and operate in the closed parking spaces on Railroad Avenue during the event.~~

10.3 Consideration and proposed approval of a Resolution authorizing the City Manager to execute Amendment No. 1 to STH Contract: FY 2021-047 in the amount of $40,000 with 4Leaf consultants for a total contract amount not-to-exceed $65,000 for Contract Building/Planning Services.

CEQA Determination: Exempt
Prepared By: Maya DeRosa, Community Development Director
Recommendation:
Staff recommends City Council adopt the attached resolution.

10.4 Consideration and proposed approval of a Resolution authorizing the City Manager to execute Amendment No. 4 to STH Contract: FY 2021-046 in the amount of $40,000 with Interwest for a total contract amount not-to-exceed $180,000 for Contract Planning Services.

CEQA Determination: Exempt
Prepared By: Maya DeRosa, Community Development Director
Recommendation:
Staff recommends City Council adopt the attached resolution.

10.5 Water Supply and Forecasting - August 2024

CEQA Determination: Not a CEQA project
Prepared By: Ian Dale, Environmental Services Tech
Recommendation:
Receive and file.

Vice Mayor Eric Hall moved to approve consent items 10.1 and 10.3 through 10.5 The motion was seconded by Council Member Anna Chouteau and on roll call carried by the following vote:

AYES: Mayor Paul Dohring, Vice Mayor Eric Hall, Council Member Anna Chouteau, and Council Member Patrick Kenealy
NOES: None
ABSENT: Council Member Billy Summers
ABSTAIN: None
RECUSE: None

10.2 Consideration and proposed approval of a resolution authorizing 1) Flying the Italian flag on the City's ceremonial flagpole during the month of October 2024 for Italian Heritage Month; and 2) Authorizing temporary street parking closures on the westside of Railroad Avenue from the Fire Station to the end of Lyman Park, and the public parking lot between Lyman Park and the Fire Station during the Festa Italiana event; 3) Approval of wine and beer vendors in Lyman Park during the Festa Italiana event; and 4) Authorizing mobile food vendors to park and operate in the closed parking spaces on Railroad Avenue during the

event.

CEQA Determination: Not a CEQA project
Prepared By: Rebecca White, Administrative Assistant
Recommendation:
Staff recommends City Council adopt the attached Resolution.

Anthony Micheli addressed the City Council inviting the City Council and the community to attend the Festa Italiana event on Saturday, October 5, 2024.

Vice Mayor Eric Hall moved to approve item 10.2. The motion was seconded by Council Member Anna Chouteau and on roll call carried by the following vote:

AYES: Mayor Paul Dohring, Vice Mayor Eric Hall, Council Member Anna Chouteau, and Council Member Patrick Kenealy
NOES: None
ABSENT: Council Member Billy Summers
ABSTAIN: None
RECUSE: None

11. PUBLIC HEARINGS

11.1 *This item is continued to a date certain of October 8, 2024.

~~Discussion of and Direction on the Potential Activities and Projects for Inclusion in the 2024 Community Development Block Grant (CDBG) Applications.~~

11.2 Consideration and proposed approval of a Resolution approving the annexation of the property known as 1582 Sulphur Springs Ave, St. Helena, CA (APN 009-362-021), into the St. Helena Municipal Sewer District No. 1, MSD Annexation No. 150.

Estimated start time: 7:00 p.m.

CEQA Determination: Not a CEQA project
Prepared By: Rebecca White, Administrative Assistant
Recommendation:
Staff recommends the City Council adopt a Resolution approving the annexation of the territory into the St. Helena Municipal Sewer District No. 1 MSD.

Acting City Manager, Joe Leach reported on the item and provided a presentation.

No public comment was received.

Vice Mayor Eric Hall moved to adopt a Resolution approving the annexation of the territory into the St. Helena Municipal Sewer District No. 1 MSD. The motion was seconded by Council Member Anna Chouteau and on roll call carried by the following vote:

AYES: Mayor Paul Dohring, Vice Mayor Eric Hall, Council Member Anna Chouteau, and Council Member Patrick Kenealy
NOES: None
ABSENT: Council Member Billy Summers
ABSTAIN: None
RECUSE: None

11.3 Introduction and first reading of an ordinance amending Section 15.36.050(A)(3) of the St. Helena Municipal Code to allow for certain traffic calming measures, including speed cushions under the approval of the Fire Chief.

Estimated start time: 7:10 p.m.

CEQA Determination: Not a CEQA project
Prepared By: Jose Calderon, Engineering Technician II
Recommendation:
City Council to introduce and waive first reading of an Ordinance of amending section 15.36.050(A)(3) of the St. Helena Municipal Code to allow for various traffic calming measures on public streets in the City of St Helena subject to the approval of the Fire Chief.

Assistant Director of Public Works, Eric Janzen reported on the item and provided a presentation.

Public Comment was received by Carlotta Sainato of Napa County Bicycle Coalition.

Council Member Anna Chouteau moved to introduce and waive first reading of an Ordinance of amending section 15.36.050(A) (3) of the St. Helena Municipal Code to allow for various traffic calming measure on public streets in the City of St. Helena subject to the approval of the Fire Chief. The motion was seconded by Vice Mayor Eric Hall and on roll call carried by the following vote:

AYES: Mayor Paul Dohring, Vice Mayor Eric Hall, Council Member Anna Chouteau, and Council Member Patrick Kenealy
NOES: None
ABSENT: Council Member Billy Summers
ABSTAIN: None

RECUSE: None

11.4 *This item is continued to a date certain of October 8, 2024.

~~Review of the City's Affordable Housing In-Lieu Fees and Nonresidential/Commercial Linkage Fee Options.~~

12. OLD BUSINESS

13. NEW BUSINESS

13.1 Introduction of Proposed Water Filtration Device Rebate Program.

Estimated start time: 7:20 p.m.

CEQA Determination: Exempt
Prepared By: Ian Dale, Environmental Services Tech
Recommendation:
Provide direction regarding implementing the rebate program.

Acting City Manager, Joe Leach reported on the item.

No public comment was received.

Council gave direction to staff to keep the rebates that staff recommended with added flexibility built in for commercial use at staff's discretion for a total not to exceed $50,000.

13.2 Consideration and Proposed Approval of a Resolution Adopting the Five-Year Capital Improvement Program for Fiscal Years 2024-25 to 2028-29.

Estimated start time: 7:35 p.m.

CEQA Determination: Not a CEQA project
Prepared By: Stephanie Killingsworth, Public Works Financial Analyst
Recommendation:
Staff recommends City Council approve the attached Resolution.

Acting City Manager Leach reported on the item and provided a presentation.

Public Comment was received by Carlotta Sainato.

Vice Mayor Eric Hall moved to approve the resolution. The motion was seconded by Council Member Anna Chouteau and on roll call carried by the following vote:

AYES: Mayor Paul Dohring, Vice Mayor Eric Hall, Council Member Anna Chouteau, and Council Member Patrick Kenealy
NOES: None
ABSENT: Council Member Billy Summers
ABSTAIN: None
RECUSE: None

14. CITY COUNCIL REPORTS:

14.1 A. Association of Bay Area Governments (ABAG) - Executive Board

B. Association of Bay Area Governments (ABAG) - General Assembly

C. Napa Valley Tourism Corporation (Umbrella for Napa County)

D. League of California Cities – North Bay Division

E. Napa County City Selection Committee

F. Napa County Flood Control and Water Conservation District

G. Youth Opportunities Commission

H. Napa County Local Agency Formation Commission (LAFCO)

I. Napa Valley Transportation Authority (NVTA)

J. Napa County Watershed Information Center & Conservancy (WICC)

K. Upper Valley Waste Management Agency

L. Napa County Groundwater Sustainability Plan Advisory Committee

M. Napa County Regional Climate Action Committee

N. Council Ad Hoc and Standing Committee Reports

15. ADJOURNMENT

Mayor Dohring adjourned the meeting at 8:05 p.m.

CHALLENGING DECISIONS OF CITY ENTITIES

APPROVED: **ATTEST:**

_____ _____

Paul Jamison Dohring, Mayor Cindy Tzafopoulos, City Clerk

Smart Meter Replacement Program & "Eye on Water" Portal

Modernizing Water Infrastructure and
Empowering Customers with Real-Time Data

10/8/24

Smart Meter Replacement

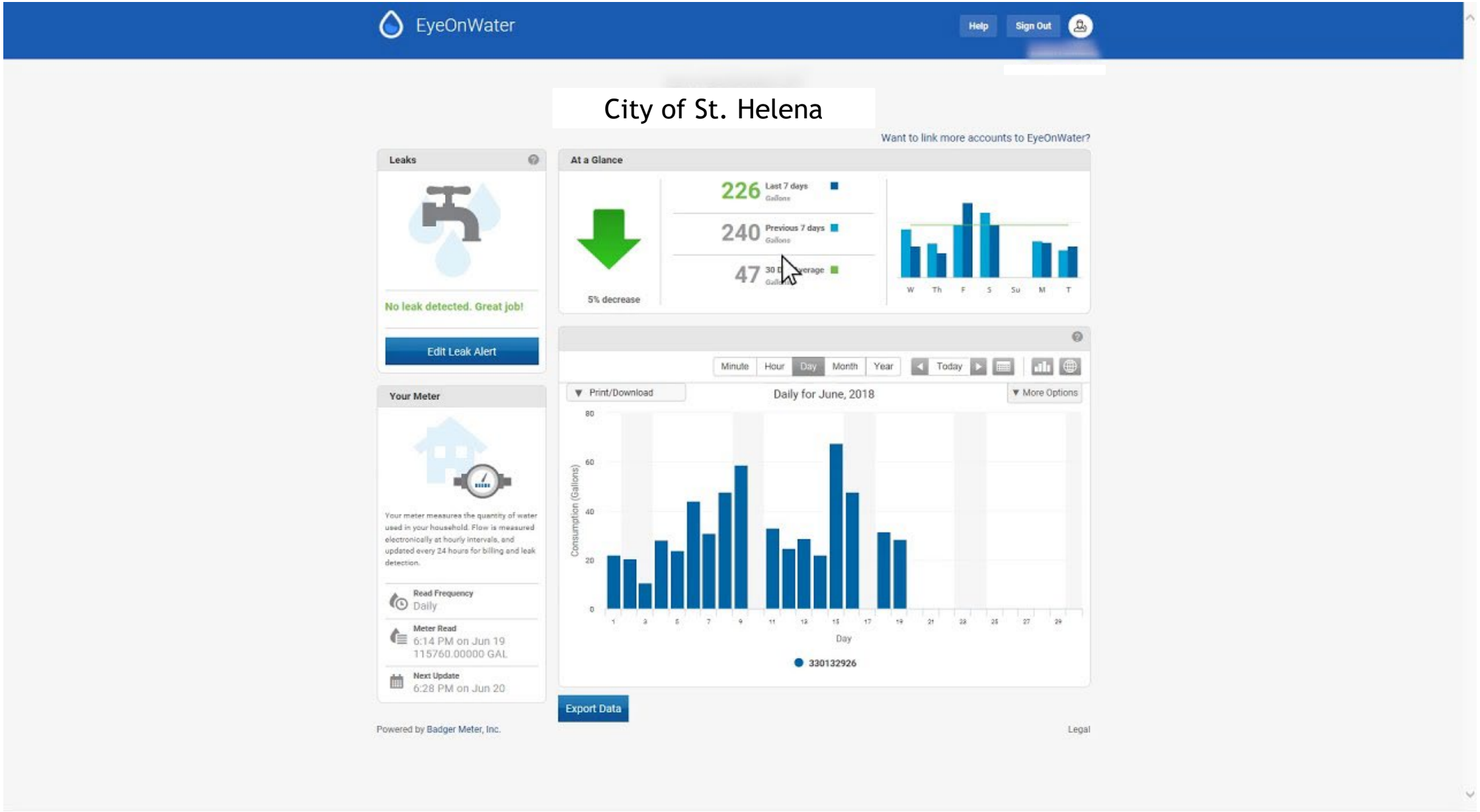


- Accuracy Improvement
- Efficiency of Utilities Staff
- Leak Detection
- Timeline & Roll out
- Billing Changes
- Transparency and Access

EyeOnWater®

- ✓Real-Time Monitoring
- ✓Alerts & Notifications
- ✓Usage Trends
- ✓Conservation Tools
- ✓Accessible Phone, Tablet, PC




EyeOnWater
Help
Sign Out
City of St. Helena
Want to link more accounts to EyeOnWater?
Leaks
No leak detected. Great job!
Edit Leak Alert
At a Glance
226 Last 7 days
Gallons
240 Previous 7 days
Gallons
47 30 D verage
5% decrease
W Th F S Su M T
Your Meter
Your meter measures the quantity of water used in your household. Flow is measured electronically at hourly intervals, and updated every 24 hours for billing and leak detection.
Read Frequency
Daily
Meter Read
6:14 PM on Jun 19
115760.00000 GAL
Next Update
6:28 PM on Jun 20
Minute Hour Day Month Year
Today
Print/Download
Daily for June, 2018
More Options
Consumption (Gallons)
Day
330132926
Export Data
Powered by Badger Meter, Inc.
Legal

Customer Benefits

- Control Over Water Consumption
- Reduce Rate Increases Through Increased Efficiency
- Ensures Fair And Accurate Billing
- Transparency To Customer
- Personalized Water-saving Tips



The Path Forward

Transparency, Access & Billing Changes

Accuracy & Efficiency

Timeline & Roll out

Agenda Report to the City Council

Agenda Section: CONSENT ITEMS

Department: Public Works

DATE:	October 8, 2024
FROM:	Rebecca White, Administrative Assistant
SUBJECT:	Consideration and acceptance of a Public Utility Easement Deed between the City of St. Helena and 1804 Main LLC.
RECOMMENDED ACTION:	Staff recommends City Council approve the attached Resolution and accept the Public Utility Easement Deed between 1804 Main LLC and the City of St. Helena.
PREVIOUS COUNCIL ACTION:	None.
STATEMENT OF THE PURPOSE:	Accept the Public Utility Easement Deed between the City of St. Helena and 1804 Main LLC.
FINANCIAL IMPACT:	None.

BACKGROUND:

Existing storm drain infrastructure located at APN 009-403-025, commonly known as 1804 Main Street, traveled directly across the property, which presented challenges to the property owner and did not align with the City's goals for effective stormwater management. The City reached an agreement with 1804 Main LLC to relocate the storm drain's route to a location beneficial to both the City and the property owner within the property of 1804 Main Street.

DISCUSSION:

1804 Main LLC and the City of St. Helena desire to enter into an agreement to accept a Public Utility Easement Deed. The easement deed authorizes the City to access the City's storm drain infrastructure on the property known as 1804 Main Street in order to repair, maintain, operate, or replace the facilities. The City agrees within the easement to conduct work in a manner that will cause the least injury to the surface of the ground and agrees to restore the surface of the ground to its prior condition, within reason, on the property. In accepting the easement deed, the City is responsible for any damages to the property which occur during any of the work performed by the City or authorized third parties, and the City is responsible to promptly repair and restore the property to its original condition if such damage occurs.

1804 Main LLC agrees within the easement to not place, or permit the placement of, any new buildings, large trees, concrete pavement, decking, and other similar improvements, in a manner that will block the City from accessing or performing work on the facilities.

City Staff has reviewed the Public Utility Easement Deed and find it to be satisfactory and beneficial to both the City of St. Helena and 1804 Main LLC.

ENVIRONMENTAL REVIEW: None.

GOAL:

Goal 2: Improve Infrastructure & Further Environmental Sustainability
Goal 3: Pursue Water Security & Sustainable Management of Water Resources

DOCUMENTS ATTACHMENTS:

Resolution
Public Utility Easement Deed
Legal Description of Easement Parcel
Depiction of Easement Parcel
Certificate of Acceptance

CITY OF ST. HELENA

RESOLUTION NO. 2024-

APPROVAL OF A RESOLUTION ACCEPTING THE PUBLIC UTILITY EASEMENT DEED BETWEEN THE CITY OF ST. HELENA AND 1804 MAIN LLC.

RECITALS

A. The location of storm drain infrastructure located at APN 009-403-025 presented challenges to the property owner and did not align with the City's goal for effective stormwater management; and

B. The storm drain was relocated to a location beneficial to both the City of St. Helena and 1804 Main LLC, the property owner of 1804 Main Street; and

C. The City of St. Helena and 1804 Main LLC desire to enter into an agreement to accept a Public Utility Easement Deed between the two entities; and

D. City Staff have reviewed the Public Utility Easement Deed and find it to be satisfactory and beneficial to both the City of St. Helena and 1804 Main LLC.

RESOLUTION

The City Council of the City of St. Helena hereby resolves as follows:

1. Authorizes the City Manager to accept the Public Utility Easement Deed between the City of St. Helena and 1804 Main LLC.

Approved at a Regular Meeting of the St. Helena City Council on October 8, 2024 by the following vote:

Mayor Dohring: _____

Vice Mayor Hall: _____

Councilmember Chouteau: _____

Councilmember Kenealy: _____

Councilmember Summers: _____

APPROVED:

_____
Paul Jamison Dohring, Mayor

ATTEST:

_____
Cindy Tzafopoulos, City Clerk

DO NOT PLACE RECORDING DATA ABOVE THIS LINE

RECORDING REQUESTED BY AND WHEN RECORDED RETURN TO: CITY OF ST. HELENA 1088 College Avenue St. Helena, California 94574 Attn: Director of Public Works **FREE RECORDING:** This instrument is for the benefit of The City of St. Helena and is entitled to be recorded without fee or tax. (Govt. Code 6103, 27383 and Rev. & Tax Code 11922)	

APN 009-403-025-000

PUBLIC UTILITY EASEMENT DEED

FOR VALUABLE CONSIDERATION, receipt of which is hereby acknowledged, 1804 MAIN LLC, herein referred to as **"GRANTOR"**, hereby grants to **CITY OF ST. HELENA,** a California municipal corporation, and its successors and assigns, including, without limitation, and to any of the several utility companies authorized to provide utility services within City rights-of-way and public utility easements **(collectively, "GRANTEES")**, for public use and purposes, a public utility easement ("Easement") in, over, under and across that certain real property more fully described in EXHIBIT A and depicted in EXHIBIT B attached hereto and incorporated herein by reference ("Easement Parcel"), to lay, construct, repair, maintain, operate, renew and replace subterranean pipelines and appurtenances incidental thereto (herein referred to as "Facilities") for storm drain purposes, together with the right of ingress and egress for repair, replacement, or installation of the Facilities only to and from the Easement Parcel. The Easement shall run with the land and shall be binding upon and inure to the benefit of the parties and their respective successors and assigns. No above-ground facilities shall be erected in the Easement except as specifically described in the exhibits hereto or as expressly agreed by GRANTOR or its successors.

GRANTOR agrees for itself, its successors and assigns, not to erect, place or maintain, nor to permit the erection, placement, or maintenance of any new buildings, permanent planter boxes, earthfill, large trees, large shrubs, block walls, concrete pavement, decking, structures or other similar improvements, that would unreasonably interfere with the ability of any GRANTEE to obtain access to the Easement Parcel for the purposes of repair, replacement, or installation of the Facilities. Subject to the foregoing, nothing herein shall require the removal nor restrict GRANTOR'S ability to maintain or restore structures existing prior to the grant hereof, including but not limited to maintenance, renovation or reinstallation of retaining walls, buildings or sidewalks.

GRANTEES, shall have the right to trim or cut tree roots and vegetation as may endanger or interfere with the function of this Easement and shall have free access to the Facilities and every part thereof,

at all times, for the purpose of exercising the rights granted herein. In doing work on property of the GRANTOR, GRANTEES will conduct work in such a manner as will cause the least injury to the surface of the ground or surface around construction area, and will replace the earth so removed, and will restore the surface of the ground to as near a condition as existed prior to such work as is practicable.

GRANTOR expressly reserves for itself, its successors or its assigns, the right to use the Easement Parcel or to grant other easements or licenses at the same location so long as such uses do not unreasonably interfere with the rights herein granted.

GRANTEES shall be responsible for any damage to GRANTOR's property or that of third parties resulting from any exercise of the rights herein granted, including but not limited to soil erosion, subsidence or damage resulting therefrom. GRANTEES shall promptly repair and restore to its original condition any of GRANTOR's property, including, but not limited to, roads, utilities, buildings and fences that may be altered, damaged or destroyed in connection with the exercise of the Easement or use of the Easement Parcel.

The Easement granted herein is for public use and purposes and is severed from and shall not be deemed to merge with fee title to the Easement Parcel. Subject to the foregoing, there shall be no right of access to the Easement Parcel to the public.

IN WITNESS WHEREOF, this Public Utility Easement Deed is executed by the undersigned this 6th day of September, 2024

1804 MAIN LLC

By: Katherine Avery,

Its :Chief Executive Officer

83578.00011\40877557.3

ACKNOWLEDGEMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA)
)
COUNTY OF Sonoma)

On September 6, 2024, before me, Chrystal A. Elkeshen, Notary Public, Notary Public, personally appeared Katherine Whiting Avery, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Chrystal A Elkeshen (Seal)
Signature of Notary

Chrystal A Elkeshen
COMM# 2437885
NOTARY PUBLIC—CALIFORNIA
Sonoma County
MY COMM. EXPIRES 2/11/2027

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EXHIBIT "A"

LEGAL DESCRIPTION OF EASEMENT PARCEL

EXHIBIT A

Public Utility Easement

Being a portion of the Lands of 1804 Main LLC, as described in the Grant Deed recorded June 3, 2022, Document No. 2022-0011072, Official Records of Napa County, APN 009-403-025, located at 1804 Main Street, St Helena, California, and shown as Parcel A, on that Record of Survey, Lands of Noelle P. French, filed March 2, 1962 in Book 8 of Surveys, Page 108, in the office of Napa County Recorder's Office.

Beginning at the most southern corner of said Parcel A, thence northerly along the southwestern boundary of said Parcel A, North 55°13'00" West, 10.00 feet;

Thence leaving said southern boundary, North 34°47'00" East, 222.79 feet;

Thence North 10°16'43" West, 24.25 feet, to a point on the northeastern boundary on said Parcel A;

Thence following the boundary of said Parcel A, South 55"20' 27" East, 14.13 feet;

Thence leaving the said boundary, South 10°16'43" W, 18.42' feet, to a point on the southern boundary of said Parcel A;

Thence following the said southern boundary, South 34°47'00" West, 226.94, to the True Point of Beginning.

Containing 2462 Square feet, more or less.

This description was prepared by me or under my direction.

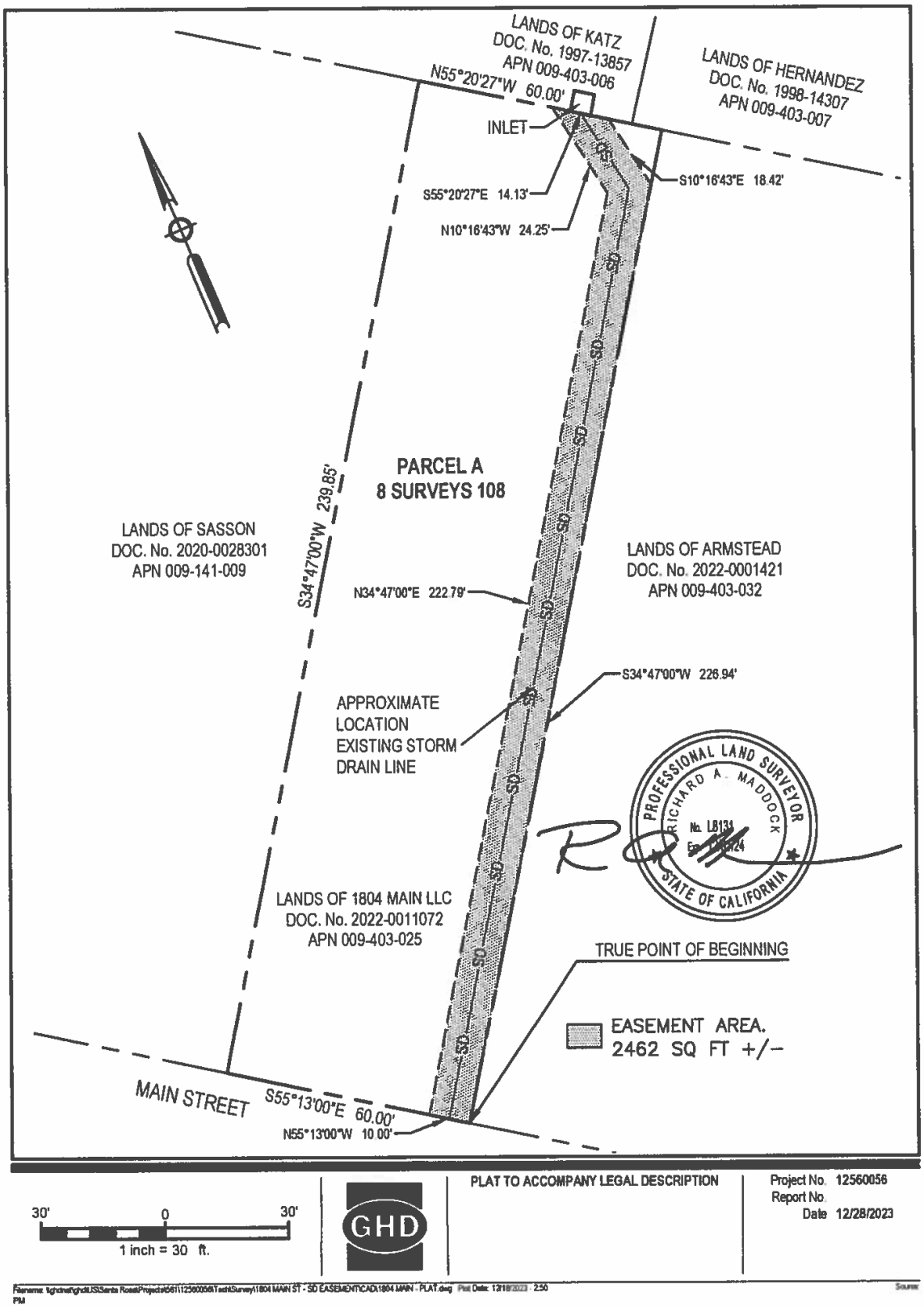
PROFESSIONAL LAND SURVEYOR
RICHARD A. MADDOCK
No. L8131
Exp. 12/31/24
STATE OF CALIFORNIA

Richard A Maddock, PLS 8131

EXHIBIT "B"

DEPICTION OF EASEMENT PARCEL

EXHIBIT B


LANDS OF KATZ
DOC. No. 1997-13857
APN 009-403-006
LANDS OF HERNANDEZ
DOC. No. 1998-14307
APN 009-403-007
N55°20'27"W 60.00'
INLET
S55°20'27"E 14.13'
N10°16'43"W 24.25'
S10°16'43"E 18.42'
SD
PARCEL A
8 SURVEYS 108
S34°47'00"W 239.85'
LANDS OF SASSON
DOC. No. 2020-0028301
APN 009-141-009
N34°47'00"E 222.79'
LANDS OF ARMSTEAD
DOC. No. 2022-0001421
APN 009-403-032
S34°47'00"W 226.94'
APPROXIMATE
LOCATION
EXISTING STORM
DRAIN LINE
PROFESSIONAL LAND SURVEYOR
RICHARD A. MADDOCK
No. L8134
STATE OF CALIFORNIA
LANDS OF 1804 MAIN LLC
DOC. No. 2022-0011072
APN 009-403-025
TRUE POINT OF BEGINNING
EASEMENT AREA.
2462 SQ FT +/-
MAIN STREET
S55°13'00"E 60.00'
N55°13'00"W 10.00'
30' 0 30'
1 inch = 30 ft.
GHD
PLAT TO ACCOMPANY LEGAL DESCRIPTION
Project No. 12560056
Report No.
Date 12/28/2023

CITY OF ST. HELENA
CERTIFICATE OF ACCEPTANCE OF
PUBLIC UTILITY EASEMENT DEED

This Certificate of Acceptance pertains to the interest in certain real property conveyed by the Public Utility Easement Deed dated _____ to which this Certificate of Acceptance is attached,

from: 1804 MAIN LLC
(**"Grantor"**),

to: **CITY OF ST. HELENA, a California municipal corporation,** and its successors and assigns, including, without limitation, and to any of the several utility companies authorized to provide utility services within City rights-of-way and public utility easements (collectively, **"Grantee(s)"**)

Said Public Utility Easement Deed is hereby accepted by the undersigned officer on behalf of Grantee City of St. Helena pursuant to authority conferred by the said Grantee's governing body, and said Grantee hereby consents to recordation of same.

Dated: _____

CITY OF ST. HELENA,
a California municipal corporation

By:_____
Anil Comelo
City Manager

ATTEST:

_____
Cindy Tzafopoulos
City Clerk

83578.00011\40877557.3

Agenda Report to the City Council

Agenda Section: CONSENT ITEMS

Department: Public Works

DATE:	October 8, 2024
FROM:	Jose Calderon, Engineering Technician II
SUBJECT:	Second reading to adopt ordinance amending Section 15.36.050(A)(3) of the St. Helena Municipal Code to allow for certain traffic calming measures, including speed cushions under the approval of the Fire Chief.
RECOMMENDED ACTION:	City Council waive the second reading of the Ordinance to amend section 15.36.050(A)(3) of the St. Helena Municipal Code and adopt.
PREVIOUS COUNCIL ACTION:	Per Council direction during the prior Introduction of this matter on September 24, 2024, Council approved first reading of ordinance amending section 15.36.050 (A)(3)
STATEMENT OF THE PURPOSE:	Second reading to adopt amendments to Section 15.36.050 of the St. Helena Municipal Code to allow traffic calming devices, including speed cushions, with the approval of the City of St Helena Fire Chief.
FINANCIAL IMPACT:	None.

BACKGROUND:
On September 24, 2024, the City Council conducted the first reading of an ordinance to amend Section 15.36.050 of the City of St Helena Municipal Code.

DISCUSSION:
On September 24, 2024, City staff now presents to Council the ordinance for its second reading and adoption.

ENVIRONMENTAL REVIEW:
Not applicable.

GOAL:

Goal 2: Improve Infrastructure & Further Environmental Sustainability
Goal 5: Enhance Quality of Life
Goal 8: Implement Capital Improvement Plans (CIP) Projects Miscellaneous/Other

DOCUMENTS ATTACHMENTS:

ORDINANCE.St. Helena_ Ordinance re Rescission of Speed Hump Prohibition.REV 1-c1 (1) (2) (1) (2) (1)
Section 503.4.1 Traffic Calming Devices amendment (1) (1)
Exhibit A (1)
Exhibit B (1)

ORDINANCE NO. _____

ORDINANCE OF THE CITY COUNCIL OF THE CITY OF ST. HELENA AMENDING SECTION 15.36.050(A)(3) OF THE ST. HELENA MUNICIPAL CODE TO ALLOW FOR THE USE OF CERTAIN TRAFFIC CALMING MEASURES ON PUBLIC STREETS IN THE CITY OF ST. HELENA

WHEREAS, Title 15 (Buildings and Construction) of the City of St. Helena's (City) Municipal Code contains regulations amending the California Fire Code; and

WHEREAS, Section 15.36.050 of Title 15 of the City's Municipal Code amends California Fire Code Section 503.4.1 and prohibits traffic calming measures including speed humps, speed tables and similar structures within the City of St. Helena; and

WHEREAS, the City Council desires to allow the use of certain traffic calming measures permissible under California Fire Code Section 503.4.1 but prohibited by St. Helena's Municipal Code Section 15.36.050.

NOW THEREFORE, THE CITY COUNCIL OF THE CITY OF ST. HELENA, CALIFORNIA DOES ORDAIN AS FOLLOWS:

SECTION 1. Recitals: This Ordinance incorporates, and by this reference makes a part hereof, the aforementioned recitals;

SECTION 2. Amendment to Municipal Code Section 15.36.050(A)(3) of the City's Municipal Code is hereby amended as follows:

"3. Section 503.4.1, Traffic calming devices, California Fire Code 2022, Chapter 5, is amended to read as follows:

"Traffic calming measures that cause vertical deflection across the full width of the vehicle travel lanes shall be allowed in public or private roadways, driveways or fire apparatus access routes with the approval of the Fire Chief for the City of St. Helena.

Traffic calming devices such as speed cushions, when installed discontinuous across the travel lane or when wheel channels are provided, are permissible within the public right of way with the approval of the Fire Chief for the City of St. Helena.

Traffic calming measures which narrow travel lanes such as curb extensions, raised medians and "bulb-outs" are permissible. Traffic calming measures that provide an audible signal to the driver such as pavement texture are also permissible."

SECTION 3. CEQA. The City Council finds that this Ordinance is not subject to the California Environmental Quality Act (CEQA) pursuant to Sections 15060(c)(2) (the activity will not result in a direct or reasonably foreseeable indirect physical change in the environment) and 15060(c)(3) (the activity is not a project as defined in Section

15378) of the CEQA Guidelines, California Code of Regulations, Title 14, Chapter 3, because it has no potential for resulting in physical change to the environment, directly or indirectly.

SECTION 4. Severability. If any section, subsection, subdivision, paragraph, sentence, clause or phrase of this ordinance, or any part thereof, is for any reason held to be unconstitutional, such decision shall not affect the validity of the remaining portion of this Ordinance or any part thereof. The City Council hereby declares that it would have passed each section, subsection, subdivision, paragraph, sentence, clause or phrase thereof, irrespective of the fact that any one or more section, subsection, subdivision, paragraph, sentence, clause or phrase be declared unconstitutional. If for any reason any portion of this ordinance is found to be invalid by a court of competent jurisdiction, the balance of this ordinance shall not be affected.

SECTION 5. Effective Date. This ordinance shall take effect and be in force thirty (30) days after its adoption, and a summary of this ordinance shall be published once with the names of the members of the Council voting for and against the ordinance in the St. Helena Star, a newspaper of general circulation published in the City of St. Helena.

THE FOREGOING ORDINANCE was introduced at a regular meeting of the St. Helena City Council on the 24 day of September, 2024, and was adopted at a regular meeting of the St. Helena City Council on the _____ day of _____, 2024, by the following vote:

Mayor Dohring: _____
Vice Mayor Hall: _____
Councilmember Chouteau: _____
Councilmember Kenealy: _____
Councilmember Summers: _____

APPROVED:

_____
Paul Jamison Dohring, Mayor

ATTEST:

CITY OF ST. HELENA

_____
Cindy Tzafopoulos, City Clerk

I, CINDY TZAFOPOULOS, CITY CLERK of the City of St. Helena, California, do hereby certify that the foregoing Ordinance was regularly introduced and placed upon its first reading at a regular meeting of the City Council on the 24 day of September, 2024. That thereafter said Ordinance was duly adopted and passed at a regular meeting of the City Council on the _____ day of _____, 2024, by the following vote:

Mayor Dohring:	_____
Vice Mayor Hall:	_____
Councilmember Chouteau:	_____
Councilmember Kenealy:	_____
Councilmember Summers:	_____

Section 503.4.1, Traffic calming devices, California Fire Code 2022, Chapter 5, is amended to read as follows:

Traffic calming measures that cause vertical deflection across the full width of the vehicle travel lanes shall be allowed in public or private roadways, driveways or fire apparatus access routes with the approval of the Fire Chief for the City of St. Helena.

Traffic calming devices ~~including, but not limited to, speed bumps, speed humps, speed tables, speed depressions, shall not be allowed on public or private roadways, driveways or fire apparatus access routes~~ such as speed cushions, when installed discontinuous across the travel lane or when wheel channels are provided, are permissible within the public right of way with the approval of the Fire Chief for the City of St. Helena.

Traffic calming measures which narrow travel lanes such as curb extensions, raised medians and “bulb-outs” are permissible. Traffic calming measures that provide an audible signal to the driver such as pavement texture are also permissible.”


2242 Grant St
Calistoga, California

March 15, 2023

Mr. Derek Rayner, PE
Public Works Department
414 Washington Street
Calistoga, CA 94515

Grant Street Speed Cushion Effectiveness Evaluation

Dear Mr. Rayner;

As requested, W-Trans has completed an evaluation of the potential effectiveness of speed cushions at calming traffic on Grant Street in the City of Calistoga. The purpose of this letter is to summarize the procedure that was used to test the speed cushions and the results of the analysis.

Procedure

1. Average Daily Traffic (ADT) counts with speed data were obtained for a period of one week on Grant Street between Wednesday September 28, 2022, and Tuesday October 4, 2022, to document conditions and travel speeds prior to installation of the speed cushions. This data collection effort was scheduled to occur during clear weather and typical traffic conditions while local schools were in session.
2. A field visit of the study area and a brief speed survey was conducted using a pocket radar device to validate the larger speed survey dataset.
3. Three speed cushions were installed by City staff with two different spacing distances to test not only the effect that speed cushions have on reducing travel speeds, but also the effect that travel distance between cushions may have on the effectiveness of the devices.
4. Once the devices were in place for a period of two weeks to allow motorists sufficient time to modify their behavior based on the new conditions, another round of ADT counts with speed measurements were collected for a period of one week between each set of cushions from Wednesday November 16, 2022, through Tuesday November 22, 2022.
5. Various speed metrics were calculated to document "after" conditions and compared to conditions before installation of the speed cushions to determine the extent to which the speed cushions had reduced vehicle travel speeds. Additionally, the speed calculations for the two different spacing distances were compared.

Setting

Grant Street is classified as an arterial roadway in the City's General Plan and has a paved roadway width that varies between 22 and 24 feet depending on the presence of bike facilities and on-street parking. The segment between Garnett Creek Court and Mora Avenue has limited pedestrian facilities and a Class II bicycle lane in only the eastbound direction. The roadway is classified as a Bicycle Route and has a posted speed limit of 25 miles per hour (mph).

Before Conditions

Based on speed data collected over a period of seven days between Wednesday, September 28, 2022, and Tuesday, October 4, 2022, prior to installation of the speed cushions, the roadway had an average travel speed of 25 mph in both directions with an 85th percentile speed (the speed at or below which 85 percent of motorists travel) of 31 mph in the eastbound direction and 29 mph westbound. The 85th percentile speed is of particular importance because this is the current metric used to establish legal radar enforceable speed limits in the state of California, though recent changes to state law will allow for greater flexibility setting speed limits when the changes take effect within the next two to three years. The 95th percentile speeds were measured at 35 mph eastbound and 34 mph westbound, with high speeds in the range of 45 to 49 mph in both directions. All speed metrics were generally found to be slightly higher in the eastbound direction than westbound, likely because

motorists traveling eastbound are coming from a higher speed setting with a posted speed limit of 35 mph within the County of Napa. The speed data metrics on Grant Street collected prior to the installation of speed cushions are summarized in Table 1.

Table 1 – Summary of Grant Street Speed Data Before Installation of Speed Cushions

Direction	15th pctl	50th pctl	Average	85th pctl	95th pctl	High Speed
Eastbound	20	26	25	31	35	45-49
Westbound	20	25	25	29	34	45-49

Notes: All speed values are in miles per hour (mph); pctl = percentile

A brief speed survey of 20 vehicles in each direction was collected using a pocket radar device in an effort to validate the larger weeklong dataset. The pocket radar survey resulted in an average travel speed of 26 mph in the eastbound direction and 25 mph in the westbound direction which was consistent with the results of the larger dataset.

After Conditions

Three speed cushions were installed by City staff in October and November 2022 between Redwood Avenue and approximately 200 feet west of Mora Avenue. The western and middle speed cushions were installed approximately 500 feet apart, while the middle and eastern speed cushions were installed approximately 250 feet apart. After all three speed cushions were in place for two weeks, a second round of speed data was collected for a period of one week from Wednesday, November 16, 2022, through Tuesday, November 22, 2022, at the approximate mid-point between each set of cushions. Plate 1 shows conditions before and after installation of a speed cushion looking east near Redwood Avenue. An exhibit showing the locations of all three speed cushions overlaid on an aerial map is enclosed for reference.



Before **After**

Plate 1 Grant Street Looking East Before and After Installation of a Speed Cushion

A comparison of the post-installation speed data to the data collected prior to installation of the traffic calming devices revealed that average travel speeds had dropped from 25 mph to 22 mph eastbound and to 20 mph westbound on the segment with 500-foot spacing between speed cushions. The average travel speed in the eastbound direction dropped another one mph to 21 mph on the segment with 250-foot spacing. The speed cushions had similar effects on 85th percentile speeds as this metric dropped from 31 mph in the eastbound direction pre-installation to 28 mph with 500-foot spacing and to 25 mph with 250-foot spacing. The 85th percentile speed in the westbound direction dropped from 29 mph pre-installation to 25 mph with 500-foot spacing and to 24 mph with 250-foot spacing. The highest speed recorded dropped by an increment of 5 mph in

the eastbound direction and 10 mph in the westbound direction on the segment with 500-foot spacing compared to data before installation. On the segment with 250-foot spacing between cushions, the highest travel speed recorded dropped by an increment of 10 mph in the eastbound direction and 15 mph in the westbound direction. A summary of the speed data metrics on Grant Street collected after installation of speed cushions is shown in Table 2.

Table 2 – Summary of Grant Street Speed Data After Installation of Speed Cushions

Spacing Distance Direction	15th pctl	50th pctl	Average	85th pctl	95th pctl	High Speed
500 Feet						
Eastbound	17	22	22	28	30	40-44
Westbound	17	21	20	25	28	35-39
250 Feet						
Eastbound	17	21	21	25	28	35-39
Westbound	14	19	20	24	26	30-34

Notes: All speed values are in miles per hour (mph); pctl = percentile

In addition to decreasing the 85th percentile speeds, the speed cushions also appear to have resulted in more consistent travel speeds overall. The pre-installation 85th percentile speeds varied by as much as three mph between days, while the data varied by no more than one mph between days after installation. Plates 2 and 3 indicate the 85th percentile speeds on Grant Street by day of week for conditions prior to installation of the traffic calming devices and afterwards.

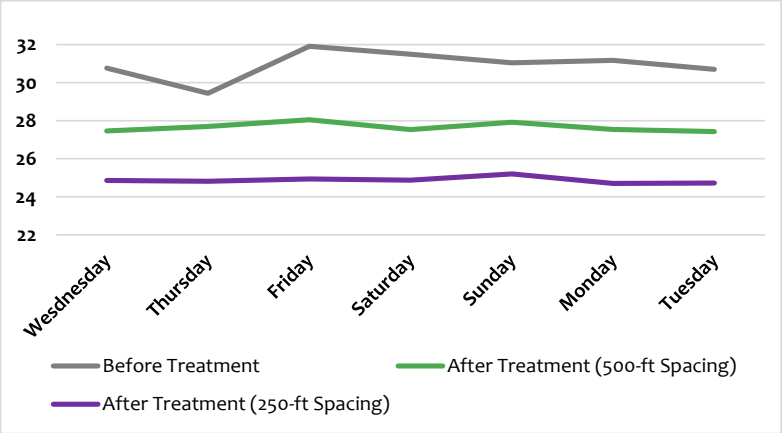


Plate 2 Grant Street Eastbound 85th Percentile Travel Speeds (mph)

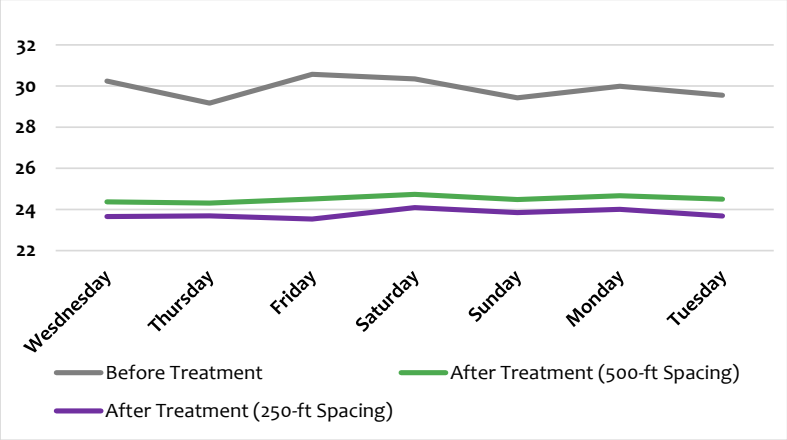


Plate 3 Grant Street Westbound 85th Percentile Travel Speeds (mph)

Key Findings

- Prior to installation of speed cushions, Grant Street had an average travel speed of 25 mph in both directions with 85th percentile speeds of 31 mph in the eastbound direction and 29 mph westbound.
- The speed cushions were effective at reducing all speed parameters calculated with the shorter 250-foot spacing between cushions resulting in a greater speed reduction than the 500-foot spacing.
- With 500-foot spacing between cushions, average travel speeds dropped from 25 mph to 22 mph in the eastbound direction and to 20 mph westbound. The 85th percentile speeds dropped from 31 mph in the eastbound direction to 28 mph and from 29 mph in the westbound direction to 25 mph. The highest travel speed recorded dropped by an increment of 5 mph in the eastbound direction and 10 mph in the westbound direction.
- With 250-foot spacing between cushions, average travel speeds dropped from 25 mph to 21 mph in the eastbound direction and to 20 mph westbound. The 85th percentile speeds dropped from 31 mph in the eastbound direction to 25 mph and from 29 mph in the westbound direction to 24 mph. The highest travel speed recorded dropped by an increment of 10 mph in the eastbound direction and 15 mph in the westbound direction.
- The speed cushions appear to have resulted in not only lower travel speeds, but more consistent travel speeds between days.
- All speed metrics were generally found to be slightly higher in the eastbound direction than westbound, likely due to the more rural character of the roadway to the west of the study segment.

Thank you for giving W-Trans the opportunity to provide these services. Please call if you have any questions.

Sincerely,

Cameron Nye, EIT
Associate Engineer

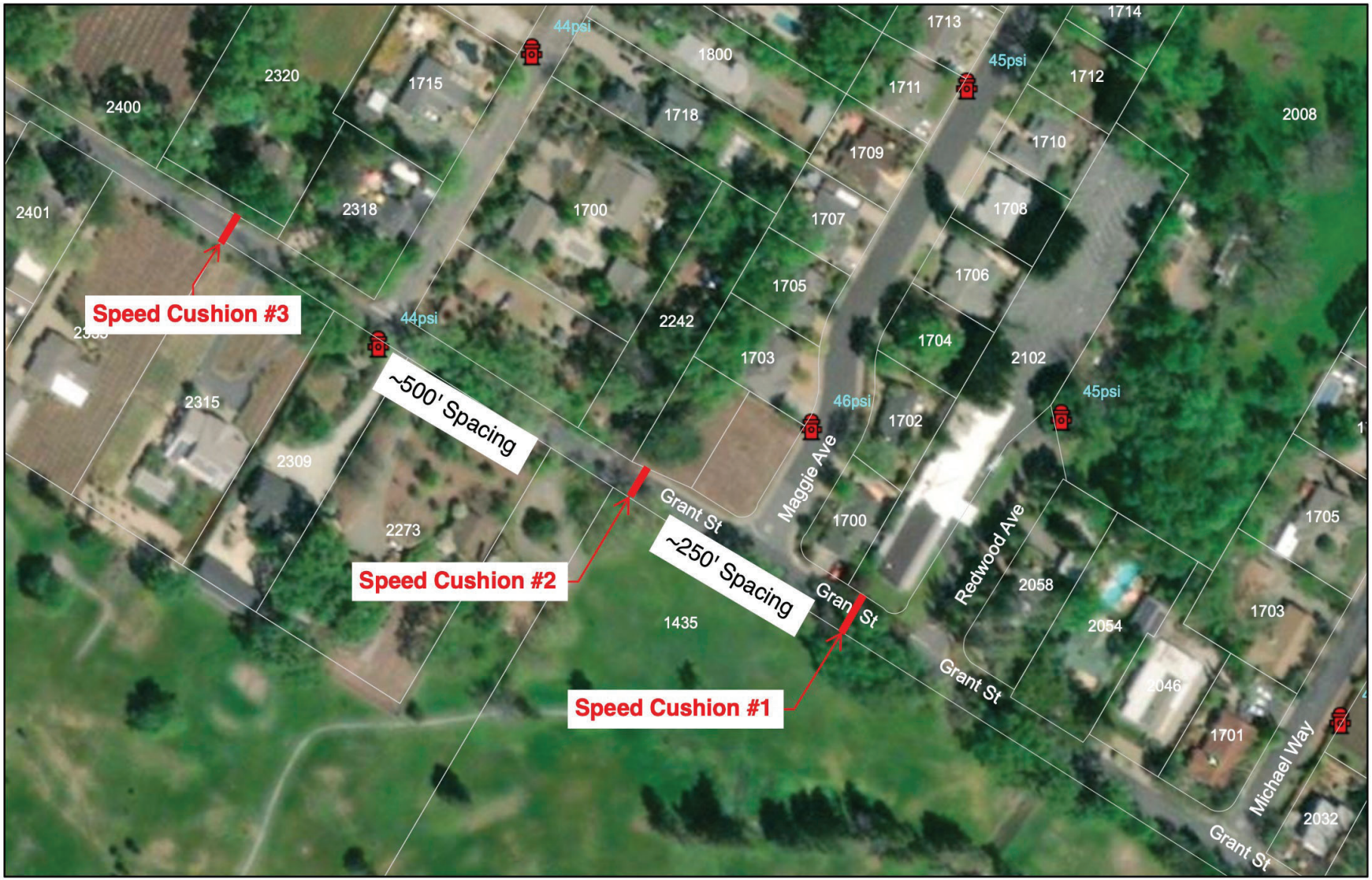
Enclosure: Speed Cushion Layout



Dalene J. Whitlock, PE, PTOE
Senior Principal

DJW/cn/CAL059.L1

Speed Cushion Layout



7/22/2022, 1:46:52 PM

Current Parcels

City_Limits

Calistoga Utilities 2019 - W_Hydrant

Calistoga Utilities 2019 - Roads

1:2,257

0 80 160 320 ft

0 25 50 100 m

Maxar, Microsoft

Agenda Report to the City Council

Agenda Section: CONSENT ITEMS

Department: Public Works

DATE:	October 8, 2024
FROM:	Ian Dale, Environmental Services Tech
SUBJECT:	Consideration and Proposed Approval of (1) A Resolution Establishing a Water Filtration Device Rebate Program and (2) Appropriating Use of Water Enterprise Fund Balance of $50,000.
RECOMMENDED ACTION:	Adopt attached Resolution.
PREVIOUS COUNCIL ACTION:	Council provided direction and approval to proceed with implementing the Water Filtration Device Rebate Program during the Regular City Council Meeting on September 24, 2024.
STATEMENT OF THE PURPOSE:	Implementing a Water Filtration Device Rebate Program aligns with the City of St. Helena's commitment to sustainability and improvements to water quality. By providing financial incentives for water filtration devices, we can improve water quality, encourage conservation, and support our local economy.
FINANCIAL IMPACT:	The fiscal impact of this resolution is $50,000 from the Water Enterprise Fund for the Water Filtration Rebate Program. **Estimated Participation:** • **Residential Customers:** 200 rebates x $150 = $30,000 • **Commercial Customers:** 50 rebates x $400 = $20,000 • **Total Estimated Cost:** $50,000 *Note: Participation may vary; adjustments will be made as necessary based on actual customer participation.*

BACKGROUND:

The City of St. Helena is committed to promoting water conservation and ensuring the delivery of high-quality drinking water to its residents and businesses. In alignment with our sustainability goals, this staff report proposes the establishment of a Water Filtration Device Rebate Program for utility customers in the Fiscal Year 2024-2025.

DISCUSSION:

City of St. Helena Rebate Program

Staff is bringing forward a rebate program for both residential and commercial customers.

Commercial Users:

- Incentive in the amount of $300 may be issued to Commercial customers with 1-3 sinks.
- Incentive in the amount of $400 may be issued to Commercial customers with 4 or more sinks.
- Incentive in the amount of $400 may be issued to Commercial Restaurants.
- Incentive in the amount of $400 may be issued to Commercial facilities serving a Homeowners Association (HOA).
- A one-time Incentive in the amount of $300 may be issued to Commercial facilities for replacement filters for devices purchased prior to the implementation of this program.
- All applicants must hold a valid St. Helena Business License.

Residential Users:

- Incentive in the amount of $150 may be issued to Residential utility customers.
- A one-time Incentive in the amount of $150 may be issued to Residential utility customers for replacement filters for devices purchased prior to the implementation of this program.
- All applicants must provide proof of St. Helena utility account. Examples of this includes a Utility Bill or account number.

For Both Programs:

- Funds will be available until expended.
- Rebates will be administered on a first-come, first-served basis for qualified applicants, subject to the maximums defined herein. For qualified applicants, please allow 4 weeks for incentive processing.
- The City of St. Helena does not promote, endorse, or require the use of any specific vendor or product.
- Purchase date must be after October 14, 2024.
- You must provide proof of purchase via a receipt, purchase order, or invoice (examples).
- Utility account must be in good standing.

Outreach

City staff will be contacting hotels, HOA's, and restaurant businesses to make them aware of the new rebate program.

The City will also be issuing a press release and notifying residential customers of this opportunity, as well as targeted marketing with community groups and individuals who

expressed interest with staff regarding water filtration. Staff will also be including information in utility bills on the rebate program.

ENVIRONMENTAL REVIEW: None.

GOAL:

Goal 3: Pursue Water Security & Sustainable Management of Water Resources
Goal 5: Enhance Quality of Life

DOCUMENTS ATTACHMENTS:

Attachment 1 - Water Filtration Rebate Program Resolution

CITY OF ST. HELENA

RESOLUTION NO. 2024-

Consideration and proposed approval of a Resolution (1) Establishing a Water Filtration Rebate Program and (2) Authorizing establishing a Budget of $50,000 from the Water Enterprise Fund

WHEREAS, on September 24, 2024, the City Council provided direction to staff to implement a Water Filtration Device Rebate Program for St Helena Utility Customers, and;

WHEREAS, this resolution promotes the use of water filtration devices; and

WHEREAS, the resolution includes the creation of a rebate program for both commercial and residential utility customers effective October 14, 2024; and

WHEREAS, City staff will be contacting residents, hotels, Homeowners Associations, and restaurant businesses to make them aware of the new rebate program; and

WHEREAS, the City of St. Helena does not promote, endorse, or require the use of any specific vendor or product.

Now, Therefore be it resolved by the City Council of The City of St. Helena as follows:

1. The above recitals are true and correct and are incorporated herein by this reference.

2. The rebate program will be administered as follows:

A. Commercial Users
- Incentive in the amount of $300 may be issued to Commercial customers with 1-3 sinks.
- Incentive in the amount of $400 may be issued to Commercial customers with 4 or more sinks.
- Incentive in the amount of $400 may be issued to Commercial Restaurants.
- Incentive in the amount of $400 may be issued to Commercial facilities serving a Homeowners Association (HOA).
- A one-time Incentive in the amount of 4300 may be issued to Commercial facilities for replacement filters for devices purchased prior to the implementation of this program.

- All applicants must hold a valid St. Helena Business License.

B. Residential Users
- Authorizes Incentive in the amount of $150 may be issued to Residential utility customers.
- A one-time Incentive in the amount of $150 may be issued to Residential utility customers for replacement filters for devices purchased prior to the implementation of this program.
- All applicants must provide proof of St. Helena utility account.

C. For Both Commercial and Residential Programs
- Funds will be available until expended.
- Rebates will be administered on a first-come, first-served basis for qualified applicants, subject to maximums defined herein. For qualified applicants, please allow 4 weeks for incentive processing.
- Purchase date must be after October 14, 2024, except where otherwise noted.
- Proof of purchase via a receipt, purchase order, or invoice (examples) must be submitted.
- Utility account must be in good standing.

5. Authorizes establishing a budget of $50,000 from the Water Enterprise Fund for the Water Filtration Rebate Program.

6. Funding is provided as follows:

Funding Details	Fund	GL Account	Amount
FY 2024-25 Budget Increase to Fund 561	Water Enterprise	561-50-00-21-50	50,000
Total			**50,000**

Approved at a Regular Meeting of the St. Helena City Council on October 8, 2024, by the following vote:

Mayor Paul Dohring: _____

Vice Mayor Eric Hall: _____

Council Member Anna Chouteau: _____

Council Member Patrick Kenealy: _____

Council Member Billy Summers: _____

APPROVED:

_____
Paul Jamison Dohring, Mayor

ATTEST:

_____
Cindy Tzafopoulos, City Clerk

Agenda Report to the City Council

Agenda Section: CONSENT ITEMS

Department: Public Works

DATE:	October 8, 2024
FROM:	Rebecca White, Administrative Assistant
SUBJECT:	Consideration and adoption of a Resolution (1) acknowledging the establishment of Capital Improvement Program Project W25-03 and budget of $282,000 as adopted by Council at the 9/24/24 meeting to develop a water management plan; 2) Authorizing the City Manager to execute a Professional Services Agreement with Luhdorff & Scalmanini (L&S) for the Assessment of Water Supply Strategies for an amount of $45,500, along with a 9.67% contingency, for a total not-to-exceed amount of $49,901; and (3) Authorizing the City Manager to execute a Professional Services Agreement with West Yost for the development of a Water Management Plan for an amount of $211,628, along with a 9.67% contingency, for a total not-to-exceed amount of $232,099.
RECOMMENDED ACTION:	Staff recommends City Council approve the attached resolution.
PREVIOUS COUNCIL ACTION:	Council action on 9/24/24 adopted Resolution 2024-137 for the 5-year Capital Improvement Program wherein this project was established and total budget appropriated.
STATEMENT OF THE PURPOSE:	To acknowledge the establishment the Capital Improvement Program Project W25-03 and budget of $282,000; to enter into a professional services agreement with the consultant L&S to conduct the assessment of Water Supply Strategies; and to enter into a professional services agreement with the consultant West Yost to develop the Water Management Plan.
FINANCIAL IMPACT:	The budget for the CIP Project W25-03 is $282,000. The cost of the Assessment of Water Supply Strategies is $45,500 and the cost of the Water Management Plan is $211,628. Adding a 9.67% contingency results in a total fiscal impact of $282,000. Expenditures and funding sources for this project are found in Attachment A.

BACKGROUND:

The 2024 Safe Yield Estimate is less than what was previously calculated in 2011. The 2024 Safe Yield Estimate calculates lower potential yields from Bell Canyon Reservoir and Stonebridge Wells to account for increasing temperatures, evaporation, reduced

annual rainfall, and restrictions on groundwater usage that were introduced with the Napa County Groundwater Sustainability Plan. The proposed CIP W25-03 will help combat this issue with the proposals from Luhdorff & Scalmanini (L&S) and West Yost Associates.

Assessment of Water Supply Strategies
In an effort to meet water demands within the City while also meeting the groundwater sustainability objectives of the Napa Valley Subbasin, the City is interested in exploring future water supply strategies. The assessment of water supply strategies will evaluate one potential new well site outside of the Napa Valley Subbasin and one potential new well site within the Napa Valley Subbasin, as well as develop model scenarios to evaluate groundwater conditions.

Water Management Plan
The City must find a way to meet its increasing water demands with its expected decreasing water supply. One way to potentially offset the limited water supply is with recycled water through methods such as injection wells or recharge, which West Yost will explore as part of the Water Management Plan. West Yost is familiar with the City's facilities and water supplies. West Yost has worked with the City to perform numerous water supply studies and projects, has helped the City update the water supply safe yield estimates in 2011 and 2024, and is currently helping the City prepare a Recycled Water Facilities Plan.

DISCUSSION:
The CIP W25-03 is created to help mitigate the issue of increased water demand from the City with expected decreased future water yields. The assessment of water supply strategies and the water management plan will help the City evaluate potential future water supplies.

The scope of services for the Assessment of Water Supply Strategies include:

- Project coordination with City Staff to determine schedule, design preferences and parameters, site requirements/constraints, and respective roles responsibilities.
- Hydrogeologic investigation and well siting evaluations which includes evaluating the suitability of sites/areas for a new well and facilities, conducting preliminary environmental review of sites to identify any potential sources of contamination for a future water supply well, characterizing site specific conditions at potential well sites, investigating potential sources of groundwater contamination near potential wells sites, and evaluating any permits and notifications required for future exploratory work and construction of a municipal well at the sites of interest.
- A summary report outlining the potential yield and water quality of a well-constructed in the potential areas, and a preliminary well design with a conceptual site plan will be provided if a site is determined to be favorable.

- Modeling of well operations using City water and wastewater infrastructure in the modeling development which will include evaluating simulated water budgets and groundwater levels to estimate the effects and benefits of the two different water supply strategies (modifications to well operations and use of recycled water to offset groundwater pumping).
- A summary report of the modeling analyses
- As-needed technical support including participating in additional meetings with City staff or consultants, performing additional model scenarios to evaluate water supply strategies, and evaluation of additional well sites.

The scope of services for the Water Management Plan include:

- Data collection documents related to water planning, the present state of stormwater management, existing conservation policies or programs, any artificial turf replacement projects, groundwater evaluation documents, and current developer water supply contribution requirements.
- Creating a draft water management plan which will document potential future conservation measures that can be taken, current supply and sources and their expected future demands, future water supply options to consider, groundwater alternatives evaluation that L&S will conduct, and potential recycled water uses.
- A final water management plan will be developed that provides detail and analysis to help guide the City.
- Project management and quality assurance/quality control will take place throughout the project with the City's project manager to ensure work is progressing in accordance with the budget, scope, and schedule.

City staff has reviewed the consultants and their proposals and finds them qualified and capable of performing the work.

ENVIRONMENTAL REVIEW: Not a CEQA project.

GOAL:

Goal 2: Improve Infrastructure & Further Environmental Sustainability
Goal 3: Pursue Water Security & Sustainable Management of Water Resources
Goal 8: Implement Capital Improvement Plans (CIP) Projects Miscellaneous/Other

DOCUMENTS ATTACHMENTS:

Resolution_Water Mgmnt Plan
Attachment A
L&S Professional Services Agreement
West Yost Professional Services Agreement

CITY OF ST. HELENA

RESOLUTION NO. 2024-

(1) ACKNOWLEDGING THE ESTABLISHMENT OF CAPITAL IMPROVEMENT PROGRAM PROJECT W25-03 AND BUDGET OF $282,000 AS ADOPTED BY COUNCIL AT THE 9/24/24 MEETING TO DEVELOP A WATER MANAGEMENT PLAN; (2) AUTHORIZING THE CITY MANAGER TO EXECUTE A PROFESSIONAL SERVICES AGREEMENT WITH LUHDORFF & SCALMANINI (L&S) FOR THE ASSESSMENT OF WATER SUPPLY STRATEGIES FOR THE AMOUNT OF $45,500, ALONG WITH A CONTINGENCY, FOR A TOTAL AMOUNT OF $49,901; AND (3) AUTHORIZING THE CITY MANAGER TO EXECUTE A PROFESSIONAL SERVICES AGREEMENT WITH WEST YOST FOR A WATER MANAGEMENT PLAN FOR AN AMOUNT OF $211,628, ALONG WITH A CONTINGENCY, FOR A TOTAL AMOUNT OF $232,099

RECITALS

A. The 2024 Safe Yield Estimate calculates lower potential yields from Bell Canyon Reservoir and Stonebridge Wells while the City's water demand increases; and

B. The creation of the W25-03 Project with a budget of $282,000 from the water enterprise bond proceeds will help the City explore potential future water supplies and potential conservation measures to help mitigate the supply and demand issues; and

C. L&S has provided a proposed scope of services to explore water supply strategies for a not-to-exceed amount of $45,500; and

D. West Yost has provided a proposed scope of services to create a water management plan for a not-to-exceed amount of $211,628; and

E. L&S and West Yost are capable of performing this work within an appropriate duration and budget; and

F. The City of St. Helena desires to enter into an agreement with L&S, and desires to enter into an agreement with West Yost.

RESOLUTION

The City Council of the City of St. Helena hereby resolves as follows:

1. Acknowledges the creation of the CIP Project W25-03 and allocation of funds in the amount of $282,000 from funding sources outlined in Attachment A for the project budget during the 9/24/24 Council action to adopt the 5-year Capital Improvement Program.
2. Authorizes the City Manager to execute a professional services agreement with Luhdorff and Scalmanini for the Assessment of Water Supply Strategies for an amount of $45,500, along with a contingency, for a total not-to-exceed fee of $49,901.
3. Authorizes the City Manager to execute a professional services agreement with West Yost for the Water Management Plan for an amount of $211,628, along with a contingency, for a total not-to-exceed fee of $232,099.
4. Authorizes the Director of Public Works to approve change orders not-to-exceed each of Luhdorff and Scalmanini's and West Yost's contract amounts.
5. Project expenditures are being updated as follows to include the contingency:

Expenditures	FY 24-25/Project Total
3110- Design	$232,099
3110- Design	$49,901
Expenditure Totals	$282,000

Approved at a Regular Meeting of the St. Helena City Council on October 8, 2024 by the following vote:

Mayor Dohring: _____
Vice Mayor Hall: _____
Councilmember Chouteau: _____
Councilmember Kenealy: _____
Councilmember Summers: _____

APPROVED: ATTEST:

_____ _____
Paul Jamison Dohring, Mayor Cindy Tzafopoulos, City Clerk

Water Management Plan

Project No: **W25-03**

Category **Water**

Project Location: **Citywide**

Responsible Department: **Public Works**

PROJECT PURPOSE & DESCRIPTION: Develop a Water Management Plan that provides strategy for management of water portfolio (including groundwater, surface water, recycled water, etc.), comparable to an Urban Water Management Plan for larger water purveyors.

NOTES: FY25 - new project; includes budget for two consultants: one for overall plan ($232k), another for detailed review of new well opportunities/constraints ($50k); seeking Council authorization to execute 2-PSAs on 10/08/24.

EXPENDITURE ACCOUNTS: **Fund:** 763 **Dept:** 5030

EXPENDITURES	Total as of 06/30/24	Rollover to FY25	2024-25	2025-26	2026-27	2027-28	2028-29	PROJECT TOTAL
3110 - Design			232,000					232,000
3110 - Design			50,000					50,000
EXPENDITURE TOTALS			282,000					282,000
FUNDING SOURCES								
763-Water Capital Improvement			262,000					262,000
763-Water Capital Improvement - Bond			10,000					10,000
764-Water Impact Fees			10,000					10,000
FUNDING TOTALS			282,000					282,000

CITY OF ST. HELENA
PROFESSIONAL SERVICES AGREEMENT

This Agreement is made and entered into as of October 8, 2024 by and between the City of St. Helena, a public agency organized and operating under the laws of the State of California ("City"), and Luhdorff & Scalmanini Consulting Engineers, a Inc. with its principal place of business at 500 First Street, Woodland, CA 95695 (hereinafter referred to as "Consultant"). City and Consultant are sometimes individually referred to as "Party" and collectively as "Parties" in this Agreement.

RECITALS

A. City is a public agency of the State of California and is in need of professional services for the following project:

Water Management Plan – Assessment of Water Supply Strategies (hereinafter referred to as "the Project").

B. Consultant is duly licensed and has the necessary qualifications to provide such services.

C. The Parties desire by this Agreement to establish the terms for City to retain Consultant to provide the services described herein.

AGREEMENT

NOW, THEREFORE, IT IS AGREED AS FOLLOWS:

1. Services.

Consultant shall provide the City with the services described in the Scope of Services attached hereto as Exhibit "A."

2. Compensation.

a. Subject to paragraph 2(b) below, the City shall pay for such services in accordance with the Schedule of Charges set forth in Exhibit "A."

b. In no event shall the total amount paid for services rendered by Consultant under this Agreement exceed the sum of $45,500. This amount is to cover all printing and related costs, and the City will not pay any additional fees for printing expenses. Periodic payments shall be made within 30 days of receipt of an invoice which includes a detailed description of the work performed. Payments to Consultant for work performed will be made on a monthly billing basis.

3. Additional Work.

If changes in the work seem merited by Consultant or the City, and informal consultations with the other party indicate that a change is warranted, it shall be processed in the following manner: a letter outlining the changes shall be forwarded to the City by Consultant with a

statement of estimated changes in fee or time schedule. An amendment to this Agreement shall be prepared by the City and executed by both Parties before performance of such services, or the City will not be required to pay for the changes in the scope of work. Such amendment shall not render ineffective or invalidate unaffected portions of this Agreement.

4. Maintenance of Records.

Books, documents, papers, accounting records, and other evidence pertaining to costs incurred shall be maintained by Consultant and made available at all reasonable times during the contract period and for four (4) years from the date of final payment under the contract for inspection by City.

5. Term.

The term of this Agreement shall be from October 8, 2024 to April 8,2025, unless earlier terminated as provided herein. The Parties may, by mutual, written consent, extend the term of this Agreement if necessary to complete the Project. Consultant shall perform its services in a prompt and timely manner within the term of this Agreement and shall commence performance upon receipt of written notice from the City to proceed ("Notice to Proceed"). The Notice to Proceed shall set forth the date of commencement of work.

Consultant shall perform its services in a prompt and timely manner and shall commence performance upon receipt of written notice from the City to proceed ("Notice to Proceed"). Consultant shall complete the services required hereunder within six months The Notice to Proceed shall set forth the date of commencement of work.

6. Delays in Performance.

a. Neither City nor Consultant shall be considered in default of this Agreement for delays in performance caused by circumstances beyond the reasonable control of the non-performing party. For purposes of this Agreement, such circumstances include but are not limited to, abnormal weather conditions; floods; earthquakes; fire; epidemics; pandemics; war; riots and other civil disturbances; strikes, lockouts, work slowdowns, and other labor disturbances; sabotage or judicial restraint.

b. Should such circumstances occur, the non-performing party shall, within a reasonable time of being prevented from performing, give written notice to the other party describing the circumstances preventing continued performance and the efforts being made to resume performance of this Agreement.

7. Compliance with Law.

a. Consultant shall comply with all applicable laws, ordinances, codes and regulations of the federal, state and local government, including Cal/OSHA requirements.

b. If required, Consultant shall assist the City, as requested, in obtaining and maintaining all permits required of Consultant by federal, state and local regulatory agencies.

c. If applicable, Consultant is responsible for all costs of clean up and/ or removal of hazardous and toxic substances spilled as a result of his or her services or operations performed under this Agreement.

8. Standard of Care; Performance of Employees

a. Consultant's services will be performed in accordance with generally accepted professional practices and principles and in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions.

b. Consultant's employees and subcontractors shall have sufficient skill and experience to perform the Services assigned to them. Consultant represents that it, its employees and subcontractors have all licenses, permits, qualifications and approvals of whatever nature that are legally required to perform the Services, including a City Business License, and that such licenses and approvals shall be maintained throughout the term of this Contract. As provided for in the indemnification provisions of this Contract, Consultant shall perform, at its own cost and expense and without reimbursement from the City, any services necessary to correct errors or omissions which are caused by the Consultant's failure to comply with the standard of care provided for herein. Any employee of the Consultant or its sub-consultants who is determined by the City to be uncooperative, incompetent, a threat to the adequate or timely completion of the Project, a threat to the safety of persons or property, or any employee who fails or refuses to perform the Services in a manner acceptable to the City, shall be promptly removed from the Project by the Consultant and shall not be re-employed to perform any of the Services or to work on the Project.

9. Assignment and Subcontracting

Consultant shall not assign, sublet, or transfer this Agreement or any rights under or interest in this Agreement without the written consent of the City, which may be withheld for any reason. Any attempt to so assign or so transfer without such consent shall be void and without legal effect and shall constitute grounds for termination. Subcontracts, if any, shall contain a provision making them subject to all provisions stipulated in this Agreement. Nothing contained herein shall prevent Consultant from employing independent associates and subcontractors as Consultant may deem appropriate to assist in the performance of services hereunder.

10. Independent Contractor

Consultant is retained as an independent contractor and is not an employee of City. No employee or agent of Consultant shall become an employee of City. The work to be performed shall be in accordance with the work described in this Agreement, subject to such directions and amendments from City as herein provided.

11. Insurance. Consultant shall not commence work for the City until it has provided evidence satisfactory to the City it has secured all insurance required under this section. In addition, Consultant shall not allow any subcontractor to commence work on any subcontract until it has secured all insurance required under this section.

a. Commercial General Liability

(i) The Consultant shall take out and maintain, during the performance of all work under this Agreement, in amounts not less than specified herein, Commercial General Liability Insurance, in a form and with insurance companies acceptable to the City.

(ii) Coverage for Commercial General Liability insurance shall be at least as broad as the following:

(1) Insurance Services Office Commercial General Liability coverage (Occurrence Form CG 00 01) or exact equivalent.

(iii) Commercial General Liability Insurance must include coverage for the following:

(1) Bodily Injury and Property Damage
(2) Personal Injury/Advertising Injury
(3) Premises/Operations Liability
(4) Products/Completed Operations Liability
(5) Aggregate Limits that Apply per Project
(6) Explosion, Collapse and Underground (UCX) exclusion deleted
(7) Contractual Liability with respect to this Agreement
(8) Property Damage
(9) Independent Contractors Coverage

(iv) The policy shall contain no endorsements or provisions limiting coverage for (1) contractual liability; (2) cross liability exclusion for claims or suits by one insured against another; (3) products/completed operations liability; or (4) contain any other exclusion contrary to the Agreement.

(v) The policy shall give City, its officials, officers, employees, agents and City designated volunteers additional insured status using ISO endorsement forms CG 20 10 10 01 and 20 37 10 01, or endorsements providing the exact same coverage.

(vi) The general liability program may utilize either deductibles or provide coverage excess of a self-insured retention, subject to written approval by the City, and provided that such deductibles shall not apply to the City as an additional insured.

b. Automobile Liability

(i) At all times during the performance of the work under this Agreement, the Consultant shall maintain Automobile Liability Insurance for bodily injury and property damage including coverage for owned, non-owned and hired vehicles, in a form and with insurance companies acceptable to the City.

(ii) Coverage for automobile liability insurance shall be at least as broad as Insurance Services Office Form Number CA 00 01 covering automobile liability (Coverage Symbol 1, any auto).

(iii) The policy shall give City, its officials, officers, employees, agents and City designated volunteers additional insured status.

(iv) Subject to written approval by the City, the automobile liability program may utilize deductibles, provided that such deductibles shall not apply to the City as an additional insured, but not a self-insured retention.

c. Workers' Compensation/Employer's Liability

(i) Consultant certifies that he/she is aware of the provisions of Section 3700 of the California Labor Code which requires every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and he/she will comply with such provisions before commencing work under this Agreement.

(ii) To the extent Consultant has employees at any time during the term of this Agreement, at all times during the performance of the work under this Agreement, the Consultant shall maintain full compensation insurance for all persons employed directly by him/her to carry out the work contemplated under this Agreement, all in accordance with the "Workers' Compensation and Insurance Act," Division IV of the Labor Code of the State of California and any acts amendatory thereof, and Employer's Liability Coverage in amounts indicated herein. Consultant shall require all subconsultants to obtain and maintain, for the period required by this Agreement, workers' compensation coverage of the same type and limits as specified in this section.

d. Professional Liability (Errors and Omissions)

At all times during the performance of the work under this Agreement the Consultant shall maintain professional liability or Errors and Omissions insurance appropriate to its profession, in a form and with insurance companies acceptable to the City and in an amount indicated herein. This insurance shall be endorsed to include contractual liability applicable to this Agreement and shall be written on a policy form specifically designed to protect against acts, errors or omissions of the Consultant. "Covered Professional Services" as designated in the policy must specifically include work performed under this Agreement. The policy must "pay on behalf of" the insured and must include a provision establishing the insurer's duty to defend.

e. Minimum Policy Limits Required

(i) The following insurance limits are required for the Agreement:

	Combined Single Limit
Commercial General Liability	$1,000,000 per occurrence/ $2,000,000 aggregate for bodily injury, personal injury, and property damage
Automobile Liability	$1,000,000 combined single limit
Employer's Liability	$1,000,000 per accident or disease
Professional Liability	$1,000,000 per claim and aggregate (errors and omissions)

(ii) Defense costs shall be payable in addition to the limits.

(iii) Requirements of specific coverage or limits contained in this section are not intended as a limitation on coverage, limits, or other requirement, or a waiver of any coverage normally provided by any insurance. Any available coverage shall be provided to the parties required to be named as Additional Insured pursuant to this Agreement.

f. Evidence Required

Prior to execution of the Agreement, the Consultant shall file with the City evidence of insurance from an insurer or insurers certifying to the coverage of all insurance required herein. Such evidence shall include original copies of the ISO CG 00 01 (or insurer's equivalent) signed by the insurer's representative and Certificate of Insurance (Acord Form 25-S or equivalent), together with required endorsements. All evidence of insurance shall be signed by a properly authorized officer, agent, or qualified representative of the insurer and shall certify the names of the insured, any additional insureds, where appropriate, the type and amount of the insurance, the location and operations to which the insurance applies, and the expiration date of such insurance.

g. Policy Provisions Required

(i) Consultant shall provide the City at least thirty (30) days prior written notice of cancellation of any policy required by this Agreement, except that the Consultant shall provide at least ten (10) days prior written notice of cancellation of any such policy due to non-payment of premium. If any of the required coverage is cancelled or expires during the term of this Agreement, the Consultant shall deliver renewal certificate(s) including the General Liability Additional Insured Endorsement to the City at least ten (10) days prior to the effective date of cancellation or expiration.

(ii) The Commercial General Liability Policy and Automobile Policy shall each contain a provision stating that Consultant's policy is primary insurance and that any insurance, self-insurance or other coverage maintained by the City or any named insureds shall not be called upon to contribute to any loss.

(iii) The retroactive date (if any) of each policy is to be no later than the effective date of this Agreement. Consultant shall maintain such coverage continuously for a period of at least three years after the completion of the work under this Agreement. Consultant shall purchase a one (1) year extended reporting period A) if the retroactive date is advanced past the effective date of this Agreement; B) if the policy is cancelled or not renewed; or C) if the policy is replaced by another claims-made policy with a retroactive date subsequent to the effective date of this Agreement.

(iv) All required insurance coverages, except for the professional liability coverage, shall contain or be endorsed to provide a waiver of subrogation in favor of the City, its officials, officers, employees, agents, and volunteers or shall specifically allow Consultant or others providing insurance evidence in compliance with these specifications to waive their right of recovery prior to a loss. Consultant hereby waives its own right of recovery against City, and shall require similar written express waivers and insurance clauses from each of its subconsultants.

(v) The limits set forth herein shall apply separately to each insured against whom claims are made or suits are brought, except with respect to the limits of liability. Further the limits set forth herein shall not be construed to relieve the Consultant from liability in

excess of such coverage, nor shall it limit the Consultant's indemnification obligations to the City and shall not preclude the City from taking such other actions available to the City under other provisions of the Agreement or law.

h. Qualifying Insurers

(i) All policies required shall be issued by acceptable insurance companies, as determined by the City, which satisfy the following minimum requirements:

(1) Each such policy shall be from a company or companies with a current A.M. Best's rating of no less than A:VII and admitted to transact in the business of insurance in the State of California, or otherwise allowed to place insurance through surplus line brokers under applicable provisions of the California Insurance Code or any federal law.

i. Additional Insurance Provisions

(i) The foregoing requirements as to the types and limits of insurance coverage to be maintained by Consultant, and any approval of said insurance by the City, is not intended to and shall not in any manner limit or qualify the liabilities and obligations otherwise assumed by the Consultant pursuant to this Agreement, including but not limited to, the provisions concerning indemnification.

(ii) If at any time during the life of the Agreement, any policy of insurance required under this Agreement does not comply with these specifications or is canceled and not replaced, City has the right but not the duty to obtain the insurance it deems necessary and any premium paid by City will be promptly reimbursed by Consultant or City will withhold amounts sufficient to pay premium from Consultant payments. In the alternative, City may cancel this Agreement.

(iii) The City may require the Consultant to provide complete copies of all insurance policies in effect for the duration of the Project.

(iv) Neither the City nor any of its officials, officers, employees, agents or volunteers shall be personally responsible for any liability arising under or by virtue of this Agreement.

j. Subconsultant Insurance Requirements. Consultant shall not allow any subcontractors or subconsultants to commence work on any subcontract until they have provided evidence satisfactory to the City that they have secured all insurance required under this section. Policies of commercial general liability insurance provided by such subcontractors or subconsultants shall be endorsed to name the City as an additional insured using ISO form CG 20 38 04 13 or an endorsement providing the exact same coverage. If requested by Consultant, City may approve different scopes or minimum limits of insurance for particular subcontractors or subconsultants.

12. Indemnification.

a. To the fullest extent permitted by law, Consultant shall defend (with counsel of City's choosing), indemnify and hold the City, its officials, officers, employees, volunteers, and agents free and harmless from any and all claims, demands, causes of action, costs, expenses,

liability, loss, damage or injury of any kind, in law or equity, to property or persons, including wrongful death, in any manner arising out of, pertaining to, or incident to any acts, errors or omissions, or willful misconduct of Consultant, its officials, officers, employees, subcontractors, consultants or agents in connection with the performance of the Consultant's services, the Project or this Agreement, including without limitation the payment of all damages, expert witness fees and attorney's fees and other related costs and expenses. Consultant's obligation to indemnify shall not be restricted to insurance proceeds, if any, received by Consultant, the City, its officials, officers, employees, agents, or volunteers.

b. If Consultant's obligation to defend, indemnify, and/or hold harmless arises out of Consultant's performance of "design professional" services (as that term is defined under Civil Code section 2782.8), then, and only to the extent required by Civil Code section 2782.8, which is fully incorporated herein, Consultant's indemnification obligation shall be limited to claims that arise out of, pertain to, or relate to the negligence, recklessness, or willful misconduct of the Consultant, and, upon Consultant obtaining a final adjudication by a court of competent jurisdiction, Consultant's liability for such claim, including the cost to defend, shall not exceed the Consultant's proportionate percentage of fault.

13. California Labor Code Requirements.

a. Consultant is aware of the requirements of California Labor Code Sections 1720 et seq. and 1770 et seq., which require the payment of prevailing wage rates and the performance of other requirements on certain "public works" and "maintenance" projects ("Prevailing Wage Laws"). If the services are being performed as part of an applicable "public works" or "maintenance" project, as defined by the Prevailing Wage Laws, and if the total compensation is $1,000 or more, Consultant agrees to fully comply with such Prevailing Wage Laws. Consultant shall defend, indemnify and hold the City, its officials, officers, employees and agents free and harmless from any claims, liabilities, costs, penalties or interest arising out of any failure or alleged failure to comply with the Prevailing Wage Laws. It shall be mandatory upon the Consultant and all subconsultants to comply with all California Labor Code provisions, which include but are not limited to prevailing wages (Labor Code Sections 1771, 1774 and 1775), employment of apprentices (Labor Code Section 1777.5), certified payroll records (Labor Code Sections 1771.4 and 1776), hours of labor (Labor Code Sections 1813 and 1815) and debarment of contractors and subcontractors (Labor Code Section 1777.1). The requirement to submit certified payroll records directly to the Labor Commissioner under Labor Code section 1771.4 shall not apply to work performed on a public works project that is exempt pursuant to the small project exemption specified in Labor Code Section 1771.4.

b. If the services are being performed as part of an applicable "public works" or "maintenance" project, then pursuant to Labor Code Sections 1725.5 and 1771.1, the Consultant and all subconsultants performing such services must be registered with the Department of Industrial Relations. Consultant shall maintain registration for the duration of the Project and require the same of any subconsultants, as applicable. Notwithstanding the foregoing, the contractor registration requirements mandated by Labor Code Sections 1725.5 and 1771.1 shall not apply to work performed on a public works project that is exempt pursuant to the small project exemption specified in Labor Code Sections 1725.5 and 1771.1.

c. This Agreement may also be subject to compliance monitoring and enforcement by the Department of Industrial Relations. It shall be Consultant's sole responsibility to comply with all applicable registration and labor compliance requirements. Any stop orders issued by the Department of Industrial Relations against Consultant or any subcontractor that

affect Consultant's performance of services, including any delay, shall be Consultant's sole responsibility. Any delay arising out of or resulting from such stop orders shall be considered Consultant caused delay and shall not be compensable by the City. Consultant shall defend, indemnify and hold the City, its officials, officers, employees and agents free and harmless from any claim or liability arising out of stop orders issued by the Department of Industrial Relations against Consultant or any subcontractor.

14. Safety.

Consultant shall execute and maintain its work so as to avoid injury or damage to any person or property. In carrying out its Services, the Consultant shall at all times be in compliance with all applicable local, state and federal laws, rules and regulations, and shall exercise all necessary precautions for the safety of employees appropriate to the nature of the work and the conditions under which the work is to be performed. Safety precautions as applicable shall include, but shall not be limited to: (A) adequate life protection and life-saving equipment and procedures; (B) instructions in accident prevention for all employees and subcontractors, such as safe walkways, scaffolds, fall protection ladders, bridges, gang planks, confined space procedures, trenching and shoring, equipment and other safety devices, equipment and wearing apparel as are necessary or lawfully required to prevent accidents or injuries; and (C) adequate facilities for the proper inspection and maintenance of all safety measures.

15. Verification of Employment Eligibility.

By executing this Agreement, Consultant verifies that it fully complies with all requirements and restrictions of state and federal law respecting the employment of undocumented aliens, including, but not limited to, the Immigration Reform and Control Act of 1986, as may be amended from time to time, and shall require all subconsultants and sub-subconsultants to comply with the same.

16. INTENTIONALLY DELETED

17. Laws and Venue.

This Agreement shall be interpreted in accordance with the laws of the State of California. If any action is brought to interpret or enforce any term of this Agreement, the action shall be brought in a the Superior Court of California for the County of Napa.

18. Termination or Abandonment

a. City has the right to terminate or abandon any portion or all of the work under this Agreement by giving ten (10) calendar days written notice to Consultant. In such event, City shall be immediately given title and possession to all original field notes, drawings and specifications, written reports and other documents produced or developed for that portion of the work completed and/or being abandoned. City shall pay Consultant the reasonable value of services rendered for any portion of the work completed prior to termination. If said termination occurs prior to completion of any task for the Project for which a payment request has not been received, the charge for services performed during such task shall be the reasonable value of such services, based on an amount mutually agreed to by City and Consultant of the portion of such task completed but not paid prior to said termination. City shall not be liable for any costs other than the charges or portions thereof which are specified herein. Consultant shall not be

entitled to payment for unperformed services, and shall not be entitled to damages or compensation for termination of work.

b. Consultant may terminate its obligation to provide further services under this Agreement upon thirty (30) calendar days' written notice to City only in the event of substantial failure by City to perform in accordance with the terms of this Agreement through no fault of Consultant.

19. Ownership of Documents and Confidential Information.

a. All deliverables and other documents generated by Consultant in the performance of the Services, including all work papers, work-in-progress, designs, drawings, documents, data, computations, specifications, studies and reports prepared by Consultant as a part of the Services or authorized Additional Services ("Consultant Work Product") shall belong to and be subject to the sole ownership and use of City.

b. Except as otherwise provided in "Termination or Abandonment," above, all original field notes, written reports, drawings and specifications and other documents, produced or developed for the Project shall, upon payment in full for the services described in this Agreement, be furnished to and become the property of the City.

c. During the course of the performance of this Agreement, Consultant may receive written or verbal information from City, its representatives or agents, not in the public domain. Such information may include City's know how, trade secrets, and other proprietary and confidential information and Consultant agrees to treat such information as confidential information belonging to City. Consultant agrees that neither it, nor its officers, employees, representatives, agents, successors, or assigns, will disclose such information to any third party or use the same in any manner without the prior written consent of City. Moreover, Consultant agrees to safeguard such proprietary and confidential information from unauthorized disclosure and/or use using the same degree of care it uses to protect its own proprietary and confidential information, but not less than a reasonable standard of care. In the event that disclosure of such information is sought pursuant to any law or regulation, Consultant shall promptly notify City of such fact to allow City to assert whatever exclusions or exemptions may be available to it under applicable law or regulation.

20. Organization

Consultant shall assign Nick Watterson as Project Manager. The Project Manager shall not be removed from the Project or reassigned without the prior written consent of the City.

21. Limitation of Agreement.

This Agreement is limited to and includes only the work included in the Project described above.

22. Notice

Any notice or instrument required to be given or delivered by this Agreement may be given or delivered by depositing the same in any United States Post Office, certified mail, return receipt requested, postage prepaid, addressed to:

CITY:	CONSULTANT:
City of St. Helena	Luhdorff & Scalmanini Consulting Engineers
1088 College Avenue, St. Helena, CA 94574	500 First Street
Attn: Joseph Leach, PW Director	Woodland, CA 95695

and shall be effective upon receipt thereof.

23. Third Party Rights

Nothing in this Agreement shall be construed to give any rights or benefits to anyone other than the City and the Consultant.

24. Equal Opportunity Employment.

Consultant represents that it is an equal opportunity employer and that it shall not discriminate against any employee or applicant for employment because of race, religion, color, national origin, ancestry, sex, age or other interests protected by the State or Federal Constitutions. Such non-discrimination shall include, but not be limited to, all activities related to initial employment, upgrading, demotion, transfer, recruitment or recruitment advertising, layoff or termination.

25. Entire Agreement

This Agreement, with its exhibits, represents the entire understanding of City and Consultant as to those matters contained herein, and supersedes and cancels any prior or contemporaneous oral or written understanding, promises or representations with respect to those matters covered hereunder. Each Party acknowledges that no representations, inducements, promises or agreements have been made by any person which are not incorporated herein, and that any other agreements shall be void. This Agreement may not be modified or altered except in writing signed by both Parties hereto. This is an integrated Agreement.

26. Severability

The unenforceability, invalidity or illegality of any provision(s) of this Agreement shall not render the remaining provisions unenforceable, invalid or illegal.

27. Successors and Assigns

This Agreement shall be binding upon and shall inure to the benefit of the successors in interest, executors, administrators and assigns of each Party to this Agreement. However, Consultant shall not assign or transfer by operation of law or otherwise any or all of its rights, burdens, duties or obligations without the prior written consent of City. Any attempted assignment without such consent shall be invalid and void.

28. Non-Waiver

None of the provisions of this Agreement shall be considered waived by either Party, unless such waiver is specifically specified in writing.

29. Time of Essence

Time is of the essence for each and every provision of this Agreement.

30. City's Right to Employ Other Consultants

City reserves its right to employ other consultants, including engineers, in connection with this Project or other projects.

31. Prohibited Interests

Consultant maintains and warrants that it has not employed nor retained any company or person, other than a bona fide employee working solely for Consultant, to solicit or secure this Agreement. Further, Consultant warrants that it has not paid nor has it agreed to pay any company or person, other than a bona fide employee working solely for Consultant, any fee, commission, percentage, brokerage fee, gift or other consideration contingent upon or resulting from the award or making of this Agreement. For breach or violation of this warranty, City shall have the right to rescind this Agreement without liability. For the term of this Agreement, no director, official, officer or employee of City, during the term of his or her service with City, shall have any direct interest in this Agreement, or obtain any present or anticipated material benefit arising therefrom.

[SIGNATURES ON FOLLOWING PAGE]

SIGNATURE PAGE FOR PROFESSIONAL SERVICES AGREEMENT BETWEEN CITY OF ST. HELENA AND LUHDORFF & SCALMANINI CONSULTING ENGINEERS

IN WITNESS WHEREOF, the Parties have executed this Agreement as of the date first written above.

CITY OF ST. HELENA

By: _____
Anil Comelo
City Manager

Luhdorff & Scalmanini Consulting Engineers

By: Will Halligan

Its: President

Printed Name: Will Halligan

ATTEST:

By: _____
Cindy Tzafopoulos, City Clerk

EXHIBIT A

Scope of Services

Luhdorff & Scalmanini
Consulting Engineers

July 3, 2024

Project No. 24-1-087

Mr. Joe Leach, PE
Director of Public Works/City Engineer
City of St. Helena Public Works
1088 College Avenue
City of St. Helena, CA 94574

SUBJECT: **Proposal for Assessment of Water Supply Strategies**

Dear Mr. Leach:

We appreciated the opportunity to discuss with you and Eric Janzen the City of St. Helena's (City's) interests in exploring future water supply strategies that would align with the City's objectives to meet service area water demands and also align with Napa Valley Subbasin groundwater sustainability objectives. In response to your request, Luhdorff and Scalmanini, Consulting Engineers (LSCE) has prepared this scope of work and budget for supporting the City in evaluating water supply strategies to improve water supply reliability with consideration of approaches that could help sustainable groundwater management efforts in the Napa Valley Subbasin. This scope of work and budget includes exploring technical considerations related to three concepts of interest in the City's water supply strategic planning: 1) evaluation of the hydrogeology at a potential new production well site near the Lower Reservoir located outside the Napa Valley Subbasin, 2) identification of and evaluation of hydrogeology for one potential new production well site within the Napa Valley Subbasin, 3) modeling effects of modified well operations (including use of a new well) and recycled water use.

Evaluate hydrogeologic feasibility of a new municipal groundwater well outside the Napa Valley Subbasin

Through consideration of the City's existing water infrastructure, the City has identified a location of interest for a new well site that is outside the Napa Valley Subbasin. The site is located near the Lower Reservoir (a non-potable supply owned and operated by the City) and by developing a new groundwater supply outside the Subbasin, less groundwater would be pumped from the Subbasin, including less groundwater pumping at the Stonebridge Well location, which could benefit groundwater management efforts for the City and the Subbasin. There are potential hydrogeologic constraints associated with constructing a well outside the Subbasin. LSCE would evaluate and provide information related to the potential feasibility of developing sufficient groundwater supply at this site and the permitting process this would involve. This would include consideration of potential for the Lower Reservoir to provide groundwater recharge.

500 First Street, Woodland, CA 95695 • Tel. 530.661.0109 • Fax. 530.661.6806 • lsce.com

Evaluate hydrogeologic feasibility of a new municipal groundwater well inside the Napa Valley Subbasin

The City would like to evaluate options for developing a new municipal groundwater well at a site located within the City's service area and in the Napa Valley Subbasin. This involves considering well sites located farther from the Napa River and tributaries (preferably farther than 1,500 feet from significant streams) in the interest of reducing potential for stream depletion caused by pumping. By developing a new supply, less groundwater could be pumped from the City's Stonebridge Wells site, which could benefit groundwater management efforts for the City and the Subbasin. LSCE would evaluate and provide information related to the potential feasibility of developing sufficient groundwater supply at potential City-owned properties and the permitting process this would involve. LSCE would preliminarily assess potential City properties and conduct refined assessment of one selected site, based on consideration of preliminary well sites' characteristics.

Model effects on groundwater from modified well system operations and use of recycled water

The City is interested in utilizing recycled water as an alternative and/or supplemental source of water and considering modified operations of its well system (including any new wells) to help support sustainable groundwater management in the vicinity of the City. The City is in the process of implementing tertiary treatment for a recycled water system and has also preliminarily explored interest in the use of recycled water by local growers as an alternative source of water supply. LSCE would utilize the integrated hydrologic model developed for the Napa Valley Subbasin (Napa Valley Integrated Hydrologic Model [NVIHM]) to conduct model simulations of different scenarios of recycled water delivery to assess the potential benefits to groundwater sustainability, especially in terms of reduced groundwater pumping and reduced stream depletion. Model scenarios of recycled water use would consider where current agricultural (and other) pumping is occurring in the vicinity of the City, and particularly pumping occurring in proximity to significant streams, to identify potential higher-priority areas for delivering recycled water. Additionally, LSCE would utilize the NVIHM to develop model simulations to evaluate the benefit to Subbasin groundwater conditions (primarily stream depletion) from modified operations of City wells, including transferring production from the City's existing Stonebridge Wells to a new City well(s).

The scope of work also includes preparation of two separate reports summarizing the results from the hydrogeologic evaluations and the modeling analyses as well as performing project management activities, including participation in meetings and coordination with City staff and the City's other consultants (e.g., West Yost Associates, or other consultants to the City) on water system planning and management.

SCOPE OF SERVICES

The following describes each of the key tasks necessary to perform this proposed Scope of Services.

Task 1. Project Coordination and Administration

Task 1.1. Kickoff and Information Request

LSCE's work on the project will begin with a kickoff meeting with City staff and key LSCE team members to discuss the various aspects of the project. Items such as contact information, chain of command, the City's project expectations, respective roles and responsibilities, schedule, design preferences and parameters, and site requirements/constraints shall be discussed at the kickoff meeting. Following the meeting, LSCE will provide the City with a list of requested information.

Task 1.2. Project Coordination and Meetings

Key LSCE team members will attend meetings with the City and with any key consultants to the City to discuss various aspects of the project. For key meetings, LSCE will prepare and distribute meeting agendas, minutes, and action item summaries, as appropriate. LSCE assumes there will be four meetings throughout the duration of the project. One of the key meetings will include presentation of results from the evaluations conducted as part of this scope. LSCE will also provide frequent updates via email, telephone or web-based platforms throughout the project as needed, including coordination with any of the City's consultants involved in the project. LSCE will coordinate closely with the City to ensure that LSCE is not duplicating any work that is already under (or will in the future be under) the purview of its other consultants.

Task 1.3. Project Administration

This task provides for project management and administrative activities such as:

- Contractual arrangements
- Ongoing examination regarding adherence to scope, budget, and schedule
- Coordination of staff resources
- Internal review of work products
- Billing review
- Scoping and budgeting

Task 2. Hydrogeologic Investigation and Well Siting Evaluations

The goals of Task 2 are to:

- Refine the hydrogeologic conceptual model (HCM) locally for the area; the locally-refined HCM will be used to evaluate the hydrogeologic conditions at different potential well locations.
- Evaluate suitability of sites/areas for a new well and facilities including access for construction and maintenance
- Conduct a preliminary environmental review of sites to identify any existing or potential sources of contamination that may impact siting a future water supply well
- Develop information to support preparation of a report presenting findings of the investigation and recommendations for further site-specific characterization

Task 2.1. Hydrogeologic Investigation

LSCE understands that the City is interested in exploring the possibility of constructing a drinking water supply well in two different areas: 1) a site located at the Lower Reservoir, and 2) properties owned by

the City within its service area in the Napa Valley Subbasin. Within the Subbasin, LSCE will preliminarily assess potential City properties and coordinate with the City to select and for LSCE to conduct refined assessment of one selected site, based on consideration of preliminary well sites' characteristics.

LSCE will collect, review, and utilize available data and our own inhouse information to refine the HCM in the areas of the Lower Reservoir and the City's broader service area to preliminarily characterize site specific conditions (well depth, water quality, yield) at potential well sites. LSCE will utilize the following sources of data and information to refine our understanding of the site locations of interest:

- Well construction details, lithology, geophysical logs, water quality, water levels, and well performance of City wells and other wells in the vicinity of the sites
- State of California Water Well Drillers Completion Reports
- The Napa Valley Subbasin Groundwater Sustainability Plan (GSP) and associated technical reports and GSP implementation workplans
- Napa County annual groundwater monitoring reports
- Previous work completed by LSCE for the City or in vicinity of the City
- Hydrogeologic reports prepared by California Department of Water Resources (DWR), United States Geological Survey (USGS), California Department of Oil and Gas, and Others
- Napa County Health Department
- Reports prepared for the City by others
- California State Water Resources Control Board, Division of Drinking Water (DDW)
- Local drilling and pump contractors

As part of the hydrogeologic investigation, LSCE will prepare or update generalized geologic cross sections through the study areas. The cross section(s) will be used to estimate depth of water bearing strata, the probable water quality at different depths, and, if warranted, to recommend depths for future site-specific investigation.

Task 2.2. Well Siting Evaluation

LSCE will investigate potential sources of groundwater contamination near the vicinity of potential well sites. LSCE will evaluate available information on possible sources of contamination and use this information and other references to address source water protection as required by the DWSAP program.

Information on contaminant sources (real or potential), if identified, may be used to exclude a site from consideration for a new well, to design well features to mitigate the potential for contamination, or explore treatment options. In addition to the information sources listed under Task 2.1, LSCE will review information from the following sources:

- Napa County Health Department
- GeoTracker
- California Department of Toxic Substance Control (DTSC)
- Environmental Data Resources, Inc. (EDR)
- Sanborn Maps

Based on the preliminary review of hydrogeology and contaminant sources, LSCE will evaluate identified potential site(s) for new well and facilities constructability, operations, and maintenance. Specific items to be assessed will include:

- Site Size
- Site Access
- Minimum setback distances from sanitary features per DDW regulations
- Land use – site and vicinity
- Seasonal ground conditions
- Location relative to distribution system
- Location relative to utilities
- Equipment layout
- Water supply for drilling
- Fluids disposal
- Cuttings storage and disposal
- Neighbors
- Need for sound attenuation
- Safety/security
- Real or potential land surface and/or groundwater contamination

LSCE will also evaluate which permits and notifications will be required for future site exploratory work and construction of a municipal well at the sites of interest. Permit requirements and fees will be summarized in the report prepared as part of Task 3. Typical permits required include:

- Drilling (Napa County Planning, Building and Environmental Services Department)
- Well Location (Napa County)
- Encroachment (City of St. Helena and/or Napa County)
- Construction (City of St. Helena)
- Sanitary Sewer Discharge (City of St. Helena)
- Storm Sewer Discharge (City of St. Helena)

Task 3. Hydrogeologic Investigation Summary Report

Task 3 includes the preparation and submission of a report to the City summarizing our investigation and discussing the potential yield and water quality of a well constructed in the study areas based on LSCE's initial hydrogeologic investigation. The report will also discuss findings regarding the constructability of the site(s) and the ability to construct a fully permitted municipal water supply well at the site(s). LSCE will schedule a meeting with City personnel to discuss the findings and recommendations contained in the report. The report will include:

- Summary of data and information collected and reviewed as part of hydrogeologic investigation and preliminary site evaluation
- Analysis of constructability, operation, and maintenance of a new well at the site
- Summary of identified environmental factors of each site that may have bearing on well siting and possible mitigations of those factors

- Summary of potential water quality issues at the site(s) and strategies to address poor quality water

If a site(s) is determined to be favorable for construction of a new well, the report will also include:

- A preliminary production well design
- Recommendations for further investigation to characterize site-specific lithology, water quality, and to gather information to finalize a well design utilizing test holes and either zone sampling or monitoring wells.
- Summary of CEQA requirements for a new well and facilities installation and use
- Conceptual site plan depicting:
    - Proposed test hole and production well locations
    - Setback distances from sanitary features per DDW regulations
    - Conceptual station layout
    - Materials and cuttings storage locations
    - Fluid containment and/or disposal locations
    - Sound wall layout
    - Site best management practices (BMPs)
    - Water supply for drilling
    - Site ingress and egress

Task 4. Modeling of Well Operations and Recycled Water Use Scenarios

Task 4 includes utilizing the NVIHM to develop up to four model scenarios to evaluate the benefits to groundwater conditions in the vicinity of the City and Subbasin from two water supply strategies: 1) modifications to well operations and 2) use of recycled water to offset groundwater pumping. The model scenarios would include simulating potential changes to the distribution and timing of groundwater pumping for City wells involving the addition of one new production well at a potential well site selected in coordination with well siting activities occurring as part of Tasks 2 and 3. LSCE will also conduct model simulations to evaluate the effects of using recycled water in priority areas within and adjacent to the City's service area to offset groundwater pumping. Priority areas for recycled water will be identified based on consideration of locations of current groundwater pumping for agricultural and other purposes, especially in close proximity to significant streams, where the potential to impact interconnected surface water conditions is greater. In coordination with City staff and consultants, additional consideration of City water and wastewater infrastructure will also be incorporated in the development of model scenarios. The modeling will include evaluating simulated water budgets and groundwater levels at different scales to estimate effects and benefits from the two water supply strategies and consideration of the timing of effects/benefits as they relate to sustainable management criteria specified in the Napa Valley Subbasin GSP.

