



City of St. Helena Ad Hoc Committee Special Meeting

Vintage Hall Board Room - Second Floor, 465 Main
Street, St. Helena
Monday, April 10, 2017 @ 9:00 AM

Page

1. CALL TO ORDER
2. ROLL CALL
Ad Hoc Utility Rate Committee Members: Bonnie Long, Tom Vence, Chris Dann, Lester Hardy, Joel Gott, Doug Cutting and Mark Smithers

City Council Liaisons: Mayor Galbraith and Councilmember Mary Koberstein
3. PUBLIC COMMENT PERTAINING TO AD HOC UTILITY RATE COMMITTEE:
Please observe the three minute limit.
4. NEW BUSINESS
 - 4.1. Brown Act over view

By: Cindy Black, City Clerk
 - 4.2. Committee appointment of Chair and Vice Chair
 - 4.3. Review Council direction and Council Liaison roll

By: Mayor Galbraith and Councilmember Koberstein
 - 4.4. Ad Hoc Utility Committee materials binder over view

By: April Mitts, Finance Director
 - [1. Council Adopted Goals and Direction to Ad Hoc Utility Rate Committee](#)
 - [2. Rate Study Adopted November 29, 2016](#)
 - [3. In Depth Financial Staff Report from February 28, 2017 City Council Meeting](#)
 - [3. February 28, 2017 Presentation to the City Council](#)
 - [4. Regional Water Quality Control Board Cease and Desist Order No. R2-2016-0004](#)
 - [5. Capistrano Taxpayers Assoc., Inc vs. City of San Juan Capistrano](#)
 - [6. City of St. Helena Capital Improvement Plan \(CIP\) 2016-2021](#)
 - [7. Open-Public V-Guide to the Brown Act-Revised April 2016](#)
 - 4.5. Review all Waste Water and Water Capital Improvement Plan (CIP) projects

3 - 584

By: Erica Ahmann Smithies, Acting Public Works Director

4.6. Highlight critical projects and timelines

By: Erica Ahmann Smithies, Acting Public Works Director

5. DISCUSSION OF ITEMS TO BE PLACED ON THE NEXT MEETING AGENDA:
6. ADJOURNMENT

The next Ad Hoc Utility Rate Committee meeting is scheduled for April 17, 2017 at 9:00 am, Vintage Hall Board Room located at 465 Main Street.

This agenda was posted at City Hall, 1480 Main Street, and at Vintage Hall, 465 Main Street, St. Helena, California on April 5, 2017.

Cindy Black, 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

**Council Direction to Ad Hoc Utility Rate Committee
Adopted at the March 28, 2017 St. Helena City Council Meeting**

The Ad Hoc Water and Wastewater Committee is to review the Water and Wastewater Study dated October 31, 2016, and make recommendations, if any, to the Council for revisions to the Study and potential adjustments to the rates adopted by the City Council on November 29, 2016.

The Ad Hoc Committee shall assess available financing assumptions and options for CIP projects in the first five years of the Rate Study, giving due consideration to project prioritization (immediate need, number, and estimated cost) and the proper balance of using cash versus debt.

The Ad Hoc Committee shall assess other significant financial assumptions in the Study, such as reserves, adequacy of sinking funds, and designated and undesignated fund balances, and shall do so in accordance with generally accepted financial principles.

The Ad Hoc Committee shall explore any apparent inequities related to industrial, commercial, and residential rates, generate alternative rate models, and recommend potential corrective actions.

In its work the Ad Hoc Committee shall give due consideration to the following:

1. Bond covenants contained in outstanding bonds of the Water and Wastewater Enterprises and strategies to come into compliance.
2. Any water or wastewater project not included in the Rate Study that must be financed in the next five years.
3. The legal principles set forth in *Capistrano Taxpayers Association, Inc. v. City of San Juan Capistrano*, 235 Cal.App.4 th 1493, 186 Cal.Rptr.3d 362 (2015).

The Ad Hoc Committee shall complete its review and submit any recommendations to the City Council such that if the Council determines to revise the Rate Study and currently adopted rates, the work will be completed in sufficient time to allow the Council to meet Proposition 218 requirements and put the new rates into effect as of the date of the rate increases currently scheduled for November 2017.

Exhibit A

**HANSFORD ECONOMIC
CONSULTING**



**City of St. Helena (2016)
Water and Wastewater
Rate Study**

FINAL
October 31, 2016

HEC Project #150182

Exhibit A

Exhibit A

TABLE OF CONTENTS

SECTION	PAGE
1. Introduction	1
1.1 Purpose of Study	1
1.2 Background on the Utility Systems	2
1.3 Financial Health of the Utility Funds	3
1.4 Customer Base	5
1.5 Major Assumptions	8
1.6 Rate Structures	10
2. Water Rate Study Summary	12
2.1 Key Findings	12
2.2 Methodology	13
2.3 New Rate Impacts	14
3. Wastewater Rate Study Summary	18
3.1 Key Findings	18
3.2 Methodology	19
3.3 New Rate Impacts	19
4. Combined Utilities Impact	22
4.1 Residential Impacts	22
4.2 Affordability	23
4.3 Large Water Users Impacts	25

Exhibit A

LIST OF TABLES

TABLE	PAGE
1 Calculated Water Rates through Fiscal Year Ending 2022	13
2 Calculated Wastewater Rate Schedule	19
3 Affordability of Water Utility Costs for Residents	24

LIST OF FIGURES

FIGURE	PAGE
1 Projected Water Cash Balances	4
2 Projected Wastewater Cash Balances	5
3 Historical Population Growth	6
4 Water Customers	6
5 Water Use by Customer Type	7
6 Typical Annual Wastewater Flows by Customer Type	7
7 Components of Water Revenue Requirement	14
8 Typical Monthly Bill for the Off-Peak Season	15
9 Typical Monthly Bill for the Peak Season	15
10 Non-Residential Water Rate Impact	16
11 Average Monthly Water Charges for Large Water Users	17
12 Components of Wastewater Revenue Requirement	20
13 Bill Impacts for Single Family Homes	20
14 Average Monthly Bill Impact for Sample Non-Residential Users	21
15 Average Monthly Bill Impact for Large Water Users	21
16 Single Family Home Utility Costs in Off-Peak Months, based on 7 HCF	22
17 Single Family Home Utility Costs in Peak Months, based on 17 HCF	22
18 Impact of Combined Utility Bill Increases	23
19 Combined Utilities Impact on Large Water Users	25

Exhibit A

Section 1: INTRODUCTION

1.1 PURPOSE OF STUDY

The City's responsibility as a water and wastewater system operator is to first and foremost provide the residents and businesses of the City with clean, safe potable water and a reliable wastewater system that meets State and Federal regulatory requirements; second, to protect its water resources, third to manage and maintain the utility systems infrastructure (assets) to be fiscally responsible to current and future residents, and fourth to support public safety (primarily fire defense).

The purpose of this Water and Wastewater Rate Study (Study) is to determine the level of funding required over the next five years to adequately fund the water and wastewater utility systems. This report provides an explanation and justification of the calculated water and wastewater rates through fiscal year 2022 and it documents adherence to the law regarding setting of rates by a municipality. Per California Constitution Article 13D, water and wastewater rates shall not be extended, imposed, or increased by any agency unless it meets all of the following requirements:

- (1) Revenues derived from the fee or charge shall not exceed the funds required to provide the property related service.
- (2) Revenues derived from the fee or charge shall not be used for any purpose other than that for which the fee or charge was imposed.
- (3) The amount of a fee or charge imposed upon any parcel or person as an incident of property ownership shall not exceed the proportional cost of the service attributable to the parcel.
- (4) No fee or charge may be imposed for a service unless that service is actually used by, or immediately available to, the owner of the property in question. Fees or charges based on potential or future use of a service are not permitted.
- (5) No fee or charge may be imposed for general governmental services including, but not limited to, police, fire, ambulance or library, services, where the service is available to the public at large in substantially the same manner as it is to property owners.

The Study includes two accompanying documents, 'City of St. Helena Water Rate Study Technical Memorandum' and 'City of St. Helena Wastewater Rate Study Technical Memorandum'. These documents provide the detailed calculations for each utility rate study.

The water financial model projects revenues and expenses, and calculates rates for the next ten years; however, the City is only proposing to adopt rates for the next five years with the Proposition 218 notification and hearing.

On May 24, 2016 St. Helena City Council authorized the re-establishment of the Ad Hoc Revenue Source Task Force (Task Force) to review and provide input on the rate study (Resolution No. 2016-

Exhibit A

66). Two meetings were held: one on August 4, 2016 and the other on September 13, 2016. The Rate Study Team, consisting of Hansford Economic Consulting and City staff members, requested feedback on policy decisions related to the Rate Study. These meetings were open to the public and recorded, in the hope of increasing transparency and public participation, as well as providing a place for members of the public to ask questions and receive additional information.

Key acronyms used regularly throughout the report are the following:

City = City of St. Helena
 HCF = Hundred Cubic Feet
 MGD = Million Gallons a Day
 CIP = Capital Improvement Project(s)
 SF = Single Family
 SRF = State Revolving Fund
 MHI = Median Household Income

1.2 BACKGROUND ON THE UTILITY SYSTEMS

The City of St. Helena (City) provides water and wastewater services to residents and businesses inside and outside of the City. The City's water sources include surface water from Bell Canyon Reservoir, groundwater from Stonebridge Wells, and purchased treated water from the City of Napa. The Louis Stralla Water Treatment Plant (water treatment plant), which treats surface water stored in Bell Canyon Reservoir, has a capacity of 4.3 million gallons a day (MGD); however, there are flow limitations in the inlet piping which restricts use of the plant to less than its capacity. Stonebridge Wells includes two active groundwater wells and a filtration facility, including filtration tanks, chlorination facilities, and a backwash return system. The filter removes iron and manganese. Treated water from the City's water sources is distributed via six storage tanks and four pump stations.

The City first entered into an agreement with the City of Napa for delivery of treated water in September 2006. The third amendment to that agreement, entered into in December 2011, increases the minimum annual delivery to 600 acre-feet with optional delivery up to 800 acre-feet. Optional additional delivery of 200 acre-feet may be delivered provided the City of Napa has sufficient water supply. If Napa does not have sufficient supply it will attempt to acquire supplemental dry-year water on a single year basis from an outside source. Price and payment terms of the optional supply will differ from the base supply, as detailed in the agreement.

The City currently distributes over 550 million gallons of clean drinking water each year. Water use fluctuates year to year depending on several factors including, but not limited to, growth, weather, sustained drought, plumbing retrofits, and pricing of water. Untreated water suitable for construction water purposes only is also available for purchase from the Lower Reservoir adjacent to York Creek.

The City's wastewater system consists of a collection system of more than 22 miles of pipe. Effluent is treated at the 0.5 million gallons a day (average daily dry weather flow) treatment plant. The wastewater treatment plant was built in 1967. The secondary level treatment plant discharges to the Napa River or land (City-owned grass fields, redwood/willow trees, and mosquito fish ponds).

Exhibit A

The City's National Pollutant Discharge Elimination System (NPDES) permit was renewed in March 2016; at the same time a Cease and Desist Order (CDO) No. R2-2016-0004 was issued because the City is unable to meet the more stringent effluent requirements of the renewed NPDES permit. A draft feasibility study was prepared for the City in August 2016 which recommends improvements at the wastewater treatment plant so that the City can be in compliance and the CDO lifted.

Separate water and wastewater enterprise funds account for the revenues and expenses associated with each of these services. An enterprise fund is a fund that is intended to recover its costs through user fees and charges. Enterprise funds provide the repayment capacity for, and make debt service payments on, any debt incurred for capital projects; therefore, enterprise fund bond-funded projects do not diminish the City's general fund debt capacity.

Enterprise funds need to be managed in a fiscally responsible manner so that users are paying for their current use of the system. Both utility systems need constant maintenance to prolong the life of the assets. If there is insufficient collection of money for system maintenance future users have to pay for repairs when they become critical and costs are more expensive.

1.3 FINANCIAL HEALTH OF THE UTILITY FUNDS

Currently both utility funds are financially at risk. The City continues to use available reserves for both operating expenses and capital improvement projects (projects are funded on a pay-as-you-go basis). The water operating fund currently has \$525,000 of unrestricted cash; the wastewater operating fund has no cash reserves. Total cash balances for operating and capital funds combined as of July 1, 2016 were \$6.1 million in the water fund and \$1.1 million in the wastewater fund.

Utility system costs typically increase at a greater rate than inflation and while City rates have increased in recent years they have not kept pace with the fiscal needs of the water and wastewater enterprise funds. In addition, the current rates do not collect for system rehabilitation of either system which has resulted in the City having to use reserves and delay necessary capital improvements. The lack of improvements to major infrastructure has resulted in heavy fines to the City. If rates are not increased to pay for these items, the City's General Fund will need to be utilized. These are unsustainable actions that will negatively impact other City services such as parks, streets, and library if not corrected.

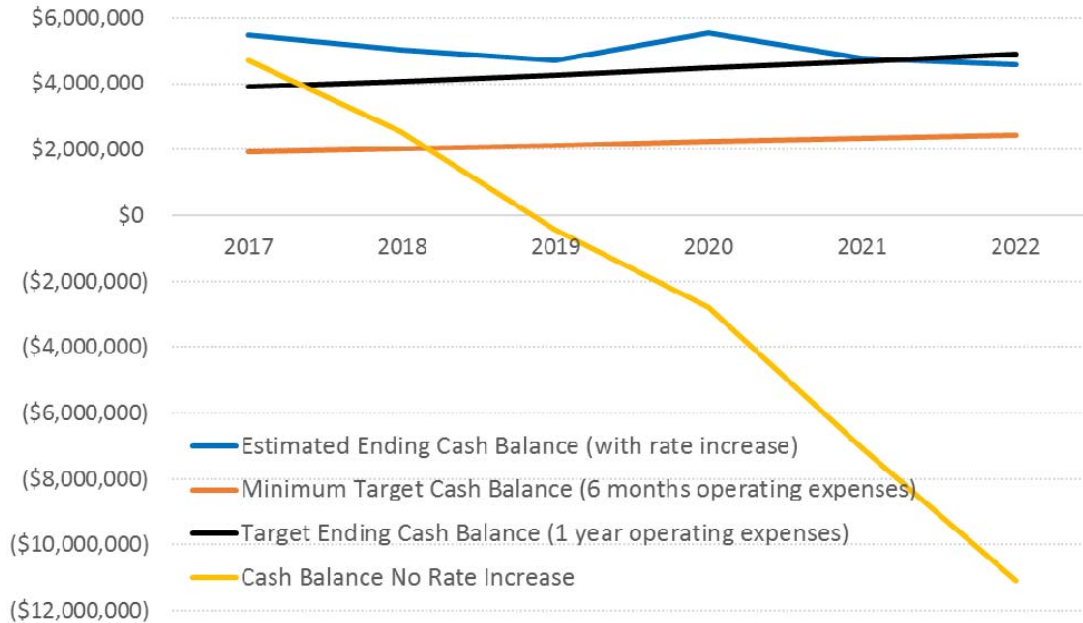
The revenue requirement is the amount that must be raised from rates or other charges for service net of other income such as investment earnings, area surcharges, finance charges, and other miscellaneous revenues. The revenue requirement for the water fund is projected to increase from \$5.5 million to \$8.4 million over the next 5 years. The revenue requirement for the wastewater fund is projected to increase from \$3.0 million to \$4.6 million over the next 5 years.

Including the operating and capital funds for each utility, both the water and wastewater enterprise funds will have negative cash balances within two years without rate increases.

Figure 1 shows the projected cash balances (operating and capital funds combined) for water and **Figure 2** shows the projected cash balances for wastewater (operating and capital funds combined) through fiscal year 2022.

Exhibit A

Figure 1
Projected Water Cash Balances

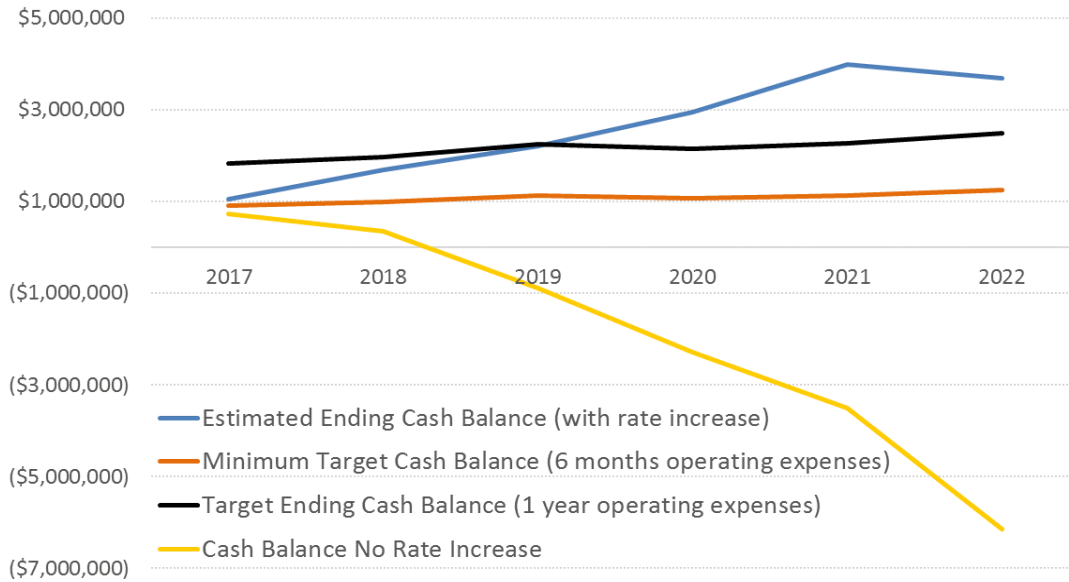


The blue lines show the projected total cash balance with rate increases. The yellow lines show the projected cash balances with no rate increases. The black lines show the target cash balance, equal to one year of operating expenses, and the orange lines show the minimum cash balance at 6 months operating expenses. The goal over time is for the black and blue lines to be as close as possible. These graphs demonstrate that the rate increases are essential.

The projected cash balance for wastewater (with a rate increase) is greater than the target cash balance because of cash outlay necessary in future years for capital improvements, including more than \$2 million for completion of the operations building and shop at the wastewater treatment plant.

Exhibit A

Figure 2
Projected Wastewater Cash Balances



1.4 CUSTOMER BASE

The City services a population of approximately 6,000. The City experienced population decline which began before, and lasted through, the Great Recession (2004 through 2014). Population is now slightly greater than it was in 2000. The average annual population growth from 2000 to 2015 was 0.1%. According to the US Census Bureau there are 2.47 persons per occupied housing unit, a figure that has remained relatively stable since 2000. Historical population change is shown in **Figure 3** below.

The City has approximately 2,600 water connections and serves more than 3,000 residential households, about 260 non-residential establishments, including businesses, schools, religious places and community centers, more than 20 industrial customers, and about 30 irrigation-only customers. A pie chart illustrating the customer base is shown in **Figure 4**.

Water use by residential and non-residential customer type is shown in **Figure 5**. Although residential customers comprise 87% of the total customer base, they use 50% of total water deliveries. Industrial customers, who comprise only 1% of the customer base use 21% of total water deliveries.

Exhibit A

Figure 3
Historical Population Growth

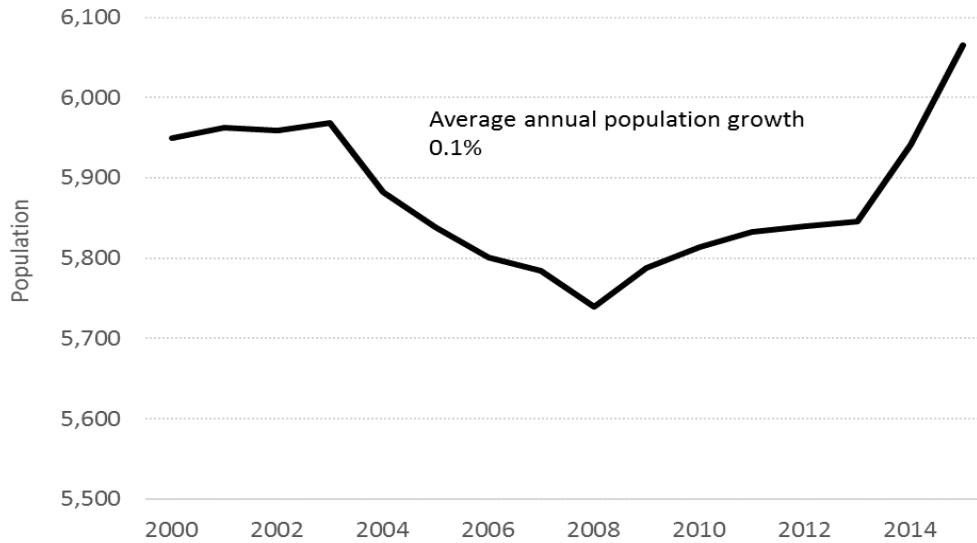


Figure 4
Water Customers

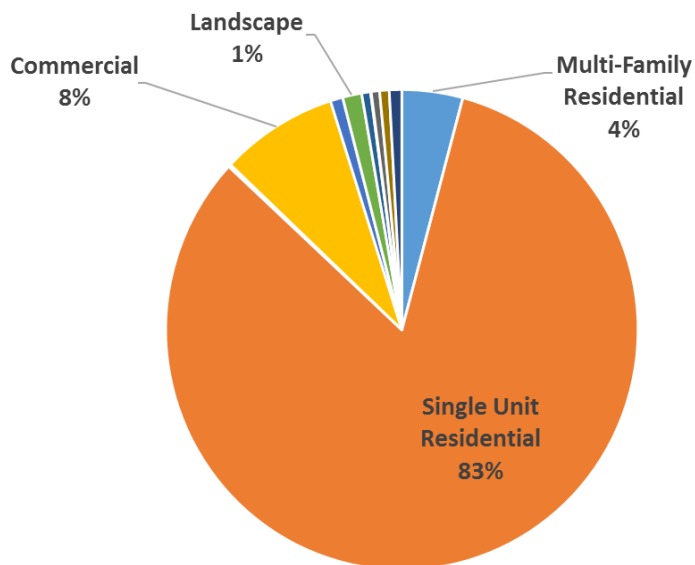
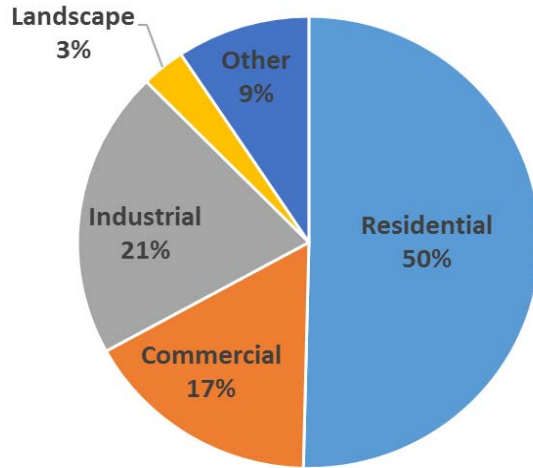


Exhibit A

Figure 5
Water Use by Customer Type



The City provides wastewater service to the same households, institutional uses and businesses, with the exception of those having septic systems. **Figure 6** shows typical annual flow to the wastewater treatment plant by residential and non-residential customer types.

Figure 6
Typical Annual Wastewater Flow by Customer Type

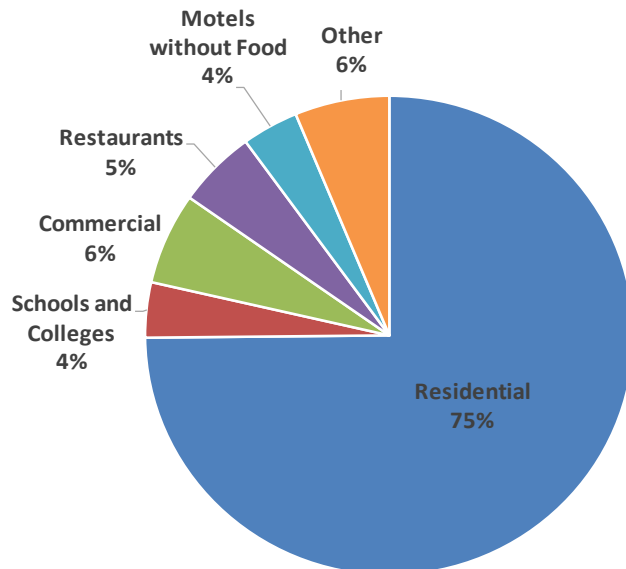


Exhibit A

1.5 MAJOR ASSUMPTIONS

Several major assumptions influence the scope of the report and findings herein. They are summarized here:

- **Water CIP Projects will be funded through rates, grants, old and new debt, impact fees, and reserves.** The York Creek upper dam removal and mitigation project as well as the Meadowood tank upgrades project are expected to be partially grant funded, and partially funded by existing bond proceeds. The Bell Canyon Creek flow measurement project will be partially funded by existing bond proceeds. For large infrastructure projects the City will apply to advantageous loan and grant programs. Pump station upgrades and the Bell Canyon intake tower replacement are assumed to be funded by new debt. Spill containment at both the Bell Creek intake and Stonebridge Well, valve replacement at the Bell Valve House, as well as the Bell Canyon reservoir improvements, will be funded by reserves. Rates (cash) will be used for all other capital outlay needs for existing customers. Impact fees will be used to fund capital project costs attributable to new customers. The water enterprise fund will loan the impact fee fund cash to pay for the new customers' share of facility costs.
- **Wastewater CIP Projects will be funded through rates, reserves and debt.** Reserves will be used to fund the replacement of the wastewater reclamation facility operations building and shop. Phase 1 and Phase 2 of the wastewater treatment plant upgrades are assumed to be funded by new debt. Cash will be used for all other capital improvement projects. The wastewater impact fee fund has sufficient cash to pay for new customers' share of wastewater facility costs.
- **Future users' share of costs updated.** The water and wastewater impact fees must be updated to reflect the CIP presented in the Rate Study. The cash balances for impact fee funds 764 (water) and 774 (wastewater) have not been updated in the Study; with updated CIPs for both utility systems the impact fees need to be updated. An increase in the water impact fee would improve the repayment period from future to existing customers and reduce future rate increases for existing customers.
- **System rehabilitation costs are fully accounted for in the rate models.** Both the water and wastewater rate models include a calculated annual cost for long-term replacement of facilities. Facilities include existing and new facilities built in the next five years. The Study projects that a capital repair and replacement reserve of \$1.7 million could be accumulated in the wastewater fund by 2022. It is not anticipated that any reserve for capital repair and replacement could be accumulated in the water fund.
- **New growth.** New development is assumed to increase at a pace of five single family units per year. This pace of growth was estimated using the St. Helena average annual change in US Census reported number of occupied housing units from 2000 to 2015, and is consistent with the City's General Plan.

Exhibit A

- **Rate structure is modified for both water and wastewater.** In an effort to allocate costs as equitably as possible with available data, the Study modifies the rate structures for both utilities as described further below and elsewhere in this report.
- **The new rate structures are assumed to be in effect February 8, 2017. The following five rate increases are assumed to be in effect November 8 of each year (November 2017, 2018, 2019, 2020, and 2021).** The rate increases go into effect as soon as possible to increase cash flow, and in the fall when price changes have less impact to customers than in the summer months. The new rates would be reflected on the City's February (and thereafter November) utility bills. The rate change dates are based on the City's current billing cycles; if the dates of the billing cycles change (for example meter reads change from the 8th of each month to the 10th of each month) the rate changes will follow the date of the new billing cycle.
- **Low income utilities subsidies, authorized by City Resolution No. 2006-44, are funded by the City general fund so that some utility customers do not subsidize others.** The general fund transfers the appropriate subsidy amount for low income households into the water and wastewater funds to maintain the revenue requirement.
- **Water-specific Assumptions:**
 - **New water meter replacement fee.** With the useful service life of a meter being approximately 20 years, the City needs to collect funds for a routine meter replacement program, replacing about five percent of the meters in the system each year. There are approximately 2,500 meters to be serviced with an approximate annual cost of \$46,000 in 2016 dollars. The new meter replacement fee is included in the updated service charges.
 - **Meadowood area surcharges are eliminated.** Customers in the Meadowood area, which is outside of the City limits, currently pay a surcharge based on consumption by all using those facilities plus a uniform maintenance surcharge. Per the decision made during the September 13th, 2016 Task Force meeting, Meadowood area customers will no longer pay a surcharge.
 - **The percentage of revenue requirement collected in base (flat) fees/service charges gradually increases.** Fixed costs comprise about 70% of the City's water system total annual operating costs. Currently the City collects 30% of costs in service charges and 70% in use charges. The water rate study gradually increases the base charges from 30% of revenue requirement to 36% of revenue requirement over the next five years. Greater revenue collection from service charges increases revenue stability for the enterprise funds. The increase is gradual to avoid large increases to households on fixed incomes.
 - **Single family residential 1" meter customers pay the same rates as single family residential 5/8" meter customers.** The total number of 5/8" meters was adjusted to include single family 1" meters. Due to CA Residential Code Section R313 (fire sprinklers), almost all new residential development is required to install 1" meters in

Exhibit A

order to have sufficient flow for sprinklers; however, most existing homes built prior to implementation of CA Residential Code Section R313 have a 5/8" or 3/4" meter. Because the 1" residential customers utilize the same average amount of water as the 3/4" and 5/8" customers, it is appropriate for them to pay the same rates, and not be penalized by the fire sprinklers requirement.

- o **The new water rate structure includes a drought period surcharge.** A drought period will be defined in the City municipal code. When the City implements Phase 1 drought restrictions it would also implement drought rates. Drought rates are only applied to use charges (does not affect service charges). Drought rates are 6% higher than non-drought rates because during drought years the cost of water per 1,000 gallons is 6% higher than during non-drought years.

1.6 RATE STRUCTURES

Water Rate Structures

The water rate study calculated water charges under two methods of collection for costs recovered through use charges. A brief summary of the rate structure differences is provided below. The Task Force chose the seasonal rate structure as the preferred water rate structure at the September 13th, 2016 Task Force Meeting; therefore, the Study only presents findings of the seasonal rate structure. Details of the seasonal rate structure, along with results, are presented in Section 2.

WATER STUDY	
Uniform Rate Structure	
Same as current rate structure except no tiers for use charges	
All customers pay a base charge by meter size per month + a uniform use charge for all treated water	
Seasonal Rate Structure	
All customers pay a base charge by meter size per month + a seasonal use charge for all water (higher during the peak than off-peak months)	
Peak = May through October	
Off-Peak = November through April	

Wastewater Rate Structures

In the financial modeling for the wastewater rate study two rate structures were considered for collection of the revenue requirement; a modified rate structure and a new rate structure. A comparison of the two rate structures considered is provided on the following page. Per the August 4th, 2016 and September 13th, 2016 Task Force meetings, the City's Task Force chose the new rate structure as the preferred rate structure; therefore, the Study only presents findings of the new rate structure. For record keeping the modified rate structure findings are presented in Attachment B of the 'City of St. Helena Wastewater Rate Study Technical Memorandum'.