Task 5. Modeling Analyses Summary Report

This task includes preparation of a report summarizing the modeling conducted as part of Task 4. The report will document the development of the model scenarios used to evaluate the two water supply

strategies and will detail important considerations and assumptions used in the modeling and approaches to simulating each of the different water supply strategies. The summary report will also present model results and provide interpretations of the results as they relate to evaluation of the benefits to groundwater conditions and groundwater sustainability in the area. LSCE will provide conclusions and recommendations for any next steps based on the results from the modeling, including considerations for well operations to mitigate potential impacts on groundwater and interconnected surface water conditions.

Task 6. As-Needed Technical Support

Through this task, LSCE will provide technical assistance, as requested, to support the evaluation of water supply strategies for the City. Services may include:

- Evaluation of additional potential well sites,
- Performing additional model scenarios to evaluate water supply strategies,
- Development of maps and other materials to support water supply planning,
- Participation in additional meetings with City staff, consultants, or groundwater users in the vicinity of the City, or
- Other as-needed technical support.

PROJECT BUDGET

The total estimated cost for all tasks included in the scope of work is $45,500. The current LSCE Schedule of Fees is enclosed for your reference. In the event the City requests out-of-scope work and additional funds are needed to complete the task(s), LSCE will seek authorization from the City before proceeding with the work.

Table 1. Estimated Project Budget

Tasks	Estimated Budget, dollars
Task 1. Project Coordination and Administration	$6,000
Task 2. Hydrogeologic Investigation and Well Siting Evaluation	$12,000
Task 3. Hydrogeologic Investigation Summary Report	$5,500
Task 4. Modeling of Well Operations and Recycled Water Use Scenarios	$12,000
Task 5. Modeling Analyses Summary Report	$5,000
Task 6. As-Needed Technical Support	$5,000
Total Project Budget	**$45,500**

SCHEDULE

LSCE is available to begin work upon receiving notice to proceed with the scope of work. We anticipate completion of the tasks associated with the hydrogeologic and well siting investigation (Tasks 2 and 3) within two months of receiving the notice to proceed. We expect completion of all tasks associated with the modeling of water supply strategies (Tasks 4 and 5) to require two months. To the extent possible, we will attempt to complete modeling work concurrent with the hydrogeologic and well siting investigation in an effort to complete the entire scope of work in less than four months from the date of the notice to proceed.

Sincerely,

LUHDORFF AND SCALMANINI
CONSULTING ENGINEERS

Nick Watterson, PG, CHG, Principal Hydrogeologist

Vicki Kretsinger Grabert, Senior Principal Hydrologist

Attachment(s): LSCE 2024 Schedule of Fees

Luhdorff & Scalmanini
Consulting Engineers
500 FIRST STREET • WOODLAND, CA 95695

2024 SCHEDULE OF FEES
ENGINEERING AND RELATED FIELD SERVICES

Professional*

Senior Principal	$260/hr.
Principal Professional	$248/hr.
Supervising Professional	$238/hr.
Senior Professional	$200 to 228/hr.
Project Professional	$182/hr.
Staff Professional	$165/hr.

Technical

ACAD DMS/GIS	$150/hr.
Engineering Assistant	$135/hr.
Scientist	$135/hr.
Technician	$135/hr.

Project Admin Support

Word Processing, Clerical	$105/hr.
Digital Communications Specialist	$115/hr.
Project Admin/Accounting Assistant	$115/hr.

Vehicle Use	$0.67/mi(or curr. IRS rate)
Subsistence	Cost Plus 15%
Groundwater Sampling Equipment (Includes Operator)	$200.00/hr
Copies	$0.20 ea.
Professional or Technical Testimony	200% of Regular Rates
Technical Overtime (if required)	150% of Regular Rates
Outside Services/Rentals	Cost Plus 15%
Services by Associate Firms	Cost Plus 15%
Prevailing Wage Rate	$200/hr until June 30, 2024
Prevailing Wage Rate	$205/hr effective July 1, 2024

** Engineer, Geologist, Hydrogeologist, and Hydrologist*

CITY OF ST. HELENA
PROFESSIONAL SERVICES AGREEMENT

This Agreement is made and entered into as of October 8, 2024 by and between the City of St. Helena, a public agency organized and operating under the laws of the State of California ("City"), and West Yost & Associates, a Inc. with its principal place of business at 2020 Research Park Drive Suite 100, Davis, CA 95618 (hereinafter referred to as "Consultant"). City and Consultant are sometimes individually referred to as "Party" and collectively as "Parties" in this Agreement.

RECITALS

A. City is a public agency of the State of California and is in need of professional services for the following project:

Water Management Plan – Preparation of a Water Management Plan (hereinafter referred to as "the Project").

B. Consultant is duly licensed and has the necessary qualifications to provide such services.

C. The Parties desire by this Agreement to establish the terms for City to retain Consultant to provide the services described herein.

AGREEMENT

NOW, THEREFORE, IT IS AGREED AS FOLLOWS:

1. Services.

Consultant shall provide the City with the services described in the Scope of Services attached hereto as Exhibit "A."

2. Compensation.

a. Subject to paragraph 2(b) below, the City shall pay for such services in accordance with the Schedule of Charges set forth in Exhibit "A."

b. In no event shall the total amount paid for services rendered by Consultant under this Agreement exceed the sum of $211,628. This amount is to cover all printing and related costs, and the City will not pay any additional fees for printing expenses. Periodic payments shall be made within 30 days of receipt of an invoice which includes a detailed description of the work performed. Payments to Consultant for work performed will be made on a monthly billing basis.

3. Additional Work.

If changes in the work seem merited by Consultant or the City, and informal consultations with the other party indicate that a change is warranted, it shall be processed in the following

manner: a letter outlining the changes shall be forwarded to the City by Consultant with a statement of estimated changes in fee or time schedule. An amendment to this Agreement shall be prepared by the City and executed by both Parties before performance of such services, or the City will not be required to pay for the changes in the scope of work. Such amendment shall not render ineffective or invalidate unaffected portions of this Agreement.

4. Maintenance of Records.

Books, documents, papers, accounting records, and other evidence pertaining to costs incurred shall be maintained by Consultant and made available at all reasonable times during the contract period and for four (4) years from the date of final payment under the contract for inspection by City.

5. Time of Performance.

The term of this Agreement shall be from October 8, 2024 to October 8, 2025 unless earlier terminated as provided herein. The Parties may, by mutual, written consent, extend the term of this Agreement if necessary to complete the Project. Consultant shall perform its services in a prompt and timely manner within the term of this Agreement and shall commence performance upon receipt of written notice from the City to proceed ("Notice to Proceed"). The Notice to Proceed shall set forth the date of commencement of work.

6. Delays in Performance.

a. Neither City nor Consultant shall be considered in default of this Agreement for delays in performance caused by circumstances beyond the reasonable control of the non-performing party. For purposes of this Agreement, such circumstances include but are not limited to, abnormal weather conditions; floods; earthquakes; fire; epidemics; pandemics; war; riots and other civil disturbances; strikes, lockouts, work slowdowns, and other labor disturbances; sabotage or judicial restraint.

b. Should such circumstances occur, the non-performing party shall, within a reasonable time of being prevented from performing, give written notice to the other party describing the circumstances preventing continued performance and the efforts being made to resume performance of this Agreement.

7. Compliance with Law.

a. Consultant shall comply with all applicable laws, ordinances, codes and regulations of the federal, state and local government, including Cal/OSHA requirements, in a manner consistent with the Standard of Care.

b. If required, Consultant shall assist the City, as requested, in obtaining and maintaining all permits required of Consultant by federal, state and local regulatory agencies.

c. If applicable, Consultant is responsible for all costs of clean up and/ or removal of hazardous and toxic substances spilled as a result of his or her services or operations performed under this Agreement.

8. Standard of Care; Performance of Employees

a. Consultant's services will be performed in accordance with generally accepted professional practices and principles and in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions at the same time and in the same or similar locality ("Standard of Care").

b. Consultant's employees and subcontractors shall have sufficient skill and experience to perform the Services assigned to them. Consultant represents that it, its employees and subcontractors have all licenses, permits, qualifications and approvals of whatever nature that are legally required to perform the Services, including a City Business License, and that such licenses and approvals shall be maintained throughout the term of this Contract. As provided for in the indemnification provisions of this Contract, Consultant shall perform, at its own cost and expense and without reimbursement from the City, any services necessary to correct errors or omissions which are caused by the Consultant's failure to comply with the Standard of Care provided for herein. Any employee of the Consultant or its sub-consultants who is determined by the City to be uncooperative, incompetent, a threat to the adequate or timely completion of the Project, a threat to the safety of persons or property, or any employee who fails or refuses to perform the Services in a manner acceptable to the City, shall be promptly removed from the Project by the Consultant and shall not be re-employed to perform any of the Services or to work on the Project.

9. Assignment and Subcontracting

Consultant shall not assign, sublet, or transfer this Agreement or any rights under or interest in this Agreement without the written consent of the City, which may be withheld for any reason. Any attempt to so assign or so transfer without such consent shall be void and without legal effect and shall constitute grounds for termination. Subcontracts, if any, shall contain a provision making them subject to all provisions stipulated in this Agreement. Nothing contained herein shall prevent Consultant from employing independent associates and subcontractors as Consultant may deem appropriate to assist in the performance of services hereunder.

10. Independent Contractor

Consultant is retained as an independent contractor and is not an employee of City. No employee or agent of Consultant shall become an employee of City. The work to be performed shall be in accordance with the work described in this Agreement, subject to such directions and amendments from City as herein provided.

11. Insurance. Consultant shall not commence services for the City until it has provided evidence satisfactory to the City it has secured all insurance required under this section. In addition, Consultant shall not allow any subcontractor to commence services on any subcontract until it has secured all insurance required under this section.

a. Commercial General Liability

(i) The Consultant shall take out and maintain, during the performance of all work under this Agreement, in amounts not less than specified herein, Commercial General Liability Insurance, in a form and with insurance companies acceptable to the City.

(ii) Coverage for Commercial General Liability insurance shall be at least as broad as the following:

(1) Insurance Services Office Commercial General Liability coverage (Occurrence Form CG 00 01) or exact equivalent.

(iii) Commercial General Liability Insurance must include coverage for the following:

(1) Bodily Injury and Property Damage
(2) Personal Injury/Advertising Injury
(3) Premises/Operations Liability
(4) Products/Completed Operations Liability
(5) Aggregate Limits that Apply per Project
(6) Explosion, Collapse and Underground (UCX) exclusion deleted
(7) Contractual Liability with respect to insured contracts
(8) Property Damage

(iv) The policy shall contain no endorsements or provisions limiting coverage for (1) contractual liability for damages assumed in a contract or agreement that (a) would be imposed without the contract or agreement or (b) assumed in a contract or agreement that is an "insured contract"; (2) cross liability exclusion for claims or suits by one insured against another; (3) products/completed operations liability; or (4) contain any other exclusion contrary to the Agreement.

(v) The policy shall give City, its officials, officers, employees, agents and City designated volunteers additional insured status using ISO endorsement forms CG 20 10 10 01 and 20 37 10 01, or endorsements providing the exact same coverage.

(vi) The general liability program may utilize either deductibles or provide coverage excess of a self-insured retention, subject to written approval by the City, and provided that such deductibles shall not apply to the City as an additional insured.

b. Automobile Liability

(i) At all times during the performance of the services under this Agreement, the Consultant shall maintain Automobile Liability Insurance for bodily injury and property damage including coverage for owned, non-owned and hired vehicles, in a form and with insurance companies acceptable to the City.

(ii) Coverage for automobile liability insurance shall be at least as broad as Insurance Services Office Form Number CA 00 01 covering automobile liability (Coverage Symbol 1, any auto).

(iii) The policy shall give City, its officials, officers, employees, and City designated volunteers additional insured status.

(iv) Subject to written approval by the City, the automobile liability program may utilize deductibles, provided that such deductibles shall not apply to the City as an additional insured, but not a self-insured retention.

c. Workers' Compensation/Employer's Liability

(i) Consultant certifies that he/she is aware of the provisions of Section 3700 of the California Labor Code which requires every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and he/she will comply with such provisions before commencing services under this Agreement.

(ii) To the extent Consultant has employees at any time during the term of this Agreement, at all times during the performance of the services under this Agreement, the Consultant shall maintain full compensation insurance for all persons employed directly by him/her to carry out the work contemplated under this Agreement, all in accordance with the "Workers' Compensation and Insurance Act," Division IV of the Labor Code of the State of California and any acts amendatory thereof, and Employer's Liability Coverage in amounts indicated herein. Consultant shall require all subconsultants to obtain and maintain, for the period required by this Agreement, workers' compensation coverage of the same type and limits as specified in this section.

d. Professional Liability (Errors and Omissions)

At all times during the performance of the services under this Agreement the Consultant shall maintain professional liability or Errors and Omissions insurance appropriate to its profession, in a form and with insurance companies acceptable to the City and in an amount indicated herein. This insurance shall be endorsed to include liability for damages assumed in a contract or agreement (a) that would be imposed without the contract or agreement or (b) assumed in a contract or agreement that is an "insured contract" and shall be written on a policy form specifically designed to protect against acts, errors or omissions of the Consultant. "Covered Professional Services" as designated in the policy must specifically include the kinds of services performed by or on Consultant's behalf under this Agreement. The policy must "pay on behalf of" the insured and must include a provision establishing the insurer's duty to defend.

e. Minimum Policy Limits Required

(i) The following insurance limits are required for the Agreement:

	Combined Single Limit
Commercial General Liability	$1,000,000 per occurrence/ $2,000,000 aggregate for bodily injury, personal injury, and property damage
Automobile Liability	$1,000,000 combined single limit
Employer's Liability	$1,000,000 per accident or disease
Professional Liability	$1,000,000 per claim and aggregate (errors and omissions)

(ii) Defense costs shall be payable in addition to the limits.

(iii) Requirements of specific coverage or limits contained in this section are not intended as a limitation on coverage, limits, or other requirement, or a waiver of any coverage normally provided by any insurance. Any available coverage shall be provided to

the parties required to be named as Additional Insured pursuant to this Agreement.

f. Evidence Required

Prior to execution of the Agreement, the Consultant shall file with the City evidence of insurance from an insurer or insurers certifying to the coverage of all insurance required herein. Such evidence shall include original copies of the ISO CG 00 01 (or insurer's equivalent) signed by the insurer's representative and Certificate of Insurance (Acord Form 25-S or equivalent), together with required endorsements. All evidence of insurance shall be signed by a properly authorized officer, agent, or qualified representative of the insurer and shall certify the names of the insured, any additional insureds, where appropriate, the type and amount of the insurance, the location and operations to which the insurance applies, and the expiration date of such insurance.

g. Policy Provisions Required

(i) Consultant shall provide the City at least thirty (30) days prior written notice of cancellation of any policy required by this Agreement, except that the Consultant shall provide at least ten (10) days prior written notice of cancellation of any such policy due to non-payment of premium. If any of the required coverage is cancelled or expires during the term of this Agreement, the Consultant shall deliver renewal certificate(s) including the General Liability Additional Insured Endorsement to the City at least ten (10) days prior to the effective date of cancellation or expiration.

(ii) The Commercial General Liability Policy and Automobile Policy shall each contain a provision stating that Consultant's policy is primary insurance and that any insurance, self-insurance or other coverage maintained by the City or any named insureds shall not be called upon to contribute to any loss.

(iii) The retroactive date (if any) of each policy is to be no later than the effective date of this Agreement. Consultant shall maintain such coverage continuously for a period of at least three years after the completion of the work under this Agreement. Consultant shall purchase a one (1) year extended reporting period A) if the retroactive date is advanced past the effective date of this Agreement; B) if the policy is cancelled or not renewed; or C) if the policy is replaced by another claims-made policy with a retroactive date subsequent to the effective date of this Agreement.

(iv) All required insurance coverages, except for the professional liability coverage, shall contain or be endorsed to provide a waiver of subrogation in favor of the City, its officials, officers, employees, agents, and volunteers or shall specifically allow Consultant or others providing insurance evidence in compliance with these specifications to waive their right of recovery prior to a loss. Consultant hereby waives its own right of recovery against City, and shall require similar written express waivers and insurance clauses from each of its subconsultants.

(v) The limits set forth herein shall apply separately to each insured against whom claims are made or suits are brought, except with respect to the limits of liability. Further the limits set forth herein shall not be construed to relieve the Consultant from liability in excess of such coverage, nor shall it limit the Consultant's indemnification obligations to the City and shall not preclude the City from taking such other actions available to the City under other

provisions of the Agreement or law.

h. Qualifying Insurers

(i) All policies required shall be issued by acceptable insurance companies, as determined by the City, which satisfy the following minimum requirements:

(1) Each such policy shall be from a company or companies with a current A.M. Best's rating of no less than A:VII and admitted to transact in the business of insurance in the State of California, or otherwise allowed to place insurance through surplus line brokers under applicable provisions of the California Insurance Code or any federal law.

i. Additional Insurance Provisions

(i) The foregoing requirements as to the types and limits of insurance coverage to be maintained by Consultant, and any approval of said insurance by the City, is not intended to and shall not in any manner limit or qualify the liabilities and obligations otherwise assumed by the Consultant pursuant to this Agreement, including but not limited to, the provisions concerning indemnification.

(ii) If at any time during the life of the Agreement, any policy of insurance required under this Agreement does not comply with these specifications or is canceled and not replaced, City has the right but not the duty to obtain the insurance it deems necessary and any premium paid by City will be promptly reimbursed by Consultant or City will withhold amounts sufficient to pay premium from Consultant payments. In the alternative, City may cancel this Agreement.

(iii) The City may require the Consultant to provide complete copies of all insurance policies in effect for the duration of the Project.

(iv) Neither the City nor any of its officials, officers, employees, or volunteers shall be personally responsible for any liability arising under or by virtue of this Agreement.

j. Subconsultant Insurance Requirements. Consultant shall not allow any subcontractors or subconsultants to commence services on any subcontract until they have provided evidence satisfactory to the City that they have secured all insurance required under this section. Policies of commercial general liability insurance provided by such subcontractors or subconsultants shall be endorsed to name the City as an additional insured using ISO form CG 20 38 04 13 or an endorsement providing the equivalent coverage. If requested by Consultant, City may approve different scopes or minimum limits of insurance for particular subcontractors or subconsultants.

12. Indemnification.

a. To the fullest extent permitted by law, Consultant shall defend (with counsel of City's choosing), indemnify and hold the City, its officials, officers, employees, and volunteers free and harmless from any and all claims, demands, causes of action, costs, expenses, liability, loss, damage or injury of any kind, in law or equity, to property or persons, including wrongful death, in any manner arising out of, pertaining to, or incident to any acts, errors or omissions, or willful misconduct of Consultant, its officials, officers, employees, subcontractors, consultants or

agents in connection with the performance of the Consultant's services, the Project or this Agreement, including without limitation the payment of all damages, expert witness fees and attorney's fees and other related costs and expenses. Consultant's obligation to indemnify shall not be restricted to insurance proceeds, if any, received by Consultant, the City, its officials, officers, employees, agents, or volunteers.

b. If Consultant's obligation to defend, indemnify, and/or hold harmless arises out of Consultant's performance of "design professional" services (as that term is defined under Civil Code section 2782.8), then, and only to the extent required by Civil Code section 2782.8, which is fully incorporated herein, Consultant's indemnification obligation shall be limited to claims that arise out of, pertain to, or relate to the negligence, recklessness, or willful misconduct of the Consultant, and, upon Consultant obtaining a final adjudication by a court of competent jurisdiction, Consultant's liability for such claim, including the cost to defend, shall not exceed the Consultant's proportionate percentage of fault.

13. California Labor Code Requirements.

a. Consultant is aware of the requirements of California Labor Code Sections 1720 et seq. and 1770 et seq., which require the payment of prevailing wage rates and the performance of other requirements on certain "public works" and "maintenance" projects ("Prevailing Wage Laws"). If the services are being performed as part of an applicable "public works" or "maintenance" project, as defined by the Prevailing Wage Laws, and if the total compensation is $1,000 or more, Consultant agrees to fully comply with such Prevailing Wage Laws. Consultant shall defend, indemnify and hold the City, its officials, officers, employees and agents free and harmless from any claims, liabilities, costs, penalties or interest arising out of any failure or alleged failure to comply with the Prevailing Wage Laws. It shall be mandatory upon the Consultant and all subconsultants to comply with all California Labor Code provisions, which include but are not limited to prevailing wages (Labor Code Sections 1771, 1774 and 1775), employment of apprentices (Labor Code Section 1777.5), certified payroll records (Labor Code Sections 1771.4 and 1776), hours of labor (Labor Code Sections 1813 and 1815) and debarment of contractors and subcontractors (Labor Code Section 1777.1). The requirement to submit certified payroll records directly to the Labor Commissioner under Labor Code section 1771.4 shall not apply to work performed on a public works project that is exempt pursuant to the small project exemption specified in Labor Code Section 1771.4.

b. If the services are being performed as part of an applicable "public works" or "maintenance" project, then pursuant to Labor Code Sections 1725.5 and 1771.1, the Consultant and all subconsultants performing such services must be registered with the Department of Industrial Relations. Consultant shall maintain registration for the duration of the Project and require the same of any subconsultants, as applicable. Notwithstanding the foregoing, the contractor registration requirements mandated by Labor Code Sections 1725.5 and 1771.1 shall not apply to work performed on a public works project that is exempt pursuant to the small project exemption specified in Labor Code Sections 1725.5 and 1771.1.

c. This Agreement may also be subject to compliance monitoring and enforcement by the Department of Industrial Relations. It shall be Consultant's sole responsibility to comply with all applicable registration and labor compliance requirements. Any stop orders issued by the Department of Industrial Relations against Consultant or any subcontractor that affect Consultant's performance of services, including any delay, shall be Consultant's sole responsibility. Any delay arising out of or resulting from such stop orders shall be considered Consultant caused delay and shall not be compensable by the City. Consultant shall defend,

indemnify and hold the City, its officials, officers, employees and agents free and harmless from any claim or liability arising out of stop orders issued by the Department of Industrial Relations against Consultant or any subcontractor.

14. Safety.

Consultant shall execute and maintain its work so as to avoid injury or damage to any person or property. In carrying out its Services, the Consultant shall at all times be in compliance with all applicable local, state and federal laws, rules and regulations, and shall exercise all necessary precautions for the safety of employees appropriate to the nature of the work and the conditions under which the work is to be performed. Safety precautions as applicable shall include, but shall not be limited to: (A) adequate life protection and life-saving equipment and procedures; (B) instructions in accident prevention for all employees and subcontractors, such as safe walkways, scaffolds, fall protection ladders, bridges, gang planks, confined space procedures, trenching and shoring, equipment and other safety devices, equipment and wearing apparel as are necessary or lawfully required to prevent accidents or injuries; and (C) adequate facilities for the proper inspection and maintenance of all safety measures.

15. Verification of Employment Eligibility.

By executing this Agreement, Consultant verifies that it fully complies with all requirements and restrictions of state and federal law respecting the employment of undocumented aliens, including, but not limited to, the Immigration Reform and Control Act of 1986, as may be amended from time to time, and shall require all subconsultants and sub-subconsultants to comply with the same.

16. INTENTIONALLY DELETED

17. Laws and Venue.

This Agreement shall be interpreted in accordance with the laws of the State of California. If any action is brought to interpret or enforce any term of this Agreement, the action shall be brought in a the Superior Court of California for the County of Napa.

18. Termination or Abandonment

a. City has the right to terminate or abandon any portion or all of the work under this Agreement by giving ten (10) calendar days written notice to Consultant. In such event, City shall be immediately given title and possession to all original field notes, drawings and specifications, written reports and other documents produced or developed for that portion of the work completed and/or being abandoned. City shall pay Consultant the reasonable value of services rendered for any portion of the work completed prior to termination. If said termination occurs prior to completion of any task for the Project for which a payment request has not been received, the charge for services performed during such task shall be the reasonable value of such services, based on an amount mutually agreed to by City and Consultant of the portion of such task completed but not paid prior to said termination. City shall not be liable for any costs other than the charges or portions thereof which are specified herein. Consultant shall not be entitled to payment for unperformed services, and shall not be entitled to damages or compensation for termination of work.

b. Consultant may terminate its obligation to provide further services under

this Agreement upon thirty (30) calendar days' written notice to City only in the event of substantial failure by City to perform in accordance with the terms of this Agreement through no fault of Consultant.

19. Ownership of Documents and Confidential Information.

a. All deliverables and other documents generated by Consultant in the performance of the Services, including all work papers, work-in-progress, designs, drawings, documents, data, computations, specifications, studies and reports prepared by Consultant as a part of the Services or authorized Additional Services ("Consultant Work Product") shall belong to and be subject to the sole ownership and use of City.

b. Except as otherwise provided in "Termination or Abandonment," above, all original field notes, written reports, drawings and specifications and other documents, produced or developed for the Project shall, upon payment in full for the services described in this Agreement, be furnished to and become the property of the City.

c. During the course of the performance of this Agreement, Consultant may receive written or verbal information from City, its representatives or agents, not in the public domain. Such information may include City's know how, trade secrets, and other proprietary and confidential information and Consultant agrees to treat such information as confidential information belonging to City. Consultant agrees that neither it, nor its officers, employees, representatives, agents, successors, or assigns, will disclose such information to any third party or use the same in any manner without the prior written consent of City. Moreover, Consultant agrees to safeguard such proprietary and confidential information from unauthorized disclosure and/or use using the same degree of care it uses to protect its own proprietary and confidential information, but not less than a reasonable standard of care. In the event that disclosure of such information is sought pursuant to any law or regulation, Consultant shall promptly notify City of such fact to allow City to assert whatever exclusions or exemptions may be available to it under applicable law or regulation.

20. Organization

Consultant shall assign Monique Day as Project Manager. The Project Manager shall not be removed from the Project or reassigned without the prior written consent of the City.

21. Limitation of Agreement.

This Agreement is limited to and includes only the work included in the Project described above.

22. Notice

Any notice or instrument required to be given or delivered by this Agreement may be given or delivered by depositing the same in any United States Post Office, certified mail, return receipt requested, postage prepaid, addressed to:

CITY:

City of St. Helena
1088 College Ave, St. Helena, CA 94574
Attn: Joseph Leach, PW Director

CONSULTANT:

West Yost & Associates
2020 Research Park Dr. Suite 100
Davis, CA 95618

and shall be effective upon receipt thereof.

23. Third Party Rights

Nothing in this Agreement shall be construed to give any rights or benefits to anyone other than the City and the Consultant.

24. Equal Opportunity Employment.

Consultant represents that it is an equal opportunity employer and that it shall not discriminate against any employee or applicant for employment because of race, religion, color, national origin, ancestry, sex, age or other interests protected by the State or Federal Constitutions. Such non-discrimination shall include, but not be limited to, all activities related to initial employment, upgrading, demotion, transfer, recruitment or recruitment advertising, layoff or termination.

25. Entire Agreement

This Agreement, with its exhibits, represents the entire understanding of City and Consultant as to those matters contained herein, and supersedes and cancels any prior or contemporaneous oral or written understanding, promises or representations with respect to those matters covered hereunder. Each Party acknowledges that no representations, inducements, promises or agreements have been made by any person which are not incorporated herein, and that any other agreements shall be void. This Agreement may not be modified or altered except in writing signed by both Parties hereto. This is an integrated Agreement.

26. Severability

The unenforceability, invalidity or illegality of any provision(s) of this Agreement shall not render the remaining provisions unenforceable, invalid or illegal.

27. Successors and Assigns

This Agreement shall be binding upon and shall inure to the benefit of the successors in interest, executors, administrators and assigns of each Party to this Agreement. However, Consultant shall not assign or transfer by operation of law or otherwise any or all of its rights, burdens, duties or obligations without the prior written consent of City. Any attempted assignment without such consent shall be invalid and void.

28. Non-Waiver

None of the provisions of this Agreement shall be considered waived by either Party, unless such waiver is specifically specified in writing.

29. Time of Essence

Time is of the essence for each and every provision of this Agreement.

30. City's Right to Employ Other Consultants

City reserves its right to employ other consultants, including engineers, in connection with this Project or other projects.

31. Prohibited Interests

Consultant maintains and warrants that it has not employed nor retained any company or person, other than a bona fide employee working solely for Consultant, to solicit or secure this Agreement. Further, Consultant warrants that it has not paid nor has it agreed to pay any company or person, other than a bona fide employee working solely for Consultant, any fee, commission, percentage, brokerage fee, gift or other consideration contingent upon or resulting from the award or making of this Agreement. For breach or violation of this warranty, City shall have the right to rescind this Agreement without liability. For the term of this Agreement, no director, official, officer or employee of City, during the term of his or her service with City, shall have any direct interest in this Agreement, or obtain any present or anticipated material benefit arising therefrom.

[SIGNATURES ON FOLLOWING PAGE]

SIGNATURE PAGE FOR PROFESSIONAL SERVICES AGREEMENT BETWEEN CITY OF ST. HELENA AND WEST YOST & ASSOCIATES, INC.

IN WITNESS WHEREOF, the Parties have executed this Agreement as of the date first written above.

CITY OF ST. HELENA

By: _____
Anil Comelo
City Manager

West Yost & Associates, Inc.

By: Elizabeth Drayer

Its: Vice President

Printed Name: Elizabeth T. Drayer

ATTEST:

By: _____
Cindy Tzafopoulos, City Clerk

WEST YOST
Water. Engineered.

2020 Research Park Drive
Suite 100
Davis CA 95618

530.756.5905 phone
530.756.5991 fax
westyost.com

July 11, 2024 SENT VIA: EMAIL

Mr. Joe Leach
Public Works Director
City of St. Helena
1480 Main Street
St. Helena, CA 94574

SUBJECT: Proposal for the Preparation of a Water Management Plan

Dear Mr. Leach:

The purpose of this letter proposal is to provide the City of St. Helena (City) with a proposal for preparation of a comprehensive Water Management Plan.

BACKGROUND

West Yost has performed a number of water supply studies and projects for the City over the years, including the 2003 Urban Water Management Plan and 2010 Water Supply Plan. West Yost also assisted the City with an update to the water supply safe yield in early 2011 and is currently under contract to update the City's water supply safe yield estimate and water neutrality policy as well as to prepare a Recycled Water Facilities Plan. The City, however, is concerned that the safe yield recently determined is less than previously calculated in 2011 and wants to assess how recycled water can offset/augment the City's limited supply through methods such as injection wells or recharge. The City is in need of a plan and strategy to implement the General Plan while maintaining water neutrality.

The City is interested in preparing a comprehensive Water Management Plan to document existing water supply demands and resources in the City and to determine the best strategy(ies) to implement moving forward for the City to execute the General Plan while maintaining water neutrality. The goals of the Water Management Plan are to:

1. Document the City's existing water supplies, City's water supply management strategies (including a water neutrality policy), and the City's demand management measures;
2. Establish and assess future demands for water based on expected future developments and population growth for next 5 to 30 years;
3. Describe and evaluate the various water supply options available to the City (including groundwater, recycled water, stormwater, and water exchanges);
4. Establish the most feasibly sustainable water supply management path forward for the City; and
5. Document the cost and scope of the projects necessary to implement the City's recommended path forward so that private developers' contributions to water neutrality project costs can be clearly determined.

From West Yost's previous and current work, recent coordination with the City, and work with the City of Napa, West Yost is familiar with the City's water supplies and facilities, as well as opportunities and constraints in water supply availability and reliability. Luhdorff and Scalmanini, who prepared the Napa Valley Subbasin Groundwater Sustainability Plan, is also performing groundwater modeling for the City to evaluate the impact of adding an additional drinking water well or groundwater recharge/injection well.

West Yost prepared a Wastewater Treatment Plant (WWTP) Upgrades and Water Recycling Project Design Memorandum in May 2006 and GHD prepared a Wastewater Treatment and Reclamation Plant (WWTRP) Improvements Feasibility Study in 2017 for the City that evaluated improvements to the City's WWTRP as well as potential customers for recycled water. Since both of these studies were produced, the City has upgraded its WWTRP to meet the State's requirements for disinfected tertiary recycled water but has not begun to utilize its newly available recycled water resources. In addition, groundwater management, recycled water regulations, and regional drought concerns due to climate change have evolved significantly since then which greatly increases the opportunity to reuse treated water from the WWTRP. This Water Management Plan will reflect all these updated conditions as further described in the Scope of Services section that follows.

SCOPE OF SERVICES

The scope of services for this project includes the following tasks:

- Task 1. Data Collection and Review
- Task 2. Draft Water Management Plan
- Task 3. Final Water Management Plan
- Task 4. Project Management and Quality Assurance/Quality Control

Task 1. Data Collection and Review

West Yost will prepare an information request list and share this list with the City prior to the kick-off meeting. During the kick-off meeting (Task 4), the information request will be discussed. Each month that West Yost meets with the City (Task 4) the information request will be revised based on information received and the information still needed. Information and data to be requested includes, but is not limited to, all relevant water planning documents (that West Yost does not already have), information on present state of stormwater management, information on existing conversation policies or programs, information on artificial turf replacement projects (e.g. at Lyman Park, Crane Park, etc.), groundwater evaluation documents from Luhdorff and Scalmanini, and information on current developer water supply contribution requirements.

Under this task West Yost will review and summarize the information provided by the City for use in the Water Management Plan.

Task 1 Assumptions

- City will provide as much requested data and information as possible to aid West Yost in the development of the Water Management Plan.

Task 1 Deliverables

- West Yost will prepare an information request list that will be updated monthly.

Task 2. Draft Water Management Plan

West Yost will develop a draft Water Management Plan which will include the following sections:

1. Introduction
2. Demand Management Measures
3. Current Supplies and Existing and Proposed Demands
4. Future Supply Options
5. Groundwater Evaluation
6. Recycled Water Evaluation
7. Water Supply Alternatives Evaluation
8. Funding for Future Supply Options
9. Recommendations/Conclusions

The anticipated content of each of these sections is described below.

Task 2.1 Introduction

The introduction will include background information and the goals for the Water Management Plan. Background information will include historic and projected population data, a high-level summary of the City's water supplies and facilities, a summary of current water management practices at the City (including stormwater), a summary of the City's Water Neutrality policy, policy modifications under consideration, a summary of current and future anticipated regulations and other relevant background information. This section will also include the City's goals for the Water Management Plan. The anticipated goals of the Water Management are included below but may be refined further overtime.

1. Document the City's existing water supplies, City's water supply management strategies (including a water neutrality policy), and the City's demand management measures;
2. Establish and assess future demands for water based on expected future developments and population growth for next 5 to 30 years;
3. Describe and evaluate the various water supply options available to the City (including groundwater, recycled water, stormwater, and water exchanges);
4. Establish the most feasibly sustainable water supply management path forward for the City; and
5. Document the cost and scope of the projects necessary to implement the City's recommended path forward so that private developers' contributions to water neutrality project costs can be clearly determined.

Task 2.2 Demand Management Measures

The chapter on demand management measures will cover both existing and additional potential measures for the City to consider. This chapter is important to document the extensive conservation efforts the City has already made towards reducing demands for potable water supply and understand what additional measures could be reasonably taken to reduce demands further. Some demand management measures that will be discussed in this chapter include replacing turf with artificial turf at parks such as Lyman Park and Crane Park, utilizing professional leak detection services, and replacing water meters and testing meters for accuracy and efficiency.

Task 2.3 Current Supplies and Existing and Proposed Demands

This chapter will document the City's current water supply sources along with the constraints associated with each supply source. This chapter will also present the City's historic, current, and expected future demands. The purpose of this chapter is to lay the groundwork for why additional supply options, along with demand management measures, need to be considered.

Task 2.4 Future Supply Options

This chapter will present a suite of future water supply options for the City to consider. The scope of each option will be described along with a planning level conceptual cost estimate for the option. These cost estimates will include construction, operation and maintenance (O&M), repair and replacement, and life cycle costs. The water supply options to be included in this chapter include:

- Water trading – both macro and micro-scale options
- Groundwater
- Recycled Water
- Stormwater

With the realm of groundwater and recycled water options being especially nuanced each of these topics will have a separate chapter devoted to its evaluation.

Task 2.5 Groundwater Evaluation

This chapter will summarize the groundwater alternatives evaluation that Luhdorff and Scalmanini will be concurrently conducting. The Technical Memorandum summarizing Luhdorff and Scalmanini's evaluation will be attached to the Water Management Plan as a reference document. Luhdorff and Scalmanini's analysis is expected to develop groundwater supply options for the City that best align with Napa Valley Subbasin Groundwater Sustainability Plan objectives. Concepts that the Luhdorff and Scalmanini study will likely consider include:

1. Development of new municipal groundwater well at a site located outside the Napa Valley Subbasin. The City has a location of interest near the Lower Reservoir (a non-potable supply owned and operated by the City). By developing a new supply outside the Subbasin, less groundwater would be pumped from the Subbasin, including less groundwater pumping at the Stonebridge Well location, which could benefit groundwater management efforts for the City and the Subbasin. There are potential hydrogeologic constraints associated with constructing a well outside the Subbasin. Luhdorff and Scalmanini will evaluate and provide information related to the potential feasibility of developing sufficient groundwater supply at this site and the permitting process this would involve. This evaluation will include consideration of potential for the Lower Reservoir to provide groundwater recharge.
2. Development of a new municipal groundwater well at a site located within the City's service area and in the Subbasin. This concept involves considering well sites located farther from the Napa River and tributaries (preferably farther than 1,500 feet from significant streams) in the interest of reducing potential for stream depletion caused by pumping. By developing a new supply, less groundwater could be pumped from the City's Stonebridge Well location, which could benefit groundwater management efforts for the City and the Subbasin. Luhdorff and Scalmanini will evaluate and provide information related to the potential feasibility of developing sufficient groundwater supply at potential City-owned properties and the permitting process this would require.

3. Aquifer Storage Recovery (ASR) with recycled water injected into the aquifer for storage for an indirect potable reuse option. Luhdorff and Scalmanini will model this ASR concept to identify whether, and if so where, ASR is feasibile in and around the City. If feasible, this indirect potable reuse option will be further explored and evaluated in the Recycled Water Evaluation chapter (Chapter 6).

Task 2.6 Recycled Water Evaluation

With the City's upgraded WWTRP that can now meet the State's requirements for disinfected tertiary recycled water, the City has a new water supply resource. Possible recycled water use within the City to be discussed in this chapter includes: landscape irrigation, agricultural/vineyard irrigation, injection (ASR) or other recharge into the underlying groundwater basin, surface water augmentation at Bell Canyon Reservoir utilizing an existing aqueduct, and surface water augmentation at the Lower Reservoir using the reservoir as a groundwater infiltration basin and recovering the recycled water via a new groundwater well. Treated water augmentation (direct potable reuse) is not an option that will be included in this chapter.

West Yost has already performed a recycled water demand assessment under an existing contract for the non-potable options which will be utilized in this evaluation.

Luhdorff and Scalmanini will be modeling the offset groundwater pumping that will result for the portion of irrigation that may happen with recycled water instead of groundwater under the non-potable recycled water options under consideration. Luhdorff and Scalmanini's modeling will focus on evaluating where agricultural pumping is occurring in the vicinity of the City, and particularly pumping occurring in proximity to significant streams. This modeling will also include assessing the potential benefit to using recycled water instead of groundwater to reduce streamflow depletion.

Task 2.7 Water Supply Alternatives Evaluation

The water supply options presented in Chapter 4 (Future Supply Options) will be compared and evaluated in this Water Supply Alternatives Evaluation chapter. Both qualitative and quantitative pros and cons for each alternative will be presented and considered. A rough estimate of dollars per acre-foot will be included in the evaluation. Additionally, the next steps needed to proceed with each alternative will also be presented.

Task 2.8 Funding for Future Supply Options

Funding options for the top 2 or 3 water supply options identified in Chapter 7 will be included in this chapter. Funding options for the identified water supply projects/programs include private developer contributions, state and/or federal grant and loan funding, as well as City ratepayer funds. This chapter will provide details for these funding options as well as a cost recovery model to show how and when the City could recover its costs from various project expenses.

Task 2.9 Recommendations/Conclusions

West Yost will conduct a workshop with City staff to review the first eight draft Water Management Plan chapters, discuss and select alternatives, and develop and discuss recommendations and conclusions the City wants to include in the plan. This workshop is expected to include only City staff but may be expanded to include the City Council and/or members of the public if the City determines that a public vetting process is needed. The budget does not include a workshop with the public or City Council.

The decisions made during this workshop and/or follow-up communications with the City project manager will be summarized in this final chapter of the Water Management Plan with the purpose of clarifying the chosen water management path forward for the City and the next steps the City should implement.

Task 2 Assumptions

- Up to three water trading, groundwater, recycled water, and stormwater options will be developed.
- City will provide O&M costs for potable system for use in estimating recycled water O&M costs.
- City will provide recent cost data for potable water pipeline projects to be used for reference when developing distribution system cost estimates.
- The workshop is assumed to be virtual.

Task 2 Deliverables

- West Yost will provide a draft Water Management Plan in electronic format to the City for review.
- West Yost will provide notes from the workshop.

Task 3. Final Water Management Plan

West Yost will develop a final Water Management Plan that will provide sufficient detail and analysis to allow the City to implement its most feasibly sustainable path forward and guide the City in appropriate financial contributions to request from private developers.

The Water Management Plan will incorporate, and address comments received from the City on the draft Water Management Plan.

This scope assumes that the City will provide one consolidated set of written comments on the draft report and West Yost will participate in one conference call to review the draft report and discuss City comments.

Task 3 Assumptions

- This scope of work does not include preparation of environmental documentation needed for compliance with CEQA laws.
- This scope of work assumes one written set of consolidated comments from the City.

Task 3 Deliverables

- West Yost will provide a final Water Management Plan in electronic format.

Task 4. Project Management, Meetings, and Quality Assurance/Quality Control

Task 4.1 Project Management

West Yost will perform project management duties including coordination with the City's Project Manager review of project schedule and budget, and preparation of monthly work summary reports. The West Yost project manager will coordinate with West Yost project team so that the project work is progressing in accordance with the scope, schedule, and budget, West Yost's Quality Assurance/Quality Control (QA/QC) policy requires all work products to be reviewed at the principal level prior to submittal to the City, QA/QC of work products is included with each task.

Task 4.2 Project Kick-off Meeting

Upon receiving Notice to Proceed, West Yost will coordinate and participate in a project kick-off meeting with the City's project team – including Luhdorff and Scalmanini. Prior to the meeting, West Yost will distribute a list of information that will be reviewed and requested with the City during the meeting.

The main purpose of the kick-off meeting will be to discuss:

- Preparation of the Water Management Plan,
- Update on Luhdorff and Scalmanini work,
- West Yost information request, and
- Detailed schedule for the preparation of the Water Management Plan.

Task 4.3 Project Progress Meetings

Beginning the month following the project kick-off meeting, up to three members of the West Yost team, including the West Yost Project Manager, will meet with City staff, including the City's Project Manager, once per month to discuss project progress, schedule and budget.

Task 4 Assumptions

- All meetings are assumed to be virtual.
- Budget is provided for up to twelve (12) project progress meetings.

Task 4 Deliverables

- West Yost will prepare the kick-off meeting, and monthly progress meeting, agendas and summary notes.
- West Yost will provide monthly invoices including a summary of work completed during the invoice period.

PROJECT BUDGET

West Yost's proposed level of effort and budget for each of the tasks described above is shown in Table 1. West Yost will perform the scope of services described above on a time-and-expenses basis, at the billing rates set forth in West Yost's attached 2024 Billing Rate Schedule, with a not-to-exceed budget of $211,628. Any additional services not included in this scope of services will be performed only after receiving written authorization and a corresponding budget augmentation.

Table 1. Estimated Project Hours and Budget

Task	Level of Effort, hours	Estimated Budget, dollars
Task 1. Data Collection and Review	56	14,668
Task 2. Draft Water Management Plan	529	136,830
Task 3. Final Water Management Plan	48	12,252
Task 4. Project Management, Meetings and Quality Assurance/Quality Control	168	47,878
Total Project Hours and Budget	**801**	**$211,628**

SCHEDULE

West Yost anticipates beginning work following Notice to Proceed (NTP). The anticipated total schedule for completion of the Water Management Plan is 12 months assuming that all data requested from the City is provided to West Yost within two weeks of the NTP. Meetings and review periods are included in the 12-month project duration. A detailed schedule will be developed upon start of the project.

Thank you for providing West Yost the opportunity to be of continued service to the City. We look forward to working with you on this important project. Please call if you have any questions or require additional information.

Sincerely,
WEST YOST

Monique Day, PE
Project Manager
RCE #69793

Elizabeth Drayer, PE
Principal-in-Charge
Water Sector Manager
RCE #46872

Attachment A: West Yost's 2024 Billing Rate Schedule

Attachment A

West Yost's 2024 Billing Rate Schedule

2024 Billing Rate Schedule

(Effective January 1, 2024, through December 31, 2024)*

POSITIONS	LABOR CHARGES (DOLLARS PER HOUR)
ENGINEERING	
Principal/Vice President	$355
Engineer/Scientist/Geologist Manager I / II	$335 / $351
Principal Engineer/Scientist/Geologist I / II	$302 / $322
Senior Engineer/Scientist/Geologist I / II	$272 / $286
Associate Engineer/Scientist/Geologist I / II	$226 / $243
Engineer/Scientist/Geologist I / II	$176 / $205
Engineering Aide	$106
Field Monitoring Services	$131
Administrative I / II / III / IV	$97 / $121 / $145 / $160
ENGINEERING TECHNOLOGY	
Engineering Tech Manager I / II	$349 / $351
Principal Tech Specialist I / II	$320 / $331
Senior Tech Specialist I / II	$293 / $306
Senior GIS Analyst	$265
GIS Analyst	$251
Technical Specialist I / II / III / IV	$187 / $213 / $239 / $267
Technical Analyst I / II	$134 / $160
Technical Analyst Intern	$108
Cross-Connection Control Specialist I / II / III / IV	$140 / $151 / $170 / $189
CAD Manager	$211
CAD Designer I / II	$164 / $185
CONSTRUCTION MANAGEMENT	
Senior Construction Manager	$338
Construction Manager I / II / III / IV	$201 / $215 / $228 / $289
Resident Inspector (Prevailing Wage Groups 4 / 3 / 2 / 1)	$181 / $201 / $224 / $232
Apprentice Inspector	$164
CM Administrative I / II	$87 / $118
Field Services	$232

- Hourly rates include charges for technology and communication, such as general and CAD computer software, telephone calls, routine in-house copies/prints, postage, miscellaneous supplies, and other incidental project expenses.
- Outside services, such as vendor reproductions, prints, and shipping; major West Yost reproduction efforts; as well as engineering supplies, etc., will be billed at the actual cost plus 15%.
- The Federal Mileage Rate will be used for mileage charges and will be based on the Federal Mileage Rate applicable to when the mileage costs were incurred. Travel other than mileage will be billed at cost.
- Subconsultants will be billed at actual cost plus 10%.
- Expert witness services, research, technical review, analysis, preparation, and meetings will be billed at 150% of standard hourly rates. Expert witness testimony and depositions will be billed at 200% of standard hourly rates.
- A finance charge of 1.5% per month (an annual rate of 18%) on the unpaid balance will be added to invoice amounts if not paid within 45 days from the date of the invoice.

* This schedule is updated annually

2024 Billing Rate Schedule

(Effective January 1, 2024, through December 31, 2024)*

Equipment Charges

EQUIPMENT	BILLING RATES
2" Purge Pump & Control Box	$300 / day
Aquacalc / Pygmy or AA Flow Meter	$28 / day
Emergency SCADA System	$35 / day
Field Vehicles (Groundwater)	$1 / mile
Gas Detector	$80 / day
Generator	$60 / day
Hydrant Pressure Gauge	$10 / day
Hydrant Pressure Recorder, Impulse (Transient)	$55 / day
Hydrant Pressure Recorder, Standard	$40 / day
Low Flow Pump Back Pack	$135 / day
Low Flow Pump Controller	$200 / day
Powers Water Level Meter	$32 / day
Precision Water Level Meter 300ft	$30 / day
Precision Water Level Meter 500ft	$40 / day
Precision Water Level Meter 700ft	$45 / day
QED Sample Pro Bladder Pump	$65 / day
Skydio 2+ Drone (2 hour mimimum)	$100 / hour
Storage Tank	$20 / day
Sump Pump	$24 / day
Transducer Communications Cable	$10 / day
Transducer Components (per installation)	$23 / day
Trimble GPS – Geo 7x	$220 / day
Tube Length Counter	$22 / day
Turbidity Meter	$30 / day
Turbidity Meter (2100Q Portable)	$35 / day
Vehicle (Construction Management)	$10 / hour
Water Flow Probe Meter	$20 / day
Water Quality Meter	$50 / day
Water Quality Multimeter	$185 / day
Well Sounder	$30 / day

* This schedule is updated annually

Agenda Report to the City Council

Agenda Section: PUBLIC HEARINGS

Department: Finance

DATE:	October 8, 2024
FROM:	Mandy Kellogg, Administrative Services Director
SUBJECT:	Review of the City's Affordable Housing In-Lieu Fees and Nonresidential/Commercial Linkage Fee Options and provide guidance to staff regarding the appropriate fees.
RECOMMENDED ACTION:	Receive direction from City Council on the recommended Affordable Housing Impact fees and Commercial Linkage fees to be adopted via Resolution on October 22, 2024.
PREVIOUS COUNCIL ACTION:	November 24, 2015 - Approval of Professional Services Agreement with Willdan Financial Services. November 14, 2017 - Approval of Amendment #1 for Water and Wastewater Impact Fees. October 9, 2018 - Approval of Amendment #2 to Update Cost Allocation Plan. August 24, 2021 - Approval of Amendment #3 to Add Commercial Linkage Fee Analysis. July 25, 2023 - Approval of Amendment #4 for Additional Funding to Complete User Fee Study. August 8, 2023 - Approval of Amendment #5 for Additional Funding to Complete the Development Impact Fee Study. July 23, 2024 - Approval of Amendment #6 for Additional Funding to Complete a Feasibility Analysis.
STATEMENT OF THE PURPOSE:	The purpose is to provide information related to the Affordable Housing Feasibility analysis and receive direction pertaining to the recommended Affordable Housing Impact Fee and Commercial Linkage Fee.
FINANCIAL IMPACT:	The financial positive impact to the Affordable Housing Trust fund could range from $200,000 to $288,000 increase in revenues based in the FY 2023-24 collections. It is important to note that an outlier transaction that was valued at $18 million was excluded from the calculation. In addition, the estimate does not include revenues that would be generated by the hotel land use fee, which could generate an additional $2.5 million in revenues based on the 65-room prototype utilized in the study.

BACKGROUND:

Development impact fees are charged to new development and support upgrades to the City's infrastructure necessitated by such development and are generally paid as a requirement to obtain a building permit. The last development impact fee study was completed in April 2013 and an updated development impact fee schedule was adopted by the City Council on November 12, 2013 through Ordinance 2013-2.

In September 2015, staff issued a Request for Proposals for a Full Cost Services and Development Impact Fee Study to include a cost allocation plan, user fee study, and a development impact fee study. On October 9, 2015 the City received four proposals which were reviewed by City staff and an outside consultant. In November 2015, the City selected Willdan Financial Services to conduct a Full Cost Services and Development Impact Fee Study and entered into a professional services agreement on November 24, 2015 by Resolution 2015-146.

During the FY 2020-21 budget development, City Council requested funding for an inclusionary and workforce housing study be included in the FY 2020-21 adopted City budget. On February 23, 2021, the City entered into a Professional Services Agreement (PSA) with Lisa Wise Consulting, Inc. to complete the Inclusionary Housing Study however after staff review of the initial report and concerns with the data source, that work on that project was terminated.

As part of the Inclusionary Housing Study and during the final analysis of the Affordable Housing In-lieu fees, established as part of the City's inclusionary housing ordinance it was determined that it would be necessary to include a commercial linkage fee analysis in order to update the commercial linkage fee, which is paid by non-residential uses to address impacts those uses have on the City's need for affordable housing. Willdan Financial Services was available to conduct this analysis and prepare recommendations for the amounts and classifications for a commercial linkage fee for St. Helena. This fee links the jobs created by commercial development to the needs for the production of affordable housing. The study determines the per-unit affordability gap by number of households in each job type, by income level to determine linkage fee on a per square foot basis by category of nonresidential development.

Willdan Financial Services completed the draft Affordable Housing and Commercial Linkage Fee Study in December 2023 (Attachment 1). The maximum justified fee, which is the fee level required to fully mitigate the impact of new residential or commercial development on the affordable housing was calculated for each land use as follows:

Land Use	**Maximum Justified Fee**
Residential	
Rental Unit	$135
For Sale Unit	$196
Non-Residential	
Hotel	$75
Commercial	$141

Office	$176
Industrial	$67

Following the completion of the review of the report by staff and the City Attorney, the City released the draft report on January 22, 2024 to local builders and affordable housing organizations and requested comments prior to formal adoption and approval by City Council. Comments were requested following a three-week review period. Staff and consultant reviewed the comments and prepared responses to those comments (Attachment 2).

On June 25, 2024, Willdan Financial Services presented the Affordable Housing and Commercial Linkage Fee study at a Regular City Council meeting. Based on the results of the Affordable Housing and Commercial Linkage Fee Study staff recommended adopting 10% of the maximum justified fee to ensure that the new fee does not result in the financial infeasibility of new development.

After careful deliberation the City Council made a motion to continue the matter to a future meeting
and directed staff to work with the Consultant to conduct additional analysis on the appropriate fee for the different land uses.

DISCUSSION:
Upon direction at the June 25, 2024, Willdan Financial Services conducted a Development Impact Fee Nexus Study Update to determine financial feasibility (Attachment 1 - Appendix). The feasibility analysis included the following:

1. Preparation of a memorandum evaluating the development feasibility of each land use type included in the affordable housing impact fee and commercial linkage fee study.
2. Evaluation of development feasibility using a pro forma analysis approach that identified the maximum supportable affordable housing related fees for a prototype associated with each land use included in the study.

The analysis examined the economics of six prototypes as follows:

- Single Family Residential
- Multi-Family Residential
- Hotel
- Office
- Retail
- Industrial/Warehouse

The financial feasibility analysis uses a pro forma approach to calculate the projected return that the six development prototypes are likely to generate. Each protype’s pro forma estimates the residual land value, a method of estimating the value of land for a project that calculates the total revenue generated by a project (either in the form of

sales price or the present value of projected lease income) and subtracts the costs of developer and operations (as applicable) to arrive at a net amount that is attributable to the land under the project.

The analysis assumes that if a residual land value is negative, the project is not feasible. A low land value means a project is challenging to develop and may not be feasible. Willdan and staff have reviewed transactions in St. Helena in the past ten years and estimate that a value below $25 per square foot (psf), or $1.1 million per acre, indicates a low feasibility and low probability of completion for the prototype development in question. This analysis was used to determine the maximum feasibility, which is the highest fee that can be charged without negatively impacting the financial viability of a project or development. This concept is used to ensure that while fees are set to cover costs or address impacts, they do not become so burdensome that they deter development or investment.

Willdan prepared Table A.1 on page 12 of Appendix: Development Impact Fee Feasibility Study (shown below), which shows the maximum estimated feasibility compared to the maximum justified fee, as well as 15% of maximum and 10% of maximum.

Attachment 3 - Table A.1
Proposed Fees (per square foot)

Land Use	**Maximum Justified**	**Maximum Estimated Feasibility** (1)	**15% of Max**	**10% of Max**
Residential				
Rental Unit	$135	NA	$20	$14
For Sale Unit	$196	$168	$29	$20
Non-Residential				
Hotel	$75	$75	$11	$8
Commercial	$141	$20	$21	$14
Office	$176	NA	$26	$18
Industrial	$67	NA	$10	$7

(1) Max Estimated Fee at $1.1 million per acre residual value.

It is important to note that the feasibility is based on the current market conditions, which will fluctuate as the market changes. NA indicates that the particular land use is not feasible even without the fee at the present time. It is also important to note that as applied to multifamily residential uses, this fee is an "in-lieu fee", meaning that it is only paid if the developer desires, and the City Council agrees, that the developer will pay a fee rather than developing affordable units on site as part of the residential development.

Additionally, with regard to the hotel impact fee, it is important to note that in a typical hotel development entitlement process, the City will often negotiate and enter into a development agreement with the applicant which could include a negotiation for an affordable housing contribution or construction of actual units in-lieu of directly paying the adopted hotel impact fee. This is a common practice among other cities and allows for a community to receive benefits from the hotel project that are appropriate for that project.

On September 12, 2024, the City held a study session to present the findings of the feasibility analysis and receive public comment on the proposed Housing Impact Fees prior to City Council action on September 24th. Based on the feedback received at the study session, staff is presenting two options for consideration. Attached is a resolution to adopt the fees.

Fee Implementation Options

Based on the comments received at the September 12, 2024 Affordable Housing and Non/Residential Commercial Linkage Fee study session and in continued consultation with the City Attorney and Consultant, staff is providing two options for discussion and direction which revised the hotel land use fee from per square foot to per room as noted below (as shown in Attachment 1, Table 2, Proposed Fees on page 3 of the Appendix).

Option A

Option A proposes all land uses with the exception of hotel be charged 10% of the Maximum Justified Fee per square foot. The hotel land use is proposed at a per room fee equal to the maximum feasible amount for the hotel land use, based on Willdan's additional analysis to convert the proposed per square foot fee to a per room fee for the hotel land use. The proposed per room fee for the hotel land use is intended to ensure that the fee is applied more equitably to new hotel developments and does not penalize hotels that have more common area that could significantly increase total square footage without providing an equal increase in revenue. A per-room fee is more intuitive for hotel developers and easier to integrate into proformas.

Land Use	Proposed Fee	Current Fee	% Increase from Current Fee
Residential			
Rental Unit	$14 per square foot	2.5% Construction Cost	71.8% (1)
For Sale Unit	$20 per square foot	2.5% Construction Cost	145.4% (1)
Non-Residential			
Hotel	$41,797 per room	$3.80 per square foot	1,233.9% (2)
Commercial	$14 per square foot	$5.21 per square foot	168.7%

Office	$18 per square foot	$4.11 per square foot	338.0%
Industrial	$7 per square foot	$1.26 per square foot	455.6%

(1) Based on a prototype with 2,761 square feet and a $900,000 construction cost.
(2) Based on a prototype with 53,597 square feet and 65 room count.

Option B
Option B proposes all land uses with the exception of hotel be charged 15% of the Maximum Justified Fee per square foot. Hotel land use is proposed at a per room fee identical to Option A.

Land Use	**Proposed Fee**	**Current Fee**	**% Increase from Current Fee**
Residential			
Rental Unit	$20 per square foot	2.5% Construction Cost	145.4% (1)
For Sale Unit	$29 per square foot	2.5% Construction Cost	255.9% (1)
Non-Residential			
Hotel	$41,797 per room	$3.80 per square foot	1,233.9% (2)
Commercial	$21 per square foot	$5.21 per square foot	303.1%
Office	$26 per square foot	$4.11 per square foot	532.6%
Industrial	$10 per square foot	$1.26 per square foot	693.7%

(1) Based on a prototype with 2,761 square feet and a $900,000 construction cost.
(2) Based on a prototype with 53,597 square feet and 65 room count.

Public Notice
A public notice was published on September 10, 2024 in the Napa Valley Register for a public hearing to be held on September 24, 2024. The scheduled public hearing was continued to a date certain on October 8, 2024. The proposed fee schedule and methodology for the fee calculations was made available for public review, electronically on the City's website by clicking the following link: Affordable Housing and Commercial Linkage Fee Study or by appointment in the City Clerk's office.

Next Steps
Under the California's Mitigation Fee Act, which includes the provisions of AB 1600, local agencies are required to post proposed development impact fees at least 10 days before adopting new fees. Therefore, upon receiving direction from Council staff will

post the proposed Affordable Housing and Commercial Linkage fee schedule on the website and conduct a first reading to amend the ordinance related to the fees at the City Council meeting on October 22, 2024 and bring forth a resolution to adopt the proposed fee schedule.

ENVIRONMENTAL REVIEW: None.

GOAL:

Goal 1: Strengthen Financial Sustainability
Goal 5: Enhance Quality of Life

DOCUMENTS ATTACHMENTS:

Attachment 1 - St. Helena - Affordable Housing and Commercial Linkage Fee Report - Final
Attachment 2 - Willdan Responses to Affordable Housing and Commercial Linkage Fee Nexus Study Comments
Attachment 3 - St. Helena - Financial Feasibility Analysis May 2024

CITY OF ST. HELENA

AFFORDABLE HOUSING AND COMMERCIAL LINKAGE IMPACT FEE STUDY

FINAL

MAY 22, 2024

WILLDAN FINANCIAL SERVICES

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Executive Summary

This report documents an analysis of affordable housing impact fees needed to fund new development's share of affordable housing induced by the household spending associated with new market rate development. It also documents a commercial linkage fee analysis which quantifies the connection between the development of commercial, office, industrial and hotel, development projects and the demand for affordable housing units.

Background and Study Objectives

The City of St. Helena has an inclusionary housing ordinance. In order to address the City's ongoing unmet housing needs, St. Helena is considering implementing an amended affordable housing fee on new development projects and inclusionary housing regulation. The purpose of the affordable housing fee is to mitigate the impact of new market rate development on the demand for affordable housing.

To adopt a development impact fee, a local jurisdiction must demonstrate the reasonable relationship (or "nexus") between the development projects paying the fee and the fee that is charged. This nexus study quantifies the connection between the development of market rate housing and the demand for affordable housing units.

This residential nexus study examines the household income and spending generated by the new market rate households renting or buying new units in St. Helena. Using the IMPLAN economic model, the household spending associated with new development is translated into new induced job growth. These induced jobs will be at various wage rates; though many induced jobs will earn lower wages. Low-wage households cannot reasonably afford to pay for market rate housing in St. Helena, a housing impact fee can be justified to bridge the difference between what these new households can afford to pay and the cost of developing modest housing units to accommodate lower income households associated with induced job growth.

The commercial linkage fee analysis examines the relationship between jobs housed in various nonresidential development prototypes and the worker households that would need a subsidy to be able to afford to live in the City. Similar to the affordable housing impact fee, the commercial linkage fee would generate fee revenue to bridge the difference between what these new worker households can afford to pay and the cost of developing modest housing units to accommodate lower income households associated with the prototype development projects.

Affordable Housing Impact Fee Schedule

The maximum justified affordable housing impact fee schedule is summarized in **Table E.1**. The fees shown here are the maximum supportable under state law. However, as a policy decision the City Council can adopt fee amounts that are less than the maximum justified amounts. Consequently, Table E.1 also demonstrates the resulting fees if adopted at 15%, or 10%, respectively of the maximum justified fee amounts.

Table E.1: Maximum Justified Affordable Housing Impact Fee Schedule

	Maximum Justified Fee per Square Foot	15% of Maximum Justified fee per Square Foot	10% of Maximum Justified fee per Square Foot
New Residential Rental Unit	$ 135	$ 20	$ 14
New Residential For Sale Unit	196	29	20

Source: Table 1.11

Commercial Linkage Fee Schedule

The maximum justified commercial linkage fee schedule is summarized in **Table E.2**. The fees shown here are the maximum supportable under state law. The City can adopt any amount up to the amounts shown here. Table E.2 also demonstrates the resulting fees if adopted at 15%, or 10%, respectively of the maximum justified fee amounts.

Table E.2: Maximum Justified Commercial Linkage Impact Fee Schedule

	Maximum Justified Fee per Square Foot	15% of Maximum Justified fee per Square Foot	10% of Maximum Justified fee per Square Foot
Commercial	$ 141	$ 21	$ 14
Office	176	26	18
Industrial	67	10	7
Hotel	75	11	7

Source: Table 2.12.

1. Affordable Housing Fee Nexus Analysis

This chapter details an analysis of the need for affordable housing required to accommodate lower-income employees that support growth within the City of St. Helena. It documents a reasonable relationship between new development and a fee to fund affordable housing.

Nexus Approach

New residential development generates population growth. Residents who can afford to purchase or rent this new housing then spend their disposable income in the city. Consequently, this increased spending results in the need to hire new workers to accommodate the increased demand for goods and services associated with new development. This analysis establishes the connection between the increase in household spending associated with new development and the number of new workers that will be hired by local businesses to meet that demand.

Employment growth provides occupations at various wage and salary levels. Low wage workers cannot afford market rate housing within the City of St. Helena, so an affordable housing impact fee can be calculated to bridge the gap between what low wage workers can afford to pay for and the cost of providing that housing.

The analysis presented here defines the upper limit for a housing impact fee to be charged on new rental and for-sale housing to mitigate impacts on affordable housing needs. The maximum fee is not necessarily the recommended fee.

Housing Affordability in St. Helena

This section of the chapter evaluates housing affordability in St. Helena, using Department of Housing and Community Development State Income Limits and current market rate rent data.

Table 1.1 displays the Napa County Income limits, as identified by HUD.

Table 1.1: 2023 Napa County Income Limits

Persons per HH:	1	2	3	4	5	6	7	8
Median Income	90,700	103,700	116,650	**129,600**	139,950	150,350	160,700	171,050
Extremely Low	28,050	32,050	36,050	40,050	43,300	46,500	49,700	52,900
Very Low Income	46,750	53,400	60,100	66,750	72,100	77,450	82,800	88,150
Low Income	74,700	85,400	96,050	106,700	115,250	123,800	132,350	140,850
Median Income	90,700	103,700	116,650	129,600	139,950	150,350	160,700	171,050
Moderate Income	108,850	124,400	139,950	155,500	167,950	180,400	192,800	205,250

Source: Department of Housing and Community Development, State Income Limits 2023.

Market Rate Rents

Willdan gathered data regarding existing market rate rents within the City of St. Helena city limits. This information will inform the assumption of the household income necessary to rent a housing unit in St. Helena at the market rate. Average asking rents as of October, 2023 are shown in

Table 1.2. All current rental listings in St. Helena from Zillow.com; and apartments.com were collected and analyzed. Luxury listings asking above $10,000 per month in rent were excluded from the sample. The remaining observations were used to calculate the average asking rent, by number of bedrooms in Table 1.2. **Appendix Table A.1** includes details regarding the observations of asking rents in the City.

Table 1.2: Average Asking Rent, October 2023

Unit Type	Average Asking Rent	Unit Count
Studio[1]	$ 1,823	-
1-Bedroom	3,350	3
2-Bedroom	3,672	16
3-Bedroom	5,802	33

[1] There are no studio apartments in St. Helena. Rent for studio apartment estimated using trend implied by rents for larger units.

Sources: Apartments.com; Zillow .com; Willdan Financial Services.

Market Rate Housing Affordability

To evaluate housing affordability in St. Helena, the analysis compares the household income at the midpoint of each income category from Table 1.1 to the market rents by number of bedrooms from Table 1.2. This analysis uses household incomes at the mid-point of each income range when calculating affordable rents as a conservative measure to avoid overstating the affordability of rental housing. In addition to rents, the analysis also includes a conservative estimate of utility costs. The maximum affordable monthly rent including utilities for each income category is calculated as 30 percent of gross monthly household income. If the difference between the maximum affordable rent and the total monthly housing costs is negative, then housing for that income category and housing product is considered unaffordable.

Table 1.3: Affordability of Market Rate Rental Housing in St. Helena, 2023

Household (Unit) Size:	1 Person (Studio)	2 Person (1 Bedroom)	3 Person (2 Bedrooms)	4 Person (3 Bedrooms)
Average Market-Rate Rent[1]	$ 1,823	$ 3,350	$ 3,672	$ 5,802
Utility Costs[2]	202	219	261	326
Total Monthly Housing Costs	$ 2,025	$ 3,569	$ 3,933	$ 6,128
Extremely Low Income (up to 30% AMI)				
Household Income at Midpoint of Income Range[3]	$ 14,025	$ 16,025	$ 18,025	$ 20,025
Maximum Affordable Monthly Rent[4]	149	182	190	175
Amount Above (Below) Market Rate Rent	(1,674)	(3,168)	(3,482)	(5,627)
Very Low Income (31-50% AMI)				
Household Income at Midpoint of Income Range[3]	$ 37,400	$ 42,725	$ 48,075	$ 53,400
Maximum Affordable Monthly Rent[4]	733	849	941	1,009
Amount Above (Below) Market Rate Rent	(1,090)	(2,501)	(2,731)	(4,793)
Low Income (51-80% AMI)				
Household Income at Midpoint of Income Range[3]	$ 60,725	$ 69,400	$ 78,075	$ 86,725
Maximum Affordable Monthly Rent[4]	1,316	1,516	1,691	1,842
Amount Above (Below) Market Rate Rent	(507)	(1,834)	(1,981)	(3,960)
Moderate Income (81-120% AMI)				
Household Income at Midpoint of Income Range[3]	$ 91,775	$ 104,900	$ 118,000	$ 131,100
Maximum Affordable Monthly Rent[4]	2,092	2,404	2,689	2,952
Amount Above (Below) Market Rate Rent	269	(946)	(983)	(2,850)

[1] See Table 1.2

[2] Utility Costs per HACN Utility Allowance

[3] Household income limits published by the California Department of Housing and Community Development for Napa County, 2023. Shows midpoint of income range. See Table 1.1

[4] Assumes 30-percent of gross income spent on housing and utilities costs.

Sources: California Department of Housing and Community Development, 2023; Willdan Financial Services.

Table 1.4 identifies the income required to afford market rate rents in the City, by household size. The income required to afford market rate rents is assumes that 30 percent of gross income spent on housing and utility costs is considered affordable. The annual affordable housing costs is then compared to the area median income (area median income) to estimate amount of gross income above AMI that is needed to afford each product type, by household size.

Table 1.4: Income Required to Afford Market-Rate Rents in St. Helena, 2023

Household (Unit) Size:	1 Person (Studio)	2 Person (1 Bedroom)	3 Person (2 Bedrooms)	4 Person (3 Bedrooms)
Total Monthly Housing Costs	$ 2,025	$ 3,569	$ 3,933	$ 6,128
Annual Housing Costs	$ 24,296	$ 42,828	$ 47,195	$ 73,534
Household Income Required[1]	80,988	142,760	157,315	245,113
Area Median Income (AMI)	90,700	103,700	116,650	129,600
Income Required as Percent of AMI	89%	138%	135%	189%

[1] Assumes 30-percent of gross income spent on housing and utilities costs.

Sources: Tables 1.1 and 1.3.

Market Rate Prototypes and Gross Income

This analysis identified two market rate residential prototypes based on a review of the housing market in St. Helena.

Market Rate Rental Prototype

The data collected to identify the current average asking rent in St. Helena was also used to identify typical rental product characteristics. The typical rental unit in the City is a three bedroom, two bathroom detached single family unit sized at roughly 1,600 square feet.[1] Using the current asking rent data, and the housing cost as percent of gross income assumptions discussed above, the amount of gross income needed to afford rent in St. Helena is calculated in **Table 1.5**. It requires an annual gross household income of $217,347 to rent a three-bedroom market rate rental unit in St. Helena.

[1] Typical rental unit in St. Helena identified based on data from CoStar which is summarized in Table 1.5. Full dataset is included in the Appendix.

Table 1.5: Rental Residential Prototype, Q3 2023

		Rental
Bedrooms		3
Bathrooms		2
Square feet		1,608
Rent per Square Foot	$	3.38
Monthly Rent	$	5,434
Annual Rent		65,204
Housing Cost as Percent of Income[1]		30%
Gross Household Income	$	217,347

[1] Renter housing burden is estimated at 30-percent of gross household income, based on California Health & Safety Code Sections 50052.5 and 50053.

Sources: CoStar; Willdan Financial Services.

Market Rate For Sale Prototype

Recent housing sales data was collected from mlslistings.com from June to September 2023. The sample included 24 observations of home sales within this time period. That data informed the typical for sale product prototypes displayed below in **Table 1.6.** The gross household income necessary to afford to purchase the prototype is then calculated using current interest rates and estimated housing ownership costs. It requires an annual gross household income of over $328,000 to purchase a home in St. Helena.

Table 1.6: For Sale Residential Prototype

		Single Family Detached
Prototype Assumptions[1]		
Bedrooms		3
Bathrooms		2
Square feet		1,669
Sales Price per Square Foot	$	889
Sales Price	$	1,483,500
Down Payment (20%)	$	296,700
Loan Amount	$	1,186,800
Interest Rate[2]		7.18%
Monthly Mortgage Payment	$	8,040
Annual Property Tax[3]		15,676
Homeowners Insurance		2,800
Annual Housing Costs	$	114,954
Housing Cost as Percent of Income[4]		35%
Gross Household Income	$	328,439

[1] Based on an analysis of recent sales in St. Helena, as reported by mlslistings.com from June to September 2023.
[2] Average 30-year fixed interest rate as of September 14, 2023 per http://www.freddiemac.com/pmms/pmms_archives.html
[3] City of St. Helena California Comprehensive Annual Financial Report, For The Fiscal Year Ended June 30, 2022, p. 125.
[4] Homeowner housing burden is estimated at 35-percent of gross household income, based on California Health & Safety Code Sections 50052.5 and 50053.

Sources: mlslistings.com; Freddie Mac; City of St. Helena; Willdan Financial Services.

Aggregate Income

Table 1.7 identifies the aggregate household income of 100 single family owner households and 100 single family renter households who can afford housing at the market rate. This aggregate income is used as the driver of induced economic effects using the IMPLAN model.

Table 1.7: Estimated Incomes by Income Categories of Prototype Buyers and Renters

	Single Family Detached (Buyer)	Single Family Detached (Renter)
Income Category	Over $200,000	Over $200,000
Gross Household Income	$ 328,439	$ 217,347
New Households	100	100
Aggregate Household Income	$ 32,843,915	$ 21,734,748

Sources: Tables 1.5 and 1.6.

Induced Employment Impacts

The aggregate household income identified above is used to estimate the number of new jobs that new households will support with their household expenditures using the IMPLAN model. IMPLAN is an input-output based economic impact model used for a variety of different analyses. In this case IMPLAN models the economy for a region.

For this analysis, IMPLAN used data specific to Napa County to estimate the multipliers effects from new households. Essentially, IMPLAN used the increase in household spending associated with the new prototype households to identify the jobs (or fraction of jobs) that are supported by that spending.

The output of the IMPLAN model was then cross referenced with the assumed compensation associated with each occupation to estimate the aggregate number of jobs induced within each income category.

Table 1.8 shows the results of the IMPLAN analysis in terms of the induced employment and household generation supported by household spending from the gross income of 100 market rate rental households.

Table 1.9 shows the results of the IMPLAN analysis in terms of the induced employment and household generation supported by household spending from the gross income of 100 market rate single family ownership households.

Table 1.8: Employment and Household Generation from a New 100-Unit Rental Development by Income Level

SOC Code	Major Goup	Extremely Low	Very Low Income	Low Income	Moderate Income	Above Moderate	Total Employment
11	Management Occupations	-	-	-	1.30	0.38	1.68
13	Business and Financial Operations Occupations	-	-	0.86	0.49	-	1.35
15	Computer and Mathematical Occupations	-	-	-	0.36	-	0.36
17	Architecture and Engineering Occupations	-	-	0.02	0.06	-	0.08
19	Life, Physical, and Social Science Occupations	-	0.02	-	0.05	0.04	0.11
21	Community and Social Service Occupations	-	0.87	-	0.19	-	1.06
23	Legal Occupations	-	-	0.05	-	0.07	0.12
25	Educational Instruction and Library Occupations	-	1.30	0.18	-	-	1.48
27	Arts, Design, Entertainment, Sports, and Media Occupations	-	-	0.14	0.26	-	0.40
29	Healthcare Practitioners and Technical Occupations	-	-	0.83	-	1.59	2.42
31	Healthcare Support Occupations	2.71	0.63	0.07	-	-	3.41
33	Protective Service Occupations	-	0.34	0.02	-	-	0.36
35	Food Preparation and Serving Related Occupations	3.30	1.55	0.57	-	-	5.42
37	Building and Grounds Cleaning and Maintenance Occupations	1.03	0.25	0.06	-	-	1.34
39	Personal Care and Service Occupations	1.51	0.12	-	-	-	1.63
41	Sales and Related Occupations	3.06	0.09	0.81	0.11	-	4.07
43	Office and Administrative Support Occupations	-	3.30	0.30	-	-	3.60
45	Farming, Fishing, and Forestry Occupations	-	0.07	-	-	-	0.07
47	Construction and Extraction Occupations	-	0.01	0.28	-	-	0.29
49	Installation, Maintenance, and Repair Occupations	-	0.39	0.55	-	-	0.94
51	Production Occupations	-	0.47	0.09	-	-	0.56
53	Transportation and Material Moving Occupations	-	2.35	0.13	0.01	-	2.49
	Total Jobs	11.61	11.76	4.96	2.83	2.08	33.24
	Total Households[1]	9.83	9.95	4.20	2.40	1.76	28.13

[1] Assumes 1.18 jobs per household in Napa County based on data from the 2021 American Community Survey.

Sources: IMPLAN, US Census, American Community Survey, 2021; Willdan Financial Services.

Table 1.9: Employment and Household Generation from a New 100-Unit Single Family For Sale Development by Income Level

SOC Code	Major Goup	Extremely Low	Very Low Income	Low Income	Moderate Income	Above Moderate	Total Employment
11	Management Occupations	-	-	-	1.95	0.57	2.52
13	Business and Financial Operations Occupations	-	-	1.30	0.74	-	2.04
15	Computer and Mathematical Occupations	-	-	-	0.54	-	0.54
17	Architecture and Engineering Occupations	-	-	0.03	0.08	-	0.11
19	Life, Physical, and Social Science Occupations	-	0.03	-	0.07	0.06	0.16
21	Community and Social Service Occupations	-	1.31	-	0.29	-	1.60
23	Legal Occupations	-	-	0.07	-	0.11	0.18
25	Educational Instruction and Library Occupations	-	1.97	0.27	-	-	2.24
27	Arts, Design, Entertainment, Sports, and Media Occupations	-	-	0.21	0.40	-	0.61
29	Healthcare Practitioners and Technical Occupations	-	-	1.25	-	2.41	3.66
31	Healthcare Support Occupations	4.10	0.95	0.11	-	-	5.16
33	Protective Service Occupations	-	0.52	0.03	-	-	0.55
35	Food Preparation and Serving Related Occupations	4.98	2.34	0.85	-	-	8.17
37	Building and Grounds Cleaning and Maintenance Occupations	1.56	0.38	0.08	-	-	2.02
39	Personal Care and Service Occupations	2.28	0.18	-	-	-	2.46
41	Sales and Related Occupations	4.62	0.13	1.22	0.16	-	6.13
43	Office and Administrative Support Occupations	-	5.00	0.45	-	-	5.45
45	Farming, Fishing, and Forestry Occupations	-	0.10	0.01	-	-	0.11
47	Construction and Extraction Occupations	-	0.02	0.44	-	-	0.46
49	Installation, Maintenance, and Repair Occupations	-	0.59	0.84	-	-	1.43
51	Production Occupations	-	0.71	0.14	-	-	0.85
53	Transportation and Material Moving Occupations	-	3.55	0.18	0.02	-	3.75
	Total Jobs	17.54	17.78	7.48	4.25	3.15	50.20
	Total Households[1]	14.84	15.05	6.33	3.60	2.67	42.49

[1] Assumes 1.18 jobs per household in Napa County based on data from the 2021 American Community Survey.

Sources: IMPLAN, US Census, American Community Survey, 2021; Willdan Financial Services.

Affordable Housing Development Costs

Table 1.10 estimates the cost to build an affordable rental unit within the City of St. Helena. These cost assumptions were provided by the City of St. Helena based on the City's estimated cost of a five-unit affordable housing development project, and were adjusted for inflation from 2020 to current 2023 dollars.

Table 1.10: Affordable Housing Development Costs

		Apartment Rental
Total Development Costs per Unit[1]	$	910,500

[1] Cost per unit to construct affordable units was $694,000 in 2020. Adjusted for inflation to September, 2023 using the Engineering News Record's Building Cost Index.

Source: City of St. Helena.

Affordability Gap and Maximum Fee Calculation

The housing affordability gap is the difference between what very low, low, and moderate-income households can afford to pay for housing, and the cost to develop affordable housing units. The affordable monthly rent associated with each income level is used to estimate the monthly supportable debt per unit, which is then used to estimate the loan proceeds associated with that level of income. The loan amount is compared to the affordable unit development costs, and the difference is the financing gap per unit.

The financing gap per unit is then multiplied by the number of units induced within each income category to determine the total financing gap associated with the 100 prototype units. This figure is then divided by 100 to determine the housing fee per unit, but prototype type. The fee per unit is finally divided by the assumed prototype square footage to determine the fee per square foot.

Table 1.11 displays the calculation of the affordability gap and maximum justified affordable housing impact fee for new rental units and for new single family units.

Table 1.11: Affordable Housing Impact Fee Calculation

	Extremely Low Income (up to 30% AMI)	Very Low Income (31-50% AMI)	Low Income (51-80% AMI)	Moderate Income (81-120% AMI)
Household Income Limit	$ 36,050	$ 60,100	$ 96,050	$ 139,950
Affordable Monthly Rent per Unit[1]	640	1,242	2,140	3,238
Monthly Operating Expenses	500	500	500	500
Vacancy	5%	5%	5%	5%
Net Operating Income per Unit	108	679	1,533	2,576
Monthly Supportable Debt Service per Unit	83	523	1,179	1,981
Loan Amount	12,177	76,438	172,495	289,795
Affordable Unit Development Costs	910,500	910,500	910,500	910,500
Financing Gap per Affordable Unit	898,323	834,062	738,005	620,705
Fee Calculation for New Rental Units				
Units Demanded	9.83	9.95	4.20	2.40
Total Financing Gap	$ 8,826,782	$ 8,301,249	$ 3,097,980	$ 1,486,653
Maximum Impact Fee per 100-Unit Development	$ 21,712,665			
Maximum Impact Fee per Unit	$ 217,127			
Prototype Square Feet	1,608			
Maximum Impact Fee per Square Foot	**$ 135**			
Fee Calculation for New For Sale Single Family Units				
Units Demanded	14.84	15.05	6.33	3.60
Total Financing Gap	$ 13,335,208	$ 12,550,698	$ 4,671,954	$ 2,232,607
Maximum Impact Fee per 100-Unit Development	$ 32,790,466			
Maximum Impact Fee per Unit	$ 327,905			
Prototype Square Feet	1,669			
Maximum Impact Fee per Square Foot	**$ 196**			
Financing Terms				
Debt Coverage Ratio	1.3			
Interest Rate	7.18%			
Term of Loan	30			

[1] Monthly affordable rent is calculated at 30% of the monthly AMI for a three-person household from Table 1.1, less utility allowance for a three person household identified in Table 1.3.

Sources: Tables 1.1, 1.3, 1.5, 1.6, 1.8, 1.9 and 1.10.

2. Commercial Linkage Fee

This chapter details an analysis of the need for affordable housing required to accommodate lower-income employees associated with commercial development projects within the City of St. Helena. It documents a reasonable relationship between new development and a commercial linkage fee to fund affordable housing.

Nexus Approach

This study calculates the maximum legal fee charged on new commercial development for affordable housing in the following steps:

1. **Establish commercial prototypes representing typical commercial development in St. Helena.** The prototypes used in this study are not intended to represent specific development projects. Instead, they represent the types of development projects that may be built in St. Helena.
2. **Estimate the number of workers that will work in the new commercial space**. The estimated number of workers are based occupancy density assumptions for each type of commercial development project. The employment density assumptions density factors were multiplied by the building size (100,000 square feet) to calculate the total number of workers occupying each commercial prototype.
3. **Estimate worker household incomes**. To determine the proportion of households requiring affordable housing the analysis uses local wage data associated with the industries and occupations housed within each prototype.
4. **Calculate the affordability gap**. The housing affordability gap is defined as the difference between what very low, low, and moderate-income households can afford to pay for housing, and the cost to develop new, modest housing units.
5. **Calculate maximum commercial linkage fee for each prototype**. The maximum commercial linkage fee for each prototype is calculated by multiplying the total number of very low, low, and moderate- income new worker households for each prototype (calculated in Step 3), by the corresponding affordable housing gap figure (calculated in Step 4). The total affordability gap was then divided by 100,000 SF, the size of each commercial prototype, to generate a maximum fee per square foot.

Commercial Prototypes

This study calculates commercial linkage fees for four types of nonresidential development projects. These nonresidential land use classifications correspond with the nonresidential land uses in the City's development impact fee program. The prototypes are 100,000 square feet of commercial (service, retail), office, industrial and hotel development.

Table 2.1 displays prototype building sizes, and an estimate of net new workers per household. Data from the US Census was used to identify the share of workers for each prototype that would be housed within City limits. The resulting net new workers are divided by the assumption of jobs per household to determine the number of net new worker households in St. Helena associated with each prototype.

Table 2.1: Net New Workers per Prototype

	Commercial	Office	Industrial	Hotel
Prototype Building Size (Sq. Ft.)	100,000	100,000	100,000	100,000
Employees per 100,000 Sq. Ft.[1]	212	326	116	100
Percent of St. Helena Employees with Jobs inside City limits[2]	11.40%	11.40%	11.40%	11.40%
Net New Workers Living in St. Helena	24.17	37.16	13.22	11.40
Jobs per Household[3]	1.18	1.18	1.18	1.18
Households	20.48	31.49	11.21	9.66

[1] Consistent with occupancy denisty factors from Development Impact Fee Study.
[2] OnTheMap Application. Percent employed and living in St. Helena.
[3] Assumes 1.18 jobs per household in Napa County based on data from the 2021 American Community Survey.

Sources: https://onthemap.ces.census.gov/; 2021 American Community Survey; Tables 2.2, Willdan Financial Services.

Industries

Various industries could be housed within each prototype. This analysis used the most recent available national industry data as of the fourth quarter of 2022 from the US Bureau of Labor Statistics to identify the range of industries associated with each prototype. **Table 2.2 through Table** 2.5 identify the industries associated with each prototype. In the next step, the occupations associated with each industry will be used to estimate the wages of workers that may be employed within each prototype.

Table 2.2: Definition of Industries for Retail Commercial Prototype

NAICS Code (2022)	NAICS Code (2017)	Description	Percent Total Workers in Prototype
7225	7225	Restaurants and other eating places	37.8%
4451	4451	Grocery stores	10.0%
4411	4411	Automobile dealers	4.5%
4441	4441	Building material and supplies dealers	4.4%
4561	4461	Health and personal care stores	4.0%
8111	8111	Automotive repair and maintenance	3.5%
4571	4471	Gasoline stations	3.4%
4581	4481	Clothing stores	3.2%
8121	8121	Personal care services	2.5%
4413	4413	Auto parts, accessories, and tire stores	2.1%
4591	4511	Sporting goods and musical instrument stores	1.8%
4599	4539	Other miscellaneous store retailers	1.7%
4491	4422	Home furnishings stores	1.6%
4492	4431	Electronics and appliance stores	1.6%
7224	7224	Drinking places, alcoholic beverages	1.5%
8129	8129	Other personal services	1.4%
4231	4231	Motor vehicle and parts merchant wholesalers	1.3%
4237	4237	Hardware and plumbing merchant wholesalers	1.1%
4233	4233	Lumber and const. supply merchant wholesalers	0.9%
8123	8123	Drycleaning and laundry services	0.9%
4452	4452	Specialty food stores	0.9%
8113	8113	Commercial machinery repair and maintenance	0.8%
4594	4532	Office supplies, stationery, and gift stores	0.8%
5321	5321	Automotive equipment rental and leasing	0.7%
4595	4533	Used merchandise stores	0.7%
4442	4442	Lawn and garden equipment and supplies stores	0.7%
5324	5324	Machinery and equipment rental and leasing	0.7%
5615	5615	Travel arrangement and reservation services	0.6%
4582	4482	Shoe stores	0.6%
4453	4453	Beer, wine, and liquor stores	0.6%
4412	4412	Other motor vehicle dealers	0.6%
8122	8122	Death care services	0.5%
5322	5322	Consumer goods rental	0.5%
4583	4483	Jewelry, luggage, and leather goods stores	0.4%
4232	4421	Furniture stores	0.4%
8112	8112	Electronic equipment repair and maintenance	0.4%
8114	8114	Household goods repair and maintenance	0.3%
4592	4512	Book stores and news dealers	0.3%
4593	4531	Florists	0.2%
5323	5323	General rental centers	0.1%

Sources: BLS, Quarterly Census of Employment and Wages, Fourth Quarter 2022.

Table 2.3: Definition of Industries for Office Prototype

NAICS Code (2022)	NAICS Code (2017)	Description	Percent Total Workers in Prototype
5613	5613	Employment services	9.3%
6211	6211	Offices of physicians	6.8%
5511	5511	Management of companies and enterprises	6.1%
5415	5415	Computer systems design and related services	6.0%
5617	5617	Services to buildings and dwellings	5.3%
5416	5416	Management and technical consulting services	4.5%
5221	5221	Depository credit intermediation	4.3%
5413	5413	Architectural and engineering services	3.9%
5242	5242	Insurance agencies and brokerages	3.2%
5241	5241	Insurance carriers	2.9%
5411	5411	Legal services	2.8%
5412	5412	Accounting and bookkeeping services	2.7%
6213	6213	Offices of other health practitioners	2.7%
6214	6214	Outpatient care centers	2.5%
6212	6212	Offices of dentists	2.4%
5616	5616	Investigation and security services	2.4%
5417	5417	Scientific research and development services	2.2%
5419	5419	Other professional and technical services	2.0%
5313	5313	Activities related to real estate	1.9%
5614	5614	Business support services	1.9%
7223	7223	Special food services	1.7%
5132	5112	Software publishers	1.5%
5311	5311	Lessors of real estate	1.5%
5611	5611	Office administrative services	1.5%
5171	517	Wired and wireless telecommunications (except satellite)	1.5%
5239	523	Other financial investment activities	1.4%
5222	5222	Non-depository credit intermediation	1.4%
5418	5418	Advertising, pr, and related services	1.2%
5182	5182	Data processing, hosting and related services	1.2%
5231	523	Securities, commodity contracts, investments	1.1%
3345	3345	Electronic instrument manufacturing	1.0%
5121	5121	Motion picture and video industries	1.0%
3344	3344	Semiconductor and electronic component mfg.	0.9%
5312	5312	Offices of real estate agents and brokers	0.9%
3391	3391	Medical equipment and supplies manufacturing	0.8%
5619	5619	Other support services	0.8%
6215	6215	Medical and diagnostic laboratories	0.8%
5223	5223	Activities related to credit intermediation	0.8%
5131	5111	Newspaper, periodical, book, and directory publishers	0.7%
5192	5191	Web search portals, libraries, archives, and other information services	0.4%
3341	3341	Computer and peripheral equipment mfg.	0.4%
5612	5612	Facilities support services	0.4%
5414	5414	Specialized design services	0.4%
3353	3353	Electrical equipment manufacturing	0.3%
5161	515	Broadcasting, except internet	0.3%
3342	3342	Communications equipment manufacturing	0.2%
5178	517	All other telecommunications	0.1%
5331	5331	Lessors of nonfinancial intangible assets	0.1%
5122	5122	Sound recording industries	0.1%
5259	5259	Other investment pools and funds	0.0%
5174	517	Satellite telecommunications	0.0%
5232	523	Securities and commodity exchanges	0.0%

Sources: BLS, Quarterly Census of Employment and Wages, Fourth Quarter 2022.

Table 2.4: Definition of Industries for Industrial (Business Park, Light Industrial) Prototype

NAICS Code (2022)	NAICS Code (2017)	Description	Percent Total Workers in Prototype
5613	5613	Employment services	7.1%
6211	6211	Offices of physicians	5.2%
5511	5511	Management of companies and enterprises	4.7%
5415	5415	Computer systems design and related services	4.6%
2382	2382	Building equipment contractors	4.4%
5617	5617	Services to buildings and dwellings	4.0%
5416	5416	Management and technical consulting services	3.4%
5221	5221	Depository credit intermediation	3.3%
5413	5413	Architectural and engineering services	3.0%
5242	5242	Insurance agencies and brokerages	2.4%
5241	5241	Insurance carriers	2.2%
5411	5411	Legal services	2.2%
5412	5412	Accounting and bookkeeping services	2.1%
6213	6213	Offices of other health practitioners	2.0%
6214	6214	Outpatient care centers	1.9%
6212	6212	Offices of dentists	1.9%
5616	5616	Investigation and security services	1.8%
2381	2381	Building foundation and exterior contractors	1.8%
2361	2361	Residential building construction	1.7%
5417	5417	Scientific research and development services	1.7%
5419	5419	Other professional and technical services	1.6%
2362	2362	Nonresidential building construction	1.6%
2383	2383	Building finishing contractors	1.5%
5313	5313	Activities related to real estate	1.5%
5614	5614	Business support services	1.4%
2389	2389	Other specialty trade contractors	1.4%
7223	7223	Special food services	1.3%
5132	5112	Software publishers	1.2%
5311	5311	Lessors of real estate	1.1%
5611	5611	Office administrative services	1.1%
5171	517	Telecommunications	1.1%
2371	2371	Utility system construction	1.0%
5222	5222	Nondepository credit intermediation	1.0%
3363	3363	Motor vehicle parts manufacturing	1.0%
3116	3116	Animal slaughtering and processing	1.0%
5418	5418	Advertising, pr, and related services	0.9%
5182	5182	Data processing, hosting and related services	0.9%
3345	3345	Electronic instrument manufacturing	0.8%
3323	3323	Architectural and structural metals mfg.	0.7%
3344	3344	Semiconductor and electronic component mfg.	0.7%
5312	5312	Offices of real estate agents and brokers	0.7%
3231	3231	Printing and related support activities	0.7%
2373	2373	Highway, street, and bridge construction	0.6%
3254	3254	Pharmaceutical and medicine manufacturing	0.6%
3327	3327	Machine shops and threaded product mfg.	0.6%
3391	3391	Medical equipment and supplies manufacturing	0.6%
3118	3118	Bakeries and tortilla manufacturing	0.6%

Sources: BLS, Quarterly Census of Employment and Wages, Fourth Quarter 2022.

Table 2.4: Definition of Industries for Industrial (Business Park, Light Industrial) Prototype Continued

NAICS Code (2022)	NAICS Code (2017)	Description	Percent Total Workers in Prototype
5619	5619	Other support services	0.6%
6215	6215	Medical and diagnostic laboratories	0.6%
3121	3121	Beverage manufacturing	0.6%
5223	5223	Activities related to credit intermediation	0.6%
5131	5111	Newspaper, book, and directory publishers	0.6%
3399	3399	Other miscellaneous manufacturing	0.5%
3339	3339	Other general purpose machinery manufacturing	0.5%
3329	3329	Other fabricated metal product manufacturing	0.5%
3119	3119	Other food manufacturing	0.5%
3219	3219	Other wood product manufacturing	0.5%
3371	3371	Household and institutional furniture mfg.	0.4%
5621	5621	Waste collection	0.4%
3273	3273	Cement and concrete product manufacturing	0.4%
5192	5191	Web search portals, libraries, archives, and other	0.3%
3114	3114	Fruit and vegetable preserving and specialty	0.3%
3335	3335	Metalworking machinery manufacturing	0.3%
3115	3115	Dairy product manufacturing	0.3%
3359	3359	Other electrical equipment and component mfg.	0.3%
5612	5612	Facilities support services	0.3%
5414	5414	Specialized design services	0.3%
3332	3332	Industrial machinery manufacturing	0.2%
2379	2379	Other heavy construction	0.2%
5161	515	Broadcasting, except internet	0.2%
3256	3256	Soap, cleaning compound, and toiletry mfg.	0.2%
3324	3324	Boiler, tank, and shipping container mfg.	0.2%
3211	3211	Sawmills and wood preservation	0.2%
3333	3333	Commercial and service industry machinery	0.2%
3212	3212	Plywood and engineered wood product mfg.	0.2%
3272	3272	Glass and glass product manufacturing	0.2%
3149	3149	Other textile product mills	0.1%
2213	2213	Water, sewage and other systems	0.1%
5178	517	All other telecommunications	0.1%
3141	3141	Textile furnishings mills	0.1%
3369	3369	Other transportation equipment manufacturing	0.1%
2372	2372	Land subdivision	0.1%
3322	3322	Cutlery and handtool manufacturing	0.1%
3271	3271	Clay product and refractory manufacturing	0.1%
3343	3343	Audio and video equipment manufacturing	0.0%
5174	517	Satellite telecommunications	0.0%

Sources: BLS, Quarterly Census of Employment and Wages, Fourth Quarter 2022.

Table 2.5: Definition of Industries for Hotel Prototype

NAICS Code (2017 and 2022)	Description	Percent Total Workers in Prototype
721	Accommodation	100.0%

Sources: BLS, Quarterly Census of Employment and Wages, Fourth Quarter 2022.

Occupations and Wages

The US Bureau of Labor Statistics, Industry-occupation matrix was used to identify the occupations associated with the industries that may be housed by each prototype in the preceding tables. Local wage data for Napa County provided by the California Employment Development Department (CA EDD) from the first quarter of 2023 was cross referenced with the identified occupations to estimate the average wages of each occupation associated with each prototype. **Table 2.6 through Table 2.9** identify the occupations and annual average wages for each occupation associated with the industries housed in each building prototype, respectively. Note that the occupations are listed because they are associated with an industry in the national data. This does not mean to imply that each occupation listed in these tables will be found in St. Helena.

Table 2.6: Occupation Mix and Averages for Commercial Prototype

SOC Code	Occupation Name	Percent of Total	Average Annual Wage
11-1011	Chief Executives	0.0309%	$280,501
11-1021	General and Operations Managers	2.4179%	151,214
11-2021	Marketing Managers	0.0281%	190,254
11-2022	Sales Managers	0.3207%	147,583
11-3012	Administrative Services Managers	0.0253%	117,406
11-3013	Facilities Managers	0.0111%	108,849
11-3021	Computer and Information Systems Managers	0.0158%	177,434
11-3031	Financial Managers	0.0752%	168,490
11-3051	Industrial Production Managers	0.0376%	153,050
11-3061	Purchasing Managers	0.0079%	130,256
11-3071	Transportation, Storage, and Distribution Managers	0.0451%	114,244
11-3121	Human Resources Managers	0.0107%	140,159
11-9041	Architectural and Engineering Managers	0.0127%	184,318
11-9051	Food Service Managers	0.6699%	83,363
11-9171	Funeral Home Managers	0.0507%	91,053
11-9179	Personal Service Managers, All Other	0.0178%	75,112
11-9199	Managers, All Other	0.0491%	152,458
13-1041	Compliance Officers	0.0115%	84,332
13-1051	Cost Estimators	0.0990%	99,079
13-1071	Human Resources Specialists	0.0899%	83,455
13-1081	Logisticians	0.0162%	87,320
13-1082	Project Management Specialists	0.0384%	104,117
13-1111	Management Analysts	0.0107%	94,775
13-1121	Meeting, Convention, and Event Planners	0.0352%	64,363
13-1151	Training and Development Specialists	0.1208%	73,511
13-1161	Market Research Analysts and Marketing Specialists	0.1386%	84,475
13-1199	Business Operations Specialists, All Other	0.1128%	76,397
13-2011	Accountants and Auditors	0.1722%	95,030
13-2051	Financial and Investment Analysts	0.0036%	116,172
13-2072	Loan Officers	0.0455%	88,738
13-2099	Financial Specialists, All Other	0.0202%	78,468
15-1211	Computer Systems Analysts	0.0095%	113,293
15-1231	Computer Network Support Specialists	0.0103%	87,114
15-1232	Computer User Support Specialists	0.0748%	79,285
15-1241	Computer Network Architects	0.0024%	122,473
15-1242	Database Administrators	0.0024%	104,872
15-1244	Network and Computer Systems Administrators	0.0214%	105,110
15-1251	Computer Programmers	0.0055%	127,375
15-1252	Software Developers	0.0317%	139,867
15-1253	Software Quality Assurance Analysts and Testers	0.0055%	142,982
15-1254	Web Developers	0.0083%	107,042
15-1255	Web and Digital Interface Designers	0.0087%	81,008
15-1299	Computer Occupations, All Other	0.0154%	104,269
15-2051	Data Scientists	0.0020%	117,001
17-2071	Electrical Engineers	0.0115%	156,741
17-2072	Electronics Engineers, Except Computer	0.0079%	143,938
17-2112	Industrial Engineers	0.0424%	120,407

Table 2.6: Occupation Mix and Averages for Commercial Prototype Continued

SOC Code	Occupation Name	Percent of Total	Average Annual Wage
17-2141	Mechanical Engineers	0.0400%	113,678
17-2199	Engineers, All Other	0.0067%	104,550
17-3013	Mechanical Drafters	0.0079%	79,191
17-3023	Electrical and Electronic Engineering Technologists and Technicians	0.0059%	82,358
17-3026	Industrial Engineering Technologists and Technicians	0.0079%	80,084
17-3027	Mechanical Engineering Technologists and Technicians	0.0055%	77,353
23-2093	Title Examiners, Abstractors, and Searchers	0.0063%	90,977
25-3021	Self-Enrichment Teachers	0.0242%	58,100
27-1011	Art Directors	0.0036%	108,485
27-1022	Fashion Designers	0.0020%	96,678
27-1023	Floral Designers	0.1295%	44,071
27-1024	Graphic Designers	0.0281%	76,855
27-1025	Interior Designers	0.0463%	89,949
27-1026	Merchandise Displayers and Window Trimmers	0.2479%	46,397
27-3031	Public Relations Specialists	0.0226%	96,647
27-4021	Photographers	0.0075%	67,799
29-1041	Optometrists	0.0182%	149,825
29-1051	Pharmacists	0.6113%	172,006
29-1126	Respiratory Therapists	0.0059%	99,846
29-1141	Registered Nurses	0.0131%	152,027
29-1181	Audiologists	0.0059%	114,020
29-2052	Pharmacy Technicians	1.0536%	61,828
29-2057	Ophthalmic Medical Technicians	0.0083%	54,123
29-2081	Opticians, Dispensing	0.0717%	55,837
29-2091	Orthotists and Prosthetists	0.0055%	87,935
29-2092	Hearing Aid Specialists	0.0135%	66,148
31-9011	Massage Therapists	0.1714%	52,720
31-9095	Pharmacy Aides	0.1267%	59,577
31-9099	Healthcare Support Workers, All Other	0.0067%	52,992
33-9032	Security Guards	0.1540%	41,286
33-9099	Protective Service Workers, All Other	0.0083%	40,073
35-1011	Chefs and Head Cooks	0.3049%	77,586
35-1012	First-Line Supervisors of Food Preparation and Serving Workers	3.5653%	51,215
35-2011	Cooks, Fast Food	3.1025%	38,087
35-2012	Cooks, Institution and Cafeteria	0.0253%	51,487
35-2014	Cooks, Restaurant	4.4550%	44,839
35-2015	Cooks, Short Order	0.4375%	42,435
35-2019	Cooks, All Other	0.0313%	41,547
35-2021	Food Preparation Workers	2.4096%	41,233
35-3011	Bartenders	1.4835%	39,885
35-3023	Fast Food and Counter Workers	11.1236%	37,648
35-3031	Waiters and Waitresses	6.5653%	41,202
35-3041	Food Servers, Nonrestaurant	0.0717%	44,317
35-9011	Dining Room and Cafeteria Attendants and Bartender Helpers	0.9166%	37,000
35-9021	Dishwashers	1.2535%	38,662
35-9031	Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop	1.2282%	38,307
35-9099	Food Preparation and Serving Related Workers, All Other	0.2245%	43,564
37-1012	First-Line Supervisors of Landscaping, Lawn Service, and Groundske	0.0107%	73,917
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	0.4438%	44,181
37-2012	Maids and Housekeeping Cleaners	0.0166%	42,352
37-3011	Landscaping and Groundskeeping Workers	0.1006%	47,118

Table 2.6: Occupation Mix and Averages for Commercial Prototype Continued

SOC Code	Occupation Name	Percent of Total	Average Annual Wage
39-1022	First-Line Supervisors of Personal Service Workers	0.1520%	53,849
39-2011	Animal Trainers	0.0384%	48,320
39-2021	Animal Caretakers	0.5939%	39,958
39-3091	Amusement and Recreation Attendants	0.0103%	37,659
39-3093	Locker Room, Coatroom, and Dressing Room Attendants	0.0075%	42,822
39-4011	Embalmers	0.0158%	59,462
39-4012	Crematory Operators	0.0075%	46,073
39-4021	Funeral Attendants	0.1299%	42,341
39-4031	Morticians, Undertakers, and Funeral Arrangers	0.0978%	55,626
39-5011	Barbers	0.0503%	48,205
39-5012	Hairdressers, Hairstylists, and Cosmetologists	1.0817%	43,355
39-5092	Manicurists and Pedicurists	0.4866%	36,154
39-5093	Shampooers	0.0392%	34,523
39-5094	Skincare Specialists	0.1588%	50,463
39-6012	Concierges	0.0218%	43,658
39-9011	Childcare Workers	0.0055%	41,192
39-9031	Exercise Trainers and Group Fitness Instructors	0.0269%	68,252
39-9099	Personal Care and Service Workers, All Other	0.0578%	39,990
41-1011	First-Line Supervisors of Retail Sales Workers	3.2719%	60,565
41-1012	First-Line Supervisors of Non-Retail Sales Workers	0.1544%	91,122
41-2011	Cashiers	10.2022%	37,787
41-2021	Counter and Rental Clerks	0.7273%	48,173
41-2022	Parts Salespersons	0.9011%	45,659
41-2031	Retail Salespersons	10.6738%	44,263
41-3021	Insurance Sales Agents	0.0150%	89,943
41-3031	Securities, Commodities, and Financial Services Sales Agents	0.0190%	81,440
41-3041	Travel Agents	0.1291%	54,359
41-3091	Sales Representatives of Services, Except Advertising, Insurance, Fi	0.6046%	85,598
41-4011	Sales Representatives, Wholesale and Manufacturing, Technical and	0.0265%	107,455
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Techn	0.3753%	94,153
41-9011	Demonstrators and Product Promoters	0.0356%	46,921
41-9031	Sales Engineers	0.0079%	147,125
41-9041	Telemarketers	0.0115%	40,032
41-9099	Sales and Related Workers, All Other	0.1809%	71,302
43-1011	First-Line Supervisors of Office and Administrative Support Workers	0.4133%	74,744
43-2011	Switchboard Operators, Including Answering Service	0.0095%	48,962
43-3011	Bill and Account Collectors	0.0273%	58,444
43-3021	Billing and Posting Clerks	0.0582%	57,825
43-3031	Bookkeeping, Accounting, and Auditing Clerks	0.7281%	58,837
43-3051	Payroll and Timekeeping Clerks	0.0301%	62,969
43-3061	Procurement Clerks	0.0230%	51,834
43-4041	Credit Authorizers, Checkers, and Clerks	0.0055%	49,571
43-4051	Customer Service Representatives	1.4135%	47,454
43-4071	File Clerks	0.0162%	47,392
43-4151	Order Clerks	0.0443%	49,375
43-4161	Human Resources Assistants, Except Payroll and Timekeeping	0.0158%	58,414
43-4171	Receptionists and Information Clerks	0.5096%	44,479
43-4181	Reservation and Transportation Ticket Agents and Travel Clerks	0.0519%	44,138
43-4199	Information and Record Clerks, All Other	0.0150%	58,197
43-5021	Couriers and Messengers	0.0063%	43,353

Table 2.6: Occupation Mix and Averages for Commercial Prototype Continued

SOC Code	Occupation Name	Percent of Total	Average Annual Wage
43-5032	Dispatchers, Except Police, Fire, and Ambulance	0.0396%	51,937
43-5061	Production, Planning, and Expediting Clerks	0.0891%	61,450
43-5071	Shipping, Receiving, and Inventory Clerks	0.6212%	52,040
43-5111	Weighers, Measurers, Checkers, and Samplers, Recordkeeping	0.0190%	46,813
43-6011	Executive Secretaries and Executive Administrative Assistants	0.0483%	84,175
43-6013	Medical Secretaries and Administrative Assistants	0.0063%	54,499
43-6014	Secretaries and Administrative Assistants, Except Legal, Medical, a	0.4011%	53,249
43-9021	Data Entry Keyers	0.0202%	43,715
43-9041	Insurance Claims and Policy Processing Clerks	0.0044%	50,542
43-9061	Office Clerks, General	1.0595%	50,078
43-9071	Office Machine Operators, Except Computer	0.0044%	46,576
43-9199	Office and Administrative Support Workers, All Other	0.0206%	58,166
45-1011	First-Line Supervisors of Farming, Fishing, and Forestry Workers	0.0067%	65,514
45-2092	Farmworkers and Laborers, Crop, Nursery, and Greenhouse	0.0855%	41,090
47-1011	First-Line Supervisors of Construction Trades and Extraction Workers	0.0123%	97,987
47-2031	Carpenters	0.0269%	75,484
47-2041	Carpet Installers	0.0301%	55,141
47-2042	Floor Layers, Except Carpet, Wood, and Hard Tiles	0.0115%	60,937
47-2061	Construction Laborers	0.0135%	58,127
47-2111	Electricians	0.0115%	71,909
47-2121	Glaziers	0.0297%	79,028
47-2152	Plumbers, Pipefitters, and Steamfitters	0.0131%	81,022
49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers	0.4925%	98,474
49-2011	Computer, Automated Teller, and Office Machine Repairers	0.1635%	54,367
49-2021	Radio, Cellular, and Tower Equipment Installers and Repairers	0.0099%	70,638
49-2022	Telecommunications Equipment Installers and Repairers, Except Lin	0.0210%	85,406
49-2092	Electric Motor, Power Tool, and Related Repairers	0.0150%	57,942
49-2094	Electrical and Electronics Repairers, Commercial and Industrial Equi	0.0210%	77,509
49-2096	Electronic Equipment Installers and Repairers, Motor Vehicles	0.0238%	40,915
49-2097	Audiovisual Equipment Installers and Repairers	0.0309%	60,533
49-3021	Automotive Body and Related Repairers	0.5365%	64,648
49-3022	Automotive Glass Installers and Repairers	0.0566%	49,869
49-3023	Automotive Service Technicians and Mechanics	2.2033%	62,140
49-3031	Bus and Truck Mechanics and Diesel Engine Specialists	0.2890%	72,669
49-3041	Farm Equipment Mechanics and Service Technicians	0.0119%	60,139
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	0.0321%	69,052
49-3051	Motorboat Mechanics and Service Technicians	0.0626%	58,865
49-3052	Motorcycle Mechanics	0.0578%	54,730
49-3053	Outdoor Power Equipment and Other Small Engine Mechanics	0.0645%	53,507
49-3091	Bicycle Repairers	0.0531%	42,739
49-3092	Recreational Vehicle Service Technicians	0.0606%	56,326
49-3093	Tire Repairers and Changers	0.3167%	41,288
49-9011	Mechanical Door Repairers	0.0166%	55,984
49-9012	Control and Valve Installers and Repairers, Except Mechanical Door	0.0059%	87,748
49-9021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	0.0392%	65,487
49-9031	Home Appliance Repairers	0.0879%	50,543
49-9041	Industrial Machinery Mechanics	0.2063%	72,286
49-9043	Maintenance Workers, Machinery	0.0146%	61,072
49-9044	Millwrights	0.0127%	69,529
49-9062	Medical Equipment Repairers	0.0527%	69,280

Table 2.6: Occupation Mix and Averages for Commercial Prototype Continued

SOC Code	Occupation Name	Percent of Total	Average Annual Wage
49-9063	Musical Instrument Repairers and Tuners	0.0182%	49,413
49-9064	Watch and Clock Repairers	0.0075%	58,937
49-9069	Precision Instrument and Equipment Repairers, All Other	0.0162%	71,975
49-9071	Maintenance and Repair Workers, General	0.3310%	57,673
49-9081	Wind Turbine Service Technicians	0.0111%	71,736
49-9091	Coin, Vending, and Amusement Machine Servicers and Repairers	0.0048%	54,056
49-9098	Helpers--Installation, Maintenance, and Repair Workers	0.0974%	43,993
49-9099	Installation, Maintenance, and Repair Workers, All Other	0.1231%	51,082
51-1011	First-Line Supervisors of Production and Operating Workers	0.2597%	82,224
51-2021	Coil Winders, Tapers, and Finishers	0.0055%	43,540
51-2041	Structural Metal Fabricators and Fitters	0.0146%	54,753
51-3011	Bakers	0.3825%	42,196
51-3021	Butchers and Meat Cutters	0.4613%	44,395
51-3022	Meat, Poultry, and Fish Cutters and Trimmers	0.0697%	36,818
51-3023	Slaughterers and Meat Packers	0.0091%	35,599
51-3091	Food and Tobacco Roasting, Baking, and Drying Machine Operators	0.0107%	42,748
51-3092	Food Batchmakers	0.0487%	39,851
51-3093	Food Cooking Machine Operators and Tenders	0.0143%	40,122
51-3099	Food Processing Workers, All Other	0.0123%	36,943
51-4021	Extruding and Drawing Machine Setters, Operators, and Tenders, Me	0.0119%	43,227
51-4022	Forging Machine Setters, Operators, and Tenders, Metal and Plastic	0.0139%	56,775
51-4023	Rolling Machine Setters, Operators, and Tenders, Metal and Plastic	0.0119%	51,325
51-4031	Cutting, Punching, and Press Machine Setters, Operators, and Tend	0.1255%	45,999
51-4033	Grinding, Lapping, Polishing, and Buffing Machine Tool Setters, Oper	0.0396%	44,478
51-4034	Lathe and Turning Machine Tool Setters, Operators, and Tenders, Me	0.0087%	54,878
51-4041	Machinists	0.1314%	58,151
51-4072	Molding, Coremaking, and Casting Machine Setters, Operators, and	0.0115%	44,655
51-4081	Multiple Machine Tool Setters, Operators, and Tenders, Metal and Pl	0.0511%	44,697
51-4111	Tool and Die Makers	0.0352%	71,552
51-4121	Welders, Cutters, Solderers, and Brazers	0.1734%	59,266
51-4122	Welding, Soldering, and Brazing Machine Setters, Operators, and Te	0.0123%	52,992
51-4191	Heat Treating Equipment Setters, Operators, and Tenders, Metal and	0.0063%	50,439
51-4193	Plating Machine Setters, Operators, and Tenders, Metal and Plastic	0.0055%	46,083
51-4194	Tool Grinders, Filers, and Sharpeners	0.0063%	48,136
51-5112	Printing Press Operators	0.0044%	52,450
51-6011	Laundry and Dry-Cleaning Workers	0.3231%	39,403
51-6021	Pressers, Textile, Garment, and Related Materials	0.1006%	37,141
51-6031	Sewing Machine Operators	0.0281%	37,673
51-6041	Shoe and Leather Workers and Repairers	0.0051%	43,530
51-6052	Tailors, Dressmakers, and Custom Sewers	0.0467%	47,844
51-6093	Upholsterers	0.0281%	44,989
51-7011	Cabinetmakers and Bench Carpenters	0.0067%	51,460
51-7021	Furniture Finishers	0.0131%	48,428
51-9012	Separating, Filtering, Clarifying, Precipitating, and Still Machine Sette	0.0162%	74,543
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	0.1318%	51,689
51-9071	Jewelers and Precious Stone and Metal Workers	0.0562%	50,970
51-9082	Medical Appliance Technicians	0.0063%	48,375
51-9083	Ophthalmic Laboratory Technicians	0.0154%	51,148
51-9111	Packaging and Filling Machine Operators and Tenders	0.0107%	48,730
51-9123	Painting, Coating, and Decorating Workers	0.0059%	52,502

Table 2.6: Occupation Mix and Averages for Commercial Prototype Continued

SOC Code	Occupation Name	Percent of Total	Average Annual Wage
51-9124	Coating, Painting, and Spraying Machine Setters, Operators, and Te	0.1378%	58,536
51-9151	Photographic Process Workers and Processing Machine Operators	0.0055%	47,333
51-9161	Computer Numerically Controlled Tool Operators	0.0610%	52,117
51-9162	Computer Numerically Controlled Tool Programmers	0.0083%	79,629
51-9194	Etchers and Engravers	0.0095%	43,905
51-9195	Molders, Shapers, and Casters, Except Metal and Plastic	0.0075%	49,032
51-9198	Helpers--Production Workers	0.0574%	46,989
51-9199	Production Workers, All Other	0.0277%	49,543
53-3031	Driver/Sales Workers	1.2286%	46,920
53-3032	Heavy and Tractor-Trailer Truck Drivers	0.2407%	60,073
53-3033	Light Truck Drivers	0.9277%	48,398
53-3053	Shuttle Drivers and Chauffeurs	0.0994%	41,842
53-6021	Parking Attendants	0.2688%	37,357
53-6031	Automotive and Watercraft Service Attendants	0.3397%	39,470
53-6051	Transportation Inspectors	0.0055%	75,651
53-6099	Transportation Workers, All Other	0.0075%	49,886
53-7051	Industrial Truck and Tractor Operators	0.0788%	50,573
53-7061	Cleaners of Vehicles and Equipment	1.0571%	40,094
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	0.8113%	43,809
53-7063	Machine Feeders and Offbearers	0.0067%	45,162
53-7064	Packers and Packagers, Hand	0.4490%	36,983
53-7065	Stockers and Order Fillers	3.5816%	42,217
53-7199	Material Moving Workers, All Other	0.0293%	49,761

Sources: CA EDD, Occupational Employment (May 2022) & Wage (2023 - 1st Quarter) Data.

Table 2.7: Occupation Mix and Averages for Office Prototype

SOC Code	Occupation Name	Percent of Total	Average Annual Wage
11-1011	Chief Executives	0.2556%	$280,501
11-1021	General and Operations Managers	2.8314%	151,214
11-2011	Advertising and Promotions Managers	0.0495%	183,247
11-2021	Marketing Managers	0.5210%	190,254
11-2022	Sales Managers	0.5315%	147,583
11-2032	Public Relations Managers	0.0764%	160,760
11-2033	Fundraising Managers	0.0071%	137,701
11-3012	Administrative Services Managers	0.2596%	117,406
11-3013	Facilities Managers	0.0801%	108,849
11-3021	Computer and Information Systems Managers	0.9955%	177,434
11-3031	Financial Managers	1.2535%	168,490
11-3051	Industrial Production Managers	0.0980%	153,050
11-3061	Purchasing Managers	0.0754%	130,256
11-3071	Transportation, Storage, and Distribution Managers	0.0619%	114,244
11-3111	Compensation and Benefits Managers	0.0271%	153,305
11-3121	Human Resources Managers	0.2445%	140,159
11-3131	Training and Development Managers	0.0511%	152,988
11-9013	Farmers, Ranchers, and Other Agricultural Managers	0.0013%	118,578
11-9021	Construction Managers	0.0751%	143,065
11-9031	Education and Childcare Administrators, Preschool and Daycare	0.0018%	71,992
11-9032	Education Administrators, Kindergarten through Secondary	0.0016%	132,693
11-9033	Education Administrators, Postsecondary	0.0003%	143,422
11-9039	Education Administrators, All Other	0.0040%	123,260
11-9041	Architectural and Engineering Managers	0.2941%	184,318
11-9051	Food Service Managers	0.0596%	83,363
11-9072	Entertainment and Recreation Managers, Except Gambling	0.0018%	89,003
11-9081	Lodging Managers	0.0055%	89,645
11-9111	Medical and Health Services Managers	0.4350%	138,476
11-9121	Natural Sciences Managers	0.1136%	207,245
11-9141	Property, Real Estate, and Community Association Managers	0.5663%	70,156
11-9151	Social and Community Service Managers	0.0414%	89,584
11-9161	Emergency Management Directors	0.0008%	124,820
11-9179	Personal Service Managers, All Other	0.0005%	75,112
11-9199	Managers, All Other	0.5823%	152,458
13-1011	Agents and Business Managers of Artists, Performers, and Athletes	0.0013%	143,606
13-1031	Claims Adjusters, Examiners, and Investigators	0.6266%	106,973
13-1032	Insurance Appraisers, Auto Damage	0.0335%	76,622
13-1041	Compliance Officers	0.3412%	84,332
13-1051	Cost Estimators	0.0530%	99,079
13-1071	Human Resources Specialists	1.0791%	83,455
13-1075	Labor Relations Specialists	0.0132%	102,781
13-1081	Logisticians	0.1842%	87,320
13-1082	Project Management Specialists	1.1217%	104,117
13-1111	Management Analysts	1.4453%	94,775
13-1121	Meeting, Convention, and Event Planners	0.0875%	64,363
13-1131	Fundraisers	0.0269%	65,036
13-1141	Compensation, Benefits, and Job Analysis Specialists	0.1423%	89,890
13-1151	Training and Development Specialists	0.3879%	73,511
13-1161	Market Research Analysts and Marketing Specialists	1.3022%	84,475

Table 2.7: Occupation Mix and Averages for Office Prototype Continued

SOC Code	Occupation Name	Percent of Total	Average Annual Wage
13-1199	Business Operations Specialists, All Other	1.0957%	76,397
13-2011	Accountants and Auditors	2.2337%	95,030
13-2031	Budget Analysts	0.0340%	99,293
13-2041	Credit Analysts	0.1665%	99,915
13-2051	Financial and Investment Analysts	0.6464%	116,172
13-2052	Personal Financial Advisors	0.6962%	142,066
13-2053	Insurance Underwriters	0.3146%	98,956
13-2054	Financial Risk Specialists	0.1325%	126,044
13-2061	Financial Examiners	0.1260%	105,422
13-2071	Credit Counselors	0.0366%	60,794
13-2072	Loan Officers	0.8435%	88,738
13-2082	Tax Preparers	0.2266%	58,336
13-2099	Financial Specialists, All Other	0.1742%	78,468
15-1211	Computer Systems Analysts	1.0258%	113,293
15-1212	Information Security Analysts	0.3689%	142,889
15-1221	Computer and Information Research Scientists	0.0495%	241,135
15-1231	Computer Network Support Specialists	0.3088%	87,114
15-1232	Computer User Support Specialists	1.1410%	79,285
15-1241	Computer Network Architects	0.3760%	122,473
15-1242	Database Administrators	0.1491%	104,872
15-1243	Database Architects	0.1133%	158,839
15-1244	Network and Computer Systems Administrators	0.5478%	105,110
15-1251	Computer Programmers	0.3162%	127,375
15-1252	Software Developers	3.2287%	139,867
15-1253	Software Quality Assurance Analysts and Testers	0.4590%	142,982
15-1254	Web Developers	0.1573%	107,042
15-1255	Web and Digital Interface Designers	0.1684%	81,008
15-1299	Computer Occupations, All Other	0.5871%	104,269
15-2011	Actuaries	0.0661%	131,570
15-2021	Mathematicians	0.0005%	131,445
15-2031	Operations Research Analysts	0.1979%	105,630
15-2041	Statisticians	0.0435%	141,445
15-2051	Data Scientists	0.2366%	117,001
15-2099	Mathematical Science Occupations, All Other	0.0047%	107,270
17-1011	Architects, Except Landscape and Naval	0.2456%	115,111
17-1012	Landscape Architects	0.0390%	119,680
17-1021	Cartographers and Photogrammetrists	0.0150%	100,168
17-1022	Surveyors	0.0970%	106,035
17-2011	Aerospace Engineers	0.0688%	145,215
17-2021	Agricultural Engineers	0.0008%	113,324
17-2031	Bioengineers and Biomedical Engineers	0.0287%	127,894
17-2041	Chemical Engineers	0.0240%	122,432
17-2051	Civil Engineers	0.4777%	112,514
17-2061	Computer Hardware Engineers	0.1655%	173,356
17-2071	Electrical Engineers	0.2901%	156,741
17-2072	Electronics Engineers, Except Computer	0.1876%	143,938
17-2081	Environmental Engineers	0.0632%	118,901
17-2111	Health and Safety Engineers, Except Mining Safety Engineers and Inspect	0.0211%	126,928
17-2112	Industrial Engineers	0.2888%	120,407
17-2121	Marine Engineers and Naval Architects	0.0058%	141,186

Table 2.7: Occupation Mix and Averages for Office Prototype Continued

SOC Code	Occupation Name	Percent of Total	Average Annual Wage
17-2131	Materials Engineers	0.0224%	118,029
17-2141	Mechanical Engineers	0.3452%	113,678
17-2151	Mining and Geological Engineers, Including Mining Safety Engineers	0.0092%	118,880
17-2161	Nuclear Engineers	0.0087%	160,843
17-2171	Petroleum Engineers	0.0211%	148,559
17-2199	Engineers, All Other	0.1929%	104,550
17-3011	Architectural and Civil Drafters	0.2053%	70,396
17-3012	Electrical and Electronics Drafters	0.0335%	79,918
17-3013	Mechanical Drafters	0.0509%	79,191
17-3019	Drafters, All Other	0.0169%	69,637
17-3021	Aerospace Engineering and Operations Technologists and Technicians	0.0132%	88,693
17-3022	Civil Engineering Technologists and Technicians	0.0788%	81,413
17-3023	Electrical and Electronic Engineering Technologists and Technicians	0.1497%	82,358
17-3024	Electro-Mechanical and Mechatronics Technologists and Technicians	0.0140%	79,721
17-3025	Environmental Engineering Technologists and Technicians	0.0192%	74,612
17-3026	Industrial Engineering Technologists and Technicians	0.0669%	80,084
17-3027	Mechanical Engineering Technologists and Technicians	0.0519%	77,353
17-3028	Calibration Technologists and Technicians	0.0103%	66,906
17-3029	Engineering Technologists and Technicians, Except Drafters, All Other	0.0941%	73,106
19-1011	Animal Scientists	0.0021%	157,988
19-1012	Food Scientists and Technologists	0.0113%	72,909
19-1021	Biochemists and Biophysicists	0.0635%	140,417
19-1022	Microbiologists	0.0271%	109,098
19-1023	Zoologists and Wildlife Biologists	0.0058%	90,541
19-1029	Biological Scientists, All Other	0.0540%	117,603
19-1031	Conservation Scientists	0.0021%	85,442
19-1032	Foresters	0.0008%	75,235
19-1041	Epidemiologists	0.0021%	102,805
19-1042	Medical Scientists, Except Epidemiologists	0.1560%	128,818
19-1099	Life Scientists, All Other	0.0079%	134,322
19-2011	Astronomers	0.0024%	150,957
19-2012	Physicists	0.0298%	172,380
19-2021	Atmospheric and Space Scientists	0.0074%	108,527
19-2031	Chemists	0.0862%	80,001
19-2032	Materials Scientists	0.0108%	106,668
19-2041	Environmental Scientists and Specialists, Including Health	0.0862%	104,799
19-2042	Geoscientists, Except Hydrologists and Geographers	0.0385%	102,224
19-2043	Hydrologists	0.0061%	131,362
19-2099	Physical Scientists, All Other	0.0121%	139,036
19-3011	Economists	0.0150%	142,359
19-3022	Survey Researchers	0.0163%	82,244
19-3032	Industrial-Organizational Psychologists	0.0003%	130,085
19-3033	Clinical and Counseling Psychologists	0.0949%	132,068
19-3034	School Psychologists	0.0029%	126,762
19-3039	Psychologists, All Other	0.0063%	120,895
19-3041	Sociologists	0.0034%	112,110
19-3051	Urban and Regional Planners	0.0145%	114,872
19-3091	Anthropologists and Archeologists	0.0111%	78,381
19-3092	Geographers	0.0003%	97,312

Table 2.7: Occupation Mix and Averages for Office Prototype Continued

SOC Code	Occupation Name	Percent of Total	Average Annual Wage
19-3093	Historians	0.0018%	101,185
19-3094	Political Scientists	0.0024%	129,638
19-3099	Social Scientists and Related Workers, All Other	0.0145%	94,321
19-4012	Agricultural Technicians	0.0129%	60,219
19-4013	Food Science Technicians	0.0024%	52,680
19-4021	Biological Technicians	0.0906%	61,891
19-4031	Chemical Technicians	0.0617%	50,613
19-4042	Environmental Science and Protection Technicians, Including Health	0.0516%	65,806
19-4043	Geological Technicians, Except Hydrologic Technicians	0.0153%	67,280
19-4044	Hydrologic Technicians	0.0005%	76,169
19-4051	Nuclear Technicians	0.0013%	78,194
19-4061	Social Science Research Assistants	0.0248%	68,142
19-4071	Forest and Conservation Technicians	0.0021%	48,422
19-4092	Forensic Science Technicians	0.0026%	97,229
19-4099	Life, Physical, and Social Science Technicians, All Other	0.0756%	59,814
19-5011	Occupational Health and Safety Specialists	0.0706%	92,431
19-5012	Occupational Health and Safety Technicians	0.0184%	68,163
21-1012	Educational, Guidance, and Career Counselors and Advisors	0.0116%	96,045
21-1013	Marriage and Family Therapists	0.0638%	56,356
21-1015	Rehabilitation Counselors	0.0177%	53,251
21-1019	Counselors, All Other	0.0264%	45,940
21-1021	Child, Family, and School Social Workers	0.0445%	69,378
21-1022	Healthcare Social Workers	0.1038%	92,493
21-1023	Mental Health and Substance Abuse Social Workers	0.1014%	109,057
21-1029	Social Workers, All Other	0.0069%	79,233
21-1091	Health Education Specialists	0.0377%	66,605
21-1092	Probation Officers and Correctional Treatment Specialists	0.0024%	101,040
21-1093	Social and Human Service Assistants	0.1220%	53,542
21-1094	Community Health Workers	0.0506%	82,047
21-1099	Community and Social Service Specialists, All Other	0.0211%	57,592
21-2011	Clergy	0.0018%	72,036
21-2099	Religious Workers, All Other	0.0003%	54,964
23-1011	Lawyers	1.3660%	176,887
23-2011	Paralegals and Legal Assistants	0.7763%	72,317
23-2093	Title Examiners, Abstractors, and Searchers	0.1299%	90,977
23-2099	Legal Support Workers, All Other	0.0474%	68,163
25-1042	Biological Science Teachers, Postsecondary	0.0005%	127,229
25-1052	Chemistry Teachers, Postsecondary	0.0003%	124,394
25-1072	Nursing Instructors and Teachers, Postsecondary	0.0003%	108,153
25-1194	Career/Technical Education Teachers, Postsecondary	0.0013%	101,777
25-2011	Preschool Teachers, Except Special Education	0.0063%	47,519
25-2012	Kindergarten Teachers, Except Special Education	0.0003%	105,412
25-2021	Elementary School Teachers, Except Special Education	0.0011%	95,162
25-2031	Secondary School Teachers, Except Special and Career/Technical Educat	0.0024%	96,367
25-2051	Special Education Teachers, Preschool	0.0021%	78,516
25-2059	Special Education Teachers, All Other	0.0026%	84,716
25-3011	Adult Basic Education, Adult Secondary Education, and English as a Sec	0.0011%	94,882
25-3021	Self-Enrichment Teachers	0.0034%	58,100
25-3031	Substitute Teachers, Short-Term	0.0335%	53,012

Table 2.7: Occupation Mix and Averages for Office Prototype Continued

SOC Code	Occupation Name	Percent of Total	Average Annual Wage
25-3041	Tutors	0.0047%	43,978
25-3099	Teachers and Instructors, All Other	0.0150%	101,808
25-4011	Archivists	0.0026%	74,518
25-4012	Curators	0.0005%	83,013
25-4022	Librarians and Media Collections Specialists	0.0232%	83,594
25-4031	Library Technicians	0.0137%	62,452
25-9031	Instructional Coordinators	0.0216%	112,099
25-9099	Educational Instruction and Library Workers, All Other	0.0013%	65,079
27-1011	Art Directors	0.0906%	108,485
27-1012	Craft Artists	0.0013%	96,554
27-1013	Fine Artists, Including Painters, Sculptors, and Illustrators	0.0063%	82,628
27-1014	Special Effects Artists and Animators	0.0472%	140,002
27-1019	Artists and Related Workers, All Other	0.0008%	108,371
27-1021	Commercial and Industrial Designers	0.0324%	98,194
27-1022	Fashion Designers	0.0155%	96,678
27-1023	Floral Designers	0.0016%	44,071
27-1024	Graphic Designers	0.3096%	76,855
27-1025	Interior Designers	0.1043%	89,949
27-1026	Merchandise Displayers and Window Trimmers	0.0711%	46,397
27-1027	Set and Exhibit Designers	0.0090%	87,519
27-1029	Designers, All Other	0.0113%	91,860
27-2012	Producers and Directors	0.2140%	156,015
27-2022	Coaches and Scouts	0.0005%	60,520
27-2041	Music Directors and Composers	0.0008%	101,943
27-3031	Public Relations Specialists	0.2693%	96,647
27-3041	Editors	0.1887%	91,538
27-3042	Technical Writers	0.0943%	125,588
27-3043	Writers and Authors	0.0754%	134,311
27-3091	Interpreters and Translators	0.0709%	69,482
27-3092	Court Reporters and Simultaneous Captioners	0.0092%	101,985
27-3099	Media and Communication Workers, All Other	0.0198%	62,836
27-4011	Audio and Video Technicians	0.0469%	73,210
27-4014	Sound Engineering Technicians	0.0192%	92,867
27-4015	Lighting Technicians	0.0013%	96,751
27-4021	Photographers	0.0664%	67,799
27-4031	Camera Operators, Television, Video, and Film	0.0316%	82,701
27-4032	Film and Video Editors	0.0632%	95,879
27-4099	Media and Communication Equipment Workers, All Other	0.0221%	76,065
29-1011	Chiropractors	0.0951%	93,480
29-1021	Dentists, General	0.2788%	205,901
29-1022	Oral and Maxillofacial Surgeons	0.0132%	267,594
29-1031	Dietitians and Nutritionists	0.0559%	91,008
29-1041	Optometrists	0.0877%	149,825
29-1051	Pharmacists	0.0672%	172,006
29-1071	Physician Assistants	0.2308%	171,757
29-1081	Podiatrists	0.0198%	187,375
29-1122	Occupational Therapists	0.1146%	111,320
29-1123	Physical Therapists	0.2906%	130,698

Table 2.7: Occupation Mix and Averages for Office Prototype Continued

SOC Code	Occupation Name	Percent of Total	Average Annual Wage
29-1124	Radiation Therapists	0.0140%	147,364
29-1125	Recreational Therapists	0.0029%	81,195
29-1126	Respiratory Therapists	0.0224%	99,846
29-1127	Speech-Language Pathologists	0.1125%	122,722
29-1128	Exercise Physiologists	0.0034%	82,254
29-1131	Veterinarians	0.1931%	131,601
29-1141	Registered Nurses	1.4364%	152,027
29-1151	Nurse Anesthetists	0.0756%	255,985
29-1161	Nurse Midwives	0.0155%	176,046
29-1171	Nurse Practitioners	0.3945%	196,462
29-1181	Audiologists	0.0213%	114,020
29-1212	Cardiologists	0.0395%	345,716
29-1214	Emergency Medicine Physicians	0.0685%	236,608
29-1215	Family Medicine Physicians	0.2113%	279,869
29-1216	General Internal Medicine Physicians	0.1012%	264,126
29-1217	Neurologists	0.0116%	254,199
29-1221	Pediatricians, General	0.0682%	225,839
29-1222	Physicians, Pathologists	0.0198%	268,010
29-1223	Psychiatrists	0.0324%	337,699
29-1224	Radiologists	0.0627%	352,175
29-1249	Surgeons, All Other	0.0564%	297,076
29-1291	Acupuncturists	0.0174%	94,768
29-1292	Dental Hygienists	0.5494%	119,607
29-1299	Healthcare Diagnosing or Treating Practitioners, All Other	0.0116%	132,525
29-2031	Cardiovascular Technologists and Technicians	0.0253%	87,769
29-2032	Diagnostic Medical Sonographers	0.0817%	118,880
29-2033	Nuclear Medicine Technologists	0.0105%	133,854
29-2034	Radiologic Technologists and Technicians	0.2098%	103,511
29-2035	Magnetic Resonance Imaging Technologists	0.0387%	113,179
29-2036	Medical Dosimetrists	0.0018%	182,941
29-2042	Emergency Medical Technicians	0.0245%	47,373
29-2043	Paramedics	0.0142%	74,217
29-2051	Dietetic Technicians	0.0034%	46,034
29-2052	Pharmacy Technicians	0.0704%	61,828
29-2053	Psychiatric Technicians	0.0556%	77,145
29-2055	Surgical Technologists	0.0754%	86,024
29-2056	Veterinary Technologists and Technicians	0.2980%	47,924
29-2057	Ophthalmic Medical Technicians	0.1613%	54,123
29-2061	Licensed Practical and Licensed Vocational Nurses	0.4003%	79,305
29-2072	Medical Records Specialists	0.2580%	57,384
29-2081	Opticians, Dispensing	0.1086%	55,837
29-2091	Orthotists and Prosthetists	0.0179%	87,935
29-2092	Hearing Aid Specialists	0.0066%	66,148
29-2099	Health Technologists and Technicians, All Other	0.1939%	64,258
29-9021	Health Information Technologists and Medical Registrars	0.0377%	99,191
29-9091	Athletic Trainers	0.0187%	68,890
29-9092	Genetic Counselors	0.0024%	136,866
29-9093	Surgical Assistants	0.0242%	55,961

Table 2.7: Occupation Mix and Averages for Office Prototype Continued

SOC Code	Occupation Name	Percent of Total	Average Annual Wage
29-9099	Healthcare Practitioners and Technical Workers, All Other	0.0366%	85,671
31-1131	Nursing Assistants	0.2000%	46,177
31-1132	Orderlies	0.0087%	51,759
31-1133	Psychiatric Aides	0.0071%	52,104
31-2011	Occupational Therapy Assistants	0.0559%	84,317
31-2012	Occupational Therapy Aides	0.0034%	50,055
31-2021	Physical Therapist Assistants	0.1354%	82,488
31-2022	Physical Therapist Aides	0.0859%	38,631
31-9011	Massage Therapists	0.0809%	52,720
31-9091	Dental Assistants	0.9051%	55,689
31-9092	Medical Assistants	1.5394%	57,351
31-9093	Medical Equipment Preparers	0.0345%	65,900
31-9094	Medical Transcriptionists	0.1062%	39,237
31-9095	Pharmacy Aides	0.0113%	59,577
31-9096	Veterinary Assistants and Laboratory Animal Caretakers	0.2493%	41,045
31-9097	Phlebotomists	0.1708%	52,752
31-9099	Healthcare Support Workers, All Other	0.0735%	52,992
33-1011	First-Line Supervisors of Correctional Officers	0.0037%	118,892
33-1021	First-Line Supervisors of Firefighting and Prevention Workers	0.0076%	96,703
33-1091	First-Line Supervisors of Security Workers	0.0793%	63,768
33-1099	First-Line Supervisors of Protective Service Workers, All Other	0.0116%	77,356
33-2011	Firefighters	0.0493%	65,754
33-2021	Fire Inspectors and Investigators	0.0011%	96,347
33-3012	Correctional Officers and Jailers	0.0472%	88,341
33-9021	Private Detectives and Investigators	0.0477%	62,608
33-9032	Security Guards	1.9120%	41,286
33-9091	Crossing Guards and Flaggers	0.0917%	51,351
33-9092	Lifeguards, Ski Patrol, and Other Recreational Protective Service Workers	0.0040%	38,077
33-9094	School Bus Monitors	0.0003%	37,418
33-9099	Protective Service Workers, All Other	0.0337%	40,073
35-1011	Chefs and Head Cooks	0.0495%	77,586
35-1012	First-Line Supervisors of Food Preparation and Serving Workers	0.1220%	51,215
35-2011	Cooks, Fast Food	0.0047%	38,087
35-2012	Cooks, Institution and Cafeteria	0.1689%	51,487
35-2014	Cooks, Restaurant	0.0740%	44,839
35-2015	Cooks, Short Order	0.0182%	42,435
35-2019	Cooks, All Other	0.0111%	41,547
35-2021	Food Preparation Workers	0.1368%	41,233
35-3011	Bartenders	0.0374%	39,885
35-3023	Fast Food and Counter Workers	0.3307%	37,648
35-3031	Waiters and Waitresses	0.1212%	41,202
35-3041	Food Servers, Nonrestaurant	0.0754%	44,317
35-9011	Dining Room and Cafeteria Attendants and Bartender Helpers	0.0527%	37,000
35-9021	Dishwashers	0.0704%	38,662
35-9031	Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop	0.0140%	38,307
35-9099	Food Preparation and Serving Related Workers, All Other	0.0192%	43,564
37-1011	First-Line Supervisors of Housekeeping and Janitorial Workers	0.1866%	56,368
37-1012	First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping	0.2113%	73,917
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	2.7676%	44,181
37-2012	Maids and Housekeeping Cleaners	0.4274%	42,352

Table 2.7: Occupation Mix and Averages for Office Prototype Continued

SOC Code	Occupation Name	Percent of Total	Average Annual Wage
37-2019	Building Cleaning Workers, All Other	0.0311%	45,811
37-2021	Pest Control Workers	0.2229%	51,539
37-3011	Landscaping and Groundskeeping Workers	1.5652%	47,118
37-3012	Pesticide Handlers, Sprayers, and Applicators, Vegetation	0.0324%	47,003
37-3013	Tree Trimmers and Pruners	0.0951%	66,329
37-3019	Grounds Maintenance Workers, All Other	0.0174%	49,888
39-1014	First-Line Supervisors of Entertainment and Recreation Workers, Except G	0.0145%	53,243
39-1022	First-Line Supervisors of Personal Service Workers	0.0140%	53,849
39-2011	Animal Trainers	0.0011%	48,320
39-2021	Animal Caretakers	0.0988%	39,958
39-3021	Motion Picture Projectionists	0.0045%	55,960
39-3031	Ushers, Lobby Attendants, and Ticket Takers	0.0859%	36,990
39-3091	Amusement and Recreation Attendants	0.0082%	37,659
39-3092	Costume Attendants	0.0040%	62,399
39-3093	Locker Room, Coatroom, and Dressing Room Attendants	0.0003%	42,822
39-5012	Hairdressers, Hairstylists, and Cosmetologists	0.0061%	43,355
39-5092	Manicurists and Pedicurists	0.0003%	36,154
39-5094	Skincare Specialists	0.0211%	50,463
39-6011	Baggage Porters and Bellhops	0.0071%	37,074
39-6012	Concierges	0.0340%	43,658
39-9011	Childcare Workers	0.0213%	41,192
39-9031	Exercise Trainers and Group Fitness Instructors	0.0174%	68,252
39-9032	Recreation Workers	0.0158%	38,547
39-9041	Residential Advisors	0.0113%	61,531
39-9099	Personal Care and Service Workers, All Other	0.0034%	39,990
41-1011	First-Line Supervisors of Retail Sales Workers	0.0791%	60,565
41-1012	First-Line Supervisors of Non-Retail Sales Workers	0.2983%	91,122
41-2011	Cashiers	0.1231%	37,787
41-2021	Counter and Rental Clerks	0.3362%	48,173
41-2022	Parts Salespersons	0.0045%	45,659
41-2031	Retail Salespersons	0.2327%	44,263
41-3011	Advertising Sales Agents	0.1881%	76,495
41-3021	Insurance Sales Agents	1.1536%	89,943
41-3031	Securities, Commodities, and Financial Services Sales Agents	1.1347%	81,440
41-3041	Travel Agents	0.0018%	54,359
41-3091	Sales Representatives of Services, Except Advertising, Insurance, Financia	1.5297%	85,598
41-4011	Sales Representatives, Wholesale and Manufacturing, Technical and Scier	0.2374%	107,455
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical a	0.2825%	94,153
41-9011	Demonstrators and Product Promoters	0.0350%	46,921
41-9022	Real Estate Sales Agents	0.4150%	95,446
41-9031	Sales Engineers	0.0877%	147,125
41-9041	Telemarketers	0.2617%	40,032
41-9091	Door-to-Door Sales Workers, News and Street Vendors, and Related Work	0.0121%	39,401
41-9099	Sales and Related Workers, All Other	0.1165%	71,302
43-1011	First-Line Supervisors of Office and Administrative Support Workers	1.7926%	74,744
43-2011	Switchboard Operators, Including Answering Service	0.0572%	48,962
43-2021	Telephone Operators	0.0032%	55,077
43-3011	Bill and Account Collectors	0.4329%	58,444
43-3021	Billing and Posting Clerks	0.7539%	57,825

Table 2.7: Occupation Mix and Averages for Office Prototype Continued

SOC Code	Occupation Name	Percent of Total	Average Annual Wage
43-3031	Bookkeeping, Accounting, and Auditing Clerks	1.7012%	58,837
43-3051	Payroll and Timekeeping Clerks	0.1800%	62,969
43-3061	Procurement Clerks	0.0285%	51,834
43-3071	Tellers	0.9895%	46,597
43-3099	Financial Clerks, All Other	0.0609%	55,046
43-4011	Brokerage Clerks	0.1049%	56,637
43-4021	Correspondence Clerks	0.0126%	50,470
43-4031	Court, Municipal, and License Clerks	0.0053%	56,978
43-4041	Credit Authorizers, Checkers, and Clerks	0.0306%	49,571
43-4051	Customer Service Representatives	4.0936%	47,454
43-4061	Eligibility Interviewers, Government Programs	0.0063%	68,464
43-4071	File Clerks	0.1178%	47,392
43-4081	Hotel, Motel, and Resort Desk Clerks	0.0256%	40,626
43-4111	Interviewers, Except Eligibility and Loan	0.1565%	55,645
43-4121	Library Assistants, Clerical	0.0200%	48,322
43-4131	Loan Interviewers and Clerks	0.6353%	51,565
43-4141	New Accounts Clerks	0.1059%	50,697
43-4151	Order Clerks	0.0440%	49,375
43-4161	Human Resources Assistants, Except Payroll and Timekeeping	0.1070%	58,414
43-4171	Receptionists and Information Clerks	1.6024%	44,479
43-4181	Reservation and Transportation Ticket Agents and Travel Clerks	0.0037%	44,138
43-4199	Information and Record Clerks, All Other	0.0611%	58,197
43-5011	Cargo and Freight Agents	0.0087%	53,776
43-5021	Couriers and Messengers	0.0798%	43,353
43-5031	Public Safety Telecommunicators	0.0024%	63,113
43-5032	Dispatchers, Except Police, Fire, and Ambulance	0.0775%	51,937
43-5041	Meter Readers, Utilities	0.0103%	72,431
43-5061	Production, Planning, and Expediting Clerks	0.3004%	61,450
43-5071	Shipping, Receiving, and Inventory Clerks	0.2920%	52,040
43-5111	Weighers, Measurers, Checkers, and Samplers, Recordkeeping	0.0179%	46,813
43-6011	Executive Secretaries and Executive Administrative Assistants	0.5626%	84,175
43-6012	Legal Secretaries and Administrative Assistants	0.3578%	62,111
43-6013	Medical Secretaries and Administrative Assistants	1.1850%	54,499
43-6014	Secretaries and Administrative Assistants, Except Legal, Medical, and Ex	1.6730%	53,249
43-9021	Data Entry Keyers	0.2474%	43,715
43-9022	Word Processors and Typists	0.0134%	49,685
43-9031	Desktop Publishers	0.0119%	60,624
43-9041	Insurance Claims and Policy Processing Clerks	0.6266%	50,542
43-9051	Mail Clerks and Mail Machine Operators, Except Postal Service	0.1238%	42,961
43-9061	Office Clerks, General	2.3189%	50,078
43-9071	Office Machine Operators, Except Computer	0.0548%	46,576
43-9081	Proofreaders and Copy Markers	0.0100%	62,483
43-9111	Statistical Assistants	0.0071%	64,415
43-9199	Office and Administrative Support Workers, All Other	0.1078%	58,166
45-1011	First-Line Supervisors of Farming, Fishing, and Forestry Workers	0.0034%	65,514
45-2011	Agricultural Inspectors	0.0032%	55,802
45-2041	Graders and Sorters, Agricultural Products	0.0029%	35,149
45-2091	Agricultural Equipment Operators	0.0024%	47,960
45-2092	Farmworkers and Laborers, Crop, Nursery, and Greenhouse	0.0282%	41,090
45-2093	Farmworkers, Farm, Ranch, and Aquacultural Animals	0.0032%	44,179

Table 2.7: Occupation Mix and Averages for Office Prototype Continued

SOC Code	Occupation Name	Percent of Total	Average Annual Wage
45-2099	Agricultural Workers, All Other	0.0018%	48,776
45-4011	Forest and Conservation Workers	0.0005%	34,539
45-4021	Fallers	0.0026%	91,106
45-4022	Logging Equipment Operators	0.0034%	61,350
45-4023	Log Graders and Scalers	0.0008%	53,167
47-1011	First-Line Supervisors of Construction Trades and Extraction Workers	0.0535%	97,987
47-2011	Boilermakers	0.0016%	100,993
47-2022	Stonemasons	0.0013%	62,869
47-2031	Carpenters	0.0717%	75,484
47-2041	Carpet Installers	0.0003%	55,141
47-2043	Floor Sanders and Finishers	0.0003%	64,915
47-2044	Tile and Stone Setters	0.0003%	67,787
47-2051	Cement Masons and Concrete Finishers	0.0158%	68,882
47-2061	Construction Laborers	0.1921%	58,127
47-2071	Paving, Surfacing, and Tamping Equipment Operators	0.0016%	71,971
47-2073	Operating Engineers and Other Construction Equipment Operators	0.0300%	85,423
47-2081	Drywall and Ceiling Tile Installers	0.0026%	67,498
47-2111	Electricians	0.0959%	71,909
47-2121	Glaziers	0.0008%	79,028
47-2132	Insulation Workers, Mechanical	0.0003%	96,582
47-2141	Painters, Construction and Maintenance	0.0348%	59,005
47-2142	Paperhangers	0.0029%	52,609
47-2151	Pipelayers	0.0013%	61,732
47-2152	Plumbers, Pipefitters, and Steamfitters	0.0374%	81,022
47-2161	Plasterers and Stucco Masons	0.0003%	63,355
47-2171	Reinforcing Iron and Rebar Workers	0.0008%	62,580
47-2181	Roofers	0.0026%	68,148
47-2211	Sheet Metal Workers	0.0090%	83,347
47-2221	Structural Iron and Steel Workers	0.0058%	71,703
47-2231	Solar Photovoltaic Installers	0.0058%	55,471
47-3012	Helpers--Carpenters	0.0029%	56,742
47-3013	Helpers--Electricians	0.0032%	44,065
47-3014	Helpers--Painters, Paperhangers, Plasterers, and Stucco Masons	0.0008%	45,109
47-3015	Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters	0.0011%	43,600
47-3019	Helpers, Construction Trades, All Other	0.0034%	46,400
47-4011	Construction and Building Inspectors	0.1331%	110,323
47-4021	Elevator and Escalator Installers and Repairers	0.0003%	120,655
47-4031	Fence Erectors	0.0016%	50,088
47-4041	Hazardous Materials Removal Workers	0.0026%	59,118
47-4051	Highway Maintenance Workers	0.0011%	66,402
47-4071	Septic Tank Servicers and Sewer Pipe Cleaners	0.0021%	52,196
47-5012	Rotary Drill Operators, Oil and Gas	0.0005%	80,009
47-5022	Excavating and Loading Machine and Dragline Operators, Surface Mining	0.0013%	75,753
47-5023	Earth Drillers, Except Oil and Gas	0.0040%	65,927
47-5032	Explosives Workers, Ordnance Handling Experts, and Blasters	0.0011%	69,688
47-5071	Roustabouts, Oil and Gas	0.0008%	66,433
47-5081	Helpers--Extraction Workers	0.0011%	55,730
49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers	0.2564%	98,474
49-2011	Computer, Automated Teller, and Office Machine Repairers	0.0366%	54,367
49-2021	Radio, Cellular, and Tower Equipment Installers and Repairers	0.0129%	70,638

Table 2.7: Occupation Mix and Averages for Office Prototype Continued

SOC Code	Occupation Name	Percent of Total	Average Annual Wage
49-2022	Telecommunications Equipment Installers and Repairers, Except Line Insta	0.3402%	85,406
49-2091	Avionics Technicians	0.0055%	93,862
49-2092	Electric Motor, Power Tool, and Related Repairers	0.0021%	57,942
49-2093	Electrical and Electronics Installers and Repairers, Transportation Equipme	0.0003%	80,245
49-2094	Electrical and Electronics Repairers, Commercial and Industrial Equipment	0.0285%	77,509
49-2095	Electrical and Electronics Repairers, Powerhouse, Substation, and Relay	0.0026%	108,371
49-2097	Audiovisual Equipment Installers and Repairers	0.0053%	60,533
49-2098	Security and Fire Alarm Systems Installers	0.1320%	65,207
49-3011	Aircraft Mechanics and Service Technicians	0.0190%	79,892
49-3021	Automotive Body and Related Repairers	0.0016%	64,648
49-3022	Automotive Glass Installers and Repairers	0.0003%	49,869
49-3023	Automotive Service Technicians and Mechanics	0.0206%	62,140
49-3031	Bus and Truck Mechanics and Diesel Engine Specialists	0.0158%	72,669
49-3041	Farm Equipment Mechanics and Service Technicians	0.0013%	60,139
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	0.0126%	69,052
49-3051	Motorboat Mechanics and Service Technicians	0.0003%	58,865
49-3053	Outdoor Power Equipment and Other Small Engine Mechanics	0.0158%	53,507
49-3092	Recreational Vehicle Service Technicians	0.0003%	56,326
49-3093	Tire Repairers and Changers	0.0016%	41,288
49-9012	Control and Valve Installers and Repairers, Except Mechanical Door	0.0055%	87,748
49-9021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	0.0427%	65,487
49-9031	Home Appliance Repairers	0.0011%	50,543
49-9041	Industrial Machinery Mechanics	0.0656%	72,286
49-9043	Maintenance Workers, Machinery	0.0137%	61,072
49-9044	Millwrights	0.0058%	69,529
49-9051	Electrical Power-Line Installers and Repairers	0.0045%	108,485
49-9052	Telecommunications Line Installers and Repairers	0.1692%	78,193
49-9061	Camera and Photographic Equipment Repairers	0.0005%	44,138
49-9062	Medical Equipment Repairers	0.0148%	69,280
49-9069	Precision Instrument and Equipment Repairers, All Other	0.0026%	71,975
49-9071	Maintenance and Repair Workers, General	1.2622%	57,673
49-9081	Wind Turbine Service Technicians	0.0003%	71,736
49-9091	Coin, Vending, and Amusement Machine Servicers and Repairers	0.0003%	54,056
49-9092	Commercial Divers	0.0040%	132,207
49-9094	Locksmiths and Safe Repairers	0.0292%	79,229
49-9096	Riggers	0.0032%	89,282
49-9098	Helpers--Installation, Maintenance, and Repair Workers	0.0148%	43,993
49-9099	Installation, Maintenance, and Repair Workers, All Other	0.0833%	51,082
51-1011	First-Line Supervisors of Production and Operating Workers	0.1768%	82,224
51-2011	Aircraft Structure, Surfaces, Rigging, and Systems Assemblers	0.0092%	62,913
51-2021	Coil Winders, Tapers, and Finishers	0.0148%	43,540
51-2031	Engine and Other Machine Assemblers	0.0100%	51,721
51-2041	Structural Metal Fabricators and Fitters	0.0095%	54,753
51-2051	Fiberglass Laminators and Fabricators	0.0005%	47,698
51-3011	Bakers	0.0126%	42,196
51-3021	Butchers and Meat Cutters	0.0003%	44,395
51-3022	Meat, Poultry, and Fish Cutters and Trimmers	0.0003%	36,818
51-3091	Food and Tobacco Roasting, Baking, and Drying Machine Operators and T	0.0018%	42,748
51-3092	Food Batchmakers	0.0261%	39,851
51-3093	Food Cooking Machine Operators and Tenders	0.0032%	40,122

Table 2.7: Occupation Mix and Averages for Office Prototype Continued

SOC Code	Occupation Name	Percent of Total	Average Annual Wage
51-3099	Food Processing Workers, All Other	0.0129%	36,943
51-4021	Extruding and Drawing Machine Setters, Operators, and Tenders, Metal ar	0.0105%	43,227
51-4022	Forging Machine Setters, Operators, and Tenders, Metal and Plastic	0.0013%	56,775
51-4023	Rolling Machine Setters, Operators, and Tenders, Metal and Plastic	0.0011%	51,325
51-4031	Cutting, Punching, and Press Machine Setters, Operators, and Tenders, M	0.0264%	45,999
51-4032	Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal a	0.0018%	51,043
51-4033	Grinding, Lapping, Polishing, and Buffing Machine Tool Setters, Operators,	0.0116%	44,478
51-4034	Lathe and Turning Machine Tool Setters, Operators, and Tenders, Metal ar	0.0032%	54,878
51-4035	Milling and Planing Machine Setters, Operators, and Tenders, Metal and P	0.0024%	56,921
51-4041	Machinists	0.1181%	58,151
51-4051	Metal-Refining Furnace Operators and Tenders	0.0003%	48,824
51-4061	Model Makers, Metal and Plastic	0.0040%	76,867
51-4071	Foundry Mold and Coremakers	0.0008%	41,404
51-4072	Molding, Coremaking, and Casting Machine Setters, Operators, and Tende	0.0503%	44,655
51-4081	Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic	0.0659%	44,697
51-4111	Tool and Die Makers	0.0119%	71,552
51-4121	Welders, Cutters, Solderers, and Brazers	0.0767%	59,266
51-4122	Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders	0.0111%	52,992
51-4191	Heat Treating Equipment Setters, Operators, and Tenders, Metal and Plas	0.0029%	50,439
51-4192	Layout Workers, Metal and Plastic	0.0008%	60,850
51-4193	Plating Machine Setters, Operators, and Tenders, Metal and Plastic	0.0095%	46,083
51-4194	Tool Grinders, Filers, and Sharpeners	0.0003%	48,136
51-4199	Metal Workers and Plastic Workers, All Other	0.0182%	45,270
51-5111	Prepress Technicians and Workers	0.0079%	50,887
51-5112	Printing Press Operators	0.0711%	52,450
51-5113	Print Binding and Finishing Workers	0.0119%	44,832
51-6011	Laundry and Dry-Cleaning Workers	0.0327%	39,403
51-6021	Pressers, Textile, Garment, and Related Materials	0.0003%	37,141
51-6031	Sewing Machine Operators	0.0213%	37,673
51-6042	Shoe Machine Operators and Tenders	0.0003%	43,686
51-6052	Tailors, Dressmakers, and Custom Sewers	0.0008%	47,844
51-6062	Textile Cutting Machine Setters, Operators, and Tenders	0.0021%	39,517
51-6063	Textile Knitting and Weaving Machine Setters, Operators, and Tenders	0.0016%	38,976
51-6064	Textile Winding, Twisting, and Drawing Out Machine Setters, Operators, a	0.0008%	36,683
51-6092	Fabric and Apparel Patternmakers	0.0021%	68,707
51-6093	Upholsterers	0.0026%	44,989
51-6099	Textile, Apparel, and Furnishings Workers, All Other	0.0050%	36,485
51-7011	Cabinetmakers and Bench Carpenters	0.0053%	51,460
51-7021	Furniture Finishers	0.0021%	48,428
51-7041	Sawing Machine Setters, Operators, and Tenders, Wood	0.0021%	46,302
51-7042	Woodworking Machine Setters, Operators, and Tenders, Except Sawing	0.0024%	48,834
51-7099	Woodworkers, All Other	0.0016%	42,560
51-8012	Power Distributors and Dispatchers	0.0029%	119,563
51-8013	Power Plant Operators	0.0013%	107,672
51-8021	Stationary Engineers and Boiler Operators	0.0079%	78,639
51-8031	Water and Wastewater Treatment Plant and System Operators	0.0047%	78,649
51-8091	Chemical Plant and System Operators	0.0008%	93,562
51-8092	Gas Plant Operators	0.0008%	108,986
51-8093	Petroleum Pump System Operators, Refinery Operators, and Gaugers	0.0029%	101,117
51-8099	Plant and System Operators, All Other	0.0008%	73,960

Table 2.7: Occupation Mix and Averages for Office Prototype Continued

SOC Code	Occupation Name	Percent of Total	Average Annual Wage
51-9011	Chemical Equipment Operators and Tenders	0.0050%	54,045
51-9012	Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, O	0.0061%	74,543
51-9021	Crushing, Grinding, and Polishing Machine Setters, Operators, and Tender	0.0040%	46,052
51-9022	Grinding and Polishing Workers, Hand	0.0090%	51,043
51-9023	Mixing and Blending Machine Setters, Operators, and Tenders	0.0187%	54,482
51-9031	Cutters and Trimmers, Hand	0.0013%	37,600
51-9032	Cutting and Slicing Machine Setters, Operators, and Tenders	0.0090%	47,021
51-9041	Extruding, Forming, Pressing, and Compacting Machine Setters, Operator	0.0082%	46,562
51-9051	Furnace, Kiln, Oven, Drier, and Kettle Operators and Tenders	0.0013%	45,968
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	0.4066%	51,689
51-9071	Jewelers and Precious Stone and Metal Workers	0.0011%	50,970
51-9081	Dental Laboratory Technicians	0.0896%	60,964
51-9082	Medical Appliance Technicians	0.0264%	48,375
51-9083	Ophthalmic Laboratory Technicians	0.0292%	51,148
51-9111	Packaging and Filling Machine Operators and Tenders	0.1186%	48,730
51-9123	Painting, Coating, and Decorating Workers	0.0026%	52,502
51-9124	Coating, Painting, and Spraying Machine Setters, Operators, and Tenders	0.0229%	58,536
51-9141	Semiconductor Processing Technicians	0.0611%	53,826
51-9151	Photographic Process Workers and Processing Machine Operators	0.0069%	47,333
51-9161	Computer Numerically Controlled Tool Operators	0.0514%	52,117
51-9162	Computer Numerically Controlled Tool Programmers	0.0071%	79,629
51-9191	Adhesive Bonding Machine Operators and Tenders	0.0008%	47,625
51-9192	Cleaning, Washing, and Metal Pickling Equipment Operators and Tenders	0.0032%	46,927
51-9193	Cooling and Freezing Equipment Operators and Tenders	0.0003%	46,729
51-9194	Etchers and Engravers	0.0016%	43,905
51-9195	Molders, Shapers, and Casters, Except Metal and Plastic	0.0063%	49,032
51-9196	Paper Goods Machine Setters, Operators, and Tenders	0.0079%	49,084
51-9197	Tire Builders	0.0011%	46,729
51-9198	Helpers--Production Workers	0.1199%	46,989
51-9199	Production Workers, All Other	0.2348%	49,543
53-2011	Airline Pilots, Copilots, and Flight Engineers	0.0008%	262,343
53-2012	Commercial Pilots	0.0132%	148,128
53-3011	Ambulance Drivers and Attendants, Except Emergency Medical Technicia	0.0011%	39,366
53-3031	Driver/Sales Workers	0.0348%	46,920
53-3032	Heavy and Tractor-Trailer Truck Drivers	0.1689%	60,073
53-3033	Light Truck Drivers	0.1275%	48,398
53-3051	Bus Drivers, School	0.0008%	52,529
53-3052	Bus Drivers, Transit and Intercity	0.0011%	61,863
53-3053	Shuttle Drivers and Chauffeurs	0.0308%	41,842
53-3054	Taxi Drivers	0.0011%	37,617
53-5021	Captains, Mates, and Pilots of Water Vessels	0.0003%	113,029
53-6021	Parking Attendants	0.0190%	37,357
53-6031	Automotive and Watercraft Service Attendants	0.0013%	39,470
53-6041	Traffic Technicians	0.0021%	75,797
53-6051	Transportation Inspectors	0.0042%	75,651
53-6099	Transportation Workers, All Other	0.0040%	49,886
53-7011	Conveyor Operators and Tenders	0.0024%	42,477
53-7021	Crane and Tower Operators	0.0018%	65,276
53-7051	Industrial Truck and Tractor Operators	0.2374%	50,573

Table 2.7: Occupation Mix and Averages for Office Prototype Continued

SOC Code	Occupation Name	Percent of Total	Average Annual Wage
53-7061	Cleaners of Vehicles and Equipment	0.0495%	40,094
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	1.7557%	43,809
53-7063	Machine Feeders and Offbearers	0.0171%	45,162
53-7064	Packers and Packagers, Hand	0.3939%	36,983
53-7065	Stockers and Order Fillers	0.3323%	42,217
53-7081	Refuse and Recyclable Material Collectors	0.0008%	64,465
53-7121	Tank Car, Truck, and Ship Loaders	0.0003%	58,044
53-7199	Material Moving Workers, All Other	0.0024%	49,761

Sources: CA EDD, Occupational Employment (May 2022) & Wage (2023 - 1st Quarter) Data.

Table 2.8: Occupation Mix and Averages for Industrial Prototype

SOC Code	Occupation Name	Percent of Total	Average Annual Wage
11-1011	Chief Executives	0.2139%	$ 280,501
11-1021	General and Operations Managers	2.7728%	151,214
11-2011	Advertising and Promotions Managers	0.0361%	183,247
11-2021	Marketing Managers	0.3957%	190,254
11-2022	Sales Managers	0.4401%	147,583
11-2032	Public Relations Managers	0.0571%	160,760
11-2033	Fundraising Managers	0.0062%	137,701
11-3012	Administrative Services Managers	0.2145%	117,406
11-3013	Facilities Managers	0.0718%	108,849
11-3021	Computer and Information Systems Managers	0.7446%	177,434
11-3031	Financial Managers	0.9248%	168,490
11-3051	Industrial Production Managers	0.2281%	153,050
11-3061	Purchasing Managers	0.0734%	130,256
11-3071	Transportation, Storage, and Distribution Managers	0.0664%	114,244
11-3111	Compensation and Benefits Managers	0.0204%	153,305
11-3121	Human Resources Managers	0.2021%	140,159
11-3131	Training and Development Managers	0.0389%	152,988
11-9013	Farmers, Ranchers, and Other Agricultural Managers	0.0014%	118,578
11-9021	Construction Managers	0.5236%	143,065
11-9031	Education and Childcare Administrators, Preschool and Daycare	0.0014%	71,992
11-9032	Education Administrators, Kindergarten through Secondary	0.0012%	132,693
11-9033	Education Administrators, Postsecondary	0.0002%	143,422
11-9039	Education Administrators, All Other	0.0030%	123,260
11-9041	Architectural and Engineering Managers	0.2642%	184,318
11-9051	Food Service Managers	0.0465%	83,363
11-9072	Entertainment and Recreation Managers, Except Gambling	0.0004%	89,003
11-9081	Lodging Managers	0.0042%	89,645
11-9111	Medical and Health Services Managers	0.3304%	138,476
11-9121	Natural Sciences Managers	0.0966%	207,245
11-9141	Property, Real Estate, and Community Association Managers	0.4372%	70,156
11-9151	Social and Community Service Managers	0.0313%	89,584
11-9161	Emergency Management Directors	0.0006%	124,820
11-9179	Personal Service Managers, All Other	0.0004%	75,112
11-9199	Managers, All Other	0.4920%	152,458
13-1031	Claims Adjusters, Examiners, and Investigators	0.4741%	106,973
13-1032	Insurance Appraisers, Auto Damage	0.0253%	76,622
13-1041	Compliance Officers	0.2716%	84,332
13-1051	Cost Estimators	0.3198%	99,079
13-1071	Human Resources Specialists	0.8847%	83,455
13-1075	Labor Relations Specialists	0.0100%	102,781
13-1081	Logisticians	0.1702%	87,320
13-1082	Project Management Specialists	1.1760%	104,117
13-1111	Management Analysts	1.0756%	94,775
13-1121	Meeting, Convention, and Event Planners	0.0676%	64,363
13-1131	Fundraisers	0.0219%	65,036
13-1141	Compensation, Benefits, and Job Analysis Specialists	0.1085%	89,890
13-1151	Training and Development Specialists	0.3160%	73,511
13-1161	Market Research Analysts and Marketing Specialists	1.0196%	84,475
13-1199	Business Operations Specialists, All Other	0.8703%	76,397
13-2011	Accountants and Auditors	1.7903%	95,030
13-2031	Budget Analysts	0.0267%	99,293
13-2041	Credit Analysts	0.1185%	99,915
13-2051	Financial and Investment Analysts	0.3454%	116,172
13-2052	Personal Financial Advisors	0.1395%	142,066
13-2053	Insurance Underwriters	0.2382%	98,956
13-2054	Financial Risk Specialists	0.0820%	126,044
13-2061	Financial Examiners	0.0774%	105,422
13-2071	Credit Counselors	0.0271%	60,794
13-2072	Loan Officers	0.6281%	88,738
13-2082	Tax Preparers	0.1712%	58,336
13-2099	Financial Specialists, All Other	0.1125%	78,468
15-1211	Computer Systems Analysts	0.7726%	113,293
15-1212	Information Security Analysts	0.2731%	142,889
15-1221	Computer and Information Research Scientists	0.0373%	241,135
15-1231	Computer Network Support Specialists	0.2404%	87,114

Table 2.8: Occupation Mix and Averages for Industrial Prototype Continued

SOC Code	Occupation Name	Percent of Total	Average Annual Wage
15-1232	Computer User Support Specialists	0.8823%	79,285
15-1241	Computer Network Architects	0.2785%	122,473
15-1242	Database Administrators	0.1111%	104,872
15-1243	Database Architects	0.0848%	158,839
15-1244	Network and Computer Systems Administrators	0.4262%	105,110
15-1251	Computer Programmers	0.2426%	127,375
15-1252	Software Developers	2.3656%	139,867
15-1253	Software Quality Assurance Analysts and Testers	0.3402%	142,982
15-1254	Web Developers	0.1205%	107,042
15-1255	Web and Digital Interface Designers	0.1269%	81,008
15-1299	Computer Occupations, All Other	0.4427%	104,269
15-2011	Actuaries	0.0501%	131,570
15-2021	Mathematicians	0.0004%	131,445
15-2031	Operations Research Analysts	0.1445%	105,630
15-2041	Statisticians	0.0337%	141,445
15-2051	Data Scientists	0.1752%	117,001
15-2099	Mathematical Science Occupations, All Other	0.0036%	107,270
17-1011	Architects, Except Landscape and Naval	0.1947%	115,111
17-1012	Landscape Architects	0.0301%	119,680
17-1021	Cartographers and Photogrammetrists	0.0114%	100,168
17-1022	Surveyors	0.0798%	106,035
17-2011	Aerospace Engineers	0.0517%	145,215
17-2021	Agricultural Engineers	0.0006%	113,324
17-2031	Bioengineers and Biomedical Engineers	0.0245%	127,894
17-2041	Chemical Engineers	0.0235%	122,432
17-2051	Civil Engineers	0.4386%	112,514
17-2061	Computer Hardware Engineers	0.1127%	173,356
17-2071	Electrical Engineers	0.2396%	156,741
17-2072	Electronics Engineers, Except Computer	0.1453%	143,938
17-2081	Environmental Engineers	0.0499%	118,901
17-2111	Health and Safety Engineers, Except Mining Safety Engineers and Inspec	0.0255%	126,928
17-2112	Industrial Engineers	0.3757%	120,407
17-2121	Marine Engineers and Naval Architects	0.0044%	141,186
17-2131	Materials Engineers	0.0219%	118,029
17-2141	Mechanical Engineers	0.3973%	113,678
17-2151	Mining and Geological Engineers, Including Mining Safety Engineers	0.0070%	118,880
17-2161	Nuclear Engineers	0.0066%	160,843
17-2171	Petroleum Engineers	0.0168%	148,559
17-2199	Engineers, All Other	0.1664%	104,550
17-3011	Architectural and Civil Drafters	0.1862%	70,396
17-3012	Electrical and Electronics Drafters	0.0311%	79,918
17-3013	Mechanical Drafters	0.0810%	79,191
17-3019	Drafters, All Other	0.0237%	69,637
17-3021	Aerospace Engineering and Operations Technologists and Technicians	0.0100%	88,693
17-3022	Civil Engineering Technologists and Technicians	0.0634%	81,413
17-3023	Electrical and Electronic Engineering Technologists and Technicians	0.1205%	82,358
17-3024	Electro-Mechanical and Mechatronics Technologists and Technicians	0.0148%	79,721
17-3025	Environmental Engineering Technologists and Technicians	0.0150%	74,612
17-3026	Industrial Engineering Technologists and Technicians	0.0844%	80,084
17-3027	Mechanical Engineering Technologists and Technicians	0.0541%	77,353
17-3028	Calibration Technologists and Technicians	0.0092%	66,906
17-3029	Engineering Technologists and Technicians, Except Drafters, All Other	0.0816%	73,106
19-1011	Animal Scientists	0.0020%	157,988
19-1012	Food Scientists and Technologists	0.0213%	72,909
19-1021	Biochemists and Biophysicists	0.0597%	140,417
19-1022	Microbiologists	0.0271%	109,098
19-1023	Zoologists and Wildlife Biologists	0.0044%	90,541
19-1029	Biological Scientists, All Other	0.0441%	117,603
19-1031	Conservation Scientists	0.0016%	85,442
19-1032	Foresters	0.0016%	75,235
19-1041	Epidemiologists	0.0016%	102,805
19-1042	Medical Scientists, Except Epidemiologists	0.1277%	128,818
19-1099	Life Scientists, All Other	0.0064%	134,322
19-2011	Astronomers	0.0018%	150,957

Table 2.8: Occupation Mix and Averages for Industrial Prototype Continued

SOC Code	Occupation Name	Percent of Total	Average Annual Wage
19-2012	Physicists	0.0227%	172,380
19-2021	Atmospheric and Space Scientists	0.0090%	108,527
19-2031	Chemists	0.1075%	80,001
19-2032	Materials Scientists	0.0096%	106,668
19-2041	Environmental Scientists and Specialists, Including Health	0.0656%	104,799
19-2042	Geoscientists, Except Hydrologists and Geographers	0.0291%	102,224
19-2043	Hydrologists	0.0046%	131,362
19-2099	Physical Scientists, All Other	0.0092%	139,036
19-3011	Economists	0.0108%	142,359
19-3022	Survey Researchers	0.0124%	82,244
19-3032	Industrial-Organizational Psychologists	0.0002%	130,085
19-3033	Clinical and Counseling Psychologists	0.0718%	132,068
19-3034	School Psychologists	0.0022%	126,762
19-3039	Psychologists, All Other	0.0048%	120,895
19-3041	Sociologists	0.0026%	112,110
19-3051	Urban and Regional Planners	0.0110%	114,872
19-3091	Anthropologists and Archeologists	0.0084%	78,381
19-3092	Geographers	0.0002%	97,312
19-3093	Historians	0.0014%	101,185
19-3094	Political Scientists	0.0018%	129,638
19-3099	Social Scientists and Related Workers, All Other	0.0110%	94,321
19-4012	Agricultural Technicians	0.0104%	60,219
19-4013	Food Science Technicians	0.0172%	52,680
19-4021	Biological Technicians	0.0812%	61,891
19-4031	Chemical Technicians	0.0708%	50,613
19-4042	Environmental Science and Protection Technicians, Including Health	0.0397%	65,806
19-4043	Geological Technicians, Except Hydrologic Technicians	0.0118%	67,280
19-4044	Hydrologic Technicians	0.0008%	76,169
19-4051	Nuclear Technicians	0.0010%	78,194
19-4061	Social Science Research Assistants	0.0188%	68,142
19-4071	Forest and Conservation Technicians	0.0016%	48,422
19-4092	Forensic Science Technicians	0.0020%	97,229
19-4099	Life, Physical, and Social Science Technicians, All Other	0.0609%	59,814
19-5011	Occupational Health and Safety Specialists	0.0980%	92,431
19-5012	Occupational Health and Safety Technicians	0.0233%	68,163
21-1012	Educational, Guidance, and Career Counselors and Advisors	0.0088%	96,045
21-1013	Marriage and Family Therapists	0.0483%	56,356
21-1015	Rehabilitation Counselors	0.0134%	53,251
21-1019	Counselors, All Other	0.0200%	45,940
21-1021	Child, Family, and School Social Workers	0.0337%	69,378
21-1022	Healthcare Social Workers	0.0786%	92,493
21-1023	Mental Health and Substance Abuse Social Workers	0.0768%	109,057
21-1029	Social Workers, All Other	0.0052%	79,233
21-1091	Health Education Specialists	0.0285%	66,605
21-1092	Probation Officers and Correctional Treatment Specialists	0.0018%	101,040
21-1093	Social and Human Service Assistants	0.0926%	53,542
21-1094	Community Health Workers	0.0383%	82,047
21-1099	Community and Social Service Specialists, All Other	0.0162%	57,592
21-2011	Clergy	0.0016%	72,036
21-2099	Religious Workers, All Other	0.0002%	54,964
23-1011	Lawyers	1.0222%	176,887
23-2011	Paralegals and Legal Assistants	0.5844%	72,317
23-2093	Title Examiners, Abstractors, and Searchers	0.0980%	90,977
23-2099	Legal Support Workers, All Other	0.0355%	68,163
25-1042	Biological Science Teachers, Postsecondary	0.0004%	127,229
25-1052	Chemistry Teachers, Postsecondary	0.0002%	124,394
25-1072	Nursing Instructors and Teachers, Postsecondary	0.0002%	108,153
25-1194	Career/Technical Education Teachers, Postsecondary	0.0010%	101,777
25-2011	Preschool Teachers, Except Special Education	0.0048%	47,519
25-2012	Kindergarten Teachers, Except Special Education	0.0002%	105,412
25-2021	Elementary School Teachers, Except Special Education	0.0008%	95,162
25-2031	Secondary School Teachers, Except Special and Career/Technical Educa	0.0018%	96,367
25-2051	Special Education Teachers, Preschool	0.0016%	78,516
25-2059	Special Education Teachers, All Other	0.0020%	84,716
25-3011	Adult Basic Education, Adult Secondary Education, and English as a Sec	0.0008%	94,882

Table 2.8: Occupation Mix and Averages for Industrial Prototype Continued

SOC Code	Occupation Name	Percent of Total	Average Annual Wage
25-3021	Self-Enrichment Teachers	0.0028%	58,100
25-3031	Substitute Teachers, Short-Term	0.0253%	53,012
25-3041	Tutors	0.0036%	43,978
25-3099	Teachers and Instructors, All Other	0.0114%	101,808
25-4011	Archivists	0.0022%	74,518
25-4012	Curators	0.0004%	83,013
25-4022	Librarians and Media Collections Specialists	0.0176%	83,594
25-4031	Library Technicians	0.0104%	62,452
25-9031	Instructional Coordinators	0.0162%	112,099
25-9099	Educational Instruction and Library Workers, All Other	0.0010%	65,079
27-1011	Art Directors	0.0621%	108,485
27-1012	Craft Artists	0.0016%	96,554
27-1013	Fine Artists, Including Painters, Sculptors, and Illustrators	0.0034%	82,628
27-1014	Special Effects Artists and Animators	0.0229%	140,002
27-1019	Artists and Related Workers, All Other	0.0008%	108,371
27-1021	Commercial and Industrial Designers	0.0363%	98,194
27-1022	Fashion Designers	0.0110%	96,678
27-1023	Floral Designers	0.0012%	44,071
27-1024	Graphic Designers	0.2620%	76,855
27-1025	Interior Designers	0.0904%	89,949
27-1026	Merchandise Displayers and Window Trimmers	0.0716%	46,397
27-1027	Set and Exhibit Designers	0.0016%	87,519
27-1029	Designers, All Other	0.0118%	91,860
27-2012	Producers and Directors	0.1191%	156,015
27-2022	Coaches and Scouts	0.0004%	60,520
27-2041	Music Directors and Composers	0.0002%	101,943
27-3031	Public Relations Specialists	0.2101%	96,647
27-3041	Editors	0.1415%	91,538
27-3042	Technical Writers	0.0738%	125,588
27-3043	Writers and Authors	0.0583%	134,311
27-3091	Interpreters and Translators	0.0541%	69,482
27-3092	Court Reporters and Simultaneous Captioners	0.0070%	101,985
27-3099	Media and Communication Workers, All Other	0.0086%	62,836
27-4011	Audio and Video Technicians	0.0257%	73,210
27-4014	Sound Engineering Technicians	0.0042%	92,867
27-4015	Lighting Technicians	0.0004%	96,751
27-4021	Photographers	0.0575%	67,799
27-4031	Camera Operators, Television, Video, and Film	0.0156%	82,701
27-4032	Film and Video Editors	0.0158%	95,879
27-4099	Media and Communication Equipment Workers, All Other	0.0044%	76,065
29-1011	Chiropractors	0.0720%	93,480
29-1021	Dentists, General	0.2111%	205,901
29-1022	Oral and Maxillofacial Surgeons	0.0100%	267,594
29-1031	Dietitians and Nutritionists	0.0423%	91,008
29-1041	Optometrists	0.0664%	149,825
29-1051	Pharmacists	0.0523%	172,006
29-1071	Physician Assistants	0.1748%	171,757
29-1081	Podiatrists	0.0150%	187,375
29-1122	Occupational Therapists	0.0868%	111,320
29-1123	Physical Therapists	0.2201%	130,698
29-1124	Radiation Therapists	0.0106%	147,364
29-1125	Recreational Therapists	0.0022%	81,195
29-1126	Respiratory Therapists	0.0170%	99,846
29-1127	Speech-Language Pathologists	0.0852%	122,722
29-1128	Exercise Physiologists	0.0026%	82,254
29-1131	Veterinarians	0.1463%	131,601
29-1141	Registered Nurses	1.0896%	152,027
29-1151	Nurse Anesthetists	0.0573%	255,985
29-1161	Nurse Midwives	0.0118%	176,046
29-1171	Nurse Practitioners	0.2987%	196,462
29-1181	Audiologists	0.0162%	114,020
29-1212	Cardiologists	0.0299%	345,716
29-1214	Emergency Medicine Physicians	0.0519%	236,608
29-1215	Family Medicine Physicians	0.1600%	279,869

Table 2.8: Occupation Mix and Averages for Industrial Prototype Continued

SOC Code	Occupation Name	Percent of Total	Average Annual Wage
29-1216	General Internal Medicine Physicians	0.0766%	264,126
29-1217	Neurologists	0.0088%	254,199
29-1221	Pediatricians, General	0.0517%	225,839
29-1222	Physicians, Pathologists	0.0150%	268,010
29-1223	Psychiatrists	0.0245%	337,699
29-1224	Radiologists	0.0475%	352,175
29-1249	Surgeons, All Other	0.0427%	297,076
29-1291	Acupuncturists	0.0132%	94,768
29-1292	Dental Hygienists	0.4160%	119,607
29-1299	Healthcare Diagnosing or Treating Practitioners, All Other	0.0088%	132,525
29-2031	Cardiovascular Technologists and Technicians	0.0192%	87,769
29-2032	Diagnostic Medical Sonographers	0.0619%	118,880
29-2033	Nuclear Medicine Technologists	0.0080%	133,854
29-2034	Radiologic Technologists and Technicians	0.1588%	103,511
29-2035	Magnetic Resonance Imaging Technologists	0.0293%	113,179
29-2036	Medical Dosimetrists	0.0014%	182,941
29-2042	Emergency Medical Technicians	0.0186%	47,373
29-2043	Paramedics	0.0108%	74,217
29-2051	Dietetic Technicians	0.0026%	46,034
29-2052	Pharmacy Technicians	0.0549%	61,828
29-2053	Psychiatric Technicians	0.0421%	77,145
29-2055	Surgical Technologists	0.0571%	86,024
29-2056	Veterinary Technologists and Technicians	0.2259%	47,924
29-2057	Ophthalmic Medical Technicians	0.1221%	54,123
29-2061	Licensed Practical and Licensed Vocational Nurses	0.3035%	79,305
29-2072	Medical Records Specialists	0.1953%	57,384
29-2081	Opticians, Dispensing	0.0822%	55,837
29-2091	Orthotists and Prosthetists	0.0136%	87,935
29-2092	Hearing Aid Specialists	0.0050%	66,148
29-2099	Health Technologists and Technicians, All Other	0.1468%	64,258
29-9021	Health Information Technologists and Medical Registrars	0.0285%	99,191
29-9091	Athletic Trainers	0.0142%	68,890
29-9092	Genetic Counselors	0.0018%	136,866
29-9093	Surgical Assistants	0.0184%	55,961
29-9099	Healthcare Practitioners and Technical Workers, All Other	0.0277%	85,671
31-1131	Nursing Assistants	0.1514%	46,177
31-1132	Orderlies	0.0066%	51,759
31-1133	Psychiatric Aides	0.0054%	52,104
31-2011	Occupational Therapy Assistants	0.0423%	84,317
31-2012	Occupational Therapy Aides	0.0026%	50,055
31-2021	Physical Therapist Assistants	0.1026%	82,488
31-2022	Physical Therapist Aides	0.0650%	38,631
31-9011	Massage Therapists	0.0613%	52,720
31-9091	Dental Assistants	0.6854%	55,689
31-9092	Medical Assistants	1.1656%	57,351
31-9093	Medical Equipment Preparers	0.0263%	65,900
31-9094	Medical Transcriptionists	0.0804%	39,237
31-9095	Pharmacy Aides	0.0086%	59,577
31-9096	Veterinary Assistants and Laboratory Animal Caretakers	0.1893%	41,045
31-9097	Phlebotomists	0.1293%	52,752
31-9099	Healthcare Support Workers, All Other	0.0557%	52,992
33-1011	First-Line Supervisors of Correctional Officers	0.0028%	118,892
33-1021	First-Line Supervisors of Firefighting and Prevention Workers	0.0058%	96,703
33-1091	First-Line Supervisors of Security Workers	0.0601%	63,768
33-1099	First-Line Supervisors of Protective Service Workers, All Other	0.0092%	77,356
33-2011	Firefighters	0.0373%	65,754
33-2021	Fire Inspectors and Investigators	0.0010%	96,347
33-3012	Correctional Officers and Jailers	0.0357%	88,341
33-9021	Private Detectives and Investigators	0.0359%	62,608
33-9032	Security Guards	1.4575%	41,286
33-9091	Crossing Guards and Flaggers	0.0776%	51,351
33-9092	Lifeguards, Ski Patrol, and Other Recreational Protective Service Workers	0.0030%	38,077
33-9094	School Bus Monitors	0.0002%	37,418
33-9099	Protective Service Workers, All Other	0.0257%	40,073

Table 2.8: Occupation Mix and Averages for Industrial Prototype Continued

SOC Code	Occupation Name	Percent of Total	Average Annual Wage
35-1011	Chefs and Head Cooks	0.0405%	77,586
35-1012	First-Line Supervisors of Food Preparation and Serving Workers	0.1018%	51,215
35-2011	Cooks, Fast Food	0.0036%	38,087
35-2012	Cooks, Institution and Cafeteria	0.1283%	51,487
35-2014	Cooks, Restaurant	0.0706%	44,839
35-2015	Cooks, Short Order	0.0154%	42,435
35-2019	Cooks, All Other	0.0094%	41,547
35-2021	Food Preparation Workers	0.1299%	41,233
35-3011	Bartenders	0.0802%	39,885
35-3023	Fast Food and Counter Workers	0.2658%	37,648
35-3031	Waiters and Waitresses	0.1189%	41,202
35-3041	Food Servers, Nonrestaurant	0.0573%	44,317
35-9011	Dining Room and Cafeteria Attendants and Bartender Helpers	0.0427%	37,000
35-9021	Dishwashers	0.0613%	38,662
35-9031	Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop	0.0140%	38,307
35-9099	Food Preparation and Serving Related Workers, All Other	0.0148%	43,564
37-1011	First-Line Supervisors of Housekeeping and Janitorial Workers	0.1443%	56,368
37-1012	First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping	0.1636%	73,917
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	2.2237%	44,181
37-2012	Maids and Housekeeping Cleaners	0.3244%	42,352
37-2019	Building Cleaning Workers, All Other	0.0249%	45,811
37-2021	Pest Control Workers	0.1688%	51,539
37-3011	Landscaping and Groundskeeping Workers	1.2211%	47,118
37-3012	Pesticide Handlers, Sprayers, and Applicators, Vegetation	0.0245%	47,003
37-3013	Tree Trimmers and Pruners	0.0738%	66,329
37-3019	Grounds Maintenance Workers, All Other	0.0132%	49,888
39-1014	First-Line Supervisors of Entertainment and Recreation Workers, Except C	0.0016%	53,243
39-1022	First-Line Supervisors of Personal Service Workers	0.0058%	53,849
39-2011	Animal Trainers	0.0008%	48,320
39-2021	Animal Caretakers	0.0750%	39,958
39-3031	Ushers, Lobby Attendants, and Ticket Takers	0.0126%	36,990
39-3091	Amusement and Recreation Attendants	0.0064%	37,659
39-3093	Locker Room, Coatroom, and Dressing Room Attendants	0.0002%	42,822
39-5012	Hairdressers, Hairstylists, and Cosmetologists	0.0028%	43,355
39-5091	Makeup Artists, Theatrical and Performance	0.0002%	106,726
39-5092	Manicurists and Pedicurists	0.0002%	36,154
39-5094	Skincare Specialists	0.0160%	50,463
39-6011	Baggage Porters and Bellhops	0.0054%	37,074
39-6012	Concierges	0.0257%	43,658
39-9011	Childcare Workers	0.0162%	41,192
39-9031	Exercise Trainers and Group Fitness Instructors	0.0132%	68,252
39-9032	Recreation Workers	0.0120%	38,547
39-9041	Residential Advisors	0.0086%	61,531
39-9099	Personal Care and Service Workers, All Other	0.0024%	39,990
41-1011	First-Line Supervisors of Retail Sales Workers	0.0686%	60,565
41-1012	First-Line Supervisors of Non-Retail Sales Workers	0.2422%	91,122
41-2011	Cashiers	0.1297%	37,787
41-2021	Counter and Rental Clerks	0.2570%	48,173
41-2022	Parts Salespersons	0.0064%	45,659
41-2031	Retail Salespersons	0.2536%	44,263
41-3011	Advertising Sales Agents	0.1810%	76,495
41-3021	Insurance Sales Agents	0.8707%	89,943
41-3031	Securities, Commodities, and Financial Services Sales Agents	0.5519%	81,440
41-3041	Travel Agents	0.0014%	54,359
41-3091	Sales Representatives of Services, Except Advertising, Insurance, Financi	1.3691%	85,598
41-4011	Sales Representatives, Wholesale and Manufacturing, Technical and Scie	0.1820%	107,455
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical a	0.5325%	94,153
41-9011	Demonstrators and Product Promoters	0.0491%	46,921
41-9022	Real Estate Sales Agents	0.3360%	95,446
41-9031	Sales Engineers	0.0716%	147,125
41-9041	Telemarketers	0.2011%	40,032
41-9091	Door-to-Door Sales Workers, News and Street Vendors, and Related Worl	0.0114%	39,401
41-9099	Sales and Related Workers, All Other	0.0936%	71,302
43-1011	First-Line Supervisors of Office and Administrative Support Workers	1.4831%	74,744
43-2011	Switchboard Operators, Including Answering Service	0.0439%	48,962

Table 2.8: Occupation Mix and Averages for Industrial Prototype Continued

SOC Code	Occupation Name	Percent of Total	Average Annual Wage
43-2021	Telephone Operators	0.0024%	55,077
43-3011	Bill and Account Collectors	0.3328%	58,444
43-3021	Billing and Posting Clerks	0.6018%	57,825
43-3031	Bookkeeping, Accounting, and Auditing Clerks	1.6187%	58,837
43-3051	Payroll and Timekeeping Clerks	0.1698%	62,969
43-3061	Procurement Clerks	0.0343%	51,834
43-3071	Tellers	0.7414%	46,597
43-3099	Financial Clerks, All Other	0.0437%	55,046
43-4011	Brokerage Clerks	0.0249%	56,637
43-4021	Correspondence Clerks	0.0094%	50,470
43-4031	Court, Municipal, and License Clerks	0.0040%	56,978
43-4041	Credit Authorizers, Checkers, and Clerks	0.0233%	49,571
43-4051	Customer Service Representatives	3.2205%	47,454
43-4061	Eligibility Interviewers, Government Programs	0.0048%	68,464
43-4071	File Clerks	0.0938%	47,392
43-4081	Hotel, Motel, and Resort Desk Clerks	0.0194%	40,626
43-4111	Interviewers, Except Eligibility and Loan	0.1185%	55,645
43-4121	Library Assistants, Clerical	0.0152%	48,322
43-4131	Loan Interviewers and Clerks	0.4775%	51,565
43-4141	New Accounts Clerks	0.0792%	50,697
43-4151	Order Clerks	0.0513%	49,375
43-4161	Human Resources Assistants, Except Payroll and Timekeeping	0.0912%	58,414
43-4171	Receptionists and Information Clerks	1.2590%	44,479
43-4181	Reservation and Transportation Ticket Agents and Travel Clerks	0.0028%	44,138
43-4199	Information and Record Clerks, All Other	0.0483%	58,197
43-5011	Cargo and Freight Agents	0.0066%	53,776
43-5021	Couriers and Messengers	0.0617%	43,353
43-5031	Public Safety Telecommunicators	0.0018%	63,113
43-5032	Dispatchers, Except Police, Fire, and Ambulance	0.1059%	51,937
43-5041	Meter Readers, Utilities	0.0110%	72,431
43-5061	Production, Planning, and Expediting Clerks	0.3575%	61,450
43-5071	Shipping, Receiving, and Inventory Clerks	0.4725%	52,040
43-5111	Weighers, Measurers, Checkers, and Samplers, Recordkeeping	0.0301%	46,813
43-6011	Executive Secretaries and Executive Administrative Assistants	0.4194%	84,175
43-6012	Legal Secretaries and Administrative Assistants	0.2702%	62,111
43-6013	Medical Secretaries and Administrative Assistants	0.8973%	54,499
43-6014	Secretaries and Administrative Assistants, Except Legal, Medical, and Ex	1.5407%	53,249
43-9021	Data Entry Keyers	0.1951%	43,715
43-9022	Word Processors and Typists	0.0102%	49,685
43-9031	Desktop Publishers	0.0090%	60,624
43-9041	Insurance Claims and Policy Processing Clerks	0.4741%	50,542
43-9051	Mail Clerks and Mail Machine Operators, Except Postal Service	0.0934%	42,961
43-9061	Office Clerks, General	2.3953%	50,078
43-9071	Office Machine Operators, Except Computer	0.0415%	46,576
43-9081	Proofreaders and Copy Markers	0.0076%	62,483
43-9111	Statistical Assistants	0.0050%	64,415
43-9199	Office and Administrative Support Workers, All Other	0.0864%	58,166
45-1011	First-Line Supervisors of Farming, Fishing, and Forestry Workers	0.0054%	65,514
45-2011	Agricultural Inspectors	0.0046%	55,802
45-2041	Graders and Sorters, Agricultural Products	0.0204%	35,149
45-2091	Agricultural Equipment Operators	0.0022%	47,960
45-2092	Farmworkers and Laborers, Crop, Nursery, and Greenhouse	0.0375%	41,090
45-2093	Farmworkers, Farm, Ranch, and Aquacultural Animals	0.0082%	44,179
45-2099	Agricultural Workers, All Other	0.0018%	48,776
45-4011	Forest and Conservation Workers	0.0004%	34,539
45-4021	Fallers	0.0024%	91,106
45-4022	Logging Equipment Operators	0.0110%	61,350
45-4023	Log Graders and Scalers	0.0062%	53,167
45-4029	Logging Workers, All Other	0.0002%	51,339
47-1011	First-Line Supervisors of Construction Trades and Extraction Workers	1.0918%	97,987
47-2011	Boilermakers	0.0208%	100,993
47-2021	Brickmasons and Blockmasons	0.1044%	70,318
47-2022	Stonemasons	0.0170%	62,869
47-2031	Carpenters	1.2594%	75,484
47-2041	Carpet Installers	0.0204%	55,141
47-2042	Floor Layers, Except Carpet, Wood, and Hard Tiles	0.0293%	60,937

Table 2.8: Occupation Mix and Averages for Industrial Prototype Continued

SOC Code	Occupation Name	Percent of Total	Average Annual Wage
47-2043	Floor Sanders and Finishers	0.0080%	64,915
47-2044	Tile and Stone Setters	0.0720%	67,787
47-2051	Cement Masons and Concrete Finishers	0.3607%	68,882
47-2053	Terrazzo Workers and Finishers	0.0050%	62,972
47-2061	Construction Laborers	1.8131%	58,127
47-2071	Paving, Surfacing, and Tamping Equipment Operators	0.0700%	71,971
47-2072	Pile Driver Operators	0.0070%	99,495
47-2073	Operating Engineers and Other Construction Equipment Operators	0.5493%	85,423
47-2081	Drywall and Ceiling Tile Installers	0.1953%	67,498
47-2082	Tapers	0.0289%	63,613
47-2111	Electricians	1.1301%	71,909
47-2121	Glaziers	0.0868%	79,028
47-2131	Insulation Workers, Floor, Ceiling, and Wall	0.0577%	63,499
47-2132	Insulation Workers, Mechanical	0.0523%	96,582
47-2141	Painters, Construction and Maintenance	0.3763%	59,005
47-2142	Paperhangers	0.0040%	52,609
47-2151	Pipelayers	0.0499%	61,732
47-2152	Plumbers, Pipefitters, and Steamfitters	0.7448%	81,022
47-2161	Plasterers and Stucco Masons	0.0491%	63,355
47-2171	Reinforcing Iron and Rebar Workers	0.0299%	62,580
47-2181	Roofers	0.2582%	68,148
47-2211	Sheet Metal Workers	0.2127%	83,347
47-2221	Structural Iron and Steel Workers	0.1295%	71,703
47-2231	Solar Photovoltaic Installers	0.0273%	55,471
47-3011	Helpers--Brickmasons, Blockmasons, Stonemasons, and Tile and Marble	0.0355%	48,373
47-3012	Helpers--Carpenters	0.0539%	56,742
47-3013	Helpers--Electricians	0.1365%	44,065
47-3014	Helpers--Painters, Paperhangers, Plasterers, and Stucco Masons	0.0148%	45,109
47-3015	Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters	0.0894%	43,600
47-3016	Helpers--Roofers	0.0130%	47,681
47-3019	Helpers, Construction Trades, All Other	0.0483%	46,400
47-4011	Construction and Building Inspectors	0.1167%	110,323
47-4021	Elevator and Escalator Installers and Repairers	0.0411%	120,655
47-4031	Fence Erectors	0.0457%	50,088
47-4041	Hazardous Materials Removal Workers	0.0108%	59,118
47-4051	Highway Maintenance Workers	0.0118%	66,402
47-4061	Rail-Track Laying and Maintenance Equipment Operators	0.0048%	74,430
47-4071	Septic Tank Servicers and Sewer Pipe Cleaners	0.0092%	52,196
47-5012	Rotary Drill Operators, Oil and Gas	0.0006%	80,009
47-5013	Service Unit Operators, Oil and Gas	0.0012%	63,427
47-5022	Excavating and Loading Machine and Dragline Operators, Surface Mining	0.0293%	75,753
47-5023	Earth Drillers, Except Oil and Gas	0.0217%	65,927
47-5032	Explosives Workers, Ordnance Handling Experts, and Blasters	0.0024%	69,688
47-5041	Continuous Mining Machine Operators	0.0004%	70,959
47-5044	Loading and Moving Machine Operators, Underground Mining	0.0002%	55,192
47-5051	Rock Splitters, Quarry	0.0028%	59,563
47-5071	Roustabouts, Oil and Gas	0.0054%	66,433
47-5081	Helpers--Extraction Workers	0.0048%	55,730
47-5099	Extraction Workers, All Other	0.0012%	55,141
49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers	0.3699%	98,474
49-2011	Computer, Automated Teller, and Office Machine Repairers	0.0289%	54,367
49-2021	Radio, Cellular, and Tower Equipment Installers and Repairers	0.0136%	70,638
49-2022	Telecommunications Equipment Installers and Repairers, Except Line Inst	0.3125%	85,406
49-2091	Avionics Technicians	0.0042%	93,862
49-2092	Electric Motor, Power Tool, and Related Repairers	0.0022%	57,942
49-2093	Electrical and Electronics Installers and Repairers, Transportation Equipm	0.0008%	80,245
49-2094	Electrical and Electronics Repairers, Commercial and Industrial Equipmen	0.0321%	77,509
49-2095	Electrical and Electronics Repairers, Powerhouse, Substation, and Relay	0.0042%	108,371
49-2097	Audiovisual Equipment Installers and Repairers	0.0182%	60,533
49-2098	Security and Fire Alarm Systems Installers	0.1415%	65,207
49-3011	Aircraft Mechanics and Service Technicians	0.0146%	79,892
49-3021	Automotive Body and Related Repairers	0.0014%	64,648
49-3022	Automotive Glass Installers and Repairers	0.0012%	49,869
49-3023	Automotive Service Technicians and Mechanics	0.0265%	62,140
49-3031	Bus and Truck Mechanics and Diesel Engine Specialists	0.0660%	72,669
49-3041	Farm Equipment Mechanics and Service Technicians	0.0032%	60,139

Table 2.8: Occupation Mix and Averages for Industrial Prototype Continued

SOC Code	Occupation Name	Percent of Total	Average Annual Wage
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	0.0902%	69,052
49-3051	Motorboat Mechanics and Service Technicians	0.0002%	58,865
49-3052	Motorcycle Mechanics	0.0002%	54,730
49-3053	Outdoor Power Equipment and Other Small Engine Mechanics	0.0124%	53,507
49-3092	Recreational Vehicle Service Technicians	0.0002%	56,326
49-3093	Tire Repairers and Changers	0.0018%	41,288
49-9011	Mechanical Door Repairers	0.0347%	55,984
49-9012	Control and Valve Installers and Repairers, Except Mechanical Door	0.0128%	87,748
49-9021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	0.5906%	65,487
49-9031	Home Appliance Repairers	0.0044%	50,543
49-9041	Industrial Machinery Mechanics	0.2825%	72,286
49-9043	Maintenance Workers, Machinery	0.0525%	61,072
49-9044	Millwrights	0.0553%	69,529
49-9051	Electrical Power-Line Installers and Repairers	0.0914%	108,485
49-9052	Telecommunications Line Installers and Repairers	0.1917%	78,193
49-9061	Camera and Photographic Equipment Repairers	0.0004%	44,138
49-9062	Medical Equipment Repairers	0.0112%	69,280
49-9063	Musical Instrument Repairers and Tuners	0.0012%	49,413
49-9069	Precision Instrument and Equipment Repairers, All Other	0.0026%	71,975
49-9071	Maintenance and Repair Workers, General	1.2434%	57,673
49-9081	Wind Turbine Service Technicians	0.0050%	71,736
49-9091	Coin, Vending, and Amusement Machine Servicers and Repairers	0.0052%	54,056
49-9092	Commercial Divers	0.0046%	132,207
49-9094	Locksmiths and Safe Repairers	0.0223%	79,229
49-9096	Riggers	0.0148%	89,282
49-9098	Helpers--Installation, Maintenance, and Repair Workers	0.0808%	43,993
49-9099	Installation, Maintenance, and Repair Workers, All Other	0.1361%	51,082
51-1011	First-Line Supervisors of Production and Operating Workers	0.6692%	82,224
51-2011	Aircraft Structure, Surfaces, Rigging, and Systems Assemblers	0.0070%	62,913
51-2021	Coil Winders, Tapers, and Finishers	0.0100%	43,540
51-2031	Engine and Other Machine Assemblers	0.0672%	51,721
51-2041	Structural Metal Fabricators and Fitters	0.0922%	54,753
51-2051	Fiberglass Laminators and Fabricators	0.0054%	47,698
51-3011	Bakers	0.1419%	42,196
51-3021	Butchers and Meat Cutters	0.0231%	44,395
51-3022	Meat, Poultry, and Fish Cutters and Trimmers	0.1943%	36,818
51-3023	Slaughterers and Meat Packers	0.1590%	35,599
51-3091	Food and Tobacco Roasting, Baking, and Drying Machine Operators and T	0.0261%	42,748
51-3092	Food Batchmakers	0.2326%	39,851
51-3093	Food Cooking Machine Operators and Tenders	0.0395%	40,122
51-3099	Food Processing Workers, All Other	0.0571%	36,943
51-4021	Extruding and Drawing Machine Setters, Operators, and Tenders, Metal ar	0.0295%	43,227
51-4022	Forging Machine Setters, Operators, and Tenders, Metal and Plastic	0.0154%	56,775
51-4023	Rolling Machine Setters, Operators, and Tenders, Metal and Plastic	0.0174%	51,325
51-4031	Cutting, Punching, and Press Machine Setters, Operators, and Tenders, M	0.2512%	45,999
51-4032	Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal a	0.0096%	51,043
51-4033	Grinding, Lapping, Polishing, and Buffing Machine Tool Setters, Operators	0.0798%	44,478
51-4034	Lathe and Turning Machine Tool Setters, Operators, and Tenders, Metal ar	0.0299%	54,878
51-4035	Milling and Planing Machine Setters, Operators, and Tenders, Metal and F	0.0146%	56,921
51-4041	Machinists	0.4852%	58,151
51-4051	Metal-Refining Furnace Operators and Tenders	0.0038%	48,824
51-4052	Pourers and Casters, Metal	0.0012%	40,247
51-4061	Model Makers, Metal and Plastic	0.0054%	76,867
51-4062	Patternmakers, Metal and Plastic	0.0012%	68,551
51-4071	Foundry Mold and Coremakers	0.0050%	41,404
51-4072	Molding, Coremaking, and Casting Machine Setters, Operators, and Tende	0.1057%	44,655
51-4081	Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic	0.1752%	44,697
51-4111	Tool and Die Makers	0.0936%	71,552
51-4121	Welders, Cutters, Solderers, and Brazers	0.5487%	59,266
51-4122	Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders	0.0447%	52,992
51-4191	Heat Treating Equipment Setters, Operators, and Tenders, Metal and Plas	0.0108%	50,439
51-4192	Layout Workers, Metal and Plastic	0.0028%	60,850
51-4193	Plating Machine Setters, Operators, and Tenders, Metal and Plastic	0.0186%	46,083
51-4194	Tool Grinders, Filers, and Sharpeners	0.0068%	48,136
51-4199	Metal Workers and Plastic Workers, All Other	0.0231%	45,270
51-5111	Prepress Technicians and Workers	0.0058%	50,887

Table 2.8: Occupation Mix and Averages for Industrial Prototype Continued

SOC Code	Occupation Name	Percent of Total	Average Annual Wage
51-5112	Printing Press Operators	0.0652%	52,450
51-5113	Print Binding and Finishing Workers	0.0090%	44,832
51-6011	Laundry and Dry-Cleaning Workers	0.0251%	39,403
51-6021	Pressers, Textile, Garment, and Related Materials	0.0006%	37,141
51-6031	Sewing Machine Operators	0.1040%	37,673
51-6042	Shoe Machine Operators and Tenders	0.0002%	43,686
51-6051	Sewers, Hand	0.0010%	35,443
51-6052	Tailors, Dressmakers, and Custom Sewers	0.0018%	47,844
51-6061	Textile Bleaching and Dyeing Machine Operators and Tenders	0.0118%	36,964
51-6062	Textile Cutting Machine Setters, Operators, and Tenders	0.0142%	39,517
51-6063	Textile Knitting and Weaving Machine Setters, Operators, and Tenders	0.0289%	38,976
51-6064	Textile Winding, Twisting, and Drawing Out Machine Setters, Operators, a	0.0429%	36,683
51-6091	Extruding and Forming Machine Setters, Operators, and Tenders, Synthet	0.0164%	52,992
51-6092	Fabric and Apparel Patternmakers	0.0020%	68,707
51-6093	Upholsterers	0.0355%	44,989
51-6099	Textile, Apparel, and Furnishings Workers, All Other	0.0138%	36,485
51-7011	Cabinetmakers and Bench Carpenters	0.1730%	51,460
51-7021	Furniture Finishers	0.0243%	48,428
51-7041	Sawing Machine Setters, Operators, and Tenders, Wood	0.0798%	46,302
51-7042	Woodworking Machine Setters, Operators, and Tenders, Except Sawing	0.1263%	48,834
51-7099	Woodworkers, All Other	0.0116%	42,560
51-8012	Power Distributors and Dispatchers	0.0022%	119,563
51-8013	Power Plant Operators	0.0012%	107,672
51-8021	Stationary Engineers and Boiler Operators	0.0122%	78,639
51-8031	Water and Wastewater Treatment Plant and System Operators	0.0385%	78,649
51-8091	Chemical Plant and System Operators	0.0072%	93,562
51-8092	Gas Plant Operators	0.0006%	108,986
51-8093	Petroleum Pump System Operators, Refinery Operators, and Gaugers	0.0022%	101,117
51-8099	Plant and System Operators, All Other	0.0054%	73,960
51-9011	Chemical Equipment Operators and Tenders	0.0874%	54,045
51-9012	Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, C	0.0684%	74,543
51-9021	Crushing, Grinding, and Polishing Machine Setters, Operators, and Tender	0.0275%	46,052
51-9022	Grinding and Polishing Workers, Hand	0.0215%	51,043
51-9023	Mixing and Blending Machine Setters, Operators, and Tenders	0.1213%	54,482
51-9031	Cutters and Trimmers, Hand	0.0060%	37,600
51-9032	Cutting and Slicing Machine Setters, Operators, and Tenders	0.0577%	47,021
51-9041	Extruding, Forming, Pressing, and Compacting Machine Setters, Operator	0.0477%	46,562
51-9051	Furnace, Kiln, Oven, Drier, and Kettle Operators and Tenders	0.0190%	45,968
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	0.6680%	51,689
51-9071	Jewelers and Precious Stone and Metal Workers	0.0126%	50,970
51-9081	Dental Laboratory Technicians	0.0678%	60,964
51-9082	Medical Appliance Technicians	0.0200%	48,375
51-9083	Ophthalmic Laboratory Technicians	0.0273%	51,148
51-9111	Packaging and Filling Machine Operators and Tenders	0.5487%	48,730
51-9123	Painting, Coating, and Decorating Workers	0.0130%	52,502
51-9124	Coating, Painting, and Spraying Machine Setters, Operators, and Tenders	0.1193%	58,536
51-9141	Semiconductor Processing Technicians	0.0467%	53,826
51-9151	Photographic Process Workers and Processing Machine Operators	0.0052%	47,333
51-9161	Computer Numerically Controlled Tool Operators	0.2416%	52,117
51-9162	Computer Numerically Controlled Tool Programmers	0.0387%	79,629
51-9191	Adhesive Bonding Machine Operators and Tenders	0.0068%	47,625
51-9192	Cleaning, Washing, and Metal Pickling Equipment Operators and Tenders	0.0168%	46,927
51-9193	Cooling and Freezing Equipment Operators and Tenders	0.0122%	46,729
51-9194	Etchers and Engravers	0.0046%	43,905
51-9195	Molders, Shapers, and Casters, Except Metal and Plastic	0.0621%	49,032
51-9196	Paper Goods Machine Setters, Operators, and Tenders	0.0088%	49,084
51-9197	Tire Builders	0.0008%	46,729
51-9198	Helpers--Production Workers	0.2650%	46,989
51-9199	Production Workers, All Other	0.2700%	49,543
53-2011	Airline Pilots, Copilots, and Flight Engineers	0.0006%	262,343
53-2012	Commercial Pilots	0.0104%	148,128
53-3011	Ambulance Drivers and Attendants, Except Emergency Medical Technicia	0.0008%	39,366
53-3031	Driver/Sales Workers	0.0595%	46,920
53-3032	Heavy and Tractor-Trailer Truck Drivers	0.6862%	60,073
53-3033	Light Truck Drivers	0.1872%	48,398
53-3051	Bus Drivers, School	0.0006%	52,529

Table 2.8: Occupation Mix and Averages for Industrial Prototype Continued

SOC Code	Occupation Name	Percent of Total	Average Annual Wage
53-3052	Bus Drivers, Transit and Intercity	0.0008%	61,863
53-3053	Shuttle Drivers and Chauffeurs	0.0225%	41,842
53-3054	Taxi Drivers	0.0008%	37,617
53-5011	Sailors and Marine Oilers	0.0022%	64,610
53-5021	Captains, Mates, and Pilots of Water Vessels	0.0028%	113,029
53-5022	Motorboat Operators	0.0010%	65,724
53-5031	Ship Engineers	0.0004%	164,861
53-6011	Bridge and Lock Tenders	0.0002%	62,092
53-6021	Parking Attendants	0.0134%	37,357
53-6031	Automotive and Watercraft Service Attendants	0.0012%	39,470
53-6041	Traffic Technicians	0.0018%	75,797
53-6051	Transportation Inspectors	0.0032%	75,651
53-6099	Transportation Workers, All Other	0.0030%	49,886
53-7011	Conveyor Operators and Tenders	0.0088%	42,477
53-7021	Crane and Tower Operators	0.0439%	65,276
53-7031	Dredge Operators	0.0018%	71,770
53-7041	Hoist and Winch Operators	0.0006%	51,468
53-7051	Industrial Truck and Tractor Operators	0.4206%	50,573
53-7061	Cleaners of Vehicles and Equipment	0.0896%	40,094
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	1.9198%	43,809
53-7063	Machine Feeders and Offbearers	0.0549%	45,162
53-7064	Packers and Packagers, Hand	0.4733%	36,983
53-7065	Stockers and Order Fillers	0.3575%	42,217
53-7072	Pump Operators, Except Wellhead Pumpers	0.0046%	58,408
53-7081	Refuse and Recyclable Material Collectors	0.1279%	64,465
53-7121	Tank Car, Truck, and Ship Loaders	0.0014%	58,044
53-7199	Material Moving Workers, All Other	0.0080%	49,761

Sources: CA EDD, Occupational Employment (May 2022) & Wage (2023 - 1st Quarter) Data.