Exhibit A

WASTEWATER STUDY	
Modified Rate Structure	
	Same as current rate structure except religious places/community centers are broken out as their own rate category
	Single family pay monthly flat base rate and a flow charge per Hundred Cubic Feet (HCF) of average winter month water
	Multi-family/mobile homes and non-residential pay monthly flat base rate based on meter size per month and a flow charge per HCF of average winter month water
New Rate Structure	
	Mobile Home parks classified as residential; religious places/community centers are broken out as their own rate category
	All Residential (single family, multi-family and mobile homes) pay flat base rates based on number of dwelling units plus a flow charge per HCF of average winter month water
	Flat monthly charge for schools based on number of students
	Non-residential pay a flat base rate by customer type (per account) plus a flow charge per HCF of average winter month water

Exhibit A

Section 2: WATER RATE STUDY SUMMARY

2.1 KEY FINDINGS

- The City has been pulling from reserves for water system operations. At the end of fiscal year 2016 (June 30) the operating fund had a positive unrestricted net position of roughly \$5 million. At the end of fiscal year 2017, the operating fund is expected to be depleted to an unrestricted net position of about \$525,000. System rehabilitation is being funded from reserves because depreciation is not currently included in the rates. This is unsustainable.
- It is projected that in fiscal year 2017 the water fund will have a 0.72 debt service coverage ratio. The City is out of compliance with its bond covenants to maintain a 1.20 minimum debt service coverage ratio. This must be rectified immediately.
- The City has identified a minimum of \$17.7 million, net of grant funds and existing bond proceeds, of water system capital improvements in today's dollars to be funded over the next 10 years. This cost is inflated to a total of \$20.8 million dollars over the next 10 years.
 - o The funding plan applies two City-awarded grants, which total \$1,787,876, for the York Creek dam removal and creek restoration project, as well as existing water bonds in the amount of \$2.7 million.
 - o Meadowood tank upgrades are partially funded by \$120,100 from existing bond proceeds.
 - o The City will continue to aggressively pursue any grant opportunities.
 - o \$0.2 million for pump station upgrades, and \$2.1 million for Bell Canyon intake tower replacement are assumed to be financed by new debt.
 - o All other system improvement costs will be cash-funded.
 - o The project for installation of smart meters is currently unfunded; however, the project is not anticipated to start in the next five years. The total cost for this project is estimated at \$1.5 million, and
 - o A new water meter replacement fee for routine replacement of existing meters, which is included in the monthly service charge, will fund \$0.3 million of meter replacement costs, not included in the CIP.
- By raising the rates in February 2017 the City will generate sufficient revenue to meet its bond covenants, to begin building a healthy reserve, to fund necessary planned capital improvements, and to fully fund water operations without using other City funds. A healthy reserve is necessary to fund emergencies and other unanticipated capital projects. Without the rate increases the water fund is projected to have a negative balance of <\$11.1> million by the end of fiscal year 2022. The water fund would have to be loaned money from other City funds, taking away money for other essential City services such as parks, library and streets.

Current and calculated water rates are shown in **Table 1**.

Exhibit A

Table 1
Calculated Water Rates through Fiscal Year Ending 2022

		Billing Period Beginning *					
Charges	Current	2/8/2017	11/8/2017	11/8/2018	11/8/2019	11/8/2020	11/8/2021
Service Charge		Monthly Charges per Meter					
5/8" , 3/4" & SF 1"	\$27.52	\$43.22	\$51.71	\$60.59	\$64.78	\$68.91	\$73.27
1"	\$63.80	\$80.08	\$96.76	\$114.44	\$123.35	\$132.22	\$141.61
1.5"	\$124.12	\$141.67	\$172.02	\$204.36	\$221.14	\$237.94	\$255.72
2"	\$196.50	\$215.12	\$261.84	\$311.76	\$337.99	\$364.27	\$392.10
3"	\$365.51	\$413.06	\$503.54	\$600.40	\$651.86	\$703.51	\$758.21
4"	\$607.01	\$640.46	\$780.29	\$930.11	\$1,010.10	\$1,090.44	\$1,175.54
6"	\$1,210.18	\$1,252.50	\$1,528.85	\$1,825.17	\$1,983.80	\$2,143.19	\$2,312.05
Private Fire Protection		Monthly Charges per Fire Service Pipe					
4"	\$4.00	\$8.47	\$9.92	\$11.38	\$11.89	\$12.36	\$12.86
6"	\$6.00	\$24.59	\$28.81	\$33.05	\$34.53	\$35.91	\$37.34
8"	\$8.00	\$52.41	\$61.40	\$70.43	\$73.57	\$76.52	\$79.58
Raw Water <i>per Gallon</i>	\$0.00267	\$0.00273	\$0.00320	\$0.00367	\$0.00383	\$0.00398	\$0.00414
TREATED WATER USE CHARGES PER HCF							
NON-DROUGHT PERIOD		[1]					
Off-Peak (Nov-Apr)		\$5.50	\$6.37	\$7.19	\$7.37	\$7.54	\$7.71
Peak (May-Oct)		\$6.11	\$7.09	\$8.00	\$8.20	\$8.38	\$8.58
DROUGHT PERIOD		[1]					
Off-Peak (Nov-Apr)		\$5.81	\$6.73	\$7.60	\$7.79	\$7.97	\$8.15
Peak (May-Oct)		\$6.46	\$7.49	\$8.45	\$8.66	\$8.86	\$9.06

Source: HEC.

* Dates reflect the current billing cycle; if the billing cycle date changes so will these effective dates.

[1] Current Rate Structure rates as follows:

Tiers by customer category (in hcf):	Tier 1	Tier 2		Tier 1	Tier 2
Single family	0-14	15+	Non-residential <=1"	0-36	37+
Multi-family	0-5	6+	Non-residential 1.5"	0-120	121+
			Non-residential 2"	0-192	193+
Price per HCF	\$4.48	\$6.74	Non-residential 3"	0-360	361+
Price per HCF - Landscape Irrigation	\$5.22		Non-residential 4"	0-600	601+
			Non-residential 6"	0-1,250	1,251+
			Non-residential 8"	0-1,920	1,921+

2.2 METHODOLOGY

The detailed methodology for calculation of rates is presented in the 'City of St. Helena Water Rate Study Technical Memorandum'. Under the new seasonal rate structure, customer bills continue to be comprised of 2 fees: (1) fixed monthly service charges (now also including a meter replacement fee), and (2) variable use charges. The new seasonal rate structure is as follows:

- All customers pay the same usage rate per HCF for treated water off-peak (Nov-Apr) and peak (May-Oct). The peak rate is higher than the off-peak rate to reflect the additional costs of water operations during the peak period. Analysis in the 'City of St. Helena Water Rate

Exhibit A

Study Technical Memorandum' demonstrates that water operations costs are 11% higher during the peak period.

2.3 NEW RATE IMPACTS

Components of revenue requirement are shown in **Figure 7**. Operating expenses are the largest component of cost, followed by capital replacement/repair, debt service, and operating reserves.

Single Family Residential Impacts

Figure 8 shows the water bill impact for a typical single family home in the off-peak months using the seasonal water rate structure in a non-drought period. Single family homes typically use 7 HCF per month in the winter (calculated using January and February data 2011 through 2015). **Figure 9** shows the water bill impact for a typical single family home in the peak months using the seasonal water rate structure in a non-drought period. Single family homes typically use 17 HCF per month in the summer (calculated using July and August data 2011 through 2015).

Figure 7
Components of Water Revenue Requirement

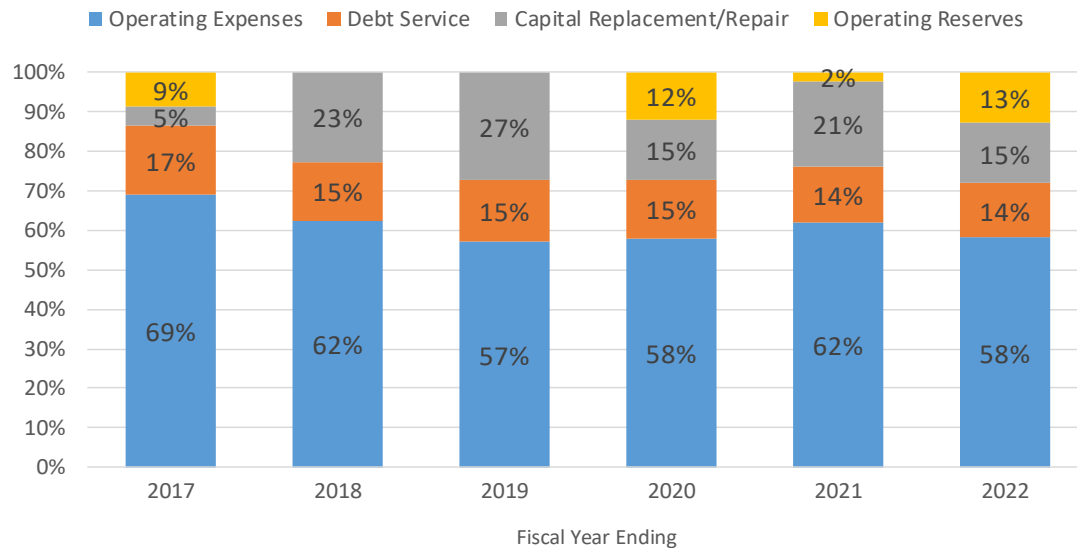


Exhibit A

Figure 8
Typical Water Monthly Bill for the Off-Peak Season

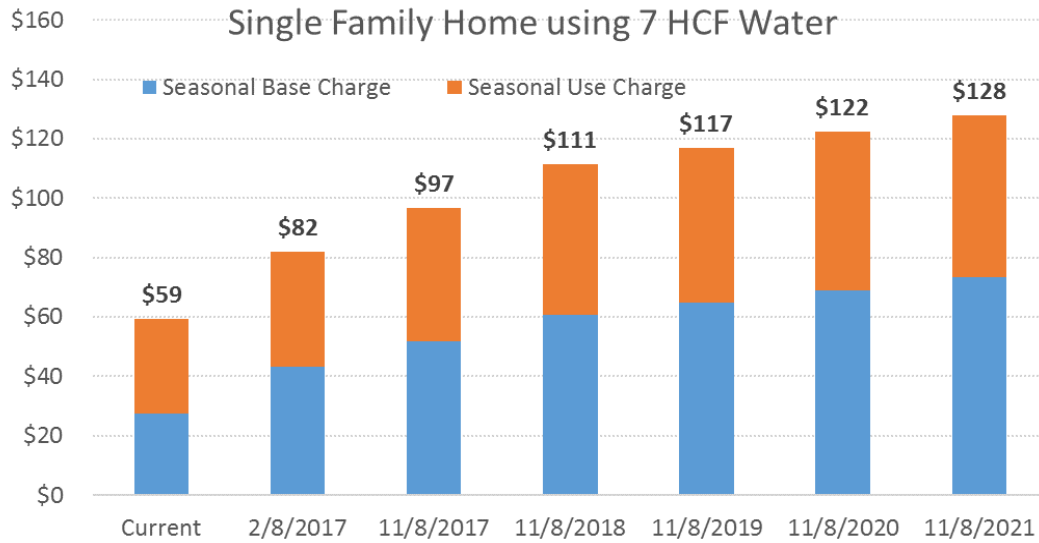


Figure 9
Typical Water Monthly Bill for the Peak Season

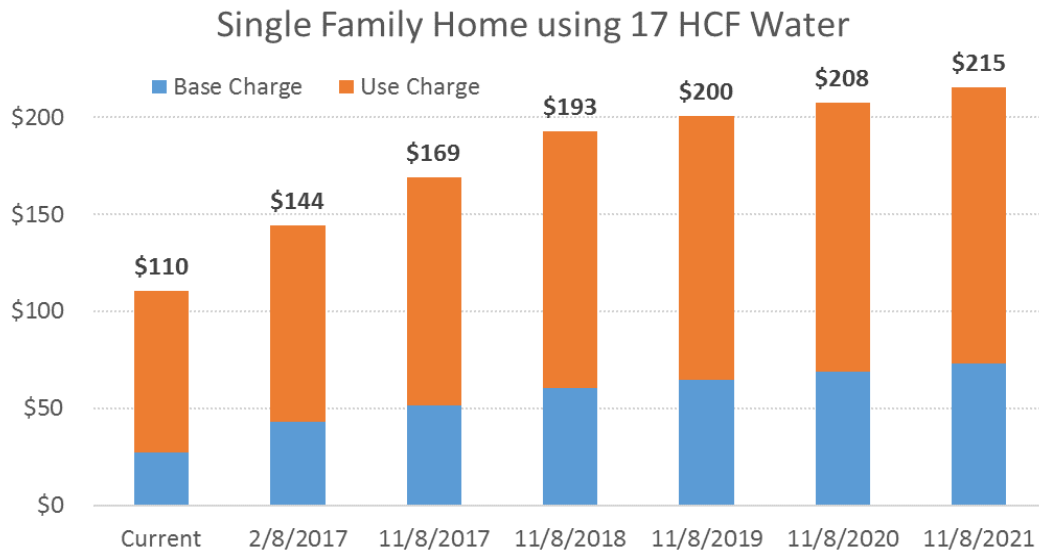
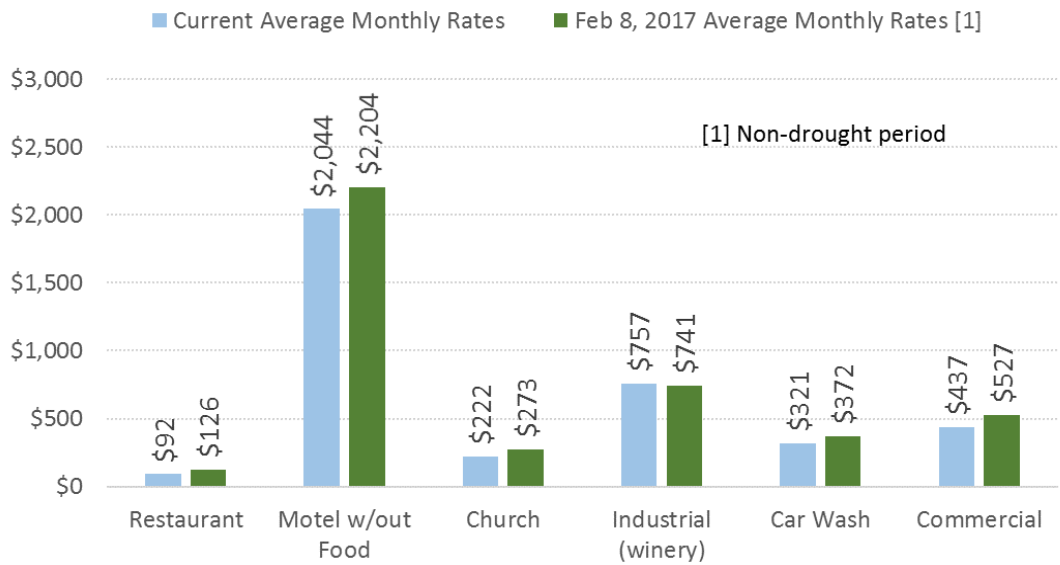


Exhibit A

Non-Residential Users

Six types of non-residential users were selected to illustrate the impacts of water rate increases in February 2017; these include a restaurant, a motel without food, a church, an industrial customer (winery), a cash wash, and a commercial office. **Figure 10** illustrates the impact to each type of water user assuming a non-drought period. Charges are calculated using actual consumption by the customers between January 2015 and December 2015. The impact is greater for all customers with the exception of the industrial customer.

Figure 10
Non-Residential Water Rate Impact



Large Water Users

The largest water users in the City include the St. Helena School District, wineries, mobile home park, and some large commercial businesses.

The Study examines the impact to a selection of these users in **Figure 11** using current charges and February 8, 2017 charges assuming a non-drought period. Charges are calculated using actual consumption by the customers between January 2015 and December 2015. In the selection, average monthly charges increase for all customers except the winery. Actual water bills will differ from customer to customer.

Exhibit A

Figure 11
Average Monthly Water Charges for Large Water Users

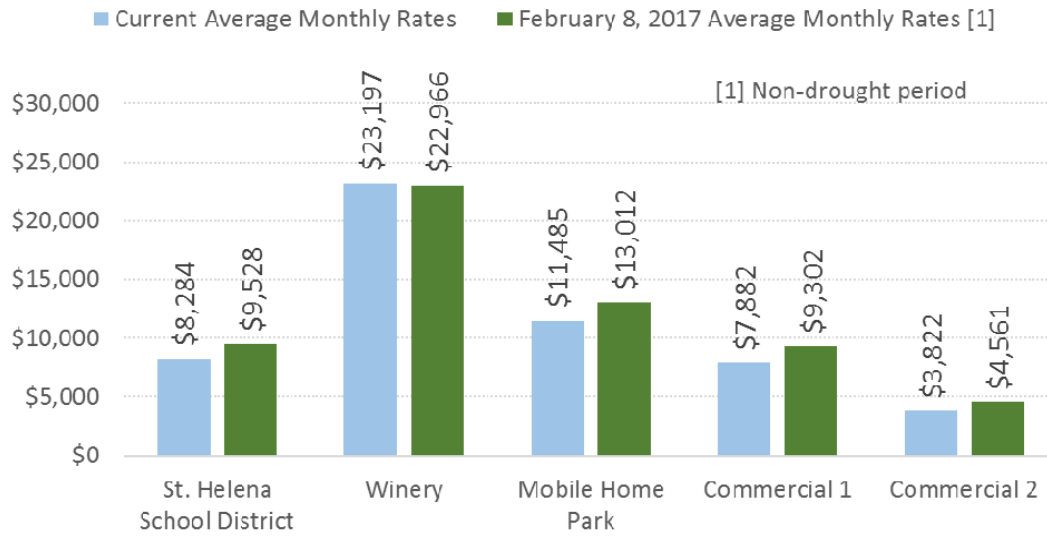


Exhibit A

Section 3: WASTEWATER RATE STUDY SUMMARY

3.1 KEY FINDINGS

- The City has been using wastewater fund reserves to fund operations. At the end of fiscal year 2016 (June 30) the operating fund had a negative unrestricted net position of <\$79,805>. At the end of fiscal year 2017, the operating fund is expected to have a negative unrestricted net position of <\$27,000>. System rehabilitation is being funded from reserves because depreciation is not currently included in the rates. This is unsustainable.
- The City has identified a minimum of \$15.4 million, net of grant funds and existing bonds, in capital improvements in today's dollars to be funded over the next 10 years. In future dollars this totals \$17.7 million to be funded over the next 10 years. The financing plan assumes that:
 - o Phases 1 and 2 of the wastewater treatment plant upgrades will be debt-financed.
 - o Reserves will be used to finance \$3.7 million for replacement of the wastewater reclamation facility operations building and shop, which is expected to be accomplished fiscal year 2021 through fiscal year 2023.
 - o Cash will fund the remaining CIP costs.
- By raising the rates in February 2017 the City will generate sufficient revenue to meet its bond covenants, to begin building a healthy reserve, to fund necessary capital improvements and to fully fund wastewater operations without using other City funds. A healthy reserve is necessary to fund emergencies and other unanticipated capital projects. Without the rate increase the wastewater fund is projected to have a negative fund balance within two fiscal years and would have to be loaned money from other City funds, taking away money for other essential City services.
- The new rate structure improves equity among certain customer classes by basing rates on typical flow and strength characteristics of each customer type. Multi-family dwellings and mobile home parks, which display characteristics more similar to residential than non-residential, are shifted to residential. Schools pay on a flat monthly rate per student basis. Non-residential customers' water use is determined by average winter water use, by customer type, to account for water that does not go to the wastewater treatment plant (applied outdoors or otherwise does not enter the sewer collection system).

Table 2 on the next page shows the new wastewater rate schedule. The current rate schedule cannot be compared with the new rate schedule because the structure is different; however, a single family unit currently pays a base monthly charge of \$47.35 and a monthly use charge of \$3.94 per HCF of winter water use.

Exhibit A

Table 2
Calculated Wastewater Rate Schedule
- New Rate Structure

Customer Category		Fiscal Year Ending					
		2017	2018	2019	2020	2021	2022
Billing Period Beginning * ---->		2/8/2017	11/8/2017	11/8/2018	11/8/2019	11/8/2020	11/8/2021
Residential							
Single Family	monthly per unit	\$48.04	\$55.24	\$70.13	\$73.03	\$74.18	\$75.23
Multi-Family	monthly per unit	\$29.07	\$33.42	\$42.43	\$44.18	\$44.88	\$45.52
Mobile Homes	monthly per unit	\$43.11	\$49.57	\$62.93	\$65.53	\$66.56	\$67.51
Residential Rate per HCF	per HCF	\$4.69	\$5.39	\$6.84	\$7.12	\$7.23	\$7.34
Schools Flat Rate per Student	monthly per student	\$1.40	\$1.62	\$2.15	\$2.21	\$2.26	\$2.28
Non-Residential							
Car Wash	monthly per account	\$209.93	\$243.25	\$328.36	\$336.45	\$343.13	\$346.45
Religious Places/Community Centers	monthly per account	\$35.34	\$40.85	\$54.06	\$55.68	\$56.71	\$57.34
Commercial [1]	monthly per account	\$62.70	\$72.20	\$92.64	\$96.19	\$97.78	\$99.09
Groceries and Mortuaries	monthly per account	\$433.93	\$492.12	\$552.00	\$595.15	\$599.41	\$613.71
Laundry	monthly per account	\$970.94	\$1,121.45	\$1,475.85	\$1,522.21	\$1,549.87	\$1,567.76
Mixed Retail w/ Food	monthly per account	\$541.20	\$617.30	\$730.21	\$775.32	\$783.78	\$799.17
Motel with Food	monthly per account	\$2,617.64	\$2,978.36	\$3,444.90	\$3,681.23	\$3,715.59	\$3,795.12
Motel without Food	monthly per account	\$642.15	\$738.08	\$933.28	\$972.87	\$987.93	\$1,002.28
Restaurant	monthly per account	\$840.03	\$952.80	\$1,070.03	\$1,153.27	\$1,161.63	\$1,189.23
Napa Valley College	monthly per account	\$2,889.93	\$3,341.62	\$4,436.77	\$4,565.57	\$4,651.20	\$4,701.87
Service Station	monthly per account	\$93.25	\$107.06	\$134.07	\$140.12	\$142.20	\$144.37
Winery Production (Merryvale/Spottswode)	monthly per account	\$989.21	\$1,116.93	\$1,199.98	\$1,310.53	\$1,315.85	\$1,351.87
Sutter Home Winery	monthly per account	\$876.04	\$1,007.39	\$1,278.85	\$1,331.67	\$1,352.66	\$1,371.89
Car Wash	per HCF	\$3.43	\$3.97	\$5.36	\$5.49	\$5.60	\$5.65
Religious Places/Community Centers	per HCF	\$3.72	\$4.30	\$5.69	\$5.86	\$5.97	\$6.03
Commercial [1]	per HCF	\$4.27	\$4.92	\$6.31	\$6.55	\$6.66	\$6.75
Groceries and Mortuaries	per HCF	\$10.30	\$11.68	\$13.10	\$14.12	\$14.22	\$14.56
Laundry	per HCF	\$3.81	\$4.40	\$5.79	\$5.97	\$6.08	\$6.15
Mixed Retail w/ Food	per HCF	\$6.73	\$7.68	\$9.08	\$9.64	\$9.75	\$9.94
Motel with Food	per HCF	\$7.91	\$9.00	\$10.41	\$11.12	\$11.23	\$11.47
Motel without Food	per HCF	\$4.59	\$5.27	\$6.67	\$6.95	\$7.06	\$7.16
Restaurant	per HCF	\$10.18	\$11.54	\$12.96	\$13.97	\$14.07	\$14.41
Napa Valley College	per HCF	\$3.67	\$4.24	\$5.63	\$5.79	\$5.90	\$5.97
Service Station	per HCF	\$4.82	\$5.53	\$6.93	\$7.24	\$7.35	\$7.46
Winery Production (Merryvale/Spottswode)	per HCF	\$17.31	\$19.55	\$21.00	\$22.93	\$23.03	\$23.66
Sutter Home Winery	per HCF	\$4.50	\$5.17	\$6.57	\$6.84	\$6.95	\$7.04

Source: HEC.

* Dates reflect the current billing cycle; if the billing cycle date changes so will these effective dates.

[1] Commercial includes City buildings.

3.2 METHODOLOGY

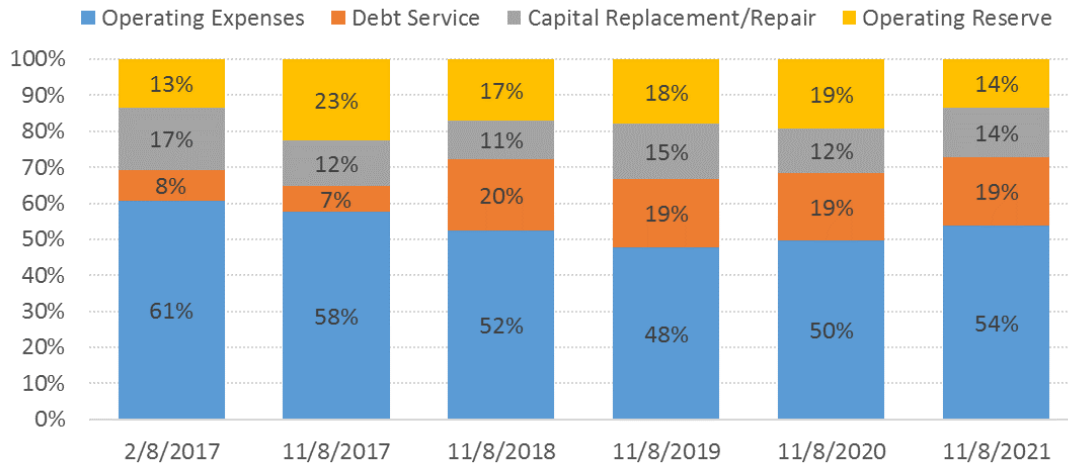
The detailed methodology for calculation of rates is presented in the 'City of St. Helena Wastewater Rate Study Technical Memorandum'.

3.3 NEW RATE IMPACTS

Components of wastewater fund revenue requirement is shown in **Figure 12**. Operating expenses is the largest component of cost (more than 50%).

Exhibit A

Figure 12
Components of Wastewater Revenue Requirement



Residential Bill Impacts

Figure 13 shows monthly bill impacts of the rate increases to single family residential customers under the new rate structure for the next five years.

Figure 13
Wastewater Bill Impact for Single Family Homes

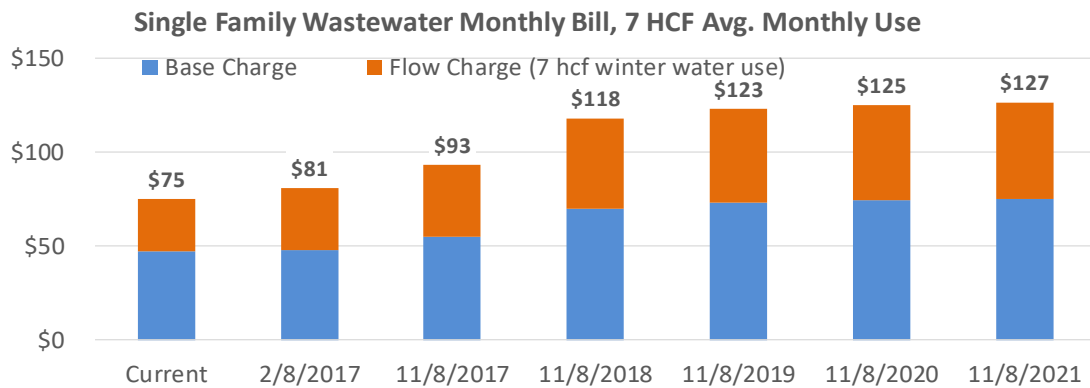


Figure 14 estimates monthly bill impacts of the February 8, 2017 rate changes for a sample of non-residential users. Because monthly bills for non-residential customers will vary from month to month and business type to business type, the examples given are only illustrative. Each non-residential customer will experience a different impact.

Exhibit A

Figure 14
Average Wastewater Monthly Bill Impact for Sample Non-Residential Users

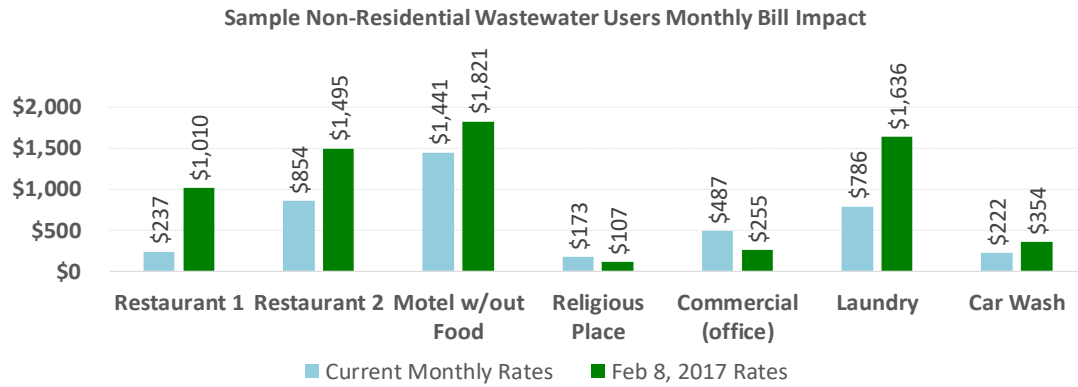


Figure 15 illustrates the impact on the same large water users as in the water rate study, with the exception of the two commercial businesses which do not receive City wastewater service.

Figure 15
Average Wastewater Monthly Bill Impact for Large Water Users

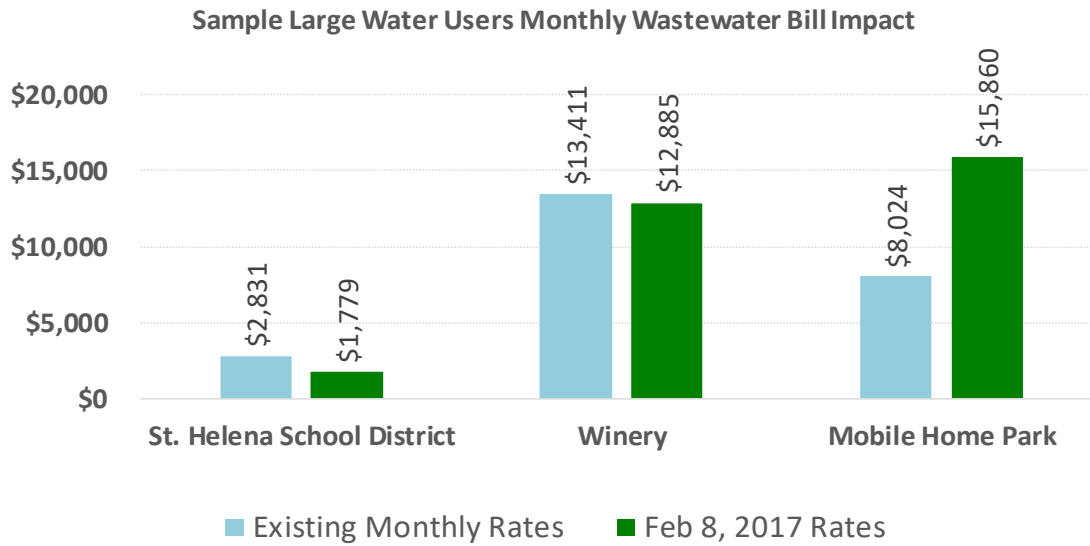


Exhibit A

Section 4: COMBINED UTILITIES IMPACT

4.1 RESIDENTIAL IMPACTS

The combined impact of increased water and wastewater rates on typical single family home utility bills is illustrated in **Figure 16** for a typical off-peak month (using 7 HCF water, 7 HCF wastewater), and **Figure 17** for a typical peak month (using 17 HCF water, 7 HCF wastewater). Both comparisons assume a non-drought period.