Table 2.9: Occupation Mix and Averages for Hotel Prototype

SOC Code	Occupation Name	Percent of Total	Average Annual Wage
11-1011	Chief Executives	0.041096%	$280,501
11-1021	General and Operations Managers	1.917808%	151,214
11-2011	Advertising and Promotions Managers	0.006849%	183,247
11-2021	Marketing Managers	0.102740%	190,254
11-2022	Sales Managers	0.493151%	147,583
11-2032	Public Relations Managers	0.013699%	160,760
11-3012	Administrative Services Managers	0.089041%	117,406
11-3013	Facilities Managers	0.321918%	108,849
11-3021	Computer and Information Systems Managers	0.041096%	177,434
11-3031	Financial Managers	0.328767%	168,490
11-3061	Purchasing Managers	0.020548%	130,256
11-3071	Transportation, Storage, and Distribution Managers	0.006849%	114,244
11-3111	Compensation and Benefits Managers	0.006849%	153,305
11-3121	Human Resources Managers	0.136986%	140,159
11-3131	Training and Development Managers	0.006849%	152,988
11-9021	Construction Managers	0.006849%	143,065
11-9051	Food Service Managers	0.404110%	83,363
11-9071	Gambling Managers	0.061644%	110,838
11-9072	Entertainment and Recreation Managers, Except Gambling	0.068493%	89,003
11-9081	Lodging Managers	2.424658%	89,645
11-9141	Property, Real Estate, and Community Association Managers	0.082192%	70,156
11-9151	Social and Community Service Managers	0.006849%	89,584
11-9179	Personal Service Managers, All Other	0.020548%	75,112
11-9199	Managers, All Other	0.178082%	152,458
13-1041	Compliance Officers	0.020548%	84,332
13-1071	Human Resources Specialists	0.376712%	83,455
13-1082	Project Management Specialists	0.034247%	104,117
13-1111	Management Analysts	0.027397%	94,775
13-1121	Meeting, Convention, and Event Planners	0.383562%	64,363
13-1131	Fundraisers	0.027397%	65,036
13-1141	Compensation, Benefits, and Job Analysis Specialists	0.013699%	89,890
13-1151	Training and Development Specialists	0.041096%	73,511
13-1161	Market Research Analysts and Marketing Specialists	0.246575%	84,475
13-1199	Business Operations Specialists, All Other	0.253425%	76,397
13-2011	Accountants and Auditors	0.602740%	95,030
13-2031	Budget Analysts	0.041096%	99,293
13-2041	Credit Analysts	0.006849%	99,915
13-2051	Financial and Investment Analysts	0.027397%	116,172
13-2099	Financial Specialists, All Other	0.006849%	78,468
15-1211	Computer Systems Analysts	0.047945%	113,293
15-1212	Information Security Analysts	0.006849%	142,889
15-1231	Computer Network Support Specialists	0.013699%	87,114
15-1232	Computer User Support Specialists	0.075342%	79,285
15-1242	Database Administrators	0.006849%	104,872
15-1244	Network and Computer Systems Administrators	0.047945%	105,110
15-1252	Software Developers	0.006849%	139,867
15-1254	Web Developers	0.006849%	107,042
15-1299	Computer Occupations, All Other	0.020548%	104,269
17-2051	Civil Engineers	0.013699%	112,514

Table 2.9: Occupation Mix and Averages for Hotel Prototype Continued

SOC Code	Occupation Name	Percent of Total	Average Annual Wage
17-2199	Engineers, All Other	0.006849%	104,550
19-5011	Occupational Health and Safety Specialists	0.006849%	92,431
25-3021	Self-Enrichment Teachers	0.061644%	58,100
25-9031	Instructional Coordinators	0.006849%	112,099
27-1023	Floral Designers	0.006849%	44,071
27-1024	Graphic Designers	0.020548%	76,855
27-1025	Interior Designers	0.006849%	89,949
27-2012	Producers and Directors	0.013699%	156,015
27-2022	Coaches and Scouts	0.054795%	60,520
27-3031	Public Relations Specialists	0.054795%	96,647
27-4011	Audio and Video Technicians	0.041096%	73,210
27-4015	Lighting Technicians	0.041096%	96,751
29-1141	Registered Nurses	0.006849%	152,027
29-2042	Emergency Medical Technicians	0.013699%	47,373
31-9011	Massage Therapists	0.335616%	52,720
33-1091	First-Line Supervisors of Security Workers	0.226027%	63,768
33-1099	First-Line Supervisors of Protective Service Workers, All Other	0.041096%	77,356
33-9031	Gambling Surveillance Officers and Gambling Investigators	0.102740%	39,195
33-9032	Security Guards	1.965753%	41,286
35-1011	Chefs and Head Cooks	0.698630%	77,586
35-1012	First-Line Supervisors of Food Preparation and Serving Workers	1.191781%	51,215
35-2011	Cooks, Fast Food	0.027397%	38,087
35-2012	Cooks, Institution and Cafeteria	0.246575%	51,487
35-2014	Cooks, Restaurant	2.986301%	44,839
35-2015	Cooks, Short Order	0.130137%	42,435
35-2019	Cooks, All Other	0.061644%	41,547
35-2021	Food Preparation Workers	0.602740%	41,233
35-3011	Bartenders	1.821918%	39,885
35-3023	Fast Food and Counter Workers	0.767123%	37,648
35-3031	Waiters and Waitresses	4.890411%	41,202
35-3041	Food Servers, Nonrestaurant	0.856164%	44,317
35-9011	Dining Room and Cafeteria Attendants and Bartender Helpers	1.993151%	37,000
35-9021	Dishwashers	0.863014%	38,662
35-9031	Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop	0.773973%	38,307
35-9099	Food Preparation and Serving Related Workers, All Other	0.232877%	43,564
37-1011	First-Line Supervisors of Housekeeping and Janitorial Workers	2.136986%	56,368
37-1012	First-Line Supervisors of Landscaping, Lawn Service, and Groundskeepir	0.102740%	73,917
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	2.363014%	44,181
37-2012	Maids and Housekeeping Cleaners	22.856164%	42,352
37-2019	Building Cleaning Workers, All Other	0.054795%	45,811
37-3011	Landscaping and Groundskeeping Workers	0.993151%	47,118
37-3019	Grounds Maintenance Workers, All Other	0.047945%	49,888
39-1013	First-Line Supervisors of Gambling Services Workers	0.513699%	64,134
39-1014	First-Line Supervisors of Entertainment and Recreation Workers, Except	0.150685%	53,243
39-1022	First-Line Supervisors of Personal Service Workers	0.136986%	53,849
39-2021	Animal Caretakers	0.034247%	39,958
39-3011	Gambling Dealers	1.904110%	38,694
39-3012	Gambling and Sports Book Writers and Runners	0.041096%	37,481
39-3019	Gambling Service Workers, All Other	0.157534%	43,355
39-3031	Ushers, Lobby Attendants, and Ticket Takers	0.089041%	36,990

Table 2.9: Occupation Mix and Averages for Hotel Prototype Continued

SOC Code	Occupation Name	Percent of Total	Average Annual Wage
39-3091	Amusement and Recreation Attendants	0.671233%	37,659
39-3092	Costume Attendants	0.006849%	62,399
39-3093	Locker Room, Coatroom, and Dressing Room Attendants	0.102740%	42,822
39-3099	Entertainment Attendants and Related Workers, All Other	0.027397%	39,174
39-5012	Hairdressers, Hairstylists, and Cosmetologists	0.041096%	43,355
39-5092	Manicurists and Pedicurists	0.054795%	36,154
39-5094	Skincare Specialists	0.089041%	50,463
39-6011	Baggage Porters and Bellhops	0.753425%	37,074
39-6012	Concierges	0.404110%	43,658
39-9011	Childcare Workers	0.034247%	41,192
39-9031	Exercise Trainers and Group Fitness Instructors	0.075342%	68,252
39-9032	Recreation Workers	0.582192%	38,547
39-9041	Residential Advisors	0.068493%	61,531
39-9099	Personal Care and Service Workers, All Other	0.130137%	39,990
41-1011	First-Line Supervisors of Retail Sales Workers	0.130137%	60,565
41-1012	First-Line Supervisors of Non-Retail Sales Workers	0.095890%	91,122
41-2011	Cashiers	0.582192%	37,787
41-2012	Gambling Change Persons and Booth Cashiers	0.178082%	36,236
41-2021	Counter and Rental Clerks	0.102740%	48,173
41-2031	Retail Salespersons	0.315068%	44,263
41-3011	Advertising Sales Agents	0.006849%	76,495
41-3041	Travel Agents	0.013699%	54,359
41-3091	Sales Representatives of Services, Except Advertising, Insurance, Finan	1.205479%	85,598
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical	0.027397%	94,153
41-9022	Real Estate Sales Agents	0.006849%	95,446
41-9041	Telemarketers	0.041096%	40,032
41-9099	Sales and Related Workers, All Other	0.047945%	71,302
43-1011	First-Line Supervisors of Office and Administrative Support Workers	2.287671%	74,744
43-2011	Switchboard Operators, Including Answering Service	0.116438%	48,962
43-2021	Telephone Operators	0.034247%	55,077
43-3011	Bill and Account Collectors	0.006849%	58,444
43-3021	Billing and Posting Clerks	0.013699%	57,825
43-3031	Bookkeeping, Accounting, and Auditing Clerks	1.308219%	58,837
43-3041	Gambling Cage Workers	0.178082%	37,796
43-3051	Payroll and Timekeeping Clerks	0.075342%	62,969
43-3061	Procurement Clerks	0.020548%	51,834
43-3099	Financial Clerks, All Other	0.013699%	55,046
43-4041	Credit Authorizers, Checkers, and Clerks	0.006849%	49,571
43-4051	Customer Service Representatives	0.342466%	47,454
43-4081	Hotel, Motel, and Resort Desk Clerks	15.123288%	40,626
43-4151	Order Clerks	0.006849%	49,375
43-4161	Human Resources Assistants, Except Payroll and Timekeeping	0.041096%	58,414
43-4171	Receptionists and Information Clerks	0.287671%	44,479
43-4181	Reservation and Transportation Ticket Agents and Travel Clerks	0.321918%	44,138
43-5021	Couriers and Messengers	0.006849%	43,353
43-5032	Dispatchers, Except Police, Fire, and Ambulance	0.054795%	51,937
43-5061	Production, Planning, and Expediting Clerks	0.034247%	61,450
43-5071	Shipping, Receiving, and Inventory Clerks	0.102740%	52,040
43-5111	Weighers, Measurers, Checkers, and Samplers, Recordkeeping	0.006849%	46,813
43-6011	Executive Secretaries and Executive Administrative Assistants	0.095890%	84,175

Table 2.9: Occupation Mix and Averages for Hotel Prototype Continued

SOC Code	Occupation Name	Percent of Total	Average Annual Wage
43-6014	Secretaries and Administrative Assistants, Except Legal, Medical, and E	0.452055%	53,249
43-9021	Data Entry Keyers	0.006849%	43,715
43-9051	Mail Clerks and Mail Machine Operators, Except Postal Service	0.013699%	42,961
43-9061	Office Clerks, General	0.657534%	50,078
43-9199	Office and Administrative Support Workers, All Other	0.020548%	58,166
45-1011	First-Line Supervisors of Farming, Fishing, and Forestry Workers	0.013699%	65,514
45-2092	Farmworkers and Laborers, Crop, Nursery, and Greenhouse	0.006849%	41,090
45-2093	Farmworkers, Farm, Ranch, and Aquacultural Animals	0.061644%	44,179
47-1011	First-Line Supervisors of Construction Trades and Extraction Workers	0.013699%	97,987
47-2031	Carpenters	0.061644%	75,484
47-2041	Carpet Installers	0.006849%	55,141
47-2061	Construction Laborers	0.006849%	58,127
47-2073	Operating Engineers and Other Construction Equipment Operators	0.006849%	85,423
47-2111	Electricians	0.034247%	71,909
47-2141	Painters, Construction and Maintenance	0.102740%	59,005
47-2152	Plumbers, Pipefitters, and Steamfitters	0.020548%	81,022
49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers	0.623288%	98,474
49-3023	Automotive Service Technicians and Mechanics	0.020548%	62,140
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	0.006849%	69,052
49-3051	Motorboat Mechanics and Service Technicians	0.006849%	58,865
49-3053	Outdoor Power Equipment and Other Small Engine Mechanics	0.020548%	53,507
49-9021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	0.047945%	65,487
49-9041	Industrial Machinery Mechanics	0.041096%	72,286
49-9043	Maintenance Workers, Machinery	0.006849%	61,072
49-9071	Maintenance and Repair Workers, General	6.342466%	57,673
49-9091	Coin, Vending, and Amusement Machine Servicers and Repairers	0.116438%	54,056
49-9094	Locksmiths and Safe Repairers	0.006849%	79,229
49-9098	Helpers--Installation, Maintenance, and Repair Workers	0.020548%	43,993
49-9099	Installation, Maintenance, and Repair Workers, All Other	0.027397%	51,082
51-1011	First-Line Supervisors of Production and Operating Workers	0.041096%	82,224
51-3011	Bakers	0.089041%	42,196
51-3021	Butchers and Meat Cutters	0.006849%	44,395
51-6011	Laundry and Dry-Cleaning Workers	1.883562%	39,403
51-6021	Pressers, Textile, Garment, and Related Materials	0.006849%	37,141
51-6031	Sewing Machine Operators	0.006849%	37,673
51-6052	Tailors, Dressmakers, and Custom Sewers	0.006849%	47,844
51-6093	Upholsterers	0.006849%	44,989
51-8021	Stationary Engineers and Boiler Operators	0.089041%	78,639
51-8031	Water and Wastewater Treatment Plant and System Operators	0.006849%	78,649
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	0.027397%	51,689
53-3033	Light Truck Drivers	0.020548%	48,398
53-3053	Shuttle Drivers and Chauffeurs	0.335616%	41,842
53-5021	Captains, Mates, and Pilots of Water Vessels	0.006849%	113,029
53-6021	Parking Attendants	0.260274%	37,357
53-6031	Automotive and Watercraft Service Attendants	0.006849%	39,470
53-7061	Cleaners of Vehicles and Equipment	0.006849%	40,094
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	0.116438%	43,809
53-7065	Stockers and Order Fillers	0.000890411	42,217

Sources: CA EDD, Occupational Employment (May 2022) & Wage (2023 - 1st Quarter) Data.

Worker Households by Income Category

Table 2.10 summarizes the number of new workers living in St. Helena by income category. Data from the prior four tables was examined to identify the number of workers employed within each

prototype whose household income falls within each income category. The worker households that fall into moderate or below area median income categories drive the calculation of the commercial linkage fee for each prototype.

Table 2.10: Number of Worker Households by Income Category

	3 Person Household Income Limits	Number of Employee Households			
		Commercial	Office	Industrial	Hotel
Extremely Low	36,050	-	-	-	-
Very Low Income	60,100	13.273	7.807	2.772	6.836
Low Income	96,050	3.509	8.312	3.710	1.804
Moderate Income	139,950	0.754	7.995	2.604	0.694
Above Moderate		2.945	7.381	2.122	0.327

Sources: Tables 1.1, 2.6, 2.7, 2.8 and 2.9; Willdan Financial Services.

Affordability Gap

The affordability gap analysis from **Table 1.11** in Chapter 2 is also used in the calculation of the commercial linkage fee. The units demanded for each prototype are multiplied by the financing gap per affordable unit and summarized across all income levels to determine the total financing gap per prototype.

Table 2.11: Financing Gap per Prototype

	Extremely Low Income (up to 30% AMI)	Very Low Income (31-50% AMI)	Low Income (51-80% AMI)	Moderate Income (81-120% AMI)	Total
Financing Gap per Affordable Unit	898,323	834,062	738,005	620,705	
Commercial Prototype					
Units Demanded	-	13.273	3.509	0.754	17.536
Total Financing Gap	$ -	$ 11,070,844	$ 2,589,522	$ 468,154	$ 14,128,520
Office Prototype					
Units Demanded	-	7.807	8.312	7.995	24.114
Total Financing Gap	$ -	$ 6,511,699	$ 6,134,268	$ 4,962,295	$ 17,608,262
Industrial Prototype					
Units Demanded	-	2.772	3.710	2.604	9.085
Total Financing Gap	$ -	$ 2,311,978	$ 2,737,705	$ 1,616,097	$ 6,665,780
Hotel Prototype					
Units Demanded	-	6.836	1.804	0.694	9.334
Total Financing Gap	$ -	$ 5,701,231	$ 1,331,724	$ 430,855	$ 7,463,811

Sources: Tables 1.11 and 2.10, Willdan Financial Services.

Maximum Justified Commercial Linkage Fee Schedule

The affordability gap from Table 2.11 is divided by the square footage of each prototype to determine the maximum justified commercial linkage fee per square foot for each land use category. The fee schedule is shown below in **Table 2.12.**

Table 2.12: Maximum Justified Commercial Linkage Fee Schedule

Land Use	Affordability Gap for All New Worker Households	Size of Prototype (Sq. Ft.)	Maximum Fee per Sq. Ft.	Current Fee per Sq. Ft.
Commercial	$ 14,128,520	100,000	$ 141.29	$ 5.21
Office	17,608,262	100,000	176.08	4.11
Industrial	6,665,780	100,000	66.66	1.26
Hotel	7,463,811	100,000	74.64	3.80

Source: Table 2.11, Willdan Financial Services.

Table 2.13 compares the City's current and maximum justified fees to the fees from Yountville and Sonoma.

Table 2.13: Commercial Linkage Fee Comparison

Land Use	St. Helena - Maximum	St. Helena - Current	Units	Yountville	Units	Sonoma	Units
Commercial	$ 141.29	$ 5.21	Sq. Ft.	$ 23.60	Sq. Ft.	$ 4.00	Sq. Ft.
Office	176.08	4.11	Sq. Ft.	23.60	Sq. Ft.	4.00	Sq. Ft.
Industrial	66.66	1.26	Sq. Ft.	23.60	Sq. Ft.	4.00	Sq. Ft.
Hotel	74.64	3.80	Sq. Ft.	11,801.15	Room	15.00	Sq. Ft.

Appendix

Appendix Table A.1: Current Rental Listings in St. Helea

Address	City	State / Zip	Listed On:	Rent per Month	Bedrooms	Baths	Square Feet
610 Harvest Ln	St. Helena	CA 94574	Apartments.com; Zillow.com	9,000	5	4	2,626
516 Meadowood Ln	St. Helena	CA 94574	Apartments.com; Zillow.com	8,500	4	3.5	3,173
(undisclosed Address)	St. Helena	CA 94574	Apartments.com	8,000	3	3	2,200
915 Valley View Ct	St. Helena	CA 94574	Apartments.com	7,100	3	3.5	2,700
1451 Spring St	St. Helena	CA 94574	Apartments.com; Zillow.com	7,000	3	1.5	1,230
1340 Pine St	St. Helena	CA 94574	Apartments.com; Zillow.com	6,000	3	2	1,426
1220 Peppertree Cir	St. Helena	CA 94574	Apartments.com	5,875	3	2	1,450
1384 Magnolia Ave	St. Helena	CA 94574	Apartments.com	5,750	3	2	2,063
338 Glass Mountain Rd	St. Helena	CA 94574	Apartments.com	5,600	3	2	2,114
1745 Oak Ave	St. Helena	CA 94574	Apartments.com	5,500	3	1	1,834
1091 Mariposa Ln	St. Helena	CA 94574	Apartments.com	5,000	3	2	1,316
1325 Pine St	St. Helena	CA 94574	Apartments.com	4,495	3	1	1,300
1350 St James Ct	St. Helena	CA 94574	Apartments.com; Zillow.com	3,500	3	2	1,281
3251 St Helena Hwy	St. Helena	CA 94574	Apartments.com; Zillow.com	5,975	2	1.5	1,636
1413 Tainter St	St. Helena	CA 94574	Apartments.com	4,750	2	1	1,223
1220 Madrona Ave	St. Helena	CA 94574	Apartments.com; Zillow.com	4,600	2	1	1,392
789 Stralla Ct	St. Helena	CA 94574	Apartments.com; Zillow.com	3,200	2	1.5	1,156
1141-1161 Oak Avenue	St. Helena	CA 94574	Apartments.com	3,100	2	1.5	n/a
620 McCorkle Avenue	St. Helena	CA 94574	Apartments.com	2,900	2	2	n/a
83C W Zinfandel Ln	St. Helena	CA 94574	Apartments.com	2,500	2	1	1,000
1103 Pope St #C	St. Helena	CA 94574	Apartments.com	2,350	2	1	1,250
1971 Vallejo St	St. Helena	CA 94574	Apartments.com	4,800	1	1	600
842 Hunt Ave #842	St. Helena	CA 94574	Apartments.com	3,500	1	1	627
3600 Spring Mountain Rd Unit 2	St. Helena	CA 94574	Apartments.com; Zillow.com	1,750	1	1	700

Note: Excludes properties with monthly rents above $10,000.

Sources: Apartments.com; Zillow.com; October, 2023.

Appendix Table A.2: Recently Sold Homes in St. Helena

Property Link	Sales Price	Type	Sale Date	Bedrooms	Bathrooms	Year Built	Square feet
https://www.mlslistings.com/property/ba323019719/1545-madrona-ave-saint-helena-ca-94574/15926110	1,950,000	Single Family Residence	Sep 14, 2023	3	2	1932	1,598
https://www.mlslistings.com/property/ba323010164/3851-spring-mountain-rd-saint-helena-ca-94574/15878397	2,895,000	Single Family Residence	Sep 7, 2023	3	2	1995	2,126
https://www.mlslistings.com/property/ba323044227/5486-chiles-pope-valley-rd-saint-helena-ca-94574/16051619	859,000	Single Family Residence	Sep 1, 2023	3	2	1987	1,481
https://www.mlslistings.com/property/ba323028987/1103-brittany-ln-saint-helena-ca-94574/15974961	3,200,000	Single Family Residence	Sep 1, 2023	4	4	1990	4,367
https://www.mlslistings.com/property/ba323027612/1626-tainter-st-saint-helena-ca-94574/15965732	1,625,000	Single Family Residence	Aug 30, 2023	2	2	1948	1,758
https://www.mlslistings.com/property/ba322046304/1832-park-st-saint-helena-ca-94574/15564611	840,000	Single Family Residence	Aug 28, 2023	3	1/1	1910	1,800
https://www.mlslistings.com/property/ba323021550/26-san-juan-ct-saint-helena-ca-94574/15935375	418,000	Manufactured In Park	Aug 25, 2023	2	2	1987	1,856
https://www.mlslistings.com/property/ba323039293/46-laguna-seca-ct-saint-helena-ca-94574/16028337	339,500	Manufactured In Park	Aug 23, 2023	2	2	1986	1,440
https://www.mlslistings.com/property/ba323005608/25-redondo-ct-saint-helena-ca-94574/15854983	245,000	Manufactured In Park	Aug 21, 2023	2	2	1986	1,344
https://www.mlslistings.com/property/ba323044948/1370-hasty-ct-saint-helena-ca-94574/16049263	1,150,000	Condominium	Aug 16, 2023	3	2	1983	1,606
https://www.mlslistings.com/property/ba323039062/1171-garden-ave-saint-helena-ca-94574/16019211	959,000	Single Family Residence	Aug 16, 2023	3	2	1961	1,346
https://www.mlslistings.com/property/ba323047978/1330-madrona-ave-saint-helena-ca-94574/16070116	2,500,000	Single Family Residence	Aug 8, 2023	3	2	1955	1,672
https://www.mlslistings.com/property/ba323041595/1550-sulphur-springs-ave-saint-helena-ca-94574/16032624	3,550,000	Single Family Residence	Aug 4, 2023	2	2/1	1950	2,438
https://www.mlslistings.com/property/ba323026300/1005-valley-view-st-2-saint-helena-ca-94574/15957450	300,000	Residential	Aug 1, 2023	2	2/1	1963	1,100
https://www.mlslistings.com/property/ba323028100/339-crystal-springs-rd-saint-helena-ca-94574/15995917	4,800,000	Single Family Residence	Jul 31, 2023	2	2/1	1993	3,791
https://www.mlslistings.com/property/ba323024554/1855-spring-mountain-rd-saint-helena-ca-94574/15954861	2,550,000	Single Family Residence	Jul 28, 2023	4	3/1	1952	2,765
https://www.mlslistings.com/property/ba323004187/650-sunnyside-rd-saint-helena-ca-94574/15851186	1,100,000	Single Family Residence	Jul 26, 2023	2	2	2023	1,350
https://www.mlslistings.com/property/ba323010066/1005-valley-view-st-saint-helena-ca-94574/15877124	310,000	Residential	Jul 18, 2023	2	2/1	1963	1,100
https://www.mlslistings.com/property/ba323030303/250-fawn-park-rd-saint-helena-ca-94574/15981492	1,075,000	Single Family Residence	Jul 17, 2023	3	2	1966	1,705
https://www.mlslistings.com/property/ba323039390/1629-hillview-pl-saint-helena-ca-94574/16020901	480,000	Residential	Jul 17, 2023	3	2	1966	1,818
https://www.mlslistings.com/property/ba323030848/922-mariposa-ln-saint-helena-ca-94574/15980589	800,000	Condominium	Jul 14, 2023	2	2	1975	1,160
https://www.mlslistings.com/property/ba323038082/943-mariposa-ln-saint-helena-ca-94574/16015941	527,000	Condominium	Jun 29, 2023	2	1/1	1975	1,156
https://www.mlslistings.com/property/ba323017916/1015-pratt-ave-saint-helena-ca-94574/15926796	2,475,000	Single Family Residence	Jun 29, 2023	4	3/1	2001	2,876
https://www.mlslistings.com/property/ba323010978/18-laguna-seca-ct-saint-helena-ca-94574/15881860	225,000	Manufactured In Park	Jun 23, 2023	2	2	1986	1,344

Source: mlslistings.com, September 2023.

APPENDIX

CITY OF ST HELENA

AFFORDABLE HOUSING DEVELOPMENT IMPACT FEE FINANCIAL FEASIBILITY ANALYSIS

OCTOBER 1, 2024

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Executive Summary

The primary purpose of this report is to estimate the impact on development financial feasibility of the imposition of an affordable housing fee by the City of St. Helena. The analysis examines the economics of six prototypes:

Table 1
Development Prototypes
St. Helena Feasibility Analysis

	SF Residential	MF Residential	Office	Retail	Industrial/ Warehouse	Hotel
Density (FAR)	0.29	0.76	0.28	0.33	0.17	0.13
Density (Units/Acre)		33				
Form Factor	single	3-5 stories	1 story	1 story	1 story	Multi
Residential Units/Rooms	1	33				65
Unit/Room Size	3,780	1,000				500
Residential SF	3,780	33,000				32,500
Commercial SF			3,597	2,847	1,500	21,097
parcel size (acres)	0.3	1	0.30	0.2	0.2	9.72

Willdan Financial Services, 2024

In a nexus study, dated May 22, 2024, Willdan has calculated the maximum justified for each development type and included them in the pro forma analysis contained in this report. These fees are detailed in the tables below. The table includes both the maximum justified fees as well as two alternatives of reduced fees presented earlier to accommodate project feasibility.

Table 2
Proposed Fees (per square foot, except where noted)
St. Helena Feasibility Analysis

	Maximum Justified	Max Estimated Feasibility (1)	15% of Max	10% of Max
Residential				
Rental Unit	$135	NA	$20	$14
For Sale Unit	$196	$168	$29	$20
Non-Residential				
Hotel (per room)	$41,797	$41,797	$6,270	$4,180
Commercial	$141	$20	$21	$14
Office	$176	NA	$26	$18
Industrial	$67	NA	$10	$7

(1) Max Estimated Fee at $1.1 million per acre residual value.

Willdan, 2024

Methodology Overview

The financial feasibility analysis uses a pro forma approach to calculate the projected return that the six development prototypes are likely to generate. Each protype's pro forma estimates the residual land value, a method of estimating the value of land for a project that calculates the total revenue generated by a project (either in the form of sales price or the present value of projected lease income) and subtracts the costs of developer and operations (as applicable) to arrive at a net amount that is attributable to the land under the project. The analysis assumes that all development protypes are rental or lease property, except for the single-family prototype.

The analysis assumes that if a residual land value is negative, the project is not feasible. A low land value means a project is challenging to develop and may not be feasible. Willdan and staff have reviewed transactions in St. Helena in the past ten years and estimate that a value below $25 per square foot (psf), or $1.1 million per acre, indicates a low feasibility and low probability of completion for the prototype development in question. This number can vary by land entitlement, with generally higher valuations for single family land and downtown parcels, and lower values for industrial and other less intensive uses.

As shown in Table 3 below, considering the $1.1 million benchmark described above, the analysis finds that single family residential, hotel and retail development appear feasible in current market conditions, and multifamily and office development are near the threshold of feasibility. Industrial uses appear infeasible, although industrial may in fact be feasible given that it typically has lower land valuations to meet. It is important to note that this feasibility analysis reflects current market conditions, and especially the historic increases in construction costs during and after the COVID epidemic. Willdan expects that market factors will return to a more historic balance in the future and that other development types will become feasible. It is also important to note that this analysis reflects a very generalized example, and that individual projects have their own economics and may in fact be feasible even in current market conditions.

Table 3 also shows the per acre cost of the 10%, 15% and 100% affordable housing fee alternatives to evaluate their effect on feasibility. It appears that the affordable housing fee would make little difference to feasibility for single family development but could pose a significant burden to the feasibility of retail. Office, MF residential and Industrial would be rendered even more infeasible, although the relative burden on industrial is small enough that it might make little material difference. For each development category the analysis has also calculated the maximum fee per acre, given the threshold value of $1.1 million.

Table 3
Residual Value Summary
St. Helena Feasibility Analysis

Item	SF Residential	MF Residential	Office	Retail	Industrial/ Warehouse	Hotel
Residual Land Value Per Acre	3,213,756	928,200	893,627	1,386,326	568,714	1,713,457
Residual Land Value Per land SF	$74	$21	$21	$32	$13	$39
Porential Fees						
10% Fee Per Acre	$246,960	$646,800	$211,024	$200,714	$50,250	$27,951
15% Fee Per Acre	$370,440	$970,200	$316,536	$301,070	$75,375	$41,926
100% Fee Per Acre	$2,469,600	$6,468,000	$2,110,240	$2,007,135	$502,500	$279,507
Max Fee at Threshold	$2,113,756	NA	NA	$286,326	NA	$613,457

Willdan, 2024

The residual land values are affected by each of the inputs and assumptions contained in the pro formas and are particularly sensitive to capitalization rates, parking requirements, construction costs, and lease rates. The analysis identified reasonable ranges for these factors, given current market conditions, and tested the sensitivity to the factors to financial feasibility for each of the prototypes.

Willdan believes it is important to consider that the impact fees are a cost recovery mechanism, not an assessment or tax. The impact fees are a calculation of the costs incurred by the City to provide affordable housing in connection with development. At the full calculated fee, the City "breaks even" on the revenue received and the costs of new facilities needed to serve development. Any reduction of the fees results in the need to outside revenues to make up the difference or a reduction in the provision of affordable housing. This analysis examines the proposed fees in comparison to estimated project feasibility, but that does not mean that the fees are responsible for the feasibility of projects, or that they should be set at a level that assists project feasibility. This is a policy judgement to be made by elected officials, with the input of members of the community and other stakeholders.

1. Introduction

Purpose

The primary purpose of this report is to analyze the effect on financial feasibility of the proposed updated impact fees on six residential and commercial prototypes. These prototypes are summarized in Table 1, below:

- Residential: For-Sale Townhomes/Single-Family Detached
- Multifamily: Multifamily Residential/3-5 Story Building
- Office/single story building
- Retail / single story building
- Industrial (warehouse)/Single Story Building
- Hotel (65-room resort hotel)

The Nexus Study calculates the maximum justified fee that will be considered by the City Council. The nexus study documents the necessary data and calculations to establish nexus and proportionality.

Assumptions

The financial feasibility analysis assumes all development prototypes are rentals or leases, except for single-family residential. The analysis includes other assumptions about the development prototypes which are documented in Table 4 and individual pro formas in the Appendices.

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2. Feasibility Analysis

The feasibility analysis of St. Helena's proposed development impact fees uses a pro forma approach to calculate the projected financial return that six development prototypes are likely to generate for developers. The analysis assumes a standard set of assumptions and then estimate potential revenues, costs and a net financial return for the real estate developer.

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Feasibility Analysis Methods

In classical real estate economics, development value is created when existing land or buildings can be improved by the investment of financial capital. Two main types of financial calculations are used by developers and policy makers to understand the financial feasibility of a particular development concept or project. The first and simplest type of financial feasibility analysis can be expressed by this basic equation:

Development Value – (Development Costs + Land) = Profit

In this case profit can be expressed as total dollars or more typically as a percent return on money invested or costs. Assuming a positive return, this percent return is then compared to typical returns in the marketplace to assess the viability of a particular development versus other potential investment and development opportunities.

The second type of financial feasibility analysis is called a "land residual method" and can be expressed by the following simple equation:

Development Value – (Development Costs + Profit) = Land Residual

This type of analysis is often preferred by urban economists as a means of clarifying the value generate by a proposed project under different planning and development scenarios and with validated cost and revenue assumptions. Assuming that the land residual is positive, the land value created by a development is compared to recent land sales for comparable parcels of land to further evaluate the relative feasibility of the development concept compared to other opportunities in the marketplace. Effectively, the land residual is the amount the developer can afford to pay for the land. If this amount is above prevailing land costs, the project is generally feasible.

This analysis uses the land residual method for determining financial feasibility.

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Land Residual Analysis

As a policy tool for helping to understand the potential for value capture related to new zoning and/or planning permissions in each area, a land residual methodology is often a

preferable approach for illustration the potential increase in underling land values associated with different policy interventions. This report uses a land residual analysis to estimate the value of land for each of the six development prototypes that relies on the net operating income and value of improvements.

Structure and Inputs

Table 4 details the key assumptions used as inputs into the pro forma model, as well as a summary of calculated residual land values.

Table 4
Feasibility Model Assumptions
St. Helena Feasibility Analysis

	SF Residential	MF Residential	Office	Retail	Industrial	Hotel
Development/Construction Costs ($/sf)						
Residential Construction Costs	240	310				
Commercial Construction Costs			250	250	125	650
Commercial Tenant Improvements (PSF) Landlord Allowance			50	75	0	0
Soft Costs						
Soft Costs (% of hard costs)	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
Developer Profit	12.00%	12.00%	12.00%	12.00%	12.00%	12.00%
Vacancy Rate						
Residential Vacancy	NA	5.00%				
Commercial Vacancy			5.00%	2.50%	5.00%	20.00%
Operating Expenses (% of revenue)						
Residential Operating Expenses	NA	25.00%				
Commercial Operating Expenses			20.00%	20.00%	15.00%	25.00%
Financing						
% of Construction Cost	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Revenue						
Residential Lease Rate (psf)		$2.60				
Commercial Lease Rate (psf)			$3.30	$3.40	$2.00	
For Sale Market Rate Residential Price Per Unit	$2,457,000					
Commercial Cap Rate			7.00%	7.00%	7.00%	8.00%
Residential Cap Rate		5.50%				
Hotel ADR						$1,000
hotel occupancy						80%
hotel revpar						$800
Results: Residual Land Values (per acre)						
Residual Land Values	$3,213,756	$928,200	$893,627	$1,386,326	$568,714	$1,713,457

Willdan, 2024

3. Impact on Land Value

The residual land values are affected by each of the inputs and assumptions contained in the pro formas, and are particularly sensitive to capitalization rates, parking requirements, construction costs, and lease rates. However, in all cases the impact fees charged by the City do not have a major effect on feasibility, and in no case do they transform a prototype project from feasible to infeasible.

Factors Affecting Feasibility

If a residual land value is negative, the project is not feasible. Alternatively, low land values indicate a low feasibility for a project. Willdan estimates that generally land values below $25 per square foot indicate a low feasibility and low probability of completion for the prototype developments.

A developer's selection of real estate product type and location depends on various factors. The past, current, and projected future demand for a certain prototype in the area are weighed against the existing and projected future supply of these development types in the local and surrounding areas.

Potential factors affecting financial feasibility include the following:

- Capitalization rate – lower capitalization rates increase financial feasibility. Based on current and anticipated market conditions and assessment of relative market risk associated with St. Helena, this analysis assumes capitalization rates of 7.0 percent for non-residential development and 5.5 percent for multifamily residential development.
- Construction costs – lower construction costs increase financial feasibility. Based on current market conditions, this analysis assumes base construction costs of $250 per square foot for retail and office development, $240 per square foot for residential development, $310 per square foot for multifamily development, and $125 per square foot for industrial developments.
- Operating expenses – operating costs include utilities, common area maintenance, security, and property taxes. The financial feasibility analysis uses 25% of revenue for multifamily residential and 15 to 20% for commercial prototypes.
- Lease rates – higher lease rates and dependent on building features and market conditions but increase financial feasibility. Based on current and expected market conditions, this analysis assumes a lease rate of between $2.60 per square foot for residential development, $3.30 per square foot for office development, $3.40 per square foot for retail development, and $2.00 per square foot for industrial development.
- Tenant improvement costs – passing improvement costs to tenants or amortizing costs increase financial feasibility. This analysis assumes a commercial tenant improvement landlord allowance of $50 psf for office and $75 psf for retail developments.
- Profit margin – lower profit margins return less to developers but increase apparent financial feasibility of a project. This analysis assumes a developer profit of 12 percent (of costs) on each development project.
- Density – the floor area ratio (FAR) of a development project affords financial feasibility because it allows for a higher number of square feet of development on a given parcel. There is a tradeoff, however, in that a higher FAR can result in a change in construction type which can lead to higher costs per square foot. The analysis assumes varying FARs to explore this dynamic.

Refer to Table 4 for a master list of pro forma inputs and assumptions.

Feasibility Results

The residual land values are affected by each of the inputs and assumptions contained in the pro forma and are particularly sensitive to capitalization rates, parking requirements, construction costs, and lease rates. The analysis identified reasonable ranges for these factors, given current and likely market conditions, and tested the sensitivity of the factors of financial feasibility for each of the six development prototypes.

As shown in Table 3, above, initial results indicate that some of the development types are feasible under current market conditions, and that single family development, retail development and hotel development appear able to bear the burden of an affordable housing impact fee to varying degrees.

4. Appendix

The appendix provides detailed and supporting tables for the summary analysis described above.

Appendix A: Proposed Affordable Housing Impact Fees

The following tables detail the maximum justified fees for the City calculated in the recent Nexus Study, dated May 22, 2024.

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Table A.1
Proposed Fees (per square foot, except where noted)
St. Helena Feasibility Analysis

	Maximum Justified	Max Estimated Feasibility (1)	15% of Max	10% of Max
Residential				
Rental Unit	$135	NA	$20	$14
For Sale Unit	$196	$168	$29	$20
Non-Residential				
Hotel (per room)	$41,797	$41,797	$6,270	$4,180
Commercial	$141	$20	$21	$14
Office	$176	NA	$26	$18
Industrial	$67	NA	$10	$7

(1) Max Estimated Fee at $1.1 million per acre residual value.

Willdan, 2024

Appendix B: Development Prototype Pro Formas

Single Family

DEVELOPMENT PROGRAM ASSUMPTIONS	ASSUMPTION/FACTOR		TOTAL
Development Site (Square Feet)	0.3	Acres	13,068
Dwelling Units	3.3	DU/Acre	1
Gross Building Area (Square Feet)	3,780	GBA/DU	3,780
Net Habitable Square Feet	100%		3,780

BUILDING INCOME AND VALUE	ASSUMPTION/FACTOR		PER GBA	TOTAL
Net Operating Income (NOI)			$0	$0
Project Market Value	$2,457,000	per DU	$650	$2,457,000
Project Sale Cost	7.0%	Value	46	171,990
Net Project Value			$605	$2,285,010

PROJECT DEVELOPMENT COSTS	ASSUMPTION/FACTOR		PER GBA	TOTAL
Construction Cost				
Building Direct Cost (includes site development)	$240	Cost/SF (GBA)	$240	$907,200
Total Construction Cost			$240	$907,200
Soft Costs				
Financing	5%	of Construction Costs	$12	$45,360
Other Soft Costs	25%	of Construction Costs	$60	$226,800
Total Soft Costs			$72	$272,160
Other Project Costs				
Developer Return on Investment	12%	of Construction & Soft Costs		$141,523
Residual Land Value	Model Output/Supportable Land Cost			$964,127
Total Other Costs				$1,105,650
Total Project Cost (including land)				$2,285,010

Residual Land Value			$964,127
Per Acre			$3,213,756
10% Affordable Housing Fee	$20	psf	$74,088
per acre			$246,960

Willdan, 2024

Multifamily

DEVELOPMENT PROGRAM ASSUMPTIONS	ASSUMPTION/FACTOR		TOTAL
Development Site (Square Feet)	1	Acres	43,560
Dwelling Units	33	DU/Acre	33
Gross Building Area (Square Feet)	1,000	GBA/DU	33,000
Net Rentable Square Feet	85%		28,050

BUILDING INCOME AND VALUE	ASSUMPTION/FACTOR		PER GBA	TOTAL
Gross Potential Rent	$2.60	per SF/Month	$27	875,160
Gross Potential Parking Income	0	per Space/Month		
Losses to Vacancy	5%	of Gross Income	($1)	(43,758)
Gross Residential Revenue				831,402
Basic Operating Expenses	25%	of Gross Potential Rent	($7)	(218,790)
Total Operating Expenses				(218,790)
Net Operating Income (NOI)			$19	$612,612
Project Market Value	5.50%	Cap Rate	$0	$11,138,400
Project Leasing Cost (included in operating costs)	0.0%	Value	$0	$0.0
Net Project Value			$0	$11,138,400

PROJECT DEVELOPMENT COSTS	ASSUMPTION/FACTOR		PER GBA	TOTAL
Construction Cost				
Building Direct Cost (includes site development)	$250	Cost/SF (leaseable area)	$213	$7,012,500
Total Construction Cost			$213	$7,012,500
Soft Costs				
Financing	5%	of Construction Costs	$11	$350,625
Other Soft Costs	25%	of Construction Costs	$53	$1,753,125
Total Soft Costs			$64	$2,103,750
Other Project Costs				
Developer Return on Investment	12%	of Construction & Soft Costs		$1,093,950
Residual Land Value	Model Output/Supportable Land Cost			$928,200
Total Other Costs				$2,022,150
Total Project Cost (including land)				$11,138,400

Residual Land Value		$928,200
per acre		$928,200
10% affordable housing fee	$20	$646,800
per acre		$646,800

Willdan, 2024

Retail

DEVELOPMENT PROGRAM ASSUMPTIONS	ASSUMPTION/FACTOR		TOTAL
Development Site (Square Feet)	0.20	Acres	8,712
FAR	0.33		
Gross Building Area (Square Feet)	14,235	GBA/Acre	2,847
Net Leaseable Square Feet	100%		2,847

BUILDING INCOME AND VALUE	ASSUMPTION/FACTOR		PER GBA	TOTAL
NNN Potential Rent	$3.40	per SF/Month	$41	$116,158
Losses to Vacancy	3%	of Gross Income	($1)	($2,904)
NNN Commercial Revenue				$113,254
Basic Operating Expenses	0%	of Gross Potential Rent	$0	$0
Additional Operating Expenses (TDM)	0	Per Year	0	0
Total Operating Expenses				$0
Net Operating Income (NOI)			$40	$113,254
Project Market Value	7.00%	Cap Rate	$0	$1,617,909
Project Leasing Cost	6.0%	Value	$0.0	$97,075
Net Project Value			$0	$1,520,835

PROJECT DEVELOPMENT COSTS	ASSUMPTION/FACTOR		PER GBA	TOTAL
Construction Cost				
Building Direct Cost (includes site development)	$250	Cost/SF (leaseable)	$250	$711,750
Tenant Improvements	$50	cost/sf (leaseable sf)	$50	$142,350
Total Construction Cost			$300	$854,100
Soft Costs				
Financing	5%	of Construction Costs	$15	$42,705
Other Soft Costs	25%	of Construction Costs	$75	$213,525
Total Soft Costs			$90	$256,230
Other Project Costs				
Developer Return on Investment	12%	of Construction & Soft Costs		$133,240
Residual Land Value	Model Output/Supportable Land Cost			$277,265
Total Other Costs				410,505
Total Project Cost (including land)				1,520,835
Residual Land Value				277,265
per acre				$1,386,326
10% affordable housing fee	$14			$40,143
per acre				$200,714

Willdan, 2024

Industrial

DEVELOPMENT PROGRAM ASSUMPTIONS	ASSUMPTION/FACTOR		TOTAL
Development Site (Square Feet)	0.2	Acres	8,712
FAR	0.17		
Gross Building Area (Square Feet)	7,500	GBA/Acre	1,500
Net Leaseable Square Feet	100%		1,500

BUILDING INCOME AND VALUE	ASSUMPTION/FACTOR		PER GBA	TOTAL
Gross Potential Rent	$2.00	per SF/Month	$24	$36,000
Losses to Vacancy	5%	of Gross Income	($1)	($1,800)
Gross Residential Revenue				$34,200
Basic Operating Expenses	15%	of Gross Potential Rent	-$4	-$5,400
Total Operating Expenses				-$5,400
Net Operating Income (NOI)			$19	$28,800
Project Market Value	7.00%	Cap Rate	$0	$411,429
Project Sale Cost	6.0%	Value	$0.0	$24,685.7
Net Project Value			$0	$386,743

PROJECT DEVELOPMENT COSTS	ASSUMPTION/FACTOR		PER GBA	TOTAL
Construction Cost				
Building Direct Cost (includes site development)	$125	Cost/SF (leaseable area)	$125	$187,500
Tenant Improvements	$0	cost/sf (leaseable sf)	$0	$0
Total Construction Cost			$125	$187,500
Soft Costs				
Financing	5%	of Construction Costs (incl.	$6	$9,375
Other Soft Costs	25%	of Construction Costs (excl	$31	$46,875
Total Soft Costs			$38	$56,250
Other Project Costs				
Developer Return on Investment	12%	of Construction & Soft Costs		$29,250
Residual Land Value	Model Output/Supportable Land Cost			$113,743
Total Other Costs				$142,993
Total Project Cost (including land)				$386,743
Residual Land Value				$113,743
per acre				$568,714
10% Affordable Housing Fee	$7			$10,050
per acre				$50,250

Willdan, 2024

Hotel

DEVELOPMENT PROGRAM ASSUMPTIONS	ASSUMPTION/FACTOR		TOTAL
Development Site (Square Feet)	9.72	Acres	423,403
FAR	0.13		
Rooms	65.00		
Gross Building Area (Square Feet)	5,514	GBA/Acre	53,597
Net Leaseable Square Feet	100%		53,597

BUILDING INCOME AND VALUE	ASSUMPTION/FACTOR		REFERENCE		TOTAL
ADR	$1,000	/night			
Occupancy	80%				
Gross Potential Room Revenue	$18,980,000	annually		$18,980,000	$18,980,000
Ancillary Income	80.00%	% of Room Revenue			15,184,000
Gross Revenue					$34,164,000
Overall Exp.	62.0%	of Gross Revenue			$21,181,680
Room Operations	18.0%	of Room Revenue			$3,416,400
Other Op Exp	27.5%	of Ancillary Revenue			$4,175,600
Total Operating Expenses					$28,773,680
Net Operating Income (NOI)					$5,390,320
Project Market Value	8.00%	Cap Rate		$0	$67,379,000
Net Project Value				$0	$67,379,000

PROJECT DEVELOPMENT COSTS	ASSUMPTION/FACTOR		REFERENCE	PER GBA	TOTAL
Construction Cost					
Building Direct Cost (includes site development and improvments)	$650	Cost/SF		$650	$34,838,050
Total Construction Cost				$650	$34,838,050
Soft Costs					
Financing	5%	of Construction Costs (incl. site)		$33	$1,741,903
Other Soft Costs	25%	of Construction Costs (excl. site)		$163	$8,709,513
Total Soft Costs				$195	$10,451,415
Other Project Costs					
Developer Return on Investment	12%	of Construction & Soft Costs			$5,434,736
Residual Land Value	Model Output/Supportable Land Cost				$16,654,799
Total Other Costs					$22,089,535
Total Project Cost (including land)					$67,379,000
Residual Land Value					$16,654,799
per acre					$1,713,457
100% Affordable Housing Fee	$41,797				$2,716,805
per acre					$279,507

Willdan, 2024

ATTACHMENT 3

Willdan Financial Services Responses to Comments on the Affordable Housing and Commercial Linkage Fee Nexus Study

Comments From Jennifer La Liberte

1. *When is this item scheduled to go to City Council, and when will the staff report be published?*

   This item is scheduled for the City Council meeting on May 14, 2024.

2. *Can the City provide a prototype comparison of the proposed Affordable Housing Impact Fee, which is in dollars per square foot, with the current fee, which is a percentage of construction costs? It seems that would be helpful for the decision makers as well as the public.*

   Willdan has prepared a fee comparison comparing the City's current fees to the maximum justified fee schedule and other Napa County cities. **Table 1** below shows the residential housing fee comparison, and **Table 2** displays the commercial linkage fee comparison.

Tabe 1: Residential Affordable Housing Fee Comparison

	American Canyon	Napa	Cloverdale	Cotati	Healdsburg	Rohnert Park	Santa Rosa (Inside Downtown)	Santa Rosa (Outside Downtown)	Sebastopol[1]	St. Helena Current	St. Helena - Maximum Justified
Fee Schedules											
Per Square Foot											
Single Family, Townhouse	3.43	4.75	-		-	-	-	-	22.24		-
Stacked Flats, Apartment	3.98	4.05	-		-	-	-	-	22.24		-
0 to 909 square feet	-	-	-	Based on sales price of unit, calculated as follows: $2,400 first $125,000 of sales price +$200 for each $5,000 increment thereafter	-	-	4.00	2.00	22.24	The housing in-lieu fee shall be charged on a percentage basis of the projected construction costs of market rate dwelling units.	-
910 square feet or above	-	-	-		-	-	8.00	3.00	22.24		-
Rental Unit	-	-	-		2.15	4.02	-	-	22.24		135
For Sale Unit	-	-	-		16.70	- -	-	-	22.24		196
Per Unit											
Studio			$ 24,000								
1 Bed			$ 27,400								
2 Bed			$ 30,900								
3 Bed			$ 34,300								
4 Bed			$ 37,000								
5 Bed			$ 39,800								
For Sale Unit						$ 15,520					
Fees for Prototype Units											
Single Family, 2,761 square feet, 3 bedrooms	$ 9,470	$ 13,115	$ 34,300	$ 33,400	$ 46,109	$ 15,520	$ 22,088	$ 8,283	$ 61,405	$ 22,500	$ 541,156
Single Family, 3,780 square feet, 5 bedrooms	12,965	17,955	39,800	41,400	63,126	15,520	30,240	11,340	84,067	27,500	740,880

[1] No in-lieu fee is required for less than 4 dwelling units. For 5 or more dwelling units, on-site inclusionary housing is required: https://sebastopol.municipal.codes/SMC/17.250 If there is a decimal fraction unit requirement, an in-lieu fee shall be provided equal to the applicable decimal fraction times the established in-lieu fee for one inclusionary unit (based on the average size of the units being built), or, at the developer's discretion, an inclusionary unit may be provided.

Table 2: Commercial Linkage Fee Comparison

Land Use Category	American Canyon	Calistoga[1]	Napa	Yountville	Cotati[2]	Petaluma[3]	Rohnert Park[3]	Santa Rosa	Sebastopol[3]	Sonoma	St. Helena - Current	St. Helena Maximum Justified
Office	$ 0.87	$ 2.63	$ 3.55	$ 11.60	$ 2.39	$ 3.36	$ 0.69	$ 3.00	$ 2.08	$ 4.00	$ 4.11	$ 176.08
Hotel	0.87	1,756.35	6.00	11.60	2.39	3.36	0.69	3.00	2.08	15.00	3.80	74.64
Retail	0.87	3.81	3.55	11.60	4.12	5.81	1.19	3.00	3.59	4.00	5.21	141.29
Industrial	0.57	1.93	3.50	11.60	2.47	3.46	0.71	3.00	2.15	n/a	1.26	66.66

All fees charged per square foot, except for Calistoga hotel fee, which is charged per room.

[1] Calistoga hotel fee charged per room.

[2] Hotel and office assumed charged at "commercial" rate. New construction less than 2,000 sf, and the first 2,000 sf of any commercial project is exempt.

[3] Hotel and office assumed charged at "commercial" rate.

3. *Can the City provide an example of how much one or more of the current proposed hotel developments would generate in housing impact fees with the current fee and the proposed fee at the 10% and 15% levels, and compare that to what it would cost the developer to construct the number of affordable housing units that particular development will necessitate?*

   Table 3 displays the potential commercial linkage fee revenue for a proposed hotel project, under the maximum justified fee schedule, the 15% and 10% scenarios. The current proposed hotel project is expected to be 75 rooms and 52,313 square feet.

   For reference, the last hotel entitled included 62 rooms, and the City negotiated $3.4 M in payment towards affordable housing back in 2020 when housing costs were lower. It is the City's policy to require a Development Agreement for all hotels to produce more housing production or larger funding than impact fees provide.

Table 3: Potential Hotel Fee Revenue

Square Feet		52,313
Maximum Justified Fee per Square Foot	$	75
Maximum Justified Fee	$	3,923,475
15% of Maximum Justified Fee		588,521
10% of Maximum Justified Fee		392,348

4. *For the fee calculation on Table 1.11, how is the "Units Demanded" factor calculated? Or what is it based on?*

   Units demanded are identified in Tables 1.8 and 1.9. They are the number of units needed to house the employment generation needed to meet induced demand from the household spending of market rate households.

5. *Has the City or consultant determined a maximum threshold a private development project can tolerate for the housing impact or in-lieu fee? If not, how did the consultant arrive at the 10% to 15% maximum for the proposed fee.*

   City staff recommended the 10% and 15% scenarios. A maximum threshold a private project can tolerate has not been determined, as it is subject to a wide variety of factors that vary from project to project and change according to market conditions. The 10% and 15% scenarios would make the fees more in line with the other Sonoma County cities in the fee comparison compared to the maximum justified fees.

Comments:

1. *It is a difficult balancing act to ensure the City can achieve a reasonable fee requirement while not discouraging private development. The City should identify and adopt incentives to encourage developers to include affordable housing in their developments that would be more attractive than writing a check to ensure affordable units actually get built.*

   The higher the fee, the greater the incentive for developer to incorporate affordable housing. A drawback of this approach is that some projects are limited in scale or other factors that make providing affordable housing problematic.

2. *Toward the City's goal to encourage housing, the City should consider adopting a policy that exempts affordable housing projects from paying impact and other fees, rather than requiring each project proponent to request a waiver, project by project. The City of Sacramento's Zero-Dollar Rate Program For Affordable Dwelling Units is a good example to follow.*

   This is a common approach. Units that meet certain criteria (below market rate in perpetuity for a certain number of years) are frequently assessed reduced or exempt from paying impact fees. This is a policy decision, however, and therefore outside the scope of this fee study.

3. It would be helpful in the staff report to include a 10-year history of the Housing Impact Fee fund, how much has been paid, and how the funds have been utilized.

   Table 4 displays the revenue and expenditure history of the housing impact fee fund.

Table 4: Historical Affordable Housing Impact Fee Revenue and Expenses

	FY 13/14	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	Totals
Revenues											
Affordable Housing Impact Fees	$884,027	$257,649	$427,649	$235,122	$ 80,340	$176,224	$317,631	$ 106,784	$ 2,226	$212,358	$2,700,009
Expenses											
Utilities - 684 McCorkle Ave	$ 2,470	$ 2,314	$ 917	$ -	$ -	$ -	$ -	$ -	$ (40)	$ -	$ 5,661
Maintenance - 684 McCorkle Avenue	2,488	750	-	-	-	-	-	-	-	-	3,238
Property Taxes - 684 McCorkle Avenue	6,558	6,562	20	-	-	-	-	-	-	-	13,140
Title & Appraisal - 684 McCorkle Avenue	-	-	4,982	-	-	-	-	-	-	-	4,982
Napa Housing Authority - Housing Services	20,950	-	-	-	-	-	-	-	-	-	20,950
Affordable Housing Feasibility Study	-	5,000	-	-	-	-	-	-	-	-	5,000
Attorney Fees	4,424	5,388	21,848	91,550	19,754	20,472	-	-	(1,574)	-	161,862
Brenkle Court Contributions	-	-	24,300	-	2,938	120,000	316,884	25,016	4,469	-	493,606
Turley Flats Contributions/Loan	-	-	-	438	813,639	50,797	(50,336)	185,884	-	9,998	1,010,420
Our Town St. Helena | Non-Profit Grant	-	-	-	-	-	10,000	25,000	-	-	-	35,000
Our Town St. Helena | 963 Pope Street	-	-	-	-	-	-	450,000	-	8,400	3,600	462,000
723 Hunt Avenue | CDBG Grant Reimbursement	-	-	-	-	-	-	-	1,400,565	(1,400,565)	-	-
Affordable Housing Fee Update	-	-	-	-	-	-	-	-	6,045	-	6,045
Housing Element Update	-	-	-	-	-	-	-	-	69,210	29,915	99,125
Total Expenses	$ 36,890	$ 20,014	$ 52,066	$ 91,988	$836,331	$201,270	$741,548	$1,611,464	$(1,314,054)	$ 43,513	$2,321,029

Source: City of St. Helena.

Comments from Mary Stephenson

1. What is the rationale for recommending 10% to 15% of maximum fees?

   This is a City staff recommendation. See response #5 above.

2. *How many new housing starts (and renovation, if that is included in the fee structure) has the city had in the last 5-10 years? Projecting into the future with the recommended fee structure, what is the potential funding that new (and renovated if it applies) units could generate for the city?*

   From 2015 to 2024 the City has added 29 net new residential dwelling units according to data from the California Department of Finance. Renovation is not included in the fee structure, unless the renovation is adding new square footage. **Table 5** displays a projection of potential fee revenue, based on the growth projections from the City's recently adopted development impact fee nexus study.

Table 5: Projected Affordable Housing and Commercial Linkage Fee Revenue

Land Use	Projected Increase (Sq. Ft.)	Maximum Justified Fee per Square Foot	Potential Fee Revenue (Maximum Justified Fees)	Potential Fee Revenue (15% Fee Scenario)	Potential Fee Revenue (10% Fee Scenario)
Residential	685,152	$ 196	$ 134,289,792	$ 20,143,469	$ 13,428,979
Nonresidential					
Commercial	325,943	$ 141	$ 45,958,019	$ 6,893,703	$ 4,595,802
Office	92,638	176	16,304,294	2,445,644	1,630,429
Industrial	640,517	67	42,914,655	6,437,198	4,291,466
Total	1,744,251		$ 239,466,761	$ 35,920,014	$ 23,946,676

3. *The current rents seem high to me. The rental rates include mostly single-family dwellings, which excludes a significant number of small multi-unit buildings that I think would illustrate a wider range of rentals.*

   The current rents were estimated based on all the available units that were advertised for rent at the time the study was completed. There were few multifamily units advertised for rent at that time. The only units that were excluded from the sample were luxury units with rents more than $10,000 per month. Further, many of the City's existing multifamily units are rented at below market rate rents, so they do not accurately reflect current market rates.

4. *Is the proposed fees for commercial development tied to past or projected development in each category? Is there an historical overview of commercial development by category that informs this?*

The nonresidential fees are calculated based on the affordable housing demands of a hypothetical project, informed by the likely type of workers and current salary data.

5. *Is it possible to see an analysis of what the current Housing Impact Fee structure has generated over the last 10 years divided between residential and commercial fees and how that money has been used?*

   See **Table 4** above for historical fee revenue and expenditures.

6. *Has any scenario been flushed out regarding how any of the existing proposals for new hotels could contribute funding under this proposed fee structure and how that compares to the cost of housing incremental employees at various salary levels as documented in the study?*

   This analysis has not evaluated any existing proposals for hotels.

7. *How does this new Housing Impact Fee Study relate to the City's plan to create the VL and L housing units in our RHNA requirements?*

   Affordable housing fee and commercial linkage fee revenue can be used to help fund the development of very low and low income units in the City.

Comments from Joe McGrath

General Comments/Questions:

**The report seems to lack effective context. It is not clear from the report what the current baseline policy is and/or fee structure. The comparison to other Napa County cities is useful, but there is not a comparison to St. Helena status quo.*

Willdan has prepared a fee comparison comparing the City's current fees to the maximum justified fee schedule and other Napa County cities. See Tables 1 and 2 above.

** It is also not clear if this Impact Fee is meant to be **in lieu of** Inclusionary policy requirements for residential development or **in addition to inclusionary** requirements. (I attempted to look thru current zoning code but this is very time consuming as new code is not yet hyperlinked :/)*

Please refer to 17.30.030 E in the new zoning code. Please note that the City will be amending the zoning text to reflect that the calculation is based on the square footage of the proposed unit (no longer percentage of construction cost). The Housing In-Lieu fee in the ordinance is the same as the impact fee, not in addition to the impact fee.
** It is not clear as to whether this fee applies to renovated S.F. or just new S.F.?*

Only applies to net new square footage. Per 17.30.030 A.3 **"**Upon the remodeling or rebuilding of a residential dwelling to add additional square footage, the housing impact fee shall be paid on the additional square footage (except for a one-time exclusion of 850 square feet per residence)"

** I believe the rental rates in the report are overstated and do not represent current market conditions. The data biases itself by looking only at open listed units and appears to be mostly detached single family structures. I believe the construction cost per rental unit is also overstated and for some reason was based on a 5-unit complex whereas the work impact numbers were based on 100-units. Having said that, as both the rental rates are high and construction costs are high, the delta cost to deliver an affordable product to this sector is probably close.*

The current rents were estimated based on all the available units that were up for rent at the time the study was completed. There were few multifamily units advertised for rent at that time. The only units that were excluded from the sample were luxury units with rents more than $10,000 per month. Were someone looking to rent a home, these would be the only available units to rent, so the data does reflect the current market.

The construction costs were based on data provided by the City. The City's most recent experience came from 2020. Those costs were adjusted for inflation using the Engineering News Record's Construction Cost index.

The hypothetical 100-unit market rate project is used to identify the affordable units demanded by income category. This is different from the cost to construct one affordable unit. The total affordability gap to meet the affordable housing demands of market rate units is then divided by 100 to identify the gap needed to meet the demands of a single unit, which drives the fee calculation.

** It would great to see a breakdown of Housing Impact Fee collections over the last ten years and a breakdown of where they were generated (ie Residential, Commercial, Industrial, Hospitality).*

Please refer to Table 4 above. Unfortunately, the revenue data is not available by land use type paying the fee.

* It would also be great to see a Pareto/chart of where all of these funds collected have been allocated or spent.

Table 4 above also lists expenditures.

Inputs:

** For Residential Development. For projects >= 4 units the city should maintain an inclusionary policy (I believe it is 20%*,) and not create an in-lieu fee relief valve. It would fail logic to have both as you would be taxing the solution side of the ledger. Inclusionary Policies build affordable units, not just funds for future units. If you do create an in-lieu fee option it would seem that that fee should roughly represent a ~ 20 YR? Net Present Value of the delta income between market rents and affordable rents.*

[When I did this calculation in 2019 at 632 McCorkle, the 20YR NPV delta between market rents and affordable rents per inclusionary unit would have been approximately $200K/unit (I did not use a discount rate because I assumed both rents would rise proportionally). In comparing the $200K to 2019 costs per unit (~$550K) that represents about 36%. Against a 20% inclusionary policy that would represent 7.2% of ***ALL*** *costs (20% * 36%). Instead I negotiated an "alternative equivalent" proposal which*

deed-restricted existing units in my portfolio. The 20-YR NPV of that proposal was closer to $100k per unit which would be ~3.6% of all costs. That was palatable.]

I believe the report is advocating between $14-20/SF. If we assume $500/SF construction costs, and $20/SF that would be 4% of ***CONSTRUCTION*** *costs. An In-lieu fee at that rate would not be a great deal for the City and the developer would likely take the lower cost in-lieu fee (as much as I hate to say this as a developer). I believe the City would rather have the deed-restricted units than the funds so it should bias towards the built units. Having said that, there is of course a limit where the rates simply cause projects not to pencil.*

** For Residential Projects <4 Units. It seems to me here there should be an option to either deed restrict an ADU for SF - Triplex developments or have an in-lieu option with a fee structure akin to what I recommend above.*

** For Commercial, Industrial, Hospitality, Hotels. I will not comment greatly here. It seems that this fee structure should be "progressive" in nature. No Impact on renovation project (ie. no new SF). Negligible impact on small businesses/projects, and have rate progression based on the size of project. The comparison with other Napa County cities and Sonoma is very informative on Hotel rates and greatly suggests that impact fee on hotels is far too low in St. Helena.*

The fees are calculated on net new square footage, so they wouldn't apply to renovation projects, unless they are adding square footage.

4. Appendix

The appendix provides detailed and supporting tables for the summary analysis described above.

Appendix A: Proposed Affordable Housing Impact Fees

The following tables detail the maximum justified fees for the City calculated in the recent Nexus Study, dated May 22, 2024.

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Table A.1
Proposed Fees (per square foot)
St. Helena Feasibility Analysis

	Maximum Justified	Max Estimated Feasibility (1)	15% of Max	10% of Max
Residential				
Rental Unit	$135	NA	$20	$14
For Sale Unit	$196	$168	$29	$20
Non-Residential				
Hotel	$75	$75	$11	$8
Commercial	$141	$20	$21	$14
Office	$176	NA	$26	$18
Industrial	$67	NA	$10	$7

(1) Max Estimated Fee at $1.1 million per acre residual value.

Willdan, 2024

Sample Affordable Housing Impact/Commercial Linkage Fees Based on Prototypes

Option A - All land uses with the exception of hotel be charged 10% of the Maximum Justified Fee per square foot

Fee Type	Residential - Rental Unit [1]	Residential - For Sale Unit [2]	Hotel	Commercial	Office	Industrial
Square Footage/# of Rooms	*2,761*	*3,780*	*65*	*2,847*	*5,000*	*1,500*
Proposed Fee	14.00 per SF	20.00 per SF	41,797 per Room	14.00 per SF	18.00 per SF	7.00 per SF
Current Total Fee	22,500	27,500	203,669	14,833	20,550	1,890
Proposed Total Fee	**38,654**	**75,600**	**2,716,805**	**39,858**	**90,000**	**10,500**
Variance	71.8%	174.9%	1233.9%	168.7%	338.0%	455.6%

Option B - All land uses with the exception of hotel be charged 15% of the Maximum Justified Fee per square foot

Fee Type	Residential - Rental Unit [1]	Residential - For Sale Unit [2]	Hotel	Commercial	Office	Industrial
Square Footage/# of Rooms	*2,761*	*3,780*	*65*	*2,847*	*5,000*	*1,500*
Proposed Fee	20.00 per SF	29.00 per SF	41,797 per Room	21.00 per SF	26.00 per SF	10.00 per SF
Current Total Fee	22,500	27,500	203,669	14,833	20,550	1,890
Proposed Total Fee	**55,220**	**109,620**	**2,716,805**	**59,787**	**130,000**	**15,000**
Variance	145.4%	298.6%	1233.9%	303.1%	532.6%	693.7%

[1] Single Family - 3 Bedrooms

[2] Single Family - 5 Bedrooms

City of St. Helena

Affordable Housing and Commercial Linkage Fee Study

October 8, 2024



WILLDAN

Overview

Affordable housing impact fees

- Charged to new residential development
- Funds share of affordable housing induced by the household spending associated with new market rate residential development

Commercial linkage fees

- Charged to new nonresidential development
- Funds share of affordable housing needed for employees of businesses located in retail, commercial and industrial development projects

Affordable Housing Impact Fee Approach

New residential development generates population growth

Residents who can afford to purchase or rent this new housing then spend their disposable income in the city

Demand from increased spending generates employment growth at various wage and salary levels

Low wage workers cannot afford market rate housing within the City of St. Helena

Funding gap exists between what low wage workers can afford to pay and the cost of providing housing

Affordable housing impact fee calculated to bridge the housing funding gap

Commercial Linkage Impact Fee Approach

Identify "prototype" projects representing the types of nonresidential development that could occur in St. Helena

Estimate the industries and occupations that could be located in prototypes

Identify wages associated with the occupations associated with each prototype

Low wage workers cannot afford market rate housing within the City of St. Helena

Funding gap exists between what low wage workers can afford to pay and the cost of providing housing

Commercial linkage fee calculated to bridge the housing funding gap

2023 Napa County Income Limits

Persons per HH:	1	2	3	4	5	6	7	8
Extremely Low	28,050	32,050	36,050	40,050	43,300	46,500	49,700	52,900
Very Low Income	46,750	53,400	60,100	66,750	72,100	77,450	82,800	88,150
Low Income	74,700	85,400	96,050	106,700	115,250	123,800	132,350	140,850
Median Income	90,700	103,700	116,650	129,600	139,950	150,350	160,700	171,050
Moderate Income	108,850	124,400	139,950	155,500	167,950	180,400	192,800	205,250

Factors Driving Differences In Nonresidential Fee Schedule

- The analysis estimates the number of affordable units demanded for each land use
  - Different land uses provide jobs for different amounts of workers by income category
- The number of units are multiplied by the adorability gap to determine the total financing gap
- The total financing gap for each prototype is divided by 100,000 to determine the fee per square foot
- Hotel fee assumes 560 square feet per room

	Very Low Income (31-50% AMI)	Low Income (51-80% AMI)	Moderate Income (81-120% AMI)	Total (per Prototype)	Total per Square Foot or Room
Financing Gap per Affordable Unit	834,062	738,005	620,705		
Commercial Prototype					
Units Demanded	13.273	3.509	0.754	17.536	
Total Financing Gap	11,070,844	2,589,522	468,154	14,128,520	141.29
Office Prototype					
Units Demanded	7.807	8.312	7.995	24.114	
Total Financing Gap	6,511,699	6,134,268	4,962,295	17,608,262	176.08
Industrial Prototype					
Units Demanded	2.772	3.710	2.604	9.085	
Total Financing Gap	2,311,978	2,737,705	1,616,097	6,665,780	66.66
Hotel Prototype (Assumes 560 Sq. Ft. per Room)					
Units Demanded	6.836	1.804	0.694	9.334	
Total Financing Gap	5,701,231	1,331,724	430,855	7,463,811	41,797.34

Maximum Justified Fee Schedules

	Maximum Justified Fee
Residential Affordable Housing Impact Fee	
New Rental Unit – per Square Foot	135
New For Sale Unit – per Square Foot	196
Commercial Linkage Fee	
Commercial – per Square Foot	141
Office – per Square Foot	176
Industrial – per Square Foot	67
Hotel – per Room	41,797

Residential Affordable Housing Fee Comparison per Prototype Unit

	St. Helena Current	American Canyon	Napa	Cloverdale	Cotati	Healdsburg	Rohnert Park	Santa Rosa (Inside Downtown)	Santa Rosa (Outside Downtown)	Sebastopol[1]	St. Helena - Maximum Justified
Single Family, 2,761 square feet, 3 bedrooms	22,500	9,470	13,115	34,300	33,400	46,109	15,520	22,088	8,283	61,405	541,156
Single Family, 3,780 square feet, 5 bedrooms	27,500	12,965	17,955	39,800	41,400	63,126	15,520	30,240	11,340	84,067	740,880

Commercial Linkage Fee Comparison

Land Use Category	St. Helena - Current	Calistoga[1]	Napa	Yountville	Cotati[2]	Petaluma[3]	Rohnert Park[3]	Santa Rosa	Sebastopol[3]	Sonoma	St. Helena Maximum Justified[4]
Office	4.11	2.63	3.55	11.60	2.39	3.36	0.69	3.00	2.08	4.00	176.08
Retail	5.21	3.81	3.55	11.60	4.12	5.81	1.19	3.00	3.59	4.00	141.29
Industrial	1.26	1.93	3.50	11.60	2.47	3.46	0.71	3.00	2.15	n/a	66.66
Hotel	3.80	1,756.35	6.00	11.60	2.39	3.36	0.69	3.00	2.08	15.00	41,797.34

All fees charged per square foot, except for Calistoga hotel fee and maximum justified St. Helena hotel fee, which are charged per room.

[1] Calistoga hotel fee charged per room.

[2] Hotel and office assumed charged at "commercial" rate. New construction less than 2,000 sf, and the first 2,000 sf of any commercial project is exempt.

[3] Hotel and office assumed charged at "commercial" rate.

[4] Maximum justified hotel fee shown per room.

Hotel Fee Comparison

Description	Farmstead	Castellucci	Noble House
Number of Rooms	65	75	56
Square Footage	53,597	81,000	105,000
St. Helena Current Fee Per Square Foot - 3.80	203,669	307,800	399,000
St. Helena Max Justified Per Square Foot - 75.00	4,019,775	6,075,000	7,875,000
St. Helena Max Justified Per Room - 41,797.34	2,716,827	3,134,801	2,340,651
Calistoga - Per Room	114,163	131,726	98,356
San Francisco - Per Square Foot	1,435,328	2,169,180	2,811,900
Sonoma - Per Square Foot	803,955	1,215,000	1,575,000
Yountville - Per Room	767,075	885,086	660,864

Feasibility Analysis- Project Prototypes

	SF Residential	MF Residential	Office	Retail	Industrial/ Warehouse	Hotel
Density (FAR)	0.29	0.76	0.28	0.33	0.17	0.13
Density (Units/Acre)		33				
Form Factor	Single	3-5 Stories	1 Story	1 Story	1 Story	Multi
Residential Units/Rooms	1	33				65
Unit/Room Size	3,780	1,000				500
Residential SF	3,780	33,000				32,500
Commercial SF			3,597	2,847	1,500	21,097
Parcel size (acres)	0.3	1	0.30	0.2	0.2	9.72

Feasibility Analysis- Pro Forma Summary

Item	SF Residential	MF Residential	Office	Retail	Industrial/ Warehouse	Hotel
Residual Land Value Per Acre	3,213,756	928,200	893,627	1,386,326	568,714	1,713,457
Residual Land Value Per Land SF	74	21	21	32	13	39
Potential Fees						
10% Fee Per Acre	246,960	646,800	211,024	200,714	50,250	27,951
15% Fee Per Acre	370,440	970,200	316,536	301,070	75,375	41,926
100% Fee Per Acre	2,469,600	6,468,000	2,110,240	2,007,135	502,500	279,507
Max Fee at Threshold	2,113,756	NA	NA	286,326	NA	613,457

Potential Revenue Scenarios
Development Impact Fee Study Planning Horizon of 2040

Land Use	Projected Increase (Sq. Ft. or Hotel Rooms)	Maximum Justified Fee per Square Foot or Room	Potential Fee Revenue (Maximum Justified Fees)	Potential Fee Revenue (15% Fee Scenario)	Potential Fee Revenue (10% Fee Scenario)
Residential	685,152	196	134,289,792	20,143,469	13,428,979
Nonresidential					
Commercial	325,943	141	45,958,019	6,893,703	4,595,802
Office	92,638	176	16,304,294	2,445,644	1,630,429
Industrial	640,517	67	42,914,655	6,437,198	4,291,466
Hotel	116	41,797	4,848,452	727,268	484,845
Total			**244,315,213**	**36,647,282**	**24,431,521**

Staff Recommended Fee Schedule

Land Use	Staff Recommended Fee	Factor	Estimated Fee Revenue [1]
Residential			
Rental Unit	14 per sq. ft.	10% Max Justified	13,428,979
For Sale Unit	20 per sq. ft.	10% Max Justified	
Non-Residential			
Commercial	20 per sq. ft.	Max Feasible	6,518,860
Office	18 per sq. ft.	10% Max Justified	1,630,429
Industrial	7 per sq. ft.	10% Max Justified	4,291,466
Hotel	41,797 per room	Max Feasible	4,848,452
Total			30,718,186

[1] Based on Development Impact Fee Study planning horizon of 2040.

Questions



From: holihshorizons@outlook.com
To: cityclerk; cityclerk
Subject: [External] Measure B housing impact fee
Date: Saturday, October 5, 2024 5:03:26 AM

Dear St Helena City Council and Staff,

In consideration of the great impact the Noble House hotel employees commuting to St Helena would have on the Napa Valley environment, I feel very strongly the in lieu of impact fee to the Affordable Housing Trust Fund should be raised to at least the maximum nexus study cost of $75 per square foot -in the area of $3,750,000- to make the building of the employee residences more sure to be built. The very low impact fees charged to developers are never enough encouragement for them to actually be built, or come close to providing St Helena enough money to assume the high costs of building the needed housing itself.

With this greater assurance of actually having the much needed housing built I would be much more likely to vote For Measure B rather than Against, mainly because of this objection. The inconsequential impact fee in this current contract is so low it seems likely to be another of the several hotels that have not built their needed staff housing, making staff have to commute long distances to work in St Helena, and also causing closure of fine restaurants and businesses due to lack of available staff.

Thank you for your consideration of this and all community opinion and dedication to keeping St Helena the great little city it's always been.

Holly Rogers
St Helena CA

From: Lyndsey Harrison
To: cityclerk
Subject: [External] Housing impact fee
Date: Friday, October 4, 2024 9:44:46 PM

Please approve the hotel impact fee to the maximum at next council meeting.

Lyndsey Harrison
1521 Allyn St. SH

Please excuse typos

October 7, 2024

To the City of St Helena City Council:

As you decide on the Development Impact Fees, please consider how your actions affect the potential development of workforce housing in St Helena. (All data from the Willdan Study and staff reports except where noted.)

Hotel
The recommendation is $41,787 per room

- Based on a 65 room hotel the total fee would be $2,716,155
- A luxury 65 room hotel will employ a minimum of 2.0 people per room or 130 people (source: Google)

Hotel Developers Options:

Recommended Fee	Maximum Allowed Fee
$41,787 x 65 rooms = $2,716,155 *Estimated number of employees housed: 5	$75 x 53,597 sq. ft. = $4,019,775 *Estimated number of employees housed: 6

*At a cost of $750,000 per unit and 1.18 employees per unit

Multi-Family
The recommendation is a 10% affordable housing fee

- Based on a 1 acre project with 33 units
- Total Project Development Cost of $11,138,400
- Per unit cost $338,000

Multi Family Developers Options:

Option 1	Option 2
Build the 20% inclusionary housing 6.6 units @ $338,000 per unit	Pay the in lieu fee of $20 per sq. ft
Developer Cost: **$2,230,800**	Developer Cost: **$646,800**

- City stated previously that the average cost to build one affordable unit is $750,000
- The develop would be paying **86% of one unit as opposed to actually building 6+ units**
- There are several multi-unit residential projects under consideration for St Helena.
- *WHY WOULD ANY DEVELOPER BUILD INCLUSIONARY HOUSING?*
- The in lieu fee should provide an incentive for the developer to include affordable housing.

Maybe after this election, the City can reexamine its approach to local housing.

Mary Stephenson
stepcomm@aol.com

Agenda Report to the City Council

Agenda Section: PUBLIC HEARINGS

Department: Finance

DATE:	October 8, 2024
FROM:	Martin Beltran, Senior Management Analyst
SUBJECT:	Discussion of and Direction on the Potential Activities and Projects for Inclusion in the 2024 Community Development Block Grant (CDBG) Applications.
RECOMMENDED ACTION:	Provide direction on the activities and projects to be considered for funding under the 2024 Community Development Block Grant program.
PREVIOUS COUNCIL ACTION:	None.
STATEMENT OF THE PURPOSE:	The purpose is to determine which activities and projects should be included in the application submittals for funding under the 2024 Community Development Block Grant program.
FINANCIAL IMPACT:	If each activity/project is awarded, the total financial impact is estimated to be $2.25 million in additional grant revenues.

BACKGROUND:

The U.S. Department of Housing and Urban Development (HUD) Community Development Block Grant (CDBG) program authorizes the use of funds to assist low- and moderate-income families or aid in the prevention or elimination of slums or blight.

On August 30, 2024, the California Department of Housing and Community Development (Department) announces the availability of approximately $34 million in funding available through the federal Small Cities Community Development Block Grant Program (CDBG) for the 2024 funding year. The objectives of the CDBG program are to develop viable communities by the provision of decent affordable housing, a suitable living environment, and to expand economic opportunities, principally for the benefit of Low- and Moderate-Income (LMI) persons, families, households, and neighborhoods.

The City is required to conduct public outreach regarding potential CDBG projects/activities that could be considered for the current application period including holding a public hearing to discuss the potential application(s) and allow for public input.

Project/Activity Selection

In order to be considered eligible, a suggested project/activity must address one or more of the three national objectives:

1. Benefit to low- and moderate-income persons; or

2. Aid in the prevention or elimination of slums and blight; or
3. To meet an urgent need.

The benefit to low- and moderate-income persons is the most predominately used National Objective. In order to benefit low- or moderate-income persons, the project/activity must either benefit an area that is comprised of at least 51% low- or moderate-income households, or the program benefits individually qualified households (i.e., each participating household is income certified).

Application deadlines are as follows:

CDBG NOFA Releases	August 30, 2024
Submission Portal for All Solicitation Opens	October 29, 2024
Application for Competitive Solicitation Closes	December 30, 2024
Application for OTC Solicitation Closes	When funds are exhausted or December 30, 2024, whichever comes first

Eligible cities and counties may submit Community Development and Housing applications for CDBG funds under the 2024 NOFA for a maximum of $3.6 million for up to three activities.

The maximum number of applications a jurisdiction can apply for is three (3) applications in this 2024 NOFA and are as follows:

- 1 Over-the-Counter (OTC) Project + 1 OTC Program + 1 Competitive -OR-
- 1 OTC Project + 2 Competitive -OR-
- 1 OTC Program + 2 Competitive.

*Note: 2 OTC Project, 2 OTC Program, or 3 Competitive applications are not allowed

The funding limits for the 2024 NOFA are as follows:

- Total grant award for all activities combined per jurisdiction shall not exceed $3.6 million.
- Competitive Applications shall not exceed $300,000.
- OTC Project application limit shall not exceed $3.3 million.
- OTC Program application limit shall not exceed $1.5 million.

Activity Limits

i) Competitive Applications
- Public Service – up to $300,000
- Planning – up to $300,000

ii) Over-the-Counter (OTC) Applications

- Projects – up to $3.3 million
- Housing Programs – up to $1.5 million
  - A Housing Program can include the following activities.
    - 13A – Housing Counseling
    - 13B – Single Family (1 - 4 units) Homeownership Assistance
    - 14A – Single Family (1 - 4 units) Housing Rehabilitation
    - 14F – Single Family (1 - 4 units) Energy Efficiency Improvements
    - 15 – Code Enforcement

Economic Development Programs – up to $1.5 million
An Economic Development Program can include the following activities.

- 18A – Economic Development Direct Financial Assistance to For-Profit Business
- 18B – Economic Development Technical Assistance
- 18C – Economic Development: Microenterprise Assistance

A comprehensive list of eligible activities under this NOFA can be found in Attachment 2: CDBG Matrix Code Categories.

DISCUSSION:
Staff has identified two potential projects and is seeking City Council feedback on each project as well as provide direction on any other projects/activities to include in the 2024 application. Based on City Council direction, the final project list will be brought back to City Council at a later meeting for approval.

CDBG Projects Identified by Staff
Based on the 2024 NOFA eligibility criteria of CDBG funds the following is list of potential projects eligible for OTC applications.

Over the Counter Program: Economic Development	$750,000
Rehabilitation: Energy Efficiency Improvements for multiple sites	$1,500,000

Over the Counter Program: Economic Development
Funding will be used for a Business Assistance Program for the purpose of establishing a business assistance revolving loan fund, which will provide 1% interest loans to small and medium sized businesses in the City of St. Helena to assist with job creation and retention of low-moderate income jobs. In addition, the program will be structured that in specific cases where businesses show an extreme financial need, the loans may be forgiven.

The City was previously awarded $500,000 under the CDBG 2021 NOFA for Economic Development for Business Assistance. This program offered forgivable loans to businesses affected by the Covid-19 pandemic to help them retain or create jobs for

low-to-moderate income individuals. The success of this program will enhance the appeal of the 2024 application.

Rehabilitation: Energy Efficiency Improvements for multiple sites
The City is exploring opportunities to enhance energy efficiency at various affordable housing locations throughout the City, including Hunt's Grove. The City previously submitted an application for the Hunt's Grove parking lot improvements project as part of the 2021 CDBG NOFA.

The apartment complex was built on City property and has been in existence since 1991. The property is leased to Hunt's Grove (Bridge Housing Corporation) and is comprised of affordable housing units. There has been an on-going parking related issue at Hunt's Grove Apartments. The proposed project will expand and improve parking for Hunt's Grove Apartments.

Based on preliminary plans, it appears an additional six (6) tandem spots would fit in the proposed area, creating space for an additional twelve (12) parked cars. In addition, the project includes infrastructure and installation of six (6) EV chargers.

Other Considerations
Our Town St Helena (OTSH) initially approached the City to submit an application for the maximum award of $3.3 million per project. OTSH has been in discussions with the owner of two apartment buildings, each with 6 rental units, who would like to sell the properties to OTSH. The seller wants the properties to be long-term deed restricted at affordable rents, which may include a mix of low- and moderate-income units. The buildings are located at 1347 and 1357 Monte Vista Court.

A recent appraisal valued the properties at $4.7 million, therefore OTSH estimates it will need to secure $4.9 million to pay fair market value and cover City and OTSH administrative and closing costs. The NOFA outlines there will be a "Sources and Uses Chart", which will require documented evidence of commitment of all funds needed to complete the project. HCD will likely disqualify the application if they are not satisfied with the feasibility based on documented financial commitments. After conversations with OTSH, it was concluded that OTSH currently lacks committed funding to bridge the gap. As a result, the City will not be moving forward with the application at this time.

ENVIRONMENTAL REVIEW: None.

GOAL:

Goal 1: Strengthen Financial Sustainability
Goal 5: Enhance Quality of Life

DOCUMENTS ATTACHMENTS:

Attachment 1: 2024 CDBG Notice of Funding Availability
Attachment 2: Matrix Code Categories

STATE OF CALIFORNIA - BUSINESS, CONSUMER SERVICES AND HOUSING AGENCY GAVIN NEWSOM, *Governor*

DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF FEDERAL FINANCIAL ASSISTANCE
651 Bannon Street, 7th Floor
Sacramento, CA 95811
(916) 263-2771
www.hcd.ca.gov

August 30, 2024

MEMORANDUM FOR: **All Potential Applicants**

FROM: Jenny Cho, Deputy Director
Division of Federal Financial Assistance

SUBJECT: **2024 Community Development Block Grant Program Notice of Funding Availability**

The California Department of Housing and Community Development (Department) is announcing the release the 2024 Notice of Funding Availability (NOFA) for approximately $34 million in federal funds for the Community Development Block Grant (CDBG) program.

Funding for this NOFA is available to the state from the United States Department of Housing and Urban Development (HUD), pursuant to the Housing and Community Development Act of 1974, as amended, and **24 Code of Federal Regulation (CFR) Part 570 Subpart I** "State Community Development Block Grant Program." These regulations require the state to make funds available to the state's non-entitlement Units of General Local Government (UGLGs). Units of General Local Government are defined by HUD as political subdivisions of the state, which in California are towns, cities, and counties. Only non-federally recognized Tribes can receive funding through applications submitted by non-entitlement Units of General Local Government. No direct funding from the Department can be provided to Tribes, Tribally-Designated Housing Entities, or nonprofits.

Applicants are encouraged to set-up profiles in the eCivis Portal at **eCivis Portal | Login** as early as possible. Profile set-up instructions and other technical assistance can be found in the eCivis Grants Network External User Manual found on the Department's CDBG webpage under the "Resources" tab.

Applicants are encouraged to begin the application process early to ensure successful submission before the application deadline. If you have issues logging into the portal or have questions on how to complete the online application, please contact the Department at cdbg@hcd.ca.gov.

To receive CDBG program NOFA FAQs, emails, and other information and updates, please sign up for emails and check the "Federal Programs" box. **If you have any questions, please submit them** to **cdbg@hcd.ca.gov.**

All activities in this NOFA are subject to availability of funds and continuing HUD and legislative authority.

Attachments

Community Development Block Grant Program
2024 Notice of Funding Availability

Gavin Newsom, Governor
State of California

Tomiquia Moss, Secretary
Business, Consumer Services and Housing Agency

Gustavo Velasquez, Director
California Department of Housing and Community Development

Division of Financial Assistance, Federal Programs Branch, **Community Development Block Grant Program**
651 Bannon Street, 7th Floor, Sacramento, CA 95811
Email: cdbg@hcd.ca.gov

August 30, 2024

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I. Overview

A. Notice of Funding Availability

The California Department of Housing and Community Development (Department) announces the availability of approximately $34 million in funding available through the federal Small Cities Community Development Block Grant Program (CDBG) for the 2024 funding year.

The objectives of the CDBG program are to develop viable communities by the provision of decent affordable housing, a suitable living environment, and to expand economic opportunities, principally for the benefit of Low- and Moderate-Income (LMI) persons, families, households, and neighborhoods.

Applicants are expected to plan activities that will reduce disparities and increase racial and socioeconomical equity in their communities. Applicants are to ensure all eligible persons receive equitable access to services, and are served with dignity, respect, and compassion regardless of circumstance, ability, or identity, which includes marginalized populations, including but not limited to, Black, Native and Indigenous, Latinx, Asian, Pacific Islanders and other people of color, immigrants, people with criminal records, people with disabilities, people with mental health and substance abuse vulnerabilities, people with limited English proficiency, people who identify as LGBTQ+, and other individuals that may not traditionally access mainstream support.

All applications will be reviewed for completeness and compliance with state and federal requirements. Only complete and compliant applications will be eligible for application review, approval, and potential funding per **42 U.S.C. §5302(a)**, **24 CFR Part 570** and the **State CDBG Guidelines**.

B. Estimated Timeline

CDBG NOFA Releases	August 30, 2024
Submission Portal for All Applications Opens	October 29, 2024, at 9AM P.D.T.
Application for Competitive Solicitation Closes	December 30, 2024, at 3PM P.D.T.
Application for OTC Solicitation Deadline	When funds are exhausted or December 30, 2024, at 3PM P.D.T., whichever comes first
Contract Execution for Competitive Applications	May 2025

Contract Execution for OTC Applications	Rolling basis starting May 2025
Expenditure Deadline	2 years, 9 months from contract execution

Applications submitted before the application open date or after the respective closing date or deadline will not be accepted. There will be no exceptions. The Department **recommends Applicants plan to submit their application(s) well before the application deadline** to provide opportunity for troubleshooting if needed.

Each application will be digitally time-stamped upon submittal.

If this NOFA is undersubscribed, unawarded funds may be made available under a subsequent NOFA. If funds become disencumbered between this NOFA release and the application deadline, the disencumbered funds may be made available under this NOFA or any subsequent NOFA's, at the department's discretion. If disencumbered funds exceed applications, the disencumbered funds will be made available under a subsequent NOFA.

C. What is new in this NOFA

1. A comprehensive list of eligible activities under this NOFA can be found here: **IDIS CDBG Matrix Code/National Objective Table**.
2. Public Service and Planning activities are eligible under a Competitive Application process.
3. Housing Program and Economic Development Program activities are eligible under an Over-The-Counter application process.
4. Economic Development Programs and Housing Programs with multiple activity types (e.g., ED Assistance to For-Profits and Micro-Enterprise Assistance or Homeownership Assistance and Housing Rehabilitation) will be considered as a single application and, if awarded, will be funded under a single Standard Agreement.
5. Maximum number of applications a jurisdiction can apply for has **increased** from one (1) application in the 2023 NOFA Amendment #1 to three (3) applications in this 2024 NOFA and are as follows:
    - 1 OTC Project + 1 OTC Program + 1 Competitive **-OR-**
    - 1 OTC Project + 2 Competitive **-OR-**
    - 1 OTC Program + 2 Competitive.

    ****Note**: 2 OTC Project, 2 OTC Program, or 3 Competitive applications are **NOT** allowed.

6. Funding limits have been updated as follows:
    i) Total grant award for all activities combined per jurisdiction shall not exceed $3.6 million.
    ii) Competitive Applications shall not exceed $300,000.
    iii) OTC Project application limit shall not exceed $3.3 million.
    iv) OTC Program application limit shall not exceed $1.5 million.
7. Application Process
    i) A complete application consists of:
        a. One Main Application **-AND-**
        b. One Sub Application **PER** Matrix Code
            *For a complete Housing or Economic Development Program application, a Sub Application is required for **each** activity (matrix code) for the program.
    ii) All applications must be submitted through the eCivis Grants Network Portal before the applicable closing date and/or deadline.
8. Applications must demonstrate Build America, Buy America (BABA) compliance, as applicable.
9. In accordance with **CDBG Program Guidelines** Section 202(a)(2), 50 Percent Rule, Grantees shall be ineligible to apply for any additional CDBG funds for Public Services or Planning activities unless, at the time of application submission, the grantee has expended at least 50 percent of CDBG funds previously awarded for such an activity. To encourage timely expenditure, this will mean ANY Planning grant or Public Service grant, regardless of matrix code.
10. For all CDBG-funded programs including Public Services and Housing or Economic Development programs, threshold documentation of site control can be satisfied with a current lease for the location from which the program will operate and a signed statement from the authorizing official that the grantee intends to extend the lease upon expiration. A new or renewed lease must be submitted at expiration of the current lease.
11. Membership in local Continuum of Care (CoC) is now a requirement for activities involving homelessness assistance.
12. Permit requirements have been added to competitive projects.
13. Authorized Signatory for cities must be the Mayor or Mayor pro tempore unless there is an ordinance or municipal code designating another position.

14. Completed Law and Authority topic worksheets must be included with all Environmental Review Records.
15. All OTC applications must demonstrate readiness to the satisfaction of the Department.

D. Authorizing Legislation

Funding under this NOFA is made available pursuant to the Housing and Community Development Act of 1974. This NOFA should be read in conjunction with the following statutes, regulations, and guidelines that establish state and federal CDBG requirements. Relevant legal authorities include, but are not limited to, the following:

- **24 Code of Federal Regulations (CFR) §570.480, et. Seq**, Federal CDBG Regulations
- **24 CFR Part 58**, Environmental Review Procedures
- **2 CFR Part 200**, Uniform Grant Administration Requirements
- **Health & Safety Code (HSC) §§50825-50834**, State of California CDBG program
- **CDBG Final Program Guidelines**
- **2020-2024 State of California Consolidated Plan**
- **2024-2025 State of California Annual Action Plan**

If there are changes to federal or state statutes, regulations, guidelines, or other laws governing the CDBG program, or if funding is modified by Congress, HUD, the Department, or the state Legislature, these changes may become effective immediately and apply to activities under this NOFA.

Note: The Housing and Community Development Act of 1974 (HCDA) is codified as Title **42 U.S.C. §5301, et. seq.**: thus, those citations are interchangeable and cite the same statute language. For example, the citation of HCDA **105(a)(22)** and **42 U.S.C. §5305(a)(22)** are references to the same statute language. For the purposes of this NOFA, we will use the **42 U.S.C. §5301** citations for references to the federal statutes.

In administering this NOFA, if there is a conflict between the federal statutes or regulations and state statutes or guidelines, the federal statutes and regulations shall prevail. All activities in this NOFA are subject to availability of funds and continuing HUD and California legislative authority. The Department reserves the right, at its sole discretion and at any time, to rescind, suspend or amend this NOFA and any or all its provisions.

The Department will notify interested parties through listserv emails and by posting notification on the Department website if the Department rescinds, suspends, or

amends this NOFA. This NOFA is not a commitment of funds to any Activity or Applicant.

II. Allocation and Funding

Funds will be allocated in accordance with federal regulations found in **24 CFR §570** and state statute, as found in **HSC §50827, et seq.** For more information, please reference the **CDBG Guidelines, Section 200**.

The table below include the estimated percentage of Funding Allocations for the 2024 NOFA:

Funding Allocation	Percentage	Estimated Dollar Amount
Local Administration	7%	$2,500,000.00
Competitive Awards (Public Service) (24 CFR 570.201(e)(1))	≤15%	$5,400,000.00
Competitive Awards (Planning) (24 CFR 570.483(b)(5))	≤10%	$3,600,000.00
Over-the-Counter Awards (Housing Projects, Economic Development Projects, Housing Programs, Economic Development Programs)	59%	$20,500,000.00
Colonias Set-Aside (Section 916 of the National Affordable Housing Act)	Set-aside of 5%	$1,800,000.00
Non-federally recognized Tribes Set-Aside (HSC §50831)	Set-aside of 1.25%	$455,000.00

***Note:** The amount of total funding available and the allocations of those funds are only estimates and are subject to change without notice.

A. Definitions

Except as otherwise defined herein, all defined terms have the meaning set forth in 42 U.S.C. §5302(a), 24 CFR Part 570, and the State CDBG Guidelines.

III. Program Requirements

All Program Requirements, Application Requirements, Application Threshold and Initial Requirements, and Application and Activity Requirements set forth in Sections III-VI must be met. Failure to timely satisfy all of the requirements will result in disqualification.