Figure 16
Single Family Home Utility Costs in Off-Peak Months, based on 7 HCF

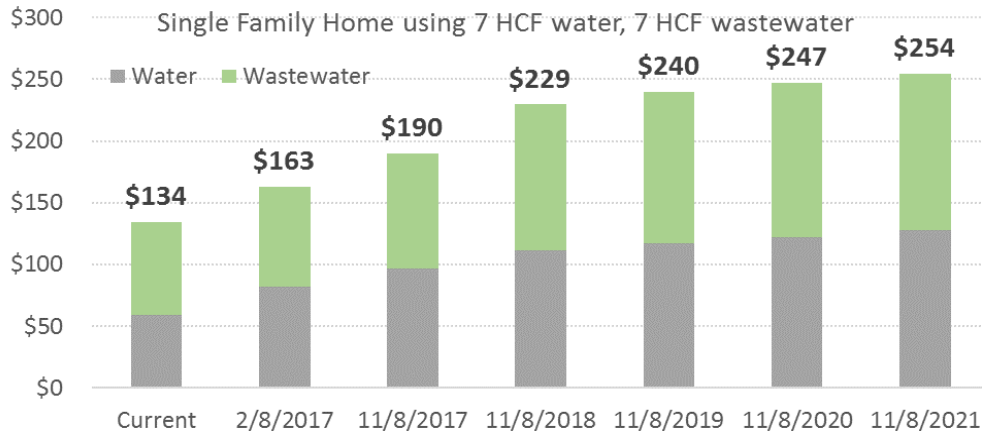


Figure 17
Single Family Home Utility Costs in Peak Months, based on 17 HCF

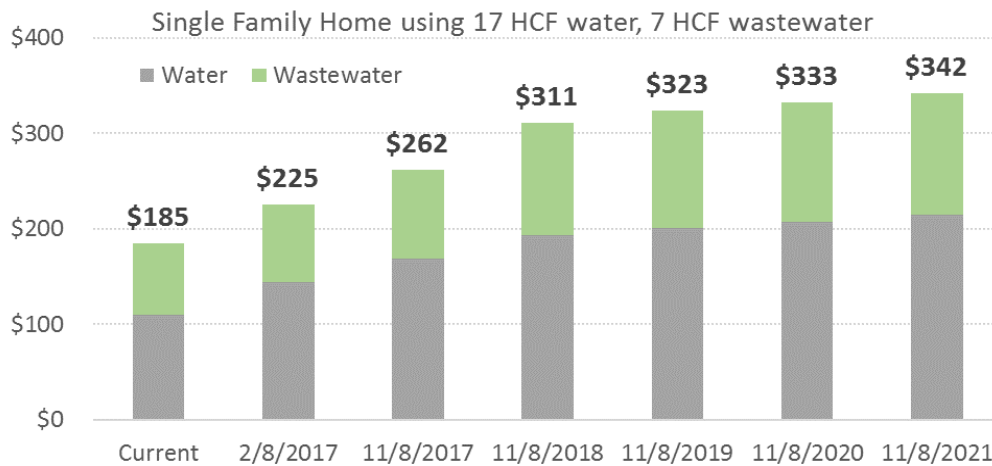
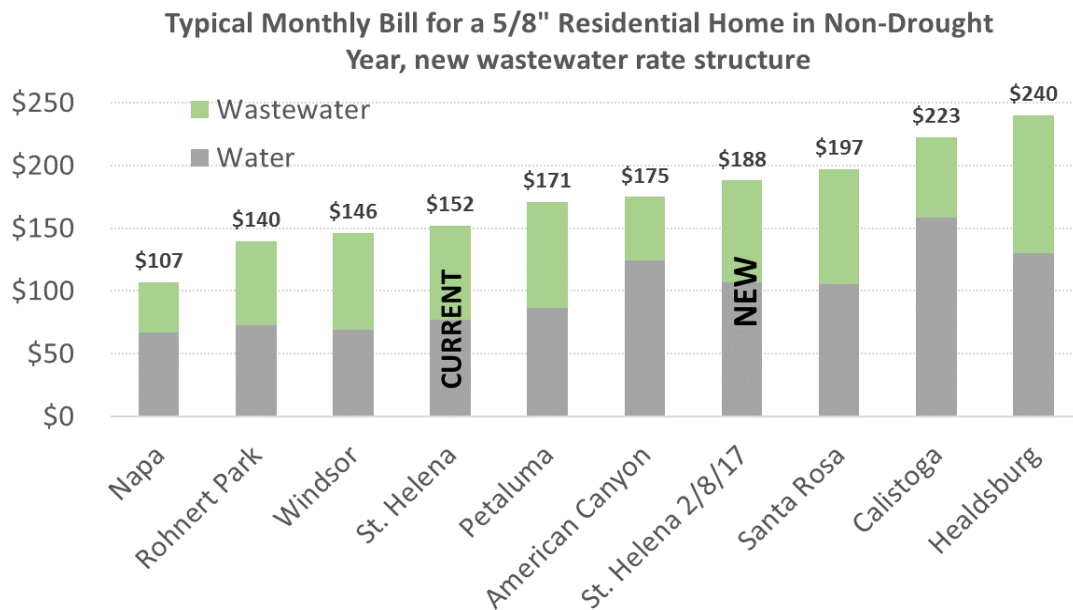


Exhibit A

Figure 18 illustrates what a household using an average of 11 HCF of water and 7 HCF of wastewater in a month would pay for combined water and wastewater in several comparison cities. For St. Helena, the use rate was calculated using the average of the peak and off-peak use rates. St. Helena's combined water and wastewater rates are currently in the middle of the range and will stay in the middle of the range with the proposed 24% rate increase. Note that the comparison cities utilized may be in the process of rate increases as well; this is a snapshot in time.

Figure 18
Impact of Combined Utility Bill Increases



4.2 AFFORDABILITY

The combined impact of increased utility costs must be considered together since they can increase costs beyond what is considered an affordable threshold. The affordability thresholds are guidelines used by State and Federal funding agencies when determining financing terms for debt-financing projects. The State Revolving Fund (SRF) program bases its evaluation of affordability of water rates on two criteria:

1. The Median Household Income (MHI) of the community compared to the State MHI, and
2. The percentage of MHI spent on water related bills.

Generally, water rates are considered to be burdensome if they are greater than 2.50% of MHI, and wastewater rates are considered to be burdensome if they are greater than 2.00% of MHI (or combined, a total of 4.50% of MHI). If a community's MHI is less than 80 percent of the State MHI, the community is considered "Disadvantaged", in which case a rate greater than 1.5 percent of MHI

Exhibit A

is considered burdensome. St. Helena is not considered disadvantaged, as the City's MHI is more than 127% of the State MHI.

Currently, St. Helena's combined water utility costs are 2.32% of MHI. With the increase in costs in February 2017 water costs will total 1.64% of MHI and wastewater will total 1.24% of MHI. Together, the utilities costs will total 2.88% of MHI. The increased water utility costs are, per the State's definition, well within the affordable threshold. The affordability calculations are shown in **Table 3**.

Table 3
Affordability of Water Utility Costs for Residents

Item	Current Rates	Proposed 2/8/2017 Rates
St. Helena Monthly Median Household Income (MHI) [1]	\$6,535	\$6,535
Monthly Water Bill		
Monthly Water Bill for 11 HCF [2]	\$76.80	\$107.08
Water Bill as Percentage of MHI [3]	1.18%	1.64%
Monthly Wastewater Bill		
Monthly Wastewater Bill for 7 HCF	\$74.93	\$80.84
Wastewater Bill as Percentage of MHI [3]	1.15%	1.24%
Total Monthly Utilities Bill	\$151.73	\$187.92
Monthly Utilities Bill as Percentage of MHI [3]	2.32%	2.88%
Median Household Income (MHI)		
Estimated California [1]	\$61,489	
Estimated St. Helena [1]	\$78,421	
St. Helena MHI as a percentage of the State MHI [4]	127.54%	

Source: HEC, California State Water Resources Control Board, and US Census Bureau.

aff comb

[1] 2014 5-year American Community Survey.

[2] Assumes a non-drought year and average seasonal use rate.

[3] The EPA considers bills unaffordable if combined water and wastewater bills are >4.5% of MHI. The State Clean Water SRF program only provides better loan terms (such as extended term financing, lower interest and principal forgiveness) to communities that are NOT Disadvantaged if the wastewater bill is >4% of MHI.

[4] Per the State Water Resources Control Board, a community with an MHI <80% of the Statewide MHI is Disadvantaged.

Exhibit A

4.3 LARGE WATER USERS IMPACTS

Figure 19 shows the cumulative impact of utility rate increases to some of St. Helena’s largest water users in a non-drought period. The St. Helena School District’s water bill increases but its wastewater bill decreases, resulting in a small net increase. The winery’s water bill decreases slightly and its wastewater bill decreases slightly, resulting in a net decrease. The mobile home park’s water bill increases slightly; however, its wastewater bill doubles.

Figure 19
Combined Utilities Impact on Large Water Users

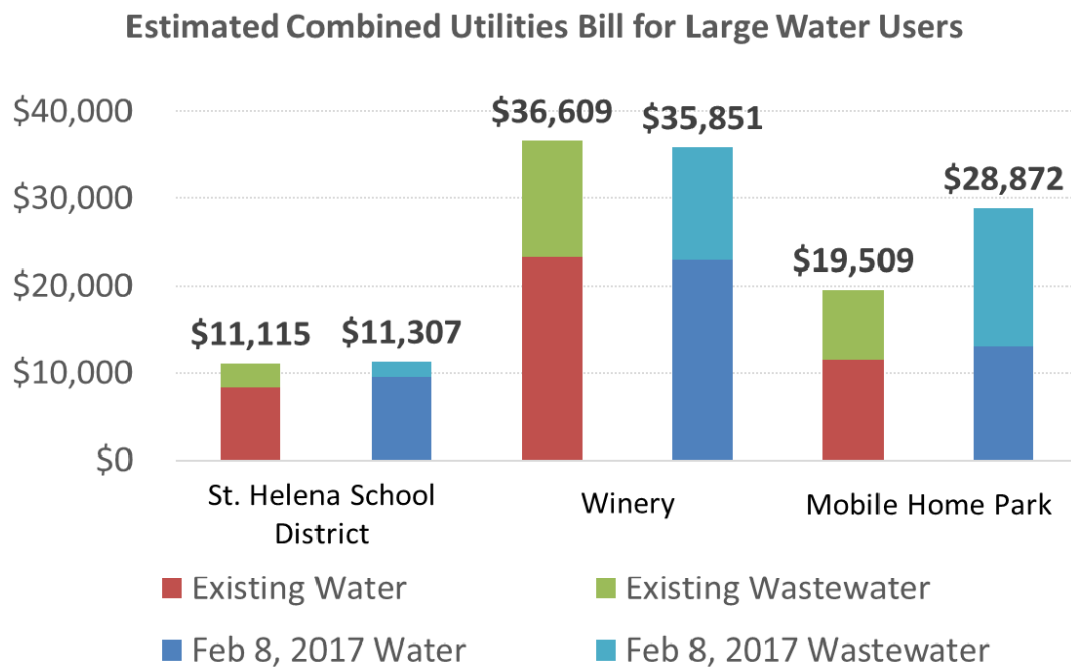


Exhibit A

**HANSFORD ECONOMIC
CONSULTING**



**City of St. Helena (2016)
Water Rate Study
Technical Memorandum**

FINAL
October 31, 2016

HEC Project #150182

Exhibit A

**HANSFORD ECONOMIC
CONSULTING**

PO Box 10384 Phone: 530-412-3676
Truckee, CA 96162 Email: catherine@hansfordecon.com

Technical Memorandum WATER RATE STUDY

To: City of St. Helena

From: Catherine Hansford

Date: October 31, 2016

This technical memorandum presents the detailed water rate study. Support tables are provided in **Attachment A**.

THE WATER FUND

Revenues

The water system is 97% funded by water sales (rates) revenue, 1% by Meadowood area rate surcharges, and 2% by other revenues including investment earnings, finance charges, fees/fines, and other miscellaneous revenues.

Rate revenue is generated according to the current water rate schedule shown in **Table 1**. Under the current rate schedule all customers pay a service charge (or base charge) and a use charge. The service charge is different by meter size, and the use charge varies by customer type. All customers pay use charges in two tiers. The tier 1 rate is applied to single family homes for the first 14 units of water. A unit of water is a hundred cubic feet (HCF). Tier 2 is applied to all water use greater than 14 units consumed each month. The amount of water that tier 1 applies to each month differs by customer type, as shown in **Table 1**.

The Madrone Knoll pump facility (otherwise called the Meadowood pump facility) specifically benefits Meadowood area customers, who are outside the St. Helena city limits. Meadowood area customers pay an additional monthly surcharge for electric use at Meadowood pump facility plus a monthly maintenance fee. The schedule of current Meadowood surcharges is shown in **Table 2**.

Exhibit A

Page 2 of 27

Water Rate Study, October 31, 2016

Table 1
Current Water Rate Schedule

Customer	Rate Schedule	
Monthly Fixed Service Charge		
Meter Size		Basis of Charge
5/8"	\$27.52	Month
3/4"	\$27.52	Month
1"	\$63.80	Month
1.5"	\$124.12	Month
2"	\$196.50	Month
3"	\$365.51	Month
4"	\$607.01	Month
6"	\$1,210.18	Month
8"	\$1,935.52	Month
Residential Use Charge		[1]
Tier 1 (0-14 Units)	\$4.48	Unit
Tier 2 (15+ Units)	\$6.74	Unit
Multi-Family Residential Use Charge		
Tier 1 (0-5 Units)	\$4.48	Unit
Tier 2 (6+ Units)	\$6.74	Unit
Non-Residential Use Charge		
5/8", 3/4", 1"		
Tier 1 (0-36 Units)	\$4.48	Unit
Tier 2 (37+ Units)	\$6.74	Unit
1.5"		
Tier 1 (0-120 Units)	\$4.48	Unit
Tier 2 (121+ Units)	\$6.74	Unit
2"		
Tier 1 (0-192 Units)	\$4.48	Unit
Tier 2 (193+ Units)	\$6.74	Unit
3"		
Tier 1 (0-360 Units)	\$4.48	Unit
Tier 2 (361+ Units)	\$6.74	Unit
4"		
Tier 1 (0-600 Units)	\$4.48	Unit
Tier 2 (601+ Units)	\$6.74	Unit
6"		
Tier 1 (0-1,250 Units)	\$4.48	Unit
Tier 2 (1,251+ Units)	\$6.74	Unit
8"		
Tier 1 (0-1,920 Units)	\$4.48	Unit
Tier 2 (1,921+ Units)	\$6.74	Unit
Landscape Irrigation Rate (\$ per unit) [2]	\$5.22	Unit

Source: City of St. Helena.

curr rates

[1] 1 unit=100 cubic feet.

[2] Service must be for landscape irrigation of public space (park, school or residential common area). Customer must implement water conservation best management practices, as determined by the city. Customer must accept more stringent water use cutbacks during periods of water shortage, as determined by the City.

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Exhibit A

Page 3 of 27

Water Rate Study, October 31, 2016

Table 2
Current Monthly Meadowood Area Surcharges

Total Water Consumption in HCF used by all accounts served by the same special reservoirs and pumping stations

0-150	\$1.81
151-200	\$1.45
201-250	\$1.25
251-300	\$1.07
301-350	\$0.88
351-400	\$0.80
401-450	\$0.74
451-500	\$0.65
501-550	\$0.56
551-600	\$0.50
601-1,250	\$0.49
1,251-1,500	\$0.48
1,501-1,750	\$0.47
1,751-2,000	\$0.43
2,001-2,250	\$0.40
2,251-2,500	\$0.39
2,501-2,750	\$0.37
2,751-3,000	\$0.36
3,001-3,250	\$0.34
3,251-3,500	\$0.33
3,501-3,750	\$0.32
3,751 and more	\$0.31
Per Residential Unit	\$27.94
Meadowood Complex (99 units + clubhouse)	\$2,793.60

Source: City of St. Helena.

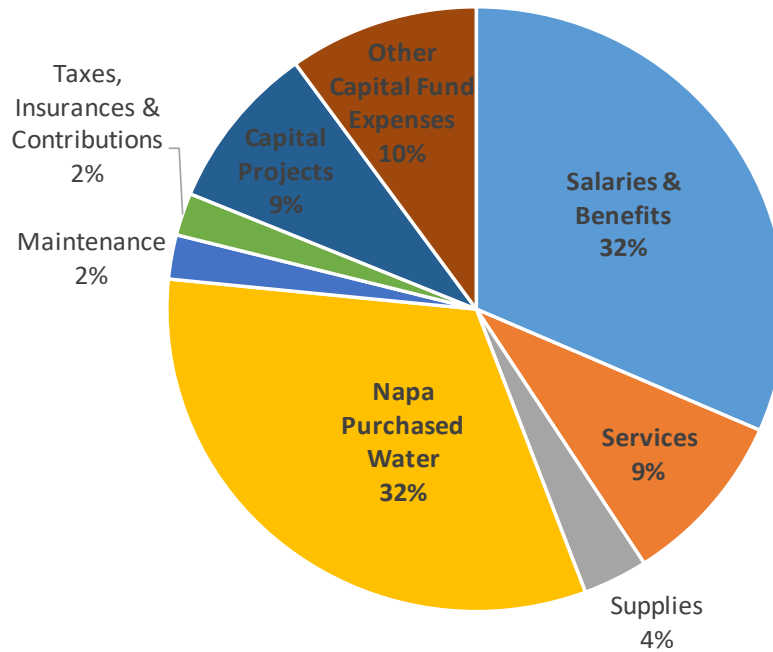
pump

Expenses

The water fund includes an operating and capital fund. Annual operating costs include all water system operating and capital expenses. Over the past five years, personnel costs (salaries and benefits), Napa purchased water, capital projects, other capital fund expenses, and services have been the largest expenditure items. Personnel costs and Napa purchased water have comprised approximately 64 percent of annual costs. Percentage share of historical expenses by expense category is shown in **Figure 1**.

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Figure 1
Typical Annual Water Fund Expenses



The operating fund expenses are further broken down into operations, distribution, treatment plant, Stonebridge Wells, and Napa purchased water. Percentage share of historical operating annual expenses by these categories is shown in **Figure 2**.

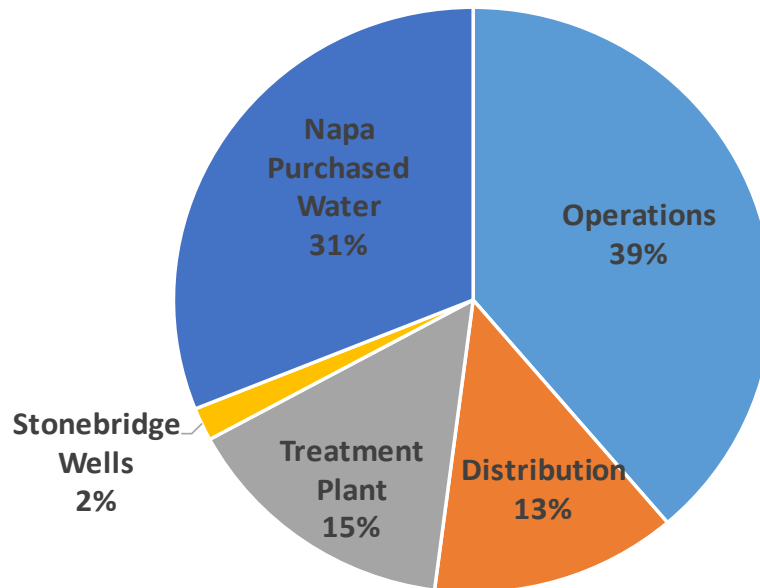
Supporting financial data is provided in Attachment A, **Tables A-1** through **A-3**.

Exhibit A

Page 5 of 27

Water Rate Study, October 31, 2016

Figure 2
Operating Fund Expenses



THE WATER SYSTEM

The City's water sources include surface water from Bell Canyon Reservoir, groundwater from Stonebridge Wells, and purchased treated water from the City of Napa. The Louis Stralla Water Treatment Plant (water treatment plant), which treats surface water stored in Bell Canyon Reservoir, has a capacity of 4.3 million gallons a day (MGD); however, there are flow limitations in the inlet piping which restricts use of the plant to less than its capacity. Stonebridge Wells includes two active groundwater wells and a filtration facility, including filtration tanks, chlorination facilities and a backwash return system. The filter removes iron and manganese. Treated water from the City's water sources is distributed via six storage tanks and four pump stations.

The City first entered into an agreement with the City of Napa for delivery of treated water in September 2006. The third amendment to that agreement, entered into in December 2011, increases the minimum annual delivery to 600 acre-feet with optional delivery up to 800 acre-feet. Optional additional delivery of 200 acre-feet may be delivered provided the City of Napa has sufficient water supply. If Napa does not have sufficient supply it will attempt to acquire supplemental dry-year water on a single year basis from an outside source. Price and payment terms of the optional supply will differ from the base supply, as detailed in the agreement.

Untreated water available for construction water purposes only is also available for purchase from the Lower Reservoir adjacent to York Creek.

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Exhibit A

Page 6 of 27

Water Rate Study, October 31, 2016

Historical system-wide water deliveries are shown in **Table 3**. Almost three-quarters of annual water production is used year-round consistently, and 26% of water production is additional water delivered for increased demand between May and October.

Table 3
Monthly Water Delivery

Month	2013	2014	2015		Avg. Annual Water Delivery (millions of gallons)	Percent of Delivery by Month
<i>millions of gallons</i>						
Jan	27.731	36.865	27.682		30.759	6%
Feb	25.853	24.743	29.805		26.800	5%
Mar	32.701	28.927	39.625		33.751	6%
Apr	43.635	31.822	39.224		38.227	7%
May	59.950	49.464	41.328		50.247	9%
Jun	57.567	50.268	46.679		51.505	10%
Jul	65.613	57.505	51.105		58.074	11%
Aug	67.830	56.303	54.491		59.541	11%
Sep	72.640	55.720	55.173		61.178	11%
Oct	65.278	52.195	52.491		56.655	11%
Nov	44.466	32.516	35.409		37.463	7%
Dec	38.386	30.405	28.648		32.480	6%
Total	601.651	506.733	501.661	A	536.681	100%
Peaking Period (May through October inclusive)				B	337.200	63%
Base Monthly Flow				C	33.247	
Base Annual Flow				D = C*12	398.962	74%
Additional Flow				E = A-D	137.719	26%

Source: City of St. Helena.

delivery

The City uses conjunctive management to preserve its water supplies in the long-term. The share of water supply from one particular source might change month to month. **Figure 3** shows the percentage share of water supply each month using data from 2013 and 2014, both non-drought years. The graph shows that Bell Canyon water is consistently about 40% of the total water supply each month. Water from the City of Napa and Stonebridge Wells fluctuates from year to year but the most variable use of water supply is Stonebridge Wells.

During a non-drought year approximately 40% of water supply is from Bell Canyon, 32% from the City of Napa, and 28% from Stonebridge Wells. This is illustrated in **Figure 4**. During a drought year the City reduces pumping from Stonebridge Wells to preserve groundwater supplies. The percentage share of water supplies during a drought year are 46% from Bell Canyon, 38% from the

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Exhibit A

Page 7 of 27

Water Rate Study, October 31, 2016

City of Napa, and 16% from Stonebridge Wells, as illustrated in **Figure 5**. Total water deliveries are reduced during a drought year. In 2013, a non-drought year, almost 602 million gallons of water were delivered. In 2015, a drought year, almost 502 million gallons of water were delivered.

Figure 3
Water Sources by Month in a Non-Drought Year

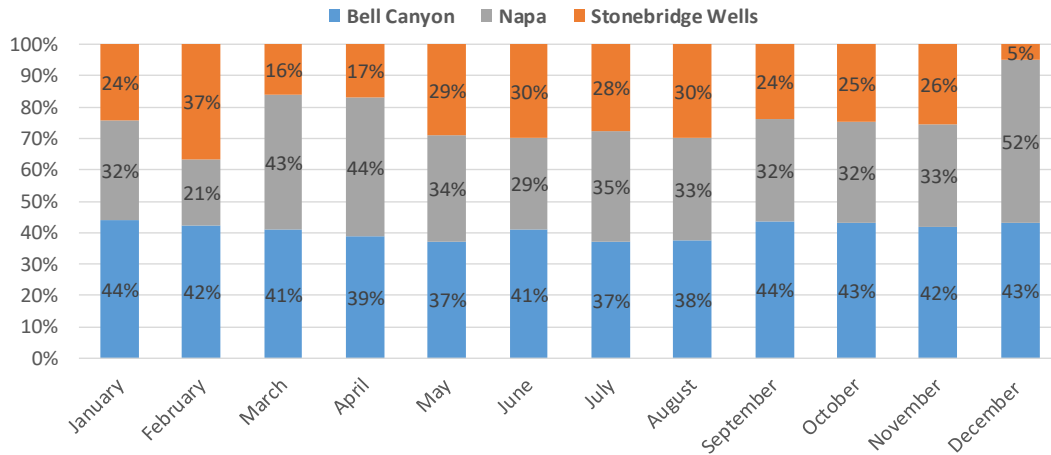
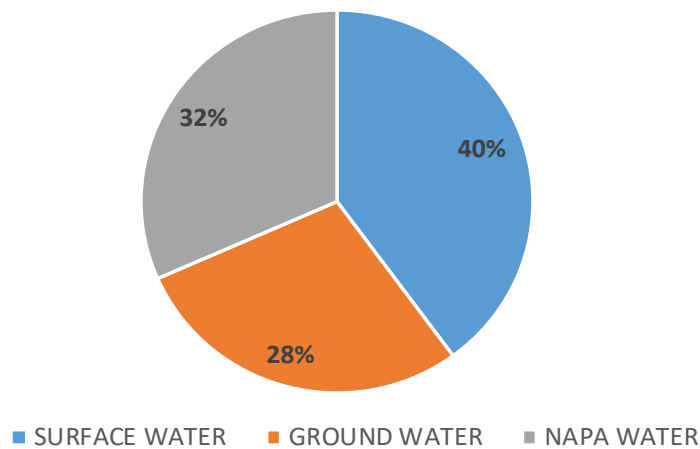
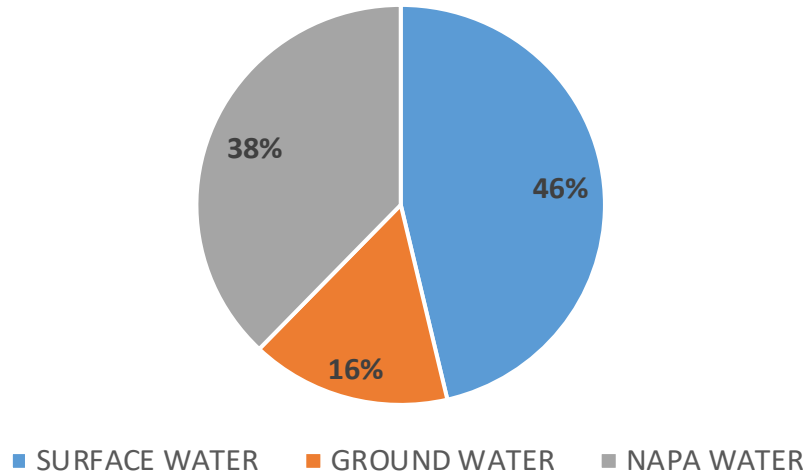


Figure 4
Water Supplies in a Non-Drought Year



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Figure 5
Water Supplies in a Drought Year



WATER USE

Water use fluctuates year to year depending on several factors including, but not limited to, growth, weather, sustained drought, plumbing retrofits, and pricing of water. Average water use by customer type for the past five years is used as the basis on which to project water use over the next five years in the rate study. Historical annual and average annual water use by customer type is shown in **Table A-4**.

Comparison of production and consumption in **Table A-5** shows that unaccounted for water is about 7% of total deliveries which is well within acceptable industry standards. Some unaccounted water will be for hydrant flushing, running to waste at wells and other operational uses of water. Not all unaccounted for water is leaked.

Customer Characteristics

St. Helena experiences greater water demand during summer months than winter months primarily due to outdoor irrigation applications of water. **Table 4** shows average monthly annual use, winter use, and summer use by customer category. With the exception of multi-family, commercial, and laundry customers all water customers use twice as much water, or more, during the summer months than they do in the winter months.

Exhibit A

Page 9 of 27

Water Rate Study, October 31, 2016

Table 4
Customer Usage Characteristics

Customer Type	Number of		Average	Winter	Summer	Summer
	Accounts	Units	Monthly Use	Monthly Average	Monthly Average	to Winter Ratio
			<i>hcf monthly use per unit</i>	[1]	[2]	
Residential						
Single Unit	2,028	2,028	11	7	17	2
Multi-Fam	102	673	7	6	7	1
Mobile Homes	4	247	7	7	13	2
Subtotal Residential	2,134	2,948				
Non-Residential			<i>use per meter</i>			
Commercial	197		34	28	41	1
Industrial	21		541	359	647	2
Landscape	32		53	11	108	10
Religious Places [3]	15		17	9	28	3
Laundry	1		256	265	254	1
Library Schools	14		119	73	164	2
Motel/Hotel	16		152	93	170	2
City Owned	21		52	18	74	4
Subtotal Non-Residential	317					
Total	2,451	2,948				

Source: City of St. Helena and HEC.

char

[1] January and February consumption.

[2] July and August consumption.

[3] Includes community centers.

REVENUE REQUIREMENT

The revenue requirement refers to the amount of money that must be raised for revenue sufficiency of the water fund through rates. The projection of revenue requirement is the cornerstone for calculation of rates. This section explains the derivation of revenue requirement for this Study. Components of revenue requirement include:

- Capital Improvements
- Debt Service
- Meter Replacement Program
- Operations Expenses and Reserves
- System Rehabilitation

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Exhibit A

Page 10 of 27

Water Rate Study, October 31, 2016

Non-water sales revenue projections are credited against projected operations costs. Non-water sales include investment earnings, finance charges (late fees for past due payments), existing Meadowood area surcharges, meter replacement fees, and other miscellaneous revenues.

Capital Improvements

Water system capital costs in any one year are dependent on the state of the current infrastructure to serve existing customers and necessary improvements to accommodate potential new customers. **Table 5** summarizes the capital improvement costs identified by the City as necessary in the next ten years. The costs do not include project costs that already have funding sources identified (i.e. have a grant secured or are to be funded with existing City bond proceeds). All costs are expressed in future dollars. The total ten-year capital improvements projects (CIP) cost is estimated at \$20.8 million. Of this total it is anticipated that \$13.8 million will be spent in the next five years.

Costs are further allocated to existing and future customers based on their estimated use of the facilities. Only \$2.0 million of the total cost is for projects partially benefiting future customers. These projects include Meadowood tank upgrades, Dwyer Road booster improvements, Bell House valve replacement, Holmes tank upgrade, Bell Canyon creek flow measurement, Tank 2 rehabilitation, and Bell Canyon intake tower replacement. **Table A-6** and **Table A-7** provide the water system CIP detail in current and future dollars. Future costs are inflated using the Engineering News Record Construction Cost Index (ENR CCI) past 20-year annual average increase of 3.1%.