A. Eligible Applicants

1. Only non-entitlement Units of General Local Government such as cities, counties and municipalities are eligible to apply. Federally recognized Tribes, non-federally recognized Tribes, and nonprofits may receive assistance only by entering into a subrecipient agreement*, a Memorandum of Understanding, or a contract with an eligible Applicant.

   *A subrecipient agreement is a written agreement in effect for each subrecipient before giving out any CDBG funds and remaining in effect for the period during which a subrecipient has control over any CDBG funds, including Program Income. At a minimum, a subrecipient agreement must contain content required by the federal CDBG regulations at 24 CFR §570.503.

2. Applicants must meet one or more of the following requirements when the application is submitted to be eligible to apply for funding under this NOFA:
   i) An eligible Applicant may apply on its own behalf.
   ii) An eligible Applicant may apply on behalf of one or more other eligible Applicants.
   iii) Two or more eligible Applicants, which share an activity, may submit a joint application.
   iv) An eligible Applicant may apply on behalf of an eligible subrecipient including a non-federally recognized Tribe or nonprofit.
   v) In addition to Activity and application limits identified in this NOFA, an eligible Applicant may apply for activities in service areas within or outside of the Applicant's Jurisdiction when the Applicant is applying for funds set aside by the California State Legislative for non-federally recognized Tribes (HSC §50831) and/or Colonias.

B. Non-Entitlement Status

CDBG program funds are provided as grants to Non-Entitlement Units of General Local Government (UGLGs). These UGLGs are encouraged to partner with federally- and non-federally recognized Tribes, districts, agencies, nonprofit service providers, and other community organizations, whenever appropriate, to prepare and submit applications for CDBG funding, and to administer and complete CDBG-funded programs and projects.

Incorporated cities located in an urban county as defined by **42 U.S.C. §5302 (a)(6)** must formally elect to be excluded from participation in the urban county entitlement status. HUD and the Department must be notified that the city has elected to be excluded from the urban county participation as per **24 CFR 570.307(g)** for it to be eligible for the state CDBG program. Only eligible activities from eligible Applicants will be considered for an award.

Applications for eligible activities outside the Applicant's Jurisdiction must include a legally binding agreement, acceptable to the Department, with the city or county in which the eligible Activity is located. Applicants may not apply to both the State CDBG program and to a CDBG program administered by an Urban County or other entitlement entity during the same program year.

C. Housing Element Compliance

As per **HSC §50829**, the Applicant must, at a minimum, submit a draft or adopted housing element to the Department in accordance with the requirements listed in **Government Code (GC) §65580, et seq**., and **GC §65585** (see Appendix B) prior to an application submission. Jurisdictions who fail to complete the Housing Element compliance process in a timely manner will be ineligible for funding until the Housing Element meets requirements pursuant to **H.S.C. 50829** and **50830**. Per **CDBG Guidelines, Section 202(a)(4)**, by the time of award funding, the Applicant must have complied with all the Housing Element requirements listed in **H.S.C. 50829** and **50830**.

D. Growth Control Limitations

Applicants that have adopted growth controls, including, but not limited to, restrictions on residential building permits and residential buildable lots, that do not meet the exception criteria in **HSC §50830 (b) and (c)** are ineligible for funding as per **HSC §50830**. Applicants intending to apply for CDBG funds are required to submit a signed 2024 CDBG Application Certifications and Statement of Assurances form that certifies the Applicant has not adopted any residential growth controls or adopted residential growth controls meet the applicable exception criteria. Failure to submit an executed Application Certifications and Statement of Assurances at the time of application will result in Applicant ineligibility.

E. Limits for Administration and Planning

1. Program Administration

   The Department can use 3 percent of the total funding +$100,000 for administration costs.

2. General Administration (GA)

   i) Applicants may request up to 7 percent of the total CDBG grant funding requested by that Applicant for General Administration (GA). For detailed information regarding General Administration costs, see **Chapter 6: Financial Management** of the current posted version of the CDBG Grants Management Manual (GMM), as may be amended, which is found on the CDBG page of the Department's website.

   ii) The calculation to determine the maximum allowable General Administration amount is the amount of Activity expenses plus Activity Delivery expenses, multiplied by 7 percent. Appendix G has been provided for ease of calculation.

   iii) In general, there should be minimal GA. Staff time and/or work completed directly on a specific Activity should be reported as Activity Delivery Cost (ADC) whereas the overall management of the CDBG Program, such as NOFA webinars and Office Hours, should be reported as GA.

   iv) For detailed information regarding ADC, see **Chapter 6: Financial Management** of the current posted version of the CDBG GMM, as may be amended, which is found on the CDBG page of the Department's website.

   v) GA should be requested in the Main Application for the aggregate amount of all Sub Applications.

3. GA for Program Income (PI) funds is 17 percent of the annual PI receipts for the most recently completed Department Program Year (e.g., for PY 2023, receipts PY 2022 (July 1, 2022 – June 30, 2023).
4. Applicants may elect to assign more funds to Activity costs and take less than the 7 percent (17 percent for Program Income) as their GA allocation.
5. For project budgets with both grant award and PI as funding sources, applications must identify how much GA will be from each source to ensure that GA stays within the appropriate program caps.

F. Insufficient Demand

If there is insufficient demand under this NOFA, the Department will make the unused funding available under subsequent CDBG NOFA(s).

G. Eligible Activities

For a complete list of eligible activities allowed under the HCDA, go to **42 U.S.C. §5305** and **Chapter 2** of the current version of the CDBG Grants Management Manual which is found on the CDBG page of the Department's website. For a list of eligible activities allowed under this NOFA, go to: **IDIS CDBG Matrix Code/National Objective Table (ca.gov)**.

Pursuant to both federal and state laws all CDBG costs must:

1. be eligible;
2. be necessary;
3. be reasonable;
4. not be used to supplant local or state resources; and
5. be guarded against fraud.

H. Application Limits

1. Each Jurisdiction can submit up to three (3) applications during this NOFA cycle.
    i) 1 OTC Project + 1 OTC Program + 1 Competitive **-OR-**
    ii) 1 OTC Project + 2 Competitive **-OR-**
    iii) 1 OTC Program + 2 Competitive.

    ****Note**: 2 OTC Project, 2 OTC Program, or 3 Competitive applications are **NOT** allowed.
2. The two (2) Competitive Applications can be 2 Public Service, 2 Planning, or 1 Public Service and 1 Planning Application.
3. The maximum combined award amount per jurisdiction is $3.6 million. Each activity must have a unique Sub Application with a complete budget, National Objective, scope of work, and milestone timeline.
4. For Housing and Economic Development Programs with multiple matrix codes, the Main Application's Budget will need to breakdown the total amount requested by each matrix code activity.
5. Applicants are encouraged to review the sample draft Standard Agreement in Appendix K as a sample of the applicable terms and conditions required for CDBG funded activities.
6. The $3.6 million per jurisdiction limits do not apply to Colonias and Native American set-asides. The maximum activity limits are listed below. Program Income (PI) included in an activity budget does not count against the Jurisdiction's maximum award limit.
7. Activity Limits
    i) Competitive Applications

- Public Service – up to $300,000
- Planning – up to $300,000

ii) Over-the-Counter (OTC) Applications

- Projects – up to $3.3 million
- Housing Programs – up to $1.5 million
    - A Housing Program can include the following activities. Each activity must have its own Sub Application.
        - ◇ 13A – Housing Counseling
        - ◇ 13B – Single Family (1 - 4 units) Homeownership Assistance
        - ◇ 14A – Single Family (1 - 4 units) Housing Rehabilitation
        - ◇ 14F – Single Family (1 - 4 units) Energy Efficiency Improvements
        - ◇ 15 – Code Enforcement
- Economic Development Programs – up to $1.5 million
    - An Economic Development Program can include the following activities. Each activity must have its own Sub Application.
        - ◇ 18A – Economic Development Direct Financial Assistance to For-Profit Business
        - ◇ 18B – Economic Development Technical Assistance
        - ◇ 18C – Economic Development: Microenterprise Assistance

8. Code Enforcement – Changes. Different from previous years, to align with HUD's directive regarding code enforcement programs, the Code Enforcement activity will only be eligible under the Housing Program application. Per HUD, code enforcement is defined as a process whereby local governments gain compliance with ordinances and regulations regarding health and housing codes, land use and zoning ordinances, sign standards, and uniform building and fire codes. The CDBG program expects the focus of code enforcement to be on health and safety issues in **buildings and structures**.
    - To gain compliance with HUD's intent for the program, applicants are required to demonstrate a $1:$2.50 ratio of code enforcement to housing rehabilitation availability. That is to say, for every $1 of code enforcement funds requested, Applicants must have $2.50 in demonstrated or applied for funds for a Housing Rehabilitation Program.

a. "Demonstrated" refers to housing rehabilitation program(s) already in existence within the Applicant's jurisdiction.

b. "Applied for" funds refers to a housing rehabilitation program through this Application.

I. Additional Requirements

1. Americans with Disabilities Act and Physical Accessibility Requirements
    i) The Grantee shall ensure compliance with all applicable state and federal building codes and accessibility laws and standards. All developments shall adhere to the accessibility requirements set forth in: (i) California Building Code Chapters 11A and 11B; (ii) the federal Fair Housing Act (**42 U.S.C. § 3601** et seq.) and its regulations at **24 CFR part 100** (particularly **24 CFR 100.205**), and its design and construction requirements, including ANSI A117.1-1986, and the Fair Housing Accessibility Guidelines, March 6, 1991, in conjunction with the Supplement to Notice of Fair Housing Accessibility Guidelines: Questions and Answers About the Guidelines, June 28, 1994; and (iii) the Americans with Disabilities Act of 1990 (**42 U.S.C. § 12101 et seq.)** and its Title II and Title III regulations at **28 CFR parts 35 and 36**; and Section 504 of the Rehabilitation Act of 1973 (**29 U.S.C. § 794**) and the implementing HUD regulations at **24 CFR Part 8**.
2. Construction Standards/Requirements
    i) All residential construction Projects, where applicable, must comply with the housing construction codes of the State of California. All units must meet these codes as well as any locally adopted codes and ordinances. Housing construction codes for building in California follow federal and state laws, regulations, and adaptions for construction of single family and multifamily units. The **State Housing Law Program** within the Department continuously refines the building standards to ensure they comply with new or changing laws and regulations and develops statewide building standards for new construction of all building types and accessories. The **State Housing Law Program** also develops the building standards necessary to provide accessibility in the design and construction of all housing other than publicly funded housing. The building standards are published as the **California Building Standards Code** under the California Code of Regulations, Title 24, and construction standards in the Standard Agreement must meet or exceed all applicable requirements for housing or building construction. Tribal Entities with Projects on Native American Lands are required to follow their own tribal building codes or the International Building Code.

IV. Application Requirements

A. National Objectives

CDBG-funded activities must meet the following National Objective:

- Benefit LMI persons

At least 70 percent of the funds awarded must benefit LMI individuals or households. No activity or portion of a program assisted by these funds may exclude from its benefits the lowest income-eligible group. Individual activities must meet the Low- to Moderate-Income National Objective as defined and described in detail in **Chapter 2** of the CDBG GMM:

B. Milestones

All CDBG program-funded activities must be timely implemented in accordance with the milestones defined in the Standard Agreement. Milestones should be project/program specific and a reflection of significant progress. Applicants must include at least five (5) milestones per Activity application. The first and last milestone will be prepopulated and cannot be edited by Applicants. Failure to meet the first milestone identified, is a material breach of the Standard Agreement and will result in a for-cause termination of this Agreement.

- **First Milestone**: Activity Initiation. Must be completed no later than 60 days from the Effective Date of the Standard Agreement.
- **Milestone Two**: [populated by Applicant] – examples below
- **Milestone Three**: [populated by Applicant] – examples below
- **Milestone Four**: [populated by Applicant] – examples below
- **Final Milestone**: Activity closeout (must be completed no later than 90 days after the Expenditure Deadline).

TIP: The Department recognizes that Applicants' proposed milestone dates are estimates. Instead of using an actual date for all optional milestones, please utilize time frames. For example:

Milestone One (required): Activity Initiation. Must be completed no later than 60 days from the Effective Date of the Standard Agreement.
Milestone Two: Release Invitation for Bid (IFB) within 90 days of Standard Agreement execution by HCD.
Milestone Three: Execute contract with a General Contractor within 120 days of Standard Agreement execution by HCD.
Milestone Four (optional): Begin construction within 9 months of Standard Agreement execution by HCD.

Milestone Five: Record Notice of Completion within 2 months of project completion.
Milestone Six (required): Activity closeout (must be completed no later than 90 days after the Expenditure Deadline).

If necessary, prior to Standard Agreement execution, your CDBG representative may update milestones if changes need to be made.

Additional milestones are optional, though encouraged for best practice of Activity implementation. Applicants are encouraged to evaluate feasibility of meeting milestones and build time for unexpected delays into the milestone schedules. Milestones may not extend beyond the term of the Standard Agreement. All milestones proposed by Applicants are subject to the review and approval of the Department in its discretion.

C. Conditions

Applicants and awardees acknowledge that the funding opportunities referenced in this NOFA, and all obligations of the Department herein, are expressly subject to and conditioned upon the ongoing availability of funds, as well as the continued federal and state authority of the Department to operate the CDBG program. In the event that funds are not available, the CDBG Program or Act under this NOFA is eliminated, or in any way restricted, the Department shall have the option, at its sole discretion, to amend, rescind, suspend, or terminate this NOFA and any associated funding pursuant to the provision set forth immediately above.

This NOFA is not a commitment of funds to any Activity or Applicant and the submission of an application does not guarantee an award to an Applicant.

V. Application Threshold and Initial Requirements

All applications are required to meet and pass threshold requirements at the time of application submission, as determined by the Department. Over-the-Counter applications that do not meet threshold will not be reviewed for award and may be immediately disqualified or reverted to draft. Competitive Applications that do not meet threshold will not move on to scoring and may be immediately disqualified.

The Department **strongly recommends** a careful review of the application and application instructions **PRIOR** to beginning the application.

A. Eligible Applicant

1. Applicant must be an Eligible Applicant as defined under Section III. Program Requirements of this NOFA.

2. Applicant must demonstrate to the satisfaction of the Department that it is compliant with the financial management requirements of **2 CFR §200**.

B. Single Audit

Applicant must provide the Department with its most recent single audit (as submitted to the State Controller's Office), if applicable. If the Applicant had or has single audit findings identified in the audit, the Applicant must include the remediation plan/agreement; the Applicant will be deemed ineligible for funding through the CDBG program until the findings are resolved or a remediation plan or agreement is established. Any and all single audit findings are included in this evaluation.

This requirement is **not** limited to federal funds administered by the Department. If an Applicant is not subject to single audit requirements, the Applicant is not required to submit an audit.

If an Applicant is not required to submit an annual single audit, they must provide documentation directly from the State Controller's Office (SCO) to such effect.

C. Site Control

Applicant must submit evidence of site control.

1. If securing federal funding is contemplated for any stage of a project at the time a project site is acquired, grantee must complete a NEPA environmental review record prior to completing the acquisition. **Failure to do this will result in a choice-limiting action, which prohibits the project from receiving any federal funds in the future.** If a site is to be acquired for a CDBG-funded project, regardless of whether CDBG funds are used for acquisition or development and construction, evidence of site control must be provided. Acceptable evidence of site control may be conveyance documentation with substantiation that the transfer is contingent on completion of a NEPA environmental review record and securing federal funds.
2. Construction-related activities must have documented site control for the year in which the application is submitted and for the duration of the Standard Agreement. Public facilities are subject to a five-year no change in use restriction. This restriction will be recorded against the property, will run with the land, and remain in effect regardless of the ownership of the property.
3. If project/activity is in a public right of way or easement, the grantee must submit an opinion of counsel that all necessary rights, easements, and permits have been obtained.
4. If site control is expected to expire during the open activity period, the Applicant must document that either an alternative site will be made available or that the

activity operators intend to extend or renew the site control on the existing site. All activities will need to provide proof of intent to extend site control and submit documentation upon site control extension. Site control must be maintained through the operation period of the activity.

5. Acceptable evidence of site control include: a conditional purchase agreement or enforceable option for projects involving acquisition, a deed or lease, or a title report showing ownership of the property vested in the applicable entity. The determination as to what constitutes acceptable evidence of site control shall be made by the Department in its sole discretion.

D. Statement of Assurances (Appendix D)

Applicant must submit the fully executed Certifications and Statement of Assurances (see Appendix D), including the Jurisdiction's name, initialing all pages [where applicable], and completing the last page. Please review the Statement and confirm compliance with each requirement. Failure to comply with the certifications and assurances may result in disqualification, recapture of federal funds, and/or debarment.

E. Public Participation

Pursuant to **24 CFR §570.486**, Applicants must follow CDBG Public Participation regulations. Applicants must provide documentation that the Department's **Citizen Participation Plan** requirements have been met. Documentation must include proof of public noticing, information provided during the public meeting, and public comments received during the public participation, including Jurisdiction responses to comments. Additional information about public participation requirements can be found in CDBG **Grants Management Manual Chapter 4.**

F. Resolution

1. Applicant must submit a completed Authorizing Resolution **using the required Department-approved Authorizing Resolution form**, which has been duly approved by the Applicant's governing board. The Authorizing Resolution designates a person or persons responsible for, and authorized to, execute and deliver all documents related to the application of CDBG funds and, if awarded, the execution of a Standard Agreement with the Department.
2. See Appendix C for the Department-approved Authorizing Resolution form as well as instructions on how to complete it.
3. If a governing body must prepare a separate resolution concurrently that conforms to its local standard, it may do so **in addition to** preparing the Authorizing Resolution form provided by the Department. **Applicants must submit their approved resolutions on the form provided by the**

Department by the application due date. Failure to provide an acceptable resolution at the time of application will result in a delay executing the Standard Agreement.

4. **Authorized Signatory for Contracts involving a City Jurisdiction Recipient**: Pursuant to **California Government Code sections 40601 and 40602**, the mayor or mayor pro tempore must sign any written contracts and conveyances made or entered into by the city, unless the city has an ordinance or municipal code provision in effect that specifically allows or designates contracts to be signed by an officer other than the mayor or mayor pro tempore. Accordingly, if the city does not have a city ordinance or municipal code provision described above, then the Department requires that the mayor or mayor pro tempore sign the Standard Agreement as the authorized signer for the city and provide to the Department the Resolution from the City Council authorizing the mayor to sign the Standard Agreement and related documents on behalf of the city. The mayor or mayor pro tempore may not delegate to a third party his or her authority to sign documents unless there is a city ordinance or municipal code provision in effect that expressly authorizes such delegation and a duly authorized resolution reflecting such delegation is provided to the Department. If the city does have an ordinance or municipal code provision as described above, the Department requires the city to provide a copy of such ordinance or municipal code, as well as the Resolution that indicates the name and title of the city official authorized to sign the Standard Agreement and related documents. The Resolution required by this section must be in form and content acceptable to the Department.

G. TIN

Applicant must submit the required **Government Agency Taxpayer ID (TIN)** Form found in the Files tab of each program solicitation. The submitted TIN form must include FEIN, accurate payment information to be complete, and must not have been signed more than one (1) year before submission.

H. Budget

Applicant must complete CDBG budget found in the Grants Network portal. Required budget information includes direct costs only. Direct costs for Activity, GA, and Program Income, if applicable, must be completed and clearly identified. Do **not** include any information on indirect cost, match, or cost share.

A Budget must be completed for the Main and every Sub Application. Failure to complete the Budget for the Main and every Sub Application may result in an immediate disqualification.

I. Sources and Uses Chart

Applicants must submit a Sources and Uses Chart which evidences the commitment of all funds required to complete the applied for CDBG project or program. The application will guide Applicants that are using multiple funding sources to upload a comprehensive Activity Sources and Uses Chart. Grantees may use their own form, or the template Sources and Uses Chart found in the Files tab of the application. Evidence of commitment of any funding sources other than CDBG needed for a project to be feasible must be uploaded at application.

J. System for Award Management (SAM)

Pursuant to **24 CFR Part 5**, all CDBG Applicants are required to verify they and their principals, or any/all persons, contractors, consultants, businesses, subrecipients, etc., that are conducting business with the Applicant are not presently debarred, proposed for debarment, suspended, declared ineligible, or voluntarily excluded from participation in the covered transaction or in any proposal submitted in connection with the covered transaction. Applicants and their partners, contractors, consultants, and subrecipients must register with the **System for Award Management (SAM)** to do business with the U.S. government and have debarment checks that return a registration status of “Active” and “No Active Exclusion Records” under the Exclusion Summary. See **Chapter 5** of the CDBG GMM for additional guidance.

The Department will not award or distribute any CDBG program funds to Applicants and Applicant partners, including contractors, subrecipients, and consultants that are debarred, suspended, proposed for debarment, declared ineligible, voluntarily excluded from participation, and/or unregistered in SAM from federally assisted programs. Applicants are not required to perform debarment checks on individual Applicant or partner employees or individual persons unless that person is acting as a contractor, consultant, subrecipient, or program partner and will be receiving payment directly from CDBG funds. Debarment checks for Applicant and all applicant partners must be completed before award of funds.

K. State Objectives

The Applicant must answer the questions regarding Affirmatively Furthering Fair Housing and Disaster Resiliency in the application form.

L. National Environmental Policy Act of 1969 (NEPA)

Pursuant to 24 CFR 570.604 Environmental Standards, the regulations in 24 CFR Part 58 specify how the National Environmental Policy Act of 1969 (NEPA), must be met. Applicants must demonstrate compliance by submission of a complete, current, and applicable Environmental Review Record with the appropriate level of review form, completed **Related Federal Laws and Authority topic worksheets**, and all

supporting documentation. For more information regarding the Related Federal Laws and Authority, please visit the **HUD Exchange website**.

Required NEPA process, training, and current forms are available on the **HUD Exchange** website. Additional HUD guidance can be found on the **Orientation to Environmental Reviews** page and in **Chapter 3** of the CDBG Grants Management Manual.

If CDBG funds will be used for GA Activities, a GA NEPA Environmental Review Record must be submitted specifying the applicable exemption in **24 CFR §58.34(a)**.

For Business Assistance and Housing Assistance activities that operate as a program but, as per HUD, require a Tiered Review process with site specific environmental reviews for NEPA clearance, both a GA NEPA review and Tier 1 NEPA review are required at time of application.

M. Construction Projects

All construction projects applying for funding under this NOFA must demonstrate readiness at the time of application, including but not limited to, the submission of the following items:

- Independent Cost Estimate
- Completed NEPA Environmental Review Record for the project.
- Bid-ready Plans and Specs
- Certification from Engineer that Plans and Specs are bid-ready.
- Certification from City that bid docs are ready.
- Construction timeline (Gantt Chart preferred)
- Demonstration and Certification that jurisdiction has the capacity and knowledge to manage the project.
- Demonstration and Certification that developer is experienced.
- List of required permits including anticipated date of obtaining the permit and any prerequisites needed to obtain the permit. Specifics regarding permit acquisition should be detailed in the application Narrative and Milestones.
- Written commitments for any and all third-party funding that is needed to complete the project.

N. Economic Development (ED) Programs Only

The Applicant must demonstrate capacity and experience to operate an ED Program. Capacity and experience may be documented through one of the following options:

1. The Applicant has hired staff that are able to dedicate capacity to the operation of a CDBG-funded ED Program. These staff must have at least:
    i) Three years of CDBG ED experience; or
    ii) Five years of commercial underwriting experience plus two years of general CDBG experience; **-OR-**
2. The Applicant has prepared a draft request for proposals (RFP) or subrecipient selection process for a qualified consultant or nonprofit ED group with direct experience in implementation of the ED activities proposed in the ED Program application.
    i) A request for proposals or a subrecipient selection process must be completed within 60 days of applicant's receipt of the Standard Agreement. A copy of the executed agreement with the selected subrecipient or contractor must be provided to the Department within 120 days of execution of the Standard Agreement. These must be listed as milestones in the application. **-OR-**
3. The applicant has identified at least three (3) qualified consultants or nonprofit ED groups with direct experience in implementation of the ED activities proposed in the ED Program application.
4. The Applicant commits to partnering with the Small Business Development Centers or a similar organization that has direct experience in CDBG ED program design, implementation, and commercial underwriting. This commitment will be a resolution, memorandum of understanding, or similar formal statement and will be required at application.

VI. Application and Activity Requirements

A. Federal Cross-Cutting Requirements

At time of application submission, all applications must comply with and provide documentation of HUD's federal cross-cutting requirements found at **24 CFR §570.600, et seq**, and summarized in XII: Federal Program Requirements of this NOFA.

B. Application Verification

Applicants must certify upon submission that their application is true and correct to the best of their knowledge. **Selecting an input field or uploading a blank document to circumvent the application requirements invalidates the application certification and will result in immediate disqualification**. Applicants that intentionally input false information or that intentionally upload blank documents will have their good standing with the Department revoked and may be determined to be ineligible for other Department funding. Applicants are warned that intentionally

providing false information to the Department may constitute fraud.

C. Application Submission

1. Applicants are ultimately responsible for what is submitted in an application, even if the application was prepared by a consultant. Applicants that rely on consultants or grant writers to prepare the CDBG application must carefully and thoroughly review the application for completeness and correctness prior to submittal.
2. Applications submitted through the eCivis Grants Network Portal must be submitted by a jurisdiction's Profile account.
3. All documents requiring signature must be executed by the Authorized Representative identified in the applicant's Authorizing Resolution.
4. All application certifications must be certified by a staff member of the applying jurisdiction.
5. A complete application consists of one Main Application and at least one Sub Application. Failure to submit a Main or a Sub Application will be considered an incomplete application. Incomplete applications WILL NOT be reviewed. We recommend reaching out to your CDBG representative for confirmation of receipt.

D. Timely Submittal

Applicants are strongly encouraged to give plenty of time for submitting prior to the application cutoff date and at least several hours prior to the cutoff time.

If an input field, upload requirement, or application component is not functioning correctly, or if there are system outages or other system failures prior to submittal, please contact cdbg@hcd.ca.gov **as soon as possible prior to the cutoff time to document the issue so that applications are not disqualified due to technical difficulties. Failure to contact the Department with system issues will not exempt Applicants from application verification requirements.**

E. Gap Funding

CDBG is intended to provide stop-gap funding for crucial infrastructure, public safety, housing, and social service projects. CDBG funds may not be obligated to Activities that are documented to already have sufficient funding for the Activity as described, or that have identified multiple funding sources for the same costs, resulting in overfunding of the Activity. **CDBG funds must be "but-for" funding for every Activity and may not be used to supplant local or state resources**. CDBG grant funds cannot be used to replace funds that have been budgeted and/or

expended from another funding source for the same Activity (i.e., there cannot be any Duplication of Benefit.) Pre-agreement costs are generally eligible provided that the initial funding for those costs is identified as a temporary funding source (such as a loan from a local fund wherein the loan is float-funding the CDBG Activity pre-agreement costs, but such costs must be repaid so that the temporary loaned funds may be used as originally intended) and that the costs are budgeted to be part of the CDBG Activity.

F. Good Standing

The Applicant, and any co-Applicant, together with all respective affiliates, must be in good standing with the Department (i.e., are current on all loan and/or grant obligations, have a satisfactory past performance history in all their prior dealings with the Department, and are in full compliance with all Department contracts and reporting requirements). Applicants not meeting the foregoing requirements shall be ineligible to apply for or receive funding under this NOFA.

G. Racial Equity

Applicants should prioritize the advancement of racial equity in all CDBG programs and across systems and units of government in the Jurisdiction. The Department asks Applicants to be leaders in the community, facilitating partnerships among service organizations, housing providers, units of government, businesses, the homelessness response system, and other partners to promote racial equity practices.

All Applicants must identify the work performed to ensure racial equity in access to programs, projects, and activities funded with CDBG resources. Applicants must commit to analyzing disproportionality in access to housing, access to services, quality of service provision, and desired outcomes in Programs and Projects and affirmatively further equitable access, quality of service provision and outcomes for protected classes, including but not limited to Black, Native and Indigenous, Latino/Latina/ Latinx, Asian, Pacific Islanders, and other people of color who have been historically marginalized and are disproportionately impacted by housing segregation, poverty, and homelessness.

Applicants cannot simply rely on delivering a standardization of services to address equity. Applicants must commit to reviewing their current policies and procedures and examining available data to ensure all eligible persons receive equitable services, and support, and are served with dignity, respect, and compassion regardless of circumstances, ability, or identity.

When applying for 2024 CDBG funds, Applicants should consider:

1. What are the community's racial demographics and the demographics of those experiencing homelessness, housing, and economic insecurity?
2. What are the outcomes of the CDBG programs based on race? What are the requirements for all sub-grantees to look at data to determine racial disparities and then put a plan in place to address them?
3. How do underserved and marginalized communities learn about and access the CDBG program? What marketing and communication strategies are used to increase equitable access to CDBG programming?
4. How does the grant-making process include prioritization for programs that are addressing the disproportionate impacts that housing insecurity, homelessness, economic insecurity, lack of access to equitable health care, and COVID-19 has on communities of color, particularly Black, Latinx, Asian, Pacific Islander, and Native and Indigenous communities?
5. How are the voices of Black, Latinx, Asian, Pacific Islander, and Native and Indigenous communities and those having lived with the experience of housing insecurity, homelessness and economic insecurity being centered in a meaningful, sustained way in creating effective approaches to addressing these challenges? How are they involved in the funding decision-making process?
6. How are these funds accessible to smaller and non-traditional organizations that have historically been serving communities of color but may not have previously participated formally in government grant programs? How would these funds address the capacity of organizations that are led by Black, Latinx, Asian, Pacific Islander, and Native and Indigenous people?
7. At application, applicants should provide a list of organizations with which the jurisdiction has partnerships that are addressing racial equity in the housing and homelessness response system, the Economic Development sector, and the health care sector and describe how you partner with them.

The Department may require successful Applicants to submit related racial and ethnic data metrics of their CDBG programming on a **quarterly reporting basis.**

H. Homelessness Assistance

If you are seeking funding for homelessness assistance, generally defined as activities falling under matrix codes 03C or 03T, you must be a participating member of your local homelessness Continuum of Care (CoC). To demonstrate this, please submit a letter on CoC letterhead signed by the CoC coordinator that states that your jurisdiction is a participating member of the Continuum of Care.

I. Scoring

Qualifying Competitive Applications will be scored according to the evaluation

criteria outlined in Appendix F. Applications requiring the least number of corrections will score higher than applications needing corrections.

1. Community Need Score (Formerly known as Needs Score)
   Community Need Score use publicly available data from the U.S. Census Bureau's American Community Survey to measure poverty, housing, and ED needs. These statistics are used to rank all eligible Non-Entitlement Jurisdictions and the rankings are translated into numeric scores. The score summarizes the severity of a community's need for a specific Activity relative to other communities. The Department will prepare the Community Need Score and provides the scores as Appendix A to this NOFA.
2. Scoring (Formerly known as Activity Readiness Score)
   Activity readiness is an indicator of Applicant preparedness for Activity implementation. The Scoring Matrix is provided as Appendix F to this NOFA.
   i) Applicants are expected to have necessary contracts and subrecipient agreements in place at the time of application submittal. Fully executed contracts and agreements will score higher than draft contracts and agreements. Applicants that will not be using contracts or subrecipient providers to carry out the Activity and will instead use Applicant staff must clearly document that staff have the experience and capacity necessary to successfully complete the Activity. Documentation may include position description(s) for the identified staff, resumes, or Curriculum Vitae for each staff person involved in the implementation of the Activity, organizational chart, and estimated workload.

Qualifying Competitive Applications will be ranked based on highest score. Applicants will be notified of their point score and the Final Award List will be posted to the CDBG webpage.

J. Readiness

Housing and Economic Development Program applications must demonstrate readiness to be considered for funding. To be considered “ready,” a program will need to provide the following at application submission:

1. Draft or final program guidelines,
2. An underwriter either secured or a draft RFP/RFQ to be released within 60 days of Standard Agreement execution by the Department, and
3. A marketing plan/strategy.

VII. Application Submission

A. Workshops

The Department is conducting a series of both live and pre-recorded application

workshops. These workshops will include training on:

i) Resolutions: What is required and why
ii) Public Participation
iii) How to complete the correct level of Environmental Review
iv) How to pull a debarment check
v) How to pick the correct National Objective
vi) How to pick the correct Matrix Code
vii) How to write a narrative and milestones
viii) Single Audit
ix) How to address racial equity in your CDBG funded projects and programs
x) Completing the 2024 NOFA Application and Budget
xi) CDBG 2024 NOFA Review

Applicants are **required** to attend these workshop sessions. It is important to attend and engage in the live webinars to ensure a complete and accurate application is submitted. If they are unable to attend the live virtual workshop, Applicants must certify that they have reviewed these workshops on the CDBG website. The website also provides Training and Technical Assistance materials on the CDBG program, the CDBG Program Redesign, using Grants Network, and preparing a CDBG program application in Grants Network.

Excessive corrections may result in disqualification, or an application being reverted to draft to reapply. Please visit the Department's **website** for upcoming information.

B. Submission Process

Applicants must follow instructions in this NOFA, the online application, and the CDBG program Guidelines. The Department strongly encourages Applicants to have all required documents on hand when completing the application. Failure to follow instructions and timely submit all required documentation **will result in disqualification**. Once submitted, applications must stand on their own. It is the Applicant's responsibility to ensure that the submitted application is clear, complete, and accurate. Department staff may request clarifying information but are unable to accept any new documentation that would provide an unfair advantage over other applications. It is **strongly** recommended that all documents be reviewed and saved to their own electronic files PRIOR to submission.

The CDBG Application and all required attachments must be submitted to the Department through the **eCivis Portal**. Applicants must certify that all information is

true and complete to the best of their knowledge, under penalty of perjury. Per 83 FR 5848 "Any person who knowingly makes a false claim or statement to HUD may be subject to civil or criminal penalties under 18 U.S.C. §287, 1001 and 31 U.S.C. §3729.''

Applicants that do not have an account with the eCivis Portal should create an account through the eCivis website. Use the "Create an account" option to initiate a profile. See the available training on the CDBG webpage to learn how to open an account. There is no cost associated with an eCivis Portal account.

A complete application consists of one Main Application **and** **at least** one Sub Application. Failure to submit a Main or a Sub Application will be considered an incomplete application. Incomplete applications **WILL NOT** be reviewed. We recommend reaching out to your CDBG representative or CDBG@hcd.ca.gov for confirmation of receipt.

C. Applicant Responsibility

It is the duty and responsibility of each Applicant to review the provisions, requirements, and limitations of all funding sources applied for and obtained for a particular project, program, or activity to ensure that each and every requirement of those funding sources is compatible with all Department program requirements and restrictions. Incompatibility of funding sources may result in the denial or cancellation of an award or may result in the placement of conditions or limitations on an award, all as determined by Department in its sole and absolute discretion.

D. Disclosure of Application

Information provided in the Application will become public record available for review by the public pursuant to the California Public Records Act (GC §7920, et. seq). As such, the Department may disclose any materials provided by the Applicant to any person making a request under this Act, without prior notice to the Applicant. The Department cautions Applicants to use discretion in providing information not specifically requested, including, but not limited to, bank account numbers, personal phone numbers, home addresses, or other personally identifying information (PII). By providing this information to the Department, the Applicant is waiving any claims of confidentiality, and consents to the Department's disclosure of the Applicant's material upon receipt of a Public Records Act request and without advance notice to the Applicant.

VIII. Application Review

All applications submitted by the application deadline (Competitive Applications) or

until funds are exhausted (OTC Applications) that pass the Threshold evaluation phase will be reviewed for Activity eligibility. Activities that do not meet program eligibility requirements will be disqualified for funding.

The Department reserves the right, at its sole discretion, to suspend, amend, or modify the provisions of this NOFA at any time, including, without limitation, the amount of funds available hereunder. This includes, but is not limited to, authorizing an eligible increase in funding to any Applicant after the Department makes an award under this NOFA.

A. Review Process

1. OTC Applications
    i) Applications will be reviewed in the order received for minimum Threshold Requirements.
    ii) If an application meets the minimum Threshold Requirements, funds may be allocated for an award.
    iii) Once all funds are allocated and the Department has announced that all funds have been exhausted, additional OTC Applications may not be reviewed.
2. Competitive Applications
    i) All applications will be reviewed for minimum Threshold Requirements as outlined in this NOFA.
    ii) Applications that meet minimum Threshold Requirements will be scored as outlined in Appendix F - CDBG Scoring Matrix.

IX. Award Recommendations

Applications that are eligible, complete, timely submitted, and that satisfy all threshold requirements may be recommended for funding, subject to the availability of funds for the activity(ies) applied for. Applicants recommended for award will officially be notified of awards via an award letter sent via email. Subsequently, the grantee will receive award notification through the eCivis Grants Network. The award notification will include instructions for accepting or declining the award, as well as an executable Standard Agreement. Applicants that are not recommended for awards or that fail threshold will be officially notified via email that their application was not awarded or failed to pass threshold. The Final Award List will be posted on the Department's CDBG webpage. Applicants may request a copy of their application reviews after the review has been completed and the Applicant has been notified of the results.

X. Appeal Criteria and Process

Any request to appeal the Department's decision regarding an application shall be reviewed for compliance with the Guidelines and the NOFA. All decisions rendered shall be final, binding, and conclusive, and shall constitute the final action of the Department.

The Department will provide opportunity to appeal any disagreed points assessment, pursuant to the appeals process as set forth in the NOFA. Disqualifying threshold determinations shall also follow a similar process, which shall be set forth in greater detail in the NOFA. For reference, all such appeals must be received by the Department no later than five (5) business days from the date of the Department's threshold review, and/or initial score letter, as applicable, representing the Department's decision made in response to the application.

A. Competitive Application Appeals

1. Basis of Appeals
    i) Applicants may appeal HCD's written determination that an application is incomplete, has failed threshold review, or has otherwise been determined to provide an insufficient basis for an award (including point scoring and tie breaker).
    ii) At the sole discretion of the Department, the Department's written determination may include a request for clarifying and/or corrective information. For purposes of this section, "clarifying information" includes information and/or documentation that resolves ambiguities in any application materials that will inform the Department's threshold, scoring, and feasibility determinations.
    iii) No Applicant shall have the right to appeal a decision of HCD relating to another Applicant's application (e.g., eligibility, award).
    iv) Any request to appeal HCD's decision regarding an application shall be reviewed for compliance with the Guidelines and this NOFA. All decisions rendered shall be made by the Program Manager or his/her designee. The decision shall be final, binding, and conclusive, and shall constitute the final action of HCD.
    v) The appeal process provided herein applies solely to decisions of HCD made pursuant to this NOFA.
2. Process
    i) To file an appeal, Applicants must submit to HCD, by the deadline set forth below, a written appeal which states all relevant facts, arguments, and evidence upon which the appeal is based. Furthermore, the Applicant must provide a detailed reference to the area or areas of the application that provide clarification and substantiation for the basis of the appeal. No new or additional

information will be considered if this information would result in a Competitive advantage to an Applicant. Once the written appeal is submitted to HCD, no further information or materials will be accepted or considered thereafter. Appeals are to be submitted to HCD at cdbg@hcd.ca.gov according to the deadline set forth in HCD review letters.

3. Filing Deadline
    i) Appeals must be received by HCD no later than five (5) business days from the date of HCD's threshold review, or initial score letters, as applicable, representing HCD's decision made in response to the application.

B. OTC Application Appeals

1. Basis of Appeals
    i) Applicants may appeal HCD's written determination that an application is incomplete, has failed threshold review, or has otherwise been determined to provide an insufficient basis for an award.
    ii) At the sole discretion of HCD, the HCD's written determination may include a request for clarifying and/or corrective information. For purposes of this section, "clarifying information" includes information and/or documentation that resolves ambiguities in any application materials that will inform HCD's determinations.
    iii) No Applicant shall have the right to appeal a decision of HCD relating to another Applicant's application (e.g., eligibility, award, etc.)
    iv) Any request to appeal HCD's decision regarding an application shall be reviewed for compliance with the Policies and Procedures and this NOFA. All decisions rendered shall be made by the Program Manager or his/her designee. The decision shall be final, binding, and conclusive, and shall constitute the final action of HCD.
    v) The appeal process provided herein applies solely to decisions of HCD made pursuant to this NOFA.
2. Process
    i) To file an appeal, Applicants must submit to HCD, by the deadline set forth below, a written appeal which states all relevant facts, arguments, and evidence upon which the appeal is based. Furthermore, the Applicant must provide a detailed reference to the area or areas of the application that provide clarification and substantiation for the basis of the appeal. No new or additional information will be considered if this information would result in a Competitive

advantage to an Applicant. Once the written appeal is submitted to HCD, no further information or materials will be accepted or considered thereafter. Appeals are to be submitted to HCD at cdbg@hcd.ca.gov according to the deadline set forth in HCD's written determination letters.

3. Filing Deadline
   i) Appeals must be received by HCD no later than five (5) business days from the date of HCD's written determination letter made in response to the application.

XI. Awards Announcement and Grant Implementation

A. Awards Announcements

The Department anticipates awards will be announced no later than May 2025. OTC awards will be announced on a rolling basis as applications are recommended for funding until funds are exhausted. All awards are subject to availability of funds and compliance with all applicable legal requirements of the Program. Until all awards are announced, the CDBG staff will not be able to discuss applications or the status of applications.

B. Standard Agreements

Successful Applicants (awardees) will enter into a Standard Agreement with the Department. A draft, sample Standard Agreement is included as Appendix E to this NOFA. The Standard Agreement contains all the relevant state and federal requirements, Activity performance and management requirements, and disbursement requirements. The form and content of the sample draft Standard Agreement is subject to revision without prior notice. A condition of award will be that a Standard Agreement must be executed by the awardee within 30 days (contracting period) of the awardee's receipt of the Standard Agreement(s). Failure to execute and return the Standard Agreement(s) to the Department within the contracting period may result in award cancellation. Award cancellations are final.

Funding awarded through this NOFA will have a 33-month (two (2) years and nine (9) months) expenditure and liquidation period.

To ensure that the Standard Agreement(s) are being sent to the correct individual, **Applicants MUST complete ALL required sections of the profile section of the application and must let the Department know in writing if the contact information has changed since the time of application submittal by emailing** cdbg@hcd.ca.gov. Standard Agreements and communication during this process will be with the email address designated in the profile section of the Application.

XII. Federal Program Requirements

A. Federal Cross-Cutting Requirements

The CDBG program is administered under the rules and regulations promulgated primarily in **24 CFR §570.600, et seq.** These primary regulations are known as the federal cross-cutting requirements and form the basis of the programmatic requirements. The Department incorporates all federal cross-cutting requirements into the state CDBG program, and the regulations in Part 570 are translated into required actions on the part of all Grantees of the state CDBG program.

The following is a list of some of the most commonly applicable federal cross-cutting requirements. This is not an exhaustive list.

i) Environmental Standards (based on National Environmental Policy Act of 1969 [NEPA])
ii) Labor Standards (Davis-Bacon and related laws)
iii) Achieving a HUD National Objective
iv) Public participation requirements
v) Fair Housing and Affirmatively Furthering Fair Housing
vi) Equal Opportunity and Non-Discrimination in federal Grant Programs
vii) Federal Procurement Guidelines
viii) National Flood Insurance Program compliance
ix) Relocation and displacement requirements
x) Employment and Contracting Opportunities Section 3 Compliance
xi) Lead-based paint requirements
xii) No use of debarred, ineligible, or suspended contractors or sub-recipients
xiii) Uniform Administrative Requirements and Cost Principles
xiv) Conflict of interest prohibitions
xv) Compliance with the Architectural Barriers Act and the Americans with Disabilities Act
xvi) Compliance with Eligibility Restrictions for certain resident aliens
xvii) Federal reporting requirements
xviii) Grant and subrecipient monitoring requirements
xix) Build America, Buy America Act (BABA) requirements

B. Build America, Buy America Act (BABA)

On November 15, 2021, the Build America, Buy America Act (the Act) was enacted as part of the Infrastructure Investment and Jobs Act (IIJA). **Pub. L. 117-58**. The Act establishes a domestic content procurement preference, the BAP, for federal programs that permit federal financial assistance to be used for infrastructure projects. In Section 70912, the Act further defines a project to include "the construction, alteration, maintenance, or repair of infrastructure in the United States" and includes within the definition of infrastructure those items traditionally included along with buildings and real property.

Starting May 14, 2022, new awards of Federal financial assistance from a program for infrastructure, as defined below, and any of those funds obligated by the grantee, are covered under the Build America, Buy America (BABA) provisions of the Act, **41 U.S.C. 8301**. Note, while HUD has issued a waiver of the application of the BAP through HUD's Notice, "General Applicability Waiver of Build America, Buy America Provisions as Applied to Recipients of HUD Federal Financial Assistance" (**87 FR 26219**), HUD will begin requiring compliance with BAP for all new funds obligated on or after November 14, 2022, unless covered by a subsequent waiver. Additional details on fulfilling the BABA requirements can be found on **HUD's website Build America, Buy America (BABA)**.

The following should be included in all contracts and agreements with Subrecipients, contractors, developers and subgrantees, and in any procurement bid/contract documents to ensure BABA compliance by subgrantees, developers and/or contractors:

> The parties to this contract must comply with the requirements of the Build America, Buy America (BABA) Act, **41 U.S.C. 8301** note, and all applicable rules and notices, as may be amended, if applicable to the Grantee's infrastructure project.* Pursuant to HUD's Notice, "Public Interest Phased Implementation Waiver for FY 2022 and 2023 of Build America, Buy America Provisions as Applied to Recipients of HUD Federal Financial Assistance" (88 Financial Report 17001), any funds obligated by HUD on or after the applicable listed effective dates, are subject to BABA requirements, unless excepted by a waiver.
>
> *The term "infrastructure project," in this context, is defined in **2 CFR 184.3** and means any activity related to the construction, alteration, maintenance, or repair of infrastructure in the United States regardless of whether infrastructure is the primary purpose of the project.

C. Relocation Plan Requirements

Applicants engaging in project-specific activities that may or will cause the temporary or permanent relocation and displacement of persons, property, or businesses must

provide a project-specific relocation plan as part of the application. The plan must meet the standards established in the **Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (URA**) and any applicable State relocation requirements. Applicants must successfully demonstrate that they have met URA requirements prior to the start of the project or displacement Activity. Applicants must include relocation costs in project budgets.

Applicants must provide relocation assistance to persons who may be displaced if the Activity in the grant application is funded. This plan must outline how the Grantee will enforce and manage the project's relocation and displacement activities and estimate what relocation benefits will be required so those costs can be included in the project's development budget.

D. Procurement Requirements

Pursuant to **24 CFR §570.489(g),** all Grantees must comply with federal procurement requirements. The Department will review the Grantee's procurement documents for services (*i.e.*, administrative sub-contractor, Davis-Bacon consultant, etc.) at time of monitoring or upon the Grantee's request.

Requirements for federal procurement can be found at **2 CFR §200.317-327**. Applicants are responsible for meeting all federal procurement standards for goods and services funded through federal programs. Failure to meet procurement requirements may result in disqualification, recapture of federal funds, and debarment.

E. False, Fictitious or Fraudulent Claims

Warning: Any person who knowingly makes a false claim or statement to HUD or the Department may be subject to civil or criminal penalties under **18 U.S.C. §287, 1001** and **31 U.S.C. §3729**.

1. Detecting, Preventing, and Reporting Fraud

   Fraud is a white-collar crime that has a devastating effect on the CDBG program because the CDBG program beneficiaries are victims of this crime when the CDBG program is abused. The Department wants to stop any criminal assault on the CDBG program it administers, and in doing so all CDBG funds go to people it was designed to help and improve their living conditions.

2. Combatting Fraud

   The HUD Office of Inspector General (OIG) is committed to protecting HUD's programs, operations, and beneficiaries from dishonest individuals and organizations.

   HUD cannot combat fraud alone; they rely on Department and CDBG NOFA Applicants to combat CDBG program fraud. HUD also relies on Applicants for,

and people receiving, HUD benefits, such as: tenants receiving rental assistance, borrowers with HUD insured loans, or citizens having their communities restored using HUD grants.

The HUD OIG Hotline number is **1-800-347-3735**. This is the primary means to submit allegations of fraud, waste, abuse, mismanagement, or Whistleblower related matters for the CDBG program to the OIG.

HUD OIG accepts reports of fraud, waste, abuse, or mismanagement in the CDBG program from HUD employees, anyone administering the CDGB program, anyone working in the CDBG program, contractors, and the public. You can report mismanagement or violations of law, rules, or regulations by HUD employees or program participants.

Fraud, Waste and Abuse in the CDBG program and its operation may be reported in one of the following four (4) ways:

i) **By email**:
hotline@hudoig.gov

ii) **By phone**:
Call toll free: 1-800-347-3735

iii) **By fax**:
202-708-4829

iv) **By mail:** Department of Housing & Urban Development

HUD OIG, Office of Investigation, Room 1200
Field Office
One Sansome Street
San Francisco, CA 94104
(213) 534-2518

HUD OIG, Office of Investigation
Suite 4070
Regional Office
300 North Los Angeles Street
Los Angeles, CA 90012
(213) 534-2518

F. Whistleblower Protection Acts

(Federal Whistleblower Protection Act (**5 U.S.C Section 2302(b)(8)**)

The Federal Whistleblower Protection Act (WPA) protects employees from retaliation for making protected disclosures. The WPA also provides penalties for supervisors who retaliate against Whistleblowers.

1. A disclosure is protected under the WPA if the employee discloses information the employee reasonably believes to be evidence of:
    i) a violation of any law, rule, or regulation,
    ii) gross mismanagement,
    iii) a gross waste of funds,
    iv) an abuse of authority, or
    v) a substantial and specific danger to public health or safety.
2. In general, an employee or Applicant may make a protected disclosure to anyone, including non-governmental audiences, unless the information is classified or specifically prohibited by law from release. Options for making a protected disclosure include:
    i) Informing a supervisor or someone higher up in management,
    ii) Submitting a complaint to the OIG by emailing the OIG at oig@ftc.gov,
    iii) Filing a complaint with the Office of Special Counsel (OSC) http://www.osc.gov/

G. The California Whistleblower Protection Act

The California Whistleblower Protection Act (Title 2, Division 1, Chapter 6.5, Article 3.5, Gov. Code §§ 8548-8548.5) authorizes the California State Auditor to receive complaints from state employees and members of the public who wish to report an improper governmental activity. An "improper governmental activity" is any action by a state agency or any action by a state employee directly related to state government that:

i) Violates any state or federal law or regulation,
ii) Violates an Executive Order of the Governor, a California Rule of Court, or any policy or procedure required by the State Administrative Manual or State Contracting Manual, or
iii) Is economically wasteful or involves gross misconduct, incompetency, or inefficiency. Complaints received by the State Auditor are confidential, and the identity of the complainant may not be revealed without the complainant's permission, aside from to an appropriate law enforcement agency conducting a criminal investigation.

There are many ways to file a complaint:

i) **By Telephone**:
You may call the Whistleblower Hotline at (800) 952-5665 to file a complaint by talking to one of the State Auditor's employees. The hotline generally is staffed

Monday through Friday from 8:00 a.m. to 5:00 p.m. If you call when the hotline is not being staffed, or staff is occupied with other calls, you may leave a voicemail message requesting a return call.

ii) **By Mail or Facsimile**:
You may file a complaint in the form of a letter to the State Auditor addressed as follows:

Investigations
California State Auditor
P.O. Box 1019
Sacramento, CA 95812

Or you may **fax** the letter to the State Auditor at (916) 322-2603.

iii) As an alternative, you may complete the electronic version of the complaint form (which is available on the State Auditor website at auditor.ca.gov), print it out, and return it by mail or facsimile as stated above.

iv) **Online**:
Although the State Auditor does not accept complaints by e-mail, you may file a complaint online at
https://app.scoutcms.com/CaStateAuditorWhistleblowerComplaint

v) The State Auditor will not undertake an investigation unless there is a basis for believing that your complaint has sufficient merit to warrant spending resources on an investigation. Your complaint should therefore include:

a. A clear and concise statement of what you Compare alleging to be improper activity and why you believe it is improper.

b. The name or other information that clearly identifies the person you are alleging has acted improperly and the department where that person works.

c. The names and contact information for any witnesses who can confirm the truth of what you are saying.

d. Copies of any documents that will support what you are saying. (You should not submit original documents, as they cannot be returned.)

XIII. LIST OF APPENDICES

Appendices are located in the eCivis Grants Network under the 'Files' tab on within each specific program solicitation.

Appendix A: Community Need Score

Appendix B: Housing Element and Growth Control Requirements

Appendix C: Resolution Template of the Governing Body

Appendix D: 2024 CDBG Application Certifications and Statement of Assurances

Appendix E: Sample DRAFT Standard Agreement

Appendix F: 2024 CDBG Scoring Matrix

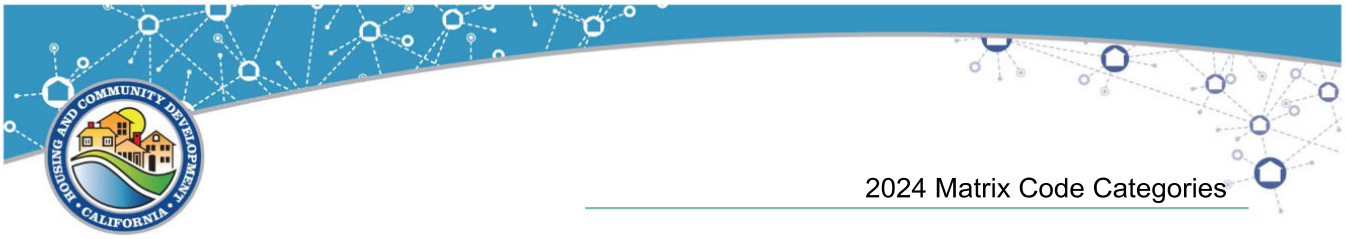
Appendix G: General Admin Calculator

2024 Matrix Code Categories

Competitive Applications

Public Service

- 03T - Operating Costs Homeless/AIDS Patients
- 05A - Senior Services
- 05B - Services for Persons with Disabilities
- 05C - Legal Services
- 05D - Youth Services
- 05E - Transportation Services
- 05F - Substance Abuse Services
- 05G - Services for Victims of Domestic Violence, Dating Violence, Sexual Assault, or Stalking
- 05H - Employment Training
- 05I - Crime Awareness
- 05J - Fair Housing Activities
- 05K - Tenant/Landlord Counseling
- 05L - Child Care Services
- 05M - Health Services
- 05N - Abused and Neglected Children
- 05O - Mental Health Services
- 05P - Screening for Lead Based Paint/Lead Hazards
- 05Q - Subsistence Payments
- 05T - Security Deposits
- 05V - Neighborhood Cleanups
- 05W - Food Banks
- 05Z - Other Public Services Not Listed in 05A-05Y
- 14J - Housing Services, excluding Housing Counseling, Supporting HOME Program
- 14K - Housing Counseling, Supporting HOME Program



Planning

- 20A - State Planning-only

Over-the-Counter Applications

Housing Program

- 13A - Housing Counseling
- 13B - Homeownership Assistance - excluding Housing Counseling
- 14A - Rehab: Single-Unit Residential
- 14F - Rehab: Energy Efficiency Improvements
- 15 - Code Enforcement

Economic Development Program

- 18A - ED Assistance to For-Profits
- 18B - Economic Development: Technical Assistance
- 18C - Micro-Enterprise Assist.

Projects

- 01 - Acquisition of Property
- 03A - Senior Centers
- 03B - Handicapped Centers
- 03C - Homeless Facilities not operating costs
- 03D - Youth Centers
- 03E - Neighborhood Facilities
- 03F - Parks, Recreational Facilities
- 03G - Parking Facilities
- 03H - Solid Waste Disposal Improvements
- 03I - Flood Drainage Improvements
- 03J - Water/Sewer Improvements
- 03K - Street Improvements
- 03L - Sidewalks
- 03M - Child Care Centers

- 03N - Tree Planting
- 03O - Fire Stations/Equipment
- 03P - Health Facilities
- 03Q - Facilities for Abused and Neglected Children
- 03R - Asbestos Removal
- 03S - Facilities for AIDS Patients (not operating costs)
- 03Z - Other Public Improvements Not Listed in 03A-03S
- 04 - Clearance and Demolition
- 14B - Rehab: Multi-Unit Residential
- 14D - Rehab: Other Publicly Owned Residential Buildings
- 14E - Rehab: Publicly or Privately Owned Commercial/Industrial
- 14G - Rehab: Acquisition
- 16A - Residential Historic Preservation

Agenda Report to the City Council

Agenda Section: NEW BUSINESS

Department: Human Resources

DATE:	October 8, 2024
FROM:	Mandy Kellogg, Administrative Services Director
SUBJECT:	Discussion Regarding Existing and Potential Shared Services with Napa County Agencies, and Presentation from Center for Public Safety Management (CPSM) of the Analysis of Fire and Emergency Medical Services (EMS).
RECOMMENDED ACTION:	Receive and file.
PREVIOUS COUNCIL ACTION:	Resolution 2023-59: Execution of a Professional Services Agreement with CPSM to perform and analysis of fire and emergency medical services for the City.
STATEMENT OF THE PURPOSE:	To provide an update of exploration of shared services with Napa County governmental agencies and receive a report from CPSM regarding Fire services.
FINANCIAL IMPACT:	There is no financial impact associated with this report.

BACKGROUND:

Shared services between government agencies involves the consolidation and centralization of functions, resources, and operations to improve efficiency, reduce costs, and enhance service delivery. Shared services can enable agencies to access specialized expertise that they may not have in-house. By leveraging the skills and knowledge available in a shared service model, agencies can offer services that would otherwise be beyond their capabilities. This not only broadens the range of services that can be provided but also enhances the quality and effectiveness of operations.

The size of the city limits the range of skills and expertise that can be obtained internally and therefore, in addition to the above, the city routinely uses a variety of private firms to provide services or augment City staff. For example, all road paving is performed by private firms, sports games are refereed by contractors, and several firms provide Planning and Community Engagement services, etc.

Challenges can arise with shared services. Transitioning to shared services model can be complex, require significant planning and coordination, and require effective change management strategies to assist with adapting to new systems, processes, and organization structures. Therefore, before implementing a shared service model, it is crucial to conduct a thorough evaluation to ensure that it meets the needs of the organization and is viable in practice. Thoroughly evaluating the shared service model ensures that the organization is making a well-informed decision that will bring tangible benefits without compromising service quality.

The table below provides a summary of the City's existing shared services.

Function	Agency	Description
Dispatch - Fire	Cal-Fire	Fire and emergency dispatch services.
Dispatch - Police	City of Calistoga	St. Helena Dispatch services are currently co-located at the City of Calistoga on a temporary basis.
Fire Protection	Napa County	St. Helena provides services to the County for areas adjacent to the city limits.
Housing	City of Napa Housing Authority	Affordable housing services.
Stormwater	Napa County Flood Control & Water Conservation District	Controls flood and storm waters in Napa County.
Benefits and Risk Management	California Intergovernmental Risk Authority (CIRA)	Risk management, workers compensation, and benefits programs.

At the direction of the City Council and consistent with the Council Goals #5 - Enhance Quality of Life for residents and Goal 7 Optimize Organizational Effectiveness, staff has been exploring shared service models for several departments, including Police, Fire, Administrative Services (Human Resources), Community Services (Library and Parks & Recreation), and Public Works (Water-Wastewater). The goal in doing so is to improve the quality of services, create efficiencies, and potentially even reduce the cost of services to the community. Likewise, staff continually seeks ways to break down departmental silos to increase collaboration, innovation, and staff morale.

Fire services are very important to all communities and especially ours since we are in a region that is prone to fires with several portions that are considered Wildland Urban Interface (WUI). The county has several fire agencies, and a Cal-Fire station located approximately 4 miles to the north of the City, provides fire services to the County. The Cal-Fire station has a robust staffing component and considerable fire suppression assets. The City of St. Helena has had a very active and beloved volunteer firefighting force and since 2016 has steadily transitioned to a full-time fire department. Therefore, the cost of providing fire services to the community from the City's General Fund has gone from approximately $582,000 in FY 2015-16 to approximately $2.9 million annually, when the City brought on board 6 full-time firefighters and 6 full-time equivalent part-time firefighters from 2018 to 2021 to staff shifts and provide round-the-clock fire protection services. This change was driven by the post-fires-realization that the community needed more consistent and stable staffing for fire protection. Staffing and therefore services had to be cut in several other departments to accommodate the cost increase.

In 2023, the City entered into its first labor agreement with its professional firefighters. It was therefore prudent to evaluate the City's fire service delivery model along with other city services.

DISCUSSION:
In 2023, at the direction of the City Council, staff began to undertake an evaluation of various City services to determine if a different delivery model would enable the City to provide better services to the community - and potentially at a lower cost. The following is a summary of the outcome of the evaluation process:

Library Services
Given the public comments of some residents, the idea of contracting with the county for library services was appraised for its viability and quickly dismissed in favor of exploring more localized consolidation to enhance service quality. Staff arrived at that conclusion because contracting with the county would not eliminate or reduce staffing costs for the St. Helena library. While the City would benefit from the county's broad as well as specialized expertise, the City already has access to similar resources through consortium memberships. Even if the City chose to contract with the county, it would still need to reimburse the county for staffing and managing the library. Additionally, the City would remain responsible for maintaining the physical building, equipment, online services, and materials.

Instead of contracting out library services to the county, when the opportunity presented itself, staff began exploring an internal consolidation. In many communities, library operations have been merged with that of other functions and the City Manager had personally been involved in different stages of consolidations in other cities (Beverly Hills, San Rafael, and Richmond). Since it had been effective for these agencies and many others, it would seem to be even more logical and pragmatic for a significantly smaller city. Over many months staff participated in an engagement process and sought input from various stakeholders including the Library Board, the Friends and Foundation, the Parks and Rec Commission, City staff, and other resident groups. Staff's initial analysis showed that while the consolidation would not save the City money, the potential for improvements in the delivery of services was high. On March 26, 2024, the City Council gave its approval for the formation of a new department initially to be called the Department of Community Services as an umbrella for several functions including library, parks and recreation, grants, and communications. With the hire of a Deputy Director of Community Services – Library, it is estimated that the consolidation will save approximately $11,000 for the current Fiscal Year.

Human Resources
The City has not had sufficient monies to fund the HR Manager position and therefore that position has been frozen. So, currently the role of an HR Manager is primarily performed by the Director of Administrative Services. Since she has other responsibilities, she does not have the capacity to perform all the duties encompassed

by the HR Manager role. Therefore, staff began to procure specialized services from Regional Government Services (RGS) including recruitment assistance and disability and leaves management. Additionally, the City explored the cooperating with neighboring cities for the services of a HR Director. Unfortunately, the cost of even partially funding a HR Director position at another city was too high and it was deemed to be unaffordable relative to other needs. At this time the City has agreed to collaborate with the City of Napa, Napa County, and other cities in the county on contributing to a county-led comprehensive training and staff development program.

Water Treatment Plant Management and Staffing

For several years, the City has had difficulty in filling positions to support the water treatment operations; this along with general underinvestment are the root causes of many problems experienced by the water enterprise. The classifications are specialized with strict state-mandated certification requirements. This means that there are very few individuals who qualify for these critical positions. This is compounded by the City's geographic location, cost of living, and comparatively low compensation scales. As a result, the City has been using the services of Operational Technical Services (OTS) professionals to serve at the City's water treatment plant. While obtaining qualified personnel from external sources was necessary, it is not sustainable because of the significantly higher cost. The City therefore explored contracting with neighboring cities for the management and staffing of the water treatment function to no avail. Therefore, the City increased the compensation by 14.2% for the Plant Operators and 20.4% for the Chief Plant Operator classifications and conducted more aggressive marketing efforts, including a direct mail campaign that targeted certified individuals throughout the state. As a result of these efforts, the Water Treatment Division is finally fully staffed. The City also increased the compensation by approximately 9.0% for the Underground Utility classifications. The position of the Underground Utilities Superintendent remains vacant despite conducting several rounds of recruitment. Consequently, staff will be pursuing filling the vacancy temporarily with an OTS professional.

Wastewater Treatment Plant Management and Staffing

Similar to the experience in the water treatment operations, the City, because of various constraints listed above including low compensation rates, has been unable to fully staff the wastewater treatment function. Over the last few years, the City has augmented its staff with professionals from OTS especially for the provision of Chief Plant Operator (CPO) services. As mentioned earlier, this is fiscally unsustainable, and staff has explored alternate models including seeking the assistance of neighboring agencies. The City is open to exploratory discussions with a nearby agency for contract services.

Police Services

Similar to library services, some community members believe that the Sheriff's Department could provide better and much cheaper alternative to having an independent police department. That is incorrect. Staff communicated with the Sheriff's Department and reviewed a report prepared for the City of Calistoga by the Matrix Consulting Group, as part of the police services evaluation process. Staff concluded that, while contracting with the Sherriff's Department for police services is viable, it

would not have saved the City any money. Further the City's residents, businesses, and visitors would in effect have a lower level of service since the law enforcement personnel assigned to the City would also be responsible for coverage outside the City and may not be able to respond as quickly to developing events within the City as they do now. So, even though the City could be an integral part of a larger police agency, the fact that the City can already tap those resources when needed negated any need to have the Sheriff's Department take over police services in St. Helena.

While staff continues to believe the current model serves the City well, we also believe that at some point, the cities of Calistoga and St. Helena may want to explore a comprehensive consolidation of police functions. This is because the police departments of the two cities have a long tradition of supporting each other and cooperating on public safety matters and there are practical considerations as well.

Having a larger Upvalley police force under a unified command will provide for greater specialization, enhanced training, and better growth opportunities (and therefore greater retention of high performers). A larger and well-rounded Upvalley police force will enhance the ability of police to respond to the wider scope of issues that police departments face today compared to say 50 years ago. A consolidation has the potential of benefiting and improving the quality of life for residents in both communities. That said, the challenges of any such consolidation should not be underestimated. It will require open dialogue with residents in both communities on the merits of even exploring such a major change (we have learnt lessons from the experience of consolidating the library under the Community Services umbrella). There would need to be a clear understanding of the goals, benefits, as well as downsides of any such consolidation. Stakeholders would need to be brought into the process right from the start, especially the unions representing employees in both cities, and a cost analysis and feasibility study would need to be undertaken. Most importantly, the members of City Council for Calistoga and St. Helena along with the City's managers will need to be open to the value of such a merger. Given the complexities and challenges of such an endeavor, staff is not recommending that the city explore a consolidation at this time.

Police Dispatch

When the City moved its City Hall and Police Department to the current location at the Napa Valley College site in early 2023, dispatch staff had to also be moved from the old city hall site on Main Street. However, it was deemed prudent to not locate them to the new city hall because the site lacked a backup generator which is considered important and previously was required by state rules. The City of Calistoga graciously agreed to host the dispatch staff. The City of Calistoga Police Chief and City Manager worked hard and expended great effort to ensure that our dispatch staff were welcomed, comfortable, and integrated into their operations. The temporary measure was subsequently deemed successful enough to warrant the leadership in the two cities to consider a longer-term agreement and even full consolidation of the dispatch services. In a cautionary example, despite the best efforts of executives in both cities, and despite transparent negotiations with the respective unions, the parties were not able to

construct an agreement that would derive savings and a guarantee of enhanced services. So, the parties chose to abandon the effort and stay with the current temporary mode. It should be noted that this does not preclude some other form of collaboration and/or consolidations with Calistoga or another public agency in the future.

Fire Services

On June 13, 2023, City Council approved a Professional Services Agreement with CPSM to perform an analysis of the City's Fire and EMS. The CPSM team conducted an extensive analysis of the Fire and EMS operational functions, which included the following:

- Examination and analysis of the factors that enhance/impact the department's current service delivery model.
- Examination and analysis of operational guidelines and their connection to the current service delivery model.
- Discussion of the organization's strengths, weaknesses, opportunities, and threats as it relates to deployment of resources and response times.
- Analysis of Fire Management Zones.
- Analysis all-hazards that will lead to the completion of a Community Risk Assessment.
- Analysis of Standard of Cover Concepts.
- Exploration and analysis of various mission driven specialty fire protection and other response duties such as EMS ground transport, emergency management operations, and technical rescue.

In addition, CPSM was tasked with providing recommendations that the City may consider in changing its current independent Fire and EMS delivery system to an alternative model, either through contracting with an outside agency for these services or considering a public safety model, which utilizes a combined service force in which personnel are trained in providing both fire and law enforcement services through a single agency.

CPSM analyzed performance data provided by the St. Helena Fire Department (SHFD) and also conducted examinations of the department's operations, while comparing to benchmarks that have been developed by organizations such as the National Fire Protection Association (NFPA), Center for Public Safety Excellence, Inc. (CPSE), the ICMA Center for Performance Measurement, as well as others.

The SHFD operates from a single station and the department is composed of both career personnel and part-time employees. The results of the study showed that while the Fire Department is a relatively small organization with limited resources, it is highly proficient in managing its workload. The Fire Department relies heavily on the recall of off-duty personnel, its part-time workforce, and its mutual aid partners (primarily from neighboring agencies) in meeting service demands. The Fire Department works closely

with AMR, a county-contracted private EMS agency, which provides advanced life support (ALS) services and ambulance transports throughout the county. However, as a small agency with limited resources, the Fire Department must interact seamlessly with a multitude of neighboring agencies to provide the appropriate protections to the community, area businesses, and the many tourists who visit the area.

In order to determine the effectiveness of the City's existing fire services model, CPSM reviewed alternative services models that included the following:

1. Contract Services with CAL-Fire
2. Contract Services with County of Napa
3. Public Safety Model (joint police and fire department)

The following table provides a cost summary to provide Public Safety services (Fire and Police) under the different models evaluated. It should be noted that the numbers below are now dated since they were originally collected in early 2023 and since then there have been leadership changes at Napa County and at Cal-Fire. Additionally, new labor Memorandums of Understanding (MOUs) have gone into effect, which will necessarily affect the cost. However, the general magnitude of the costs continues to be relevant for evaluation purposes at this point on time.

Description	Fire Cost	Police Cost	Total Cost
Existing Fire & Police Model	$2.69 M	$4.49 M	**$7.18 M**
Projected CAL-Fire Contract	$2.48 M	$4.49 M	**$6.97 M**
Projected Napa County Contract	$2.44 M	$4.49 M	**$6.93 M**
Projected Public Safety Model	$6.29 M		**$6.29 M**

As the above summary shows, the current model is slightly more expensive than contracting with the County of Napa or directly with Cal-Fire. Even though the above analysis indicates that there is potential for saving approximately $1 million per year on fire services by creating a Public Safety (cross-trained police and fire personnel), doing so would be a multiyear and highly complicated endeavor and will likely generate significant community concern. For those reasons, staff is recommending that the City stay with its current model of delivery for fire services. It should be noted that the current model and staff's recommendation to stay with the current model is predicated upon the use of part-time employees who staff one-third and sometimes two-thirds of some shifts. In other words, if the City were to explore adding a third full-time employee to the three-person fire shift, staff would recommend a reevaluation of the City’s options with the goal of delivering better and more efficient services to the community. This was underscored by CPSM as noted below.

After evaluating the City's existing fire services model compared to other service models, CPSM determined that the City's existing fire services model was effective through the use of career and part-time firefighters. In addition, CPSM provided a list of recommendations to help support the City in fulfilling its mission in providing both emergency and nonemergency response.

ENVIRONMENTAL REVIEW: None.

GOAL:

Goal 5: Enhance Quality of Life
Goal 7: Enhance Organizational Effectiveness



CITY OF ST. HELENA
SHARED SERVICES DISCUSSION

October 8, 2024



1	2	3	4	5
Access to Specialized Services	Broader Range of Services	Enhanced Quality of Operations	Cost Efficiency	Improved Focus on Organization

UNDERSTANDING SHARED SERVICES



Complexity of Transition

Resistance to Change

Need for Thorough Evaluation

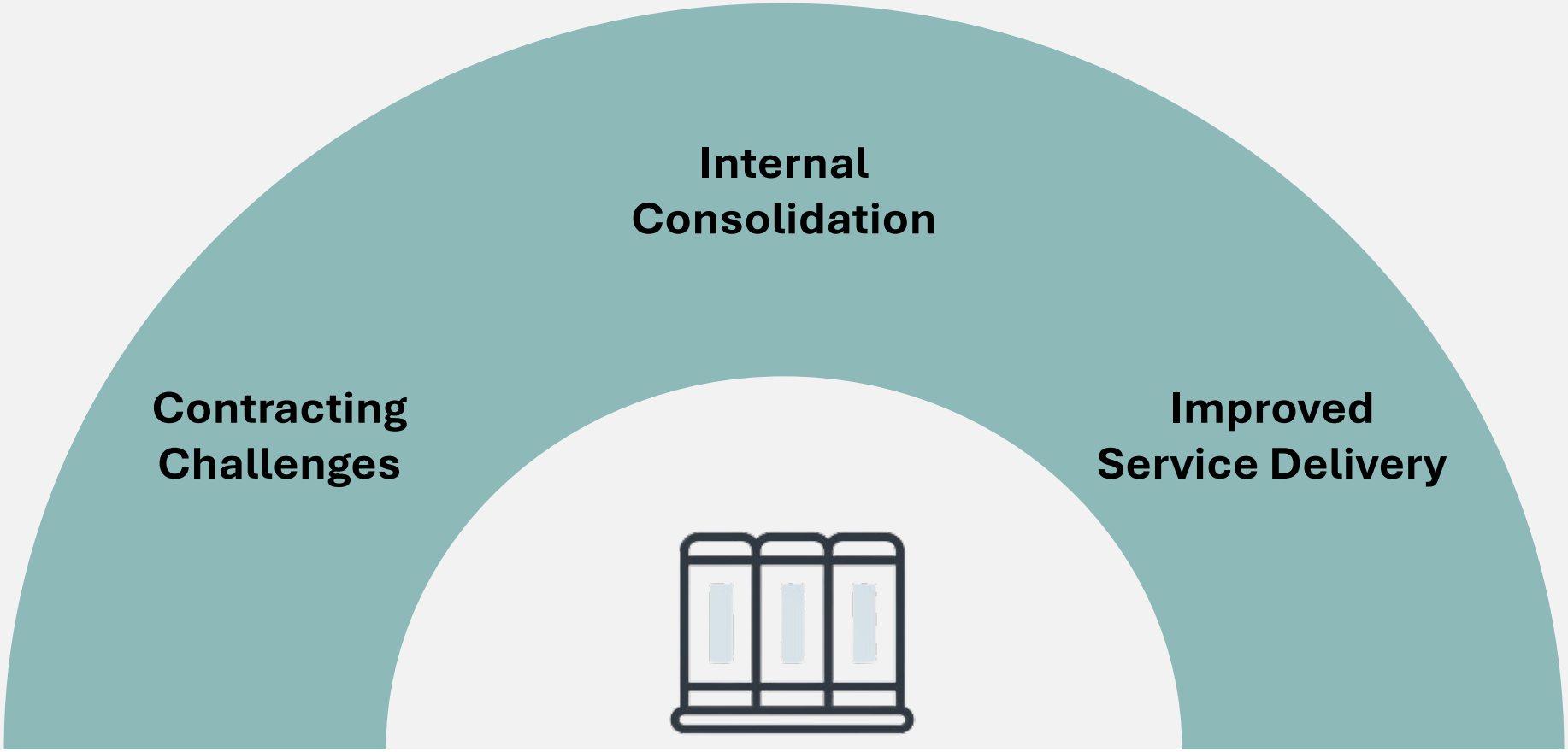
EXISTING SHARED SERVICES

Function	Agency	Description
Dispatch - Fire	Cal-Fire	Fire and emergency dispatch services
Dispatch - Police	City of Calistoga	St. Helena Dispatch services co-located at City of Calistoga temporarily
Fire Protection	Napa County	St. Helena provides services to the County for areas adjacent to city limits
Housing	City of Napa Housing Authority	Affordable housing services
Stormwater	Napa County Flood Control & Water Conservation District	Controls flood and storm waters in Napa County
Benefits & Risk Management	California Intergovernmental Risk Authority (CIRA)	Risk management, workers compensation, & benefit programs

EVALUATION OF CITY SERVICES



LIBRARY SERVICES



HUMAN RESOURCES



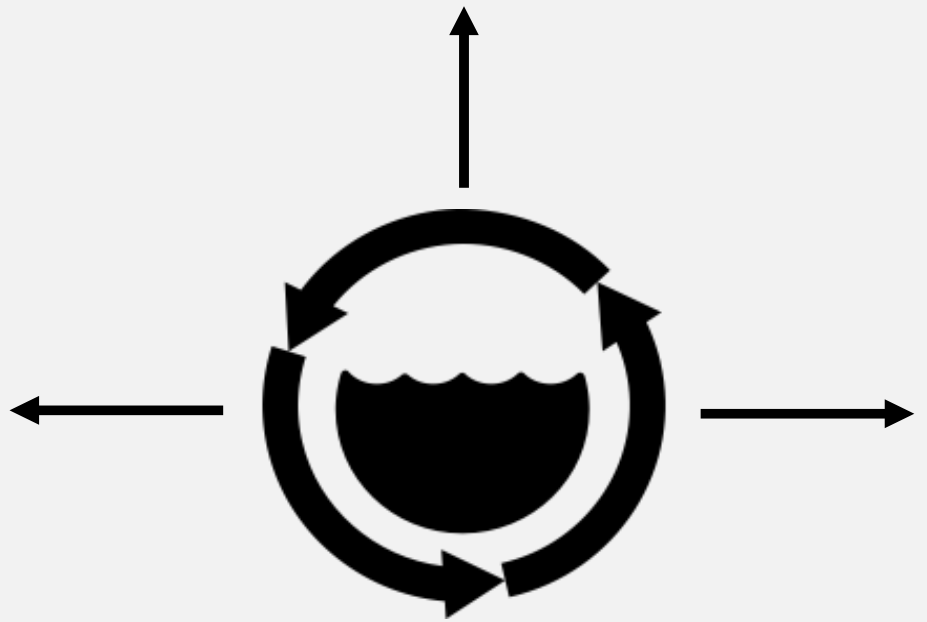
Budget Constraints

Collaboration Solutions

Countywide Training Program

WATER & WASTEWATER TREATMENT

Staffing Challenges



Regional Collaboration

Compensation Adjustments

Contracting with Sheriff's Department

Consolidating with Calistoga Police Department

Stakeholder Engagement

Cost Analysis & Feasibility Study



POLICE SERVICES



POLICE DISPATCH

- Temporary Relocation at City of Calistoga
- Explored Permanent Consolidation
- Lacked Cost Effectiveness



FIRE SERVICES

Contracted with Center for Public Safety Management (CPSM)

Evaluated the following:

1. Contract Services with CAL-Fire
2. Contract Services with County of Napa
3. Public Safety Model (joint police and fire department)

St. Helena Fire Department



October 8, 2024

Tom Wieczorek, Director

Mike Iacona, Manager Fire & EMS

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Project Objectives:

Review the Existing Service Demand & Deployment Practices.

Evaluate the Organizational Structure & Managerial Oversight.

Determine the effectiveness of Part-time Employees.

Assess the quality of Inter-Agency Joint-Response.

Identify Options for Service Alternatives & Cost Comparisons.

Provide System Analysis and Recommendations.

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Department Profile and Workload:

Limited Workload-mostly EMS and Service Calls (2-3/calls daily).

Transition from Volunteer to Career Department: Very Effective.

Excellent resources: station facility, vehicles & equipment.

Quality leadership, field supervision & organizational culture.

Comprehensive Fire Prevention/Code Review Effort (In-house).

Exceptional cooperation: joint response & mutual aid partners.

Expanded focus on Training & Career Development is needed.

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Organization & Management:

Current structure & deployment very effective.

Integration of Career and Part-time personnel - Excellent.

Utilization of Volunteer Association – Very Positive.

Strong Integration with Field Personnel and prevention efforts.

Greater focus needed on performance measures and reporting.

Dispatching is fragmented-Difficult to monitor performance.

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Part-Time Employees:

Career/Part-time model is critical to overall efficiency.

Extensive utilization - approximately 45% of on-duty hours.

Excellent workforce integration - opportunities for expansion.

Realized cost savings – approximately $250,000 annually.

Reduces overtime expenditures (additional savings).

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Inter-Agency Cooperation:

Exceptional joint response arrangements w/AMR & CAL-FIRE.

Frequent mutual aid responses with Calistoga and others.

Approximately 20% of SHFD responses outside city - $82,900.

Effective arrangements for specialized services. (Haz-Mat, etc.)

Wildland joint response and resource access is essential.

Strong cooperation with County Emergency Management

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Alternative Service Options:

1. Cooperative Fire Service Agreement with CAL-FIRE.
2. Contract for services through Napa County.
3. Establish a Public Safety Model (Combined Police & Fire).
4. Engage a Private Company to provide fire protection services.
5. Establish a regional Fire/EMS service agency (multi-city).



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1. Agreement with CAL-FIRE:

Pricing based on personnel & shared costs – Billed Quarterly.

Requires approval by CAL-FIRE Labor Union.

Short-term agreement (2-3 years).

Uncertain impact on Association's continued affiliation.

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1. Agreement with CAL-FIRE:

	Projected Cost
Current Police Budget (including dispatch)	$4,489,352
Fire Personnel Costs (1 Engine/3 Personnel)	$2,400,000
Fire Dispatching Services	80,000
TOTAL	$6,969,352

Not Included:

Overtime & Supervision
Fire Prevention Services
Payment for Part-time personnel
Capital Replacement
Insurance & Maintenance (Vehicles & Building)
Utilities

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2. Contract with Napa County:

CAL-FIRE continues provide services.

Requires approval by County Executive & Bd. of Supervisors.

Pricing varies on the basis of shared costs – negotiable.

Long-term agreement possible.

Limited control of Service Levels & Future Costs.

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2. Contract with Napa County:

	Projected Cost
Current Police Budget (including dispatch)	$4,489,352
Fire Personnel Costs (1 Engine/3 Personnel)	$2,400,000
Fire Dispatching Services (50%)	40,000
TOTAL	$6,929,352

Not Included:

Overtime & Supervision
Fire Prevention Services
Payment for Part-time personnel
Capital Replacement
Insurance & Maintenance (Vehicles & Building)
Utilities

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3. Public Safety Model:

Multi-year implementation process (3-5 years).

Complex recruitment and training requirements (3-Type's).

Projected 16 PSO's to provide combined services (Excludes Dispatch).

Many existing employees will not obtain all certifications.

Joint response & mutual aid may be problematic.

Uncertain impact on Association's continued affiliation.

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3. Public Safety Model:

	Projected Cost
Current Police Budget (including dispatch)	$4,489,352
Additional Public Safety Officers (5 @ $200K)	1,000,000
Public Safety Officer Incentive (11 @ 15%)	350,000
Training for PSO	75,000
Overtime	200,000
Part-time Employees	100,000
911 Dispatch (CAL-FIRE)	80,000
TOTAL	$6,294,352

Not Included:

Fire Prevention Services

Capital Replacement

Utilities & Maintenance (Vehicles & Building)

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Cost Comparisons (FY24-25):

Description	Fire Cost	Police Cost	Total Cost
1. Existing Fire & Police Model	$2.69 M	$4.49 M	$7.18 M
2. Projected CAL-Fire Contract	$2.48 M	$4.49 M	$6.97 M
3. Projected Napa County Contract	$2.44 M	$4.49 M	$6.93 M
4. Projected Public Safety Model	$6.29 M		$6.29 M



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Conclusions:

SHFD is an excellent organization providing quality services.

SHFD is still transitioning with several areas requiring improvement.

Career/Part-time model is critical to overall efficiency.

Joint Response and Mutual Aid agreements are very viable.

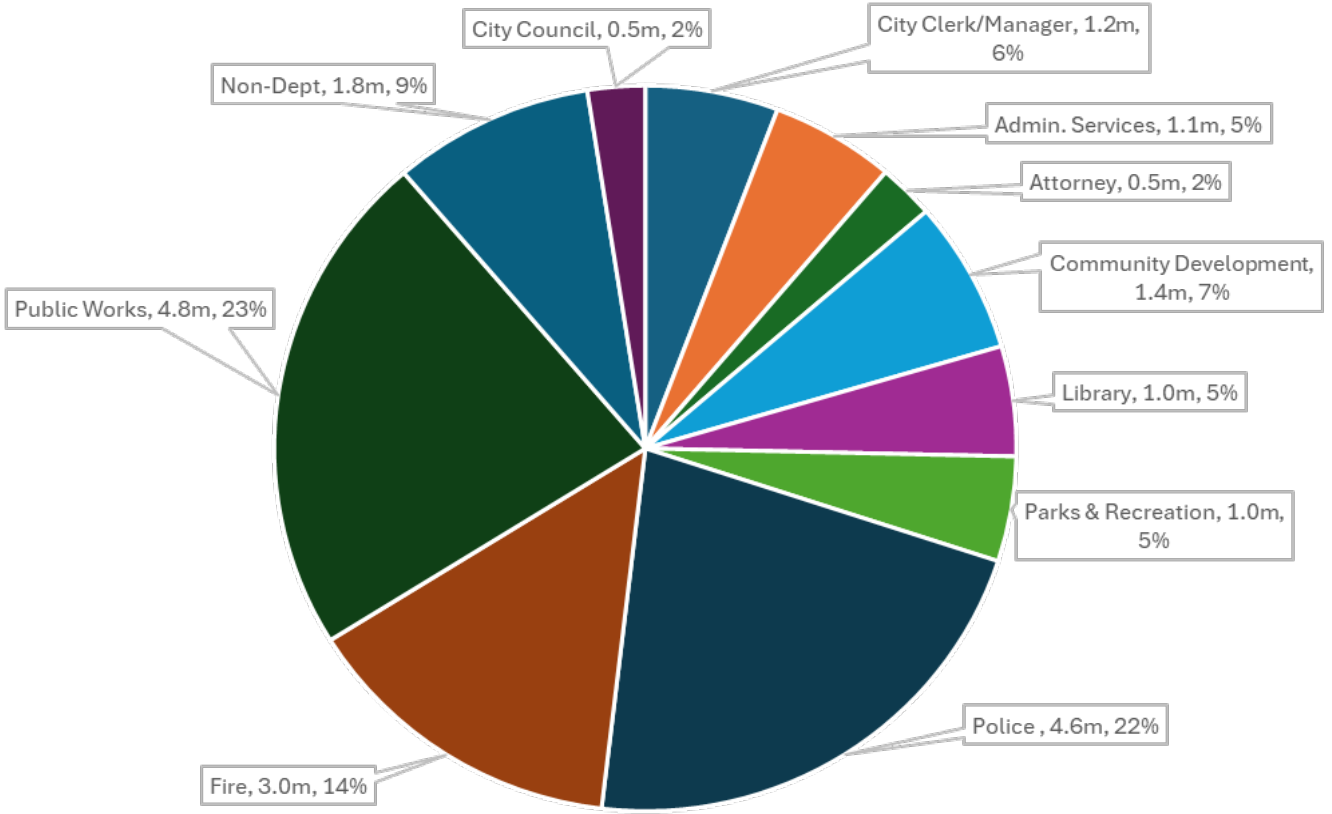
Contracted models can jeopardize local control (Service/Future Costs).

Volunteer Association contributes positively to the organization.

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FY25 EXPENSES BY DEPARTMENT

$21.5M



OPPORTUNITIES

Police Dispatch Services

Wastewater Treatment Plant

QUESTIONS

CENTER FOR PUBLIC SAFETY MANAGEMENT, LLC

COMPREHENSIVE FIRE DEPARTMENT STUDY

ST. HELENA FIRE DEPARTMENT, ST. HELENA, CALIFORNIA

Final Report-October 2024



CPSM®

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ICMA

Exclusive Provider of Public Safety Technical Services for
International City/County Management Association

THE ASSOCIATION & THE COMPANY

INTERNATIONAL CITY/COUNTY MANAGEMENT ASSOCIATION (ICMA)

The International City/County Management Association (ICMA) is a 109-year-old, non-profit professional association of local government administrators and managers, with approximately 13,000 members located in 32 countries.

Since its inception in 1914, ICMA has been dedicated to assisting local governments and their managers in providing services to their citizens in an efficient and effective manner. ICMA advances the knowledge of local government best practices with its website, www.icma.org, publications, research, professional development, and membership.

CENTER FOR PUBLIC SAFETY MANAGEMENT (CPSM)

The ICMA Center for Public Safety Management (ICMA/CPSM was launched by ICMA to provide support to local governments in the areas of police, fire, and Emergency Medical Services.

The Center also represents local governments at the federal level and has been involved in numerous projects with the Department of Justice and the Department of Homeland Security. In 2014, as part of a restructuring at ICMA, the Center for Public Safety Management (CPSM) spun out as a separate company and is now the exclusive provider of public safety technical assistance for ICMA. CPSM provides training and research for the Association's members and represents ICMA in its dealings with the federal government and other public safety professional associations such as CALEA, PERF, IACP, IFCA, IPMA-HR, DOJ, BJA, COPS, NFPA, etc.

The Center for Public Safety Management, LLC, maintains the same team of individuals performing the same level of service that it had for ICMA. CPSM's local government technical assistance experience includes workload and deployment analysis using our unique methodology and subject matter experts to examine department organizational structure and culture, identify workload and staffing needs, and identify industry best practices.

We have conducted more than 400 such studies in 46 states and provinces and more than 275 communities ranging in population size 3,300 (Lewes, DE) to 800,000 (Indianapolis, IN).

Thomas Wieczorek is the Director of the Center for Public Safety Management.
Leonard Matarese serves as the Managing Partner for Research and Project Development.
Dr. Dov Chelst is the Director of Quantitative Analysis.

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SECTION 1. EXECUTIVE SUMMARY

The Center for Public Safety Management, LLC (CPSM) was retained by the City of St. Helena to conduct an Operational and Administrative Analysis for its fire department, including a detailed review of department operations, its organization structure, work schedule, training, performance measures, prevention activities and its interaction with AMR and neighboring agencies. This analysis also includes a review of those primary options the city may consider as an alternative service delivery model. Specifically, CPSM was tasked with providing recommendations that the city may consider in changing its current independent Fire and EMS delivery system to an alternative model, either through contracting with an outside agency for these services or considering a public safety model, which utilizes a combined service force in which personnel are trained in providing both fire and law enforcement services through a single agency.

CPSM analyzed performance data provided by the St. Helena Fire Department (SHFD) and also conducted a firsthand examination of the department's operations. Fire departments tend to deploy resources utilizing traditional approaches, which are rarely reviewed. To begin the review, project staff asked for certain documents, data, and information. The project staff used this information/data to familiarize themselves with the department's structure, assets, and operations. The provided information was supplemented with information collected during an on-site visit to observe the performance of the department and to compare that performance to national benchmarks. CPSM will typically utilize benchmarks that have been developed by organizations such as the National Fire Protection Association (NFPA), Center for Public Safety Excellence, Inc. (CPSE), the ICMA Center for Performance Measurement, as well as others.

Project staff conducted a site visit on November 8-10, 2023, for the purpose of observing fire department and agency-connected support operations, interviewing key department staff, and reviewing preliminary data and information. We also evaluated the community, identifying the potential fire risk in the area, both structural and wildland, in order to determine the alignment of workload with the potential service demands. Telephone and video conference calls as well as email exchanges were conducted between CPSM project management staff, the city, and the fire department so that CPSM staff could affirm the project scope, and elicit further discussion regarding this analysis.

The St. Helena Fire Department (SHFD) operates from a single station; the department is composed of both career personnel and part-time employees. Though SHFD is a relatively small organization with limited resources, it is highly proficient in managing its workload. SHFD relies heavily on the recall of off-duty personnel, its part-time workforce, and its mutual aid partners (primarily from neighboring agencies), in meeting service demands. SHFD works closely with AMR, a county-contracted private EMS agency, which provides advanced life support (ALS) services and ambulance transports throughout the county.

The SHFD personnel with whom CPSM interacted demonstrated a profound work ethic, professionalism, and a commitment to customer service and protecting the community. However, as a small agency with limited resources, SHFD must interact seamlessly with a multitude of neighboring agencies to provide the appropriate protections to the community, area businesses, and the many tourists who visit the area. The challenges in St. Helena, however, are not unique nor are they insurmountable. CPSM will provide a series of observations and recommendations that we believe will support SHFD in fulfilling its mission in providing both emergency and nonemergency response.

RECOMMENDATIONS

The St. Helena Fire Department is currently providing a wide range of services to its citizens, local businesses, and visitors who frequent the area. The department is well-respected in the community it serves and by city leadership. In the evaluations we conduct, we will recognize those departments when we observe exceptional services or a level of proficiency that stands out. In these situations, we recognize these efforts as a ***Best Practice.*** In those areas that we find deficiencies or areas in need of improvement, we provide ***Recommendations*** that could be considered. Though the St. Helena Fire Department and its command structures are very limited in terms of number of personnel, and the agency relies heavily on the use of part-time employees along with the support from the St. Helena Volunteer Fire Dept. Association. We discovered an agency that is vibrant and operates in a cost-effective manner to provide a very high level of service to the community. Every agency has its shortfalls and struggles to find the right approach in meeting the ever-changing service demands of our time. However, we found the SHFD to be very adept and nimble in meeting these challenges; it demonstrates a vital capacity to address its challenges and shows a willingness to make changes in order to meet the challenges that lie ahead.

Twenty-six recommendations are listed below and are also found in applicable sections within this report. The recommendations are based on best practices derived from the NFPA, CPSM, ICMA, the U.S. Fire Administration, the International Association of Emergency Managers (IAEM), and the Federal Emergency Management Agency (FEMA).

These recommendations are listed in the order in which they appear in the report.

Section 3

(See pp. 6-32.)

Alternative Response Vehicles

1. The St. Helena Fire Department should consider the use of EMS squad units to handle EMS and non-fire related service calls in the city's service area.

Promotional testing Processes

2. SHFD should revise its promotional requirements for Engineer, Captain, and Battalion Chief and include specific prerequisites regarding time-in-grade, certifications, and college coursework.
3. SHFD should move to a regular testing process for all promoted positions (Engineer and Fire Captain). These testing processes should be specified in written policy, clearly identifying the components and weighting of the elements involved in the testing processes.
4. SHFD should formalize the step-up process for all promoted positions and use the existing promotional eligibility lists to determine who is qualified for step-up assignments.

Fire Incident Reporting Review

5. The St. Helena Fire Department should institute a Quality Assurance/Quality Improvement (QA/QI) review process for its fire incident reporting.

Apparatus and Fleet Management

6. The city should institute a work-order tracking system and vehicle repair log for the fire department fleet which provides a comprehensive chronology and the cost accounting associated with the SHFD fleet repairs and maintenance.

Radio Interoperability and Coverage

7. St. Helena should take immediate steps in instituting a common radio link that will enable direct radio communications between the Calistoga/St. Helena Dispatch Center and the CAL-FIRE Center.

911/Dispatch

8. St. Helena should initiate an effort to evaluate the effectiveness and efficiency of the 911 dispatching services currently being utilized for law enforcement, fire, and EMS services.

Section 4

(See pp. 33-41.)

Fire Risk Analysis

9. The St. Helena Fire Department should conduct a formal structure fire risk assessment that concentrates on the city's downtown, commercial establishments, wineries, and institutional properties.

Target Hazards and Fire Pre-Planning

10. The St. Helena Fire Department should continue in its efforts to develop a comprehensive Pre-Incident Planning program for its target hazards and high-risk occupancies.

Accreditation

11. St. Helena should consider working toward CPSE Fire Accreditation in the future.

Section 5

(See pp. 42.63.)

EMS Response

12. SHFD should work with the CAL-FIRE Emergency Communications Center to implement response protocols that alter the SHFD response mode when calls are determined to be minor or non-emergency.

Alternative Service Delivery Options

13. St. Helena should maintain its current service delivery model, which utilizes a municipal fire department that combines both career and part-time employees along with cooperative response agreements with neighboring agencies.

Section 7

(See pp. 76-79.)

Performance Measurement

14. SHFD should implement a series of performance measures that enable ongoing review of service outcomes. The process of developing these measures should utilize input from SHFD members, the community, the City Council, and City Administration.

Section 8

(See pp. 80-90.)

Fire Prevention and Code Enforcement

15. The City of St. Helena should implement fire inspection, weed abatement and permitting fees in order to recover the full cost of providing these services in the community.

Education and Training

16. The St. Helena Fire Department should establish a minimum shift training requirement (in number of hours) for each employee and implement this requirement in the department's Standard Operating Guidelines.

17. The St. Helena Fire Department should implement an electronic training calendar and utilize this recordkeeping to document training activities throughout the year.
18. The St. Helena Fire Department should assign a Fire Captain to assume the role of the fire department Training Officer, with responsibility to coordinate training activities for the department.
19. The St. Helena Fire Department should establish a Training Steering committee to assist the department Training Officer in developing the training curriculum, identifying source materials, and implementing the training calendar.
20. The St. Helena Fire Department should pursue joint training opportunities with AMR to enhance improved working relationships and to provide the needed EMS continuing education credits (CEs) for EMT recertification.

Physical Fitness, Medical Evaluations

21. The St. Helena Fire Department should modify its annual medical physicals for firefighters and utilize the screening criteria specified in NFPA 1572, Standard on Comprehensive Occupational Medical Program for Fire Departments.
22. The City of St. Helena should implement a drug testing policy that requires employees to undergo testing when there is reasonable suspicion or when the employee is involved in a vehicle accident while driving a fire department vehicle.

Emergency Management

23. The City of St. Helena should initiate an effort with Napa County Emergency Management that simulates the full activation of the city's EOC and the exercise of the Emergency Operations Plan (EOP) on an annual basis.
24. The City of St. Helena should initiate an effort in which every city department develops and exercises a Continuity of Operations Plan (COOP).

Emergency Communications Centers

25. The City of St. Helena should initiate an effort to fully evaluate its dispatching operations and obtain the necessary reporting to understand the level of effectiveness of these operations.

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SECTION 2. SCOPE OF PROJECT

The scope of this project was to provide an independent review of the services provided by the St. Helena Fire Department (SHFD), so that the Mayor, City Council and city officials, including officials of SHFD, could obtain an external perspective regarding the city's Fire and EMS delivery system. This study provides a comprehensive analysis of the SHFD, including its organizational structure, workload, staffing, work schedule, overtime, deployment, use of part-time personnel, training, fire prevention, emergency communications (911), planning, and public education efforts.

In addition, CPSM will provide its insights to help the department determine the appropriateness of the level of response and alternative delivery systems that could be utilized in meeting current service demands or to optimize service efficiencies. Local government officials often commission these types of studies to measure their department against industry best practices. In this analysis, CPSM provides recommendations where appropriate, and offers input on a strategic direction for the future.

Key areas evaluated during this study include:

- Fire department response times (using data from the city's computer-aided dispatch system and the SHFD records management system).
- Deployment, work schedule, staffing, and overtime.
- Part-time firefighters and their utilization.
- Agency interaction with AMR, Calistoga/St. Helena Emergency Communications, CAL FIRE, and other mutual aid partners.
- Organizational structure and managerial oversight.
- Fire and EMS workloads, including unit response activities.
- SHFD support functions (Training, Fire Prevention/Code Enforcement, Emergency Management, Fleet Services, IT, Human Resources, etc.).
- Essential facilities, equipment, and resources.
- An evaluation of alternative service delivery options.

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SECTION 3. ORGANIZATION AND MANAGEMENT

GOVERNANCE AND ADMINISTRATION

St. Helena is a quaint and idyllic community located in the North Bay region of the San Francisco Bay Area. The city is located in Napa County, approximately 65 miles north of San Francisco and 77 miles west of Sacramento. It is a popular tourist destination because of its charm and central location in the northern California wine country.

St. Helena is a relatively small community that has not experienced significant growth in recent years. In 2020, the U.S. Census estimated the population of St. Helena to be 5,438. In 2000, the city's population had been measured as 5,950. The projected growth of the city during the current planning horizon (through 2040) is expected to see a population increase of approximately 1,000 people.[1]

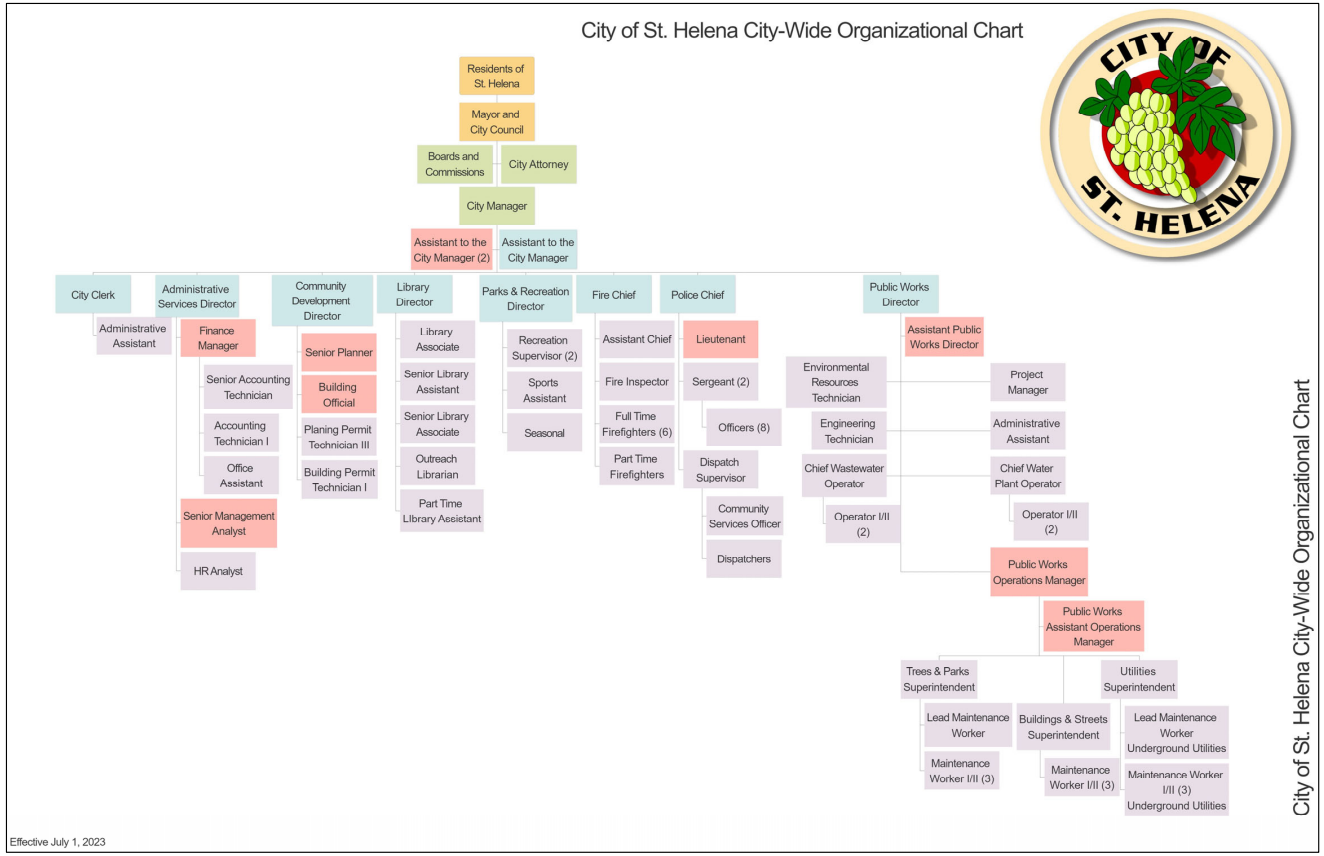
The St. Helena area and the surrounding Napa Valley region were designated in 1995 as an American Viticultural Area (AVA). This appellation designation emphasizes the geographic pedigree of the grapes and wines of the area and their distinctive characteristics. An appellation is a legally defined and protected geographical identification primarily used to identify where the grapes for a wine were grown. The city is generally rural in nature with much of the economy associated with the area vineyards, retail establishments, and the many fine dining venues of the area. The city maintains a vibrant commercial hub that attracts year-round tourism from throughout the nation and internationally.