Table 5
Capital Improvement Costs Summary

Customer	Estimated CIP Costs in Future Dollars		
	Through 2022	2023 to 2027	Total CIP
Existing Customer Share	\$11,747,982	\$7,006,340	\$18,754,322
Future Customer Share	\$2,045,145	\$0	\$2,045,145
Total Existing and Future	\$13,793,127	\$7,006,340	\$20,799,466

Source: HEC.

cip share

CIP funding sources of costs are shown in **Table 6**, with supporting data in **Table A-8**.

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Exhibit A

Page 11 of 27

Water Rate Study, October 31, 2016

Table 6
Sources of Funding for CIP Costs

Source	Total Cost	Total Through FY 2022	Fiscal Year Ending					
			2017	2018	2019	2020	2021	2022
				Year 1	Year 2	Year 3	Year 4	Year 5
Future \$'s								
Cash - Capital Fund	\$14,571,782	\$7,565,442	\$274,386	\$1,496,091	\$2,069,348	\$1,195,209	\$1,750,606	\$779,802
Cash - Operations Fund	\$405,604	\$405,604	\$0	\$0	\$0	\$56,453	\$349,151	\$0
Debt - Capital Fund	\$2,001,334	\$2,001,334	\$569,522	\$1,431,811	\$0	\$0	\$0	\$0
Reserves	\$1,775,602	\$1,775,602	\$0	\$159,385	\$0	\$0	\$0	\$1,616,217
Existing Customers CIP	\$18,754,322	\$11,747,982	\$843,908	\$3,087,287	\$2,069,348	\$1,251,662	\$2,099,757	\$2,396,019

Source: City of St. Helena and HEC.

exis rates

Debt Service

The City has existing debt service for a water revenue bond sold in 2006. In 2012, the City entered into an installment purchase agreement with the California Statewide Communities Development Authority to finance for water and wastewater system improvements. The debt is secured by a pledge of the net revenues of the water and wastewater system. The installment purchase agreement includes provisions requiring that the City set rates, fees and charges for each fiscal year so as to yield system net revenues during each fiscal year equal to at least 120% of the annual debt service (including parity debt). The City is currently, and has been, out of compliance with this requirement, which will impact the City's rating for future debt if not corrected. Existing yearly debt service payments are shown in **Table A-9**.

New debt service is assumed to be incurred, financed by the State Drinking Water Revolving Fund (DWSRF), for pump station upgrades and Bell Canyon intake tower replacement. The total estimated DWSRF-funded project costs are \$2.3 million. Due to the size of the projects a 15% contingency factor was added to the estimated City cost. The calculated annual new debt service is calculated based on total project costs of \$2.7 million. The estimated annual debt service is \$166,000 although an additional 10% is due in the first 10 years of the loan to build up a reserve of one year of debt service. Existing customers' share of the debt is 86%; the remaining debt service is for future customers' share of the Bell Canyon intake tower replacement costs. The calculated new debt is shown in **Table 7**.

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Exhibit A

Page 12 of 27

Water Rate Study, October 31, 2016

Table 7
Estimated DWSRF New Debt

Item	Construction Fiscal Year
Projects Needed in Next 3 Years	2018
Pump Station Upgrades	\$212,514
Bell Canyon Intake Tower Replacement	\$2,104,494
Subtotal Costs	\$2,317,008
Contingency (15%) [1]	\$347,551
Total	\$2,664,559
Estimated Annual Debt Service [2], [3]	\$166,118
<i>Existing Customers Debt Service</i>	<i>\$143,485</i>
<i>Future Customers Debt Service</i>	<i>\$22,632</i>
Total Debt-Financed Infrastructure Cost	\$2,664,559
Estimated Total Financing Costs	\$657,795

Source: State Water Resources Control Board and HEC.

new debt

[1] State-funded projects typically cost more (more administration as well as American Iron and Steel requirements, and labor reporting).

[2] DWSRF loan assumptions:

Interest Rate (2016 rate is 1.6%)	2.2%
Term (years)	20

[3] Annual debt service is 10% higher for the first 10 years to build one year of reserve.

Meter Replacement Program

The City does not currently collect for replacement of water meters; costs of replacement are currently paid for with reserves, which is unsustainable. This rate study includes calculation of annual costs to replace meters. Each year City crews will replace older water meters that are near the end of their useful life, or which are inaccurately measuring water flow. The cost to replace meters by size of meter was used to determine the annual cost of the meter replacement program. The estimated meter replacement fee revenues are shown in **Table 8**. Meter replacement program costs will increase as the number of City water meters increases and as the cost of installation increases. It is estimated that the meter replacement program will increase from approximately \$47,000 in 2017 to \$54,000 in 2022. Meter replacement costs by size are shown in **Table A-10**.

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Exhibit A

Page 13 of 27

Water Rate Study, October 31, 2016

Table 8
Estimated Meter Replacement Fee Program Cost

Item	Assumption	Fiscal Year Ending					
		2017	2018	2019	2020	2021	2022
			Year 1	Year 2	Year 3	Year 4	Year 5
<i>Projected Growth in Water Meters</i>			5	5	5	5	5
City Water Meters in 2016 [1]		2,485	2,485	2,485	2,485	2,485	2,485
Projected City Water Meters		2,485	2,490	2,495	2,500	2,505	2,510
Estimated Replacement Cost per Meter [2]	3.0%	\$374	\$385	\$397	\$409	\$421	\$434
Percentage of Meters Replaced	20-yr cycle	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Estimated Meter Replacement Program Cost		\$46,494	\$47,985	\$49,524	\$51,112	\$52,751	\$54,442

Source: City of St. Helena and HEC.

meter cost

[1] Includes each meter in compound meters.

[2] Weighted average cost of meters.

Operations Expenses and Reserves

Budgeted fiscal year 2017 expenses are used to project future year expenditures. All operating expenditures are increased 5% each year with the exception of maintenance, taxes, insurances and contributions which are increased at 10% per year, and Napa purchased water, increased at 3% per year per the 2011 amended agreement with the City of Napa. **Table A-11** shows historical annual average operating cost increases of 5.3%.

The water rate study has a target cash reserve of six to twelve months of operating expenses. Additional rate revenue will have to be collected to achieve this reserve fund target within the five-year period.

System Rehabilitation

Depreciation is used as the basis for which to collect rates to cover system rehabilitation costs. Inclusion of system rehabilitation costs demonstrates fiscal responsibility toward the assets to potential future investors and helps to establish good credit¹. Depreciation is calculated based on existing water facilities and new facilities built in the next 5-year period. **Table 9** shows the total annual amount included in the rates for system rehabilitation. Supporting data is provided in **Tables A-12** and **A-13**.

¹ Per Governmental Accounting Standards Board (GASB) 34, local governments must report on the value of their infrastructure assets and plan for asset maintenance (including collecting sufficient revenue) to obtain good credit when issuing bonds or procuring other forms of financing for long-term construction projects.

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Exhibit A

Page 14 of 27

Water Rate Study, October 31, 2016

Table 9
System Rehabilitation Annual Budget Estimate

Depreciation	Fiscal Year Ending					
	2017	2018 Year 1	2019 Year 2	2020 Year 3	2021 Year 4	2022 Year 5
Existing Assets Annual Depreciation	\$875,144	\$902,107	\$929,901	\$958,551	\$988,084	\$1,018,526
New Assets Annual Depreciation	\$25,985	\$72,094	\$104,294	\$158,594	\$268,189	\$309,305
Total Annual Depreciation	\$901,130	\$974,201	\$1,034,195	\$1,117,145	\$1,256,273	\$1,327,831
Percentage of Depreciation in Rates	0%	100%	100%	100%	100%	100%
Estimated System Rehabilitation Cost	\$0	\$974,200	\$1,034,200	\$1,117,100	\$1,256,300	\$1,327,800

Source: HEC.

depr

Meadowood Area Surcharges

Currently approximately \$50,000 each year is generated from surcharges applied in the Meadowood area, which is outside of the City limits. Per the September 13, 2016 Task Force meeting, Meadowood area surcharges are to be eliminated when new rates go into effect February 8, 2017.

Revenue Requirement

Table 10 on page 16 provides the projection of annual costs and revenues and the resulting revenue requirement through fiscal year 2027. Total revenue requirement is projected to increase from \$5.5 million in fiscal year 2017 to \$8.4 million in fiscal year 2022, and \$9.6 million in fiscal year 2027.

COST CLASSIFICATION

After determining a utility's revenue requirements, a utility's next step is determining the cost of service. Utilizing a public agency's approved budget, financial reports, operating data, and capital improvement plans, the rate study categorizes (functionalizes) the costs, expenses, and assets of the water system among major operating functions to determine the cost of service.

After the assets and the costs of operating those assets are properly categorized by function, the rate study allocates those "functionalized costs" to the various customer classes (e.g., single-family residential, multi-family residential and commercial) by determining the characteristics of those classes and the contribution of each to incurred costs such as peaking factors or different delivery costs, service characteristics and demand patterns. Rate design is the final part of the rate-making procedure. The revenue requirement and cost of service analysis are used to determine appropriate rates for each customer class.

Cost classification provides a guideline for the City in determining the portion of revenue requirement to collect through service charges versus use charges. Generally, rates reflect fixed costs in the service charges (flat monthly rates) and variable costs in the use charges (per HCF of

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Exhibit A

Page 15 of 27

Water Rate Study, October 31, 2016

water). Through the cost classification analysis, it is calculated that fixed costs comprise about 70% of St. Helena's water system total annual operating costs. Currently St. Helena collects 30% of costs recovered through rates in service charges and 70% in use charges.

If all fixed costs (70%) were in the service charge the bill increase would be dramatic for people on a fixed income. This rate study gradually increases the allocation of total costs to base charges from 31% in 2017, to 36% in 2022, and to 41% in 2027. Allocation of the projected revenue requirement is shown in **Table 11**. Supporting detail is shown in **Tables A-14 and A-15** in **Appendix A**.

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Exhibit A

Page 16 of 27

Water Rate Study, October 31, 2016

Table 10
Projected Revenue Requirement

Operating Expenses and Revenues	Annual Increase	Fiscal Year Ending										
		2017 Budgeted	2018 Year 1	2019 Year 2	2020 Year 3	2021 Year 4	2022 Year 5	2023 Year 6	2024 Year 7	2025 Year 8	2026 Year 9	2027 Year 10
Operating Expenses												
Salaries & Benefits	5.0%	\$1,612,243	\$1,692,855	\$1,777,498	\$1,866,373	\$1,959,691	\$2,057,676	\$2,160,560	\$2,268,588	\$2,382,017	\$2,501,118	\$2,626,174
Services	5.0%	\$507,525	\$532,901	\$559,546	\$587,524	\$616,900	\$647,745	\$680,132	\$714,139	\$749,846	\$787,338	\$826,705
Supplies	5.0%	\$138,690	\$145,625	\$152,906	\$160,551	\$168,579	\$177,007	\$185,858	\$195,151	\$204,908	\$215,154	\$225,911
Napa Purchased Water	3.0%	\$1,349,019	\$1,389,490	\$1,431,174	\$1,474,109	\$1,518,333	\$1,563,883	\$1,610,799	\$1,659,123	\$1,708,897	\$1,760,164	\$1,812,969
Maintenance	10.0%	\$157,079	\$172,787	\$190,066	\$209,072	\$229,979	\$252,977	\$278,275	\$306,103	\$336,713	\$370,384	\$407,422
Taxes, Insurances & Contributions	10.0%	\$133,167	\$146,484	\$161,132	\$177,245	\$194,970	\$214,467	\$235,913	\$259,505	\$285,455	\$314,001	\$345,401
Meter Replacement Program		\$19,373	\$47,985	\$49,524	\$51,112	\$52,751	\$54,442	\$56,186	\$57,987	\$59,845	\$61,763	\$63,741
WTP Condition Assessment		\$0	\$0	\$0	\$0	\$174,576	\$0	\$0	\$0	\$0	\$0	\$0
Update GIS Maps of Water System		\$0	\$0	\$0	\$56,453	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Water Master Plan Update		\$0	\$0	\$0	\$0	\$174,576	\$0	\$0	\$0	\$0	\$0	\$0
Total Operating Expenses		\$3,917,096	\$4,128,126	\$4,321,846	\$4,582,439	\$5,090,354	\$4,968,197	\$5,207,724	\$5,460,595	\$5,727,681	\$6,009,921	\$6,308,323
Debt Service												
Existing (2012B & 2006A Bonds)		\$989,251	\$982,916	\$985,767	\$982,373	\$980,513	\$980,132	\$974,551	\$974,027	\$971,916	\$969,490	\$964,087
New Debt for 2018 Improvements		\$0	\$0	\$182,729	\$182,729	\$182,729	\$182,729	\$182,729	\$182,729	\$182,729	\$182,729	\$182,729
Subtotal Debt Service		\$989,251	\$982,916	\$1,168,496	\$1,165,102	\$1,163,243	\$1,162,861	\$1,157,281	\$1,156,757	\$1,154,646	\$1,152,220	\$1,146,816
Capital Projects (cash funded)		\$274,386	\$521,891	\$1,035,148	\$78,109	\$494,306	\$0	\$523,620	\$362,953	\$0	\$0	\$0
System Rehabilitation		\$0	\$974,200	\$1,034,200	\$1,117,100	\$1,256,300	\$1,327,800	\$1,393,200	\$1,472,700	\$1,531,300	\$1,609,700	\$1,665,200
Operating Reserves		\$500,000	\$0	\$0	\$950,000	\$200,000	\$1,069,600	\$600,000	\$700,000	\$965,000	\$800,000	\$650,000
Total Costs		\$5,680,733	\$6,607,133	\$7,559,690	\$7,892,750	\$8,204,202	\$8,528,458	\$8,881,824	\$9,153,004	\$9,378,627	\$9,571,841	\$9,770,340
Non-Operating Credits (Expenses)												
Investment Earnings	constant	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000
Finance Charges	constant	\$36,000	\$36,000	\$36,000	\$36,000	\$36,000	\$36,000	\$36,000	\$36,000	\$36,000	\$36,000	\$36,000
Surcharge-Meadowood [1]		\$48,643	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Revenue	constant	\$32,850	\$32,850	\$32,850	\$32,850	\$32,850	\$32,850	\$32,850	\$32,850	\$32,850	\$32,850	\$32,850
Meter Replacement Fee		\$19,373	\$47,985	\$49,524	\$51,112	\$52,751	\$54,442	\$56,186	\$57,987	\$59,845	\$61,763	\$63,741
Total Non-Operating Credits (Expenses)		\$161,866	\$141,835	\$143,374	\$144,962	\$146,601	\$148,292	\$150,036	\$151,837	\$153,695	\$155,613	\$157,591
Total Revenue Requirement		\$5,518,867	\$6,465,298	\$7,416,316	\$7,747,788	\$8,057,602	\$8,380,166	\$8,731,788	\$9,001,167	\$9,224,932	\$9,416,228	\$9,612,749
Percent Increase in Revenue Requirement [2]		24%	17%	15%	4%	4%	4%	4%	3%	2%	2%	2%
Sources: City of St. Helena and HEC.												

Source: City of St. Helena and HEC.

[1] FY 2017 costs from 2017 budget for "Surcharge-Meadowood" plus "Pumping Charge". Per Task Force September 13, 2016 meeting, Meadowood surcharges are eliminated.

[2] Percentage increase for FY 2017 based on FY 2016 water sales.

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Exhibit A

Page 17 of 27

Water Rate Study, October 31, 2016

Table 11
Allocation of Revenue Requirement to Service and Use Charges

Costs	Fiscal Year Ending										
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Total Revenue Requirement	\$5,518,867	\$6,465,298	\$7,416,316	\$7,747,788	\$8,057,602	\$8,380,166	\$8,731,788	\$9,001,167	\$9,224,932	\$9,416,228	\$9,612,749
Fire Services	0.48%	\$26,569	\$31,126	\$35,704	\$37,300	\$38,792	\$40,345	\$43,334	\$44,411	\$45,332	\$46,279
Non-Fire Services Rev. Req.											
Customer Charges	9.43%	9.43%	9.43%	9.43%	9.43%	9.43%	9.43%	9.43%	9.43%	9.43%	9.43%
Subtotal in Customer Charges	\$520,435	\$609,684	\$699,366	\$730,624	\$759,840	\$790,258	\$823,416	\$848,819	\$869,920	\$887,960	\$906,492
% in base	[1]	21.23%	22.23%	24.23%	25.23%	26.23%	27.23%	28.23%	29.23%	30.23%	31.23%
Subtotal in Capacity Charges	\$1,171,870	\$1,437,487	\$1,723,098	\$1,877,590	\$2,033,246	\$2,198,443	\$2,378,005	\$2,541,379	\$2,696,806	\$2,846,892	\$3,002,435
% in use	[1]	68.85%	67.85%	65.85%	64.85%	63.85%	62.85%	61.85%	60.85%	59.85%	58.85%
Subtotal in Use Charges	\$3,799,993	\$4,387,001	\$4,958,147	\$5,102,274	\$5,225,724	\$5,351,120	\$5,488,329	\$5,567,635	\$5,613,794	\$5,636,044	\$5,657,543
Source: HEC.											
[1] Percentages shown are rounded to the nearest one hundredth.											
											cost alloc

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Exhibit A

Page 18 of 27

Water Rate Study, October 31, 2016

RATES ANALYSIS

Service Charges. Service costs are divided into customer costs and capacity costs. Customer costs are allocated to customers based on the number of water accounts (which is the same as the number of meters). Capacity costs are allocated to customers based on the number of equivalent meters, determined by the relative hydraulic capacity of the meter size relative to a 5/8-inch meter. **Table 12** shows the calculation of equivalent meters, calculation of equivalent fire units, and number of meters by meter size. Total number of meters by customer type is shown in **Table A-16**.

The total number of 5/8" meters was adjusted to include single family 1" meters. Due to CA Residential Code Section R313 (fire sprinklers), almost all new residential development is required to install 1" meters in order to have sufficient flow for sprinklers; however, most existing homes built prior to implementation of CA Residential Code Section R313, have a 5/8" or 3/4" meter. Because the 1" residential customers utilize the same average amount of water as the 3/4" and 5/8" customers, it is appropriate for them to pay the same rates, and not be penalized by the fire sprinklers requirement.

Table 12
Estimated Meter and Fire Equivalent Units

Meter Size	Number of Meters	Meter Flow (gpm)	Meter Ratio	Equivalent Meter Units	Number of Fire Services	Pipe Flow	Equivalent Fire Units
		[1]	[1]			[2]	
5/8"	1,987	20	1.0	1,987			
1"	330	50	2.5	825		1	0
1.5"	61	100	5.0	305		3	0
2"	47	160	8.0	376		6	0
3"	7	320	16.0	112		18	0
4"	9	500	25.0	225	79	38	3,027
6"	11	1,000	50.0	550	33	111	3,673
8"	0	1,600	80.0	0	14	237	3,321
Total	2,452			4,380	126		10,021

Source: American Water Works Association, City of St. Helena and HEC.

m equiv

[1] AWWA standard meter flow and ratios - assumes all larger meters are compound meters (AWWA C702). 1.5" meters and smaller are displacement type. 2" and larger are compound type meters.

[2] Hazen-Williams equation for flow through pressure conduits is pipe diameter raised to the 2.63 power.

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Exhibit A

Page 19 of 27

Water Rate Study, October 31, 2016

The calculation of monthly service charges through fiscal year 2022 is shown in **Table 13**. The total service charges include addition of the customer and capacity charges. All 5/8", 3/4" and single family residential 1" meters pay the same service charge.

Table 13
Calculated Monthly Service Charge per Meter

		Fiscal Year Ending					
		2017	2018	2019	2020	2021	2022
Billing Period Beginning*		2/8/2017	11/8/2017	11/8/2018	11/8/2019	11/8/2020	11/8/2021
Customer Costs		\$520,435	\$609,684	\$699,366	\$730,624	\$759,840	\$790,258
Customer Accounts		2,451	2,456	2,461	2,466	2,471	2,476
Cost per Account per Month		\$17.69	\$20.69	\$23.68	\$24.69	\$25.63	\$26.60
Capacity Costs		\$1,171,870	\$1,437,487	\$1,723,098	\$1,877,590	\$2,033,246	\$2,198,443
Est. Billable Meter Equivalents		4,032	4,037	4,042	4,047	4,052	4,057
Meter Size	Meter Ratio	Capacity Costs Monthly Service Charges per Meter					
5/8", 3/4" & SF 1"	1.0	\$24.22	\$29.67	\$35.52	\$38.66	\$41.82	\$45.16
1"	2.5	\$60.55	\$74.18	\$88.81	\$96.66	\$104.54	\$112.89
1.5"	5.0	\$121.10	\$148.37	\$177.62	\$193.31	\$209.08	\$225.79
2"	8.0	\$193.76	\$237.39	\$284.20	\$309.30	\$334.53	\$361.26
3"	16.0	\$387.52	\$474.77	\$568.40	\$618.59	\$669.05	\$722.52
4"	25.0	\$605.50	\$741.83	\$888.12	\$966.55	\$1,045.39	\$1,128.94
6"	50.0	\$1,211.01	\$1,483.66	\$1,776.24	\$1,933.11	\$2,090.78	\$2,257.87
		Total Base Monthly Charges per Meter					
Meter Size							
5/8", 3/4" & SF 1"		\$41.91	\$50.36	\$59.21	\$63.35	\$67.44	\$71.75
1"		\$78.25	\$94.87	\$112.49	\$121.35	\$130.16	\$139.49
1.5"		\$138.80	\$169.05	\$201.31	\$218.00	\$234.70	\$252.38
2"		\$211.46	\$258.07	\$307.88	\$333.99	\$360.15	\$387.86
3"		\$405.22	\$495.46	\$592.08	\$643.28	\$694.68	\$749.12
4"		\$623.20	\$762.52	\$911.80	\$991.24	\$1,071.02	\$1,155.53
6"		\$1,228.70	\$1,504.35	\$1,799.93	\$1,957.80	\$2,116.41	\$2,284.47

Source: City of St. Helena and HEC.

service charge

* Dates reflect the current billing cycle; if the billing cycle date changes so will these effective dates.

Seasonal Rate Structure

Two rate structures were evaluated for collection of use charges: the uniform rate structure and the seasonal rate structure. The September 13th, 2016 Task Force meeting selected the seasonal rate structure as the preferred rate structure for the Study; therefore, only the seasonal rate structure is presented herein.

Total costs allocated to use charges are divided by projected water demand in the peak and off-peak seasons to calculate the use rate per HCF in the peak and off-peak seasons. The use rate during each season is the same for all treated water customers. Water use by season is determined

Prepared by HEC

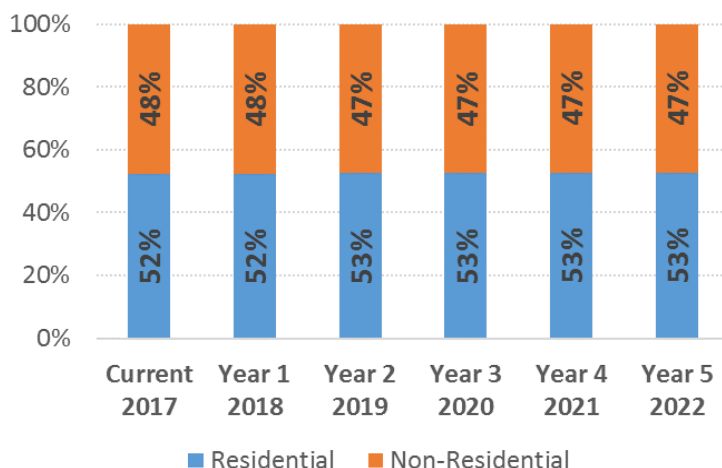
Exhibit A

Page 20 of 27

Water Rate Study, October 31, 2016

in **Table A-17**. Total annual projected water demand is shown in **Figure 6**, with supporting data in **Table A-18**.

Figure 6
Projected Water Demand



The projection of water demand incorporates assumed growth of 5 units per year and an expectation that as water rates increase demand will decrease. The projection of water demand accounts for reduced consumption due to increased rates. The relationship between increased prices and decreased demand is referred to as price elasticity. Price elasticity varies by geography due to many micro-economic variables. Hansford Economic Consulting (HEC) applied industry knowledge to establish assumed price elasticity factors for St. Helena. The price elasticity and water demand analysis is shown in **Tables A-18** through **A-20**.

Off-peak water rates are lower November through April (off-peak months) than during peak months (May through October). During the peak months the costs of operating the water system are 11% higher. Supporting data is provided in **Tables A-17** and **A-21**.

Drought Surcharge

In addition to the seasonal rate structure the City may implement a drought surcharge. The drought surcharge would be implemented when the City enters Phase I drought regulations. **Table A-22** calculates a drought surcharge ratio that would be applied to the seasonal rate structure. The drought surcharge would only be applied to use charges, not to service charges. The analysis demonstrates that during drought years the cost of water is 6% higher than during non-drought years.

The calculation of use charges is shown in **Table 14**.

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Exhibit A

Page 21 of 27

Water Rate Study, October 31, 2016

Table 14
Calculated Use Charges per HCF

		Fiscal Year Ending					
		2017	2018	2019	2020	2021	2022
	Billing Period Beginning*	2/8/2017	11/8/2017	11/8/2018	11/8/2019	11/8/2020	11/8/2021
Allocated Cost		\$3,799,993	\$4,387,001	\$4,958,147	\$5,102,274	\$5,225,724	\$5,351,120
Total Consumption		645,800	643,042	644,175	646,780	647,544	648,219
Cost per HCF		\$5.88	\$6.82	\$7.70	\$7.89	\$8.07	\$8.26
SEASONAL RATE STRUCTURE							
Off-Peak Water Use (Nov-Apr)	37%	240,040	239,015	239,436	240,404	240,688	240,939
Peak Water Use (May-Oct)	63%	405,760	404,027	404,739	406,376	406,856	407,280
Total Consumption		645,800	643,042	644,175	646,780	647,544	648,219
Calculated Cost per HCF by Season -- NON-DROUGHT PERIOD							
Off-Peak Costs per HCF		\$5.50	\$6.37	\$7.19	\$7.37	\$7.54	\$7.71
Peak Costs per HCF	1.11	\$6.11	\$7.09	\$8.00	\$8.20	\$8.38	\$8.58
Calculated Cost per HCF by Season -- DROUGHT PERIOD							
Off-Peak Costs per HCF	1.06	\$5.81	\$6.73	\$7.60	\$7.79	\$7.97	\$8.15
Peak Costs per HCF	1.11	\$6.46	\$7.49	\$8.45	\$8.66	\$8.86	\$9.06

Source: HEC.

use charge

* Dates reflect the current billing cycle; if the billing cycle date changes so will these effective dates.

A small portion of fixed costs are associated with private fire protection. Fire costs are allocated to fire customers based on the number of equivalent fire units. Fire service charges are calculated in **Table 15**.

Calculated meter replacement fees are shown in **Table 16**. Meter replacement fees are calculated using data presented in **Table A-10**. The raw water cost and rate per HCF for February 8, 2017 is calculated in **Table 17**. Raw water may only be taken from the Lower Reservoir for construction-related water applications.

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Exhibit A

Page 22 of 27

Water Rate Study, October 31, 2016

Table 15
Calculation of Fire Service Charges

		2017	2018	2019	2020	2021	2022
Fire Services		Current	Year 1	Year 2	Year 3	Year 4	Year 5
Billing Period Beginning*		2/8/2017	11/8/2017	11/8/2018	11/8/2019	11/8/2020	11/8/2021
Fire Services Cost Allocation		\$26,569	\$31,126	\$35,704	\$37,300	\$38,792	\$40,345
Equivalent Fire Units		10,021	10,021	10,021	10,021	10,021	10,021
Monthly Cost per Equivalent Fire Unit		\$0.22	\$0.26	\$0.30	\$0.31	\$0.32	\$0.34
Pipe Size	Pipe Flow	Monthly Charge					
1"	1	\$0.22	\$0.26	\$0.30	\$0.31	\$0.32	\$0.34
1.5"	3	\$0.64	\$0.75	\$0.86	\$0.90	\$0.94	\$0.97
2"	6	\$1.37	\$1.60	\$1.84	\$1.92	\$2.00	\$2.08
3"	18	\$3.97	\$4.65	\$5.34	\$5.58	\$5.80	\$6.03
4"	38	\$8.47	\$9.92	\$11.38	\$11.89	\$12.36	\$12.86
6"	111	\$24.59	\$28.81	\$33.05	\$34.53	\$35.91	\$37.34
8"	237	\$52.41	\$61.40	\$70.43	\$73.57	\$76.52	\$79.58

Source: HEC.

fire

* Dates reflect the current billing cycle; if the billing cycle date changes so will these effective dates.

Table 16
Calculated Meter Replacement Fees by Meter Size

Meter Size	Fiscal Year Ending					
	2017	2018	2019	2020	2021	2022
		Year 1	Year 2	Year 3	Year 4	Year 5
Annual escalator						
3/4" or less	\$1.31	\$1.35	\$1.39	\$1.43	\$1.47	\$1.52
1"	\$1.83	\$1.89	\$1.94	\$2.00	\$2.06	\$2.12
1-1/2"	\$2.88	\$2.96	\$3.05	\$3.14	\$3.24	\$3.33
2"	\$3.66	\$3.77	\$3.88	\$4.00	\$4.12	\$4.24
3"	\$7.84	\$8.08	\$8.32	\$8.57	\$8.83	\$9.09
4"	\$17.26	\$17.78	\$18.31	\$18.86	\$19.42	\$20.01
6"	\$23.79	\$24.51	\$25.24	\$26.00	\$26.78	\$27.58

Source: HEC.

meter fee

Prepared by HEC

Exhibit A

Page 23 of 27

Water Rate Study, October 31, 2016

Table 17
Raw Water Rate Calculation for Fiscal Year 2017

Costs	Estimated Cost FY 2016-17
Total Operating Costs [1]	\$3,897,723
Less Napa Purchased Water	\$1,349,019
Less Stonebridge Wells Costs	\$85,400
Less Distribution Costs	\$685,930
Less Treated Water Costs	\$834,407
Total Raw Water Operating Costs	\$942,967
City Water Supplies (gallons) [2]	345,701,088
Cost per Gallon	\$0.00273
Cost per HCF	\$2.04

Source: City of St. Helena.

raw

[1] Equals total operating costs in the revenue requirement table less the meter replacement program costs, WTP condition assessment costs, updating GIS maps costs, and Water Master Plan update costs.

[2] Based on annual average production of city groundwater and surface water.

A summary of the calculated water rates schedule through fiscal year 2027 is given in **Table 18**.

Prepared by HEC

Table 18
Calculated Water Rates

Charges		Billing Period Beginning *											
Current	2/8/2017	11/8/2017	11/8/2018	11/8/2019	11/8/2020	11/8/2021	11/8/2022	11/8/2023	11/8/2024	11/8/2025	11/8/2026		
Monthly Charges per Meter													
Service Charge													
5/8", 3/4" & SF 1"	\$27.52	\$43.22	\$51.71	\$60.59	\$64.78	\$68.91	\$73.27	\$78.00	\$82.13	\$85.95	\$89.54	\$93.26	
1"	\$63.80	\$80.08	\$96.76	\$114.44	\$123.35	\$132.22	\$141.61	\$151.81	\$160.89	\$169.40	\$177.51	\$185.90	
1.5"	\$124.12	\$141.67	\$172.02	\$204.36	\$221.14	\$237.94	\$255.72	\$275.02	\$292.36	\$308.70	\$324.35	\$340.54	
2"	\$196.50	\$215.12	\$261.84	\$311.76	\$337.99	\$364.27	\$392.10	\$422.31	\$449.54	\$475.26	\$499.94	\$525.48	
3"	\$365.51	\$413.06	\$503.54	\$600.40	\$651.86	\$703.51	\$758.21	\$817.59	\$871.27	\$922.08	\$970.92	\$1,021.45	
4"	\$607.01	\$640.46	\$780.29	\$930.11	\$1,010.10	\$1,090.44	\$1,175.54	\$1,267.90	\$1,351.51	\$1,430.71	\$1,506.92	\$1,585.75	
6"	\$1,210.18	\$1,252.50	\$1,528.85	\$1,825.17	\$1,983.80	\$2,143.19	\$2,312.05	\$2,495.35	\$2,661.38	\$2,818.75	\$2,970.20	\$3,126.89	
Private Fire Protection													
4"	\$4.00	\$8.47	\$9.92	\$11.38	\$11.89	\$12.36	\$12.86	\$13.40	\$13.81	\$14.15	\$14.45	\$14.75	
6"	\$6.00	\$24.59	\$28.81	\$33.05	\$34.53	\$35.91	\$37.34	\$38.91	\$40.11	\$41.11	\$41.96	\$42.84	
8"	\$8.00	\$52.41	\$61.40	\$70.43	\$73.57	\$76.52	\$79.58	\$82.92	\$85.48	\$87.60	\$89.42	\$91.28	
Raw Water <i>per Gallon</i> [1]	\$0.00267	\$0.00273	\$0.00320	\$0.00367	\$0.00383	\$0.00398	\$0.00414	\$0.00432	\$0.00445	\$0.00456	\$0.00465	\$0.00475	
TREATED WATER USE CHARGES PER HCF													
SEASONAL RATE STRUCTURE													
NON-DROUGHT PERIOD													
Off-Peak (Nov-Apr)	[2]	\$5.50	\$6.37	\$7.19	\$7.37	\$7.54	\$7.71	\$7.90	\$8.01	\$8.06	\$8.08	\$8.11	
Peak (May-Oct)		\$6.11	\$7.09	\$8.00	\$8.20	\$8.38	\$8.58	\$8.79	\$8.90	\$8.97	\$8.99	\$9.02	
DROUGHT PERIOD													
Off-Peak (Nov-Apr)	[2]	\$5.81	\$6.73	\$7.60	\$7.79	\$7.97	\$8.15	\$8.35	\$8.46	\$8.52	\$8.54	\$8.57	
Peak (May-Oct)		\$6.46	\$7.49	\$8.45	\$8.66	\$8.86	\$9.06	\$9.28	\$9.41	\$9.47	\$9.50	\$9.53	
Source: HEC.													

Source: HEC.

* Dates reflect the current billing cycle; if the billing cycle date changes so will these effective dates.

[1] Raw water costs increased from fiscal year 2016-17 by the same percentage increase as the revenue requirement.

[2] Current Rate Structure rates as follows:

Tiers by customer category (in hcf):

Single family
Multi-family

Price per HCF

Price per HCF - Landscape Irrigation

Tier 1	0-14	Tier 2	15+	Tier 1	0-36	Tier 2	37+	Tier 1	0-600	Tier 2	601+
0-5	0-5	6+	6+	0-120	0-120	121+	121+	0-1,250	0-1,250	1,251+	1,251+
\$4.48	\$4.48	\$6.74	\$6.74	0-192	0-192	193+	193+	0-1,920	0-1,920	1,921+	1,921+
\$5.22	\$5.22			0-360	0-360	361+	361+				

proj rates

CASH FLOW

Table 19 and **Table 20** on the following pages show the projected cash flow and cash flow by fund, respectively, through fiscal year 2027. With adoption of the calculated rates it is anticipated that the City will be able to meet all water enterprise fund obligations and achieve at least six months of operating expenses in cash reserves in each year of the projection. The cash flow table demonstrates that a debt service coverage ratio of at least 1.20 will be met. In addition, the City may be able to designate (put aside) up to \$3.1 million by fiscal year ending 2027 for future cash funding of system rehabilitation.

Figure 7 shows projected water fund balances with and without rate increases as well as target and minimum operating cash reserves.

Figure 7

Projected Water Fund Cash Balance (Operating and Capital Funds combined)

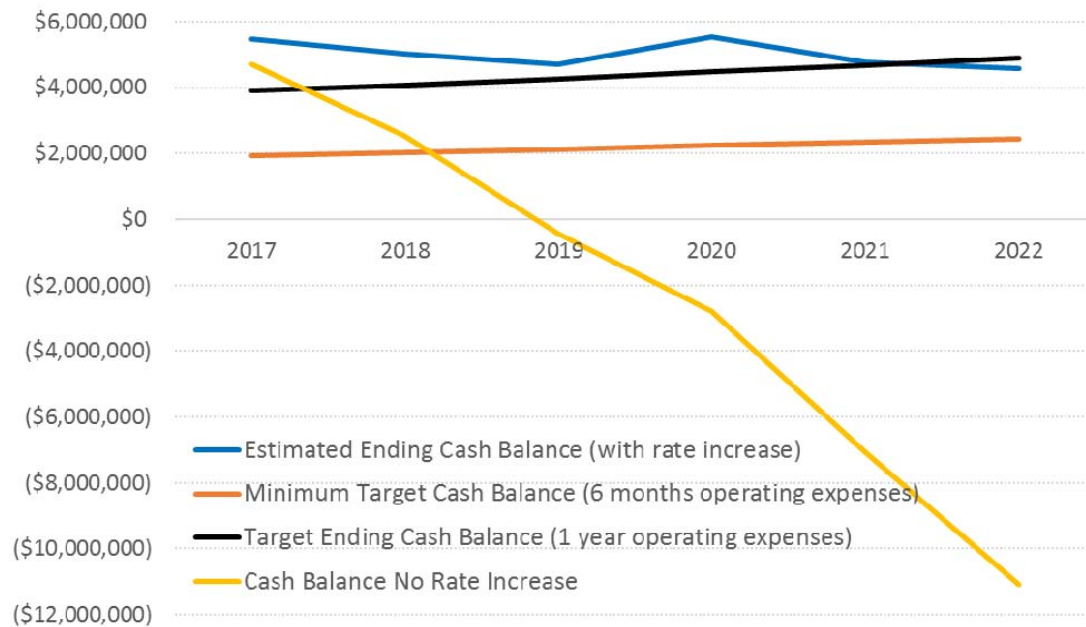


Table 19
Projected Cash Flow

Revenues and Expenses	2017 Estimated	Fiscal Year Ending									
		2018 Year 1	2019 Year 2	2020 Year 3	2021 Year 4	2022 Year 5	2023 Year 6	2024 Year 7	2025 Year 8	2026 Year 9	2027 Year 10
Billing Period Beginning*	2/8/2017	11/8/2017	11/8/2018	11/8/2019	11/8/2020	11/8/2021	11/8/2022	11/8/2023	11/8/2024	11/8/2025	11/8/2026
Revenue											
Water Sales [1]	\$4,459,929	\$6,149,821	\$7,099,310	\$7,637,297	\$7,954,330	\$8,272,645	\$8,614,580	\$8,911,374	\$9,150,344	\$9,352,463	\$9,547,242
Meadowland Surcharge [1]	\$53,088	\$19,770	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Meter Replacement Fee	\$19,373	\$47,612	\$49,139	\$50,715	\$52,341	\$54,019	\$55,750	\$57,537	\$59,381	\$61,283	\$63,247
Other Revenues	\$93,850	\$93,850	\$93,850	\$93,850	\$93,850	\$93,850	\$93,850	\$93,850	\$93,850	\$93,850	\$93,850
Total Revenues	\$4,626,240	\$6,311,054	\$7,242,299	\$7,781,862	\$8,100,521	\$8,420,513	\$8,764,181	\$9,062,761	\$9,303,574	\$9,507,596	\$9,704,338
Operating Expenses											
	\$3,917,096	\$4,128,126	\$4,321,846	\$4,582,439	\$5,090,354	\$4,968,197	\$5,207,724	\$5,460,595	\$5,727,681	\$6,009,921	\$6,308,323
Net Revenue before Debt Service and System Rehabilitation	\$709,144	\$2,182,928	\$2,920,454	\$3,199,423	\$3,010,168	\$3,452,317	\$3,556,457	\$3,602,166	\$3,575,893	\$3,497,675	\$3,396,015
Debt Service	\$989,251	\$982,916	\$1,168,496	\$1,165,102	\$1,163,243	\$1,162,861	\$1,157,281	\$1,156,757	\$1,154,646	\$1,152,220	\$1,146,816
Debt Service Coverage [2]	0.72	2.22	2.50	2.75	2.59	2.97	3.07	3.11	3.10	3.04	2.96
System Rehabilitation	\$0	\$974,200	\$1,034,200	\$1,117,100	\$1,256,300	\$1,327,800	\$1,393,200	\$1,472,700	\$1,531,300	\$1,609,700	\$1,665,200
Net Revenue	(\$280,107)	\$225,812	\$717,758	\$917,221	\$590,625	\$961,656	\$1,005,976	\$972,709	\$889,947	\$735,755	\$583,998
Beginning Balance [3]	\$6,113,512	\$5,474,019	\$5,018,555	\$4,701,164	\$5,540,276	\$4,766,595	\$4,590,032	\$5,092,389	\$5,722,146	\$7,177,867	\$8,391,982
Net Revenue	(\$280,107)	\$225,812	\$717,758	\$917,221	\$590,625	\$961,656	\$1,005,976	\$972,709	\$889,947	\$735,755	\$583,998
Cash Funded Capital Projects	(\$274,386)	(\$521,891)	(\$1,035,148)	(\$78,109)	(\$494,306)	\$0	(\$523,620)	(\$362,953)	\$0	\$0	\$0
Spill Containment at Bell Creek & Stonebridge	\$0	(\$159,385)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Bell Canyon Reservoir Improvements	\$0	\$0	\$0	\$0	\$0	(\$1,079,726)	\$0	\$0	\$0	\$0	\$0
Bell Valve House Valve Replacement	\$0	\$0	\$0	\$0	\$0	(\$536,491)	\$0	\$0	\$0	\$0	\$0
Bell Canyon Creek Flow Measurement	(\$85,000)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Transfer Out to Impact Fee Fund	\$0	\$0	\$0	\$0	(\$870,000)	(\$70,000)	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
Add Back System Depreciation Net of CIP	\$0	\$0	\$0	\$0	\$0	\$547,998	\$0	\$0	\$545,775	\$458,359	\$548,199
Ending Balance	\$5,474,019	\$5,018,555	\$4,701,164	\$5,540,276	\$4,766,595	\$4,590,032	\$5,092,389	\$5,722,146	\$7,177,867	\$8,391,982	\$9,544,179
Months of Operating Expenses in Reserve	17	15	13	15	11	11	12	13	15	17	18
Designated [4]	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$200,000	\$1,300,000	\$2,400,000	\$3,100,000
Undesignated Ending Balance	\$5,474,019	\$5,018,555	\$4,701,164	\$5,540,276	\$4,766,595	\$4,590,032	\$5,092,389	\$5,522,146	\$5,877,867	\$5,991,982	\$6,444,179
Undesignated Months of Op. Exps. in Reserve	17	15	13	15	11	11	12	12	12	12	12
Target Balance [5]	\$3,897,723	\$4,080,141	\$4,272,322	\$4,474,874	\$4,688,452	\$4,913,755	\$5,151,537	\$5,402,608	\$5,667,836	\$5,948,158	\$6,244,582

flow

* Dates reflect the current billing cycle; if the billing cycle date changes so will these effective dates.

[1] Rates for FY 2017 calculated as 7 months of current rates plus 5 months of rates implemented in February 2017. Rates for all future fiscal years calculated as 4 months of the rates implemented in February of the prior fiscal year plus 8 months of the rates implemented in November of the current fiscal year.

[2] Debt service coverage should be at least 1.20.

[3] Estimated beginning balance for the operating and capital funds combined per the City 2016/17 Budget.

[4] New designated fund for capital repairs and replacement.

[5] Minimum six months and target balance is one year of operating expenses.

Source: City of St. Helena and HEC.

Exhibit A

Page 27 of 27

Water Rate Study, October 31, 2016

Table 20
Projected Cash Flow by Fund

Fund	2017 Estimated	2018 Year 1	2019 Year 2	2020 Year 3	2021 Year 4	2022 Year 5	2023 Year 6	2024 Year 7	2025 Year 8	2026 Year 9	2027 Year 10
Operating Fund 561											
Beginning Balance	\$4,923,632	\$4,643,525	\$4,869,337	\$4,487,094	\$4,854,316	\$4,024,941	\$4,364,595	\$4,740,571	\$4,983,280	\$6,439,002	\$7,653,116
Net Revenue	(\$280,107)	\$225,812	\$717,758	\$917,221	\$590,625	\$961,656	\$1,005,976	\$972,709	\$889,947	\$735,755	\$583,998
Add Back System Depreciation Net of CIP	\$0	\$0	\$0	\$0	\$0	\$547,998	\$0	\$0	\$545,775	\$458,359	\$548,199
Transfer Out to Capital Fund	\$0	\$0	\$0	(\$550,000)	(\$550,000)	(\$1,100,000)	(\$650,000)	(\$750,000)	\$0	\$0	\$0
Transfer In (Out) -Impact Fee Fund	\$0	\$0	\$0	\$0	(\$870,000)	(\$70,000)	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
Ending Balance	\$4,643,525	\$4,869,337	\$4,487,094	\$4,854,316	\$4,024,941	\$4,364,595	\$4,740,571	\$4,983,280	\$6,439,002	\$7,653,116	\$8,805,314
Capital Fund 763											
Beginning Balance	\$1,189,880	\$830,494	\$149,218	\$214,070	\$685,961	\$741,654	\$225,438	\$351,818	\$738,865	\$738,865	\$738,865
Transfer In from Operating Fund	\$0	\$0	\$1,100,000	\$550,000	\$550,000	\$1,100,000	\$650,000	\$750,000	\$0	\$0	\$0
Capital Projects Expenses [1]	(\$359,386)	(\$681,276)	(\$1,035,148)	(\$78,109)	(\$494,306)	(\$1,616,217)	(\$523,620)	(\$362,953)	\$0	\$0	\$0
Ending Balance	\$830,494	\$149,218	\$214,070	\$685,961	\$741,654	\$225,438	\$351,818	\$738,865	\$738,865	\$738,865	\$738,865
Combined Operating and Capital Funds	\$5,474,019	\$5,018,555	\$4,701,164	\$5,540,276	\$4,766,595	\$4,590,032	\$5,092,389	\$5,722,146	\$7,177,867	\$8,391,982	\$9,544,179
Impact Fee Fund 764											
Beginning Balance	\$685,291	\$702,091	\$620,876	\$388,259	\$114,398	\$8,850	\$3,208	\$2,722	\$2,730	\$3,243	\$4,274
Transfer In (Out) -Operating Fund [2]	\$0	\$0	\$0	\$0	\$870,000	\$70,000	(\$20,000)	(\$20,000)	(\$20,000)	(\$20,000)	(\$20,000)
Fee Revenues [3]	\$16,800	\$17,225	\$17,660	\$18,106	\$18,564	\$19,033	\$19,514	\$20,007	\$20,513	\$21,031	\$21,563
Expenses											
Meadowood Tank Upgrades	\$0	\$0	\$136,913	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Dwyer Road Booster	\$0	\$0	\$0	\$259,225	\$223,069	\$0	\$0	\$0	\$0	\$0	\$0
Bell Valve House Valve Replacement	\$0	\$0	\$0	\$0	\$0	\$94,675	\$0	\$0	\$0	\$0	\$0
Holmes Tank Upgrade	\$0	\$0	\$0	\$32,743	\$771,043	\$0	\$0	\$0	\$0	\$0	\$0
Bell Canyon Creek Flow Measurement	\$0	\$88,876	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Tank 2 Rehabilitation	\$0	\$9,563	\$113,364	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Ending Balance	\$702,091	\$620,876	\$388,259	\$114,398	\$8,850	\$3,208	\$2,722	\$2,730	\$3,243	\$4,274	\$5,837

Source: City of St. Helena and HEC.

[1] Cash-funded projects only. Projects that are debt-funded are included in the operating fund.

[2] Future users' share of debt service is approximately \$25,000 each year starting in fiscal year 2019.

[3] Assumes growth of 5 units per year and the current impact fee of \$1.68 per building square foot
2,000 average home building square feet
Fee assumed to grow 2.5% per year.

The impact fee needs to be revised for these CIP costs.

\$3,360 Average fee per unit

Prepared by HEC

Exhibit A

Exhibit A

ATTACHMENT A
WATER RATE STUDY
SUPPORT TABLES

Exhibit A

Table A-1
City of St. Helena Water Rate Study
Historical Water Fund Financial Performance

	Actual Financials for Fiscal Year Ending					Avg. Annual Percentage Change
Revenues and Expenses	2011	2012	2013	2014	2015	
OPERATING						
Revenues						
Charges For Services	\$3,062,669	\$4,313,393	\$4,731,720	\$4,883,409	\$4,237,307	8.5%
Miscellaneous	\$6,117	\$12,088	\$28,246	\$12,491	\$89,673	95.7%
Total Revenues	\$3,068,786	\$4,325,481	\$4,759,966	\$4,895,900	\$4,326,980	9.0%
Expenses						
Personnel	\$1,207,335	\$1,214,927	\$1,176,559	\$1,131,354	\$1,362,727	3.1%
Contracted Services	\$21,451	\$56,561	\$0	\$0	\$0	-100.0%
Purchased Water	\$787,525	\$1,178,400	\$1,189,925	\$1,327,251	\$1,272,770	12.8%
Utilities	\$105,749	\$106,389	\$147,994	\$170,384	\$161,313	11.1%
Fuel	\$0	\$0	\$0	\$0	\$0	n.a.
Other Supplies and Expenses	\$399,366	\$530,562	\$370,484	\$498,635	\$560,847	8.9%
Depreciation and Amortization	\$617,876	\$657,710	\$792,559	\$792,559	\$1,028,037	13.6%
Subtotal Expenses	\$3,139,302	\$3,744,549	\$3,677,521	\$3,920,183	\$4,385,694	8.7%
NET OPERATING INCOME (LOSS)	(\$70,516)	\$580,932	\$1,082,445	\$975,717	(\$58,714)	
NON OPERATING						
Transfers Out	\$0	(\$55,479)	\$0	\$0	\$0	n.a.
Gains (Loss) on Capital Asset Disposals	\$0	(\$124,356)	\$0	\$0	\$0	n.a.
Interest and Investment Revenue	\$49,268	\$34,746	\$16,909	\$25,476	\$40,968	-4.5%
Interest Expense	(\$387,792)	(\$349,084)	(\$396,126)	(\$343,880)	(\$196,547)	-15.6%
Net Non Operating Revenues (Expenses)	(\$338,524)	(\$494,173)	(\$379,217)	(\$318,404)	(\$155,579)	-17.7%
Capital Contributions	\$190,034	\$321,951	\$169,417	\$287,140	\$152,989	-5.3%
Change in Net Assets	(\$219,006)	\$408,710	\$872,645	\$944,453	(\$61,304)	
Net Assets Beginning Balance	\$10,649,155	\$10,430,149	\$10,502,760	\$11,375,405	\$12,319,858	
Net Assets Ending Balance	\$10,430,149	\$10,838,859	\$11,375,405	\$12,319,858	\$12,258,554	

Source: City of St. Helena.

cafr

Table A-2
City of St. Helena Water Rate Study
Historical Revenues and Expenditures

Revenues and Expenses	Fiscal Year Ending				Estimated 2016	Budgeted 2017
	2012	2013	2014	2015		
OPERATING FUND						
Revenues						
Investment Earnings	\$33,247	\$16,718	\$24,907	\$30,781	\$24,900	\$25,000
Fire Service Agreement Fees	\$0	\$0	\$0	\$0	\$0	\$0
Raw Water Permit Fees	\$100	\$400	\$550	\$750	\$650	\$800
Water Conservation Fines	\$0	\$0	\$0	\$0	\$0	\$0
Backflow Testing & Insp Fees	\$0	\$300	\$150	\$150	\$150	\$150
Sale Of Capital Asset	\$0	\$0	\$0	\$0	\$0	\$0
Other Revenue	\$11,988	\$6,165	\$11,791	\$7,594	\$5,500	\$8,500
Insurance Receipts	\$0	\$0	\$0	\$0	\$0	\$0
Water Revenue	\$2,251	\$2,089	\$1,306	\$2,327	\$2,300	\$5,500
Surcharge-Meadowood	\$30,210	\$30,223	\$30,223	\$32,223	\$30,223	\$30,223
Pumping Charge	\$23,120	\$23,038	\$23,956	\$22,890	\$23,650	\$18,420
Rates - Inside City Limits	\$3,862,757	\$4,264,423	\$4,381,060	\$3,821,553	\$4,082,365	\$3,343,945
Rates - Outside City Limits	\$337,510	\$364,387	\$385,337	\$345,644	\$359,600	\$359,600
Finance Charges	\$34,418	\$30,514	\$40,533	\$36,142	\$37,150	\$36,000
Sale of Remote Meters	\$571	\$231	\$4,575	\$3,046	\$1,740	\$1,500
Hydrant Rental	\$150	\$150	\$0	\$0	\$0	\$0
Property Rentals	\$8,400	\$8,400	\$8,400	\$8,400	\$8,400	\$8,400
Water Meter Install Fee	\$14,006	\$8,265	\$8,018	\$10,724	\$5,000	\$8,000
Total Revenues	\$4,358,728	\$4,755,303	\$4,920,806	\$4,322,225	\$4,581,628	\$3,846,038
Expenses						
Salaries & Benefits	\$1,217,968	\$1,168,983	\$1,165,302	\$1,299,809	\$1,565,976	\$1,612,243
Services	\$440,097	\$284,472	\$348,495	\$358,264	\$538,363	\$564,625
Supplies	\$147,577	\$100,683	\$82,066	\$117,593	\$142,949	\$151,490
Napa Purchased Water	\$1,178,401	\$1,189,926	\$1,327,251	\$1,272,770	\$1,311,272	\$1,349,019
Maintenance	\$91,794	\$68,433	\$78,880	\$124,006	\$195,116	\$172,579
Taxes, Insurances & Contributions	\$102,988	\$74,528	\$79,111	\$91,930	\$147,415	\$133,167
Capital	\$13,175	\$33,471	\$11,886	\$15,056	\$59,785	\$137,925
Transfers	\$179,836	\$0	\$200,000	\$979,380	\$111,995	\$0
Debt	\$349,084	\$396,126	\$343,980	\$196,547	\$1,008,078	\$1,001,067
Total Expenses	\$3,720,918	\$3,316,623	\$3,636,971	\$4,455,356	\$5,080,949	\$5,122,115
Operating Fund Net Revenues	\$637,810	\$1,438,681	\$1,283,835	(\$133,132)	(\$499,321)	(\$1,276,077)
WATER CAPITAL FUND						
Revenues						
Transfers in	\$182,000	\$92,045	\$200,000	\$979,380	\$75,541	\$0
Total Revenues	\$182,000	\$92,045	\$200,000	\$979,380	\$75,541	\$0
Expenses						
Salaries & Benefits	\$110,984	\$349	\$0	\$0	\$0	\$0
Professional Services	\$233,894	\$430,235	\$1,638,364	\$424,649	\$0	\$0
Training	\$0	\$0	\$0	\$38	\$0	\$0
Supplies	\$0	\$17,802	\$14,030	\$2,382	\$0	\$0
Advertising	\$421	\$0	\$0	\$0	\$0	\$0
Taxes and Charges	\$0	\$0	\$0	\$3,120	\$0	\$0
Capital Projects Budget	\$0	\$0	\$0	\$4,092	\$0	\$0
Capital Equipment	\$0	\$0	\$5,875	\$0	\$0	\$0
Capital Imp Equipment	\$0	\$222,039	\$10,759	\$0	\$0	\$0
Total Expenses	\$345,300	\$670,426	\$1,669,028	\$434,282	\$0	\$0
Capital Fund Net Revenues	(\$163,300)	(\$578,381)	(\$1,469,028)	\$545,098	\$75,541	\$0
WATER IMPACT FUND						
Revenues						
Investment Revenue	\$1,054	\$17	\$569	\$1,787	\$1,500	\$1,800
Other Revenue	\$0	\$21,381	\$0	\$45,937	\$0	\$0
Water Impact Fees	\$321,951	\$169,417	\$287,140	\$152,989	\$110,000	\$100,000
Total Revenues	\$323,005	\$190,815	\$287,709	\$200,713	\$111,500	\$101,800
Expenses						
Transfers Out	\$182,000	\$92,045	\$0	\$0	\$0	\$0
Total Expenses	\$182,000	\$92,045	\$0	\$0	\$0	\$0
Water Impact Fund Net Revenues	\$141,005	\$98,770	\$287,709	\$200,713	\$111,500	\$101,800

Source: City of St. Helena Financial Data.

rev exp

Table A-3
City of St. Helena Water Rate Study
Historical Expenditures

Expenses	Actuals Fiscal Year Ending				Estimated	Budgeted
	2012	2013	2014	2015	2016	2017
Operations						
Salaries & Benefits	\$509,098	\$442,817	\$448,242	\$507,936	\$678,792	\$706,986
Services	\$271,166	\$91,007	\$127,243	\$137,836	\$290,421	\$311,925
Supplies	\$11,086	\$13,053	\$12,308	\$10,918	\$20,513	\$18,792
Napa Purchased Water	\$0	\$0	\$0	\$0	\$0	\$0
Maintenance	\$6,942	\$6,959	\$10,452	\$21,512	\$13,246	\$13,197
Taxes, Insurances & Contributions	\$86,653	\$64,812	\$68,027	\$79,911	\$123,415	\$113,467
Capital	\$0	\$5,272	\$113	\$551	\$8,234	\$1,925
Transfers	\$179,836	\$0	\$200,000	\$979,380	\$111,995	\$0
Debt	\$349,084	\$396,126	\$343,980	\$196,547	\$1,008,078	\$1,001,067
Subtotal Operations	\$1,413,864	\$1,020,046	\$1,210,366	\$1,934,592	\$2,254,694	\$2,167,359
Distribution						
Salaries & Benefits	\$362,007	\$357,787	\$357,186	\$413,670	\$497,637	\$490,637
Services	\$50,639	\$56,393	\$72,008	\$76,939	\$86,957	\$85,700
Supplies	\$20,493	\$16,111	\$10,127	\$21,459	\$21,810	\$28,298
Napa Purchased Water	\$0	\$0	\$0	\$0	\$0	\$0
Maintenance	\$37,922	\$36,834	\$44,189	\$52,003	\$57,389	\$60,295
Taxes, Insurances & Contributions	\$0	\$0	\$0	\$0	\$0	\$0
Capital	\$12,238	\$0	\$0	\$0	\$26,000	\$21,000
Transfers	\$0	\$0	\$0	\$0	\$0	\$0
Debt	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal Distribution	\$483,298	\$467,126	\$483,510	\$564,071	\$689,793	\$685,930
Treatment						
Salaries & Benefits	\$346,863	\$368,378	\$359,875	\$378,203	\$389,547	\$414,620
Services	\$84,949	\$89,641	\$94,000	\$89,843	\$102,350	\$109,900
Supplies	\$109,114	\$59,140	\$49,245	\$73,764	\$74,988	\$91,600
Napa Purchased Water	\$1,178,401	\$1,189,926	\$1,327,251	\$1,272,770	\$1,311,272	\$1,349,019
Maintenance	\$36,589	\$24,384	\$21,299	\$50,197	\$104,518	\$83,587
Taxes, Insurances & Contributions	\$16,335	\$9,716	\$11,084	\$12,019	\$24,000	\$19,700
Capital	\$937	\$28,199	\$1,356	\$14,505	\$14,776	\$115,000
Transfers	\$0	\$0	\$0	\$0	\$0	\$0
Debt	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal Treatment	\$1,773,187	\$1,769,383	\$1,864,109	\$1,891,301	\$2,021,451	\$2,183,426
Stonebridge Wells						
Salaries & Benefits	\$0	\$0	\$0	\$0	\$0	\$0
Services	\$33,343	\$47,430	\$55,244	\$53,646	\$58,635	\$57,100
Supplies	\$6,884	\$12,380	\$10,386	\$11,452	\$25,638	\$12,800
Napa Purchased Water	\$0	\$0	\$0	\$0	\$0	\$0
Maintenance	\$10,341	\$257	\$2,940	\$294	\$19,963	\$15,500
Taxes, Insurances & Contributions	\$0	\$0	\$0	\$0	\$0	\$0
Capital	\$0	\$0	\$10,416	\$0	\$10,775	\$0
Transfers	\$0	\$0	\$0	\$0	\$0	\$0
Debt	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal Stonebridge Wells	\$50,568	\$60,067	\$78,986	\$65,392	\$115,011	\$85,400
Total Expenses	\$3,720,918	\$3,316,623	\$3,636,971	\$4,455,356	\$5,080,949	\$5,122,115

Source: City of St. Helena.

hist exp

Table A-4
City of St. Helena Water Rate Study
Historical Water Use by Customer Category

Customer	2011	2012	2013	2014	2015	Average [1]	% of Avg.
<i>Figures in HCF</i>							
Residential							
Single Unit	257,882	287,886	315,468	256,777	249,219	262,941	39%
Multi-Fam	53,603	53,447	54,233	47,016	41,356	48,856	7%
Mobile Homes	28,762	28,086	33,486	26,478	24,777	27,026	4%
Subtotal Residential	340,247	369,419	403,187	330,271	315,352	338,822	50%
Non-Residential							
Commercial	79,633	84,345	88,911	85,056	70,394	79,857	12%
Industrial	154,499	149,776	163,569	131,722	117,691	138,422	21%
Landscape	26,100	28,440	30,349	17,268	10,650	20,615	3%
Churches	3,308	3,462	3,911	2,847	1,895	2,878	0%
Wells	2,584	2,470	2,531	2,705	2,579	2,585	0%
Laundry	3,390	3,317	3,366	2,949	2,412	3,017	0%
Library Schools	20,009	19,613	20,981	18,022	20,162	19,452	3%
Motel/Hotel	28,650	32,351	32,173	27,028	27,720	28,937	4%
City Owned	9,664	10,554	14,963	11,559	13,088	11,216	2%
Subtotal Non-Residential	327,837	334,328	360,754	299,156	266,591	306,978	46%
Raw Water	36,005	27,617	27,393	21,756	21,274	26,663	4%
Total Billable	704,089	731,364	791,334	651,183	603,217	672,463	100%
Non-Billable	62,293	59,636	69,465	61,384	64,609	61,980	
Total Water	766,382	791,000	860,799	712,567	667,826	725,950	

Source: City of St. Helena

use

[1] Average excludes 2013.