St. Helena is general law municipal government within the State of California, operating under a council-manager form of government. The five council members are elected at-large to 4-year terms, and the Mayor is elected to a two-year term. The Vice-Mayor is selected by a council vote. The mayor presides at Council meetings and votes on issues as a member of the City Council to effectuate decisions. The City Council appoints the City Manager, who is the administrative officer for the city with the authority to hire, appoint, and remove all employees of the local government. The City Council serves as the legislative body for the city. The City Council is responsible for enacting laws that govern the city, adopting the annual budget, and appropriating funds to provide city services. Most transactions require only a quorum or simple majority be present.

St. Helena is typical of many cities and towns across the United States in that it operates its own public works department, community development, parks and recreation, library, and internal functions including finance and human resources. St. Helena operates its own police and fire departments. The initial call-screening for Emergency 911/dispatch services are provided through a cooperative arrangement between the City of St. Helena and Calistoga. Emergency dispatching along with Fire and EMS call screening is done by CAL-FIRE. The St. Helena Fire Department responds jointly with American Medical Response. Inc. (AMR), a private ambulance transport company that operates throughout Napa County.

1. California Department of Finance (DOF) and the Association of Bay Area Government (ABAG) estimates.

FIGURE 3-1: City of St. Helena Table of Organization



ST. HELENA FIRE DEPARTMENT OVERVIEW

The St. Helena Fire Department (SHFD) is a combination fire department comprised of 8 career personnel and 17 part-time employees. The Fire Chief has overall responsibility for managing the department's day-to-day operations and providing both administrative oversight and field command supervision. The Fire Chief is assisted by a Fire Inspector who has primary responsibilities for fire prevention activities; including fire inspections and permitting. Fire Plans Review is done by an outside vendor, Interwest Consulting Group. The Fire Chief will conduct fire investigations to determine cause and origin of fires in the city. In those more complex investigations or in incidents involving suspected arson, injuries, or deaths, the Fire Chief may obtain assistance from the State Fire Marshal's office or from area mutual aid partners. The 17-part-time employees include one Assistant Chief who provides both administrative and emergency field assistance. There are two part-time captains and four part-time Driver Engineers.

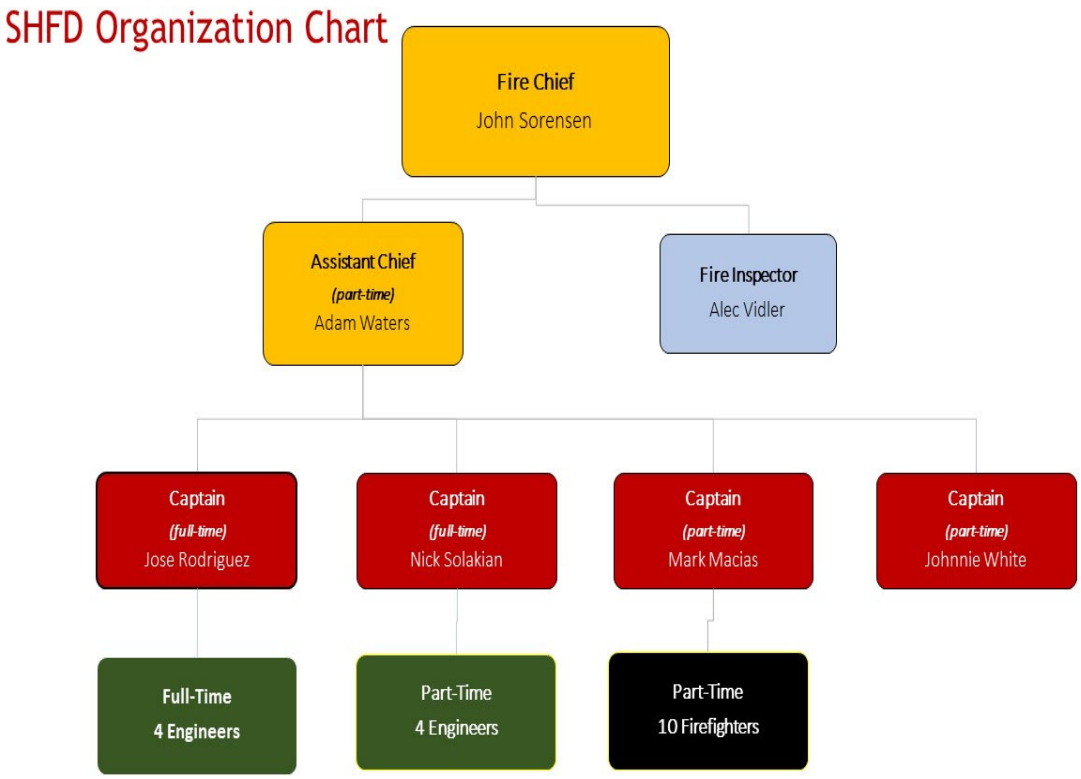
Field operations involving Fire and EMS response is provided by a combination of career personnel and part-time employees. Typically, SHFD operates a single engine that is staffed with three personnel. These personnel include a Captain, Engineer, and Firefighter. Generally, the Captain and Engineer positions are staffed by career personnel and the Firefighter slot is filled by a part-time employee. However, this arrangement is often altered with both acting assignments and the assignment of part-time employees into either the Captain or Engineer assignments. Rarely is the on-duty staffing composed solely of part-time employees; however, on rare occasions the on-duty crew will be staffed with only one career position.

The St. Helena station serves the city along with designated areas of unincorporated Napa County. The city has an agreement with CAL-FIRE, which is responsible for providing services in Napa County, in which CAL-FIRE provides automatic response into St. Helena to assist the city during larger incidents in return for the city providing initial response into those designated areas of the county adjacent or in proximity with St. Helena municipal boundaries.

The department's support activities—including; training, logistical support, administrative services, recordkeeping, purchasing, and vehicle and station maintenance—are provided through a combination of assigned responsibilities held by both career and part-time personnel, with the overall coordination of these activities provided by the Fire Chief.

§ § §

FIGURE 3-2: St. Helena Fire Department Table of Organization



Field operations are delivered by three shifts, with a (24-hour) field supervisor (Fire Captain), assigned to each shift and who has the responsibility for supervising field operations, scheduling, and personnel matters on their respective shifts. The department responds to a wide array of fire, rescue, and emergency medical services calls. SHFD has a minimum staffing policy that maintains three people on-duty at all times. For larger events, additional personnel are provided by the re-call of off-duty personnel and through automatic and mutual aid response from neighboring jurisdictions.

During the one-year period of this study from November 1, 2022, through October 31, 2023, the SHFD responded to 844 incidents, of which 676 were within St. Helena and 168 were outside city limits, either in incorporated Napa County or in neighboring municipalities. CPSM estimates that EMS calls accounted for more than 60 percent of the response activities of the St. Helena fire department. All personnel are cross-trained and are able to provide emergency medical care as well as structural and wildland fire fighting.

All line personnel must hold a Basic-EMT certification (EMT-B). SHFD operates in what is often termed a ***two-tiered EMS delivery system***. In this arrangement the fire department provides EMS first response and the county ambulance provider (AMR) provides advanced life support services and ambulance transport.

In addition to their emergency response duties, emergency services personnel also provide a wide range of customer service and community outreach efforts including; weed abatement inspections, blood pressure screenings, tours of the fire station and apparatus, smoke detector installations, and fire and life safety presentations.

Workweek and Definition of Time Worked

The work schedule in St. Helena is similar to the work schedule that is currently being used for many agencies throughout California and the western United States. SHFD works a 48/96 schedule. Under this schedule, line personnel work on a three-platoon system in which personnel are on duty for 48 consecutive hours followed by 96 hours off. This rotation is replicated by each of the three shifts.

This schedule equates to a 56-hour workweek for all employees if averaged throughout the year (or 2,912 hours annually). Overtime guidelines relating to municipal fire personnel are specified in the Fair Labor Standards Act (FLSA) and the "***7(k) exemption,***" which allows municipal fire personnel to work up to 53 hours each week before an overtime premium is required.[2] St. Helena has established through its MOU with the Firefighter's Union, a 14-day, 106-hour FLSA pay cycle. FLSA specifies that overtime be paid for all hours worked in excess of 106 hours (53 hours per week times 2). On the basis of this schedule and the 14-day pay cycle, SHFD full-time employees receive on average, 156 hours of FLSA overtime each year. At the current pay scale, this equates to approximately $8,000 annually in FLSA overtime per employee.

In calculating overtime eligibility, FLSA further specifies that overtime pay is required only when the actual hours worked are in excess of the designated pay cycle. FLSA does not require that this calculation include time not worked, such as vacation time, sick leave, or holidays (federal or otherwise).[3]

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These exclusions when considering overtime eligibility are consistent with FLSA guidelines and fully compliant with the legal requirements imposed by this legislation. In addition, by excluding sick leave and FMLA when considering overtime eligibility, there is a secondary effect of reducing absenteeism, as employees often choose not to call in sick if it results in a loss of overtime premium pay.

Two-In/Two-Out Provision

The U.S. Occupational Safety and Health Administration (OSHA) has issued a standard that has been termed the "*Two-In/Two-Out*" provision. This standard affects most public fire departments across the U.S., including the SHFD. Under this standard, firefighters are required to operate in teams (of no fewer than two personnel) when engaged in ***interior structural firefighting.*** The environment in which interior structural firefighting occurs is further described as areas that are immediately dangerous to life or health (an IDLH atmosphere) and subsequently require the use of self-contained breathing apparatus (SCBA). When operating in these conditions, firefighters are required to operate in pairs and they must remain in visual or voice contact with each other and must have at least two other employees located outside the IDLH atmosphere. This assures that the "***two-in***" can monitor each other and assist with equipment failure or entrapment or

2. See 29 USC §207(k).
3. U.S. Department of Labor, Wage and Hour Division, Overtime Pay: General Guidance.

other hazards, and the "***two-out***" can monitor those in the building, initiate a rescue, or call for back-up if a problem arises.[4]

This standard does not specify staffing on individual apparatus, but rather specifies a required number of personnel be assembled on-scene when individuals are in a hazardous environment. There is, however, a provision within the OSHA standard that allows two personnel to make entry into an IDLH atmosphere without the required two back-up personnel outside. This is allowed when they are attempting to rescue a person or persons in the structure before the entire team is assembled.[5]

The typical St. Helena staffing pattern places three personnel on Engine #17 and this is the only unit operating within the city. As a result of the automatic response agreement with CAL-FIRE, additional fire units will respond from Napa County stations for all structure fires and other emergency incidents in which additional staffing is needed. St. Helena Standard Operating Guidelines provide specific reference to the application of the Two-in/Two-Out OSHA guidelines and these guidelines are strictly adhered to during situations in which fire personnel are operating in a hazardous environment. CPSM recognizes the SHFD automatic response agreement with CAL-FIRE and its adherence to OSHA guidelines regarding the two-in/two-out provision as a ***Best Practice***.

Alternative Response Vehicles

EMS calls are the predominant workload for the St. Helena Fire Department, accounting for more than 60 percent of its call activity. With an estimated 932-unit responses annually. CPSM estimates that ***SHFD units are responding an estimated 900 times annually to calls that do not involve actual fires***.

SHFD handles all of its emergency and non-emergency responses primarily with its fire apparatus. This workload puts considerable wear and tear on these heavy vehicles. CPSM estimates the combined service miles traveled annually by SHFD fire apparatus (excluding utility vehicles and command units) is in the range of 9,000 to 10,000 miles, with its busiest unit (Engine 17) amassing as much as 6,000 miles annually.

Fire apparatus are extremely expensive vehicles to purchase and maintain. Engines have a replacement cost of more than $850,000 and ladders are more than $1.8 million. In addition, each engine and ladder must be outfitted with various tools, equipment, EMS supplies, radios, computers, and other equipment that collectively add upwards of $200,000 to the cost of any replacement. Due to the high replacement cost for these vehicles and ongoing operating and maintenance costs, many agencies have gone to the use of ***alternative response vehicles*** for EMS and non-fire related incidents. Incorporating smaller vehicles into the response fleet helps to reduce the wear and tear on larger vehicles and prolong their useful time in service.

Alternative response vehicles vary in their design and chassis types but generally are commercially available light trucks in a one-ton chassis configuration with either a pick-up or SUV body design. These vehicles are often equipped with after-market outside compartmentation and interior storage areas. Vehicles with these chassis' designs are readily available through state bid procurement programs. When equipped with the added compartmentation, 4-wheel drive, lighting, radio systems, and painting, such a vehicle may be acquired for a cost that ranges from $85,000 to $100,000.

4. OSHA-Respiratory Protection Standard, 29CFR-1910.134(g)(4).
5. Ibid, Note 2 to paragraph (g).

FIGURE 3-3: Alternative Response Vehicle



There is a significant cost benefit in utilizing smaller, more fuel-efficient vehicles for the more frequent EMS and public service call activity. CPSM estimates that the St. Helena Fire Department is spending approximately $75,000 annually for fuel, maintenance, and repairs of its fire apparatus. The typical operating and maintenance costs for engines and ladders cost ***five times higher*** than for smaller EMS squad vehicles. In addition, the smaller units are more maneuverable, provide off-road access, and can achieve faster response times than the larger fire apparatus, especially ladder trucks. There is also the benefit of perception in the community when the department responds with an alternative response vehicle to non-emergency or EMS calls rather than larger fire apparatus. When a squad unit is operational, the engine is still able to respond with the remaining personnel if a simultaneous incident were to occur. Two notable agencies that have taken this approach are Tualatin Valley Fire Rescue, Oregon (***CARS Program***) and the Shreveport Fire Department, Louisiana (***SPRINT Program***).

Squad and SUV-type response vehicles can be expected to be operational for seven to eight years or approximately 100,000 to 120,000 miles in a first-line status. Fire engines and ladder trucks have a longer life expectancy but typically are in need of replacements when odometer readings approach 120,000 to 150,000 miles. Given the economic comparison between engines and alternative response vehicles and the added fact that EMS squads typically are staffed with fewer personnel, it is apparent that from both an economic and operational perspective, the use of EMS squads can provide a cost-effective response option in the St. Helena system.

> ***Recommendation: The St. Helena Fire Department should consider the use of EMS squad units to handle EMS and non-fire related service calls in the city's service area. (Recommendation No. 2.)***

STAFFING AND WORK SCHEDULE

Staffing of individual apparatus and minimum daily staffing levels are perhaps the most contentious aspects of managing fire operations in the U.S. There are a number of factors that have fueled the staffing debate. Aside from FAA requirements for minimum staffing levels at commercial airports, ***there are no state or federal requirements for the staffing of structural fire apparatus.***

As discussed above, the Two-in/Two-out provision in OSHA guidelines requires that fire departments assemble a minimum of four personnel when conducting firefighting operations in a hazardous environment where SCBA units are utilized. Fire unions often attempt to utilize this OSHA requirement as a further justification for staffing fire apparatus with four personnel. However, the OSHA guideline does not speak to individual unit staffing, but rather its focus is on the assembling of a minimum of four personnel at the scene before interior firefighting is initiated.

A second factor that contributes to the staffing debate is the National Fire Protection Association (NFPA) 1710 publication, *Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments (2020 Edition, Sec. 5.2.2.)*. This standard specifies that the staffing level on responding engine and ladder companies be established at **a minimum of four on-duty personnel**. Unlike the OSHA guideline, which is a mandatory provision, the ***NFPA 1710 guideline is advisory***, meaning that communities (including St. Helena) are not required to adhere to this NFPA guideline. NFPA 1710 also provides guidance regarding staffing levels for units responding to EMS incidents; however, the provision is less specific and does not specify a minimum staffing level for EMS response units. Instead, the standard states; "*EMS staffing requirements shall be based on the minimum levels needed to provide patient care and member safety.*"[6]

As stated previously, St. Helena staffs a single fire unit with three personnel on a daily basis. This on-duty crew is comprised of both career fire personnel and part-time employees. All employees, whether career or part-time (excluding those in training), have the recommended training specified by the California Office of the State Fire Marshal. CPSM believes that the current staffing and deployment practices combined with the joint-response arrangements with neighboring agencies, is very sufficient in handling the existing workload.

In 2016, the SHFD began its transition from a volunteer fire department. In October 2018, two-full-time firefighters were first hired. In July 2022, the city entered into an MOU with the St. Helena Professional Firefighters Association. In 2022, the number of full-time firefighters was increased to six, and the Fire Chief was moved to a full-time position. This type of transition is significant and often changes the dynamic of an organization. However, our observations indicate that this transition is progressing very well and the services being provided today are much improved over that provided previously. Notwithstanding this improvement, the current level of staffing in St. Helena is a basic minimum and must be supplemented on a regular basis from neighboring agencies through its mutual aid and automatic service response agreements. In addition, St. Helena draws from its off-duty personnel when more significant incents occur. The following table identifies the number of units and their station assignment for the SHFD.

6. (NFPA) 1710, *Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments* (2020 Edition Sec., 5.3.3.2.2.).

TABLE 3-1: SHFD Fire Station, Response Units, and Assigned Personnel

Station #	Response Units	Minimum Assignment
17	1 Engine Chief 170	3 1*
1 Station	**2 Response Units**	**4 on-duty personnel**

*__Note__: The Fire Chief works a 40-hour schedule but maintains an on-call status, responding to any significant event.

Work Schedule

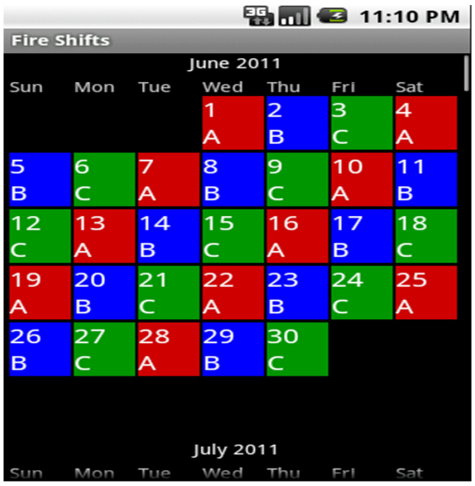
Fire departments must be able to respond rapidly to emergencies at any time throughout the day or night. For this reason, agencies throughout the U.S. typically assign personnel to a 24-hour shift to ensure this level of readiness. In addition, as mentioned above, the Fair labor Standards Act (FLSA), creates an exception for the payment of overtime for firefighters, in part because of the typical 24-hour work schedule. The "7-K Exemption" allows firefighters to work upwards of 53 hours each week before overtime premium pay (usually time and one-half) is required. For most municipal employees, overtime premium pay is required after 40 hours of work during a 7-day workweek. In addition, the hourly overtime rate for firefighters working 2,912 hours annually is nearly 50 percent less (49.7 percent) than the overtime rate for a 40-hour employee (2,080 hours annually) with the same annual salary.

Generally, fire departments operate with the same number of people on duty throughout the entire 24-hour cycle. However, emergency response activities are significantly higher during the daytime hours than they are during the nighttime and early morning hours. This type of schedule in which the number of people on duty remains the same throughout the entire 24-hour tour is often described as a "static-staffing" model. When staffing levels are adjusted throughout the day to reflect fluctuations in workload, the staffing model is referred to as a "dynamic staffing" model.

Fire department work schedules will vary from agency to agency. Most fire departments today utilize a 24/48 schedule, However, the 48/96 schedule is the predominate work schedule throughout California and many cities in the western United States. In the 24/48 rotation, a given shift or workgroup will work 24 consecutive hours, followed by 48 hours off. This type of scheduling requires three platoons or shifts to fill out the rotation. Typically, the individual shifts are referenced by an alphabetical notation. One shift will be designated as the "A" shift, the second as the "B" shift, and the third as the "C" shift. Typically, each shift is assigned duty days in sequence, meaning that the "A" shift is followed by the "B" shift and the "B" shift is followed by the "C" shift and then the cycle is repeated. This three-tour rotation repeats itself throughout the year and generally two of the shifts work 122 days each year while the third shift will work 121 days. This cycle over time averages out to 56-hour work week or a total 2,912 hours worked annually.

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FIGURE 3-4: 24/48 Work Schedule (56-Hour Workweek)



Another iteration of the 24/48-hour schedule is the 48/96-hour schedule. This is the schedule currently being utilized in St. Helena. This schedule is becoming very popular in many communities because it reduces by half the number of days that the individual worker is required to commute to their place of employment. This schedule merely doubles the number of consecutive on-duty hours (to 48 hours) and similarly doubles the number off-duty hours (to 96 consecutive hours). This schedule is often criticized because of the potential for excessive fatigue if the employee is responding to multiple alarms during the 48-hour tour, especially through the nighttime hours. This cycle over time averages out to 56-hour work week or a total 2,912 hours worked annually. Employees on this schedule, as with the 24/48-hour schedule, will receive approximately 156 hours of FLSA overtime throughout the year.

FIGURE 3-5: 48/96 Work Schedule (56-Hour Workweek)



In some communities, fire departments operate on a four-platoon system. In this arrangement, there are four different work groups and again they follow a four-day rotation throughout the

year. One iteration of the four-platoon system is the 24/72-hour schedule. In this rotation, there are four shifts (A, B, C, D), each working a 24-hour tour followed by 72 hours off. In this arrangement, there is a need for an additional shift, meaning that a department would need additional positions for each station or unit assignment (Captain, Driver, Firefighter, etc.). This schedule is based on a total of 2,184 hours of work annually, so employees would not be eligible for FLSA overtime as their workweek does not exceed the 53-hour weekly threshold. However, the hourly rate and thus overtime rates are likely to increase. Employees on this schedule work 728 hours less than those employees working the 24/48 or 48/96 schedules (2,912 hours). For example, on a 42-hour work week, the hourly salary for an individual making $90,000 is $41.21 and their overtime rate is $61.81. If compared to a 56-hour employee (2,912 annual hours), the hourly rate is $30.91 and the overtime rate would be $46.36 (for the same $90,000 annual salary).

FIGURE 3-6: 24/72 Work Schedule (42-Hour Workweek)



Another iteration of the four-platoon system is one in which the 24-hour duty day is split. These schedules utilize either two 12-hour tours, two 9-15 tours, or two 10-14 tours. Typically, employees will work two consecutive daytime tours, followed by 24 hours off, and then they work two consecutive nighttime tours. At the completion of their on-duty cycle, employees are off for 72 hours. Again, this workweek averages out to 42 hours or 2,184 hours annually. This schedule is often utilized in many of the large urban cities in the northeast where call activities, especially fire calls, are very prevalent and the physical work requirements are considerable.

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FIGURE 3-7: 12/12, 10/14, or 9/14 Work Schedule (42-Hour Workweek)



It is hard to state definitively whether one of the work schedules is better than all the others. Clearly the four-platoon system reduces the annual hours worked by individual employees but will require more personnel. The 56-hour schedule (either 24/48 or 48/96) requires fewer employees and results in employees working more hours over the course of the year. Either the 24/48 schedule or the 48/96 schedule can be criticized for working employees for extended periods of time and could result in employee fatigue. None of the schedules presented have been documented to result in higher amounts of employee lost time, increased absenteeism, or higher frequencies of worker's compensation resulting from job-related injuries. Regardless of the work schedule utilized, CPSM recommends that agencies take definitive steps to monitor the amount of lost time being utilized both individually and across the department in order to identify any excess usage or trends that can be identified over time or by work group.

It is important to note that the 24-hour schedule is perhaps the most coveted aspect of pursuing employment as a firefighter. The schedule allows the individual more time off to either carry out childcare responsibilities or to pursue supplemental employment options. However, the 24-hour schedule in which a static staffing model is utilized, is justifiably criticized for its inefficiencies, as the size of the workforce is not adjusted to reflect varying service demands.

It is our belief that the 48/96-hour schedule currently being worked by many of the part-time employees utilized by SHFD is the primary reason these employees are available and want to work in St. Helena. The 48/96 schedule, as stated previously, reduces the number of commutes that are required throughout the year. This is extremely important in communities such as St. Helena, where housing prices are high and are difficult to navigate for entry level buyers. Subsequently, ***CPSM does not believe that a move to an alternative work schedule will result in improved productivity or enhanced service efficiency***. Because the SHFD is currently operating with a single engine and only three on-duty personnel, we believe that this is the minimum level of protection needed and any reduction in this staffing level would not be recommended.

Program Management Responsibilities

In most agencies the oversight of program management duties is often the responsibility of staff officers and chief officers who are assigned to 40-hour assignments. CPSM believes it is critical, however, that many of these types of logistical and support duties should be assigned to line

personnel. We often make this recommendation in our studies because the distribution of these responsibilities is a more productive way to manage departmental functions while at the same time providing a training opportunity in the development of line personnel. SHFD has done a good job in distributing these assignments to both career and part-time personnel. Given the limited number of career and staff employees, it is critical that SHFD expand the role of line personnel (both career and part-time) in managing these duties. The following table lists a variety of program management duties that can be considered for assignment to field personnel.

TABLE 3-2: Program Assignment Duties

Program Description
Promotional Testing
Performance Appraisals
Haz Mat/Technical Rescue
Employee Recognition/Awards
CISM/EAP
Sick Leave/Absenteeism Review
Budget Committee
Payroll / Executive Time Auditing
Police Department Liaison
EMS Protocols
Station Maintenance/Upkeep and Supplies
Fire Reporting QA
Hose Testing
Hydrant Testing
Radio Programming
Mapping
Fire Pre-incident Planning
Infectious Disease Control
EMS Supplies/Decon/Bio Disposal
911 Liaison
Station Response Area Designation
Response Protocols
Fire Investigations
Safety/Rehab/Risk Management
SOP/Ops Committee
Fitness Committee
Shift Training Coordinator
Recruit Training/Proctoring
Public Information Officer
Driver Training/EVOC
Fleet Maintenance/Repair Recordkeeping
Internal Communications/Newsletter
Social media/FD Web Page
FF/EMS Recruitment Committee

Program Description
Car Seat Installation
Smoke Detector Replacement
Volunteer FF Liaison
Volunteer FF Training Officer

The level of participation and the degree to which line personnel are managing specific program responsibilities in St. Helena is truly commendable and a tribute to the leadership of the organization. CPSM considers the delegation of these duties as a ***Best Practice***. The SHFD has been able to create and foster a sense of ownership and stewardship among its employees. We believe this is a remnant of the volunteer-association philosophy which is not usually present in career organizations.

Internal Communication St. Helena Volunteer Fire Dept. Association

The ability to communicate work assignments, conduct training sessions, discuss new program initiatives, or merely to update employees on departmental programs or the strategic direction of the organization, requires ongoing outreach, specifically from the Fire Chief, officers, and training instructors in the organization. There are a number of communication tools currently available that can be used to conduct video conference calls, training sessions, and information exchanges among multiple work settings from remote settings (for example, see Zoom™, Microsoft TEAMS™, Skype for Business™, and Lifesize™, etc.). These tools are inexpensive and, in some cases, the software is free and there are minimal recurring charges. The realities of the COVID-19 pandemic have increased the use of these types of remote meetings and virtual training activities. In addition, the single station operation in St. Helena fosters opportunities for direct communications with off-duty personnel and mutual aid partners. SHFD has become proficient in these applications and should continue and expand their use into the future.

Promotional Testing Processes

The promotional processes for Fire Engineer, Fire Captain, and Battalion Chief are the most competitive and coveted career advancement processes in the fire service. Even more importantly, these promotional processes provide an exceptional learning environment in which candidates prepare themselves and spend countless hours studying and learning the source materials. From an organizational perspective, there is no better training instrument than the fire service promotional process. This point is even more critical in an organization such as SHFD, which is transitioning from a volunteer system to a full-time career department. It is essential that an effective promotional process be built around individual performance, personal achievement, and the ability to measure the required skills in an objective and competitive forum.

The fire service promotional process should be very structured and directed by written policy. The process must be relevant to the position and the test materials should be updated at frequent intervals in order to properly reflect the latest technology and management systems germane to the position. Most fire departments conduct promotional testing processes at defined intervals. Typically, a test is given and an eligibility list is created so that as vacancies occur, personnel are selected from the established lists. In addition, these testing processes should be utilized in determining eligibility as to who can assume acting or interim roles for these positions during absences or short-term vacancies. The SHFD should develop a departmental policy that specifies the scheduling, test components, their weighting, and the eligibility criteria

for the Driver and Fire Captain positions. CPSM further recommends that promotional tests for each position be held every two years.

The Driver testing process is much more technical and should be weighted on the basis of practical skills relating to vehicle operations, including driving, vehicle maneuvering, pump practices, and hydraulic calculations in producing various types of fire streams and hose lays. In addition, there should be a test component that allows the candidate to demonstrate their operating skills on the various fire apparatus and associated equipment (portable pumps, fans, generators, etc.).

The Engineer testing process should include a written examination, practical testing, and an oral interview; however, the more significant weighting should be in the areas of vehicle operation and pump practices. St. Helena currently uses a "***Task Book***" component as the interim steps for eligibility to compete in the promotional testing process.

The Fire Captain testing process should focus on tactical skills, leadership, emergency field supervision, administration, computer/technology utilization, and problem solving. Additional focus should be given to a broad-based understanding of fire department policy and procedures, work place decorum, fire prevention, and training. The testing process for Fire Captain should again be in three parts, that is, written, practical, and oral interviews. However, the practical and oral interviews should follow an assessment center format, utilizing role plays, simulations, and presentation skills, all in an effort to home in on the candidate's understanding of the position's critical knowledge, skills, and abilities.

The most critical aspects of all testing and assessment processes is the relevance of the materials utilized in the testing process. The process must be unbiased and fair to all participants. The use of subject matter experts (SMEs) in the development and administration of these examinations is highly recommended. There is always an uncertainty with regard to the use of SMEs and maintaining the confidentiality of the materials utilized in the testing process. This issue is compounded when those SMEs are also from within the organization. Given the importance of the promotional testing process and the evolving nature of these positions, we recommend that the city utilize a combination of both internal and external SMEs in developing and administering all promotional processes.

The SHFD has had limited experience in the utilization of a formal promotional process for its promotable positions. Over time we expect that St. Helena will perfect its promotional processes and create valid selection tools that result in a positive learning experience for participating candidates. These processes, if done properly, generate credibility and objectivity and are designed specifically for the positions being tested for.

The current job requirements and prerequisites for the various promotable positions (Engineer, and Captain), are very limited in both the formal training and certification requirements along with college coursework. The attainment of these qualifications as prerequisites are not clearly stated and appear subjective. The current job description utilizes language that is not definitive. For example, with regard to Fire Officer I Certification, a key requirement for Fire Captain, the language states that an individual must be in; ***"Possession of, or the ability to obtain."*** There are no timelines specified nor is there a clear disqualification if the certification is not obtained. Even the time-in-grade requirements, which typically are a key criterion for eligibility, has language that is subject to interpretation. For example, the Fire Captain job description states;

> *"A typical way of obtaining the required qualification is to possess the equivalent of four years of increasingly responsible fire suppression, emergency medical response, and fire prevention experience comparable to that of a Firefighter/Engineer with the*

City of St. Helena, and equivalent to the completion of the twelfth grade supplemented by college level course work in fire science, business administration, or related courses and successful completion of state-certified fire academy and other required certification courses."

CPSM believes that promotional requirements should be clearly stated. If a four-year time-in-grade requirement as a Driver is a pre-requisite for the captain promotion, state it as such. Similarly, state the requirement of a High School Diploma, or an Associate's Degree and clearly specify the successful completion of the Fire Officer I Certification, either at the time of application or at the time of promotion.

All criteria should be implemented with sufficient advance notice to employees and should have a ***scheduled effective date*** that provides ample time for existing employees to obtain any new criteria. In addition, the city may consider a "***grandfathering provision***" that will allow a promotion to take place without meeting the new criteria, but stipulations be established that requires that the criteria must be met within a designated timeframe after the promotions are made.

Recommendation: SHFD should revise its promotional requirements for Engineer and Captain and include specific prerequisites regarding time-in-grade, certifications, and college coursework. (Recommendation No. 3.)

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Career development in the fire service should match the level of formal education that is required in other public sector supervisory and managerial positions. This coursework provides timely information and the demonstration of skill sets that are needed in fulfilling these supervisory and management roles in the fire department. It is also important that all college credits or degree requirements specify that coursework be obtained from institutions that have been accredited by a regional or nationally recognized accrediting agency.

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TABLE 3-3: Recommended Educational Prerequisites for Promotions

Position	Coursework	Credit Hours	Degree Requirement
Engineer	Pumping Apparatus/Driver Operator	3	
	Fire Service Hydraulics	3	
	Building Construction	3	
	EVOC	Certification	
	EMT	Certification	
	FF-2	Certification	
Fire Captain	Driver's Requirements	9	
	Strategies and Tactics	3	
	Industrial Fire Fighting	3	
	Wildland Fire Fighting	3	
	Fire Officer 1	Certification	
	Fire Inspector I	Certification	
	ICS-300 & 400	Certification	
	Associates Degree Fire Science or Related		Yes
Battalion Chief	Captain's Requirements		
	Bachelor's Degree		Yes
	ICS-600 & 700	Certification	
	IS 100 & 200	Certification	

Recommendation: SHFD should move to a regular testing process for all promoted positions (Engineer and Fire Captain). These testing processes should be specified in written policy, clearly identifying the components and weighting of the elements involved in the testing processes. (Recommendation No. 4.)

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Currently, SHFD will only conduct a promotional exam when there is an actual vacancy. CPSM believes that promotional exams for the positions of Engineer, Captain, and Battalion Chief should by conducted every two-years and an eligibility list be maintained for all positions and utilized when openings occur and for eligibility for step-up assignments.

Recommendation: SHFD should formalize the step-up process for all promoted positions and use the existing promotional eligibility lists to determine who is qualified for step-up assignments. (Recommendation No. 5.)

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The step-up process provides real-time, on the job training and a valid assessment tool to evaluate candidates in the promotional process. CPSM believes that when employees assume step-up assignments, they should receive a supplemental pay increase for that assumption of additional duties. In addition, we recommend that assessments be done regarding performance of employees in these step-up roles, which ultimately are considered when promotions are made.

The use of part-time personnel injects additional complexity into the management and administration of the promotional testing processes. These complexities involve both the lateral transfer of personnel into either of the promotable positions or the ability of a part-time employee to qualify and compete for advancement in the various promotional processes. CPSM believes that part-time employees should meet the same promotional criteria for each position and should be allowed to compete against full-time personnel for advancement. Clear and transparent assessments of a candidate's work experience, training, and educational achievements must be evaluated in an open and objective fashion. It is of critical importance that if full-time and part-time employees are to work effectively as a team, there must be an open and fair process that ensures that the same criteria for promotion are being used for both groups of employees.

Sound leadership and effective supervision are the cornerstones for success in the public safety arena. A fire department and its leaders are tested regularly and often under impactful circumstances. Future leadership must have expanded competencies in the use of technology, honed interpersonal skills, sound judgement, and a broad range of tactical expertise. These skills must be learned and it is essential that the system rewards performance and demonstrated achievement.

Performance Reviews

Closely aligned with the promotional process and equally effective in career development, professional growth, and remediation, is the annual employee performance review. The City of St. Helena and the fire department conducts an annual performance review process for all employees, both full-time and part-time. A satisfactory or above satisfactory review is required when considering the employee for promotion, position upgrade, or annual step increases. CPSM believes that the utilization of the performance review process in considering an employee's personal advancement is a ***Best Practice***.

Fire Incident Reporting Review

Every response that is carried out by the St. Helena Fire Department is documented by a written incident report. EMS calls utilize a patient care report that documents the date, time, personnel involved, and actions taken in treating the patient along with any related patient information (blood pressure, respirations, level of consciousness, signs and symptoms, injuries etc.). Fire reports identify the date and time of the incident, the occupancy type or location of the incident, the situation found, personnel involved, and the actions taken. These incident reports serve as the official public record and also provide statistical information that can be used to evaluate department activities including workload, response times, fire loss estimates, patient transports, etc.

All EMS reports undergo a comprehensive review for Quality Assurance (Q/A) and Quality Improvements (Q/I). These reviews are done both internally and through the county's Medical Director's office. Fire reports are typically done by the on-duty Captain, with little or no follow-up or formal QA/QI process.

> ***Recommendation: The St. Helena Fire Department should institute a Quality Assurance/Quality Improvement (QA/QI) review process for its fire incident reporting. (Recommendation No. 6.)***

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The QA/QI review process is a critical part of the incident reporting process. It is imperative that this work be given a high level of importance organizationally. The QA/QI process should be consistent, follow specific guidelines, be confidential, and provide remediation when necessary. CPSM recommends that a select individual be given the responsibility to review fire reports, document findings, and provide follow-up when needed. Generalized regular reporting of these findings (without referencing individuals) should be provided to members of the organization and used as a training tool in improving overall outcomes.

FIRE STATION FACILITIES

Fire department capital facilities are exposed to some of the most intense and demanding uses of any public local government facility, as they are occupied and in use 24 hours a day, 7 days a week.[7] The St. Helena Fire Department operates out of a single station with one 24-hour staffed emergency response unit. Department administrative and fire prevention offices are also located at Station #1. The Fire Chief is assigned a command vehicle and will respond to larger incidents when needed. The following table shows the location, year built, and size of the department's station.

TABLE 3-4: Station Location, Year Built, and Size

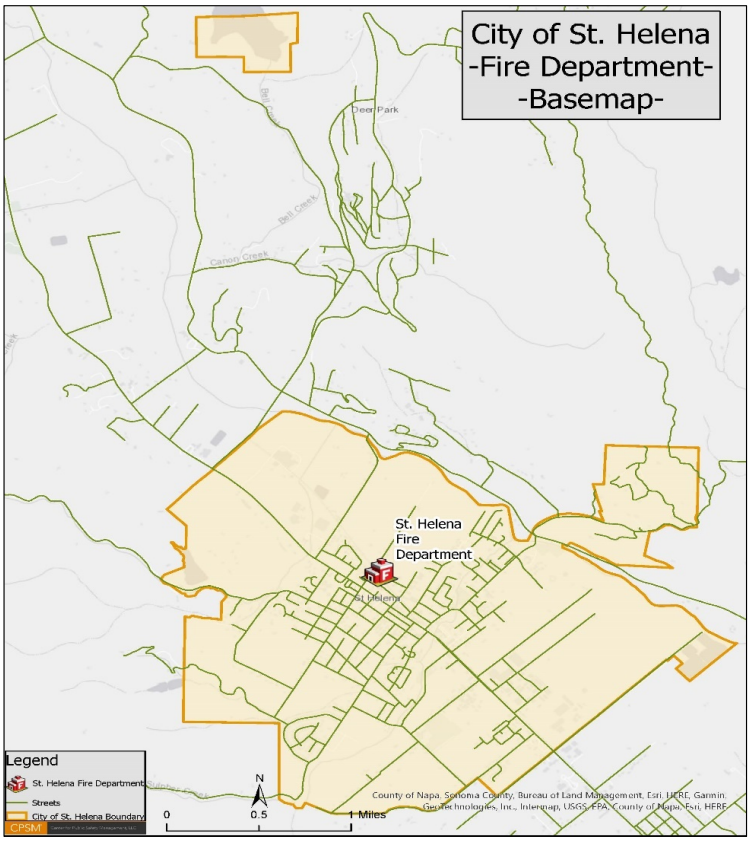
Building	Address	Year Built	Size/Sq. Ft.
Fire Station #1	1500 Main Street	1998	15,303

The following figure shows the location of the city's fire station and the municipal boundaries of St. Helena.

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7. Compton and Granito, eds., *Managing Fire and Rescue Services*, 219.

FIGURE 3-8: City of St. Helena Fire Station Location



Fire Station Location and Service Area

SHFD currently serves a population of approximately 5,438 people with a very robust year-round tourist influx. The city has a total service area of 5.08 square miles. In addition, SHFD has entered into a service agreement with Napa County, and provides first response Fire and EMS services to Rutherford and Deer Park communities, along with several other areas of unincorporated Napa County that are adjacent to city limits.

In a FY 2011 *ICMA Data Report*, ICMA tabulated survey information from 56 municipalities with populations under 25,000. In this grouping the average fire station service area was 10.05 square miles.[8] The median service area for this grouping was ***6.32 square miles per fire station***.[9]

In addition, the NFPA and ISO have established different indices in determining recommended fire station distribution. The ISO Fire Suppression Rating Schedule, Section 560, indicates that first-

8. Comparative Performance Measurement, FY 2011 Data Report - Fire and EMS, ICMA Center for Performance Measurement, August 2012.
9. Ibid.

due engine companies should serve areas that are within a 1.5-mile travel distance.[10] The placement of fire stations that achieves this type of separation creates service areas that are approximately ***4.5 square miles*** in size, depending on the road network and other geographical barriers (rivers, lakes, railroads, limited access highways, etc.). The National Fire Protection Association (NFPA) references the placement of fire stations in an indirect way. It recommends that fire stations be placed in a distribution that achieves the desired minimum response times. NFPA Standard 1710, Section 5.2.4.1.1, suggests an engine placement that achieves a 240-seconds (four-minute) travel time.[11] Using an empirical model called the "piece-wise linear travel time function" the Rand Institute has estimated that the average emergency response speed for fire apparatus is 35 mph. At this speed the distance a fire engine can travel in four minutes is approximately 1.97 miles.[12] A polygon based on a 1.97-mile travel distance results in a service area that on average is ***7.3 square miles***.[13] From these comparisons, it can be seen that the estimated 5.08. square-mile service area of the station in St. Helena is very consistent with the noted references.

Stations are designed to adequately meet the needs of housing apparatus and necessary equipment. Typically, new fire stations have an anticipated service life of 50 years. However, we have noted that in many jurisdictions fire stations are being replaced in a 30 to 35-year time frame. In most cases facilities require replacement because of their size constraints, a need to relocate the facility to better serve shifting population centers, the absence of needed safety features, or a decision to provide better personnel accommodations.

SHFD owns Station-1, which is a large 25-year-old structure (approximately 15,300 square feet), located at 1500 Main St. The building is in very good condition and provides very suitable accommodations for the assigned personnel and equipment. The station has four pass-through bays and accommodates upwards of nine personnel along with the administrative offices for the Fire Chief and Fire Inspector. It also has very spacious and well-equipped training and meeting rooms. The station also houses the city's Emergency Operations Center (EOC) along with a number of mechanical and storage areas.

The current one-station configuration with its central location in St. Helena provides excellent response coverage for the existing call activities. The projected response activities within the city are not expected to change significantly with the anticipated future growth. CPSM believes that the current facility is very suitable for the current personnel and resources being stored and operated from this facility and has the potential to accommodate additional personnel and administrative activities if needed.

APPARATUS AND FLEET MANAGEMENT

Fire departments utilize a wide range of fire apparatus, along with tools and equipment, in carrying out their core mission. Apparatus generally includes emergency response vehicles such as engines, tenders/tankers (water supply vehicles), aerial apparatus (ladders & quints), rescue vehicles/squads, and ambulances. There are also specialized apparatus including wildland

10. Insurance Services Office. (2003) Fire Protection Rating Schedule (edition 02-02). Jersey City, NJ: Insurance Services Office (ISO).
11. National Fire Protection Association. (2010). NFPA 1710, Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments. Boston, MA: National Fire Protection Association.
12. University of Tennessee Municipal Technical Advisory Service, Clinton Fire Location Station Study, Knoxville, TN, November 2012. p. 8.
13. Ibid, p. 9.

engines, off-road vehicles, and watercraft that are typically part of the emergency fleet. Trailers are utilized to carry specialized equipment when needed. Other vehicles include; hazardous materials response/equipment, decontamination devices and diking materials, structural collapse equipment, portable air filling stations, scene lighting, foam units, and mass casualty incident supplies. In addition, a wide range of utility vehicles including command vehicles and emergency communications units, staff vehicles, and maintenance trucks can be part of the fleet.

The mission, duties, demographics, geography, and construction features within the community all play a major role in the makeup of the apparatus and equipment inventory utilized. These factors, as well as the funding available, must be taken into consideration when specifying and purchasing apparatus and equipment. Every effort should be made to make new apparatus as versatile, safe, and multifunctional as is possible as well as practical.

Apparatus maintenance is also an integral part of any fire department, and budget-wise it is invariably a key component in keeping such large ticket items as apparatus running and extending their usefulness. It takes a big chunk of a city's budget to purchase and subsequently maintain a fire department fleet. As fleets age, it is logical and sound planning to conclude that repairs and costs will increase exponentially.

There are two proven ways to mitigate the long-term and short-term costs associated with repairs and replacements. The primary way is to have a sound, dedicated preventive maintenance (PM) program that is on a regular cycle for each and every vehicle in a department's fleet. PM should be a sacrosanct practice that is unwavering. This strategy not only saves money, but can very well saves lives. The other method is to have a realistic capital improvement plan (CIP) to acquire new apparatus when an existing vehicle has outlived its usefulness. NFPA 1911, *Guidelines for First-Line and Reserve Fire Apparatus*, has changed and adapted over the years to reflect the changes in industry standards, but on one thing it has been wholly consistent:

> *"…it is imperative that all fire apparatus be checked and maintained regularly to ensure that they are reliable and safe to use. The manufacturer's instructions should always be followed when maintaining the fire apparatus."*

The standard further states:

> *"In the fire service there are fire apparatus with 8 to 10 years of service that are simply worn out. There is also fire apparatus that were manufactured with quality components, that have had excellent maintenance, and that have responded to a minimum number of incidents that are still in serviceable condition after 20 years. …the quality and timelessness of maintenance are perhaps the most significant factors in determining how well a fire apparatus ages."*

NFPA Standard 1915 addresses the minimum expectations for a comprehensive PM program. The benefits of implementing a PM program in compliance with NFPA 1915 are many. First, maintaining a vehicle is less expensive than repairing it. Second, vehicles that undergo PM on a dedicated schedule are more likely to have a longer lifespan. Third, PM reduces the time that a vehicle is unavailable for use in the community by reducing the chances that it will need repairs that take it out of service for a lengthy period of time. Finally, demonstrating adherence to an NFPA 1915-compliant PM program reduces the chance of a maintenance-related untoward event and possible resulting lawsuits.

The SHFD staffs one primary first response unit to accomplish its mission (Engine 17). In addition, a second Type-1 engine (Engine 317) is utilized extensively in providing service response and non-

emergency work activities (inspections, weed abatement, demonstrations, etc.). SHFD also maintains two wildland engines (Engine 417 and Brush 217) for all off-road wildland responses. At the time of our site visit, a new Type-1 fire engine was delivered and being readied for service. All of the fire apparatus, support vehicles, and specialty trailers are housed at Station-1.

Finally, the department maintains several reserve apparatus (engines, ladders, and utility units) for use when maintenance or repair is needed for its frontline apparatus. Altogether, the department's entire fleet is comprised of 10 units (increasing to 11 units), including apparatus reserve units, trailers, staff vehicles, etc. The following table shows the basic frontline inventory.

TABLE 3-5: SHFD Inventory of Frontline Apparatus

Unit	Type	Make	Year	Age	Mileage*
Engine-17	Type 1/Engine	Spartan	2013	11 years	38,595
Engine-317	Type 1/Engine	Pierce	1995	29 years	41,138
Truck-17	Ladder Truck	Pierce	2002	22 years	20,194
Engine-417	Type 3/Wildland	Pierce	2019	5 years	20,868
Brush-17	Wildland	Ford/F-550	2018	6 years	4,856
Brush-217	Type-6/Wildland	Chevy-3500	2006	18 years	47,560
Water Tender-17	Type-1/Tender	Peterbilt/Westates	1998	26 years	31,676
Command-170	Command	Ford/F-250	2018	6 years	33,442
Utility-17	Utility	Ford/F-250	2015	9 years	30,611
Utility-217	Utility	Ford/F-350	2009	15 years	84,233

*__Note:__ Mileage as of September 2023.

The department's frontline pumper is 11 years old and had an odometer reading in September 2023 of 38,595. The department's ladder truck, which is used primarily as a reserve unit or to expand the fire suppression capabilities for larger events, is 22 years old but has an odometer reading of fewer than 21,000 miles. The department maintains two wildland engines and a water tender. Overall, the fleet is modern and well-maintained and the department has been very proficient in its replacement schedule.

SHFD has assigned one of its Fire Captains to oversee the repairs and preventive maintenance of its fleet. Most repairs and maintenance are provided by out-sourced private providers. The department utilizes an on-call mechanic who provides repair and maintenance services. Annual ladder testing, aerial ladder maintenance, and pump-testing is done by another out-sourced private entity. Minor repairs and light maintenance are done internally by on-duty crews and the St. Helena Volunteer Fire Dept. Association under the supervision of the Fleet Maintenance Fire Captain. The St. Helena Volunteer Fire Dept. Association contributes assistance, both financial and via staff hours, to help maintain the fleet. The city budgets approximately $50,000 annually for vehicle repairs and parts. The St. Helena Volunteer Fire Dept. Association also contributes varying amounts of funding for these services. CPSM highly commends the commitment and efficiency of the fleet management efforts currently being utilized in St. Helena.

The Fleet Maintenance Captain does not fully utilize an automated work-order tracking system, nor does the department maintain a detailed recordkeeping log that tracks each of its vehicle's maintenance and repair history. CPSM believes that the city should institute a comprehensive work-order tracking system and vehicle repair log for its fire department fleet.

Recommendation: The city should institute a work-order tracking system and vehicle repair log for the fire department fleet and which provides a comprehensive chronology and the cost accounting associated with the SHFD fleet repairs and maintenance. (Recommendation No. 7.)

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NFPA 1901, *Standard for Automotive Fire Apparatus*, 2016 edition, serves as a guide to the manufacturers that build fire apparatus and the fire departments that purchase them. The document is updated every five years, using input from the public/stakeholders through a formal review process. The committee membership is made up of representatives from the fire service, manufacturers, consultants, and special interest groups. The committee monitors various issues and problems that occur with fire apparatus and attempts to develop standards that address those issues. Of primary interest to the committee over the past years has been improving firefighter safety and reducing fire apparatus accidents.

The Annex Material in NFPA 1901 contains recommendations and work sheets to assist in decision-making in vehicle purchasing. With respect to recommended vehicle service life, the following excerpt is noteworthy:

> *"It is recommended that apparatus greater than 15 years old that have been properly maintained and that are still in serviceable condition be placed in reserve status and upgraded in accordance with NFPA 1912, Standard for Fire Apparatus Refurbishing, to incorporate as many features as possible of the current fire apparatus standard. This will ensure that, while the apparatus might not totally comply with the current edition of the automotive fire apparatus standards, many improvements and upgrades required by the recent versions of the standards are available to the firefighters who use the apparatus."*[14]

> *"Apparatus that were not manufactured to the applicable apparatus standards or that are over 25 years old should be replaced."*[15]

In a 2004 survey of 360 fire departments in urban, suburban, and rural settings across the nation, Pierce Manufacturing reported on the average life expectancy for fire pumpers.[16] The results are shown in the following table.

TABLE 3-6: Fire Pumper Life Expectancy by Type of Jurisdiction

Demographic	Frontline Service	Annual Miles Driven	Reserve Status	Total Years of Service
Urban	15 Years	7,629	10 Years	25
Suburban	16 Years	4,992	11 Years	27
Rural	18 years	3,034	14 Years	32

Note: Survey information was developed by Added Value Inc. for Pierce Manufacturing in, "Fire Apparatus Duty Cycle White Paper," Fire Apparatus Manufacturer's Association (FAMA), August 2004.

Most agencies utilize a combination of funding methods for apparatus replacements. These include capital replacement funds, bond initiatives, or simply through annual budget

14. NFPA 1901, Standard for Automotive Fire Apparatus, 2016 Edition. Quincy, MA.
15. NFPA 1901, Standard for Automotive Fire Apparatus, 2016 Edition. Quincy, MA.
16. "Fire Apparatus Duty Cycle White Paper," Fire Apparatus Manufacturer's Association. August 2004.

allocations. The key, however, is to develop an ongoing funding mechanism to fund the replacement of apparatus when their useful lifespan has been met.

St. Helena has a unique and effective vehicle replacement strategy. The fire department has established a replacement schedule for its fleet which is based primarily on an estimated service life of the vehicle type. Engines, wildland vehicles, and the ladder are on a 15-year replacement schedule. Utility vehicles, command units, and pick-up trucks are on a 10-year replacement cycle. The city uses a combination of funding to pay for vehicle replacements. Revenue from all out-of-area assignments is put into the replacement fund. The St. Helena Volunteer Fire Dept. Association also contributes annual funding for vehicle replacements. This combined funding, which typically generates from $200,000 to $300,000 annually, has been sufficient to maintain fleet replacements. While there is no guarantee that out-of-area assignments will generate consistent funding from year to year and there is no formal agreement that requires a contribution by the St. Helena Volunteer Fire Dept. Association. This combination of funding has proven to be very effective as a funding strategy for this key capital expenditure. CPSM recognizes the city and the St. Helena Volunteer Fire Dept. Association's contributions to the apparatus replacement program as a ***Best Practice***.

Capital Equipment

Fire apparatus are equipped with various types of tools and equipment that are utilized in providing Fire and EMS services. Many of the tools and much of the equipment carried on fire apparatus are specified in NFPA and ISO guidelines. Fire and EMS equipment includes such items as hose, couplings, nozzles, various types of ladders, foam, scene lighting, oxygen tanks, AEDs, defibrillators, small hand tools, fire extinguishers, mobile and portable radios, salvage covers, and medical equipment and supplies. Many of the small tools and equipment are considered disposable items and are replaced with ongoing operating funds. However, some pieces of equipment are very expensive, and thus their replacement must be planned. The more expensive capital items include:

- Self-contained breathing apparatus (SCBA) and fill stations.
- Firefighting PPE (personal protective equipment).
- Hydraulic/pneumatic extrication equipment.
- Portable generators
- ECG Monitors/Defibrillators/AEDs.
- Thermal imaging cameras.
- Mobile/portable and base radios.
- Aerial drones
- Mobile data computers.
- Gas monitoring and detection devices.

Much of the more expensive capital equipment is generally on a ten-year replacement cycle. Each new apparatus must be outfitted with a complement of capital equipment; a full complement has an estimated cost of nearly $300,000. The total cost of outfitting a department the size of the SHFD with the capital items described is estimated to be approximately $750,000. Thus, CPSM estimates that the annual replacement needs for these types of capital items in the SHFD is approximately $50,000 to $75,000.

RADIO INTEROPERABILITY AND COVERAGE

In general, interoperability refers to seamless radio communications between emergency responders using different communication systems or products. Wireless communication interoperability is the specific ability of emergency responders to use voice and data communication in real time, without delay. For example, police, fire, and EMS responding to an incident are interoperable when all can communicate with one another over individual and perhaps shared communication channels. Interoperability enables first responders from any jurisdiction to communicate with one another at larger incidents and also enables emergency planners and personnel to coordinate their radio operations in advance of major events.[17]

The SHFD has not transitioned its radio system to a P-25, trunked system. SHFD is currently using a repeated VHF radio frequency for its Fire and EMS operations. The current system has inter-operability with mutual aid partners and AMR and the coverage areas in St. Helena are very good. These systems are very functional in the more rural settings, particularly in mountainous terrain. However, the CAL-FIRE Dispatch Center and the Calistoga/St. Helena Dispatch Center do not have direct radio communications with each other. Whenever the two centers need to have voice communications, it must be done via an independent telephone conversation.

> ***Recommendation: St. Helena should take immediate steps to institute a common radio link that will enable direct radio communications between the Calistoga/St. Helena Dispatch Center and the CAL-FIRE Center. (Recommendation No. 8.)***

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911 CALLS / DISPATCH

The current arrangement for 911 dispatch answering points, dispatch centers, and call-screening processes being utilized in St. Helena appears redundant and likely prone to delays or even dropped calls. Currently there are three separate agencies that are involved in processing 911 calls that originate in St. Helena. These include the following:

- Calistoga / St. Helena consolidated public safety answering point (PSAP).
- CAL-FIRE ECC.
- Napa City Central Dispatch.

Each of these entities operates from a separate facility, utilizing different personnel, and operating under differing levels of supervision and oversight in managing their individual operations.

The Calistoga/St. Helena PSAP is the public safety answering point for both the city of St. Helena and Calistoga. This is a Police dispatching center that has been recently consolidated for providing services for both cities. 911 calls originating in either city, are routed into this center and depending on the nature of the call are transferred to the appropriate dispatch center.

The CAL-FIRE ECC (Emergency Command Center) is primarily a fire dispatch and operations center operated by CAL-FIRE and provides Fire and EMS dispatching throughout Napa, Lake, Solano, Yolo, Colusa and Sonoma Counties. Because of its service contract with Napa County

17. SAFECOM, U.S. Department of Homeland Security, "Interoperability," http://www.safecomprogram.gov/SAFECOM/interoperability/default.htm.

for Fire and EMS protection, this center is providing 911 dispatching services for its resources along with municipal resources operating in Napa County. This center receives calls from the Calistoga/St. Helena PSAP and pages out the St. Helena units for Fire, EMS, or other service calls, both emergency and non-emergency.

The Napa City Central Dispatch operates as the EMS call screening center for all EMS calls originating in Napa County. This center is charged with speaking to the 911 caller making a request for EMS services and screens calls for their acuity and then dispatches ambulance (AMR) resources. The Napa Central has a direct CAD link with the CAL-FIRE ECC, so that when a call requires a St. Helena response this electronic message is sent to CAL-FIRE, which then dispatches St. Helena resources.

The current arrangement is very complex and requires a very sophisticated level of support both technologically and in the day-to-day management of operations. The current arrangement requires the operations of three separate facilities. There are a large number of personnel and supervisory staff that are maintained. Training and the monitoring of activities along with incident reporting, recordkeeping, and 24-hour staffing requirements place significant strain and responsibility in multiple work environments.

Though the current arrangement is working, there are a number of inherent problems associated with this composite of resources. Personnel recruitment and retention is an issue. Quality control and reporting regarding the time it is taking to process calls and identifying delays in the transfer of callers and information between the various centers is not being done. There is not a singular managerial oversight among the three centers. Each center operates independently and each has a separate governmental structure under which it is funded and function. Performance measures, training standards, quality control, and system reporting are not being done for the entire call-taking and dispatching process. CPSM believes that a thorough review of the current arrangement is warranted. This review should evaluate the overall cost of these services, the effectiveness of these services, training, supervision, redundancy, and a host of other factors critical in operating an effective public safety 911 dispatching system.

Recommendation: St. Helena should initiate an effort to evaluate the effectiveness and efficiency of the 911 dispatching services currently being utilized for law enforcement, fire, and EMS. (Recommendation No. 9.)

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SECTION 4. ANALYSIS OF PLANNING APPROACHES

FIRE RISK ANALYSIS

The cost of providing Fire and EMS protection in many communities has increased steadily in recent years. This has been fueled in part by rising wages, additional special pay, and escalating overtime costs. In addition, funding requirements have been compounded by increasing health insurance premiums and spiraling pension contributions. In St. Helena as in many communities across the nation, the combined costs for employee benefits are exceeding 75 to 80 percent of the actual salary costs. At the same time, the workforce has become less productive, largely because of the increases in lost time, specifically vacation leave, greater usage of sick leave, holiday leave, compensatory time, and increases in other miscellaneous lost-time categories (Kelly Days, worker's compensation, light duty, FMLA, training leave, etc.). As a result, many jurisdictions are asking the fundamental question of whether the level of risk in their jurisdiction is commensurate with the type of protective force that is being deployed. To this end, a fire risk and hazard analysis can be helpful in providing a more objective assessment of a community's level of risk.

A fire risk analysis utilizes a fire risk score, often referred to as an "OVAP Score" (Occupancy Vulnerability Assessment Profile), which is a rating of an individual property on the basis of several factors, including:

- Needed fire flow if a fire were to occur.
- Probability of an occurrence based on historical events.
- The consequence of an incident in that occupancy (to both occupants and responders).
- The cumulative effect of these occupancies and their concentration in the community.

A community risk and vulnerability assessment is used to evaluate community properties and assign an associated risk as either a high, medium, or low hazard. The NFPA *Fire Protection Handbook* defines these hazards as:

> **High-hazard occupancies:** Schools, hospitals, nursing homes, explosive plants, refineries, high-rise buildings, and other high life-hazard or large fire-potential occupancies.
>
> **Medium-hazard occupancies:** Apartments, offices, and mercantile and industrial occupancies not normally requiring extensive rescue by firefighting forces.
>
> **Low-hazard occupancies:** One-, two-, or three-family dwellings and scattered small business and industrial occupancies. [18]

Plotting the rated properties on a map provides a better understanding of how the response matrix and staffing patterns can be used to ensure a higher concentration of resources for worst-case scenarios or, conversely, fewer resources for lower levels of risk.[19]

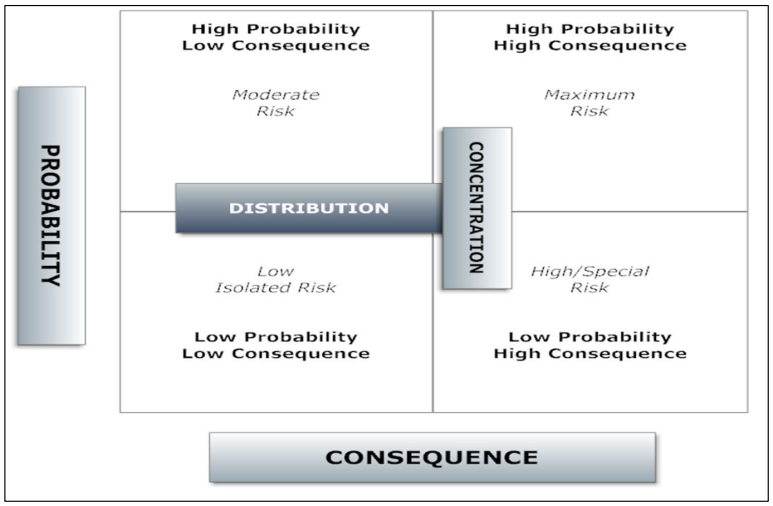
18. Cote, Grant, Hall & Solomon, eds., *Fire Protection Handbook* (Quincy, MA: NFPA 2008), 12.
19. *Fire and Emergency Service Self-Assessment Manual*, Eighth Edition (Center for Public Safety Excellence, 2009), 49.

Hazard Analysis and Community Risk Assessment

Hazard analysis and community risk assessment are essential elements in a fire department's planning process. The City of St. Helena and the SHFD, though they have recognized the need for a comprehensive community risk and vulnerability, have not completed this process. Each jurisdiction has to decide what degree of risk is acceptable to the citizens it serves. This determination is based on criteria that have been developed to define the levels of risk (e.g., of fire) within all sections of the community.[20] To this end, a comprehensive planning approach that includes a fire risk assessment and hazard analysis is essential in determining local needs.

The term *integrated risk management* refers to a planning methodology that recognizes that citizen safety, the protection of property, and the protection of the environment from fire and related causes must include provisions for the reasonable safety of emergency responders. This means assessing the risk faced, taking preventive action, and deploying the proper resources in the right place at the right time.[21] There are two main considerations of a risk assessment: the probability of an event occurring and the consequence of that event occurring. The matrix in the following figure divides the risk assessment into four quadrants. Each quadrant of the chart creates different requirements in the community for commitment of resources.

FIGURE 4-1: Community Risk Matrix



Plotting the rated properties on a map will provide a better understanding of how the response matrix and staffing patterns can be used to ensure a higher concentration of resources for worst-case scenarios or, conversely, fewer resources for lower levels of risk.[22]

Community risk and vulnerability assessments are essential elements in a fire department's planning process. Although the City of St. Helena and the SHFD has an effective and ongoing program to identify the risks and hazards associated with wildfires in the community, a

20. Compton and Granito, *Managing Fire and Rescue Services*, 39.
21. Cote, Grant, Hall & Solomon, eds., *Fire Protection Handbook* (Quincy, MA: NFPA 2008), 12-3.
22. *Fire and Emergency Service Self-Assessment Manual*, Eighth Edition, (Center for Public Safety Excellence, 2009), 49.

comprehensive community risk and vulnerability assessment for structure fires has not been done.

Recommendation: The St. Helena Fire Department should conduct a formal structure fire risk assessment that concentrates on the city's downtown, commercial establishments, wineries, and institutional properties. (Recommendation No. 10.)

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As a guide in conducting a vulnerability assessment, CPSM has developed the following template that may be utilized in completing this process.

Community Risk Assessment Template

TASK 1: Establish a Risk Assessment Team

- Five to six members with assorted skills.
- Team leader.
- Data analyst.
- Tactical/command expertise.
- City planning/growth management.
- Financial/economic.
- GIS/mapping.

TASK 2: Review and Plot Historical Workload (5 years)

- Breakout daily call distribution by type.
  - Location/occupancy type.
  - High-volume/frequent use.
    - Hospital.
    - Learning Institutes.
    - Wineries and tasting centers.
    - Adult living center.
- Identify high-dollar loss fire events (>$25K).
  - Location/occupancy type.
  - Cause & origin/demographic.
- Identify high-manpower events (>20 people).
- Identify high-time duration events (>2 hours).
- Identify events with significant economic impact (>$1 million).
- Identify events with multiple injuries or fatalities.
- Identify events with significant environmental impacts (which require remediation).

TASK 3: Identify the Community Risks for High-profile Events

- Transportation accidents (rail, air, roadway, port).
- Occupancies with high OVAP scores.[23]
- Wildfire events.
- Large, complex fire (dormitory, assisted living, jail, hospital, etc.).
- Processing or manufacturing accident (chemical, radiologic, petroleum, electrical, etc.).
- Mass casualty incident.
- Weather, flooding, or seismic event.
- Terrorist event.
- Driven by a community profile or demographic.

TASK 4: Identify Capacity Issues or Incidents in which Insufficient Resources Resulted in a Negative Outcome

- Related to daily activities.
- Related to larger/significant events.
- Related to incidents requiring the utilization of mutual aid or external resources.
- Other incident types.

TASK 5: Identify Additional Service Demands Related to Anticipated Growth of the Service Area

- Affecting daily activities.
- Related to larger/significant events.
- Incidents that required specialized services or a currently unavailable expertise.

TASK 6: Identify Risk Reduction or Prevention Efforts that can Reduce or Eliminate Future Workload

- Related to daily activities.
- Related to larger/significant events.
- Related to new demand resulting from growth.
- Develop cost/outcome analysis.

TASK 7: Identify Additional Training Needs to Better Manage Current or Anticipated Service Demand

- Develop cost/outcome analysis.

TASK 8: Identify Organizational or Tactical Capabilities Needed to Meet Current Shortfalls

- Develop cost/outcome analysis.

In addition to examining risks faced by the community at large, the department needs to examine internal risks. The National Fire Protection Association's *Standard for a Fire Department Occupational Safety and Health Program* (NFPA 1500) requires a risk management plan for fire departments to be developed separately from those that are incorporated in the local

23. http://riskassessment.strategicfire.org/wp-content/uploads/2016/03/Community-Risk-Assessment-Guide-v1.5.pdf

government plan.[24] The St. Helena Fire Department does not have a written internal risk management program in place.

A fire department risk management plan is developed and implemented to comply with the requirements of NFPA 1500. The following components must be included in the risk management plan:

Risk Identification: Actual or potential hazards.

Risk Evaluation: The potential of occurrence of a given hazard and the severity of its consequences.

Prioritizing Risk: The degree of a hazard based upon the frequency and severity of occurrence.

Risk Control: Solutions for elimination or reduction of real or potential hazards by implementing an effective control measure.

Risk Monitoring: Evaluation of effectiveness of risk control measures.[25]

HAZARDOUS MATERIALS RESPONSE

Hazardous materials (Hazmat) incidents occur with limited frequency in St. Helena. In 2023, according to data provided by the SHFD, there was only one hazmat-related call. In most communities, hazardous materials incidents typically involve natural gas and propane leaks, carbon monoxide incidents, biologic hazards, combustible and flammable gas spills, chemical hazards, and transport vehicle accidents with associated spills and leaks. California Highway 29 is a major thoroughfare that runs through St. Helena and is prone to vehicle accidents that result in gasoline and diesel spills. In addition, the numerous wineries with their bottling and storage processes present the added potential for heavy machinery incidents and spills along with exposure issues involving hazardous chemicals utilized in these processing activities.

SHFD personnel are trained and equipped at the *First Responder Operations Level*. This is the required level of training for all California fire personnel. This level of response is designed to recognize that a hazardous materials release has occurred and their primary function is to take actions that protect people and the environment for from this exposure.

Clearly the primary risks from hazardous material spills are those generated by transportation accidents and fixed facilities that experience spills involving chemicals utilized in their processing activities. However, over the years, the type and nature of incidents to which regional hazmat teams may respond has significantly changed and have become more technically challenging. Examples include the following:

- Clandestine labs, criminal and terrorist use of hazmat as weapons, chemical suicides, etc.
- Interdisciplinary response scenarios in which the regional hazmat teams' interface with their response partners in the law enforcement, emergency medical, and fire communities. Scenarios include special events and the use of Joint Hazard Assessment Teams (JHAT),

24. Robert C. Barr and John M. Eversole, eds., *The Fire Chief's Handbook*, 6th edition (PennWell Books, 2003), 270.
25. NFPA 1500, *Standard for a Fire Department Occupational Safety and Health Program* (2007 ed.), Annex D.

improvised explosive devices, coordinated/complex attack scenarios, active shooter/assailant scenarios, and the emergence of virus threats such as Ebola and Zika.

- Tourism and economic development initiatives have drawn large gathering to festivals throughout the area. While this is a positive economic development, high-profile and high-density crowd events raise the threat level that requires a more sophisticated hazmat preparedness and response package.
- Changes in the U.S. domestic energy infrastructure have impacted the response community, such as for incidents involving high-hazard, flammable trains with crude oil and ethanol, increased use of liquefied natural gas (LNG), and related facilities, etc.
- The increasing use of social media is viewed as both a situational awareness asset and a potential operations security (OPSEC) vulnerability. The regional hazmat teams can assume a leadership role in determining future pathways and options on how social media can be safely and effectively integrated into response operations.[26]

Level I hazardous materials incidents are typically managed and mitigated by the first response personnel without a hazardous materials response team or other special unit. These incidents include:

- Spills that can be properly and effectively contained/or abated by equipment and supplies immediately accessible to SHFD.
- Leaks and ruptures that can be controlled using equipment and supplies accessible to SHFD.
- Fires involving toxic materials and which can be extinguished and cleaned up with resources immediately available to SHFD.
- Hazardous materials incidents not requiring civilian evacuation. (Example: A small pool supply spill that can be diluted with water for clean-up.)

In the event of a larger incident (Level II and III), in which a regional hazardous material team is required, St. Helena will request assistance from either CAL-FIRE or Napa City. Each SHFD and Napa County Fire responders maintain hazardous materials operations-level certification, which enables them to identify hazards and conduct defensive operations for those situations requiring Level II and III capability.

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26. Flippin, P., et al; Virginia Department of Emergency Management Hazmat Program Strategic Review (VDEM, Richmond, VA, 2016)

TARGET HAZARDS AND FIRE PREPLANNING

The process of identifying target hazards and conducting pre-incident planning are basic preparedness efforts that have been key functions in the fire service for many years. In this process, critical structures are identified based on the risk they pose. Then, tactical considerations are established for fires or other emergencies in these structures. Consideration is given to the activities that take place (manufacturing, processing, etc.), the number and types of occupants (elderly, youth, handicapped, imprisoned, etc.), and other specific aspects relating to the construction of the facility or any hazardous or flammable materials that are regularly found in the building. Target hazards are those occupancies or structures that are unusually dangerous when considering the potential for loss of life or the potential for property damage. Typically, these occupancies include hospitals, nursing homes, and high-rise and other large structures. Also included are arenas and stadiums, industrial and manufacturing plants, and other buildings or large complexes.

NFPA's 1620, *Standard for Pre-Incident Planning,* through its *Sample Pre-Incident Plan Field Collection Card and Facility Data Record* in Annex A, is quite specific in identifying the need to utilize a written narrative, diagrams, and predesignated, detailed forms to depict the physical features of a building, its contents, and any built-in fire protection systems. Information collected for pre-fire/incident plans includes, but is certainly not limited to, data such as:

- The occupancy types.
- Floor plans/layouts.
- Building construction type and features.
- Building fire protection systems.
- Utility locations.
- Hydrant locations.
- Hazards to firefighters and/or firefighting operations.
- Hazmat considerations and locations.
- Special conditions in the building.
- Apparatus placement plan.
- Fire flow requirements and/or water supply plan.
- Forcible entry and ventilation plan.
- Emergency contact information.

NFPA 1620 goes on to state that "A pre-incident plan is one of the most valuable tools available for aiding responding personnel in effectively controlling an emergency."[27] The information contained in pre-incident fire plans enables firefighters and officers to have a familiarity with the building/facility, its features, characteristics, operations, and hazards. Thus, they can more effectively, efficiently, and safely conduct firefighting and other emergency operations. Pre-incident fire plans should be reviewed regularly and tested by periodic table-top exercises and on-site drills, especially in the most critical and frequented occupancies.

27. http://www.nfpa.org/codes-and-standards/all-codes-and-standards/codes-and-standards/detail?code=1620

Strategically and from an operational standpoint, according to NFPA 1620, pre-incident planning is a total concept based upon the following:

- Situation awareness.
- Management commitment.
- Education.
- Protection.
- Prevention.
- Emergency organization.[28]

St. Helena is home to Adventist Health-St. Helena, a 151-bed acute-care hospital providing a range of services including a 24-hour emergency room. There are a number of assisted living facilities in the St. Helena service area, including Silverado Orchards Retirement Community, Solstice Senior Living, St. Helena Home Care, Rianda House, Vintage Chalet, and Rose Haven.

There are a number of manufacturing and processing establishments in St. Helena, including HELIMEC, Loomis Industries, Ogletree's Metal and Equipment Fabricators, Must Machining and Fabrication, Chase Alstott Design, Crown Hill Stone Supply, and a number of wineries, vineyards, and tasting centers. The downtown area also has a number of businesses and restaurants with suppression systems for which familiarization and preplanning walk-throughs could be accomplished during the company inspection program.

SHFD has a very robust inspection and weed abatement program that provides periodic inspection to more than 2,300 properties within the SHFD service area. Line personnel are actively involved in many in-service company inspections. More than 400 properties are inspected on a regular basis by engine companies. CPSM believes that these efforts are critical in developing tactical expertise and preplanning reconnaissance. At the same time they offer an opportunity to inspect and correct code violations and life-safety concerns.

However, the SHFD does not conduct pre-fire incident planning. When queried regarding this omission, CPSM was told that the department's new Image Trend software package will provide a platform to complete and store pre-incident plans and the transition to this platform was being developed.

> ***Recommendation: The St. Helena Fire Department should continue in its efforts to develop a comprehensive Pre-Incident Planning program for its target hazards and high-risk occupancies. (Recommendation No. 11.)***

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It is critical that this program follow the guidelines specified in NFPA's 1620, *Standard for Pre-Incident Planning, be fully retrievable on the apparatus mobile data terminals, and be updated on a regular basis.*

ACCREDITATION

Accreditation is a comprehensive self-assessment and evaluation model that enables organizations to examine past, current, and future service levels. It is used to evaluate internal

28. Ibid.

performance and compares this performance to industry best practices. The intent of the process is to improve service delivery.

The Center for Public Safety Excellence (CPSE) provides an extensive evaluation process, on a fee basis, to member agencies and which ultimately leads to accreditation. CPSE is governed by the Commission on Fire Accreditation International (CFAI), an 11-member commission representing a cross-section of the fire service, including fire departments, city and county management, code councils, the U.S. Department of Defense, and the International Association of Firefighters.

The CPSE Accreditation Program is built around the following key measurements:

- Determine community risk and safety needs.
- Evaluate the performance of the department.
- Establish a method for achieving continuous organizational improvement.

Local government executives face increasing pressure to "do more with less" and justify expenditures by demonstrating a direct link to improved or measured service outcomes. Particularly for emergency services, local officials need criteria to assess professional performance and efficiency.

CPSE accreditation has national recognition and is widely used throughout the fire service. The key to its success is that it enables communities to set their own standards that are reflective of their needs and a service delivery model that is specific to these needs. In addition, it is a program that is based on ongoing improvement and continuous monitoring. The CPSE accreditation model may be well-suited for St. Helena.

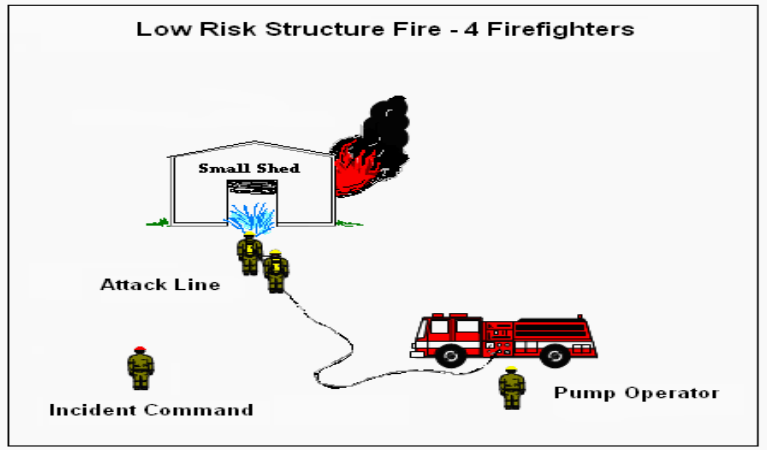
Recommendation: St. Helena should consider working toward CPSE Fire Accreditation in the future. (Recommendation No. 12.)

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SECTION 5. OPERATIONAL RESPONSE APPROACHES

As mentioned previously, many agencies incorporate the use of prefire plans to provide a response and tactical strategy for those more critical or complex occupancies in the community. Figures 5-1 to 5-3 illustrate the critical tasks and resources required on low- and moderate-risk structure incidents along with when an aerial device is utilized. Understanding the community's risk greatly assists fire department planning, and with ongoing training, these activities improve overall effectiveness and responder safety.

FIGURE 5-1: Low-Risk Response, Exterior Fire Attack



The following figure is a representation of the critical task elements for a moderate-risk structure fire. Some jurisdictions add additional response resources to meet and, in some cases, exceed the national benchmarking provided by the National Fire Protection Association (NFPA) 1710, *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Departments*, 2020 Edition. NFPA 1710 calls for the initial assignment of 16 personnel on a single-family residential structure fire when an aerial ladder is not utilized. St. Helena is unable to assemble this full complement of resources (16 to 17 personnel) for a single-family residential structure fire from its on-duty resources. Additional resources are typically obtained through the re-call of off-duty personnel and through mutual aid requests and automatic response agreements with neighboring agencies.

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FIGURE 5-2: Moderate-Risk Response, Interior Fire Attack

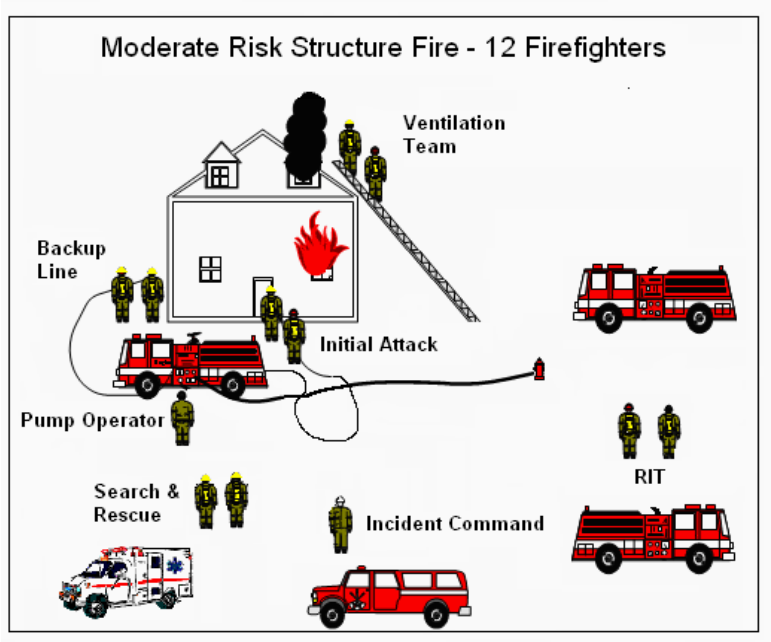
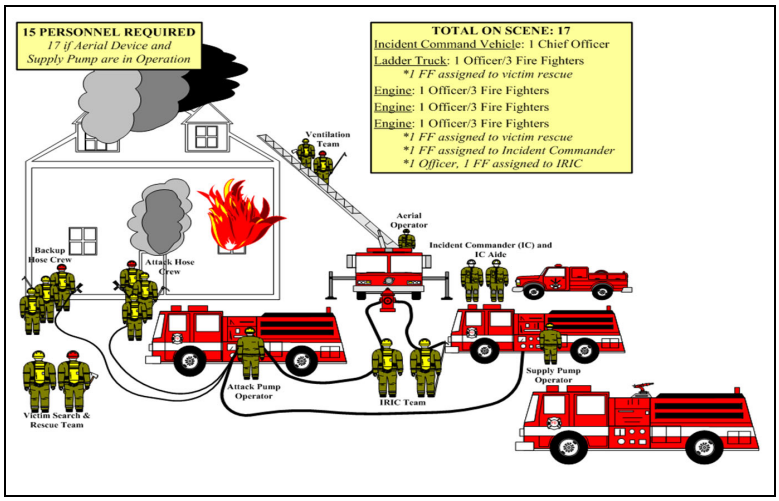


FIGURE 5-3: Full-Force Response, Utilizing an Aerial Device



FIRE RESPONSE PROTOCOLS

The ability to assemble the necessary resources to effectively manage even a smaller residential or commercial structure fire is significant. As mentioned above, the NFPA standard (NFPA 1710) recommends a minimum of 16 personnel as the initial response to a fire at a single-family residential structure. An actual fire of any significance will require 16 to 20 personnel or more for extended periods of time. As the incident grows in size and complexity, it is not unusual to see staffing needs that can exceed 30 to 40 personnel. This would be the case in a fire at a large commercial occupancy, a winery, a wildfire, a train derailment, or a fire at an apartment complex. Though these larger incidents do not occur frequently, when they do occur, the ability to assemble sufficient resources rapidly can significantly impact the outcome.

The decision as to what is the proper staffing level for a specific community's protection is perhaps the most difficult assessment faced by policy makers and fire department leadership. As communities increase their level of response, the costs associated with maintaining this level of readiness can have significant financial implications. **CPSM believes that the current deployment practices being utilized in St. Helena are providing sufficient structural, wildfire, and EMS protection to the community.** This level of protection is only available because of the various mutual aid and automatic response arrangements the city maintains with CAL-FIRE, Napa County, and Calistoga. In addition, St. Helena operates in a two-tiered EMS delivery system in which AMR (a private ambulance provider) provides advanced life support (ALS) throughout the city, while the fire department provides basic life support (BLS) first response services. These combinations of resources are providing a highly trained and rapid response to each service request and which offer added resources when larger events occur. As an added cost-saving measure, the city of St. Helena uses part-time firefighters to maintain its on-duty staffing levels. CPSM estimates that part-time personnel are filling more than 40 percent of the daily staffing assignments, resulting in considerable savings. CPSM recognizes the current staffing and deployment practices being utilized in St. Helena as a ***Best Practice***.

Call Activities

In addition to having sufficient resources available to respond to daily events, it is equally important that on-duty resources are utilized safely and efficiently in responding to EMS and Fire service-related calls for assistance. The key to organizational efficiency and the safety of responding personnel is directly related to response activities and departmental deployment practices.

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FIGURE 5-4: Number of Arriving SHFD Units for EMS Calls

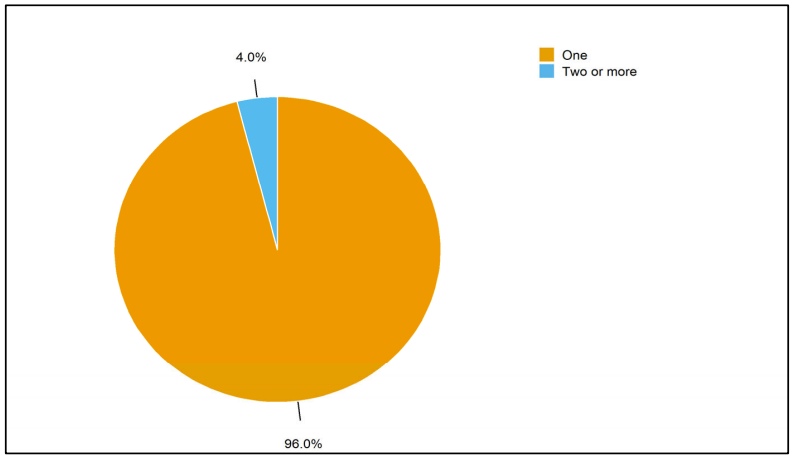
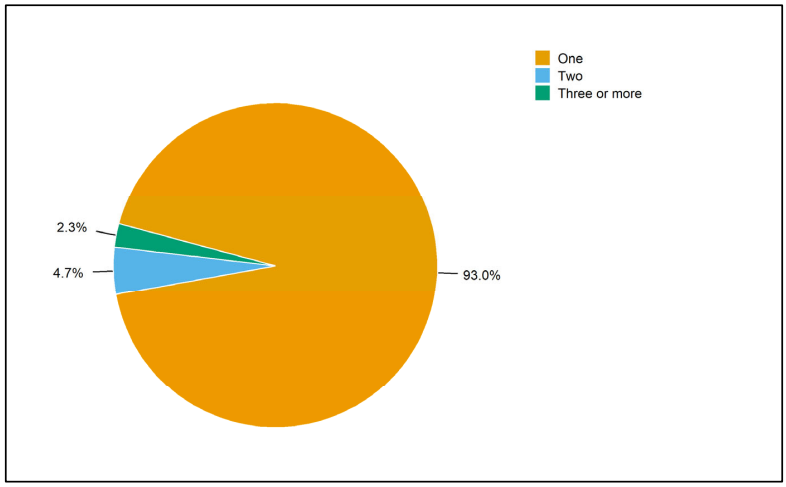


FIGURE 5-5: Number of Arriving SHFD Units for Fire Calls



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TABLE 5-1: Calls by Call Type and Number of Arriving SHFD Units

Call Type	Number of Units			Total Calls	Percent %
Medical and other	344	8	1	353	42.3
MVA	12	6	0	18	2.4
EMS subtotal	**356**	**14**	**1**	**371**	**44.7**
False alarm	58	0	0	58	7.9
Good intent	6	1	0	7	1.2
Hazard	37	6	2	45	6.0
Public service	135	2	1	138	16.7
Actual Fires					**1.1**
Outside fire	2	1	0	3	0.4
Structure fire	1	2	3	6	0.7
Fire subtotal	**239**	**12**	**6**	**257**	**32.9**
Canceled	12	0	0	12	2.5
Aid given	112	14	3	129	19.9
Total	**719**	**40**	**10**	**769**	
Total Percentage	**93.5**	**5.2**	**1.3**	**100.0**	**100.0**

Note: Out of 75 calls that did not have an arriving unit, nine were canceled calls, six were EMS calls, 21 were fire calls, and 39 were aid-given calls.

The following table shows the aggregate call totals for the 12-month period evaluated. EMS calls represent the largest percentage of calls for service at more than 60 percent, when canceled calls are excluded and mutual aid responses are categorized by their call type. This predominance of EMS call activity is not unusual when compared to what we usually observe in many communities. Our experience is that EMS-related calls typically account for more than 75 percent of call activity; in some communities with a larger senior demographic, this number can go as high as 80 to 85 percent. While fire calls in St. Helena represent approximately 33 percent of all calls for service, actual fires (structural and outside) represent only 1.1 percent of the overall call activity. Hazard, false alarms, good intent, and public service calls represent the largest percentage of the fire calls (98 percent). This is also very typical in CPSM data and workload analyses of other fire departments.

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TABLE 5-2: Calls by Type

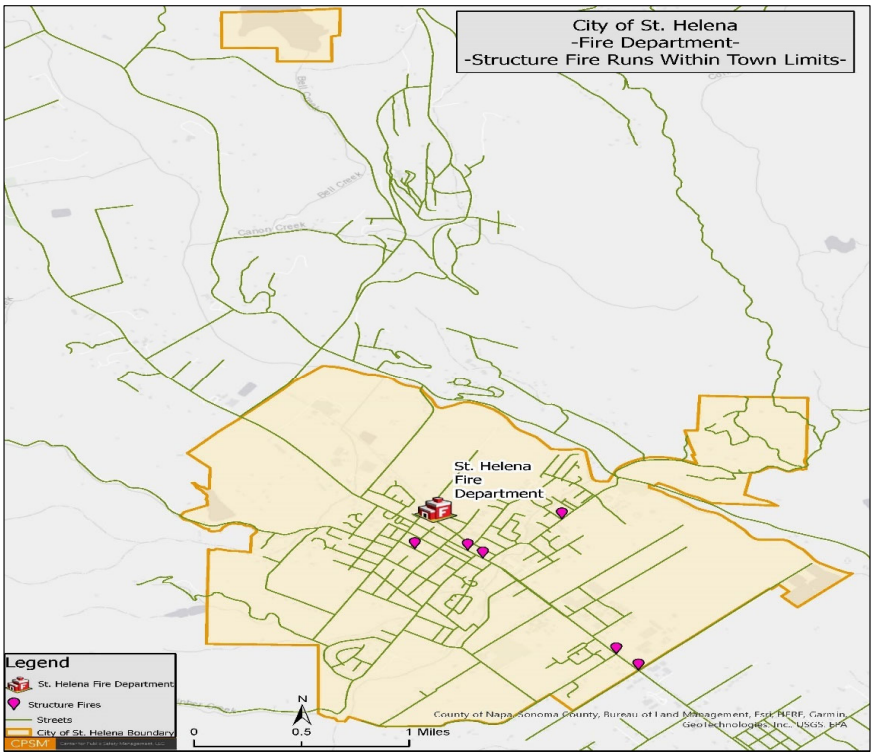
Call Type	Total Calls	Calls per Day	Call Percentage
Medical and other	357	1.0	42.3
MVA	20	0.1	2.4
EMS subtotal	**377**	**1.0**	**44.7**
False alarm	67	0.2	7.9
Good intent	10	0.0	1.2
Hazard	51	0.1	6.0
Public service	141	0.4	16.7
Actual Fires			**1.1**
Outside fire	3	0.0	0.4
Structure fire	6	0.0	0.7
Fire subtotal	**278**	**0.8**	**32.9**
Canceled	21	0.1	2.5
Aid given*	168	0.5	19.9
Total	**844**	**2.3**	**100.0**

Note: *Calls outside St Helena were labeled as aid given.

In looking in more detail at the **6 structure fires**, it was determined that for ***3*** of these events, there was ***no reported fire damage***. This indicates that many structure fires are minor and in some instances the fire is out upon arrival of the SHFD or the fire was contained to a cooking appliance, the kitchen sink, or a trash receptacle. When we looked at the time spent on structure fire incidents, we found that on 4 of the 6 structure fires and all 3 of the outside fires, the call duration for these incidents was 60 minutes or less. This is indicative of a relatively minor occurrence. However, 2 structure fire calls saw a duration of greater than one hour and 1 lasted for more than two hours. This would indicate a more significant event. The following figure shows the locations of structure fires in St. Helena during our study period.

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FIGURE 5-6: Location of Structure Fires



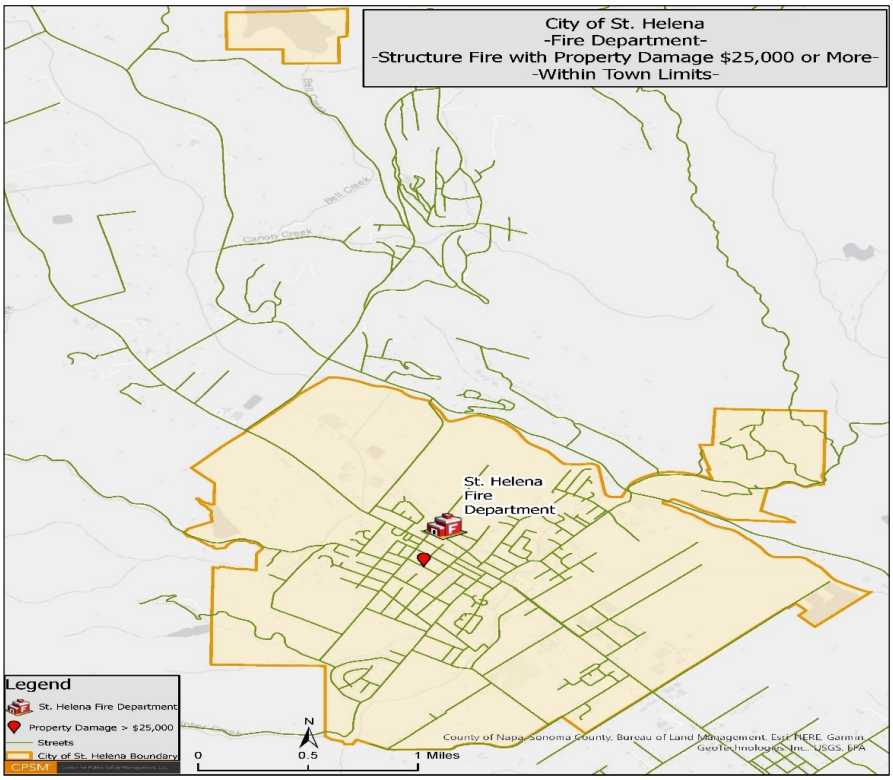
There were three structure fires in which some degree of fire damage was noted in the incident report. The total fire loss (structure and contents) for all structural fires in the 12-month evaluation period was estimated to be $55,500. Fire damage estimates are made by SHFD Fire Chief and company officers.

For the calls in which damage was reported (structure and contents), we estimate that the **average damage for each fire was approximately $9,733**. We can compare this experience to average fire loss nationwide for structure fires. NFPA estimates that in 2022 the average fire loss for a structure fire in the U.S. was $28,200.[29] From this perspective ***the average fire loss in St. Helena is significantly lower than the amount of loss found in many communities across the nation.***

Another indication that we use in our analysis of structure fire occurrences is the frequency with which an individual event results in a combined loss that exceeds $25,000. The $25,000 demarcation is relevant from two perspectives. First, this is a dollar amount that is comparable to the national average for fire loss in a structure fire, and second, it indicates a fire loss that from CPSM's perspective is representative of a more significant fire event that requires fire department extinguishment. In the period evaluated, there was only **one *structure fire in which the combined fire loss was $25,000 or greater.***

29. Shelby Hall, "Fire Loss in the United States during 2022," NFPA October 2023.

FIGURE 5-7: Location of Structure Fire with Fire Loss Greater Than $25,000



The largest combined fire loss (structure and contents) for a single event was $50,000. The average fire loss and the frequency of higher loss fires appears much lower in St. Helena than what would be expected, considering the price of housing in the area. It is hard to fully determine the reason(s) for the low number of fires that resulted in the lower relative loss in St. Helena. CPSM believes that this level of loss is a product of the effectiveness of the firefighting efforts in St. Helena and the infrequency of actual fire events. It is important to note that there was no fire loss from outside fires in this same period in St. Helena. Outside fires typically include fires in various vehicles (passenger, RVs, heavy equipment, and trucks). The data show three outside fires and no associated fire loss.

The following two tables provide an analysis of fire loss in St. Helena during the year-long evaluation period.

TABLE 5-3: Content and Property Loss, Structure and Outside Fires

Call Type	Property Loss		Content Loss	
	Loss Value	Number of Calls	Loss Value	Number of Calls
Outside fire	$0	3	$0	3
Structure fire	$55,500	3	$2,900	3
Total	**$55,500**	**6**	**$2,900**	**6**

Note: The table includes only fire calls with a recorded loss greater than 0.

TABLE 5-4: Total Fire Loss Above and Below $25,000

Call Type	No Loss	Under $25,000	$25,000 plus	Total
Outside fire	3	0	0	3
Structure fire	3	2	1	6
Total	**6**	**2**	**1**	**9**

Observations:

- All outside fires and three structure fires had no recorded loss.
- For structure fires:
  - The highest total loss for a structure fire was $50,000.
  - The average recorded total loss for all structure fires was $9,733.
  - Three structure fires had content losses with a combined $2,900 in losses.
  - Out of six structure fires, three recorded property losses, with a combined $55,500 in losses.

EMS RESPONSE AND TRANSPORT

EMS calls make up the predominant workload within the SHFD system. As already mentioned, more than 60 percent of the call activities reviewed in the SHFD response area involve EMS-related responses (including MVAs).

SHFD operates in a two-tiered EMS delivery system in cooperation with the Napa County Emergency Medical Services Agency (EMSA) and AMR. AMR is a private ambulance provider that is contracted by Napa County to provide 911 emergency response services along with ambulance transports throughout the county. AMR staffs its ambulances with paramedics who provide advanced life support (ALS) services. SHFD is a licensed basic life support (BLS) first response agency; together, AMR and the SHFD respond to all EMS incidents within the City of St. Helena and neighboring areas of Napa County. CPSM believes that the current working relationship with AMR and the EMSA is excellent and creates a very cooperative and effective system in delivering pre-hospital emergency care. CPSM recognizes this cooperative arrangement as a ***Best Practice***.

Evaluating BLS First Response Capabilities

Many Fire and EMS agencies often struggle with the question of whether they should maintain EMS first response at the BLS level or if their system would be improved if upgraded to an AEMT (Advanced EMT) or paramedic, ALS-level first response.

Currently most SHFD employees are trained and capable of providing "***Basic***" EMT services. In this capacity personnel have been trained to recognize and handle a range of medical situations—from minor to life-threatening situations, including falls, cuts, broken bones, respiratory distress, strokes and heart attacks. They provide cardiopulmonary resuscitation (CPR), and can administer cardiac defibrillation utilizing automatic external defibrillators (AEDs). SHFD personnel can also administer oxygen and limited types of medications. They also provided services to stabilize and prepare patients for ambulance transports. All Emergency Medical Technicians are trained in accordance with the National Standard Curriculum, a 110-hour training program and

clinical ride-time that typically is a one-semester course, regularly taught at most community colleges or technical centers.#

The "***Advanced***" EMT (AEMT), requires an estimated 350 hours of additional classroom and clinical training beyond Basic EMT training. In this capacity individuals are able to start IVs and administer a limited number of cardiac-related drugs along with medications utilized in the treatment of drug overdose, diabetes, stroke, and other critical illnesses. EMT-Advanced first response is a high level of EMS care and in most instances is sufficient to provide the treatment that is needed for optimum patient care. Advanced Emergency Medical Technicians function as part of a comprehensive EMS response, under medical oversight and are given, through the oversight of a physician, an expanded scope of care, allowing treatments to be provided in the pre-hospital setting.

The" Paramedic "is an allied health professional, working under the specific direction of a physician, in providing advanced life support services (ALS) for critical and emergency patients in pre-hospital settings. Paramedics perform interventions with the basic and advanced equipment typically found on an ambulance. They are trained to administer an assortment of medications through various administration methods. Paramedics are trained to interpret fundamental electrocardiograms (EKGs) and provide interventions to address diagnosed arrythmias. The paramedic training is usually part of an associate's degree program at the community college level and typically will take two years to complete the required coursework and clinicals.

In addition to the original training for each of these certifications, there is a corresponding amount of continuing education (CE) credits required to maintain this licensure. Generally, paramedics require more CEs than AEMTs and AEMTs require more CEs that EMT-Bs.

Most agencies throughout Napa County provide EMS first response services at the BLS level. Only Napa City and American Canyon are providing ALS first response. CPSM has observed a number of ALS first response systems that are beginning to question the effectiveness of ALS first response over BLS first response. In fact, **a number of recent clinical studies have found that there are limited impacts on patient outcomes when EMS first response services are at the BLS level vs ALS.**[30] The ability to provide ALS first response care is significantly more expensive than BLS first response or A-EMT first response. These costs are a result of the additional equipment that is required in the delivery of ALS care and the level of training required for paramedics versus EMTs. In addition, most systems pay paramedics higher wages for maintaining this higher level of certification. The issue of ALS first response is further compounded in a community such as St Helena that relies heavily on volunteer and part-time employees. The added training associated with ALS care and maintaining these certifications will further add to the complexity of staffing and deploying resources. CAL-FIRE and Calistoga also operate at the BLS first response level. CPSM believes that the current deployment of BLS first response is very effective in St. Helena and should not be changed.

EMS Response Mode

Another key concept in prehospital emergency medical care that has evolved as more evidence-based research has become available is that faster response times improve patient outcomes.

30. https://www.amr.net/about/medicine/articles/outcomes-of-als-vs-bls.pdf, https://sjtrem.biomedcentral.com/articles/10.1186/1757-7241-18-62

Four recent studies evaluated the impact of response times on patient outcomes; findings consistently point to the fact that there is very little, if any association, between the speed of the EMS response and patient outcomes.[31] Further, a 2008 statement developed by the Consortium of U.S. Metropolitan Municipalities EMS Medical Directors published in *Pre-hospital Emergency Care Journal* contains the following:

> *"Over-emphasis upon response-time interval metrics may lead to unintended, but harmful, consequences (e.g., emergency vehicle crashes)."*[32]

Many EMS systems have revised their response time criteria and have moved to a quality-based evaluation of EMS care while deemphasizing the speed of response as a proxy for quality service. These systems liberally use non-lights and siren responses and reserve precious ALS first response resources for the few calls in which the rapid arrival of an EMS unit may make a life-or-death difference. **The key component in making this distinction is the utilization of an effective and coordinated call screening and emergency medical dispatching process**.

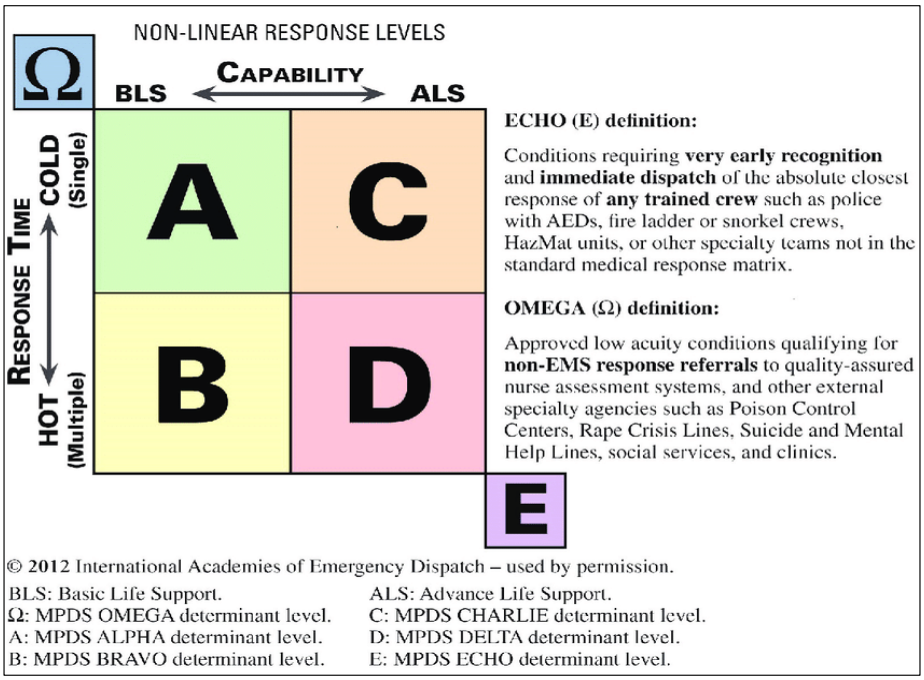
A recent report compiled by the National Highway Traffic Safety Administration (NHTSA), "Lights and Sirens Use by Emergency Medical Services (EMS): Above All Do No Harm,"[33] revealed that ***HOT responses are inherently dangerous***, do not result in changes of patient outcomes, and should be limited to only time-life critical events. The study goes on to recommend that HOT responses should be less than 50 percent of all EMS responses.