Table A-5
City of St. Helena Water Rate Study
Calculation of Unaccounted for Water

	2013	2014	2015	Average
Gallons of Water				
Consumption	568,883,172	477,673,548	446,865,672	497,807,464
Production	601,650,524	506,733,207	501,660,534	536,681,422
Consumption as a % of				
Production	95%	94%	89%	93%
Water	5%	6%	11%	7%

Source: City of St. Helena.

unacc

Table A-6
City of St. Helena Water Rate Study
Estimated Ten-Year Schedule of Water Capital Improvements in 2016 \$'s

Project	Notes	Total Cost	Total Cost Less Existing Funding	Fiscal Year Ending										
				2017	2018 Year 1	2019 Year 2	2020 Year 3	2021 Year 4	2022 Year 5	2023 Year 6	2024 Year 7	2025 Year 8	2026 Year 9	2027 Year 10
Estimated Project Costs (2016 \$'s)			[1]	Costs are net of existing bond proceeds and grant funds										
York Creek Upper Dam Removal/Mitigation	Partially funded by grant and City (existing bond proceeds)	\$ 6,177,117	\$1,695,775	\$0	\$847,888	\$847,888	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Meadowood Tank Upgrades	Partially funded by grant and City (existing bond proceeds)	\$500,000	\$379,900	\$0	\$0	\$379,900	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Bell Canyon Reservoir Improvements	Funded by Reserves	\$900,000	\$900,000	\$0	\$0	\$0	\$0	\$0	\$900,000	\$0	\$0	\$0	\$0	\$0
Dwyer Road Booster	Moved out 3 years	\$842,523	\$842,523	\$0	\$0	\$0	\$459,190	\$383,333	\$0	\$0	\$0	\$0	\$0	\$0
Bell Canyon Intake Mid-Valve Repair		\$14,387	\$14,387	\$14,387	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Bell Valve House Valve Replacement	Funded by Reserves	\$526,105	\$526,105	\$0	\$0	\$0	\$0	\$0	\$526,105	\$0	\$0	\$0	\$0	\$0
Holmes Tank Upgrade	Moved out 3 years	\$1,383,000	\$1,383,000	\$0	\$0	\$0	\$58,000	\$1,325,000	\$0	\$0	\$0	\$0	\$0	\$0
Bell Canyon Creek Flow Measurement	Partially funded by City existing bond proceeds	\$750,000	\$492,750	\$0	\$492,750	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sludge Handling Program	Moved out 2 years	\$150,000	\$150,000	\$0	\$0	\$0	\$150,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Raw Water Metering Station	Moved out 1 year	\$100,000	\$100,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100,000	\$0	\$0
Tank 2 Rehabilitation	Moved out 1 year	\$750,000	\$750,000	\$0	\$60,000	\$690,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Well Filter Rehabilitation		\$11,103	\$11,103	\$11,103	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pump Station Upgrades	Funded by New Debt	\$200,000	\$200,000	\$0	\$200,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Replace 12" Transmission Main	Moved out 1 year	\$400,000	\$400,000	\$0	\$0	\$0	\$0	\$0	\$0	\$400,000	\$0	\$0	\$0	\$0
Lower York Creek Dam Rehab		\$480,695	\$480,695	\$190,695	\$0	\$0	\$0	\$0	\$0	\$0	\$290,000	\$0	\$0	\$0
Bell Canyon Intake Tower Replacement	Funded by New Debt	\$2,000,000	\$2,000,000	\$650,000	\$1,350,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
WTP Condition Assessment	Moved out 2 years	\$150,000	\$150,000	\$0	\$0	\$0	\$0	\$150,000	\$0	\$0	\$0	\$0	\$0	\$0
Spill Containment at Bell Creek Intake	Funded by Reserves	\$75,000	\$75,000	\$0	\$75,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
SCADA Improvements (Rutherford & Holmes)		\$150,000	\$150,000	\$0	\$0	\$0	\$150,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Spill Containment at Stonebridge Well	Funded by Reserves	\$75,000	\$75,000	\$0	\$75,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Upgrade Rutherford Pump Station		\$500,000	\$500,000	\$0	\$0	\$50,000	\$450,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Remove Restriction at Rutherford PS		\$150,000	\$150,000	\$0	\$50,000	\$100,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Install Smart Meters	Unfunded [2]	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Update GIS Maps of Water System		\$50,000	\$50,000	\$0	\$0	\$0	\$50,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Water Master Plan Update		\$150,000	\$150,000	\$0	\$0	\$0	\$0	\$150,000	\$0	\$0	\$0	\$0	\$0	\$0
	Moved out and increased in later years													
Replace Mains < 6-Inch Diameter		\$4,000,000	\$4,000,000	\$0	\$0	\$0	\$0	\$400,000	\$600,000	\$600,000	\$600,000	\$600,000	\$600,000	\$600,000
Replace 1% of Water Mains Annually		\$150,000	\$150,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$150,000
Additional Storage		\$1,000,000	\$1,000,000	\$0	\$0	\$0	\$0	\$0	\$0	\$500,000	\$500,000	\$0	\$0	\$0
Annual Maintenance Program		\$950,000	\$950,000	\$50,000	\$50,000	\$50,000	\$50,000	\$250,000	\$50,000	\$50,000	\$50,000	\$50,000	\$250,000	\$50,000
Total Estimated Project Costs (2016 \$'s)		\$22,584,930	\$17,726,238	\$916,185	\$3,200,638	\$2,117,788	\$1,367,190	\$2,658,333	\$2,076,105	\$1,550,000	\$1,440,000	\$750,000	\$850,000	\$800,000

Source: City of St. Helena and HEC.

2016 cip

[1] Total Cost Less Existing Funding = Total Cost - Existing Bonds - Existing Grants

[2] Installing Smart Meters program is currently unfunded. Total cost for the program is estimated at \$1.5 million.

Table A-7
City of St. Helena Water Rate Study
Estimated Ten-Year Schedule of Water Capital Improvements in Future \$'s

Project	Notes	Existing Funding	Fiscal Year Ending										
			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
			Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	
Estimated Project Costs (Future \$'s) [1]			Annual Increase 3.1%										
York Creek Upper Dam Removal/Mitigation	Partially funded by grant and City (existing bond proceeds)	\$1,829,635	\$0	\$900,939	\$928,696	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Meadowood Tank Upgrades	Partially funded by grant and City (existing bond proceeds)	\$416,107	\$0	\$0	\$416,107	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Bell Canyon Reservoir Improvements	Funded by Reserves	\$1,079,726	\$0	\$0	\$0	\$0	\$0	\$1,079,726	\$0	\$0	\$0	\$0	\$0
Dwyer Road Booster	Moved out 3 years	\$964,587	\$0	\$0	\$0	\$518,449	\$446,137	\$0	\$0	\$0	\$0	\$0	\$0
Bell Canyon Intake Mid-Valve Repair		\$14,830	\$14,830	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Bell Valve House Valve Replacement	Funded by Reserves	\$631,166	\$0	\$0	\$0	\$0	\$0	\$631,166	\$0	\$0	\$0	\$0	\$0
Holmes Tank Upgrade	Moved out 3 years	\$1,607,570	\$0	\$0	\$0	\$65,485	\$1,542,085	\$0	\$0	\$0	\$0	\$0	\$0
Bell Canyon Creek Flow Measurement	Partially funded by City existing bond proceeds	\$523,581	\$0	\$523,581	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sludge Handling Program	Moved out 2 years	\$169,358	\$0	\$0	\$0	\$169,358	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Raw Water Metering Station	Moved out 1 year	\$131,403	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$131,403	\$0	\$0	\$0
Tank 2 Rehabilitation	Moved out 1 year	\$819,515	\$0	\$63,754	\$755,761	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Well Filter Rehabilitation		\$11,445	\$11,445	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pump Station Upgrades	Funded by New Debt	\$212,514	\$0	\$212,514	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Replace 12" Transmission Main		\$494,663	\$0	\$0	\$0	\$0	\$0	\$0	\$494,663	\$0	\$0	\$0	\$0
Lower York Creek Dam Rehab		\$566,250	\$196,570	\$0	\$0	\$0	\$0	\$0	\$0	\$369,680	\$0	\$0	\$0
Bell Canyon Intake Tower Replacement	Funded by New Debt	\$2,104,494	\$670,026	\$1,434,468	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
WTP Condition Assessment	Moved out 2 years	\$174,576	\$0	\$0	\$0	\$0	\$174,576	\$0	\$0	\$0	\$0	\$0	\$0
Spill Containment at Bell Creek Intake	Funded by Reserves	\$79,693	\$0	\$79,693	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
SCADA Improvements (Rutherford & Holmes)		\$169,358	\$0	\$0	\$0	\$169,358	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Spill Containment at Stonebridge Well	Funded by Reserves	\$79,693	\$0	\$79,693	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Upgrade Rutherford Pump Station		\$562,839	\$0	\$0	\$54,765	\$508,073	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Remove Restriction at Rutherford PS		\$162,659	\$0	\$53,128	\$109,531	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Install Smart Meters	Unfunded [2]	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Update GIS Maps of Water System		\$56,453	\$0	\$0	\$0	\$56,453	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Water Master Plan Update		\$174,576	\$0	\$0	\$0	\$0	\$174,576	\$0	\$0	\$0	\$0	\$0	\$0
Replace Mains < 6-Inch Diameter	Moved out and increased in later years	\$5,131,085	\$0	\$0	\$0	\$0	\$465,535	\$719,817	\$741,995	\$764,855	\$788,420	\$812,711	\$837,751
Replace 1% of Water Mains Annually		\$209,438	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$209,438
Additional Storage		\$1,255,708	\$0	\$0	\$0	\$0	\$0	\$0	\$618,329	\$637,379	\$0	\$0	\$0
Annual Maintenance Program		\$1,166,546	\$51,540	\$53,128	\$54,765	\$56,453	\$290,959	\$59,985	\$61,833	\$63,738	\$65,702	\$338,630	\$69,813
Total Estimated Project Costs (Future \$'s)		\$20,799,466	\$944,412	\$3,400,897	\$2,319,626	\$1,543,629	\$3,093,869	\$2,490,694	\$1,916,820	\$1,835,653	\$985,525	\$1,151,341	\$1,117,001

Source: City of St. Helena and HEC.

future clip

[1] Estimated costs increased by historical Engineering News Record Construction Cost Index 20-year average increase.

[2] Installing Smart Meters program is currently unfunded. Total cost for the program is estimated at \$1.5 million.

[3] Total Cost Less Existing Funding = Total Cost - Existing Bonds - Existing Grants

Table A-8
City of St. Helena Water Rate Study
Total Cost by Water System and Share of Cost to Existing Customers

Project	Funding Source	Percent Share Existing Customers	Percent Share in Rate Model	Total Cost	Fiscal Year Ending										
					2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
					Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	
Estimated Project Costs (2016 \$'s)		per City CIP													
York Creek Upper Dam Removal/Mitigation	Cash	100%	100%	\$1,695,775	\$0	\$847,888	\$847,888	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Meadowood Tank Upgrades	Cash	67%	67%	\$254,900	\$0	\$0	\$254,900	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Bell Canyon Reservoir Improvements	Reserves	100%	100%	\$900,000	\$0	\$0	\$0	\$0	\$0	\$900,000	\$0	\$0	\$0	\$0	\$0
Dwyer Road Booster	Cash	50%	50%	\$421,262	\$0	\$0	\$0	\$229,595	\$191,667	\$0	\$0	\$0	\$0	\$0	\$0
Bell Canyon Intake Mid-Valve Repair	Cash	100%	100%	\$14,387	\$14,387	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Bell Valve House Valve Replacement	Reserves	85%	85%	\$447,189	\$0	\$0	\$0	\$0	\$0	\$447,189	\$0	\$0	\$0	\$0	\$0
Holmes Tank Upgrade	Cash	50%	50%	\$691,500	\$0	\$0	\$0	\$29,000	\$662,500	\$0	\$0	\$0	\$0	\$0	\$0
Bell Canyon Creek Flow Measurement	Cash	83%	83%	\$409,107	\$0	\$409,107	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sludge Handling Program	Cash	100%	100%	\$150,000	\$0	\$0	\$0	\$150,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Raw Water Metering Station	Cash	100%	100%	\$100,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100,000	\$0	\$0
Tank 2 Rehabilitation	Cash	85%	85%	\$637,500	\$0	\$51,000	\$586,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Well Filter Rehabilitation	Cash	100%	100%	\$11,103	\$11,103	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pump Station Upgrades	Debt	100%	100%	\$200,000	\$0	\$200,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Replace 12" Transmission Main	Cash	100%	100%	\$400,000	\$0	\$0	\$0	\$0	\$0	\$0	\$400,000	\$0	\$0	\$0	\$0
Lower York Creek Dam Rehab	Cash	100%	100%	\$480,695	\$190,695	\$0	\$0	\$0	\$0	\$0	\$0	\$290,000	\$0	\$0	\$0
Bell Canyon Intake Tower Replacement	Debt	85%	85%	\$1,700,000	\$552,500	\$1,147,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
WTP Condition Assessment	Ops Cash	100%	100%	\$150,000	\$0	\$0	\$0	\$0	\$150,000	\$0	\$0	\$0	\$0	\$0	\$0
Spill Containment at Bell Creek Intake	Reserves	100%	100%	\$75,000	\$0	\$75,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
SCADA Improvements (Rutherford & Holmes)	Cash	100%	100%	\$150,000	\$0	\$0	\$0	\$150,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Spill Containment at Stonebridge Well	Reserves	100%	100%	\$75,000	\$0	\$75,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Upgrade Rutherford Pump Station	Cash	100%	100%	\$500,000	\$0	\$0	\$50,000	\$450,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Remove Restriction at Rutherford PS	Cash	100%	100%	\$150,000	\$0	\$50,000	\$100,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Install Smart Meters	Unfunded	100%	100%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Update GIS Maps of Water System	Ops Cash	100%	100%	\$50,000	\$0	\$0	\$0	\$50,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Water Master Plan Update	Ops Cash	100%	100%	\$150,000	\$0	\$0	\$0	\$0	\$150,000	\$0	\$0	\$0	\$0	\$0	\$0
Replace Mains < 6-inch Diameter	Cash	100%	100%	\$4,000,000	\$0	\$0	\$0	\$0	\$400,000	\$600,000	\$600,000	\$600,000	\$600,000	\$600,000	\$600,000
Replace 1% of Water Mains Annually	Cash	100%	100%	\$150,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$150,000
Additional Storage	Cash	100%	100%	\$1,000,000	\$0	\$0	\$0	\$0	\$0	\$0	\$500,000	\$500,000	\$0	\$0	\$0
Annual Maintenance Program	Cash	100%	100%	\$950,000	\$50,000	\$50,000	\$50,000	\$50,000	\$250,000	\$50,000	\$50,000	\$50,000	\$50,000	\$250,000	\$50,000
Total Estimated Project Costs (2016 \$'s)				\$15,913,418	\$818,685	\$2,905,495	\$1,889,288	\$1,108,595	\$1,804,167	\$1,997,189	\$1,550,000	\$1,440,000	\$750,000	\$850,000	\$800,000

Table A-8
City of St. Helena Water Rate Study
Total Cost by Water System and Share of Cost to Existing Customers

Project	Funding Source	Percent Share Existing Customers	Percent Share in Rate Model	Total Cost	Fiscal Year Ending										
					2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
					Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	
Estimated Project Costs (Future \$'s) [1]															
York Creek Upper Dam Removal/Mitigation	Cash	100%	100%	\$1,829,635	\$0	\$900,939	\$928,696	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Meadowood Tank Upgrades	Cash	67%	67%	\$279,194	\$0	\$0	\$279,194	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Bell Canyon Reservoir Improvements	Reserves	100%	100%	\$1,079,726	\$0	\$0	\$0	\$0	\$0	\$1,079,726	\$0	\$0	\$0	\$0	\$0
Dwyer Road Booster	Cash	50%	50%	\$482,293	\$0	\$0	\$0	\$259,225	\$223,069	\$0	\$0	\$0	\$0	\$0	\$0
Bell Canyon Intake Mid-Valve Repair	Cash	100%	100%	\$14,830	\$14,830	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Bell Valve House Valve Replacement	Reserves	85%	85%	\$536,491	\$0	\$0	\$0	\$0	\$0	\$536,491	\$0	\$0	\$0	\$0	\$0
Holmes Tank Upgrade	Cash	50%	50%	\$803,785	\$0	\$0	\$0	\$32,743	\$771,043	\$0	\$0	\$0	\$0	\$0	\$0
Bell Canyon Creek Flow Measurement	Cash	83%	83%	\$434,704	\$0	\$434,704	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sludge Handling Program	Cash	100%	100%	\$169,358	\$0	\$0	\$0	\$169,358	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Raw Water Metering Station	Cash	100%	100%	\$131,403	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$131,403	\$0	\$0
Tank 2 Rehabilitation	Cash	85%	85%	\$696,588	\$0	\$54,191	\$642,397	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Well Filter Rehabilitation	Cash	100%	100%	\$11,445	\$11,445	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pump Station Upgrades	Debt	100%	100%	\$212,514	\$0	\$212,514	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Replace 12" Transmission Main	Cash	100%	100%	\$494,663	\$0	\$0	\$0	\$0	\$0	\$0	\$494,663	\$0	\$0	\$0	\$0
Lower York Creek Dam Rehab	Cash	100%	100%	\$566,250	\$196,570	\$0	\$0	\$0	\$0	\$0	\$0	\$369,680	\$0	\$0	\$0
Bell Canyon Intake Tower Replacement	Debt	85%	85%	\$1,788,820	\$569,522	\$1,219,298	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
WTP Condition Assessment	Ops Cash	100%	100%	\$174,576	\$0	\$0	\$0	\$0	\$174,576	\$0	\$0	\$0	\$0	\$0	\$0
Spill Containment at Bell Creek Intake	Reserves	100%	100%	\$79,693	\$0	\$79,693	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
SCADA Improvements (Rutherford & Holmes)	Cash	100%	100%	\$169,358	\$0	\$0	\$0	\$169,358	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Spill Containment at Stonebridge Well	Reserves	100%	100%	\$79,693	\$0	\$79,693	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Upgrade Rutherford Pump Station	Cash	100%	100%	\$562,839	\$0	\$0	\$54,765	\$508,073	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Remove Restriction at Rutherford PS	Cash	100%	100%	\$162,659	\$0	\$53,128	\$109,531	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Install Smart Meters	Unfunded	100%	100%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Update GIS Maps of Water System	Ops Cash	100%	100%	\$56,453	\$0	\$0	\$0	\$56,453	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Water Master Plan Update	Ops Cash	100%	100%	\$174,576	\$0	\$0	\$0	\$0	\$174,576	\$0	\$0	\$0	\$0	\$0	\$0
Replace Mains < 6-Inch Diameter	Cash	100%	100%	\$5,131,085	\$0	\$0	\$0	\$0	\$465,535	\$719,817	\$741,995	\$764,855	\$788,420	\$812,711	\$837,751
Replace 1% of Water Mains Annually	Cash	100%	100%	\$209,438	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$209,438
Additional Storage	Cash	100%	100%	\$1,255,708	\$0	\$0	\$0	\$0	\$0	\$0	\$618,329	\$637,379	\$0	\$0	\$0
Annual Maintenance Program	Cash	100%	100%	\$1,166,546	\$51,540	\$53,128	\$54,765	\$56,453	\$290,959	\$59,985	\$61,833	\$63,738	\$65,702	\$338,630	\$69,813
Total Estimated Project Costs (Future \$'s)				\$18,754,322	\$843,908	\$3,087,287	\$2,069,348	\$1,251,662	\$2,099,757	\$2,396,019	\$1,916,820	\$1,835,653	\$985,525	\$1,151,341	\$1,117,001
2016 \$'s															
Cash - Capital Fund				\$12,166,229	\$266,185	\$1,407,995	\$1,889,288	\$1,058,595	\$1,504,167	\$650,000	\$1,550,000	\$1,440,000	\$750,000	\$850,000	\$800,000
Cash - Operations Fund				\$350,000	\$0	\$0	\$0	\$50,000	\$300,000	\$0	\$0	\$0	\$0	\$0	\$0
Debt - Capital Fund				\$1,900,000	\$552,500	\$1,347,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Reserves				\$1,497,189	\$0	\$150,000	\$0	\$0	\$0	\$1,347,189	\$0	\$0	\$0	\$0	\$0
Total				\$15,913,418	\$818,685	\$2,905,495	\$1,889,288	\$1,108,595	\$1,804,167	\$1,997,189	\$1,550,000	\$1,440,000	\$750,000	\$850,000	\$800,000
Future \$'s															
Cash - Capital Fund				\$14,571,782	\$274,386	\$1,496,091	\$2,069,348	\$1,195,209	\$1,750,606	\$779,802	\$1,916,820	\$1,835,653	\$985,525	\$1,151,341	\$1,117,001
Cash - Operations Fund				\$405,604	\$0	\$0	\$0	\$56,453	\$349,151	\$0	\$0	\$0	\$0	\$0	\$0
Debt - Capital Fund				\$2,001,334	\$569,522	\$1,431,811	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Reserves				\$1,775,602	\$0	\$159,385	\$0	\$0	\$0	\$1,616,217	\$0	\$0	\$0	\$0	\$0
Total				\$18,754,322	\$843,908	\$3,087,287	\$2,069,348	\$1,251,662	\$2,099,757	\$2,396,019	\$1,916,820	\$1,835,653	\$985,525	\$1,151,341	\$1,117,001

Source: City of St. Helena and HEC.

exist share

[1] Estimated costs increased by historical Engineering News Record Construction Cost Index 20-year average increase.

Table A-9
City of St. Helena Water Rate Study
Existing Annual Debt Service

Fiscal Year Ending	Principal	Interest	Total	Remaining Principal
2017	\$514,130	\$475,121	\$989,251	\$11,121,087
2018	\$528,043	\$454,873	\$982,916	\$10,593,043
2019	\$550,870	\$434,897	\$985,767	\$10,042,174
2020	\$568,696	\$413,677	\$982,373	\$9,473,478
2021	\$591,522	\$388,991	\$980,513	\$8,881,956
2022	\$618,261	\$361,871	\$980,132	\$8,263,696
2023	\$641,087	\$333,464	\$974,551	\$7,622,609
2024	\$668,913	\$305,114	\$974,027	\$6,953,696
2025	\$696,739	\$275,177	\$971,916	\$6,256,956
2026	\$728,478	\$241,012	\$969,490	\$5,528,478
2027	\$760,217	\$203,870	\$964,087	\$4,768,261
2028	\$800,870	\$166,167	\$967,037	\$3,967,391
2029	\$836,522	\$128,353	\$964,874	\$3,130,870
2030	\$877,174	\$90,504	\$967,678	\$2,253,696
2031	\$908,913	\$51,095	\$960,008	\$1,344,783
2032	\$949,565	\$23,400	\$972,965	\$395,217
2033	\$395,217	\$7,904	\$403,122	\$0

Source: City of St. Helena and HEC.

debt serv

Table A-10
City of St. Helena Water Rate Study
Meter Replacement Costs Estimate

Item	Assumption / Total	Meter Size							
		5/8"	3/4"	1"	1-1/2"	2"	3"	4"	6"
New Meter with Transponder [1]		\$200	\$250	\$350	\$550	\$700	\$1,500	\$3,300	\$4,550
Installation Costs [2]	20%	\$40	\$50	\$70	\$110	\$140	\$300	\$660	\$910
Administration Costs	3%	\$6	\$8	\$11	\$17	\$21	\$45	\$99	\$137
Total Cost per Meter	\$374	\$246	\$308	\$431	\$677	\$861	\$1,845	\$4,059	\$5,597
Replacement Interval (years)		20	20	20	20	20	20	20	20
Cost per Meter per Year		\$12	\$15	\$22	\$34	\$43	\$92	\$203	\$280
Monthly Cost per Meter		\$1.03	\$1.28	\$1.79	\$2.82	\$3.59	\$7.69	\$16.91	\$23.32
Monthly Cost per Billing Meter [3]		\$1.05	\$1.31	\$1.83	\$2.88	\$3.66	\$7.84	\$17.26	\$23.79

Source: City of St. Helena and HEC.

meter prog

[1] Approximate prices based on HEC experience.

[2] Actual installation costs vary by meter size as a percentage of meter cost.

[3] Accounts for an estimated vacancy rate of: 2%

Table A-11
City of St. Helena Water Rate Study
Comparison of Historical Operating Expenses to Standard Indices

Historical Water Operating Expenses	Actuals Fiscal Year Ending				Estimated 2016	Change	
	2012	2013	2014	2015		Total	Avg. Annual
Salaries & Benefits	\$1,217,968	\$1,168,983	\$1,165,302	\$1,299,809	\$1,565,976	\$348,008	6.5%
Services	\$440,097	\$284,472	\$348,495	\$358,264	\$538,363	\$98,266	5.2%
Supplies	\$147,577	\$100,683	\$82,066	\$117,593	\$142,949	(\$4,628)	-0.8%
Napa Purchased Water	\$1,178,401	\$1,189,926	\$1,327,251	\$1,272,770	\$1,311,272	\$132,872	2.7%
Maintenance	\$91,794	\$68,433	\$78,880	\$124,006	\$195,116	\$103,322	20.7%
Taxes, Insurances & Contributions	\$102,988	\$74,528	\$79,111	\$91,930	\$147,415	\$44,427	9.4%
Total Expenses	\$3,178,823	\$2,887,026	\$3,081,105	\$3,264,373	\$3,901,091	\$722,268	5.3%
Engineering News Record							
	<i>Dec 2011</i>	<i>Dec 2012</i>	<i>Dec 2013</i>	<i>Dec 2014</i>	<i>Dec 2015</i>		
ENR Construction Cost Index 20-City [1]	9,172.00	9,412.00	9,668.00	9,936.00	10,135.00	963.00	2.5%
ENR Construction Cost Index San Francisco	10,204.79	10,355.09	10,898.84	10,915.84	11,155.41	950.62	2.3%
Bureau of Labor Statistics							
Consumer Price Index - California	232.99	237.71	241.53	244.81	250.71	17.73	1.9%
Consumer Price Index - San Francisco	234.33	239.53	245.71	252.27	260.29	25.96	2.7%

Source: City of St. Helena, California Department of Finance, and the Engineering News Record.

indices

[1] Engineering News Record (ENR) Consumer Cost Index (CCI) change 1995 to 2015:

ENR CCI 1995	5,524	Change	<u>Annual Avg. % Change</u>
ENR CCI 2015	10,135	4,611	3.1%

Table A-12
City of St. Helena Water Rate Study
Estimated Depreciation of New Assets

New Asset	Asset Life	Fiscal Year Ending										
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
	years											
York Creek Upper Dam Removal/Mitigation	n.a.	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Meadowood Tank Upgrades	50	\$0	\$0	\$8,322.14	\$8,322	\$8,322	\$8,322	\$8,322	\$8,322	\$8,322	\$8,322	\$8,322
Bell Canyon Reservoir Improvements	80	\$0	\$0	\$0	\$0	\$0	\$13,497	\$13,497	\$13,497	\$13,497	\$13,497	\$13,497
Dwyer Road Booster	50	\$0	\$0	\$0	\$10,369	\$19,292	\$19,292	\$19,292	\$19,292	\$19,292	\$19,292	\$19,292
Bell Canyon Intake Mid-Valve Repair	10	\$1,483	\$1,483	\$1,483	\$1,483	\$1,483	\$1,483	\$1,483	\$1,483	\$1,483	\$1,483	\$1,483
Bell Valve House Valve Replacement	50	\$0	\$0	\$0	\$0	\$0	\$12,623	\$12,623	\$12,623	\$12,623	\$12,623	\$12,623
Holmes Tank Upgrade	50	\$0	\$0	\$0	\$1,310	\$32,151	\$32,151	\$32,151	\$32,151	\$32,151	\$32,151	\$32,151
Bell Canyon Creek Flow Measurement	40	\$0	\$13,090	\$13,090	\$13,090	\$13,090	\$13,090	\$13,090	\$13,090	\$13,090	\$13,090	\$13,090
Sludge Handling Program	40	\$0	\$0	\$0	\$4,234	\$4,234	\$4,234	\$4,234	\$4,234	\$4,234	\$4,234	\$4,234
Raw Water Metering Station	15	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$8,760	\$8,760	\$8,760
Tank 2 Rehabilitation	50	\$0	\$1,275	\$16,390	\$16,390	\$16,390	\$16,390	\$16,390	\$16,390	\$16,390	\$16,390	\$16,390
Well Filter Rehabilitation	10	\$1,145	\$1,145	\$1,145	\$1,145	\$1,145	\$1,145	\$1,145	\$1,145	\$1,145	\$1,145	\$1,145
Pump Station Upgrades	50	\$0	\$4,250	\$4,250	\$4,250	\$4,250	\$4,250	\$4,250	\$4,250	\$4,250	\$4,250	\$4,250
Replace 12" Transmission Main	80	\$0	\$0	\$0	\$0	\$0	\$0	\$6,183	\$6,183	\$6,183	\$6,183	\$6,183
Lower York Creek Dam Rehab	20	\$9,829	\$9,829	\$9,829	\$9,829	\$9,829	\$9,829	\$9,829	\$28,313	\$28,313	\$28,313	\$28,313
Bell Canyon Intake Tower Replacement	80	\$8,375	\$26,306	\$26,306	\$26,306	\$26,306	\$26,306	\$26,306	\$26,306	\$26,306	\$26,306	\$26,306
WTP Condition Assessment	10	\$0	\$0	\$0	\$0	\$17,458	\$17,458	\$17,458	\$17,458	\$17,458	\$17,458	\$17,458
Spill Containment at Bell Creek Intake	50	\$0	\$1,594	\$1,594	\$1,594	\$1,594	\$1,594	\$1,594	\$1,594	\$1,594	\$1,594	\$1,594
SCADA Improvements (Rutherford & Holmes)	10	\$0	\$0	\$0	\$16,936	\$16,936	\$16,936	\$16,936	\$16,936	\$16,936	\$16,936	\$16,936
Spill Containment at Stonebridge Well	50	\$0	\$1,594	\$1,594	\$1,594	\$1,594	\$1,594	\$1,594	\$1,594	\$1,594	\$1,594	\$1,594
Upgrade Rutherford Pump Station	50	\$0	\$0	\$1,095	\$11,257	\$11,257	\$11,257	\$11,257	\$11,257	\$11,257	\$11,257	\$11,257
Remove Restriction at Rutherford PS	50	\$0	\$1,063	\$3,253	\$3,253	\$3,253	\$3,253	\$3,253	\$3,253	\$3,253	\$3,253	\$3,253
Install Smart Meters	15	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Update GIS Maps of Water System	10	\$0	\$0	\$0	\$5,645	\$5,645	\$5,645	\$5,645	\$5,645	\$5,645	\$5,645	\$5,645
Water Master Plan Update	10	\$0	\$0	\$0	\$0	\$17,458	\$17,458	\$17,458	\$17,458	\$17,458	\$17,458	\$17,458
Replace Mains < 6-Inch Diameter	80	\$0	\$0	\$0	\$0	\$5,819	\$14,817	\$24,092	\$33,653	\$43,508	\$53,667	\$64,139
Replace 1% of Water Mains Annually	80	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,618
Additional Storage	50	\$0	\$0	\$0	\$0	\$0	\$0	\$12,367	\$25,114	\$25,114	\$25,114	\$25,114
Annual Maintenance Program	10	\$5,154	\$10,467	\$15,943	\$21,589	\$50,685	\$56,683	\$62,866	\$69,240	\$75,810	\$109,673	\$116,655
Total Estimated Annual Depreciation		\$25,985	\$72,094	\$104,294	\$158,594	\$268,189	\$309,305	\$343,313	\$390,479	\$415,665	\$459,687	\$479,758

Source: City of St. Helena and HEC.

new dep

Table A-13
City of St. Helena Water Rate Study
Depreciation of Existing Assets

Asset Category	Current Depreciation
Buildings	\$36,008
Vehicles	\$8,383
Equipment	\$155,600
Improvements	\$559,834
Pipes	\$115,319
Total	\$875,144