Our observations and national statistics indicate that when medical priority dispatching systems are fully functional, the number of Priority 1 calls that necessitate a "HOT" response are dramatically reduced. We have also observed in a number of EMS delivery systems that responding fire officers and paramedics are given the latitude to alter their mode of response on the basis of the dispatch call-screening process and dispatcher notes and their familiarity with the caller.[34] As a result of this discretion, the ensuing response patterns have been altered so that "HOT" responses are being reduced significantly to about 20 percent of the total EMS call activity.[35]

In addition to modifying the response mode, there is also the option to actually ***eliminate*** the fire department's response completely for those very minor EMS call types or public assist calls in which a single ambulance response is sufficient. This point is critical, as government entities are frequently faced with requests for additional EMS response capabilities because of the volume of EMS call activity. The following figure is a graphic developed by the International Academies of Emergency Dispatch that provides guidance regarding the mode of response and resources deployed on the basis of the call-screening and call-prioritization process.

31. See: https://www.ncbi.nlm.nih.gov/pubmed/15995089
https://www.ncbi.nlm.nih.gov/pubmed/19731155
https://www.ncbi.nlm.nih.gov/pubmed/12217471
https://www.ncbi.nlm.nih.gov/pubmed/11927452
32. Prehospital Emergency Care 2008;12:141–151
33. https://www.ems.gov/pdf/Lights_and_Sirens_Use_by_EMS_May_2017.pdf
34. See Sugar Land Fire-Rescue, a suburb of Houston TX.
35. Ibid.

FIGURE 5-8: MDPS Response Matrix



Both Napa City and CAL-FIRE ECC are determining if EMS calls are emergency or non-emergency. However, the corresponding response mode is rarely altered and SHFD units are responding hot (with lights and sirens) to most Fire and EMS calls. **CPSM believes that there are as many as 500 calls annually that can be altered to a COLD response in the St. Helena service area.**

> ***Recommendation: SHFD should work with the Emergency Communications Center to implement response protocols that alter the SHFD response mode when calls are determined to be minor or non-emergency. (Recommendation No. 13.)***

The ability to modify the emergency unit response or even eliminate some responses is important from a safety perspective as well as a means to improve efficiency. **The capacity currently exists to make this determination regarding call severity at the dispatch level;** it would merely take a policy directive on the part of the St. Helena Fire Department to implement this important policy change.

MUTUAL AID/AUTOMATIC RESPONSE

Local governments use many types of intergovernmental agreements to enhance fire protection and EMS. These arrangements take various shapes and forms and range from a simple automatic response agreement that will respond a single unit to a minor vehicle accident or EMS call, to a more complex regional hazardous materials team or a helicopter trauma service that involves multiple agencies and requires a high level of coordination.

It is important that fire departments are able to quickly access extra and/or specialized resources to manage significant events. In addition, because these types of incidents do not respect jurisdictional boundaries, they often require a coordinated response. Sharing resources also helps departments reduce costs without impacting service delivery. All of these situations point to the need for good working relationships with other Fire and EMS organizations.

The St. Helena Fire Department relies heavily on its joint and automatic response agreements with neighboring agencies. With a single station, operating with one on-duty engine with staffing of three personnel, St. Helena could not manage its daily workload without the assistance of neighboring agencies. St. Helena has a joint response agreement with both Napa County and CAL-FIRE in which the St. Helena unit has primary response duties in neighboring areas of Napa County adjacent to city limits. The areas in the general vicinity of Spring Mountain and Deer Park, along with other areas of Napa County that are outside St. Helena city limits, are primary response areas for SHFD. This responsibility is part of a Professional Services Agreement between St. Helena, Napa County, and CAL-FIRE in which St. Helena will have initial response responsibilities in these county areas and in return, CAL-FIRE and Napa County will respond into St. Helena to supplement St. Helena resources for all fire calls or incidents in which multiple units are required. In addition, St. Helena receives a nominal payment from CAL-FIRE for its response activities into the county.

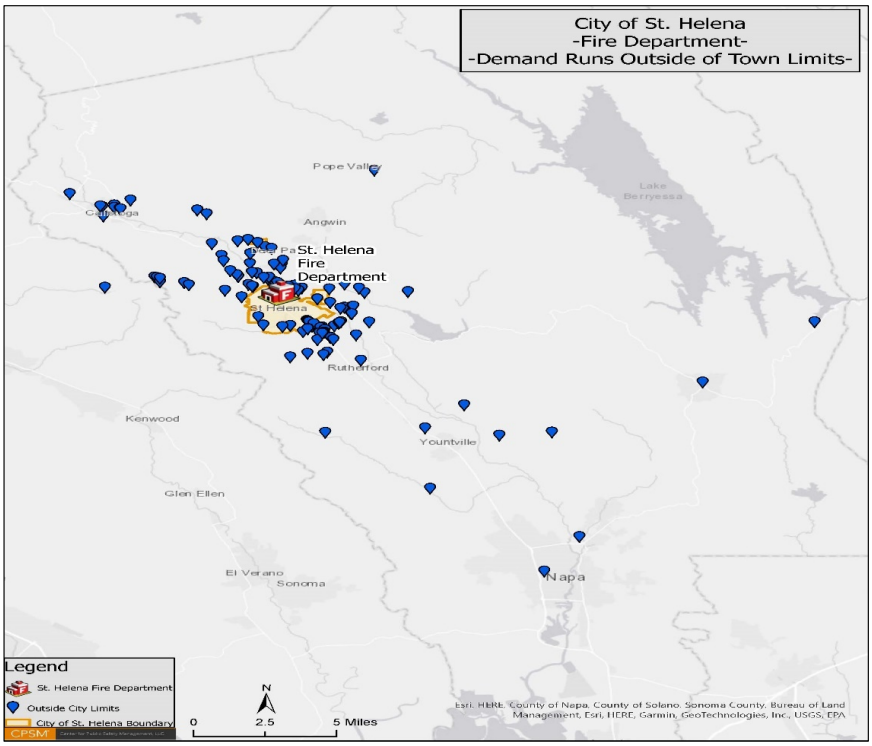
Due to this agreement and St. Helena's participation in the Napa County mutual aid agreements, SHFD is frequently called upon to provide its resources throughout the county as well as the region (approximately 168 times, or nearly 20 percent of the SHFD call activities). SHFD works closely with neighboring municipalities and volunteer companies in providing services. The system is very effective and provides a ready source of resources; the system is highly beneficial to both the City of St. Helena, Napa County, and neighboring communities. The following table shows SHFD's annual workload by the location in which services were provided.

TABLE 5-5: Annual Workload by Location

Location	Calls	Percent Calls	Runs	Runs Per Day	Minutes Per Run	Work Hours	Percent Work	Minutes Per Day
St. Helena	676	80.1	731	2.0	22.1	269.2	69.2	44.3
Napa*	120	14.2	141	0.4	29.0	68.1	17.5	11.2
Deer Park	18	2.1	25	0.1	51.1	21.3	5.5	3.5
Calistoga	14	1.7	17	0.0	32.5	9.2	2.4	1.5
Rutherford	5	0.6	5	0.0	22.5	1.9	0.5	0.3
Yountville	3	0.4	4	0.0	16.7	1.1	0.3	0.2
Dry Creek	2	0.2	2	0.0	182.8	6.1	1.6	1.0
Santa Rosa	2	0.2	3	0.0	32.9	1.6	0.4	0.3
Capell Valley	1	0.1	1	0.0	31.4	0.5	0.1	0.1
Del Norte County	1	0.1	1	0.0	450.4	7.5	1.9	1.2
Pope Valley	1	0.1	1	0.0	22.3	0.4	0.1	0.1
Spanish Flat	1	0.1	1	0.0	114.0	1.9	0.5	0.3
Total	**844**	**100.0**	**932**	**2.6**	**25.0**	**388.8**	**100.0**	**63.9**

Note: *Unincorporated Napa County.

FIGURE 5-9: Annual Workload Outside City Limits



WORKLOAD ANALYSIS

The current workload being handled by the St. Helena Fire Department is relatively light, with the department's primary response unit experiencing very limited call activities. ***CPSM considers units responding to fewer than 1,000 calls annually as having a low workload***. Overall, SHFD units are responding to approximately 2.3 calls each day.

The SHFD operates from a single fire station, utilizing a single fire unit. In most instances, the staffing level is only three personnel on Engine-17. The Fire Chief, operating from a command vehicle (CH-170), responds to most incidents in the service area, although the Chief is on a 40-hour work-schedule and is typically not on duty during nighttime hours, weekends, and holidays. Combined, SHFD resources handled nearly 844 calls for service in the one-year period covered by this report. These 844 calls generated 932 runs or unit responses. In many of these incidents additional units were staffed by the re-call of off-duty personnel or from mutual aid resources. On any given call there can be multiple unit responses or "runs." For example, a single structure fire call will typically generate responses of three to four-units. It must be pointed out that of the 932-unit responses, Engine-17 responded 798 times in the 12-month evaluation period. CH-170 responded 45 times in that same timeframe. AMR units were not tabulated in these response totals.

Given the relatively short call durations for both fire and EMS calls (average of 25 minutes), the cumulative in-service time associated with this call activity was not very high. The following two

tables show the annual runs, call types, and deployed time for the primary SHFD response units. Of note is the column labeled "***Minutes per Day***," in Table 5-6, which shows that Engine-17, for example, was only involved in emergency response activities a total of 48.7 minutes (less than one hour) each 24-hour duty day. It is also important to point out that on all EMS calls, AMR will co-respond with SHFD and provide its two EMS personnel.

TABLE 5-6: Annual Workload by Unit

Unit	Type	Minutes per Run	Hours	Percent	Minutes per Day	Runs	Runs per Day
B17	Utility	14.0	1.2	0.3	0.2	5	0.0
BR17	Brush	26.3	3.1	0.8	0.5	7	0.0
BR217	Brush	76.8	1.3	0.3	0.2	1	0.0
CH170	Command	35.0	26.2	6.7	4.3	45	0.1
E17	Engine	22.3	296.1	76.2	48.7	798	2.2
E317	Engine	24.1	10.9	2.8	1.8	27	0.1
E417	Engine	60.2	21.1	5.4	3.5	21	0.1
TRK17	Truck	40.9	6.1	1.6	1.0	9	0.0
U17	Utility	47.3	2.4	0.6	0.4	3	0.0
WT17	Water tender	76.9	20.5	5.3	3.4	16	0.0
Total		**25.0**	**388.8**	**100.0**	**63.9**	**932**	**2.6**

TABLE 5-7: Annual Runs by Unit and Type

Unit	Unit Type	EMS	False Alarm	Good Intent	Hazard	Out Fire	Public Service	Struct Fire	Cancel	Aid Given	Total
B17	Utility	1	0	0	1	0	0	1	0	2	5
BR17	Brush	2	0	0	2	0	0	0	0	3	7
BR217	Brush	0	0	0	0	0	0	0	0	1	1
CH170	Admin	12	1	0	7	1	2	4	1	17	45
E17	Engine	370	67	10	46	3	131	7	21	143	798
E317	Engine	8	0	1	2	0	9	1	1	5	27
E417	Engine	2	1	0	3	0	3	0	1	11	21
TRK17	Truck	1	0	0	2	0	1	3	0	2	9
U17	Utility	1	0	0	0	0	1	0	0	1	3
WT17	Water tender	0	0	0	0	0	0	0	0	16	16
Total		**397**	**69**	**11**	**63**	**4**	**147**	**16**	**24**	**201**	**932**

Frequency of Overlapping Calls

When we look at the frequency of call activity in St. Helena the pattern observed is again indicative of a system that is not experiencing frequent overlapping calls***. Most systems attempt to achieve an availability rate of between 85 and 90 percent.*** This means that on 85 to 90 percent of the calls, a unit is available to respond to an incident originating in its first due area. The data in St. Helena indicates that 3 percent of the time (about 25 calls annually) two calls overlapped. However, given the relatively short call duration in St. Helena (25 minutes), it is likely

that two calls can occur in an hour in the same service area and the period of unavailability is a short duration, usually 10 minutes or less.

The following table shows the frequency of overlapping calls handled by SHFD units.

TABLE 5-8: Frequency of Overlapping Calls

Scenario	Number of Calls	Percent of All Calls	Total Hours
No overlapped call	819	97.0	345.5
Overlapped with one call	25	3.0	5.2

Another indicator of workload is the frequency with which peak service demand is occurring. Peak demand can occur when there are multiple calls occurring simultaneously or when there are larger events that draw on the system's resources and additional calls continue to occur while resources are assigned to the larger incident. All systems experience peak service demands that strain the available resources in the system. This is why it is necessary for mutual aid and joint response agreements, which help mitigate these occurrences.

The key to any deployment strategy is to have sufficient resources to handle the day-to-day call activities and have the system designed to adjust and respond effectively during those high-demand periods. In the St. Helena system, given the limited resources available and the overall call volume, we would anticipate that throughout the year there were only three times that three calls occurred in the same hour. In addition, there is also high likelihood that during periods of high demand, there is insufficient staffing available to properly manage these incidents.

The following lists the ten busiest hours in the 12-month evaluation period and the number of calls occurring during each of those hours. It must be pointed out that, given the relatively short call duration in St. Helena (25 minutes), it is probable that two calls can occur in an hour in the same service area and which do not overlap with one another or which overlap only briefly.

TABLE 5-9: Top 10 Hours with the Most Calls Received

Hour	Number of Calls	Number of Runs	Total Deployed Hours
7/27/2023, 9:00 a.m. to 10:00 a.m.	3	4	1.8
3/14/2023, noon to 1:00 p.m.	3	4	1.1
11/25/2022, 10:00 a.m. to 11:00 a.m.	3	3	0.5
3/28/2023, noon to 1:00 p.m.	2	4	2.9
1/16/2023, 6:00 p.m. to 7:00 p.m.	2	4	2.6
8/1/2023, 10:00 a.m. to 11:00 a.m.	2	4	2.4
10/10/2023, 11:00 a.m. to noon	2	4	2.0
1/19/2023, 3:00 p.m. to 4:00 p.m.	2	3	1.7
10/8/2023, 2:00 p.m. to 3:00 p.m.	2	3	1.6
4/26/2023, 3:00 p.m. to 4:00 p.m.	2	3	1.3

Note: Total deployed hours is a measure of the total time spent responding to calls received in the hour. The deployed time from these calls may extend into the next hour or hours.

ALTERNATIVE SERVICE DELIVERY OPTIONS

As part of this study and evaluation, the city and SHFD expressed interest in evaluating the various service delivery options that could be utilized to provide Fire and EMS services in the community. It is common for CPSM to have these discussions with communities and quite often we have provided an analysis that has led to changes. Typically, there are a number of options that can be considered in changing service delivery. These options include:

- Moving from a volunteer organization to a career or combination department.
- Contracting for services with an outside service provider (either a county or neighboring municipal agency).
- Terminating an existing service agreement and starting an independent department.
- Contracting with a private company to provide services.
- Moving to a public safety model (consolidated police and fire services).
- Joining with neighboring agencies in providing regional protection.

The St. Helena Fire Department has transitioned from a fully volunteer organization to a combination system in 2021. St. Helena depends heavily on part-time employees to maintain its daily on-duty staffing and surge staffing during larger events. In addition, St. Helena has a very effective automatic response agreements with Napa County and mutual aid agreements, which provide additional resources, on demand, to handle both the daily workload and spikes in demand during larger events. Fortunately, because of this combined support from the extensive use of part-time employees and neighboring agencies, St. Helena has been very successful in its transition and the department is able to effectively fulfil both its fire protection and EMS service demands in a very cost-effective manner.

Entering into a Cooperative Services Agreement with CAL FIRE

In looking at the alternative service delivery models available to St. Helena, CPSM had multiple discussions with CAL-FIRE officials in order to understand the type of arrangement that would be available to the city if it chose to obtain services from CAL-FIRE. CAL-FIRE currently has a *Cooperative Fire Service Agreement* with NAPA County. This is a long-term arrangement that has been in effect for multiple years. The current agreement is scheduled to expire in June 2025. Napa County recently engaged an outside consultant to evaluate its arrangement with CAL-FIRE in preparation for contract renewal. Under the terms of this agreement, CAL-FIRE provides structural fire protection, wildfire protection, EMS first response, fire prevention and code enforcement services, along with 911 dispatching. CAL-FIRE is very adept in providing Fire and EMS arrangements to local communities and has established many similar agreements with both cities and counties throughout California. CAL-FIRE provides a high quality of service, has significant resources, has well trained personnel, and is very proficient in managing the broad array of service demands in urban, suburban and rural settings.

CAL-FIRE has indicated that it utilizes a "*menu-driven*" approach when providing service to cities or counties. In this format, a community considering a contractual arrangement with CAL-FIRE is required to make a formal request for proposal (RFP) to CAL-FIRE, specifying the types of services to be provided. This RFP typically specifies the levels of staffing on each unit, the numbers of units assigned to the community, a determination as to the number of fire apparatus needed (engines, ladders, rescue vehicles and support vehicles), and if these units will be provided by CAL-FIRE or if the local agency will be providing all or some of these resources. In addition,

CAL-FIRE will evaluate if the fire stations are to be provided or if CAL-FIRE is to provide this resource. In addition, other services are similarly considered in the pricing of a request. These additional services include 911 dispatching, fire prevention, plans review, code enforcement, vehicle and station maintenance, the level of reporting, performance standards required, along with other associated services.

CAL-FIRE will also do its own risk assessment of the community in determining the level of protection that it feels is warranted based on the identified risks and its standards of service. It is also important to note that when CAL-FIRE enters into such an agreement, the pricing is not fixed. CAL-FIRE provides quarterly invoices based on its actual costs for its services. Of course, there is ongoing dialog between the receiving agency and CAL-FIRE regarding its costs, and if the actual pricing is exceeding the projected costs, CAL-FIRE and the agency receiving service can agree to make adjustments to the service levels to bring the actual pricing more in line with what the receiving agency has budgeted. CAL-FIRE also works closely with its labor union and it will not enter into a contract with a city or county if the labor union in the prospective community is opposed to being absorbed by CAL-FIRE.

CAL-FIRE officials indicated that they are currently pricing their service contracts based on an estimated cost of $2.4 million annually for a single engine staffed with three personnel daily. Again, there will be a number of other factors that will impact actual costing, and this would be fully vetted during the RFP process. CPSM developed cost projections for a contracted service agreement with CAL FIRE; these projections are shown in the following table. These estimates are based on a number of assumptions which are generally conservative and the actual pricing would likely change depending on the final service package that would be agreed upon between the agencies.

TABLE 5-10: Projected Costs: CAL-FIRE Cooperative Fire Service Agreement

	Projected Cost
Personnel Costs (1 Engine/3 Personnel)	$2,400,000
Dispatching Services	80,000
TOTAL	**$2,480,000**

Not Included:
Overtime & Supervision
Fire Prevention Services
Payment for Part-time personnel
Capital Replacement
Insurance & Maintenance (Vehicles & Building)
Utilities

Entering into a Services Agreement with Napa County

St. Helena has the option to obtain services through the Napa County agreement and become a part of the county's existing contract with CAL-FIRE. This approach would similarly require that a formal RFP be submitted to Napa County and a determination would then be made by the County Executive and require approval by the County Board of Supervisors. The pricing model for this arrangement has a large degree of variance, depending on level of service requested, staffing level, and the capital and maintenance costs that would be assumed by the city. In this relationship, St. Helena would have an indirect relationship with the actual service provider, which is CAL-FIRE. Any discussion regarding service levels, cost off-sets, performance measures, and auxiliary services (dispatching, fire prevention, vehicle and facilities maintenance, etc.) would be held with Napa County.

It is likely that the actual cost for these services when contracting through Napa County would be very comparable to the costs of a direct Cooperative Services Agreement with CAL-FIRE. There could be some additional offsets for the use of the St. Helena Fire Station and the utilization of this facility to support CAL-FIRE administrative, command, and support functions. However, the issues of station and vehicle maintenance would be a point of negotiations that would have an impact on the cost of services. Again, the only way to obtain the most realistic price for these services is by actually going through the RFP process. However, CPSM has developed the pricing estimates shown in the following table in order to provide a comparison for this service option.

TABLE 5-11: Projected Costs: Napa County Professional Services Agreement

	Projected Cost
Personnel Costs (1 Engine/3 Personnel)	$2,400,000
Dispatching Services (50%)	40,000
TOTAL	**$2,440,000**

Not Included:
Overtime & Supervision
Fire Prevention Services
Payment for Part-time personnel
Capital Replacement
Insurance & Maintenance (Vehicles & Building)
Utilities

Establishing a Public Safety Model (Combined Police and Fire/EMS Department)

Successful public safety models are not very prevalent throughout the U.S. Of the country's nearly 18,000 police agencies (local police, county sheriffs, state police), only approximately 130 operate under the public safety model. Under this model, cross-trained police officers and firefighters provide both services. California, with nearly 550 cities, towns, and counties, hosts only five public safety organizations, two of which are in the San Francisco Bay area (Rohnert Park and Sunnyvale). It is difficult to fully understand why police and fire consolidations are not more common. Both job functions are certainly under the umbrella of "public safety" but realistically are quite different. The job requirements vary considerably and the selection and training criteria, require different skill sets. Recent developments that espouse anti-police sentiments have made law enforcement recruitment much more difficult. Firefighter recruitment on the other hand, has not been as difficult. Usually, the applicant pool for vacant firefighter positions is much more bountiful than that for police vacancies.

The transition of the St. Helena Police and Fire Departments to a combined public safety model would be very challenging. The transition process would take a considerable length of time. CPSM estimates it would require a minimum three years to complete. The major factor of such a transition would be the city's ability to recruit and train individuals to fill these rolls.

CPSM estimates that a St. Helena Public Safety Department would require a total of 17 personnel. This includes the existing 11-personnel earmarked for Police duties, along with 6 firefighting staff personnel.

It would be uncertain if the city would be able to use existing employees while providing the necessary training to enable each person to obtain certifications as Police Officer, Firefighter-1, and EMT-Basic. There would be limitations as to the number of people who could enroll in local training academies and the timeframe to complete the necessary training. It is also likely that some of the existing personnel, both police and fire, will choose not to take the public safety route and will move on to other positions. Filling these positions would further delay the process of generating the total number of personnel with the appropriate certifications.

Another complication would arise in selecting and establishing sufficient competencies for supervisory and command staff. The key to organizational efficiency will be in having a supervisory staff that is capable of managing either of the three areas of operations (law enforcement, firefighting, and EMS). In all likelihood there will be a transition period in which there will be multiple employees who do not have all the required certifications and they will assume roles in their respective disciplines until sufficient cross-training has occurred.

There is also a very high likelihood that the transition from the existing police and fire departments to a public safety model will be criticized and accusations will be made alleging that the quality of service will be compromised. Fire unions are very vocal and politically active in most communities and it is very common that negative sentiments are expressed and mis-information generated that will be critical of the public safety model. In addition, the St. Helena Volunteer Fire Dept. Association may similarly express sentiments that are unsupportive of change. The St. Helena Volunteer Fire Dept. Association has been active in the community for many years and it is very likely that they will express sentiments that will complicate political decision-making involved.

The following table shows cost projections developed by CPSM; these estimates project the start-up costs associated with developing a combined Police/Fire Public Safety Department. Again, we made multiple assumptions regarding staffing, service levels, training, and equipment;

the actual costs and implementation timeline are likely to change if this transition were to unfold. Currently, the combined annual cost for operating separate Police and Fire Departments is approximately $7.1 million. CPSM is projecting that the first year of costs associated with a new public safety model would increase this amount by approximately 30 percent.

TABLE 5-12: Projected Costs: St. Helena Department of Public Safety

	Projected Cost
Current Police Budget (including dispatch)	$4,489,352
Public Safety Officer Incentive (11 @ 15%)	350,000
Firefighters PSO Incentive (6 @ $200K)	1,200,000
Training for PSO	75,000
Overtime	200,000
Part-time Employees	100,000
911 Dispatch (CAL-FIRE)	80,000
TOTAL	**$6,494,352**

Not Included:
Fire Prevention Services
Capital Replacement
Utilities & Maintenance (Vehicles & Building)

Summary of Alternative Service Options

In our assessments of local fire departments, we typically observe agencies considering a change in the service delivery model that is being driven by two key factors:

- The cost of providing services.
- The ability to exert greater control as to the level of services being provided.

In looking at the current Fire and EMS delivery model being utilized in St. Helena; it is our assessment that the existing model is providing a high level of service at a cost that is significantly lower than the available alternatives. St. Helena has a very cost-effective model, primarily because of the small number of full-time employees and the utilization of part-time employees to supplement staffing levels. Currently, St. Helena is utilizing part-time personnel to fill more than 40 percent of its on-duty staffing requirements (approximately 11,303 hours annually).

This is resulting in a substantial cost savings; we estimate that the use of part-time employees is saving the city nearly $260,000 annually because part-time employee salaries on average, are approximately $23 per hour less than the full-time employees' fully burdened hourly rates (11,303 X $23 = $259,969). In addition, if full-time personnel were utilized on an overtime basis (@ time and one-half) to cover the hours currently being worked by part-time employees, this additional cost would be in excess of $630,000 annually (11,303 X $56 = $632,968). We would also expect that in the absence of part-time employees, annual overtime will similarly increase by 30 percent. This would raise annual overtime costs to approximately $235,000 or approximately a $55,000 annual increase over current overtime expenditures.

In addition, the current staffing model in St. Helena is being supported in part by the St. Helena Volunteer Fire Dept. Association. This is a significant benefit to the city as the St. Helena Volunteer Fire Dept. Association provides direct payments for apparatus replacement, equipment and building maintenance, and countless hours of volunteer services. In the absence of the St. Helena Volunteer Fire Dept. Association, the city would be required to provide these services and funding through other means and this would further increase the cost of operating the

department. CPSM believes that if one of the alternative service models is pursued, it is very likely that the assistance currently being provided by the St. Helena Volunteer Fire Dept. Association will be either eliminated or reduced significantly.

The current SHFD budget is slightly over $2.5 million. Neither of the two possible contracting options (contracting with CAL FIRE or contracting with Napa County) would likely result in any appreciable savings. In addition, a key downfall in contracting with an outside entity is a lack of control in both determining the level of service being provided and in managing future cost escalations.

Cost Comparisons (FY24-25**):**

Existing Fire Department Budget	**$ 2.69 million**
Existing Police Budget	**$ 4.49 million**
Projected CAL-FIRE Contract	**$ 2.48 million**
Projected Napa County Contract	**$ 2.44 million**
Projected Public Safety Model	**$ 6.5 million**

Realistically, the public safety model would require a significant increase in the existing police and firefighter salaries. This is in part due to the higher cost of a public safety officer (estimated to be approximately 15 to 20 percent higher than the existing police officer salary). In addition, the public safety model will likely preclude the use of part-time employees and this would have a significant cost implication.

Recommendation: St. Helena should maintain its current service delivery model, which utilizes a municipal fire department that combines both career and part-time employees along with cooperative response agreements with neighboring agencies. (Recommendation No. 14.)

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SECTION 6. RESPONSE TIME ANALYSIS

Response times are typically the primary measurement used in evaluating Fire and EMS services. Most deployment models attempt to achieve a four-minute initial travel time for both Fire and EMS calls and a full-force travel time of eight minutes for fire calls. A full-force travel time indicates the time it takes for the initial response of all resources assigned to the call to arrive on the scene.

While these times have validity, the actual impact of a speedy response time is limited to very few incidents. For example, in a full cardiac arrest, analysis shows that successful outcomes are rarely achieved if basic life support (CPR) is not initiated within four minutes of the onset of the arrest. However, ***cardiac arrests occur very infrequently; on average these are 1 percent to 1.5 percent of all EMS incidents***.[36] There are also other EMS incidents that are truly life-threatening and the time of response can clearly impact the outcome. These involve drownings, electrocutions, and severe trauma (often caused by gunshot wounds, stabbings, and severe motor vehicle accidents, etc.). Again, the ***frequency of life-threatening calls is limited, typically not more than 10 to 15 percent of the overall EMS call activity***.

Regarding response times for fire incidents, the frequency of actual fires in St. Helena (structure and outside fires) is very low, approximately 1.1 percent of all incidents. ***Actual structure fires were approximately 0.7 percent of all calls, or six in the 12-month period evaluated***.

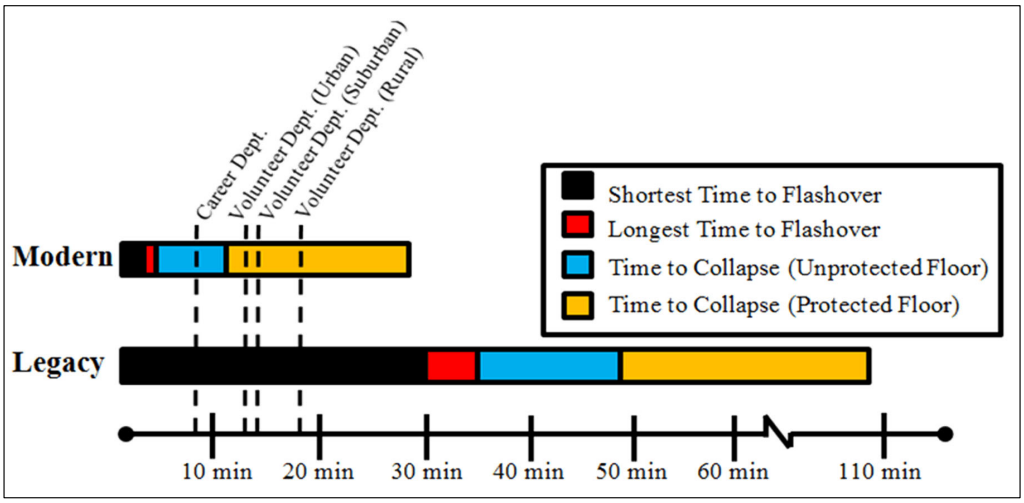
The criterion for fire response is based on the concept of "flashover." This is the state at which super-heated gasses from a fire in an enclosed area results in a near-simultaneous ignition of the combustible material in the area. In this situation, usually after an extended period of time (upwards to ten minutes), the fire expands rapidly and is much more difficult to contain. When the fire reaches this hazardous state, a larger and more destructive fire occurs.

Additional research indicates that the speed of fire spread and the degradation of structural components is occurring much faster in modern construction.[37] The introduction of lightweight construction, increases in house size, open living areas that promote smoke and flame spread, and more flammable interior contents and construction materials, are all contributing to this outcome. The following figure is a comparison in the time to flashover when comparing modern construction with legacy or older construction methods.

Another important factor in the whole response time question is what we term "detection time." This is the time it takes to detect a fire or a medical situation and notify 911 to initiate the response. In many instances, particularly at night or when automatic detection systems (fire sprinklers and smoke detectors) are unavailable or inoperable, the detection process can be extended. Fires that go undetected and are able to expand in size, become more destructive and are more difficult to extinguish. In St. Helena, as is the case throughout California, automatic fire sprinklers are required in most new construction, including single-family residential structures. Because of the presence of automatic fire sprinklers, the speed of response to structure fire incidents is somewhat ameliorated as the sprinkler system, if functioning, will automatically contain the fire and minimize the extent of its spread.

36. Myers, Slovis, Eckstein, Goodloe et al. (2007)." Evidence-based Performance Measures for Emergency Medical Services System: A Model for Expanded EMS Benchmarking." *Pre-hospital Emergency Care*.
37. https://link.springer.com/article/10.1007/s10694-011-0249-2

FIGURE 6-1: Times to Flashover: Modern vs. Legacy Construction Methods



MEASURING RESPONSE TIMES

There have been no documented studies that have made a direct correlation between response times and outcomes in Fire and EMS events. No one has been able to show that a four-minute response time is measurably more effective than a six-minute response time. The logic has been "faster is better," but this has not been substantiated by any detailed analysis. Furthermore, the ability to measure the difference in outcomes (patient saves, reduced fire damage, or some other quantifiable measure) between a six-minute, eight-minute, or ten-minute response is not a performance measure often utilized in the fire service.

For example, in St. Helena nearly 9.2 percent of calls (54 calls within the city), had an initial response time of 10 minutes or higher. Though this is a significant number of calls, there is no indication that the outcomes on these calls were markedly worse than those calls with faster arrivals. So, in looking at response times it is prudent to design a deployment strategy around the actual circumstances that exist in the community and the fire problem that is perceived to exist. This requires a "fire risk assessment" and a political determination as to the desired level of protection for the community. It would be imprudent, and very costly, to build a deployment strategy that is based solely upon response times.

For the purpose of this analysis, ***response time*** is a product of three components: ***dispatch time***, ***turnout time***, and ***travel time***.

- *Dispatch time* is the time interval that begins when the alarm is received at the communication center and ends when the response information is transmitted via voice or electronic means to the emergency response facility or emergency response units in the field. Dispatch time is typically the responsibility of the 911 Center.[38]

38. Note: In St. Helena, 911 calls are initially received by the Calistoga/St. Helena Public Safety Answering Point (PSAP). The time it takes for this call to be processed and transferred to the CAL-FIRE ECC is not include in these time calculations.

- *Turnout time* is the time interval that begins when the notification process to emergency response facilities and emergency response begins through an audible alarm or visual announcement or both and ends at the beginning point of travel time.
- *Travel time* is the time interval that initiates when the unit is en route to the call and ends when the unit arrives at the scene.
- *Response time*, also known as total response time, is the time interval that begins when the call is received by the primary dispatch center and ends when the dispatched unit arrives on the scene to initiate action.

ST. HELENA RESPONSE TIMES

For this study, and unless otherwise indicated, our response time calculations measure the first arriving unit only. Typically, we track only those responses in which the unit is responding with lights and sirens (hot). Out of the 844 total calls, our response time analysis was based on a total of 587 calls. We excluded 168 mutual aid responses, 21 canceled calls, 24 calls where no units recorded a valid on-scene time, 43 calls where one or more segments of the first arriving unit's response time could not be calculated due to missing or faulty data, and 1 call where the first arriving unit response was greater than 30 minutes. It is important to note that ***there were no calls that were run as non-emergency*** that were excluded from the response time calculations.

On the basis of these calculations, we determined:

- The average dispatch time was 1.6 minutes.
- The average turnout time was 1.4 minutes.
- The average travel time was 2.9 minutes.
- The average total response time was 5.9 minutes.
- The average response time was 5.1 minutes for EMS calls and 5.7 minutes for fire calls.
- The average response time was 10.9 minutes for outside fires and 5.7 minutes for structure fires.

According to NFPA 1710, *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Departments,* 2020 Edition, the alarm processing time or dispatch time should be less than or equal to 64 seconds 90 percent of the time. This standard also states that the turnout time should be less than or equal to 80 seconds (1.33 minutes) for fire and special operations 90 percent of the time, and a 60 second turnout for EMS calls. Travel times are recommended to be less than or equal to 240 seconds (4 minutes) for the first arriving engine company 90 percent of the time for both fire and EMS calls. The following table shows the average and 90th percentile response time in minutes for the first arriving unit, by call type, for the SHFD.

TABLE 6-1: Average and 90th Percentile Response Time of First Arriving Unit, by Call Type

Call Type	Average Response Time, Min.				90th Percentile Response Time, Min.				Call Count
	Dispatch	Turnout	Travel	Total	Dispatch	Turnout	Travel	Total	
Medical and other	1.5	1.2	2.4	5.1	2.2	2.1	3.8	6.9	335
MVA	1.6	1.3	3.4	6.3	3.2	1.9	6.4	8.6	15
EMS subtotal	**1.5**	**1.2**	**2.4**	**5.1**	**2.2**	**2.1**	**3.9**	**6.9**	**350**
False alarm	2.1	1.7	3.8	7.6	2.8	2.5	8.6	12.2	53
Good intent	1.8	1.8	4.0	7.6	2.8	3.8	8.0	11.1	6
Hazard	2.5	1.7	4.0	8.1	4.0	2.6	9.2	13.9	42
Outside fire	2.4	1.7	6.7	10.9	2.7	2.2	14.0	18.5	3
Public service	1.6	1.6	3.4	6.5	2.6	3.0	5.4	9.2	129
Structure fire	1.7	1.7	2.3	5.7	2.1	3.2	3.1	7.6	4
Fire subtotal	**1.9**	**1.6**	**3.6**	**7.1**	**3.2**	**2.8**	**6.8**	**11.1**	**237**
Total	**1.6**	**1.4**	**2.9**	**5.9**	**2.5**	**2.5**	**4.9**	**8.5**	**587**

Observations:

- The average dispatch time was 1.6 minutes.
- The average turnout time was 1.4 minutes.
- The average travel time was 2.9 minutes.
- The average total response time was 5.9 minutes.
- The average response time was 5.1 minutes for EMS calls and 7.1 minutes for fire calls.
- The average response time was 10.9 minutes for outside fires and 5.7 minutes for structure fires.
- The 90th percentile dispatch time was 2.5 minutes.
- The 90th percentile turnout time was 2.5 minutes.
- The 90th percentile travel time was 4.9 minutes.
- The 90th percentile total response time was 8.5 minutes.
- The 90th percentile response time was 6.9 minutes for EMS calls and 11.1 minutes for fire calls
- The 90th percentile response time was 18.5 minutes for outside fires and 7.6 minutes for structure fires.

As stated previously, all SHFD responses are currently being responded to with lights and sirens. However, in many instances, units realize that many calls are non-emergency and they slow down their response, even though the call is still being categorized as an emergency response. For example, look at the 90th percentile response times in the above table for Hazard, Good Intent, and False Alarm calls. The response times to these categories of calls are noticeably higher than other call types. This is not an uncommon occurrence and we often see this situation in the agencies we evaluate. However, by not officially excluding these calls as non-emergency responses, the net effect is an increase in the calculation of overall response time. CPSM believes that if SHFD were to officially downgrade its responses to non-emergency calls and

exclude these calls from the emergency response time calculations, the net effect would be a decrease in emergency response times. Many agencies have taken this approach and have adopted different response time standards for emergency and non-emergency responses. We believe if SHFD were to take this approach, the response times for emergency calls can be reduced by at least one minute.

That said, ***the response times being generated in St. Helena are exceptional***. The fire station is a critical link in service delivery and where facilities are located is the single most important factor in determining overall response times and workload distribution. As noted previously, the SHFD operates from a single fire station located at 1500 Main St.

The next four figures illustrate the SHFD station location and estimated travel distance projections from this station: 240 seconds (indicated by the green overlay), 360 seconds (indicated by the amber overlay), and 480 seconds (indicated by the red overlay), and composite times. These projections are based on actual road travel distances and the posted speed limits on these roadways.

FIGURE 6-2: St. Helena Station Location with Travel Projection of 240 Seconds

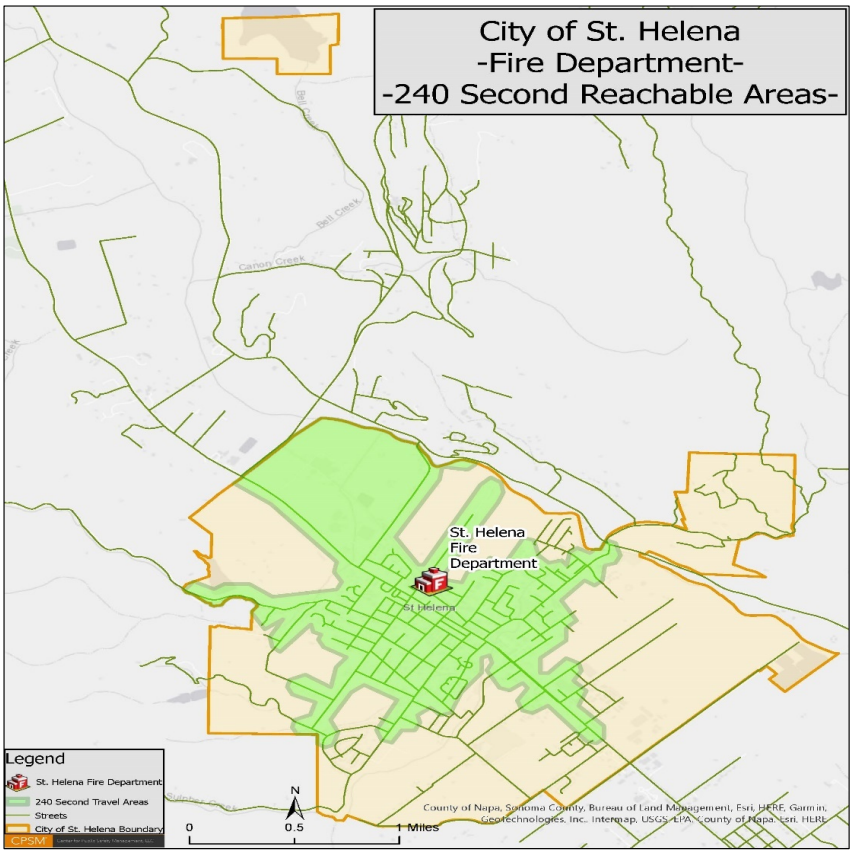
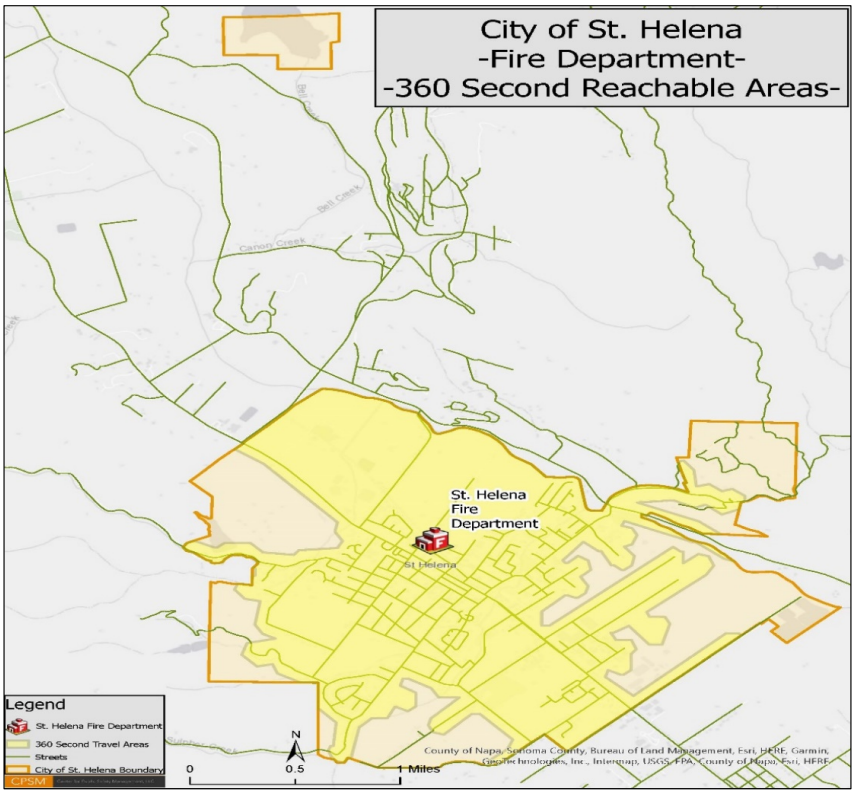
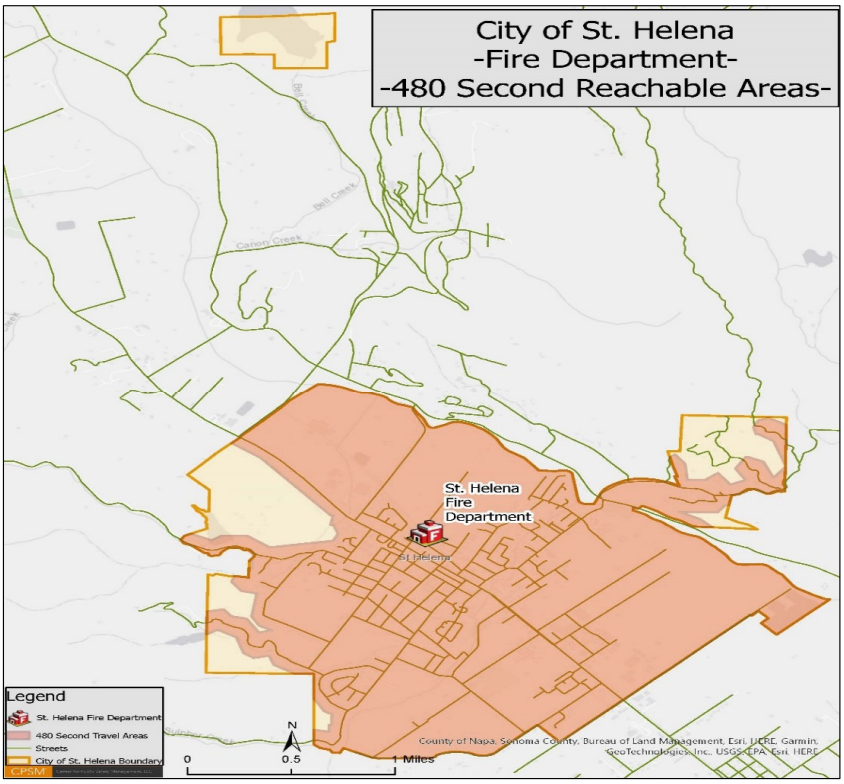


FIGURE 6-3: St. Helena Station Location with Travel Projection of 360 Seconds



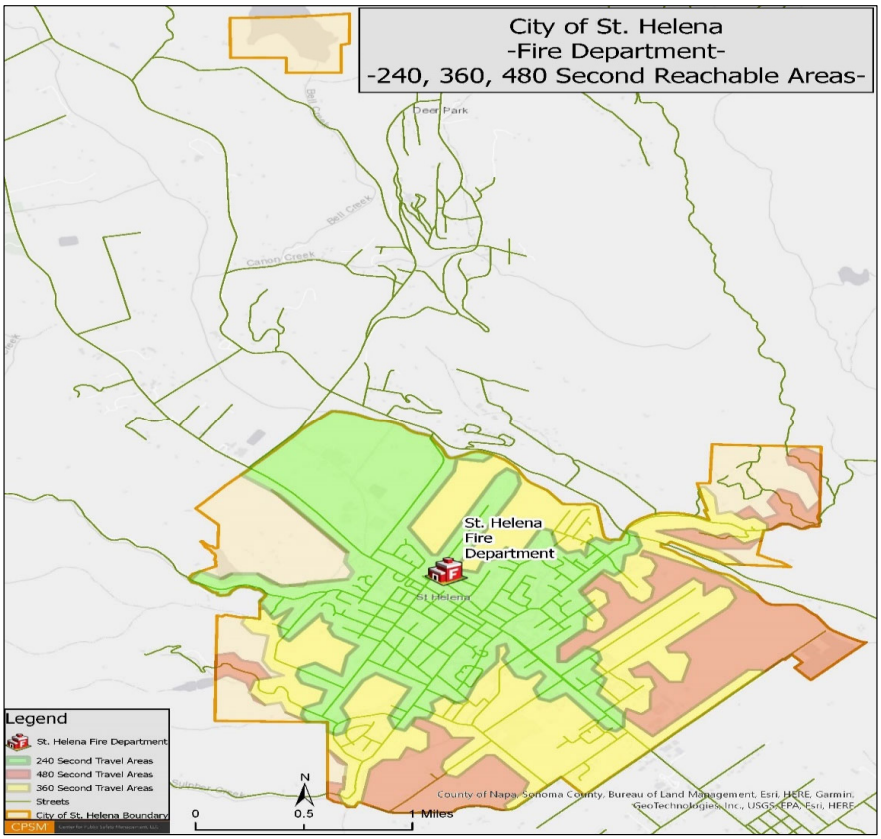
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FIGURE 6-4: St. Helena Station Location with Travel Projection of 480 Seconds



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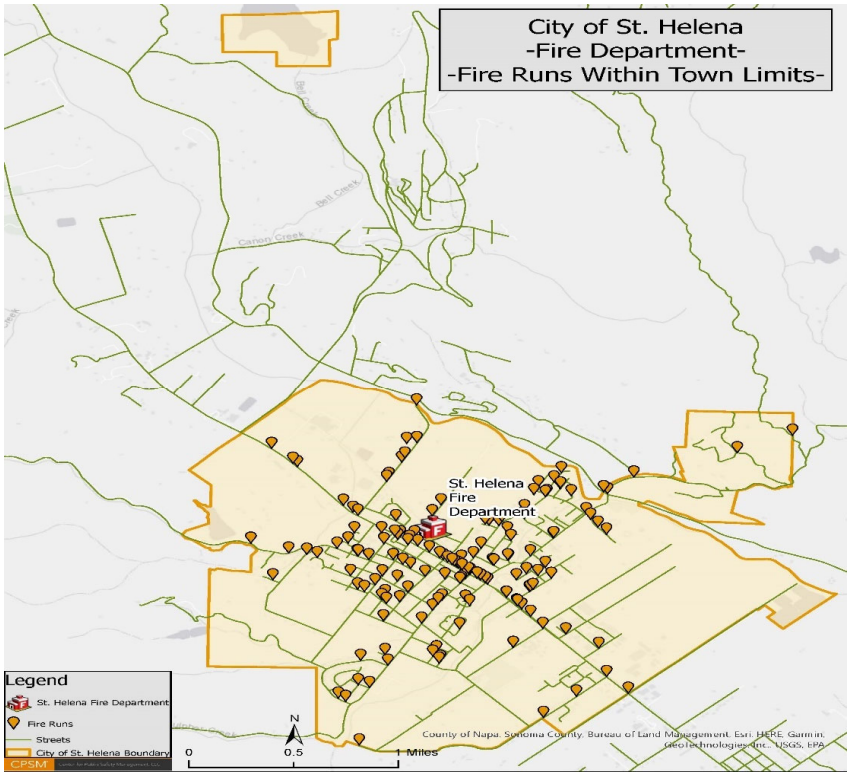
FIGURE 6-5: St. Helena Station Location with Composite Travel Projections



The preceding figures show that approximately 70 to 75 percent of the developed areas of the city are covered under the 240-second benchmark. We would estimate that approximately 85 percent of the developed areas of the city are covered under the 360-second overlay and approximately 95 percent of the city is covered under the 480-second benchmark. ***These maps only depict travel distances and not actual response times.***

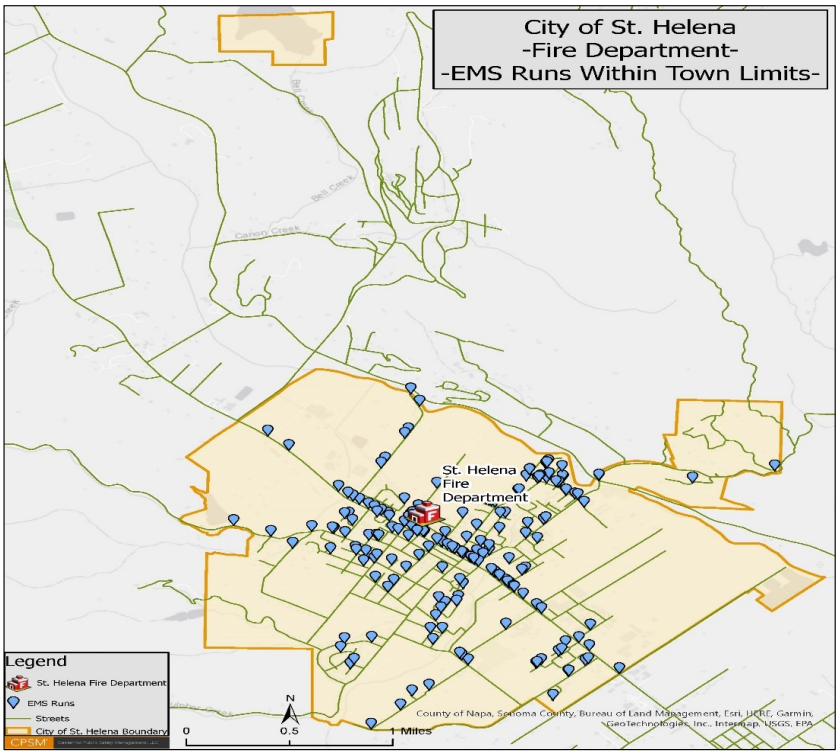
The next three figures show the actual locations of fire, EMS, and other emergency responses carried out by the St. Helena Fire Department during the year-long study period. It is apparent from these graphics that most responses in St. Helena should result in travel times that are within three to four minutes. It also appears that the overall distribution of calls is generally concentrated in the central city areas.

FIGURE 6-6: SHFD Fire Runs



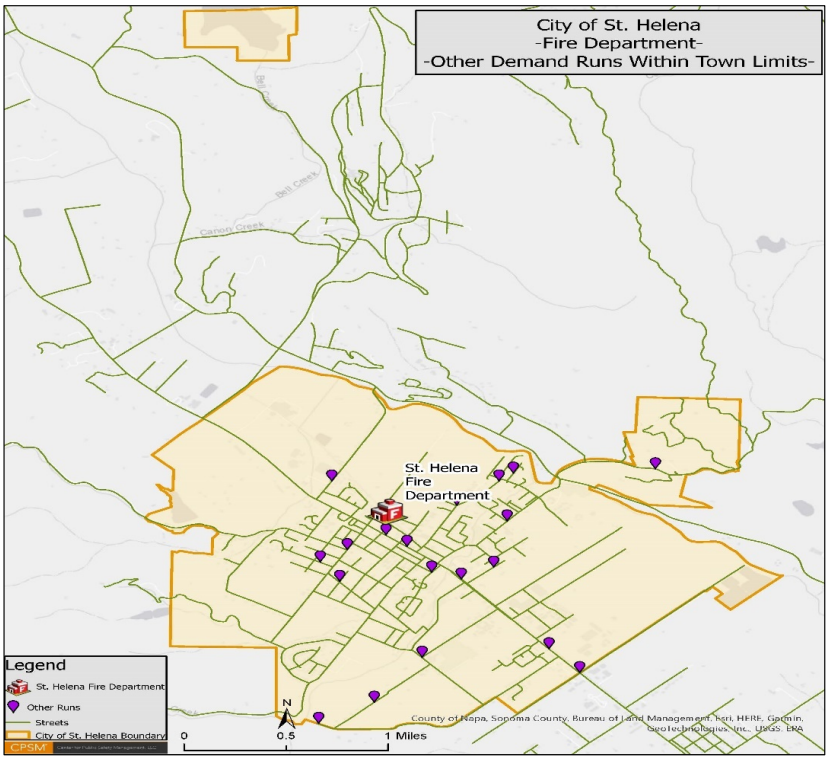
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FIGURE 6-7: SHFD EMS Runs



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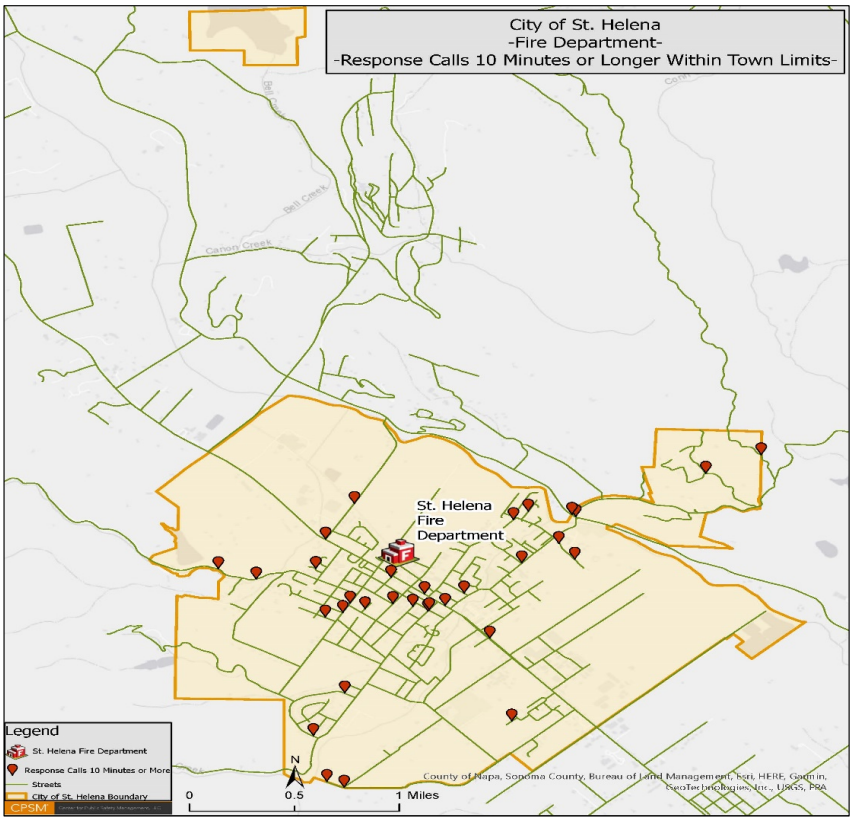
FIGURE 6-8: SHFD Other Runs



In our analysis we also looked at those calls with extended total response times, that is, those response times of 10 minutes or greater within city limits. We determined that approximately 9.2 percent of all responses (54 calls) resulted in a total response time greater than 10 minutes. The following figure illustrates the location of the estimated 54 calls that had a total response time of 10 minutes or greater. Though the overall response times during the one-year evaluation period were exceptional, there were a sizable number of calls with extended response times. There does not appear to be any pattern or geographic location that are generating these response times. Several of the calls with extended response times were in outlying areas; however, most were not.

It is always surprising when agencies see this graphic and question why so many calls with extended response times are in close proximity to responding units. Typically, our findings indicate that when agencies do not adjust their mode of response from emergency to non-emergency on the basis of the call-screening process, responding units still slow down their response when they have indications that the call is non-emergency. Though we did not evaluate closely the locations and call types for the 54 instances of extended response, our speculation is that many of these were responses that were purposely slowed but were still tabulated as an emergency response. As noted above, we did not exclude any calls from the response time calculations because they were classified as a non-emergency response.

FIGURE 6-9: SHFD Responses with Total Response Times of 10 Minutes or Greater



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SECTION 7. PERFORMANCE MEASUREMENT

Fire suppression, prevention programs, and EMS service delivery need to be planned and managed so that these efforts achieve specific, agreed-upon results. This requires that a set of goals be established for the activities that make up any given program. Determining how well an organization or program is doing requires that these goals be measurable and that they are measured against desired results. This is the goal of performance measurement.

Simply defined, performance measurement is the ongoing monitoring and reporting of progress toward pre-established goals. It captures data about programs, activities, and processes, and displays data in standardized ways that help communicate to service providers, customers, and other stakeholders how well the agency is performing in key areas. Many agencies in both government and business refer to performance measures as ***Key Performance Indicators or KPIs***. Measuring performance in the fire service provides a basis for determining if the current methods of deployment, the distribution of resources, and the overall effectiveness of operations are appropriately matched in meeting the service demands of the community. Performance measurement provides an organization with tools to assess performance and identify areas in need of improvement or adjustment. In short, ***what gets measured gets improved***.

The need to continually assess performance requires adding new words and definitions to the fire service lexicon. Fire administrators need to be familiar with the different tools available and the consequences of their use. In *Managing the Public Sector*, business professor Grover Starling applies the principles of performance measurement to the public sector. He writes that the consequences to be considered for any given program include:

Administrative Feasibility: How difficult will it be to set up and operate the program?

Effectiveness: Does the program produce the intended effect in the specified time? Does it reach the intended target group?

Efficiency: How do the benefits compare with the costs?

Equity: Are the benefits distributed equitably with respect to region, income, gender, ethnicity, age, and so forth?

Political Feasibility: Will the program attract and maintain key actors with a stake in the program area?[39]

Performance measurement systems vary significantly among different types of public agencies and programs. Some systems focus primarily on efficiency and productivity within work units, whereas others are designed to monitor outcomes produced by major public programs. Still others track the quality of services provided by an agency and the extent to which citizens are satisfied with these services.

Within the fire service, performance measures tend to focus on inputs (the amount of money and resources spent on a given program or activity) and short-term outputs (the number of fires, number of EMS calls, response times, etc.). One of the goals of any performance measurement system should be also to include efficiency and cost-effectiveness indicators, as well as explanatory information on how these measures should be interpreted. An explanation of these types of performance measures are shown in the following table.

39. Grover Starling, *Managing the Public Sector*, (Cengage Learning), 396.

TABLE 7-1: The Five GASB Performance Indicators[40]

Category	Definition
Input indicators	These are designed to report the number of resources, either financial or other (especially personnel), that have been used for a specific service or program.
Output indicators	These report the number of units produced or the services provided by a service or program.
Outcome indicators	These are designed to report the results (including quality) of the service.
Efficiency (and cost-effectiveness) indicators	These are defined as indicators that measure the cost (whether in dollars or employee hours) per unit of output or outcome.
Explanatory information	This includes a variety of information about the environment and other factors that might affect an organization's performance.

One of the most important elements of performance measurement within the fire service is to describe service delivery performance in a way that both citizens and those providing the service have the same understanding. The customer will ask, "Did I get what I expected?" the service provider will ask, "Did I provide what was expected?"

Ensuring that the answer to both questions is "yes" requiring alignment of these expectations and the use of understandable terms. The author of the "Leadership" chapter of the 2012 edition of ICMA's *Managing Fire and Emergency Services* "Green Book" explains how jargon can get in the way:

> *Too often, fire service performance measures are created by internal customers and laden with jargon that external customers do not understand. For example, the traditional fire service has a difficult time getting the public to understand the implications of the "time temperature curve" or the value of particular levels of staffing in the suppression of fires. Fire and emergency service providers need to be able to describe performance in a way that is clear to customers, both internal and external. In the end, simpler descriptions are usually better.*[41]

The SHFD does not utilize performance measures in tracking operational, administrative, prevention, or training activities within the department. Though SHFD keeps records of select activities, these indices are not utilized in the regular review and reporting of department activities. It is critical that SHFD develop a series of internal reporting processes that provide a direct link to department goals or specific target measures. It is also critical that these measures be both quantitative and qualitative in nature and reflect on multiple areas of service delivery within the organization. This type of ongoing analysis and the monitoring of trends are most useful to justify program budgets and to measure service delivery levels.

Staff throughout the organization should participate in the development of any measures. In addition to helping facilitate department wide buy-in, this could provide an opportunity for

40. From Harry P. Hatry et al., eds. *Service Efforts and Accomplishments Reporting: Its Time Has Come* (Norwalk, CT: GASB, 1990).
41. I. David Daniels, "Leading and Managing," in Managing Fire and Emergency Services (ICMA: Washington, DC: 2012), 202.

upper management to better understand what the line staff believes to be critical goals—and vice versa. For the same reason, the process of developing performance measures should include citizen input, specifically with regard to service level preferences. Translating this advice from the citizens into performance measures will link the citizens and business community to the department, and will identify clearly if the public's expectations are being met.

Recommendation: SHFD should implement a series of performance measures that enable ongoing review of service outcomes. The process of developing these measures should utilize input from SHFD members, the community, the City Council, and City Administration. (Recommendation No. 15.)

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Following are a number of performance measures that may be considered:

Operations:

- Response times (fire and percentile/average/frequency of excessive times).
  - Alarm/dispatch handling times.
  - Turnout times.
  - Travel times.
  - On-scene time.
  - Call duration.
  - Canceled en route.
- Workload measures.
  - Emergency vs. nonemergency responses.
  - Number and frequency of EMS transports—ALS/BLS.
  - Response to automatic fire alarms/frequency and outcomes.
  - Company inspections/area occupancy familiarization.
  - Fire preplanning.
  - Public education: contact hours/numbers by age group.
- Outcome measures.
  - EMS/save rates/action taken.
  - EMS protocol compliance.
  - Fire loss/limit of fire spread—point of origin, room of origin, etc.
  - On-duty injuries/worker's comp claims.
  - Lost time—sick/injury.
  - Vehicle accidents.
  - Equipment lost or broken.

Training:

- Fire and EMS hours.
- Officer development.
- Skills assessment compliance.
- Specialty training.
- Professional development/formal education/certifications.
- Fitness performance.

Prevention:

- Plans review (numbers/valuation amount/completion time).
- Inspections (new and existing).
  - Numbers.
  - Completion time.
  - Violations (found/corrected).
  - Quantification by type of violation and occupancy type.
- Fire investigations.
  - Numbers and determinations.
  - Occupancy types, time of occurrence, ignition source.
  - Fire loss/structure and contents.
  - Arson arrests/convictions.
  - Fire deaths (demographics/occupancy type/cause and origin).

Miscellaneous:

- Customer service surveys (by engine/by shift).
  - Following emergency response.
  - Public assist.
  - Inspections (prevention and company).
  - Public education.
  - In-service training (employee assessments).
- Financial/budgetary.
  - Overtime expenditures and cause.
  - Apparatus repair costs and out-of-service time.

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SECTION 8. ESSENTIAL RESOURCES

FIRE PREVENTION AND CODE ENFORCEMENT

Ensuring that services are delivered effectively is paramount in any fire service organizational mission. The fire prevention services are perhaps the most critical of these services in that organizational milieu. The foundation of a good risk management program is to prevent fires before they occur and reduce the losses from those that do occur.

The fire departments that are most effective in reducing losses are those that have successfully integrated prevention as a core value throughout the organization and continuously review the impact of prevention on the overall services provided by the department. The prevention effort in St. Helena is compounded because of the additional risk from wildfire, as well as structure fires. There are basic approaches that can be used to ensure that prevention is treated as a paramount department-wide priority. One way to accomplish this is to have that core value of an organization referenced directly in the mission statement.

In St. Helena the Fire Inspector is responsible for fire prevention code enforcement, public safety education, and the administration of the city's weed abatement program. The Fire Chief conducts fire investigations and the city utilizes Interwest, a private fire engineering company, to do its fire plans review. The city has a robust ***in-service engine company fire inspection program***. Nearly 400 fire inspections are conducted on a two-year cycle (200 annually) at local businesses, manufacturing facilities, multifamily residential structures, hotels, motels, medical facilities, assisted living centers, and schools. CPSM recognizes the SHFD in-service fire inspection program as a ***Best Practice.***

The city's weed abatement program includes more than 2,300 properties that receive annual inspections. The weed abatement effort is carried out by on-duty fire crews and the fire inspector. The city's code review process involves the plans review and inspections for approximately 40 properties annually. These properties involve new construction, renovations, and protection system inspections. Typically, each permit translates into two inspections.

The City of St. Helena has adopted the 2019 California Fire Code (CFC), which is based on the International Fire Code (IFC) and the International Building Code (IBC). The Fire Department is responsible fire inspections, weed abatement inspection and enforcement, and public fire education. The SHFD works closely with the city's Building Department in carrying out its inspection duties. The permitting process, inspection scheduling, and collection of all fees are carried out through the Building Department. The Fire Department does not receive any revenue from its inspection, plans review, and permitting services.

TABLE 8-1: SHFD Fire Prevention Activities, 2022–2023*

Activity	2022	2023*
In-service fire company inspections	153	230
New construction plans review	43	30
New construction inspections	83	58
Weed Abatement Inspections	2,322	2,322
Total Inspections and Plans Reviews	**2,601**	**2,640**

Note: *2023 Fire Prevention activities 1-1-23 thru 11-16-23.

CPSM estimates that the costs incurred by the SHFD in providing these services are approaching $200,000 annually. The majority of these services are provided to business, multifamily residential properties, manufacturing, institutions, health care, wineries, and processing entities. Many fire agencies have moved to, or are moving to, full cost recovery for fire prevention services. These costs are passed on as development charges or as ongoing business expenses. SHFD is not recovering any of its inspections or plans review costs. Annually, the city pays Interwest approximately $12,000 for it plans review services, all of which is recovered from fees charged for these services. We believe, however, that there should be a direct off-set for the fire inspections services and fees generated through the permitting process. The city should attempt to achieve the full cost recovery for fire prevention and permitting services.

Recommendation: The City of St. Helena should implement fire inspection, weed abatement, and permitting fees in order to recover the full cost of providing these services in the community. (Recommendation No. 16.)

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Some of the costs associated with fire prevention activities (public education, fire investigations, etc.) are generally costs that are not charged for and are provided from municipal taxation. However, these costs make up a small percentage of the SHFD fire prevention expenditures.

Fire Investigations

Fire investigations are conducted primarily by the Fire Chief. In 2023, a total of 26 fire investigations were completed. These investigations are utilized to identify any trends or patterns in the types of fires occurring in the city along with providing reporting on the cause and origin of the fire along with estimating fire loss. When needed the State Fire Marshal's office or a mutual aid partner will be brought in for those more complex investigations involving suspected arson or when there is a fire death.

ISO RATING

The ISO collects data for more than 39,000 communities and fire districts throughout the country. This information is analyzed using a proprietary Fire Suppression Rating Schedule (FSRS). This analysis is then tabulated in generating a Public Protection Classification (PPC). The PPC classifications range from 1 to 10, with Class 1 representing "superior property fire protection" and Class 10 indicating that an area does not meet the minimum criteria set by the ISO. In 2013, the revised FSRS was released; it adds an emphasis on a community's effort to limit loss before an incident occurs (fire prevention).

Since the 1800s, insurance companies have been involved in one way or another in "rating" fire departments. As cities grew and buildings became larger and communities more industrialized, insurance companies sometimes incurred large losses from fires. Much of the time, these losses were due to inadequate water supplies and ineffective fire suppression capabilities. To help reduce losses, insurance companies developed criteria to evaluate community fire suppression capabilities and to quantify the level of fire services provided. Once quantified, insurance companies used the information (rating) to determine and assign fire insurance rates. The emphasis then, as now, was primarily to reduce dollar loss from fires. Though improving water supplies and fire suppression can and do improve life safety, the purpose of rating fire departments is to adjust insurance rates to lessen insurance company losses.

ISO uses data and information provided by each community to derive a Public Protection Classification (PPC). Community evaluations are performed periodically or when there is reason to believe there may be a change in the PPC. As it is intended, the PPC is only used to assess a community's fire protection—it does not consider other emergencies or important services provided by the fire department such as EMS, wildfire mitigation, technical rescue, or hazmat incident response. The ISO acknowledges the use of the PPC is limited to assessing *fire suppression capabilities* and that fire departments do many more things to improve public safety.[42]

In developing a PPC, the following major categories are evaluated:

- Emergency Communications: Fire alarm and communication systems, including telephone systems, telephone lines, staffing, and dispatching systems.
- Fire Department: The fire department, including equipment, staffing, training, and geographic distribution of fire companies.
- Water Supply: The water supply system, including the condition and maintenance of hydrants and the amount of available water compared to the amount needed to suppress fires.
- Fire Prevention: Programs that contain plan review; certificate of occupancy inspections; compliance follow-up; inspection of fire protection equipment; and fire prevention regulations related to fire lanes on area roads, hazardous material routes, fireworks, barbecue grills, and wildland-urban interface areas.
- Public Fire Safety Education Programs: Fire safety education training and programs for schools, private homes, and buildings with large loss potential or hazardous conditions, and a juvenile fire-setter intervention program.

St. Helena received an ISO Class 3 rating in 2022. The city's score was 76.20, which is at the upper end of the Class 3 rating (70.0 to 79.9). CPSM recognizes the city's achievement as a Class 3 ISO rating as a ***Best Practice***. Nationwide, in 2022, only 2,117 communities of the more than 39,000 communities rated received a higher rating than St. Helena. The St. Helena rating places the community in the ***top 10 percent of those ratings in 2022***.

It is also important to note that SHFD received good scoring in the areas of Emergency Communications, receiving 8.72 points out of 10. The water utility system was scored at 32.19 out of a possible 40. St. Helena was short by only 3.8 points in achieving a Class 2 Rating. Three areas in which these points can be achieved are as follows:

- Credit for Training……3.32 Points Available
- Water Supply: Credit for Hydrant Testing ……..……3.31 Points Available
- Fire Department: Credit for Company Personnel ……..……10.66 Points Available

CPSM believes that the needed 3.8 points to obtain a Class 2 rating can be satisfied *without* the addition of personnel. Improvements in Training Activities (Monthly Hours, Officer Training, Recruit Training, and Pre-Fire Planning Inspections), along with increased Fire Hydrant Inspection and Testing, can generate more than the additional 3.8 points needed.

42. Flippin, P., Gaull E., Laun, J., Flicko, R., District of Columbia Fire and Emergency Medical Services Fleet Management Audit and Assessment (District of Columbia Fire and Emergency Medical Services, Washington, DC 2013).

EDUCATION AND TRAINING PROGRAMS

Training is one of the most important functions that a fire department should be performing on a regular basis. One could even make the argument that training is, in some ways, more important than emergency response, because a department that is not well-trained, prepared, and operationally ready will be unable to effectively and safely fulfill its emergency response obligations. A comprehensive, relative, and ongoing training program is absolutely critical to the fire department's level of success.

An effective fire department training program must cover all of the essential elements of that department's core missions and responsibilities. The program must include an appropriate combination of technical/classroom training, manipulative or hands-on/practical evolutions, and training assessment to gauge the effectiveness of these efforts. Most of the training, but particularly the practical, hands-on training evolutions, should be developed based upon the department's own operating procedures while remaining cognizant of widely accepted practices and standards.

Certain Occupational Safety and Health Administration (OSHA) regulations dictate that minimum training covering various topics must be completed on an annual basis. This training covers:

- A review of the respiratory protection standard, self-contained breathing apparatus (SCBA) refresher and user competency training, SCBA fit testing (29 CFR 1910.134).
- Blood Borne Pathogens Training (29 CFR 1910.1030).
- Hazardous Materials Training (29 CFR 1910.120).
- Confined Space Training (29 CFR 1910.146).
- Structural Firefighting Training (29 CFR 1910.156).

Education and training programs help to create the character of a fire service organization. Agencies that place a real emphasis on their training have a tendency to be more proficient in carrying out day-to-day duties. The prioritization of training also fosters an image of professionalism and instills pride in the organization.

In-Service Fire & EMS Training

The training functions of the SHFD are coordinated by the department's station Captains with oversight from the Fire Chief. Station officers (Captains) are assigned the responsibility for ensuring that personnel under their supervision receive the requisite training and assuring that the required level of competency is achieved.

In-service fire training, beyond OSHA requirements, is typically not highly regulated by either state or local regulations. Unlike EMS certifications, which have very specific continuing education requirements, fire service training generally follows the ISO criteria of 16 hours per month (192 hours annually) for subjects related to structural firefighting. In addition, ISO has specific guidelines for company level (group) training, driver operator training, hazardous materials training, and pre-fire planning. There are also specific requirements for recruit training (new firefighter), but these tend to generally follow state criteria and there are often distinctions made between career firefighters and volunteers. SHFD does not have a specified train requirement for its firefighters. The agency has a guideline for annual training and a listing of

various hours spent for the different categories. Generally, a good rule of thumb is to commit two hours of combined training (Fire and EMS) in each 24-hour tour.

Recommendation: The St. Helena Fire Department should establish a minimum shift training requirement (in hours) for each employee and implement this requirement in the department's Standard Operating Guidelines. (Recommendation No. 17.)

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The departmental training calendar is printed on a chalk board at the Helena Fire Department. This provides a good, quick reference for on-duty personnel with regards to the current training guidelines. It is recommended that a digital calendar, referencing the various shift assignments, be created to provide an electronic reference that can also be accessed remotely. In addition, this recordkeeping allows individuals or officers to identify past training that may have been missed. Simultaneously, these records will document departmental training assignments throughout the year.

Recommendation: The St. Helena Fire Department should implement an electronic training calendar and utilize this recordkeeping to document training activities throughout the year. (Recommendation No. 18.)

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Quite often training exercises are repeated over time and the ability maintain an ongoing record of when a particular evolution or drill was completed will be beneficial for maintaining accurate recordkeeping.

Oversight of training activities is a key department function. The ability to incorporate timely and relevant training activities is essential. The St. Helena Fire Department is at a disadvantage in not having a dedicated training officer to develop the training calendar, provide source material, and to monitor the completion of the required training activities by individual employees. CPSM believes that the SHFD should designate a Station Officer as the department's Training Officer and assign these functions as part of their program management responsibilities.

Recommendation: The St. Helena Fire Department should assign a Fire Captain to assume the role of the fire department Training Officer, with responsibility to coordinate training activities for the department. (Recommendation No. 19.)

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The department training officer should be able to draw from department members in developing the training curriculum and source materials. In addition, department members who have particular expertise in various training topics should be available to the training officer to produce video tapes, training objectives, and handout materials for the various training topics. The department should also consider the establishment of a Training Steering Committee to serve as a resource to the Training Officer in the development and delivery of the department's training program.

Recommendation: The St. Helena Fire Department should establish a Training Steering Committee to assist the department Training Officer in developing

the training curriculum, identifying source materials, and the implementing the training calendar. (Recommendation No. 20.)

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The Fire Chief should play in integral part in developing and directing the department's training activities. The Training Officer should present the recommended training calendar to the Chief for approval and implementation. There is also the option of entering into a cooperative training delivery arrangement with either Calistoga or CAL-FIRE to coordinate the delivery of in-service fire training.

Firefighter Recruit Training

Fire service agencies have traditionally trained new firefighters in-house utilizing NFPA guidelines. It is very common for smaller agencies, particularly those with a limited number of position openings (including St. Helena), to utilize an on-the-job training process and task-book progression to train and qualify new employees or members for various assignments. SHFD currently requires all new firefighter applicants to have, as a prerequisite for hiring, certifications for both Firefighter-1 and EMT-B. This approach for the hiring of new personnel is very cost-effective in that it eliminates the need to conduct a multiweek training academy and allows SHFD to bring new employees into line positions more rapidly. CPSM recognizes the SHFD new employee hiring prerequisites as a ***Best Practice***.

EMS Training

EMS training and scope of practice guidelines are established by state statute and are administered by the California Emergency Medical Services Authority (EMSA). EMSA has authorized the creation of Local EMS Agencies (LEMSAs) to administer the day-to-day management and oversite of EMS operations in either regional or countywide geographic subareas. Napa County has established the Napa County EMS Agency as a part of the County Health Department to serve as the LEMSA for Napa County. The County EMS Agency employs a Medical Director who is responsible for the supervision of patient care, ensuring quality assurance, and authorizing the training requirements for all EMTs and Paramedics operating in the county. Service agencies in Napa County must enter into a ***provider service agreement*** that stipulates the level of care that can be provided and a series of requirements involving continuing education, reporting and recordkeeping, equipment and medications to be carried, and the quality assurance processes. Local providers such as the St. Helena Fire Department are required to enter into individual provider agreements in order to deliver basic life support services in their respective communities.

Napa County has entered in a contract with American Medical Response (AMR) to provide Advanced Life Support (ALS) services throughout the county along with ambulance transport services. AMR co-responds with SHFD units in delivering these services.

EMT recertification requires 24 hours of approved EMS continuing education (CE) or an approved 24-hour refresher course certificate taken every two years. At least 12 of the 24 hours of continuing education coursework must be instructor-based. In addition, all EMTs must have a valid CPR card and pass a skills verification test.

Much of the required training for SHFD employees is obtained through the Image-Trend online training program and approved coursework. AMR offers frequent training opportunities in meeting these criteria; however, St. Helena does not take advantage of these training offerings that are available locally at no charge. CPSM believes that St. Helena should pursue joint EMS

training opportunities with AMR to both improve field working relationships and provide the necessary EMS continuing education requirements.

Recommendation: The St. Helena Fire Department should pursue joint training opportunities with AMR to enhance improved working relationships and to provide the needed EMS continuing education credits (CEs) for EMT recertification. (Recommendation No. 21.)

Physical Fitness Evaluation

Employee physical fitness is necessary for Fire and EMS personnel to do their jobs effectively while avoiding injuries. NFPA 1583, *Standard on Health-Related Fitness Programs for Fire Department Members*, is a recognized industry standard for monitoring and maintaining firefighter fitness. SHFD maintains a rigid fitness standard for its emergency response personnel. SHFD personnel are required to successfully complete the ***Pack Test-Work Capacity Testing for Wildland Fire Fighting*** as an annual fitness qualification. CPSM recognizes the SHFD fitness requirements for its line employees to be a ***Best Practice***.

Annual Medical Evaluations

Closely aligned with the need for firefighter fitness assessment is the need for firefighters to have an annual medical evaluation to ensure employee well-being and health status so they can safely perform their duties.

Firefighters are susceptible to developing hypertension, diabetes, high cholesterol, and obesity. According to the NFPA, 43 percent of firefighter deaths are caused by overexertion and stress. In 2017, the Firefighter Cancer Support Network revealed that 61 percent of career firefighter line-of-duty deaths occurred as a result of cancer from 2002 to 2017. Periodic and directed medical testing and screening are vital to the well-being of firefighters and are effective in identifying problems at early stages in order to facilitate treatment. NFPA 1582, *Standard on Comprehensive Occupational Medical Program for Fire Departments*, outlines an occupational medical program for firefighters aimed at reducing health risks and provides guidance for periodic screening and medical evaluations. The following medical testing is recommended under the provisions of NFPA 1582:

- Blood analysis.
- Urinalysis.
- Pulmonary function test.
- Chest X-ray (every five years).
- EKG.
- Infectious disease screening.
- Cancer screening.
- Audiometric exam.
- Vision testing.

St. Helena conducts an annual medical evaluation for its firefighters but this evaluation does not follow the parameters of NFPA 1572.

Recommendation: The St. Helena Fire Department should modify its annual medical physicals for firefighters and utilize the screening criteria specified in NFPA 1572, Standard on Comprehensive Occupational Medical Program for Fire Departments. (Recommendation No. 22.)

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In close alignment with annual medical evaluations is the issue involving employee drug testing. The city of St. Helena requires new employees to undergo drug testing, including firefighters. The city does not have drug testing requirements when there is reasonable suspicion or in a post-driving accident situation. CPSM believes that the fire department should expand it policy regarding drug testing to involve testing after a driving accident or when a supervisor has reasonable suspicion that an employee is under the influence.

Recommendation: The city of St. Helena should implement a drug testing policy that requires employees to undergo testing when there is reasonable suspicion or when the employee is involved in a vehicle accident while driving a fire department vehicle. (Recommendation No. 23.)

EMERGENCY MANAGEMENT

Emergency management is the discipline and profession of applying science, technology, planning, and management to deal with extreme events that can injure or kill large numbers of people, do extensive damage to property, and disrupt community life. When such events occur and cause extensive harm, they are called disasters.[43]

Napa County has an adopted and well-designed Emergency Operations Plan (EOP) that includes the city of St. Helena. The county COP is an integrated plan based on the National Incident Management System; it provides an all-hazards approach in managing larger emergency incidents. The plan outlines a concept for emergency operations, assigns roles and responsibilities, and prescribes management and procedures for the Emergency Operations Center. Napa County has a total area of nearly 790 square miles and a population in 2020 estimated at 138,000. St. Helena is one of five municipalities in the county; the county seat is in Napa City.

The county EOP provides emergency management coordination, planning, and training opportunities for its municipal partners. This plan is issued in accordance with the Standardized Emergency Management System (SEMS), the cornerstone of California's emergency response system, the Robert T. Stafford Disaster Relief Act, and the California Emergency Services Act (ESA), which establishes the authority for jurisdictions to guide their operations during a major disaster.

The County EOP is a usable and thorough document last updated and distributed in 2020. The City of St. Helena does not have its own EOP but operates under the guidelines and in cooperation with the county plan. The city has designated a large meeting room in St. Helena Fire Department to function as the city's EOC when needed. This area is used for multiple purposes throughout the year but is very viable, if equipped appropriately, as a forum from which the coordination for a single-agency or joint operations event can be executed.

43. *Emergency Management: Principles and Practice for Local Government*. Eds. Thomas E. Drabek, Gerard J. Hoetmer. International City Management Association, 1991. p. xvii

The EOC is intended to provide these primary functions:

- Serve as a central information sharing center.
- Collect, gather, and analyze data.
- Maintain a countywide common operating picture of response activities.
- Prepare OA-wide situation reports.
- Coordinate/communicate Policy Group priorities.
- Implement event management-by-objective.
  - Reconcile competing objectives.
  - Coordinate resource allocation priorities.
- Maintain communication with DOCs and city/special district EOCs.
  - Ensure that departments are aware of current incident objectives and make collaborative decisions.
  - Maintain a common level of situational awareness throughout the operational area.
- Communicate and coordinate with the REOC.
- Serve as a coordination and communication center for all county stakeholders, including the private sector and non-governmental organizations (NGOs), such as community hospitals, clinics, and ambulance providers.

While the Napa CEOP and its coordination with the city of St. Helena is well-designed and comprehensive in its organization, it is the responsibility of the City of St. Helena to ensure that key staff members along with elected officials and designated non-governmental organization are well-versed in the plan's objectives and drill regularly in the activation of the EOC and the execution of its key activities. Given the frequent changing of staff both at the city and county levels, it is recommended that the City of St. Helena conduct a training drill that activates the EOC and test its emergency management communications and processing activities with the county on an annual basis.

Recommendation: The city of St. Helena should initiate an effort with Napa County Emergency Management that simulates the full activation of the city's EOC and the exercise of the Emergency Operations Plan (EOP) on an annual basis. (Recommendation No. 24.)

The following is a list of the key activities of the EOP that should be exercised in these training activities:

- Organization and assignment of key responsibilities.
- Administration and logistics of setting up the EOC.
- The coordination of transportation resources.
- Instituting and testing the necessary communications links.
- Public works and engineering activities.
- Firefighting.

- Law Enforcement, Looting and Evacuations
- Mass care, emergency assistance, housing and human services.
- Public health and medical services.
- Search and rescue.
- Oil and hazardous material response.
- Agricultural and natural resources.
- Energy.
- Long-term community recovery.
- External affairs.
- Debris management.
- Mass fatalities management.

The City of St. Helena has not developed a municipal continuity of operations plan (COOP). It is vital that each department within the city develop a detailed plan for the continuity of its specific operations, the succession of leadership, and the preservation of records.

Recommendation: The City of St. Helena should initiate an effort in which every city department develops and exercises a Continuity of Operations Plan (COOP). (Recommendation No. 25.)

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A Continuity of Operations Plan details how a particular agency will continue to operate under adverse conditions including under circumstances where its primary operating locations are no longer functional or the normal staffing levels have been reduced so that an altered service model is required. FEMA provides a very functional guide in developing agency-specific COOP planning documents.

(See: http://www.fema.gov/pdf/about/org/ncp/coop/continuity_plan_federal_d_a.pdf). The Butte / Silver Bow County COOP document could serve as a model for this planning document.[44]

EMERGENCY COMMUNICATIONS CENTER (911)

As mentioned previously, the current arrangement of agencies involved in the 911 Emergency Communications process in St. Helena appears redundant and likely prone to delays or even dropped calls. Currently the are three separate agencies involved in the processing 911 calls that originate in St. Helena. These include:

- Calistoga / St. Helena consolidated public safety answering point (PSAP).
- CAL-FIRE ECC.
- Napa City Central Dispatch.

44. https://www.co.silverbow.mt.us/DocumentCenter/View/4842/Annex--COOP?bidId=

Each of these entities operate from separate facilities, utilizing different personnel, and have differing levels of supervision and oversight in managing their individual operations. St Helena does not receive periodic reports regarding the combined activities of each of these entities providing services to the city. St. Helena officials are very aware of the difficulties associated with their current call taking and dispatching processes and have expressed frustration in finding a viable and cost-effective solution to this issue.

Part of the problem observed by CPSM in the composite of dispatching services currently being provided is that none of the three agencies are providing any reporting regarding the services being provided or any assessment regarding the quality of these services. St. Helena is currently paying an annual service fee to CAL FIRE for its services. In FY-24 this amount was nearly $80,000 and the city receives no reporting regarding these services. Napa City is responsible for dispatching AMR units into St. Helena. AMR is the provider of ALS services for the city and works in close cooperation with SHFD in the delivery of EMS care. Again, no reporting is provided to St. Helena regarding the volume of activity in the city, any qualification regarding the types of patients encountered, number of transports, or any compliance assessment regarding this care.

The Calistoga/St. Helena PSAP was recently initiated and the system has experienced growing pains. There have been multiple position vacancies and service levels have suffered. Little or no reporting has been distributed from this center with regard to its services and the effectiveness of this operation.

Dispatch operations is a key element in the quality of public safety services being provided in a community. The dispatch center is a type of "gate-keeper" in determining the type of emergency being reported and the type of response that is warranted. With the mass volume of calls originating through the 911 system, it is essential that agencies have dispatch screening systems in effect that can rapidly and accurately determine the severity of incoming calls and effectively determine the appropriate response patterns and resources deployed on the basis of these assessments. This is the prime objective of how an efficient public safety dispatching system should be operating and St. Helena should be taking the steps necessary to ensure that its composite of dispatching operations is working effectively towards this end.

Recommendation: The City of St. Helena should initiate an effort to fully evaluate its dispatching operations and obtain the necessary reporting to understand the level of effectiveness of these operations. (Recommendation No. 26.)

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It is important that St. Helena receive regular reports regarding all aspects of these dispatching operations. These reports should be produced on a monthly basis and have the following information:

- Number of calls processed for St. Helena.
- Call types.
- Call processing times (from receipt of the incoming call to the dispatch of resources).
- Number of dropped calls.
- Breakout of emergency and non-emergency calls.
- Dispatching compliance with call-screening protocol guidelines.

Once St. Helena begins receiving a full reporting regarding all aspects of dispatching activities it will be in a more informed position to establish service delivery standards and to observe any trends that can be measured over time.

There are number of guiding standards that can be utilized in making this analysis. Comparisons can be made regarding the services being received and what ultimately is the desired level of service for St. Helena. The following entities have reputable standards regarding emergency public safety dispatching services that can be utilized by St. Helena in making these evaluations:

- ISO.
- NFPA 1225, Standard for Emergency Service Communications.
- APCO ANS 1.107.1-2015, Standard for the Establishment of a Quality Assurance and Quality Improvement Program for Public Safety Answering Points.
- IAED MPDS, Medical Priority Dispatching System.
- IAED FPDS, Fire Priority Dispatching System.
- Priority Dispatch, ProQA.

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SECTION 9. DATA ANALYSIS

This data analysis was prepared as a key component of the study of the fire services provided by the St. Helena Fire Department (SHFD) and the emergency medical services (EMS) provided by American Medical Response (AMR) in the City of St. Helena, and which was conducted by the Center for Public Safety Management LLC (CPSM). This analysis examines all calls for service between November 1, 2022, and October 31, 2023, as recorded in the St. Helena Emergency Command Center's computer-aided dispatch (CAD) system as provided by the CAL FIRE Sonoma-Lake-Napa Unit, SHFD's National Fire Incident Reporting System (NFIRS) records, and AMR's records management system.

In this report, CPSM analyzes calls and runs. A call is an emergency service request or incident. A run is a dispatch of a unit (i.e., a unit responding to a call). Thus, a call may include multiple runs.

The St. Helena Fire Department (SHFD) serves a population of about 5,300 people in an area of over five square miles covering the City of St. Helena and the surrounding area. SHFD is an all-hazards response fire department, providing service and protection for fire and medical emergencies, hazardous material responses, vehicle accidents, and other incidents where life and property are threatened. The SHFD operates out of one fire station with six full-time firefighters and 18 part-time firefighters. It utilizes two Type I and one Type III engine, one Type I truck, two brushes, one water tender, two utility units, and one command vehicle.

In addition to the fire protection service provided by the SHFD, the City of St. Helena contracts with American Medical Response (AMR) for the emergency medical services (EMS) throughout the city.

This analysis is made up of two independent parts. The first part focuses on the fire protection service provided by SHFD. The second part studies the EMS provided by AMR in the City of St. Helena.

Between November 1, 2022, and October 31, 2023, SHFD responded to 844 calls, of which 45 percent were EMS calls, 33 percent were fire calls, and 22 percent were other calls. The total combined workload (deployed time) for SHFD units was 388.8 hours. In responding to calls that involved the fire department, the average dispatch time was 1.6 minutes, and the average response time was 5.9 minutes. The 90th percentile dispatch time was 2.5 minutes and the 90th percentile response time was 8.5 minutes.

The average dispatch time was 1.0 minutes, and the average response time was 6.0 minutes. The 90th percentile dispatch time was 2.4 minutes and the 90th percentile response time was 9.9 minutes.

PART 1: FIRE PROTECTION AND RESCUE

We received CAD data and NFIRS data for the St. Helena Fire Department (SHFD). We first matched the NFIRS and CAD data based on the incident numbers provided. Then, we classified the calls in a series of steps. We first used the NFIRS incident type to identify canceled calls and to assign emergency medical service (EMS), motor vehicle accident (MVA), and fire category call types. For calls that did not have matched NFIRS records, we instead used the incident type description in the CAD data to identify the call type. Calls that occurred outside SHFD's response area were identified as aid given. The method used to categorize call types is shown in Attachment IV.

We received records for a total of 871 calls that occurred between November 1, 2022, and October 31, 2023. We removed 27 calls to which a dispatched SHFD unit did not have at least an en route or an arrive time. As a result, a total of 844 calls were included in this part of the study.

This part of the analysis is made up of four sections. The first section focuses on call types and dispatches. The second section explores the time spent and the workload of individual units. The third section presents an analysis of the busiest hours in the year studied. The fourth and final section provides a response time analysis of responding SHFD units.

SHFD RESPONDING CALL TOTALS

Between November 1, 2022, and October 31, 2023, the St. Helena Fire Department (SHFD) responded to 844 calls. Of these, three were outside fire calls and six were structure fire calls within the City of St. Helena.

SHFD Responding Calls by Type

Table 9-1 shows the number of calls that SHFD responded to by call type, average calls per day, and the percentage of calls that fall into each call type category. Figure 9-1 shows the percentage of calls by grand call type. Figures 9-2 and 9-3 show the percentage of calls that fall into each EMS (Figure 9-2) and fire (Figure 9-3) type category.

TABLE 9-1: SHFD Calls by Type

Call Type	Total Calls	Calls per Day	Call Percentage
Medical and other	357	1.0	42.3
Motor vehicle accident	20	0.1	2.4
EMS Subtotal	**377**	**1.0**	**44.7**
False alarm	67	0.2	7.9
Good intent	10	0.0	1.2
Hazard	51	0.1	6.0
Public service	141	0.4	16.7
Outside fire	3	0.0	0.4
Structure fire	6	0.0	0.7
Fire Subtotal	**278**	**0.8**	**32.9**
Canceled	21	0.1	2.5
Aid given*	168	0.5	19.9
Total	**844**	**2.3**	**100.0**

Note: *Calls outside St Helena were labeled as aid given.

FIGURE 9-1: SHFD Responding Calls by Grand Type

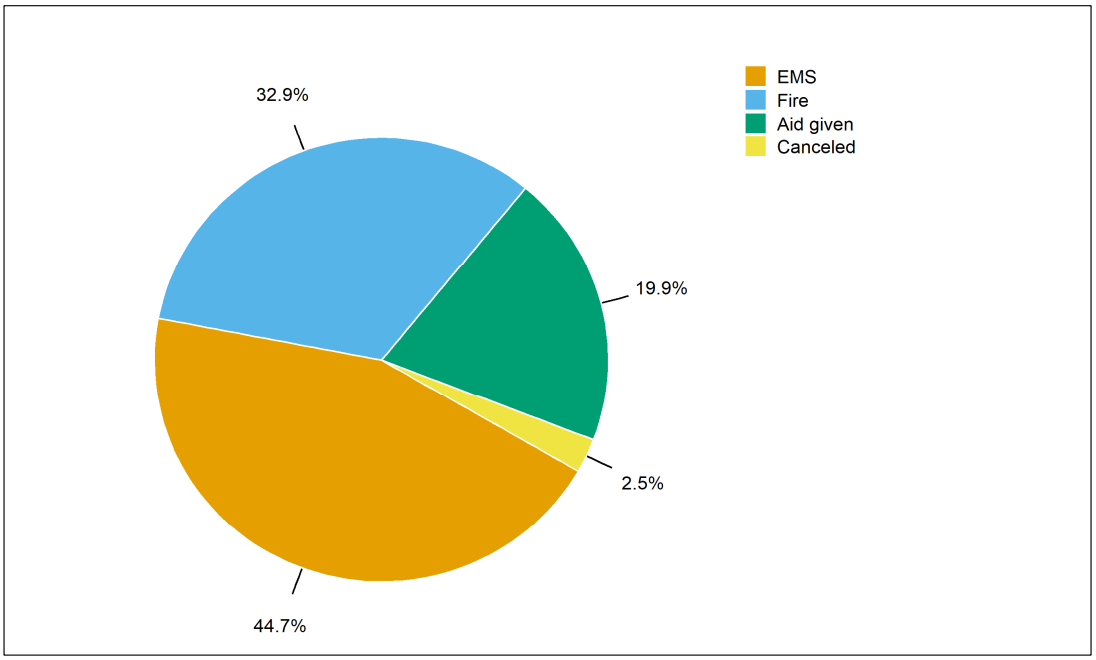


FIGURE 9-2: SHFD Responding EMS Calls by Type

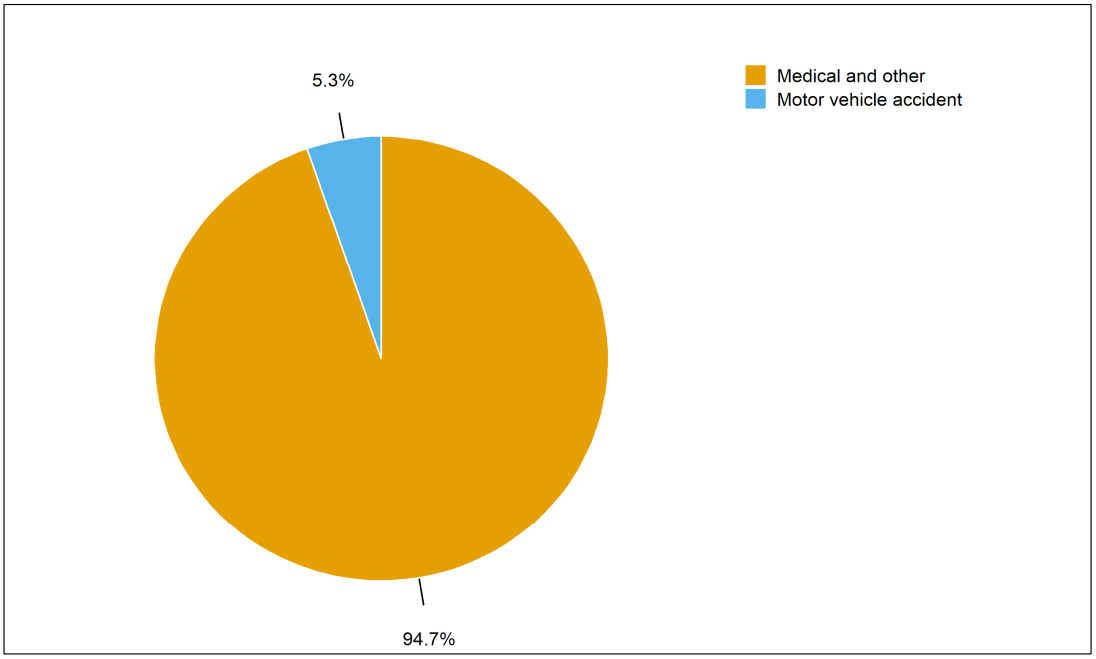
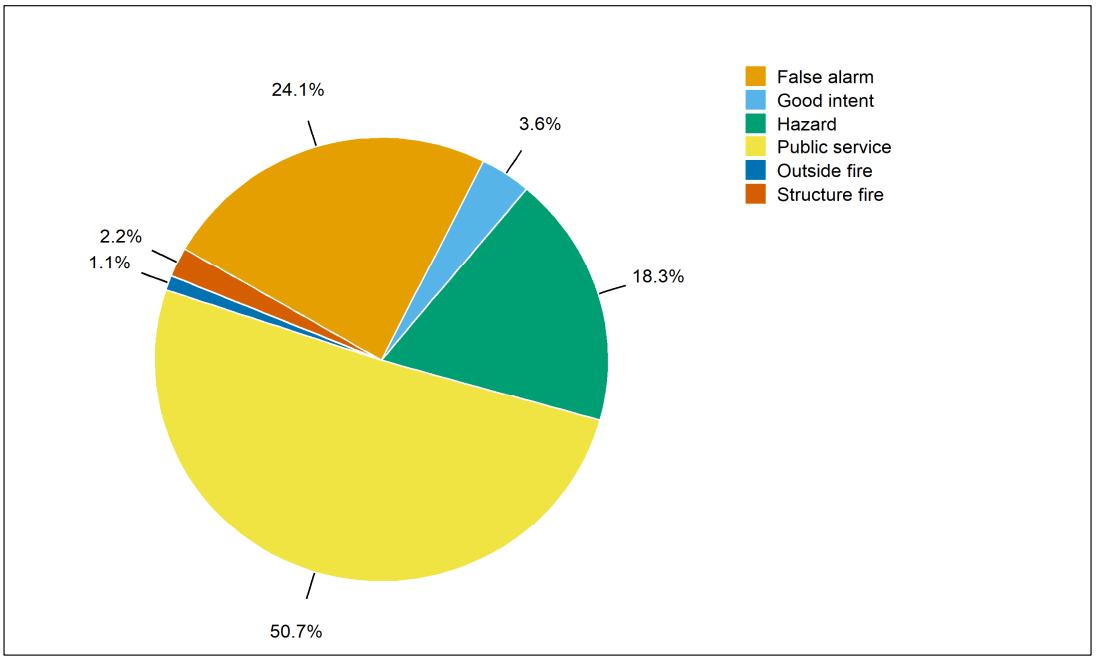


FIGURE 9-3: SHFD Responding Fire Calls by Type



Observations:

- SHFD responded to an average of 2.3 calls, including 0.5 aid given and 0.1 canceled calls, per day.
- EMS calls for the year totaled 377 (45 percent of all calls), an average of 1.0 per day.
- Fire calls for the year totaled 278 (33 percent of all calls), an average of 0.8 per day.
  - Public service calls were the largest category of fire calls at 51 percent of fire calls, an average of 0.4 calls per day.
  - False alarm calls made up 24 percent of fire calls, an average of 0.2 calls per day.
  - Structure and outside fire calls combined made up three percent of fire calls, or one call every 41 days on average.

SHFD Responding Calls by Type and Duration

The following table shows the duration of calls by type using four duration categories: less than 30 minutes, 30 minutes to one hour, one to two hours, and two or more hours.