Source: City of St. Helena. curr depr

Table A-14
City of St. Helena Water Rate Study
Allocation of Plant in Service

Facility	Percent Allocation					Cost Allocation				
	Customer	Capacity	Fire		Total	Customer	Capacity	Fire		Cost Basis
			Capacity	Use				Capacity	Use	
Buildings	100%				100%	\$1,656,932	\$0	\$0	\$0	\$1,656,932
Vehicles	25%	40%		35%	100%	\$10,522	\$16,835	\$0	\$14,730	\$42,086
Equipment	10%	50%		40%	100%	\$206,127	\$1,030,636	\$0	\$824,509	\$2,061,272
Improvements		75%	10%	15%	100%	\$0	\$7,482,162	\$997,622	\$1,496,432	\$9,976,217
Pipes		75%		25%	100%	\$0	\$2,887,942	\$0	\$962,647	\$3,850,589
Total Plant in Service						\$1,873,580	\$11,417,575	\$997,622	\$3,298,319	\$17,587,095
% of Plant in Service						11%	65%	6%	19%	100%

Source: City of St. Helena and HEC. plant

Table A-15
City of St. Helena Water Rate Study
Functional Allocation of Revenue Requirement

Expenditures	BUDGET 2016/17	Allocation Basis	Customer	Capacity	Fire Capacity	Use	Unclassified
Operations							
Salaries & Benefits	\$706,986	Avg. of Classified	0%	0%	0%	0%	100%
Services	\$311,925	Customers	100%	0%	0%	0%	0%
Supplies	\$18,792	Avg. of Classified	0%	0%	0%	0%	100%
Maintenance	\$13,197	Plant In Service	11%	65%	6%	19%	0%
Taxes, Insurances & Contributions	\$113,467	Avg. of Classified	0%	0%	0%	0%	100%
Capital	\$1,925	Plant In Service	11%	65%	6%	19%	0%
Debt	\$1,001,067	Ratio Avg. to Peak Month	0%	74%	0%	26%	0%
Subtotal Operations	\$2,167,359						
Distribution							
Salaries & Benefits	\$490,637	Avg. of Classified	0%	0%	0%	0%	100%
Services & Supplies	\$52,228	Avg. of Classified	0%	0%	0%	0%	100%
Utilities	\$61,770	Avg. of Classified	0%	0%	0%	0%	100%
Maintenance	\$60,295	Plant In Service	11%	65%	6%	19%	0%
Capital	\$21,000	Plant In Service	11%	65%	6%	19%	0%
Subtotal Distribution	\$685,930						
Treatment							
Salaries & Benefits	\$414,620	Ratio Avg. to Peak Month	0%	74%	0%	26%	0%
Services & Supplies	\$64,000	Ratio Avg. to Peak Month	0%	74%	0%	26%	0%
Utilities & Chemicals	\$137,500	Utilities & Chemicals	0%	0%	0%	100%	0%
Maintenance	\$83,587	Plant In Service	11%	65%	6%	19%	0%
Taxes, Insurances & Contributions	\$19,700	Avg. of Classified	0%	0%	0%	0%	100%
Capital	\$115,000	Plant In Service	11%	65%	6%	19%	0%
Subtotal Treatment	\$834,407						
Stonebridge Wells							
Services	\$57,100	Utilities & Chemicals	0%	0%	0%	100%	0%
Supplies	\$12,800	Utilities & Chemicals	0%	0%	0%	100%	0%
Maintenance	\$15,500	Plant In Service	11%	65%	6%	19%	0%
Subtotal Stonebridge Wells	\$85,400						
Napa Purchased Water	\$1,349,019	Napa	0%	75%	0%	25%	0%
TOTAL OPERATING EXPENDITURES	\$5,122,115		\$345,003	\$2,313,324	\$17,613	\$982,594	\$1,463,580
Reallocate As All Others			\$138,017	\$925,435	\$7,046	\$393,082	
ALLOCATION OF OP. EXP.	\$5,122,115		\$483,021	\$3,238,759	\$24,659	\$1,375,676	
	100%		9.4%	63.2%	0.5%	26.9%	

Source: City of St. Helena and HEC.

func

Table A-16
City of St. Helena Water Rate Study
Number of Meters

Meter Size	TOTAL	Customer Type											
		Commercial	Industrial	Residential			Landscape	Churches [2]	Laundry	Library/Schools	Motel/Hotel	All Other	City-Owned
				SF	MF	Mob							
	[1]												
5/8"	1,987	131	12	1,776	36	1	12	7	0	1	5	0	6
1"	330	40	0	232	36	0	6	6	0	1	2	0	7
1.5"	61	11	1	11	20	1	6	1	1	3	2	0	4
2"	47	11	1	8	6	1	7	1	0	6	4	0	2
3"	7	1	0	0	3	0	1	0	0	0	1	0	1
4"	9	2	1	1	0	0	0	0	0	3	1	1	0
6"	11	1	6	0	1	1	0	0	0	0	1	0	1
Total	2,452	197	21	2,028	102	4	32	15	1	14	16	1	21

Source: City of St. Helena.

meters

[1] Compound meters counted only once.

[2] Includes all religious places and community centers

Table A-17
City of St. Helena Water Rate Study
Calculated Consumption Charges for Seasonal Water Rates

Allocated Peak & Off-Peak	Fiscal Year Ending										
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Allocated Cost	\$3,799,993	\$4,387,001	\$4,958,147	\$5,102,274	\$5,225,724	\$5,351,120	\$5,488,329	\$5,567,635	\$5,613,794	\$5,636,044	\$5,657,543
Off-Peak Water Use (Nov-Apr) 37%	240,040	239,015	239,436	240,404	240,688	240,939	241,176	241,506	241,799	242,079	242,329
Peak Water Use (May-Oct) 63%	405,760	404,027	404,739	406,376	406,856	407,280	407,682	408,238	408,734	409,208	409,631
Total Water Use	645,800	643,042	644,175	646,780	647,544	648,219	648,858	649,744	650,533	651,287	651,960
Off-Peak Costs per HCF	\$5.50	\$6.37	\$7.19	\$7.37	\$7.54	\$7.71	\$7.90	\$8.01	\$8.06	\$8.08	\$8.11
Peak Costs per HCF 1.11	\$6.11	\$7.09	\$8.00	\$8.20	\$8.38	\$8.58	\$8.79	\$8.90	\$8.97	\$8.99	\$9.02

Source: City of St. Helena and HEC. seasonal rates

Table A-18
City of St. Helena Water Rate Study
Projection of Water Demand

Customer	Fiscal Year Ending										
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Residential	All figures in Hundreds of Cubic Feet										
Single Unit	262,941	261,914	262,758	264,154	264,862	265,537	266,199	266,954	267,672	268,377	269,052
Multi-Fam	48,856	48,665	48,696	48,830	48,836	48,836	48,833	48,848	48,856	48,861	48,861
Mobile Homes	27,026	26,920	26,938	27,012	27,015	27,015	27,014	27,022	27,026	27,029	27,029
Subtotal Residential	338,822	337,499	338,393	339,995	340,713	341,388	342,046	342,823	343,554	344,267	344,942
Non-Residential											
Commercial	79,857	79,272	79,369	79,778	79,797	79,797	79,789	79,834	79,857	79,874	79,873
Industrial	138,422	138,084	138,140	138,377	138,387	138,387	138,383	138,409	138,422	138,432	138,432
Landscape	20,615	20,413	20,447	20,587	20,594	20,594	20,591	20,606	20,615	20,620	20,620
Churches	2,878	2,867	2,869	2,876	2,877	2,877	2,877	2,878	2,878	2,878	2,878
Wells	2,585	2,585	2,585	2,585	2,585	2,585	2,585	2,585	2,585	2,585	2,585
Laundry	3,017	3,010	3,011	3,016	3,016	3,016	3,016	3,017	3,017	3,017	3,017
Library Schools	19,452	19,357	19,372	19,439	19,442	19,442	19,441	19,448	19,452	19,454	19,454
Motel/Hotel	28,937	28,768	28,796	28,914	28,920	28,920	28,918	28,930	28,937	28,942	28,942
City Owned	11,216	11,189	11,193	11,213	11,213	11,213	11,213	11,215	11,216	11,217	11,217
Subtotal Non-Residential	306,978	305,543	305,782	306,785	306,831	306,831	306,812	306,921	306,979	307,020	307,018
Total Billable	645,800	643,042	644,175	646,780	647,544	648,219	648,858	649,744	650,533	651,287	651,960
Non-Billable [1]	61,980	61,980	61,980	61,980	61,980	61,980	61,980	61,980	61,980	61,980	61,980
Total Water	707,781	705,022	706,155	708,760	709,525	710,199	710,838	711,724	712,513	713,267	713,941

Source: City of St. Helena and HEC.

demand

[1] Non-Billable water includes unaccounted and/or unbilled water e.g. leaks, and certain city agreements.

Table A-19
City of St. Helena Water Rate Study
Assumptions for the Effect of Increasing Prices on Water Demand (Price Elasticity)

Customer Type	Estimated Elasticity	2018 Year 1	2019 Year 2	2020 Year 3	2021 Year 4	2022 Year 5	2023 Year 6	2024 Year 7	2025 Year 8	2026 Year 9	2027 Year 10
% Change in Price to Meet Revenue Requirement		17.1%	14.7%	4.5%	4.0%	4.0%	4.2%	3.1%	2.5%	2.1%	2.1%
Assumption for Inflation		2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
Price Increase Adjusted for Inflation		14.6%	12.2%	2.0%	1.5%	1.5%	1.7%	0.6%	0.0%	-0.4%	-0.4%
Residential											
Single Unit	-0.08	-1.2%	-1.0%	-0.2%	-0.1%	-0.1%	-0.1%	0.0%	0.0%	0.0%	0.0%
Multi-Fam	-0.08	-1.2%	-1.0%	-0.2%	-0.1%	-0.1%	-0.1%	0.0%	0.0%	0.0%	0.0%
Mobile Homes	-0.08	-1.2%	-1.0%	-0.2%	-0.1%	-0.1%	-0.1%	0.0%	0.0%	0.0%	0.0%
Non-Residential											
Commercial	-0.15	-2.2%	-1.8%	-0.3%	-0.2%	-0.2%	-0.3%	-0.1%	0.0%	0.1%	0.1%
Industrial	-0.05	-0.7%	-0.6%	-0.1%	-0.1%	-0.1%	-0.1%	0.0%	0.0%	0.0%	0.0%
Landscape	-0.20	-2.9%	-2.4%	-0.4%	-0.3%	-0.3%	-0.3%	-0.1%	0.0%	0.1%	0.1%
Churches	-0.08	-1.2%	-1.0%	-0.2%	-0.1%	-0.1%	-0.1%	0.0%	0.0%	0.0%	0.0%
Laundry	-0.05	-0.7%	-0.6%	-0.1%	-0.1%	-0.1%	-0.1%	0.0%	0.0%	0.0%	0.0%
Library Schools	-0.10	-1.5%	-1.2%	-0.2%	-0.1%	-0.2%	-0.2%	-0.1%	0.0%	0.0%	0.0%
Motel/Hotel	-0.12	-1.8%	-1.5%	-0.2%	-0.2%	-0.2%	-0.2%	-0.1%	0.0%	0.1%	0.0%
City Owned	-0.05	-0.7%	-0.6%	-0.1%	-0.1%	-0.1%	-0.1%	0.0%	0.0%	0.0%	0.0%

Source: HEC.

elasticity

Table A-20
City of St. Helena Water Rate Study
Projected Changes in Water Demand due to Price Changes

Customer Type	Fiscal Year Ending									
	2018 Year 1	2019 Year 2	2020 Year 3	2021 Year 4	2022 Year 5	2023 Year 6	2024 Year 7	2025 Year 8	2026 Year 9	2027 Year 10
Residential										
Single Unit [1]	262,941	263,617	264,292	264,968	265,644	266,320	266,995	267,671	268,347	269,023
Multi-Fam	48,856	48,856	48,856	48,856	48,856	48,856	48,856	48,856	48,856	48,856
Mobile Homes	27,026	27,026	27,026	27,026	27,026	27,026	27,026	27,026	27,026	27,026
Subtotal Residential	338,822	339,498	340,174	340,849	341,525	342,201	342,877	343,552	344,228	344,904
Non-Residential										
Commercial	79,857	79,857	79,857	79,857	79,857	79,857	79,857	79,857	79,857	79,857
Industrial	138,422	138,422	138,422	138,422	138,422	138,422	138,422	138,422	138,422	138,422
Landscape	20,615	20,615	20,615	20,615	20,615	20,615	20,615	20,615	20,615	20,615
Churches	2,878	2,878	2,878	2,878	2,878	2,878	2,878	2,878	2,878	2,878
Wells	2,585	2,585	2,585	2,585	2,585	2,585	2,585	2,585	2,585	2,585
Laundry	3,017	3,017	3,017	3,017	3,017	3,017	3,017	3,017	3,017	3,017
Library Schools	19,452	19,452	19,452	19,452	19,452	19,452	19,452	19,452	19,452	19,452
Motel/Hotel	28,937	28,937	28,937	28,937	28,937	28,937	28,937	28,937	28,937	28,937
City Owned	11,216	11,216	11,216	11,216	11,216	11,216	11,216	11,216	11,216	11,216
Subtotal Non-Residential	306,978	306,978	306,978	306,978	306,978	306,978	306,978	306,978	306,978	306,978
Total Billable Water	645,800	953,454	954,129	954,805	955,481	956,157	956,832	957,508	958,184	958,860
Change in Demand due to Price [2]										
Residential										
Single Unit	-1,027	-858	-139	-106	-106	-120	-42	1	31	30
Multi-Fam	-191	-159	-26	-20	-20	-22	-8	0	6	5
Mobile Homes	-106	-88	-14	-11	-11	-12	-4	0	3	3
Subtotal Residential	-1,324	-1,105	-179	-136	-137	-155	-53	1	39	38
Non-Residential										
Commercial	-585	-488	-79	-60	-60	-68	-23	1	17	16
Industrial	-338	-282	-45	-35	-35	-39	-13	0	10	10
Landscape	-201	-168	-27	-21	-21	-23	-8	0	6	6
Churches	-11	-9	-2	-1	-1	-1	0	0	0	0
Laundry	-7	-6	-1	-1	-1	-1	0	0	0	0
Library Schools	-95	-79	-13	-10	-10	-11	-4	0	3	3
Motel/Hotel	-170	-141	-23	-17	-17	-20	-7	0	5	5
City Owned	-27	-23	-4	-3	-3	-3	-1	0	1	1
Subtotal Non-Residential	-1,435	-1,196	-193	-147	-147	-166	-57	1	42	40
Total Billable Water	-2,758	-2,301	-372	-283	-284	-321	-111	3	81	78

Source: HEC.

elas demand

[1] Assumes growth of 5 units per year.

[2] Change applied to summer months consumption only.

Percent of Year	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%

Table A-21
City of St. Helena Water Rate Study
Operating Expenses (FY2016) Peak to Off-Peak Ratio

Expenses	TOTAL Excl. Debt	Percent of Year Total
Jul-15	\$280,972	8%
Aug-15	\$156,745	5%
Sep-15	\$373,717	11%
Oct-15	\$367,289	11%
Nov-15	\$297,387	9%
Dec-15	\$391,236	11%
Jan-16	\$256,759	7%
Feb-16	\$158,108	5%
Mar-16	\$267,578	8%
Apr-16	\$252,836	7%
May-16	\$155,424	5%
Jun-16	\$471,651	14%
TOTAL	\$3,429,701	100%
PEAK	\$1,805,798	
PEAK AS % OF TOTAL	53%	
OFF-PEAK	\$1,623,903	
PEAK AVG.	\$300,966	
OFF-PEAK AVG.	\$270,650	
PEAK TO OFF-PEAK RATIO	1.11	

Source: City of St. Helena.

exp monthly 2

[1] Excludes operating costs not influenced by seasonal changes; debt, taxes, insurance, and capital.

Table A-22
City of St. Helena Water Rate Study
Calculated Drought and Non-Drought Year Water Costs

Source Costs	Imported <i>City of Napa</i>	Surface Water <i>Bell Canyon</i>	Ground Water <i>Stonebridge Wells</i>	Total <i>All Sources</i>
<u>Fiscal Year 2015</u>				
Cost per 1,000 Galls	\$6.70	\$2.82	\$0.65	
DROUGHT YEAR				
Wtd. Avg. Cost per 1,000 Galls.	\$2.53	\$1.31	\$0.10	\$3.94
Source of Supply	38%	46%	16%	100%
NON-DROUGHT YEAR				
Wtd. Avg. Cost per 1,000 Galls.	\$2.12	\$1.13	\$0.19	\$3.43
Source of Supply	32%	40%	28%	100%
All Other Operations Costs (assumed not to change) [1]				\$1,814,740
All Other Operations Costs per 1,000 Gallons of City produced water				\$5.68
TOTAL DROUGHT YEAR COST PER 1,000 GALLONS				\$9.62
TOTAL NON-DROUGHT YEAR COSTS PER 1,000 GALLONS				\$9.10
<i>Ratio of Drought to Non-Drought</i>			<i>1.06</i>	

Source: City of St. Helena and HEC.

cost by source

[1] Includes general operations costs; excludes distribution costs, debt, capital, and transfers.

Exhibit A

**HANSFORD ECONOMIC
CONSULTING**



**City of St. Helena (2016)
Wastewater Rate Study
Technical Memorandum**

FINAL
October 31, 2016

HEC Project #150182

Exhibit A

**HANSFORD ECONOMIC
CONSULTING**

PO Box 10384
Truckee, CA 96162

Phone: 530-412-3676
Email: catherine@hansfordecon.com

Technical Memorandum WASTEWATER RATE STUDY

To: City of St. Helena

From: Catherine Hansford

Date: October 31, 2016

This technical memorandum presents the detailed wastewater rate study. Support tables are provided in **Attachment A**.

THE WASTEWATER FUND

Table A-1 in **Attachment A** shows comprehensive audited financial report data for the wastewater fund from 2011 through 2015. Detailed historical revenues and expenses are shown in **Table A-2**, with supporting data in **Table A-3**.

Revenues

The wastewater system is funded through rates, annexation fees, investment earnings, and sewer connection fees. More than 99% of revenue is from wastewater rates. Rate revenue is generated according to the current wastewater rate schedule shown on the following page in **Table 1**. Under the current rate schedule all customers pay a service charge (or base charge) and a flow charge per HCF based on average winter month water use. Residential single family customers pay a flat monthly base charge, and a flow charge. For non-residential customers, including residential multi-family customers, the service charge is different by meter size, and the flow charge is different by customer type.

Expenses

Figure 1 displays the components of expenditures for the past five years for the wastewater capital and operating funds combined. Personnel costs (salaries and benefits), services, and capital projects have been the largest expenditure items.

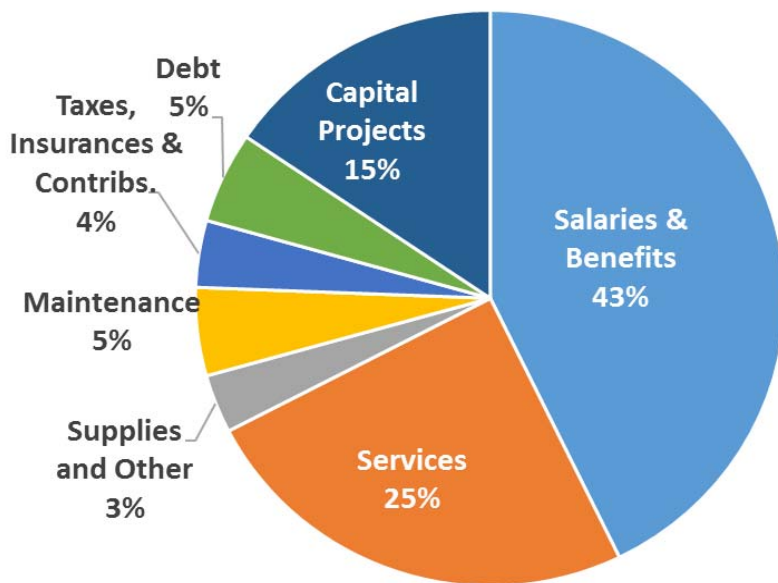
Prepared by HEC

Exhibit A

Page 2 of 23

Wastewater Rate Study, October 31, 2016

Figure 1
Typical Annual Wastewater Fund Expenditures



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Exhibit A

Page 3 of 23

Wastewater Rate Study, October 31, 2016

Table 1
Current Wastewater Rate Schedule

Land Use	Base Monthly Rate (2016)	Usage Rate (\$ per hcf of Winter Water Use)
Residential		[1]
Single Family	\$47.35	\$3.94
Multi-family	[2]	\$3.94
Non-Residential Base Rates		
5/8" & 3/4" Meter	\$42.12	
1" Meter	\$102.42	
1 1/2" Meter	\$202.92	
2" Meter	\$323.53	
3" Meter	\$604.94	
4" Meter	\$1,006.96	
6" Meter	\$2,012.00	
Non-Residential Usage Rates (per hcf)		
Car Wash		\$2.85
Schools		\$3.17
Laundry/Laundromat		\$3.34
Churches		\$3.64
City Buildings		\$3.64
Commercial (General)		\$3.64
Winery (Sutter Home)		\$4.27
Motels without Food		\$4.35
Service Stations/Auto Repair		\$4.70
Mixed Retail with Food		\$6.79
Motels with Food		\$8.75
Restaurant		\$11.68
Grocery		\$11.87
Mortuary		\$11.87
Winery (Merryvale)		\$20.94
Winery (Spottswode)		\$20.94

Source: City of St. Helena.

curr

[1] Single family usage charge based on average winter water use, determined as average monthly usage for billing cycles with read dates from January through March. Months with zero usage are to be excluded from the averaging. Usage charge to be adjusted annually in April, based on the newest winter average.

[2] Multi-family pays same base charges based on meter size as non-residential.

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Exhibit A

Page 4 of 23

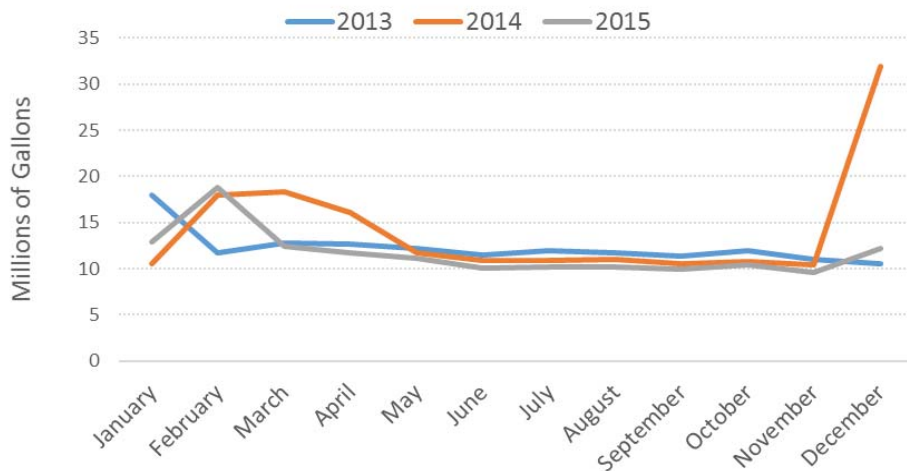
Wastewater Rate Study, October 31, 2016

THE WASTEWATER SYSTEM

The City's wastewater system consists of a collection system of more than 22 miles of pipe. Effluent is treated at the 0.5 million gallons a day (average daily dry weather flow) treatment plant. The wastewater treatment plant was built in 1967. The secondary level treatment plant discharges to the Napa River or land (City-owned grass fields, redwood/willow trees, and mosquito fish ponds). The City's National Pollutant Discharge Elimination System (NPDES) permit was renewed in March 2016; at the same time a Cease and Desist Order (CDO) No. R2-2016-0004 was issued because the City is unable to meet the more stringent effluent requirements of the renewed NPDES permit. A draft feasibility study was prepared for the City in August 2016 which recommends improvements at the wastewater treatment plant so that the City can be in compliance and the CDO lifted.

Figure 2 shows historical monthly influent at the wastewater treatment plant. Data is provided in **Table A-4**. Wastewater inflow at the treatment plant currently averages 0.4 million gallons per day (MGD).

Figure 2
Historical Wastewater Plant Monthly Influent Flow



Customer Characteristics

The number of customers and total calculated flow for each customer and customer category, BOD and TSS characteristics are summarized in **Table 2**.

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Exhibit A

Page 5 of 23

Wastewater Rate Study, October 31, 2016

Table 2
Summary of User Characteristics

Customer Category	Billing Basis	No. Billing Units	Wastewater Characteristics				Existing Treatment Capacity/Load				Total Annual Capacity/Load			
			Flow	BOD	SS	Flow	BOD	SS	Flow	BOD	SS			
			GPD	MG/L	MG/L	MGD	Lbs/Day	Lbs/Day	MG	Lbs/Year	Lbs/Year			
		(A)	(B)	(C)	(D)	(E)=(A)(B)/1000000	(F)=(C)(E)(8.34)	(G)=(D)(E)(8.34)	(H)=(E)(365)	(I)=(F)(365)	(J)=(G)(365)			
[1]														
Residential														
Single Family	Unit	1,503	175	200	200	0.26	439.25	439.25	96.12	160,328	160,328	160,328		
Multi-Family	Unit	669	106	200	200	0.07	118.29	118.29	25.89	43,177	43,177	43,177		
Mobile Homes (Vineyard Valley)	Unit	211	157	200	200	0.03	55.33	55.33	12.11	20,197	20,197	20,197		
School	Student	1,437	8	130	100	0.01	11.68	8.99	1.94	2,103	1,618			
Non-Residential														
Car Wash	Account	1	1,005	20	150	0.00	0.17	1.26	0.37	61	459			
Religious Places/Community Centers	Account	13	156	130	110	0.00	2.20	1.86	0.74	802	679			
Commercial [2]	Account	126	241	150	200	0.03	37.96	50.61	11.08	13,855	18,473			
Groceries and Mortuaries	Account	3	691	800	800	0.00	13.84	13.84	0.76	5,052	5,052			
Laundry	Account	1	4,181	150	110	0.00	5.23	3.84	1.53	1,909	1,400			
Mixed Retail w/ Food	Account	3	1,319	240	600	0.00	7.92	19.80	1.44	2,891	7,228			
Motel with Food	Account	2	5,429	500	600	0.01	45.28	54.34	3.96	16,528	19,833			
Motel without Food	Account	8	2,297	310	120	0.02	47.51	18.39	6.71	17,340	6,712			
Restaurant	Account	19	1,354	1,000	600	0.03	214.60	128.76	9.39	78,328	46,997			
Napa Valley College	Account	1	12,925	130	100	0.01	14.01	10.78	4.72	5,115	3,935			
Service Station	Account	5	318	180	280	0.00	2.38	3.71	0.58	870	1,353			
Winery Production (Merryvale/Spottswode)	Account	2	937	2,800	400	0.00	43.78	6.25	0.68	15,981	2,283			
Sutter Home Winery	Account	1	3,195	200	200	0.00	5.33	5.33	1.17	1,945	1,945			
TOTAL (ADWF 0.5 MGD)						0.50	1,064.78	940.64	179.17	386,483	341,669			
Source: City of St. Helena, California Department of Education, Educational Demographics Unit, and HEC														

Source: City of St. Helena, California Department of Education Educational Demographics Unit, and HEC.

[1] Schools multiplied by 180 days per year.

[2] Commercial includes City buildings.

chair

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Exhibit A

Page 6 of 23

Wastewater Rate Study, October 31, 2016

REVENUE REQUIREMENT

The revenue requirement refers to the amount of money that must be raised through rates. The projection of revenue requirement is the cornerstone for calculation of rates. This section explains the derivation of revenue requirement for this Study. Components of revenue requirement include:

- Capital Improvements
- Debt Service
- Operations Expenses and Reserves
- System Rehabilitation
- Wastewater Fund Reserves

Non-water sales revenue projections are credited against projected operations costs. Non-water sales include investment earnings and sewer connection fees.

Capital Improvements

Table 3 summarizes the capital improvement costs identified by the City as necessary in the next ten years. The costs do not include project costs that already have funding sources identified (i.e. have a grant secured or are to be funded with existing City bond proceeds). All costs are expressed in future dollars. The total ten-year capital improvement projects (CIP) costs is estimated at \$17.7 million. Of this total it is anticipated that \$13.0 million will be spent in the next five years.

Table A-5 and **Table A-6** provide the wastewater system CIP list of facilities, provided by the City for the next 10 years, in current and future dollars respectively. Major necessary improvements include phase 1 upgrades to the wastewater treatment plant, replacing the wastewater reclamation facility operations building and shop, and sewer mains replacement or rehabilitation.

Costs are further allocated to existing and future customers based on their estimated use of the facilities. Only \$125,000 of the total cost is for projects partially benefiting future customers. These projects include reclamation field facilities and miscellaneous maintenance improvements. Supporting data is provided in **Table A-7**, in 2016 dollars, and **Table A-8**, in future dollars. All other CIP items are allocated entirely to existing customers. Existing customers' costs included in rates are shown in **Table A-9**.

Future costs are inflated using the Engineering News Record Construction Cost Index (ENR CCI) past 20-year annual average increase of 3.1%.

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Exhibit A

Page 7 of 23

Wastewater Rate Study, October 31, 2016

Table 3
Wastewater Capital Improvement Costs by Customer Share

Customer	Estimated CIP Costs in Future Dollars		
	Through 2022	2023 to 2027	Total CIP
Existing Customer Share	\$12,909,786	\$4,699,894	\$17,609,680
Future Customer Share	\$57,033	\$68,049	\$125,082
Total Existing and Future	\$12,966,819	\$4,767,944	\$17,734,763

Source: HEC.

cip share

CIP funding sources of costs are shown in **Table 4**.

Table 4
Sources of Funding for Existing Customers CIP Costs

Project	Total Cost Less Existing Funding	Total Through FY 2022	Fiscal Year Ending					
			2017	2018	2019	2020	2021	2022
Future \$'s								
Cash - Capital Fund	\$4,636,494	\$2,636,034	\$521,023	\$426,887	\$391,846	\$686,181	\$270,883	\$339,214
Cash - Operations Fund	\$561,029	\$462,386	\$15,462	\$69,067	\$235,491	\$16,936	\$17,458	\$107,973
Debt - Capital Fund	\$8,746,428	\$8,495,287	\$239,259	\$743,798	\$3,582,746	\$3,693,130	\$116,384	\$119,970
Reserves	\$3,665,729	\$1,316,079	\$0	\$0	\$0	\$0	\$116,384	\$1,199,695
Total CIP	\$17,609,680	\$12,909,786	\$775,744	\$1,239,752	\$4,210,083	\$4,396,247	\$521,108	\$1,766,852

Source: City of St. Helena and HEC.

exis rates

Debt Service

The City has wastewater system debt associated with a 2005 bond issue, and refunding of that bond issue in 2012. Yearly debt service for the wastewater system is shown in **Table A-9**.

New debt is anticipated to be incurred for phase 1 and phase 2 of the wastewater treatment plant (WWTP) upgrades. For the rate study it is assumed these projects are funded with a Clean Water State Revolving Fund (CWSRF) loan. Due to the size of the projects, a 15% contingency factor was added to the estimated City cost. The estimated new CWSRF debt service is shown in **Table 5**. A year of debt service must be accumulated prior to repayment of the loan, which begins one year after completion of construction.