TABLE 9-2: Calls by Type and Duration

Call Type	Less than 30 Minutes	30 Minutes to One Hour	One to Two Hours	Two or More Hours	Total
Medical and other	307	42	7	1	357
Motor vehicle accident	11	5	4	0	20
EMS Subtotal	**318**	**47**	**11**	**1**	**377**
False alarm	60	3	4	0	67
Good intent	9	1	0	0	10
Hazard	41	7	3	0	51
Public service	124	11	6	0	141
Outside fire	2	1	0	0	3
Structure fire	3	1	1	1	6
Fire Subtotal	**239**	**24**	**14**	**1**	**278**
Canceled	18	1	2	0	21
Aid given	121	22	17	8	168
Total	**696**	**94**	**44**	**10**	**844**

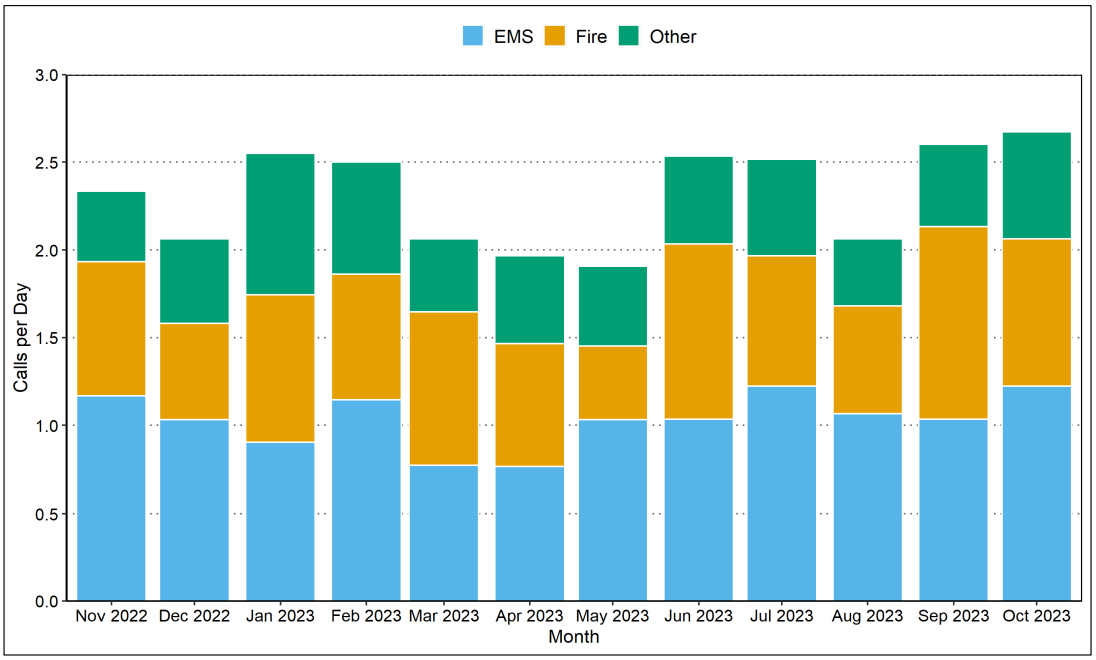
Observations:

- A total of 375 EMS calls (97 percent) lasted less than one hour, and 12 EMS calls (three percent) lasted one or more hours.
  - A total of 16 motor vehicle accidents (80 percent) lasted less than one hour, and four motor vehicle accidents (20 percent) lasted one to two hours.
- A total of 263 fire calls (95 percent) lasted less than one hour, and 15 fire calls (five percent) lasted one or more hours.
  - All outside fire calls lasted less than one hour.
  - A total of four structure fire calls (67 percent) lasted less than one hour, one structure fire call (17 percent) lasted one to two hours, and one structure fire call (17 percent) lasted two or more hours.

SHFD Responding Calls by Month and Hour of Day

Figure 9-4 shows the monthly variation in the average daily number of calls handled by SHFD between November 1, 2022, and October 31, 2023. Similarly, Figure 9-5 illustrates the average number of calls received each hour of the day.

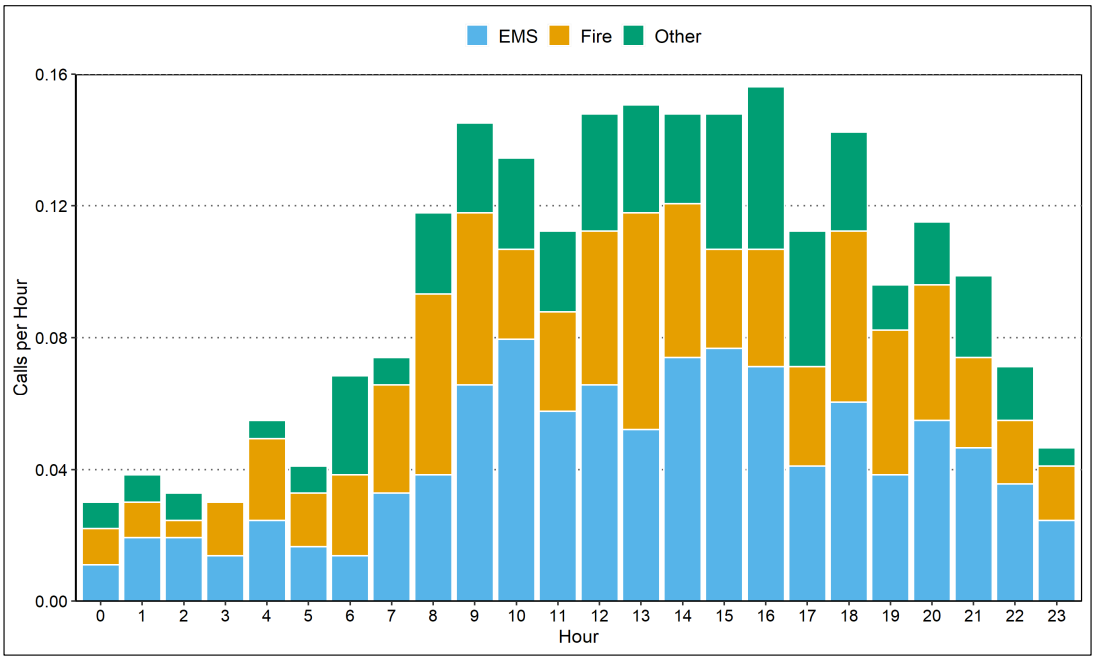
FIGURE 9-4: SHFD Responding Calls per Day by Month



Observations:

- Average EMS calls per day ranged from 0.8 in April 2023 to 1.2 in both July and October 2023.
- Average fire calls per day ranged from 0.4 in May 2023 to 1.1 in September 2023.
- Average calls per day overall ranged from 1.9 in May 2023 to 2.7 in October 2023.

FIGURE 9-5: Average SHFD Responding Calls by Hour of Day



Observations:

- Average EMS calls per hour ranged from 0.01 between midnight and 1:00 a.m. to 0.08 between 10:00 a.m. and 11:00 a.m.
- Average fire calls per hour ranged from 0.01 between 2:00 a.m. and 3:00 a.m. to 0.07 between 1:00 p.m. and 2:00 p.m.
- Average calls per hour overall ranged from 0.03 between midnight and 1:00 a.m., and between 3:00 a.m. and 4:00 a.m., to 0.16 between 4:00 p.m. and 5:00 p.m.

SHFD Units Arriving at Calls

In this section, we limit ourselves to calls where a SHFD unit arrives. For this reason, there are 75 fewer calls in Table 9-3 than in Table 9-1. Table 9-3, along with Figures 9-6 and 9-7, detail the number of calls with one, two, and three or more SHFD units arriving at a call, broken down by call type.

TABLE 9-3: Calls by Type and Number of Arriving SHFD Units

Call Type	Number of Units			Total Calls
	One	Two	Three or More	
Medical and other	344	8	1	353
Motor vehicle accident	12	6	0	18
EMS Subtotal	**356**	**14**	**1**	**371**
False alarm	58	0	0	58
Good intent	6	1	0	7
Hazard	37	6	2	45
Public service	135	2	1	138
Outside fire	2	1	0	3
Structure fire	1	2	3	6
Fire Subtotal	**239**	**12**	**6**	**257**
Canceled	12	0	0	12
Aid given	112	14	3	129
Total	**719**	**40**	**10**	**769**
Total Percentage	**93.5**	**5.2**	**1.3**	**100.0**

Note: Out of 75 calls that did not have an arriving unit, nine were canceled calls, six were EMS calls, 21 were fire calls, and 39 were aid-given calls.

FIGURE 9-6: Number of Arriving SHFD Units for EMS Calls

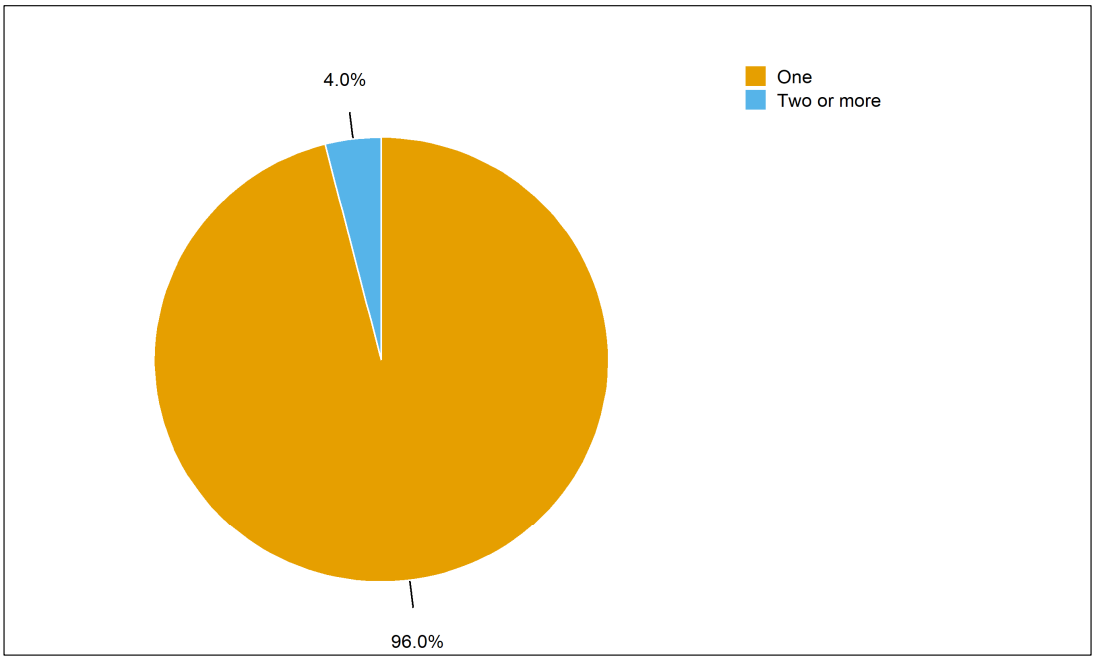
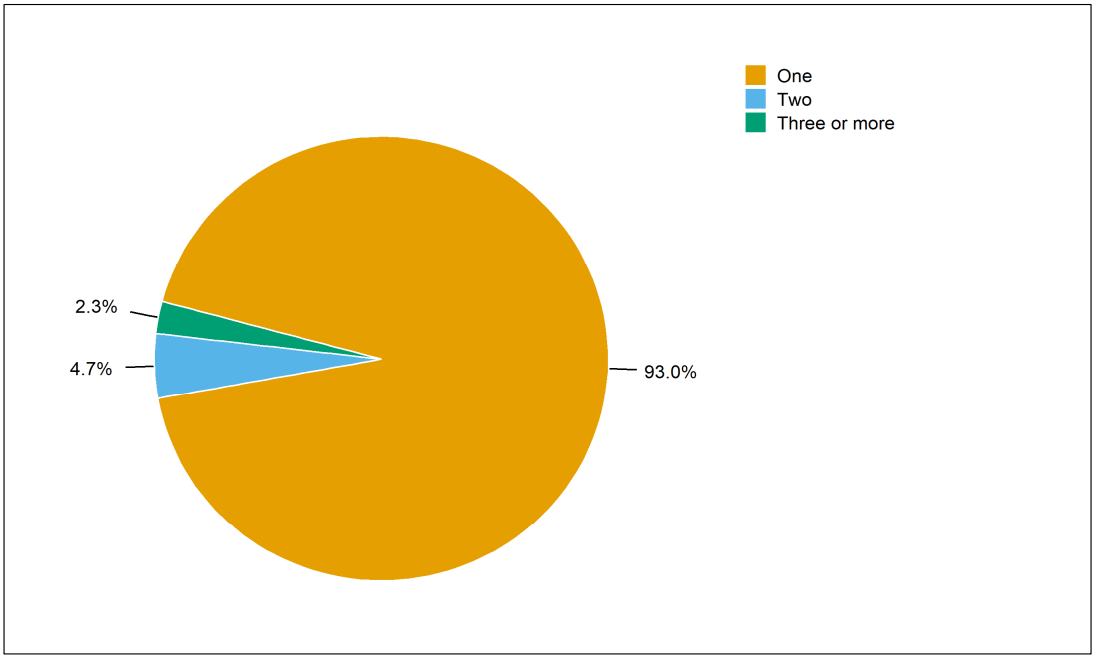


FIGURE 9-7: Number of Arriving SHFD Units for Fire Calls



Observations:

Overall

- Out of 844 total calls, SHFD arrived at 769 calls (91 percent).
- On average, 1.1 units arrived at all calls; for 93 percent of calls, only one unit arrived.
- Overall, three or more units arrived at one percent of calls.

EMS

- On average, 1.0 units arrived per EMS call.
- For EMS calls, one unit arrived 96 percent of the time, and two or more units arrived 4 percent of the time.

Fire

- On average, 1.1 units arrived per fire call.
- For fire calls, one unit arrived 93 percent of the time, two units arrived five percent of the time, and three or more units arrived two percent of the time.
- For outside fire calls, one unit arrived 67 percent of the time, and two units arrived 33 percent of the time.
- For structure fire calls, one unit arrived 17 percent of the time, two units arrived 33 percent of the time, and three or more units arrived 50 percent of the time.

SHFD WORKLOAD: RUNS AND TOTAL TIME SPENT

The workload of SHFD's units is measured in two ways: runs and deployed time. The deployed time of a run is measured from the time a unit is dispatched through the time the unit is cleared. Because multiple units respond to some calls, there are more runs (932) than calls (844) and the average deployed time per run varies from the average duration per call.

Runs and Deployed Time

Deployed time, also referred to as deployed hours, is the total deployment time of SHFD units deployed on all runs. Table 9-4 shows the total deployed time, both overall and broken down by type of run, for all non-administrative SHFD units. Table 9-5 and Figure 9-8 present the average deployed minutes by hour of day.

TABLE 9-4: SHFD Annual Runs and Deployed Time by Type

Run Type	Minutes per Run	Total Hours	Percent of Hours	Minutes per Day	Total Runs	Runs per Day
Medical and other	22.6	139.1	35.8	22.9	370	1.0
Motor vehicle accident	34.0	15.3	3.9	2.5	27	0.1
EMS Subtotal	**23.3**	**154.4**	**39.7**	**25.4**	**397**	**1.1**
False alarm	15.5	17.8	4.6	2.9	69	0.2
Good intent	15.6	2.9	0.7	0.5	11	0.0
Hazard	21.6	22.7	5.8	3.7	63	0.2
Public service	18.5	45.3	11.7	7.5	147	0.4
Outside fire	24.9	1.7	0.4	0.3	4	0.0
Structure fire	69.2	18.5	4.7	3.0	16	0.0
Fire Subtotal	**21.1**	**108.8**	**28.0**	**17.9**	**310**	**0.8**
Canceled	14.9	6.0	1.5	1.0	24	0.1
Aid given	35.7	119.6	30.8	19.7	201	0.6
Other Subtotal	**33.5**	**125.6**	**32.3**	**20.6**	**225**	**0.6**
Total	**25.0**	**388.8**	**100.0**	**63.9**	**932**	**2.6**

Observations:

Overall

- The total deployed time for the year was 388.8 hours. The daily average was 63.9 minutes for all units combined.
- There were 932 runs, including 201 runs dispatched for aid-given calls and 24 runs dispatched for canceled calls. The daily average was 2.6 runs.

EMS

- EMS runs accounted for 40 percent of the total workload.
- The average deployed time for EMS runs was 23.3 minutes. The deployed time for all EMS runs averaged 25.4 minutes per day.

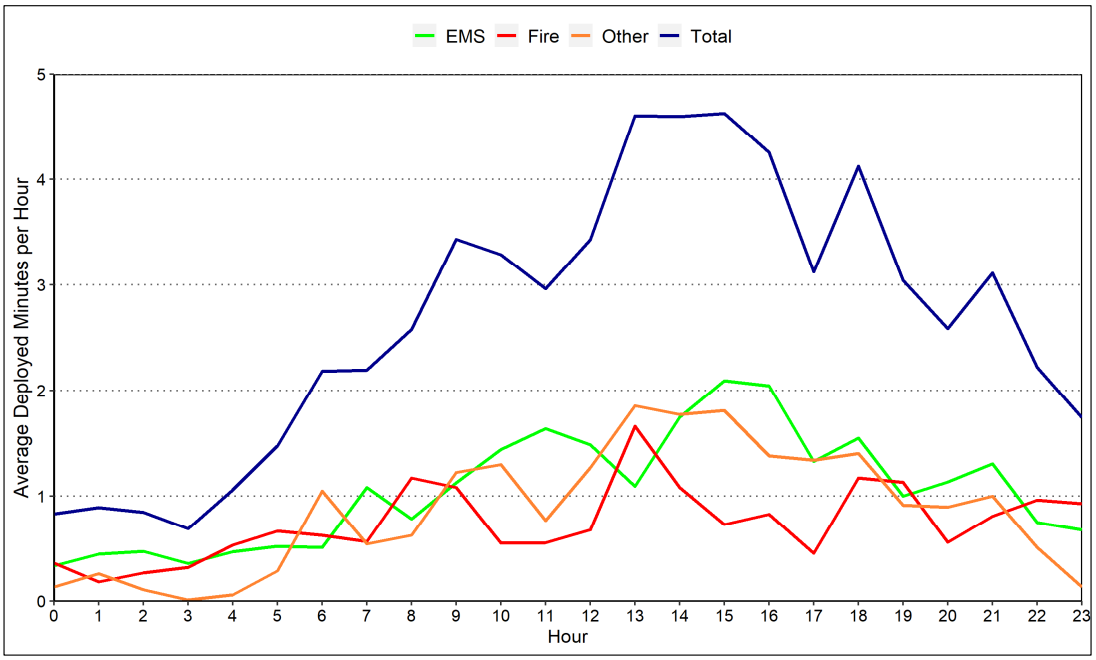
Fire

- Fire runs accounted for 28 percent of the total workload.
- The average deployed time for fire runs was 21.1 minutes. The deployed time for all fire runs averaged 17.9 minutes per day.
- There were 20 runs for structure and outside fire calls combined, with a total workload of 20.1 hours. This accounted for five percent of the total workload.
- The average deployed time for outside fire runs was 24.9 minutes per run, and the average deployed time for structure fire runs was 69.2 minutes per run.

TABLE 9-5: SHFD Deployed Minutes by Hour of Day

Hour	EMS	Fire	Other	Total
0	0.3	0.4	0.1	0.8
1	0.4	0.2	0.3	0.9
2	0.5	0.3	0.1	0.8
3	0.4	0.3	0.0	0.7
4	0.5	0.5	0.1	1.1
5	0.5	0.7	0.3	1.5
6	0.5	0.6	1.0	2.2
7	1.1	0.6	0.5	2.2
8	0.8	1.2	0.6	2.6
9	1.1	1.1	1.2	3.4
10	1.4	0.6	1.3	3.3
11	1.6	0.6	0.8	3.0
12	1.5	0.7	1.3	3.4
13	1.1	1.7	1.9	4.6
14	1.7	1.1	1.8	4.6
15	2.1	0.7	1.8	4.6
16	2.0	0.8	1.4	4.3
17	1.3	0.5	1.3	3.1
18	1.5	1.2	1.4	4.1
19	1.0	1.1	0.9	3.0
20	1.1	0.6	0.9	2.6
21	1.3	0.8	1.0	3.1
22	0.7	1.0	0.5	2.2
23	0.7	0.9	0.1	1.7
Total	**25.4**	**17.9**	**20.6**	**63.9**

FIGURE 9-8: Average SHFD Deployed Minutes by Hour of Day



Observations:

- Hourly deployed time was highest during the day from 1:00 p.m. to 5:00 p.m., averaging between 4.3 minutes and 4.6 minutes.
- Average deployed time peaked between 3:00 p.m. and 4:00 p.m., averaging 4.6 minutes.
- Average deployed time was lowest between 3:00 a.m. and 4:00 a.m., averaging 0.7 minutes.

SHFD Workload by Unit

Table 9-6 provides a summary of each SHFD unit's workload for the period between November 1, 2022, and October 31, 2023. Tables 9-7 and 9-8 provide a more detailed view of the workload, showing each unit's runs broken out by run type (Table 9-7) and its daily average deployed time by run type (Table 9-8).

TABLE 9-6: SHFD Workload by Unit

Unit	Type	Minutes per Run	Hours	Percent	Minutes per Day	Runs	Runs per Day
B17	Utility	14.0	1.2	0.3	0.2	5	0.0
BR17	Brush	26.3	3.1	0.8	0.5	7	0.0
BR217	Brush	76.8	1.3	0.3	0.2	1	0.0
CH170	Command	35.0	26.2	6.7	4.3	45	0.1
E17	Engine	22.3	296.1	76.2	48.7	798	2.2
E317	Engine	24.1	10.9	2.8	1.8	27	0.1
E417	Engine	60.2	21.1	5.4	3.5	21	0.1
TRK17	Truck	40.9	6.1	1.6	1.0	9	0.0
U17	Utility	47.3	2.4	0.6	0.4	3	0.0
WT17	Water tender	76.9	20.5	5.3	3.4	16	0.0
Total		**25.0**	**388.8**	**100.0**	**63.9**	**932**	**2.6**

TABLE 9-7: Total Runs by Type and SHFD Unit

Unit	Unit Type	EMS	False Alarm	Good Intent	Hazard	Public Service	Out Fire	Struct Fire	Cancel	Aid Given	Total
B17	Utility	1	0	0	1	0	0	1	0	2	5
BR17	Brush	2	0	0	2	0	0	0	0	3	7
BR217	Brush	0	0	0	0	0	0	0	0	1	1
CH170	Admin	12	1	0	7	2	1	4	1	17	45
E17	Engine	370	67	10	46	131	3	7	21	143	798
E317	Engine	8	0	1	2	9	0	1	1	5	27
E417	Engine	2	1	0	3	3	0	0	1	11	21
TRK17	Truck	1	0	0	2	1	0	3	0	2	9
U17	Utility	1	0	0	0	1	0	0	0	1	3
WT17	Water tender	0	0	0	0	0	0	0	0	16	16
Total		**397**	**69**	**11**	**63**	**4**	**147**	**16**	**24**	**201**	**932**

TABLE 9-8: Deployed Minutes per Day by Type and SHFD Unit

Unit	Unit Type	EMS	False Alarm	Good Intent	Hazard	Public Service	Out Fire	Struct Fire	Cancel	Aid Given	Total
B17	Utility	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.2
BR17	Brush	0.2	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.1	0.5
BR217	Brush	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2
CH170	Admin	0.9	0.0	0.0	0.5	0.4	0.0	0.8	0.2	1.5	4.3
E17	Engine	23.5	2.9	0.4	2.6	6.3	0.2	1.0	0.8	10.9	48.7
E317	Engine	0.5	0.0	0.1	0.1	0.4	0.0	0.5	0.0	0.3	1.8
E417	Engine	0.2	0.0	0.0	0.2	0.2	0.0	0.0	0.0	2.9	3.5
TRK17	Truck	0.0	0.0	0.0	0.1	0.1	0.0	0.7	0.0	0.1	1.0
U17	Utility	0.1	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.2	0.4
WT17	Water tender	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	3.4
Total		**25.4**	**2.9**	**0.5**	**3.7**	**0.3**	**7.5**	**3.0**	**1.0**	**19.7**	**63.9**

Observations:

- Engine E17 made the most runs (798 or an average of 2.2 runs per day) and had the highest total annual deployed time (296.1 hours or an average of 48.7 minutes per day).
  - EMS calls accounted for 46 percent of runs and 48 percent of total deployed time.
  - Outside and structure fire calls accounted for one percent of runs and three percent of the total deployed time.

SHFD Workload by Location

Table 9-9 breaks down the workload of SHFD by the locations where the calls occurred. Table 9-10 provides further detail on the workload associated with structure and outside fire calls, also broken down by location.

TABLE 9-9: Annual Workload by Location

Location	Calls	Percent Calls	Runs	Runs Per Day	Minutes Per Run	Work Hours	Percent Work	Minutes Per Day
St. Helena	676	80.1	731	2.0	22.1	269.2	69.2	44.3
Napa*	120	14.2	141	0.4	29.0	68.1	17.5	11.2
Deer Park	18	2.1	25	0.1	51.1	21.3	5.5	3.5
Calistoga	14	1.7	17	0.0	32.5	9.2	2.4	1.5
Rutherford	5	0.6	5	0.0	22.5	1.9	0.5	0.3
Yountville	3	0.4	4	0.0	16.7	1.1	0.3	0.2
Dry Creek	2	0.2	2	0.0	182.8	6.1	1.6	1.0
Santa Rosa	2	0.2	3	0.0	32.9	1.6	0.4	0.3
Capell Valley	1	0.1	1	0.0	31.4	0.5	0.1	0.1
Del Norte County	1	0.1	1	0.0	450.4	7.5	1.9	1.2
Pope Valley	1	0.1	1	0.0	22.3	0.4	0.1	0.1
Spanish Flat	1	0.1	1	0.0	114.0	1.9	0.5	0.3
Total	**844**	**100.0**	**932**	**2.6**	**25.0**	**388.8**	**100.0**	**63.9**

Note: *Unincorporated Napa County.

TABLE 9-10: SHFD Runs for Structure and Outside Fires by Municipality

Location	Structure Fires		Outside Fires		Total Deployed Hours	Percent Deployed Hours
	Runs	Minutes per Run	Runs	Minutes per Run		
St. Helena	16	69.2	4	24.9	20.1	27.0
Napa*	5	20.5	13	63.1	15.4	20.7
Calistoga	3	72.1	0	NA	3.6	4.8
Deer Park	3	92.6	8	90.0	16.6	22.3
Dry Creek	2	182.8	0	NA	6.1	8.2
Capell Valley	1	31.4	0	NA	0.5	0.7
Pope Valley	1	22.3	0	NA	0.4	0.5
Rutherford	1	41.0	0	NA	0.7	0.9
Spanish Flat	1	114.0	0	NA	1.9	2.6
Yountville	1	22.9	0	NA	0.4	0.5
Total	**34**	**67.7**	**28**	**77.2**	**74.4**	**100.0**

Note: *Unincorporated Napa County area.

Observations:

City of St. Helena

- There were 676 calls or 80 percent of the total calls within St. Helena.
- There were 731 runs, including 24 runs dispatched for canceled calls. The daily average was 2.0 runs.
- The total deployed time for the year was 269.2 hours or 69 percent of SHFD's total annual workload. The daily average was 44.3 minutes for all units combined.

Aid Given

- There were 168 calls or 20 percent of the total calls.
- There were 201 runs, including 30 runs dispatched for canceled calls. The daily average was 0.6 runs.
- The total deployed time for the year was 119.6 hours or 31 percent of SHFD's total annual workload. The daily average was 19.8 minutes for all units combined.

ANALYSIS OF BUSIEST HOURS

In this analysis, we included all 844 calls given in Table 9-1. For these calls, there is significant variability in the number of calls from hour to hour. One special concern relates to the resources available for hours with the heaviest workload. We tabulated the data for each of the 8,760 hours between November 1, 2022, and October 31, 2023. Table 9-11 shows the number of hours in which there were zero to two or more calls during the hour. Table 9-12 shows the ten one-hour intervals that had the most calls during the studied period. Table 9-13 examines the number of times a call overlapped with another call.

TABLE 9-11: Frequency Distribution of the Number of Calls

Calls in an Hour	Frequency	Percentage
0	7,965	90.9
1	749	8.6
2+	46	0.5
Total	**8,760**	**100.0**

TABLE 9-12: Top Ten Hours with the Most Calls Received

Hour	Number of Calls	Number of Runs	Total Deployed Hours
7/27/2023, 9:00 a.m. to 10:00 a.m.	3	4	1.8
3/14/2023, noon to 1:00 p.m.	3	4	1.1
11/25/2022, 10:00 a.m. to 11:00 a.m.	3	3	0.5
3/28/2023, noon to 1:00 p.m.	2	4	2.9
1/16/2023, 6:00 p.m. to 7:00 p.m.	2	4	2.6
8/1/2023, 10:00 a.m. to 11:00 a.m.	2	4	2.4
10/10/2023, 11:00 a.m. to noon	2	4	2.0
1/19/2023, 3:00 p.m. to 4:00 p.m.	2	3	1.7
10/8/2023, 2:00 p.m. to 3:00 p.m.	2	3	1.6
4/26/2023, 3:00 p.m. to 4:00 p.m.	2	3	1.3

Note: Total deployed hours is a measure of the total time spent responding to calls received in the hour. The deployed time from these calls may extend into the next hour or hours.

TABLE 9-13: Frequency of Overlapping Calls

Scenario	Number of Calls	Percent of All Calls	Total Hours
No overlapped call	819	97.0	345.5
Overlapped with one call	25	3.0	5.2

Observations:

- During 46 hours (0.5 percent of all hours), two or more calls occurred; in other words, the department responded to two or more calls in an hour roughly once every eight days.
- The highest number of calls to occur in an hour was three, which happened three times.
  - One hour with three calls was 9:00 a.m. to 10:00 a.m. on July 27, 2023. The hour's three calls involved four individual dispatches resulting in 109 minutes of deployed time. These three calls included one canceled call, one medical and other call, and one public service call.
  - Another hour with three calls was noon to 1:00 p.m. on March 14, 2023. The hour's three calls involved four individual dispatches resulting in 68 minutes of deployed time. These three calls included two hazard calls and one public service call.
  - The third hour with three calls was 10:00 a.m. to 11:00 a.m. on November 25, 2022. The hour's three calls involved three individual dispatches resulting in 32 minutes of deployed time. These three calls included one aid-given call, one hazard call, and one medical and other call.

SHFD RESPONSE TIME

In this part of the analysis, we present response time statistics for different call types. We separate response time into its identifiable components. *Dispatch time* is the difference between the time a call is received and the time a unit is dispatched. Dispatch time includes call processing time, which is the time required to determine the nature of the emergency and the types of resources to dispatch. *Turnout time* is the difference between dispatch time and the time a unit is en route to a call's location. *Travel time* is the difference between the time en route and arrival on scene. *Response time* is the total time elapsed between receiving a call to arriving on scene.

In this analysis, we included all calls to which at least one non-administrative unit arrived. Canceled and aid-given calls were not included. In addition, calls with a total response time exceeding 30 minutes were excluded. Finally, we focused on units that had complete time stamps, that is, units with all components recorded, so that we could calculate each segment of response time.

Based on the methodology above, for 844 calls (Table 9-1), we excluded 168 aid-given calls, 21 canceled calls, 24 calls where no units recorded a valid on-scene time, 43 calls where one or more segments of the first arriving unit's response time could not be calculated due to missing or faulty data, and 1 call with a total response time exceeding 30 minutes. As a result, in this section, a total of 587 calls are included in the analysis.

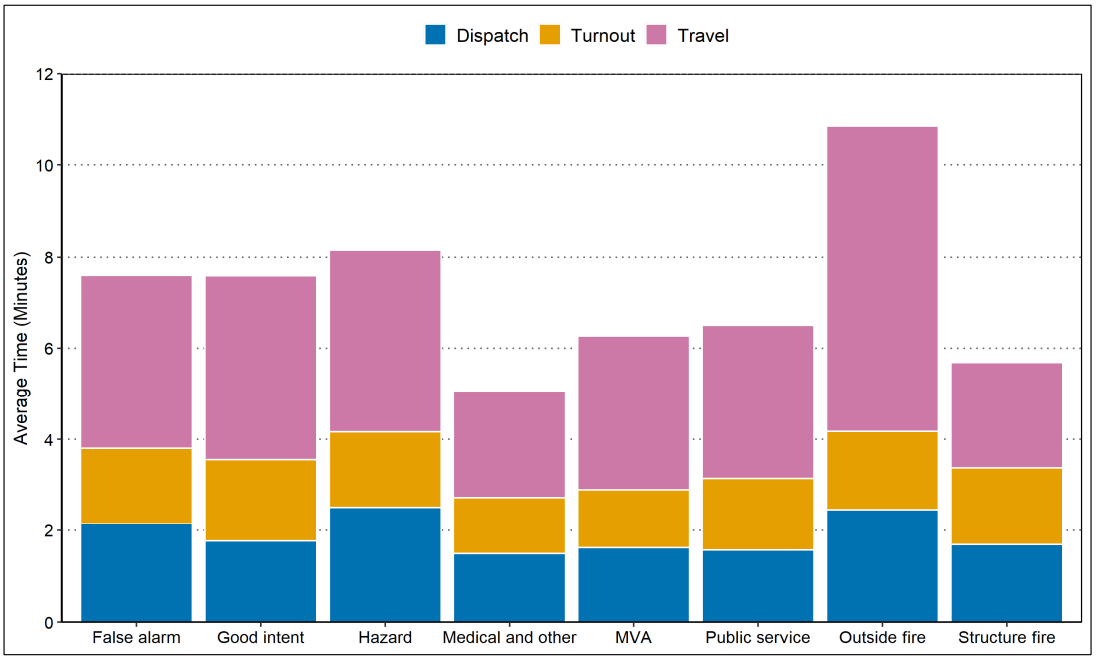
SHFD Response Time by Type of Call

Table 9-14 breaks down the average and 90th percentile dispatch, turnout, travel, and total response times by call type. A 90th percentile means that 90 percent of calls had response times at or below that number. For example, Table 9-14 shows an overall 90th percentile response time of 8.5 minutes, which means that 90 percent of the time, a call had a response time of no more than 8.5 minutes. Figure 9-9 illustrates the average response time by call type.

TABLE 9-14: Average and 90th Percentile Response Time of First Arriving SHFD Unit, by Call Type

Call Type	Average Response Time, Min.				90th Percentile Response Time, Min.				Call Count
	Dispatch	Turnout	Travel	Total	Dispatch	Turnout	Travel	Total	
Medical and other	1.5	1.2	2.4	5.1	2.2	2.1	3.8	6.9	335
Motor vehicle accident	1.6	1.3	3.4	6.3	3.2	1.9	6.4	8.6	15
EMS Subtotal	**1.5**	**1.2**	**2.4**	**5.1**	**2.2**	**2.1**	**3.9**	**6.9**	**350**
False alarm	2.1	1.7	3.8	7.6	2.8	2.5	8.6	12.2	53
Good intent	1.8	1.8	4.0	7.6	2.8	3.8	8.0	11.1	6
Hazard	2.5	1.7	4.0	8.1	4.0	2.6	9.2	13.9	42
Public service	1.6	1.6	3.4	6.5	2.6	3.0	5.4	9.2	129
Outside fire	2.4	1.7	6.7	10.9	2.7	2.2	14.0	18.5	3
Structure fire	1.7	1.7	2.3	5.7	2.1	3.2	3.1	7.6	4
Fire Subtotal	**1.9**	**1.6**	**3.6**	**7.1**	**3.2**	**2.8**	**6.8**	**11.1**	**237**
Total	**1.6**	**1.4**	**2.9**	**5.9**	**2.5**	**2.5**	**4.9**	**8.5**	**587**

FIGURE 9-9: Average Response Time of First Arriving SHFD Unit, by Call Type



Observations:

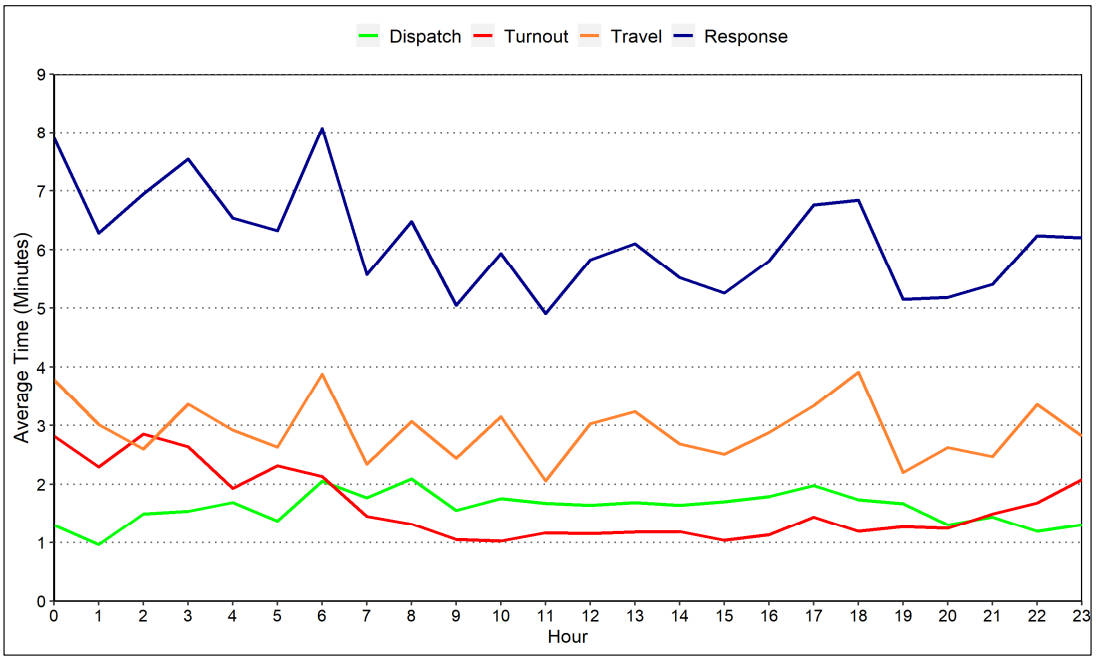
- The average dispatch time was 1.6 minutes.
- The average turnout time was 1.4 minutes.
- The average travel time was 2.9 minutes.
- The average total response time was 5.9 minutes.
- The average response time was 5.1 minutes for EMS calls and 7.1 minutes for fire calls.
- The average response time was 10.9 minutes for outside fires and 5.7 minutes for structure fires.
- The 90th percentile dispatch time was 2.5 minutes.
- The 90th percentile turnout time was 2.5 minutes.
- The 90th percentile travel time was 4.9 minutes.
- The 90th percentile total response time was 8.5 minutes.
- The 90th percentile response time was 6.9 minutes for EMS calls and 11.1 minutes for fire calls.
- The 90th percentile response time was 18.5 minutes for outside fires and 7.6 minutes for structure fires.

The following table shows the average response time by the time of day. The table also shows the 90th percentile response times. Figure 9-10 shows the average response time by the time of day.

TABLE 9-15: Average and 90th Percentile Response Times of First Arriving SHFD Unit, by Hour of Day

Hour	Minutes				90th Percentile Response Time, Minutes	Number of Calls
	Dispatch	Turnout	Travel	Response Time		
0	1.3	2.8	3.8	7.9	10.3	8
1	1.0	2.3	3.0	6.3	7.2	10
2	1.5	2.8	2.6	6.9	8.9	8
3	1.5	2.6	3.4	7.5	9.5	11
4	1.7	1.9	2.9	6.5	8.2	17
5	1.4	2.3	2.6	6.3	8.4	10
6	2.1	2.1	3.9	8.1	13.1	13
7	1.8	1.5	2.3	5.6	7.8	24
8	2.1	1.3	3.1	6.5	9.2	29
9	1.6	1.1	2.4	5.1	7.8	39
10	1.8	1.0	3.1	5.9	6.9	33
11	1.7	1.2	2.1	4.9	7.7	27
12	1.6	1.2	3.0	5.8	9.8	36
13	1.7	1.2	3.2	6.1	10.1	40
14	1.6	1.2	2.7	5.5	7.2	40
15	1.7	1.0	2.5	5.3	7.4	38
16	1.8	1.1	2.9	5.8	9.2	33
17	2.0	1.4	3.3	6.8	12.6	24
18	1.7	1.2	3.9	6.8	12.9	35
19	1.7	1.3	2.2	5.1	6.7	28
20	1.3	1.2	2.6	5.2	6.7	30
21	1.4	1.5	2.5	5.4	8.0	22
22	1.2	1.7	3.4	6.2	13.8	18
23	1.3	2.1	2.8	6.2	7.8	14
Total	**1.6**	**1.4**	**2.9**	**5.9**	**8.5**	**587**

FIGURE 9-10: Average Response Time of First Arriving SHFD Unit, by Hour of Day



Observations:

- Average dispatch time was between 1.0 minutes (1:00 a.m. to 2:00 a.m.) and 2.1 minutes (8:00 a.m. to 9:00 a.m.).
- Average turnout time was between 1.0 minutes (10:00 a.m. to 11:00 a.m.) and 2.9 minutes (2:00 a.m. to 3:00 a.m.).
- Average travel time was between 2.1 minutes (11:00 a.m. to noon) and 3.9 minutes (6:00 p.m. to 7:00 p.m.).
- Average response time was between 4.9 minutes (11:00 a.m. to noon) and 8.1 minutes (6:00 a.m. to 7:00 a.m.).
- The 90th percentile response time was between 6.7 minutes (7:00 p.m. to 8:00 p.m.) and 13.8 minutes (10:00 p.m. to 11:00 p.m.).

SHFD Response Time Distribution

Here, we present a more detailed look at how response times to calls are distributed. The cumulative distribution of total response time for the first arriving unit to EMS calls is shown in Figure 9-11 and Table 9-16. Figure 9-11 shows response times for the first arriving unit to EMS calls as a frequency distribution in whole-minute increments, and Figure 9-12 shows the same for the first arriving unit to outside and structure fire calls.

The cumulative percentages here are read in the same way as a percentile. In Figure 9-11, the 90th percentile of 6.9 minutes means that 90 percent of EMS calls had a response time of 6.9 minutes or less. In Table 9-16, the cumulative percentage of 95.2 and 77.8, for example, means that 95.2 percent of EMS calls and 77.8 percent of outside and structure fire calls, respectively, had a response time under 8 minutes.

FIGURE 9-11: Cumulative Distribution of Response Time for First Arriving SHFD Unit, EMS

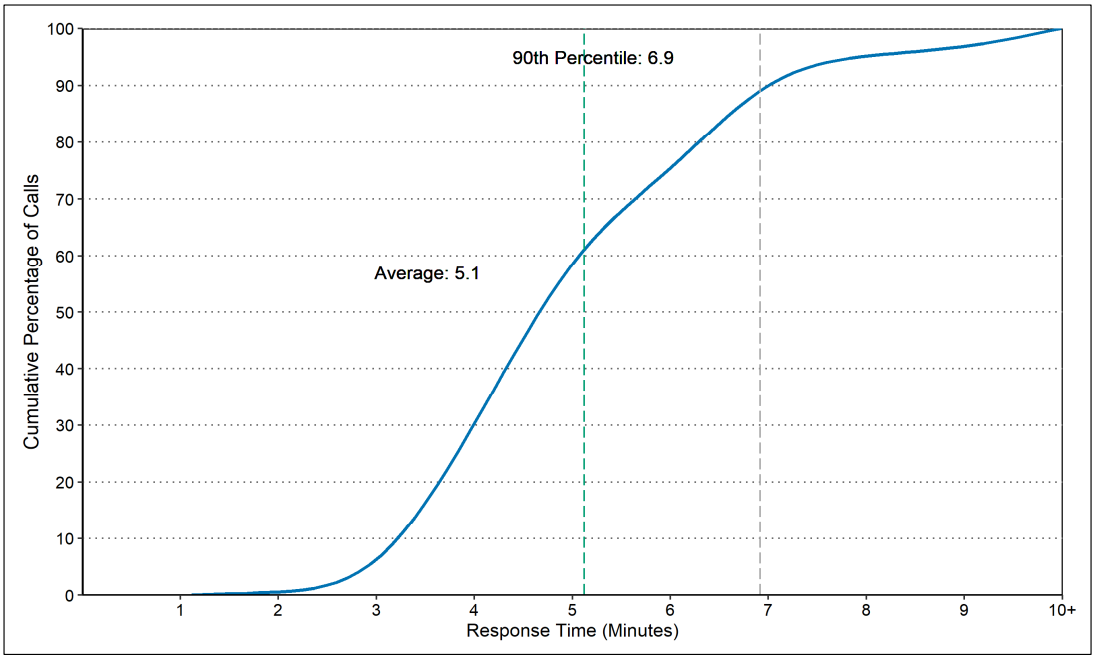


FIGURE 9-12: Cumulative Distribution of Response Time for First Arriving SHFD Unit, Outside and Structure Fires

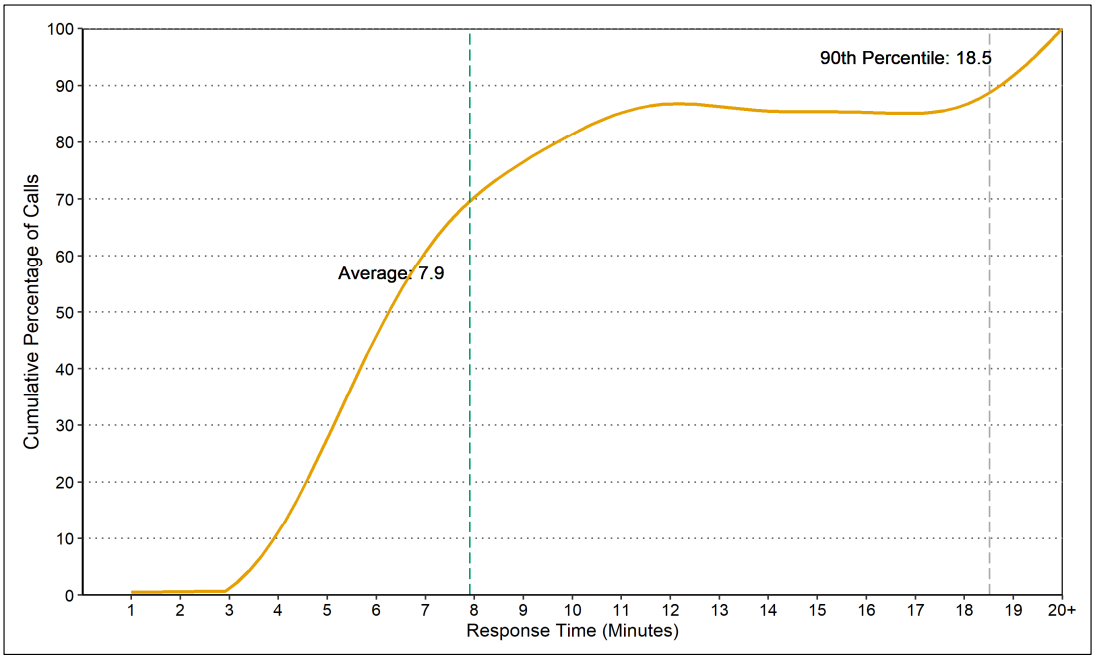


TABLE 9-16: Cumulative Distribution of Response Time for First Arriving SHFD Unit

Response Time (minute)	EMS		Structure and Outside Fires	
	Frequency	Cumulative Percentage	Frequency	Cumulative Percentage
1	0	0.0	0	0.0
2	2	0.6	0	0.0
3	20	6.3	0	0.0
4	84	30.3	0	0.0
5	99	58.6	2	28.6
6	59	75.4	2	57.1
7	51	90.0	0	57.1
8	18	95.1	1	71.4
9	6	96.9	0	71.4
10+	11	100.0	2	100.0

PART 2. EMERGENCY MEDICAL SERVICE

In this part, we examine the response and workload of American Medical Response Inc. (AMR) in the City of St. Helena between November 1, 2022, and October 31, 2023.

We received call data and separated chief complaint information from the AMR records management system. We used the chief complaint information to assign an EMS call category. The method of call categorization is described in Attachment V.

We received records for a total of 836 calls that occurred between November 1, 2022, and October 31, 2023. Based on the agency's suggestion, we included a total of 755 calls as shown in the following table in this part of the study. In addition, out of the 755 calls, AMR units did not arrive at 51 calls. We label these 51 calls as canceled and did not include them in the response time analysis.

This part of the analysis includes four sections. The first section focuses on call types and dispatches. The second section examines the time spent and the workload of AMR units. The third section provides a response time analysis. The fourth and final section is an analysis of AMR ambulance transport.

TABLE 9-17: AMR Responding Calls by Type

Final Priority Code	Description	Total Calls
1	Potentially Life-Threatening Emergency Response	659
2	Non- Life-Threatening Emergency Response	19
3	Emergency Response	10
4	Non-Emergency Interfacility ALS Transports	67
Total		755

AMR RESPONDING CALLS BY TYPE

Between November 1, 2022, and October 31, 2023, AMR responded to 755 calls inside the City of St. Helena.

AMR Responding Calls by Type

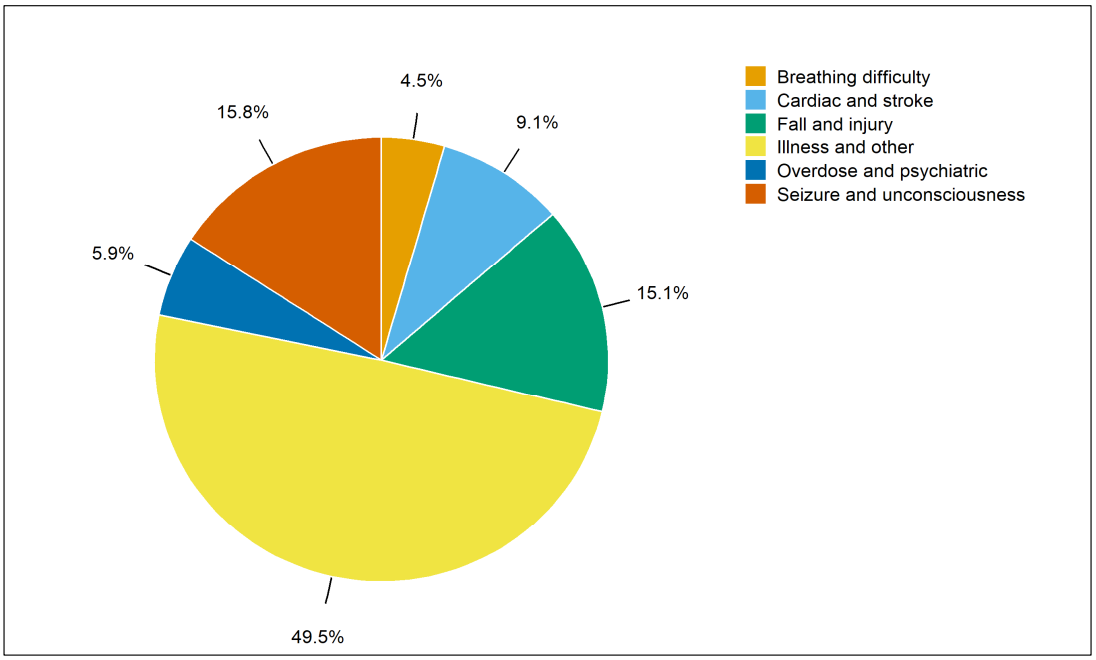
Table 9-18 and Figure 9-13 show the number of calls by type, average calls per day, and the percentage of calls that fall into each call type category for the 12 months studied. Note that Table 9-18 and Figure 9-13 were created separately from the subsequent results. Since the call type description was not available in the provided call data, we instead used separate chief complaint information to categorize calls. The chief complaint data included 713 calls.

TABLE 9-18: AMR Responding Calls by Type

Call Type	Total Calls	Calls per Day	Percentage
Breathing difficulty	32	0.1	4.5
Cardiac and stroke	65	0.2	9.1
Fall and injury	108	0.3	15.1
Illness and other	353	1.0	49.5
Overdose and psychiatric	42	0.1	5.9
Seizure and unconsciousness	113	0.3	15.8
Total	**713**	**2.0**	**100.0**

Note: This table includes the chief complaint information provided separately from the data included in subsequent tables and will not match.

FIGURE 9-13: AMR Responding EMS Calls by Type



Observations:

- Illness and other calls were the largest category of EMS calls at 50 percent of EMS calls, an average of 1.0 calls per day.
- Cardiac and stroke calls made up nine percent of EMS calls, an average of 0.2 calls per day.

AMR Responding Calls by Type and Duration

The following table shows the duration of calls by grand call type using four duration categories: less than 30 minutes, 30 minutes to one hour, one to two hours, and two or more hours.

TABLE 9-19: AMR Responding Calls by Type and Duration

Call Type	Less than 30 Minutes	30 Minutes to One Hour	One to Two Hours	Two or More Hours	Total
EMS	161	153	310	80	704
Canceled	49	2	0	0	51
Total	**210**	**155**	**310**	**80**	**755**

Note: Out of 755 calls, AMR units dd not arrive 51 calls. These 51 calls were labeled as canceled.

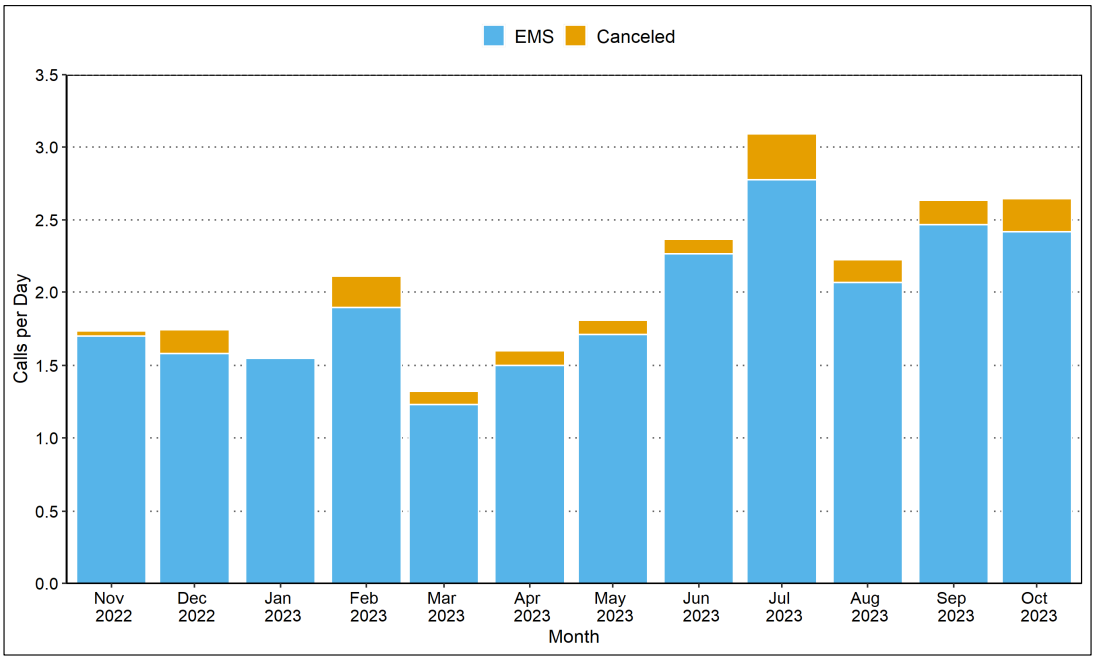
Observations:

- On average, there were 1.1 EMS calls per day that lasted more than one hour.
- A total of 314 EMS calls (45 percent) lasted less than one hour, 310 EMS calls (44 percent) lasted one to two hours, and 80 EMS calls (11 percent) lasted two or more hours.

Average AMR Responding Calls by Month and Hour of Day

Figure 9-14 shows the monthly variation in the combined daily number of calls handled by AMR in the city. Similarly, Figure 9-15 illustrates the average number of calls received each hour of the day.

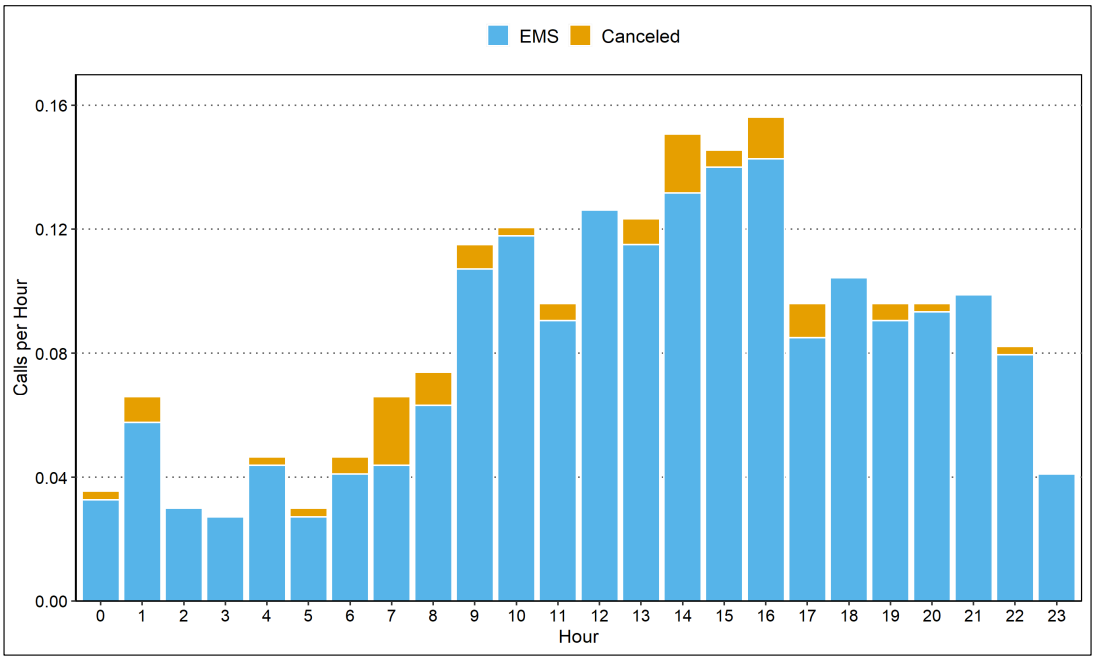
FIGURE 9-14: Average AMR Responding Calls by Month



Observations:

- Average EMS calls per day overall ranged from 1.2 in March 2023 to 2.8 in July 2023
- Average total calls per day overall ranged from 1.3 in March 2023 to 3.1 in July 2023.

FIGURE 9-15: Average AMR Responding Calls by Hour of Day



Observations:

- Average EMS calls per hour overall ranged from 0.03 between 3:00 a.m. and 4:00 a.m. to 0.14 between 4:00 p.m. and 5:00 p.m.
- Average total calls per hour overall ranged from 0.03 between 3:00 a.m. and 4:00 a.m. to 0.16 between 4:00 p.m. and 5:00 p.m.

AMR WORKLOAD: RUNS AND TOTAL TIME SPENT

The workload of AMR units is measured in two ways: runs and deployed time. Because multiple units respond to some calls, there are more runs (1,378) than calls (755) and the average deployed time per run varies from the average duration per call.

AMR Unit Runs and Deployed Time

The following table provides a summary of each AMR unit's workload for the period between November 1, 2022, and October 31, 2023. Figure 9-16 presents the average deployed minutes by hour of day.

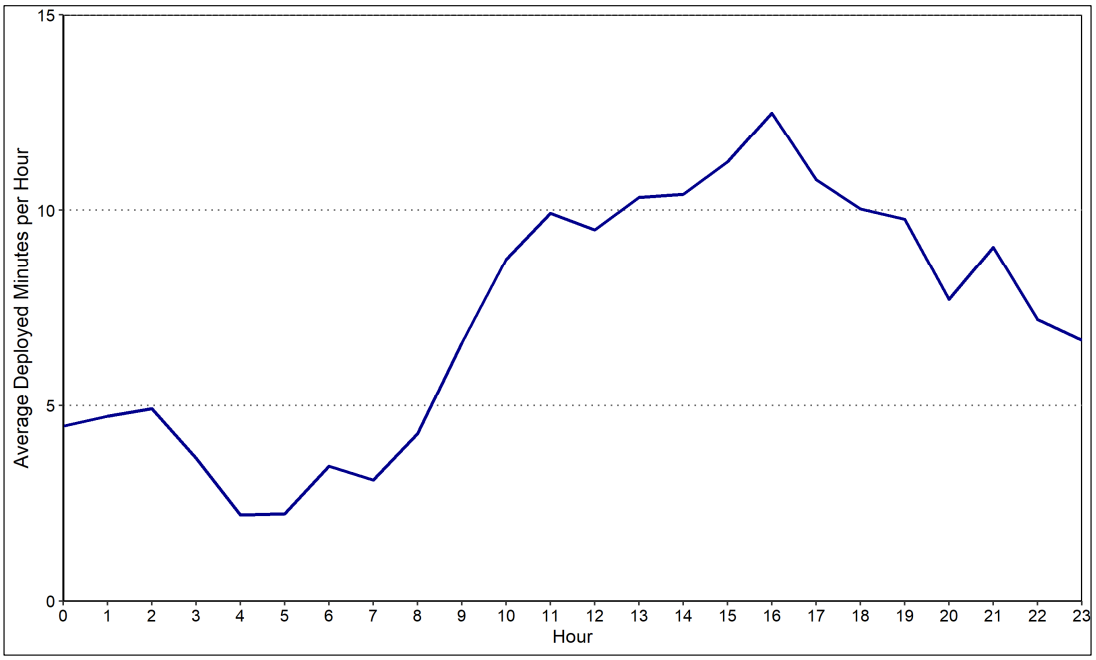
TABLE 9-20: AMR Workload by Unit

Unit	Minutes per Run	Hours	Percent	Minutes per Day	Runs	Runs per Day
MED51	75.7	78.2	7.3	12.9	62	0.2
MED54	72.8	8.5	0.8	1.4	7	0.0
MED57	64.4	36.5	3.4	6.0	34	0.1
MED59	59.6	135.1	12.6	22.2	136	0.4
MED60	72.3	89.2	8.3	14.7	74	0.2
MED61	61.1	94.8	8.9	15.6	93	0.3
MED62	48.4	62.9	5.9	10.3	78	0.2
MED63	58.5	75.0	7.0	12.3	77	0.2
MED64	64.9	51.9	4.9	8.5	48	0.1
MED65	75.8	56.9	5.3	9.3	45	0.1
MED66	69.1	53.0	5.0	8.7	46	0.1
MED67	66.4	56.5	5.3	9.3	51	0.1
MED68	72.6	42.3	4.0	7.0	35	0.1
MED69	64.8	30.2	2.8	5.0	28	0.1
MED72	22.7	0.4	0.0	0.1	1	0.0
MED74	481.2	8.0	0.8	1.3	1	0.0
MED92	61.3	2.0	0.2	0.3	2	0.0
QRV71	17.2	66.3	6.2	10.9	231	0.6
QRV79	22.1	121.0	11.3	19.9	329	0.9
Total	**46.5**	**1,068.7**	**100.0**	**175.7**	**1,378**	**3.8**

Observations:

- The total deployed time for the year was 1,068.7 hours. The daily average was 2.9 hours for all units combined.
- There were 1,378 runs, including 89 runs dispatched for canceled calls. The daily average was 3.8 runs.

FIGURE 9-16: Average Deployed Minutes by Hour of Day



Observations:

- Hourly deployed time was highest during the day from 1:00 p.m. to 7:00 p.m., averaging between 10.2 minutes and 12.6 minutes.
- Average deployed time peaked between 4:00 p.m. and 5:00 p.m., averaging 12.6 minutes.
- Average deployed time was lowest between 4:00 a.m. and 5:00 a.m., averaging 2.2 minutes.

AMR RESPONSE TIME

The method of response time analysis is similar to that introduced in the response time analysis section for the SHFD. In this analysis, we included all calls within the City of St. Helena to which at least one AMR unit arrived. For 755 total calls, we excluded 51 canceled calls, 64 nonemergency interfacility ALS transport calls, and 22 calls where one or more segments of the first arriving unit's response time could not be calculated due to missing or faulty data. As a result, a total of 618 calls are included in this section's analysis.

The following table summarizes the average and 90th percentile total response times, broken out by the final priority code for calls. The 90th percentile of 9.9 minutes means that 90 percent of AMR responding calls had a response time of 9.9 minutes or less.

TABLE 9-21: Average and 90th Percentile AMR Response Times

Final Priority Code	Average Response Time, Min.				90th Percentile Response Time, Min.				Total Calls
	Dispatch	Turnout	Travel	Total	Dispatch	Turnout	Travel	Total	
1	1.0	0.4	4.4	5.8	2.4	1.1	7.9	9.7	597
2	1.5	0.6	5.0	7.2	3.1	1.1	10.9	14.1	13
3	1.2	3.1	12.7	17.0	4.3	19.6	55.1	55.4	8
Total	**1.0**	**0.4**	**4.5**	**6.0**	**2.4**	**1.1**	**8.2**	**9.9**	**618**

Observations:

- The average dispatch time was 1.0 minutes.
- The average turnout time was 0.4 minutes.
- The average travel time was 4.5 minutes.
- The average total response time was 6.0 minutes.
- The 90th percentile dispatch time was 2.4 minutes.
- The 90th percentile turnout time was 1.1 minutes.
- The 90th percentile travel time was 8.2 minutes.
- The 90th percentile total response time was 9.9 minutes.

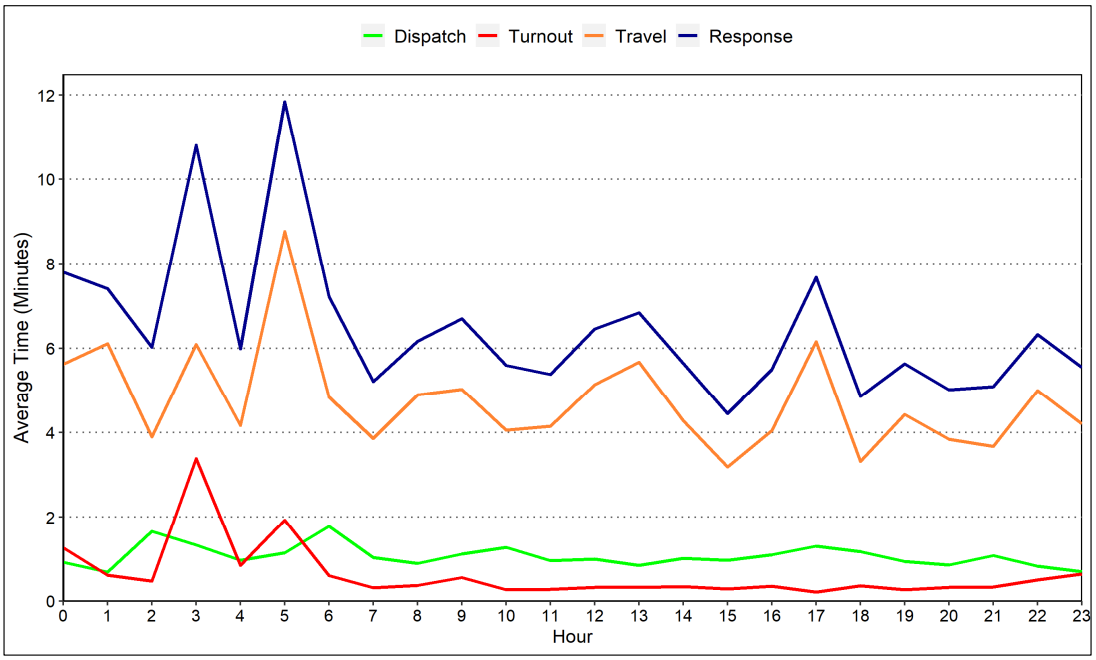
AMR Response Time by Hour of Day

The average turnout, travel, and total response time of the AMR unit by hour of day are shown in Table 9-22. The table also shows 90th percentile response times. Figure 9-17 shows the average AMR response time by hour of day.

TABLE 9-22: Average and 90th Percentile AMR Response Time, by Hour of Day

Hour	Time in Minutes					Number of Calls
	Dispatch	Turnout	Travel	Response Time	90th Percentile Response Time	
0	0.9	1.3	5.6	7.8	12.1	9
1	0.7	0.6	6.1	7.4	18.2	17
2	1.7	0.5	3.9	6.0	11.2	9
3	1.3	3.4	6.1	10.8	25.4	9
4	1.0	0.8	4.2	6.0	9.2	14
5	1.1	1.9	8.8	11.8	19.8	7
6	1.8	0.6	4.8	7.2	9.2	13
7	1.0	0.3	3.9	5.2	6.2	14
8	0.9	0.4	4.9	6.2	6.3	20
9	1.1	0.6	5.0	6.7	9.4	35
10	1.3	0.3	4.1	5.6	8.9	42
11	1.0	0.3	4.1	5.4	10.6	31
12	1.0	0.3	5.1	6.5	14.3	43
13	0.8	0.3	5.7	6.8	15.3	39
14	1.0	0.3	4.3	5.6	7.8	43
15	1.0	0.3	3.2	4.4	8.0	44
16	1.1	0.4	4.0	5.5	9.6	47
17	1.3	0.2	6.2	7.7	20.3	24
18	1.2	0.4	3.3	4.9	7.3	35
19	0.9	0.3	4.4	5.6	11.5	25
20	0.9	0.3	3.8	5.0	7.6	31
21	1.1	0.3	3.7	5.1	7.5	31
22	0.8	0.5	5.0	6.3	11.0	24
23	0.7	0.6	4.2	5.6	8.2	12
Total	**1.0**	**0.4**	**4.5**	**6.0**	**9.9**	**618**

FIGURE 9-17: Average AMR Response Time, by Hour of Day



Observations:

- Average dispatch time was between 0.7 minutes (1:00 a.m. to 2:00 a.m.) and 1.8 minutes (6:00 a.m. to 7:00 a.m.).
- Average turnout time was between 0.2 minutes (5:00 p.m. to 6:00 p.m.) and 3.4 minutes (3:00 a.m. to 4:00 a.m.).
- Average travel time was between 3.2 minutes (3:00 p.m. to 4:00 p.m.) and 8.8 minutes (5:00 a.m. to 6:00 a.m.).
- Average response time was between 4.4 minutes (3:00 p.m. to 4:00 p.m.) and 11.8 minutes (5:00 a.m. to 6:00 a.m.).
- The 90th percentile response time was between 6.2 minutes (7:00 a.m. to 8:00 a.m.) and 25.4 minutes (3:00 a.m. to 4:00 a.m.).

AMR Response Time Distribution

Here, we present a more detailed look at how response times to calls are distributed. The cumulative distribution of total response time is shown in Figure 9-18 and Table 9-23. Figure 9-18 shows response times as a frequency distribution in whole-minute increments. In Table 9-23, the cumulative percentage of 83.5, for example, means that 83.5 percent of AMR responding calls had a response time under 8 minutes.

FIGURE 9-18: Cumulative Distribution of AMR Response Time

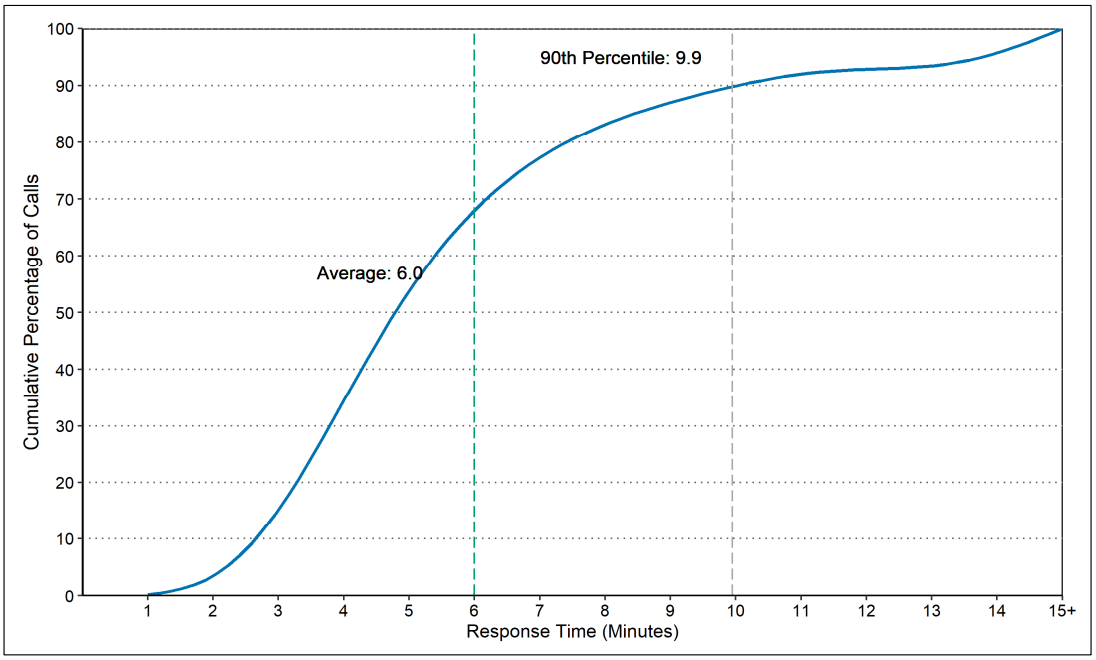


TABLE 9-23: Cumulative Distribution of AMR Response Time

Response Time (minute)	Frequency	Cumulative Percentage
1	2	0.3
2	20	3.6
3	66	14.2
4	128	35.0
5	117	53.9
6	89	68.3
7	53	76.9
8	41	83.5
9	20	86.7
10	21	90.1
11	10	91.7
12	7	92.9
13	8	94.2
14	2	94.5
15	6	95.5
16	4	96.1
17	5	96.9
18	0	96.9
19	2	97.2
20	3	97.7
21	1	97.9
22	1	98.1
23	3	98.5
24	3	99.0
25	2	99.4
26	1	99.5
27	0	99.5
28	0	99.5
29	0	99.5
More than 29	3	100.0

AMR AMBULANCE TRANSPORT

In this section, we present an analysis of the AMR ambulances' activity that involved transporting patients, the variations by hour of day, and the average time for each stage of transport service. We identified transport calls by requiring that at least one AMR ambulance had recorded both a "beginning to transport" time and an "arriving at the hospital" time.

Transport Runs by Type

The following table shows the number of calls by call type broken out by transport and non-transport calls.

TABLE 9-24: AMR Transport Calls by Call Type

Call Type	Number of Calls			Conversion Rate
	Non-transport	Transport	Total	
EMS	218	486	704	69.0
Canceled	51	0	51	0.0
Total	**269**	**486**	**755**	**64.4**

Observations:

- 69 percent of EMS calls involved transporting one or more patients.
- On average, 1.3 EMS calls per day involved transporting one or more patients.

Average Transport Calls per Hour

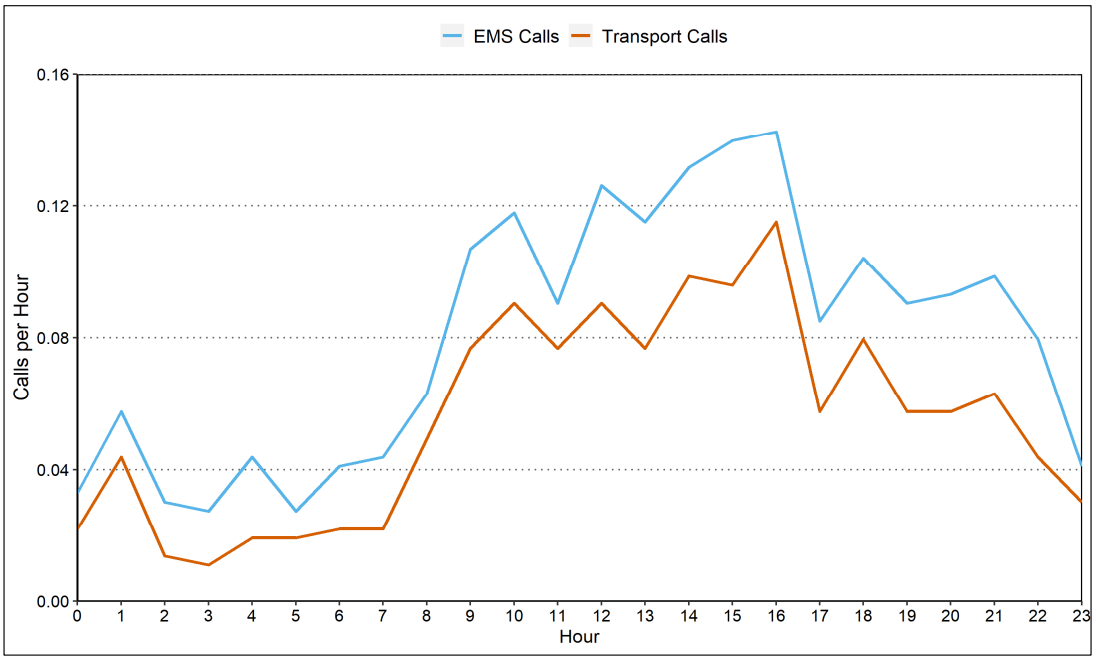
Table 9-25 and Figure 9-19 show the average number of total and transport calls received each hour of the day over the studied period. In Table 9-25, the conversion rate measures the percent of AMR calls that transported one or more patients.

TABLE 9-25: AMR Transport Calls per Hour, by Time of Day

Hour	EMS Calls	Transport Calls	EMS Calls per Day	Transports Calls per Day	Conversion Rate
0	12	8	0.0	0.0	66.7
1	21	16	0.1	0.0	76.2
2	11	5	0.0	0.0	45.5
3	10	4	0.0	0.0	40.0
4	16	7	0.0	0.0	43.8
5	10	7	0.0	0.0	70.0
6	15	8	0.0	0.0	53.3
7	16	8	0.0	0.0	50.0
8	23	18	0.1	0.0	78.3
9	39	28	0.1	0.1	71.8
10	43	33	0.1	0.1	76.7
11	33	28	0.1	0.1	84.8
12	46	33	0.1	0.1	71.7
13	42	28	0.1	0.1	66.7
14	48	36	0.1	0.1	75.0
15	51	35	0.1	0.1	68.6
16	52	42	0.1	0.1	80.8
17	31	21	0.1	0.1	67.7
18	38	29	0.1	0.1	76.3
19	33	21	0.1	0.1	63.6
20	34	21	0.1	0.1	61.8
21	36	23	0.1	0.1	63.9
22	29	16	0.1	0.0	55.2
23	15	11	0.0	0.0	73.3
Total	**704**	**486**	**1.9**	**1.3**	**69.0**

Note: The conversion rate is measured by dividing the number of transport calls by the number of total EMS calls. For example, between midnight and 1:00 a.m., there were eight transport calls out of 12 EMS calls. This gives a conversion rate of 0.667 or 66.7 percent.

FIGURE 9-19: Average Transport Calls by Hour



Observations:

- Average hourly EMS calls per day peaked between 4:00 p.m. and 5:00 p.m., averaging 0.14 calls per day.
- Average hourly EMS calls per day was lowest between 3:00 a.m. and 4:00 a.m., averaging 0.03 calls per day.
- Average hourly transport calls per day peaked between 4:00 p.m. and 5:00 p.m., averaging 0.12 calls per day.
- Average hourly transport calls per day was lowest between 3:00 a.m. and 4:00 a.m., averaging 0.01 calls per day.
- The hourly transport conversion rate was highest between 11:00 a.m. and noon at 85 percent of EMS calls.
- The hourly transport conversion rate was lowest between 3:00 a.m. and 4:00 a.m., at 40 percent of EMS calls.

Transport Calls by Type and Duration

The following table shows the average duration of transport and non-transport EMS calls.

TABLE 9-26: Transport Call Duration

Call Type	Non-transport		Transport	
	Average Duration, Min.	Number of Calls	Average Duration, Min.	Number of Calls
EMS	24.5	218	92.7	486
Canceled	8.4	51	0.0	0
Total	**21.4**	**269**	**92.7**	**486**

Note: The duration of a call is the longest deployed time of any of the units responding to the same call.

Observations:

- The average duration was 24.5 minutes for non-transport EMS calls and 92.7 minutes for EMS calls where one or more patients were transported to a hospital.

Transport Time Components

The following table gives the average deployed time for AMR ambulance transport runs, along with three major components of the deployed time: on-scene time, travel to hospital time, and at-hospital time, broken out by transport destination.

The on-scene time is the interval from the unit arriving on-scene time through the time the unit departs the scene for the hospital. Travel to hospital time is the interval from the time the unit departs the scene to travel to the hospital through the time the unit arrives at the hospital. At-hospital time is the time it takes for patient turnover at the hospital.

This table analyzes times by run. Normally, the number of runs (490 in Table 9-27) will exceed the number of calls (486 in Table 9-26) as a call may have multiple runs. In addition, average times may differ slightly from similar averages measured per call.

TABLE 9-27: Time Component of AMR Unit Transport Runs by Destination

Transport Destination	Average Time Spent per Run Minutes				Number of Runs
	On Scene	Traveling to Hospital	At Hospital	Deployed	
St. Helena Hospital	18.8	11.7	31.6	68.2	299
Providence Queen of the Valley (QVH)	16.9	29.3	35.9	92.0	94
Kaiser Permanente Vallejo (KVH)	16.9	50.6	36.1	111.4	22
Kaiser Santa Rosa	19.5	51.1	48.8	127.1	17
UCSF Parnassus	25.9	95.2	48.6	192.1	8
UC Davis	28.2	106.6	59.3	214.2	6
Santa Rosa Memorial	41.1	36.7	29.2	120.4	5
Stanford Tri Valley	19.8	84.0	50.6	182.8	2
Sutter Santa Rosa	17.9	41.9	65.0	151.5	2
Other*	34.7	97.5	49.1	203.4	35
Total	**20.0**	**27.5**	**35.3**	**91.6**	**490**

Note: *Other includes transport destinations that were missing or appeared once in the CAD data. Average unit deployed time per run is lower than the average call duration for some call types because call duration is based on the longest deployed time of any of the units responding to the same call, which may include an engine or ladder. Total deployed time is greater than the combination of on-scene, transport, and hospital wait times as it includes turnout and initial travel times.

Observations:

- The average time spent on-scene for a transport EMS call was 20.0 minutes.
- The average travel time from the scene of the EMS call to the hospital was 27.5 minutes.
- The average deployed time spent on transport EMS calls was 91.6 minutes.
- The average deployed time at the hospital was 35.3 minutes, which accounts for approximately 39 percent of the average total deployed time for a transport EMS call.

ATTACHMENT I: ACTIONS TAKEN

TABLE 9-28: Actions Taken Analysis for Structure and Outside Fire Calls

Action Taken	Number of Calls	
	Outside Fire	Structure Fire
Extinguishment by fire service personnel	1	4
Fire control or extinguishment, other	2	0
Investigate	0	1
Salvage & overhaul	0	3

Note: Totals are higher than the total number of structure and outside fire calls because some calls recorded multiple actions taken.

Observations:

- Out of three outside fires, one was extinguished by fire service personnel, which accounted for 33 percent of outside fires.
- Out of six structure fires, four were extinguished by fire service personnel, which accounted for 67 percent of structure fires.

ATTACHMENT II: FIRE LOSS

Table 9-29 presents the number of outside and structure fires, broken out by levels of fire loss. There was no recorded loss for outside fires. Table 9-30 shows the amount of property and content loss for structure fires inside SHFD's service area between November 1, 2022, and October 31, 2023.

TABLE 9-29: Total Fire Loss Above and Below $25,000

Call Type	No Loss	Under $25,000	$25,000 plus	Total
Outside fire	3	0	0	3
Structure fire	3	2	1	6
Total	**6**	**2**	**1**	**9**

TABLE 9-30: Content and Property Loss, Structure and Outside Fires

Call Type	Property Loss		Content Loss	
	Loss Value	Number of Calls	Loss Value	Number of Calls
Structure fire	$55,500	3	$2,900	3

Note: The table includes only fire calls with a recorded loss greater than 0. There were no recorded losses for outside fires.

Observations:

- All outside fires and three structure fires had no recorded loss.
- Structure fires:
  - The highest total loss for a structure fire was $50,000.
  - The average recorded total loss for all structure fires was $9,733.
  - Three structure fires had content losses with a combined $2,900 in losses.
  - Out of six structure fires, three recorded property losses, with a combined $55,500 in losses.

ATTACHMENT III: AID RECEIVED

Between November 1, 2022, and October 31, 2023, SHFD received aid from external EMS and fire agencies in 429 calls that occurred inside the City of St. Helena. This section examines the response and workload of the assisting agencies during the study period.

Table 9-31 shows the number of calls that the assisting agencies responded to by call type, average calls per day, and the percentage of calls that fall into each call type category. Table 9-32 provides further detail on the workload associated with each assisting agency.

TABLE 9-31: Aid Received Calls by Type

Call Type	Total Calls	Calls per Day	Call Percentage
Medical and other	347	1.0	80.9
Motor vehicle accident	20	0.1	4.7
EMS Subtotal	**367**	**1.0**	**85.5**
False alarm	4	0.0	0.9
Good intent	6	0.0	1.4
Hazard	4	0.0	0.9
Public service	27	0.1	6.3
Structure fire	6	0.0	1.4
Fire Subtotal	**47**	**0.1**	**11.0**
Canceled	15	0.0	3.5
Total	**429**	**1.2**	**100.0**

Note: Of the 429 total calls, the assisting agency responded to 423 calls jointly with SHFD and responded to six calls independently.

TABLE 9-32: Aid Received Workload by Agency

Agency	Minutes per Run	Total Hours	Percent of Hours	Minutes per Day	Total Runs	Runs per Day
AMR	22.6	255.1	89.1	41.9	678	1.9
Cal Fire	33.1	16.0	5.6	2.6	29	0.1
Calistoga FD	38.3	3.2	1.1	0.5	5	0.0
Capell Valley FD	45.0	0.8	0.3	0.1	1	0.0
Deer Park FD	12.2	0.2	0.1	0.0	1	0.0
Rutherford FD	3.0	0.2	0.1	0.0	3	0.0
Yountville FD	32.0	5.3	1.9	0.9	10	0.0
Other	40.7	5.4	1.9	0.9	8	0.0
Total	**23.4**	**286.2**	**100.0**	**47.0**	**735**	**2.0**

Observations:

- Assisting agencies responded to 429 calls inside the city, an average of 1.2 calls per day.
- The total deployed time for the year was 286.2 hours. The daily average was 47.0 minutes for all assisting units combined.

ATTACHMENT IV: SHFD RESPONDING CALL TYPE IDENTIFICATION

When available, NFIRS data serves as our primary source for assigning call categories. For 603 non-aid given calls, NFIRS incident type codes were used to assign call types for canceled, EMS, fire, and motor vehicle accident (MVA) calls. Table 9-33 summarizes the identified call types based on the NFIRS incident type. For 73 additional calls without NFIRS incident type codes, the CAD data's call type description was used as described in Table 9-34. In both tables, the 168 aid-given calls were not included.

TABLE 9-33: Call Types by NFIRS Incident Type Code and Description

Call Type	Code	Description	Count
Canceled	611	Dispatched and canceled en route	21
False Alarm	700	False alarm or false call, other	23
	715	Local alarm system, malicious false alarm	4
	730	System or detector malfunction, other	2
	733	Smoke detector activation due to malfunction	3
	735	Alarm system activation due to malfunction	1
	740	Unintentional transmission of alarm, other	1
	741	Sprinkler activation (no fire), unintentional	1
	743	Smoke detector activation (no fire), unintentional	2
	745	Alarm system activation (no fire), unintentional	27
Good Intent	600	Good intent call, other	4
	632	Prescribed fire	1
	651	Smoke scare, odor of smoke, not steam	3
	671	Hazardous material release investigation	1
Hazard	400	Hazardous condition (no fire), other	44
	440	Electrical wiring/equipment problem, other.	3
	444	Power line down	1
Medical & Other	311	Medical and other	17
	320	Emergency medical service incident, other	8
	321	EMS call.	280
	381	Rescue or EMS standby for hazardous conditions	1
Motor Vehicle Accident	322	Motor vehicle accident with injuries	7
	323	Motor vehicle/pedestrian accident	1
	324	Motor vehicle accident with no injuries	10
Outside Fire	141	Mobile property (vehicle) fire, other	1
	151	Outside rubbish, trash, or waste fire	1
	160	Passenger vehicle fire	1
Public Service	500	Service call, other	1
	511	Lock-out	6
	521	Water (not people) evacuation	1
	522	Water or steam leak	1
	550	Public service assistance, other	106
	551	Assist police or other governmental agency	5

Call Type	Code	Description	Count
	553	Public service	3
	554	Assist invalid	4
	812	Flood assessment	1
Structure Fire	111	Building fire	4
	118	Trash or rubbish fire in a structure	2
Total			**603**

TABLE 9-34: Call Type by CAD Type Description

Call Type	Description	Calls
False Alarm	Fire – Commercial Alarm	2
	Fire – Residential Alarm	1
Good Intent	Fire – Smoke Check	1
Hazard	Hazard - Electrical	1
	Hazard – Fire Menace Standby	1
	Hazard - Tree Down	1
Medical and Other	Medical	51
Motor Vehicle Accident	Med – Traffic Collision	2
Public Service	PA - AGENCY	1
	PA - Other	1
	PA - Person	11
Total		**73**

ATTACHMENT V: AMR RESPONDING CALL TYPE IDENTIFICATION

For the 713 calls given in the chief complaint data, we categorized the call types based on the primary impression information in the data. The categorization method for these calls is presented in the following table.

TABLE 9-35: Call Type by Primary Impression

Call Type	Primary Impression	Calls
Breathing Difficulty	Acute Respiratory Distress (Dyspnea)	32
Cardiac and Stroke	Cardiac arrest	5
	Cardiac arrhythmia/dysrhythmia	18
	Chest Pain, Other (Non-Cardiac)	16
	Heatstroke and Sunstroke	2
	Palpitations	2
	ST elevation myocardial infarction (STEMI)	1
	Stroke	18
	Traumatic Circulatory Arrest	3
Fall and Injury	Epistaxis	2
	Eye Injury	1
	Injury	105
Illness and Other	Abdominal Pain	39
	Acute abdomen	2
	Acute Pain, not elsewhere classified	26
	Allergic Reaction	6
	Anaphylactic Shock	1
	Anaphylaxis	1
	Apparent Life-Threatening Event	1
	Common Cold	2
	Contact with Venomous Animal	1
	COVID-19 - Confirmed by testing	2
	Diabetic Hyperglycemia	1
	Diabetic Hypoglycemia	6
	Diarrhea	1
	Dizziness	19
	Ear problem	1
	Extremity Pain	46
	Eye Pain	1
	Fever	12
	Gastrointestinal hemorrhage	1
	Generalized Weakness	49
	Headache	8
	Health hazard contact /Suspected exposure	1
	Hypertension	5
	Hypotension	9

Call Type	Primary Impression	Calls
	Nausea	15
	No Complaints or Injury/Illness Noted	49
	Obvious Death	8
	Pain (non-traumatic)	20
	Pregnancy-related conditions	1
	Preterm labor without delivery	1
	Sepsis/Septicemia	3
	Urinary system disorder	7
	Vaginal Hemorrhage	1
	Vomiting	4
	Other	3
Overdose and Psychiatric	Alcohol intoxication	14
	Alcohol use	6
	Behavioral/psychiatric episode	16
	Mental disorder	2
	Overdose - Alcohol	1
	Overdose - Cannabis	1
	Overdose - Unspecified	1
	Substance abuse	1
Seizure and Unconsciousness	Altered Mental Status	29
	Confusion/Delirium	2
	Seizures without status epilepticus	13
	Syncope / Fainting	69
Total		**713**

- END -

Agenda Report to the City Council

Agenda Section: NEW BUSINESS

Department: Planning

DATE:	October 8, 2024
FROM:	Maya DeRosa, Community Development Director
SUBJECT:	Staff briefing regarding the process to rezone the Noble House Housing site
RECOMMENDED ACTION:	Receive report and provide feedback.
PREVIOUS COUNCIL ACTION:	n/a
STATEMENT OF THE PURPOSE:	To inform the City Council regarding the necessary steps and process in order to rezone the Noble House housing site.
FINANCIAL IMPACT:	Should the City Council decide to pursue a City initiated rezoning, the City would not receive any fees to pay for staff time and the City would incur costs to complete the CEQA process.

BACKGROUND:

At the September 24, 2024 City Council meeting, Vice Mayor Hall requested that staff bring an item to the October 8th City Council meeting to discuss the rezoning of the Noble House housing site to High Density Residential and how that process can be expedited by the City.

This housing site was analyzed and presented to the City Council as part of a 9212 report recently and one of the issues identified is that the 1.9 acre site (located off Fulton Lane and bisected by the wine train tracks), has a General Plan and zoning designation of Business Professional Office (BPO). In the BPO zone, housing is only allowed on upper floors. This would make it difficult for the property owner to achieve the target number of units which was said to be 60 in their project description without a change to the General Plan and zoning designation for the housing site.

DISCUSSION:

Typically development projects like the future development of the Noble House housing site are initiated by the landowner and/or a developer, who submit an application to the City for processing by City staff, and ultimate consideration by the Planning Commission and the City Council if applicable. This report outlines that typical approach, and then discusses whether the entitlement process could be expedited through any potential streamlining laws, or by having the City initiate a General Plan and zoning amendment to allow for housing on that site.

In a property owner initiated rezoning, the typical City review process is outlined below:

1. City Council approves a pre-application for the General Plan Amendment/zoning change;
2. Applicant files formal General Plan and zoning amendment applications; may include other discretionary applications necessary to develop the site;
3. CEQA document is prepared by a consultant and paid for by applicant (not an Exemption);
4. Planning Commission public hearing; and
5. City Council public hearing.

The time for this process can vary widely, and is largely dependent on the extent to which the application complies with the City's requirements at the time of application, and the level of CEQA review required for the project. The processing time for an application of this type can range from 7 months to 18 months.

In the last few years the State has passed a number of housing streamlining bills, including multiple bills which allow commercial and office zoned properties to be developed with residential uses without requiring any discretionary action by the City. This could allow for the property at the Noble House housing site to be developed as housing without a General Plan amendment and zoning change, which would significantly reduce the processing time and potentially reduce the extent of CEQA review required for the project. It does appear that this property could qualify for streamlining, except that these bills require that the housing units developed be sold or rented at a lower level of affordability than is contemplated in the Noble House project description, and a developer taking advantage of these streamlining provisions must pay prevailing wage for the housing development and/or enter into a project labor agreement with labor unions. This would likely increase the construction costs associated with the development of the housing site, and the applicant therefore may not be interested in using this option.

Finally, the City does have the option to initiate a General Plan amendment and rezoning prior to or without a property owner application, although it is unusual for the City to initiate such a change for an individual property.

In the case when the City initiates the rezoning, the detailed process is outlined below:
1. Staff drafts a project description and attaches to a General Plan Amendment and zoning map amendment application;
2. Application is routed for review to internal departments;
3. Staff prepares RFP to select a CEQA consultant;
4. CEQA consultant selected and PSA awarded by City Council;
5. CEQA consultant runs preliminary technical studies including traffic and water use and prepares initial study;
6. Department comments submitted to case planner;

7. CEQA document prepared based on if impacts can be mitigated to level of insignificance;
8. CEQA public review occurs;
9. Response to comments prepared and staff prepares staff report for Planning Commission public hearing; and
10. If Planning Commission recommends City Council approval, staff prepares staff report for City Council approval.

Anticipated time frame: 6-12 months (depending on level of CEQA review)

There are issues that are worthy of consideration should the City Council decide to direct staff to rezone the subject property:

- The City incurs the cost for processing, including the CEQA document. The CEQA document would likely either be a Mitigated Negative Declaration or focused EIR (this requires the onboarding of a CEQA consultant to analyze).
- The CEQA review and preparation would occur without the property owners input and possibly before the project is fully developed by by the property owner, which makes it difficult to ensure we are accurately portraying the project.
- A GPA and zoning change will not fulfill all the processing requirements to build an infill housing development. There likely will be other entitlements needed (Major Design Review, PD Overlay, etc...) and ultimately not save applicant time as these applications would require internal review and Planning Commission public hearing post the approval of the GPA and zoning change.
- Lastly, the CEQA process would require identifying mitigation measures without the applicant participating in that process but would be the responsibility of the applicant to implement.

ENVIRONMENTAL REVIEW: N/A

GOAL:

Miscellaneous/Other

DOCUMENTS ATTACHMENTS:

Wine Train Fulton Lane Site

NAPA VALLEY WINE TRAIN - FULTON LANE SITE ST. HELENA, CA

VICINITY MAP:



SHEET INDEX:

ARCHITECTURAL:

A1 TITLE SHEET
A2 SITE PLAN
A3 BUILDING PLANS
A4 TYPICAL UNIT PLANS

PROJECT DATA:

APN: 009-193-006-000

SITE AREA: 2.54 AC

PROPOSED DENSITY: 18.90 DUA

UNIT MIX

BUILDING A (2 STORIES):	
STUDIO UNITS	38
1-BED UNITS	8
4-BED UNITS	2
TOTAL	48
BUILDING B (2 STORIES):	
STUDIO UNITS	11
1-BED UNITS	4
4-BED UNITS	2
TOTAL	17
TOTAL:	
STUDIO UNITS	49
1-BED UNITS	12
4-BED UNITS	4
TOTAL	65

PARKING

SPACES PROVIDED: 65

TITLE SHEET

FULTON LANE SITE | ST. HELENA, CA

NAPA VALLEY WINE TRAIN

DAHLIN

5865 Owens Drive
Pleasanton, CA 94588
925-251-7200

JOB NO. 1096.014
DATE 03.21.2024

A1



SITE PLAN

0 20 40 80

FULTON LANE SITE | ST. HELENA, CA

NAPA VALLEY WINE TRAIN

DAHLIN
5865 Owens Drive
Pleasanton, CA 94588
925-251-7200

JOB NO. 1096.014
DATE 03.21.2024

N

A2

City Council
October 8, 2024

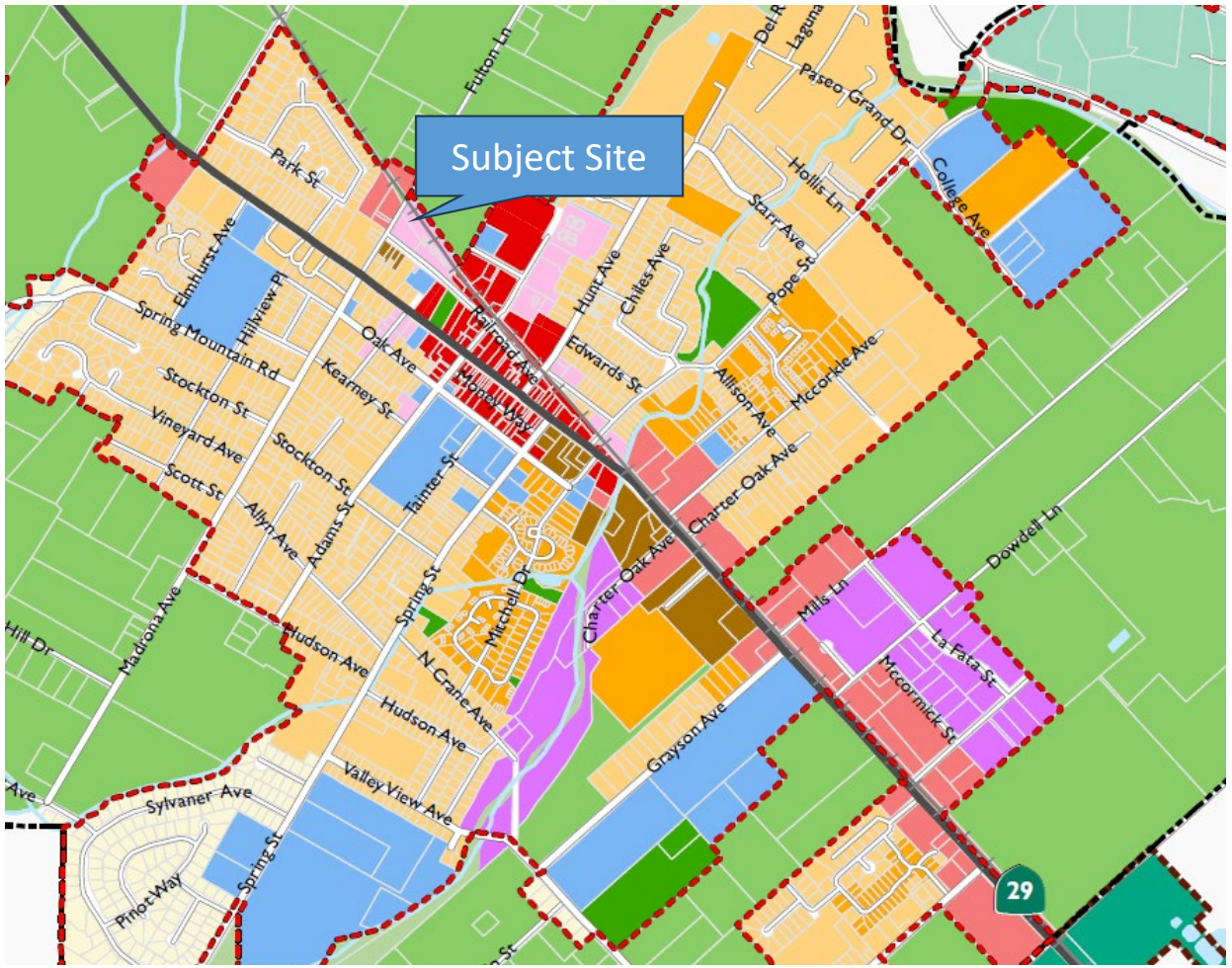
Noble House Housing Site Rezoning Discussion

Background

- Site is 1.9 acres
- General Plan: Business Professional Office
- Zoning: BPO (housing only allowed on upper floors)
- Site located on Fulton Lane, bisected by railroad tracks
- Site is NOT included in Measure B initiative



2019 General Plan



Typical Rezoning Process-Owner initiated

1. City Council approves a pre-application for the General Plan Amendment/zoning change;
2. Applicant files formal General Plan and zoning amendment applications; may include other discretionary applications necessary to develop the site;
3. CEQA document is prepared by a consultant and paid for by applicant (not an Exemption);
4. Planning Commission public hearing; and
5. City Council public hearing.

Time frame estimated 7 -18 months

Would Housing Streamlining Bills Apply?

- **Site could qualify streamlining EXCEPT:**
  - **Bills require the housing units developed be sold or rented at a lower price of affordability than contemplated in the Noble House project**
  - **Developer must pay prevailing wage for the housing development and/or enter into a project labor agreement with labor unions**

Rezoning Process-City initiated

1. Staff drafts a project description and attaches to a General Plan Amendment and zoning map amendment application;
2. Application is routed for review to internal departments;
3. Staff prepares RFP to select a CEQA consultant;
4. CEQA consultant selected and PSA awarded by City Council;
5. CEQA consultant runs preliminary technical studies including traffic and water use and prepares initial study;
6. Department comments submitted to case planner;
7. CEQA document prepared based on if impacts can be mitigated to level of insignificance;

Rezoning Process-City initiated (con't)

8. CEQA public review occurs;

9. Response to comments prepared and staff prepares staff report for Planning Commission public hearing; and

10. If Planning Commission recommends City Council approval, staff prepares staff report for City Council approval.

Time frame estimated 6-12 months

Issues to Consider with City Initiated Rezoning

- **The City incurs the cost for processing, including the CEQA document.** The CEQA document would likely either be a Mitigated Negative Declaration or focused EIR (this requires the onboarding of a CEQA consultant to analyze).
- **The CEQA review and preparation would occur without the property owners input and possibly before the project is fully developed by the property owner**
- **A GPA and zoning change will not fulfill all the processing requirements to build an infill housing development**.
- **The CEQA process would require identifying mitigation measures without the applicant participating in that process but would be the responsibility of the applicant to implement.**

Recommended Action

Receive report and provide feedback

Site Plan



SITE PLAN

FULTON LANE SITE | ST. HELENA, CA
NAPA VALLEY WINE TRAIN

DAHLIN
JOB NO. 1096.014
DATE 03.21.2024
5865 Owens Drive
Pleasanton, CA 94588
925-251-7200
A2

Questions and Discussion