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Exhibit A

Page 8 of 23

Wastewater Rate Study, October 31, 2016

Table 5
Estimated CWSRF Debt Financing for WWTP Upgrades

Item	Construction Fiscal Year
Treatment Plant Phase 1	2019
Construction Cost Estimate	\$8,258,933
Contingency (15%) [1]	\$1,238,840
Total	\$9,497,773
Estimated Annual Debt Service [2]	\$592,124
Estimated Total Financing Costs	\$2,344,700
Treatment Plant Phase 2	2022
Construction Cost Estimate	\$487,495
Contingency (15%) [1]	\$73,124
Total	\$560,619
Estimated Annual Debt Service [2]	\$34,951
Estimated Total Financing Costs	\$138,399
Total Debt-Financed Infrastructure Cost	\$10,058,393
Estimated Total Financing Costs	\$2,483,099

Source: State Water Resources Control Board and HEC.

new debt

[1] State-funded projects typically cost more (more administration as well as American Iron and Steel requirements, and labor reporting).

[2] CWSRF loan assumptions:

Interest Rate	2.2%
Term (years)	20

Operations Expenses and Reserves

Estimated fiscal year 2015/16 operating expenses are used to project future year operating expenditures. All operating expenditures are increased 5% each year with the exception of capital, which is increased at 3% per year, and maintenance, taxes, insurances and contributions which are increased at 10% per year to be more consistent with higher historical increases for these expenses. **Table A-10** shows historical annual average operating cost increases of 14.6%. Fiscal year 2015/16 was abnormally high. Taking this out of the calculation, the data shows historical annual average operating cost increases of only 4.9%.

System Rehabilitation Costs

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Exhibit A

Page 9 of 23

Wastewater Rate Study, October 31, 2016

Depreciation is used as the basis for which to collect rates to cover system rehabilitation costs. Inclusion of system rehabilitation costs demonstrates fiscal responsibility toward the assets to potential future investors and helps to establish good credit¹. Depreciation is calculated based on existing wastewater assets and new assets added to the wastewater system in the next five years. **Table 6** shows the total annual amount of depreciation for existing and new assets included in the rate study. If the collected revenue is not applied to a CIP rehabilitation project it should be designated within the fund for the purposes of repair and rehabilitation only. Supporting data is provided in **Tables A-11** and **A-12**.

Table 6
System Rehabilitation Annual Costs

Asset List	Fiscal Year Ending					
	2017	2018	2019	2020	2021	2022
Existing Assets	\$340,044	\$350,521	\$361,320	\$372,452	\$383,928	\$395,756
Projected Assets Annual Depreciation	\$16,613	\$41,264	\$98,143	\$159,973	\$176,412	\$230,848
Total Annual Depreciation	\$356,657	\$391,785	\$459,463	\$532,425	\$560,339	\$626,604
<i>Percent Depreciation for System Rehabilitation</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>
System Rehabilitation	\$356,700	\$391,800	\$459,500	\$532,400	\$560,300	\$626,600

Source: City of St. Helena and HEC.

depr

Revenue Requirement

Table 7 on the next page provides the projection of annual costs and revenues and the resulting revenue requirement through fiscal year ending 2027. Total revenue requirement is projected to increase from \$3.0 million in the fiscal year 2017 to \$4.6 million in fiscal year 2022 to \$5.7 million in fiscal year 2027.

¹ Per Governmental Accounting Standards Board (GASB) 34, local governments must report on the value of their infrastructure assets and plan for asset maintenance (including collecting sufficient revenue) to obtain good credit when issuing bonds or procuring other forms of financing for long-term construction projects.

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Exhibit A

Page 10 of 23

Wastewater Rate Study, October 31, 2016

Table 7
Projected Revenue Requirement

Revenues and Expenses		Assumptions	Fiscal Year Ending										
			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Operating Expenses	**	Budgeted	\$1,071,519	\$1,125,095	\$1,181,350	\$1,240,417	\$1,302,438	\$1,367,560	\$1,435,938	\$1,507,735	\$1,583,122	\$1,662,278	\$1,745,392
	5.0%	Services & Benefits	\$319,189	\$335,148	\$351,906	\$369,501	\$387,976	\$407,375	\$427,744	\$449,131	\$471,588	\$495,167	\$519,925
	5.0%	Supplies	\$75,942	\$79,739	\$83,726	\$87,912	\$92,308	\$96,923	\$101,770	\$106,858	\$112,201	\$117,811	\$123,702
	**	Maintenance	\$130,513	\$143,564	\$157,921	\$173,713	\$191,084	\$210,192	\$231,212	\$254,333	\$279,766	\$307,743	\$338,517
	10.0%	Taxes, Insurances & Contribs.	\$105,967	\$116,564	\$128,220	\$141,042	\$155,146	\$170,661	\$187,727	\$206,500	\$227,150	\$249,865	\$274,851
	**	Capital	\$101,700	\$104,751	\$107,894	\$111,130	\$114,464	\$117,898	\$121,435	\$125,078	\$128,831	\$132,695	\$136,677
	3.0%	Wet Weather Flow Monitoring	\$0	\$0	\$54,765	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
		Update GIS Maps of Sewer System	\$0	\$53,128	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
		Sewer Master Plan	\$0	\$0	\$164,296	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
		CCTV Program	\$15,462	\$15,939	\$16,430	\$16,936	\$17,458	\$17,995	\$18,550	\$19,121	\$19,711	\$20,318	\$20,944
Recycled Water Feasibility Study			\$0	\$0	\$0	\$16,936	\$17,458	\$17,995	\$18,550	\$19,121	\$19,711	\$20,318	\$20,944
Total Operating Expenses			\$1,820,292	\$1,973,928	\$2,246,507	\$2,140,652	\$2,260,874	\$2,478,583	\$2,524,375	\$2,668,756	\$2,822,367	\$2,985,876	\$3,160,007
Debt Service													
		Existing Debt	\$252,876	\$253,904	\$256,030	\$252,890	\$253,823	\$255,392	\$250,938	\$251,669	\$252,022	\$252,310	\$251,490
		WWTP New Debt - Phase 1	\$0	\$0	\$592,124	\$592,124	\$592,124	\$592,124	\$592,124	\$592,124	\$592,124	\$592,124	\$592,124
		WWTP New Debt - Phase 2	\$0	\$0	\$0	\$0	\$0	\$34,951	\$34,951	\$34,951	\$34,951	\$34,951	\$34,951
**		Total Debt Service	\$252,876	\$253,904	\$848,154	\$845,014	\$845,947	\$882,467	\$878,012	\$878,744	\$879,097	\$879,384	\$878,565
		Capital Projects	\$164,323	\$35,087	\$0	\$153,781	\$0	\$0	\$154,028	\$0	\$0	\$0	\$0
		System Rehabilitation	\$356,700	\$391,800	\$459,500	\$532,400	\$560,300	\$626,600	\$690,300	\$712,900	\$732,900	\$775,900	\$797,200
		Operating Reserves	\$400,000	\$775,000	\$725,000	\$805,000	\$875,000	\$625,000	\$650,000	\$850,000	\$900,000	\$900,000	\$900,000
SUBTOTAL Annual Cost			\$2,994,191	\$3,429,719	\$4,279,161	\$4,476,847	\$4,542,121	\$4,612,649	\$4,896,715	\$5,110,400	\$5,334,364	\$5,541,161	\$5,735,771
**	Base		\$1,662,575	\$1,743,878	\$2,423,538	\$2,511,316	\$2,609,080	\$2,748,778	\$2,854,324	\$2,972,389	\$3,097,965	\$3,231,965	\$3,374,001
	Use		\$1,331,616	\$1,685,841	\$1,855,623	\$1,965,531	\$1,933,042	\$1,863,871	\$2,042,391	\$2,138,010	\$2,236,399	\$2,309,196	\$2,361,771
Credits													
		Investment Earnings	\$4,615	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
		Sewer Connection Fee	\$900	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Credits			\$5,515	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
REVENUE REQUIREMENT			\$2,988,676	\$3,429,719	\$4,279,161	\$4,476,847	\$4,542,121	\$4,612,649	\$4,896,715	\$5,110,400	\$5,334,364	\$5,541,161	\$5,735,771
Annual Percentage Change			42%	15%	25%	5%	1%	2%	6%	4%	4%	4%	4%
Base Costs Percentage			56%	51%	57%	56%	57%	60%	58%	58%	58%	58%	59%
Use Costs Percentage			44%	49%	43%	44%	43%	40%	42%	42%	42%	42%	41%

Source: HEC.

** Amounts included in Base Costs

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Exhibit A

Page 11 of 23

Wastewater Rate Study, October 31, 2016

RATES ANALYSIS

In the financial modeling for the wastewater rate study two rate scenarios were considered for collection of the revenue requirement; a modified rate structure and a new rate structure. Under the modified rate structure:

- Residential single family continues to pay a flat monthly charge per unit, plus a flow charge per HCF of winter water use.
- Non-Residential, including multi-family and mobile homes, pay a flat monthly charge by water meter size plus a flow charge per HCF of winter water use by customer type.
- Religious paces/community centers are placed into their own customer category (previously included as commercial).

Under the new rate structure:

- Residential single family, multi-family, and mobile homes pay a flat monthly charge per housing unit.
- Schools pay a flat monthly charge on a per student basis.
- Non-Residential pay a flat monthly charge by customer type plus a flow charge by customer type per HCF of winter water use.

In the new rate structure, there are no charges based on water meter size and all costs are allocated on flow and strength customer characteristics.

Per the August 4th, 2016 and September 13th, 2016 Task Force meetings, the City's Task Force chose the new rate structure as the preferred rate structure; therefore, the body of this memorandum includes the methodology and results of the new rate structure only. For record keeping the modified rate structure is presented in **Attachment B**.

New Rate Structure

The following four steps outline how wastewater rates are calculated such that the monthly wastewater rates meet legal requirements. The accompanying tables show the calculations for the first year of the analysis, fiscal year 2016-17, in order to demonstrate the model and illustrate how the rates are calculated. The same cost allocation methodology is used for all years considered in this analysis.

- 1. Establish the Wastewater Customer Base and User Characteristics** – The wastewater customer base includes residential (single family, multi-family, and mobile homes), schools, car wash, religious places/community center, commercial, grocery and mortuary, laundry, mixed retail with food, motel with food, motel without food, restaurant, Napa Valley College, service station, winery production, and Sutter Home Winery users. Wastewater flow parameters are based on City winter average (January through March) water meter reads and sewer strength is based on industry standards. *Wastewater inflow at the treatment plant currently averages 0.5 million gallons per day (MGD). The number of customers and total calculated flow for each customer and customer category, Biological Oxygen Demand (BOD) and Total Suspended Solids (TSS) characteristics were summarized earlier in the report in Table 2.*

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Exhibit A

Page 12 of 23

Wastewater Rate Study, October 31, 2016

2. **Project Revenue Requirement and Allocate to Collection and Treatment** –Projections of annual costs and non-rate revenues are used to determine revenue requirement as previously described. *The revenue requirement (the amount to be funded through wastewater service charges/rates) for fiscal year 2016-17 is \$3.0 million. The revenue requirement is allocated between collection and treatment. Of this total cost, approximately 72% is for the treatment plant and 28% for the collection system. Table 8 shows the allocation of projected costs between the wastewater collection system and the treatment plant for fiscal year 2016-17.*
3. **Allocate Revenue Requirement based on Flow and Strength and Determine Unit Costs** – The revenue requirement is allocated based on flow and load (strength) depending on the percentage distribution of operations and maintenance operations attributed to flow, BOD, or TSS. Per unit revenue requirement for each projected year is determined by dividing the allocated revenue requirement by the demand for each customer type.

Costs are allocated to customer categories as follows:

- A. Allocate the costs (by Cost Category) to flow, BOD and TSS
- B. Determine the Unit Cost by Cost Category

Each of these steps is described in greater detail below.

A. Cost Allocation to Flow, BOD, and SS

Costs are allocated to flow, BOD, and SS based on percentage allocation or distribution factors. These percentage allocation factors are based on the estimated distribution of the treatment and collection facilities O&M activities between or related to flow, BOD, and TSS.

Table 9 shows the calculation of unit costs by cost category for flow, BOD, and TSS. Collection costs are strictly related to flow and therefore, 100 percent of the collection costs are allocated to flow. Treatment plant costs are allocated by cost category for flow, BOD and TSS using the subtotal percentages from the collection and treatment cost allocations.

Exhibit A

Page 13 of 23

Wastewater Rate Study, October 31, 2016

Table 8

Revenue Requirement Distributed between Collection and Treatment

- New Rate Structure based on Flow and Strength

FY 2017

Expenditures	Projected Total	Allocation		Collection		Treatment	
		Collection	Treatment	Operations	Capital	Operations	Capital
Salaries & Benefits	\$1,071,519	21%	79%	\$227,165		\$844,354	
Services	\$319,189	4%	96%	\$12,682		\$306,507	
Supplies	\$75,942	22%	78%	\$16,619		\$59,323	
Maintenance	\$130,513	11%	89%	\$14,137		\$116,376	
Taxes, Insurances & Contribs.	\$105,967	0%	100%	\$0		\$105,967	
Capital	\$101,700	0%	100%	\$0		\$101,700	
Wet Weather Flow Monitoring	\$0	100%	0%	\$0		\$0	
Update GIS Maps of Sewer System	\$0	50%	50%	\$0		\$0	
Sewer Master Plan	\$0	50%	50%	\$0		\$0	
CCTV Program	\$15,462	100%	0%	\$15,462		\$0	
Recycled Water Feasibility Study	\$0	0%	100%	\$0		\$0	
Total Debt Service	\$252,876	100%	0%	\$252,876		\$0	
Capital Projects	\$164,323	0%	100%	\$0		\$164,323	
System Rehabilitation	\$356,700	50%	50%	\$178,350		\$178,350	
Total Operating Expenses	\$2,594,191	28%	72%	\$270,603	\$446,689	\$1,534,227	\$342,673
Operating Reserve	\$400,000						
Less Offsetting Revenue	(\$5,515)						
Total	\$2,988,676						

alloc

Source: HEC.

Prepared by HEC

Exhibit A

Page 14 of 23

Wastewater Rate Study, October 31, 2016

Table 9
Unit Cost Determination
- New Rate Structure based on Flow and Strength

FY 2017

Cost Category	Percent Allocation				Cost			Total Influent				Unit Cost Per:			
	Allocated Costs	Flow	BOD	SS	Flow	BOD	SS	Flow	BOD	SS		Mgal of Flow	Klb of BOD	Klb of SS	
	(A)	(B)	(C)	(D)	(E) = (A)*(B)	(F) = (A)*(C)	(G) = (A)*(D)	(H)	(I)	(J)	Table 2	(K) = (E)/(H)	(L) = (F)/(I)	(M) = (G)/(J)	
Operating Costs															
Collection System Costs	Table 8 \$270,603	100%	0%	0%	\$270,603	\$0	\$0	179	386	342		\$1,510.29	\$0.00	\$0.00	
Treatment Costs	\$1,534,227	34%	33%	33%	\$521,637	\$506,295	\$506,295	179	386	342		\$2,911.36	\$1,310.01	\$1,481.83	
Capital Costs															
Collection System Costs	\$446,689	100%	0%	0%	\$446,689	\$0	\$0	179	386	342		\$2,493.05	\$0.00	\$0.00	
Treatment Costs	\$342,673	34%	33%	33%	\$116,509	\$113,082	\$113,082	179	386	342		\$650.26	\$292.59	\$330.97	
Subtotal Collection Costs	\$717,291	100%	0%	0%	\$717,291	\$0	\$0	179	386	342		\$4,003.34	\$0.00	\$0.00	
Subtotal Treatment Costs	\$1,876,900	34%	33%	33%	\$638,146	\$619,377	\$619,377	179	386	342		\$3,561.61	\$1,602.60	\$1,812.80	
Subtotal Costs	\$2,594,191	52%	24%	24%	\$1,355,437	\$619,377	\$619,377					\$7,564.96	\$1,602.60	\$1,812.80	
Other Costs															
Operating Reserve	\$400,000	52%	24%	24%	\$208,996	\$95,502	\$95,502	179	386	342		\$1,166.45	\$247.11	\$279.52	
Less Offsetting Revenue	(\$5,515)	52%	24%	24%	(\$2,882)	(\$1,317)	(\$1,317)	179	386	342		(\$16.08)	(\$3.41)	(\$3.85)	
Subtotal Other Costs	\$394,485	52%	24%	24%	\$206,114	\$94,185	\$94,185					\$1,150.36	\$243.70	\$275.66	
TOTAL COSTS	\$2,988,676				\$1,561,552	\$713,562	\$713,562					\$8,715.32	\$1,846.30	\$2,088.46	

Source: HEC.

unit

Prepared by HEC

Exhibit A

Page 15 of 23

Wastewater Rate Study, October 31, 2016

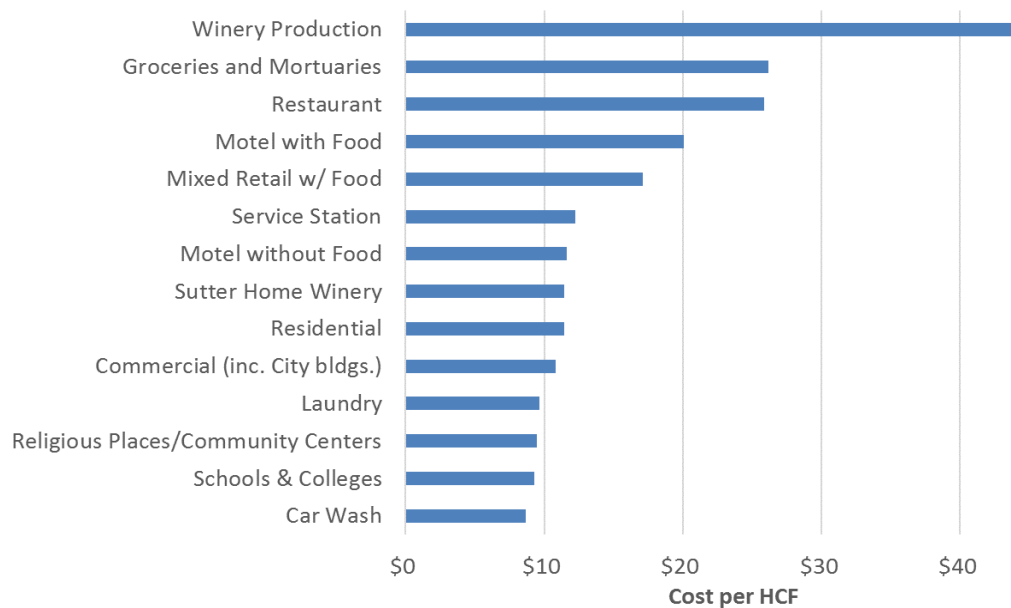
B. Unit Cost by Cost Category

The allocated costs are then divided by total annual capacity from **Table 2** to determine the unit cost by flow, BOD, and TSS units of measurement. These unit costs are used to determine the cost allocated to each customer type in the next step.

4. **Determine Revenue Requirement by Customer Type** – The per unit costs are multiplied by the flow and strength characteristics of each customer category to determine the annual cost by customer type. *The unit costs determined in **Table 9** are multiplied by the flow, BOD, or TSS for each customer type. These costs are then summed to determine the total costs allocated to each customer type, as shown in **Table 10**.*

Total allocated costs to each customer category are shown in **Table 11**. Residential customers are responsible for 69% of the total costs, schools are responsible for 1% of the total costs, and non-residential customers are responsible for 30% of the total costs. Total treatment cost per hundred cubic feet is greatest for high strength customers such as winery production customers, restaurants, groceries and mortuaries, and lowest for customers such as car washes and religious places/community centers which have low strength wastewater. This data is shown graphically in **Figure 3**.

Figure 3
Cost per Hundred Cubic Feet by Customer Type



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Exhibit A

Page 16 of 23

Wastewater Rate Study, October 31, 2016

Table 10

Allocation of Costs to Flow, BOD, and SS by Customer Category

- New Rate Structure based on Flow and Strength

FY 2017

Unit Cost/Customer Category	Flow MG/Yr	BOD Klb/Yr	SS Klb/Yr	Collection		Treatment			Other			TOTAL
				Flow (\$/Mgal)	SS (\$/Klb)	Flow (\$/Mgal)	BOD (\$/Klb)	SS (\$/Klb)	Flow (\$/Mgal)	BOD (\$/Klb)	SS (\$/Klb)	
Unit Cost	Table 9	----->		\$4,003.34	\$3,561.61	\$1,602.60	\$1,812.80	\$1,150.36	\$243.70	\$275.66		
Residential												
Single Family	96	160	160	\$384,800	\$342,342	\$256,941	\$290,642	\$110,573	\$39,072	\$44,196	\$1,468,566	
Multi-Family	26	43	43	\$103,629	\$92,195	\$69,196	\$78,271	\$29,778	\$10,522	\$11,902	\$395,493	
Mobile Homes	12	20	20	\$48,474	\$43,125	\$32,367	\$36,612	\$13,929	\$4,922	\$5,567	\$184,996	
School	2	2	2	\$7,766	\$6,909	\$3,371	\$2,933	\$2,232	\$513	\$446	\$24,170	
Non-Residential												
Car Wash	0	0	0	\$1,469	\$1,307	\$98	\$832	\$422	\$15	\$127	\$4,270	
Religious Places/Community Centers	1	1	1	\$2,961	\$2,635	\$1,285	\$1,230	\$851	\$195	\$187	\$9,345	
Commercial [1]	11	14	18	\$44,338	\$39,445	\$22,204	\$33,488	\$12,740	\$3,376	\$5,092	\$160,685	
Groceries and Mortuaries	1	5	5	\$3,031	\$2,697	\$8,096	\$9,158	\$871	\$1,231	\$1,393	\$26,477	
Laundry	2	2	1	\$6,109	\$5,435	\$3,059	\$2,538	\$1,755	\$465	\$386	\$19,748	
Mixed Retail w/ Food	1	3	7	\$5,783	\$5,145	\$4,633	\$13,103	\$1,662	\$705	\$1,993	\$33,022	
Motel with Food	4	17	20	\$15,867	\$14,117	\$26,488	\$35,954	\$4,559	\$4,028	\$5,467	\$106,480	
Motel without Food	7	17	7	\$26,850	\$23,887	\$27,789	\$12,168	\$7,715	\$1,850	\$4,226	\$104,485	
Restaurant	9	78	47	\$37,599	\$33,450	\$125,529	\$85,196	\$10,804	\$19,089	\$12,955	\$324,622	
Napa Valley College	5	5	4	\$18,887	\$16,803	\$8,197	\$7,133	\$5,427	\$1,247	\$1,085	\$58,778	
Service Station	1	1	1	\$2,320	\$2,064	\$1,394	\$2,453	\$667	\$212	\$373	\$9,483	
Winery Production (Merryvale/Spottswode)	1	16	2	\$2,740	\$2,437	\$25,612	\$4,139	\$787	\$3,895	\$629	\$40,239	
Sutter Home Winery	1	2	2	\$4,669	\$4,154	\$3,117	\$3,526	\$1,342	\$474	\$536	\$17,818	
TOTAL	179	386	342	\$717,291	\$638,146	\$619,377	\$619,377	\$206,114	\$94,185	\$94,185	\$2,988,676	

Source: HEC.

[1] Commercial includes City buildings.

Prepared by HEC

Exhibit A

Page 17 of 23

Wastewater Rate Study, October 31, 2016

Table 11
Calculated Cost per Hundred Cubic Feet
- New Rate Structure based on Flow and Strength

FY 2017

Customer Category	Allocated Cost	Percentage of Cost	Annual Flow (MG)	Cost per 1,000 Gallons	Cost per HCF
Residential					
Single Family	\$1,468,566	49%	96.12	\$15.28	\$11.43
Multi-Family	\$395,493	13%	25.89	\$15.28	\$11.43
Mobile Homes	\$184,996	6%	12.11	\$15.28	\$11.43
Subtotal Residential	\$2,049,055	69%	134.11	\$15.28	\$11.43
School	\$24,170	1%	1.94	\$12.46	\$9.32
Non-Residential					
Car Wash	\$4,270	0%	0.37	\$11.64	\$8.70
Religious Places/Community Centers	\$9,345	0%	0.74	\$12.63	\$9.45
Commercial [1]	\$160,685	5%	11.08	\$14.51	\$10.85
Groceries and Mortuaries	\$26,477	1%	0.76	\$34.97	\$26.16
Laundry	\$19,748	1%	1.53	\$12.94	\$9.68
Mixed Retail w/ Food	\$33,022	1%	1.44	\$22.86	\$17.10
Motel with Food	\$106,480	4%	3.96	\$26.87	\$20.10
Motel without Food	\$104,485	3%	6.71	\$15.58	\$11.65
Restaurant	\$324,622	11%	9.39	\$34.56	\$25.85
Napa Valley College	\$58,778	2%	4.72	\$12.46	\$9.32
Service Station	\$9,483	0%	0.58	\$16.36	\$12.24
Winery Production (Merryvale/Spottswode)	\$40,239	1%	0.68	\$58.80	\$43.98
Sutter Home Winery	\$17,818	1%	1.17	\$15.28	\$11.43
Subtotal Non-Residential	\$915,452	31%	43.12	\$21.23	\$15.88
TOTAL	\$2,988,676	100%	179.17	\$16.68	\$12.48

Source: HEC.

flow cost

[1] Commercial includes City buildings.

Table 12 presents the calculated rates for February 8, 2017. The total allocated costs to each customer category provide the basis for the rates. It is projected that 59% of costs will be recovered through flat monthly charges (residential and school customers, as well as base charges for non-residential customers) and 41% of costs will be recovered through consumption charges. Customers with consumption charges pay for average monthly winter water passing through the water meter, measured from January through March.

Table 13 shows the projected wastewater rate schedule through fiscal year 2027.

Prepared by HEC

Exhibit A

Page 18 of 23

Wastewater Rate Study, October 31, 2016

FY 2017

Table 12
Wastewater Rates Calculations for February 8, 2017
- New Rate Structure based on Flow and Strength

Customer Category	Billing Basis	No. Billing Units	Allocated Cost	Base 59%	Flow 41%	Annual Cost per Billing Unit		Monthly Cost	
						Base	Flow	Base	Usage per HCF
Residential									
Single Family	Unit	1,503	\$1,468,566	\$866,454	\$602,112	\$576	\$401	\$48.04	\$4.69
Multi-Family	Unit	669	\$395,493	\$233,341	\$162,152	\$349	\$242	\$29.07	\$4.69
Mobile Homes	Unit	211	\$184,996	\$109,148	\$75,848	\$517	\$359	\$43.11	\$4.69
Residential			\$2,049,055	\$1,208,943	\$840,113				
School	Student	1,437	\$24,170	\$14,260	\$9,910	\$10	\$7	\$1.40	
Non-Residential (\$ per hcf of Winter Water Use)									
Car Wash	Account	1	\$4,270	\$2,519	\$1,751	\$2,519	\$1,751	\$209.93	\$3.43
Religious Places/Community Centers	Account	13	\$9,345	\$5,513	\$3,831.32	\$424	\$295	\$35.34	\$3.72
Commercial [1]	Account	126	\$160,685	\$94,804	\$65,881	\$752	\$523	\$62.70	\$4.27
Groceries and Mortuaries	Account	3	\$26,477	\$15,621	\$10,856	\$5,207	\$3,619	\$433.93	\$10.30
Laundry	Account	1	\$19,748	\$11,651	\$8,097	\$11,651	\$8,097	\$970.94	\$3.81
Mixed Retail w/ Food	Account	3	\$33,022	\$19,483	\$13,539	\$6,494	\$4,513	\$541.20	\$6.73
Motel with Food	Account	2	\$106,480	\$62,823	\$43,657	\$31,412	\$21,828	\$2,617.64	\$7.91
Motel without Food	Account	8	\$104,485	\$61,646	\$42,839	\$7,706	\$5,355	\$642.15	\$4.59
Restaurant	Account	19	\$324,622	\$191,527	\$133,095	\$10,080	\$7,005	\$840.03	\$10.18
Napa Valley College	Account	1	\$58,778	\$34,679	\$24,099	\$34,679	\$24,099	\$2,889.93	\$3.67
Service Station	Account	5	\$9,483	\$5,595	\$3,888	\$1,119	\$778	\$93.25	\$4.82
Winery Production (Merryvale/Spottswoode)	Account	2	\$40,239	\$23,741	\$16,498	\$11,871	\$8,249	\$989.21	\$17.31
Sutter Home Winery	Account	1	\$17,818	\$10,512	\$7,305	\$10,512	\$7,305	\$876.04	\$4.50
Non-Residential and Schools			\$939,621	\$554,376	\$385,245				
TOTAL			\$2,988,676	\$1,763,319	\$1,225,357				

rates

Source: City of St. Helena, California Department of Education Educational Demographics Unit, and HEC.

[1] Commercial includes City buildings.

Prepared by HEC

Exhibit A

Page 19 of 23

Wastewater Rate Study, October 31, 2016

Table 13
Projected Wastewater Rate Schedule
- New Rate Structure based on Flow and Strength

Customer Category	Billing Period Beginning *----->	Fiscal Year Ending											2027
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026		
Residential	2/8/2017	11/8/2017	11/8/2018	11/8/2019	11/8/2020	11/8/2021	11/8/2022	11/8/2023	11/8/2024	11/8/2025	11/8/2026	11/8/2026	
	Single Family	monthly per unit	\$48.04	\$55.24	\$70.13	\$73.03	\$74.18	\$75.23	\$79.74	\$83.28	\$86.84	\$90.13	\$93.20
	Multi-Family	monthly per unit	\$29.07	\$33.42	\$42.43	\$44.18	\$44.88	\$45.52	\$48.24	\$50.39	\$52.54	\$54.53	\$56.39
	Mobile Homes	monthly per unit	\$43.11	\$49.57	\$62.93	\$65.53	\$66.56	\$67.51	\$71.55	\$74.73	\$77.93	\$80.87	\$83.63
	Residential Rate per HCF	per HCF	\$4.69	\$5.39	\$6.84	\$7.12	\$7.23	\$7.34	\$7.78	\$8.12	\$8.47	\$8.79	\$9.09
	Schools Flat Rate per Student	monthly per student	\$1.40	\$1.62	\$2.15	\$2.21	\$2.26	\$2.28	\$2.41	\$2.52	\$2.62	\$2.71	\$2.80
Non-Residential	Car Wash	monthly per account	\$209.93	\$243.25	\$328.36	\$336.45	\$343.13	\$346.45	\$365.12	\$382.42	\$397.39	\$411.10	\$423.62
	Religious Places/Community Centers	monthly per account	\$35.34	\$40.85	\$54.06	\$55.68	\$56.71	\$57.34	\$60.54	\$63.35	\$65.91	\$68.25	\$70.41
	Commercial [1]	monthly per account	\$62.70	\$72.20	\$92.64	\$96.19	\$97.78	\$99.09	\$104.91	\$109.63	\$114.25	\$118.51	\$122.47
	Groceries and Mortuaries	monthly per account	\$433.93	\$492.12	\$552.00	\$595.15	\$599.41	\$613.71	\$658.17	\$683.48	\$717.89	\$749.95	\$781.06
	Laundry	monthly per account	\$970.94	\$1,121.45	\$1,475.85	\$1,522.21	\$1,549.87	\$1,567.76	\$1,656.08	\$1,732.56	\$1,802.98	\$1,867.65	\$1,927.33
	Mixed Retail w/ Food	monthly per account	\$541.20	\$617.30	\$730.21	\$775.32	\$783.78	\$799.17	\$852.68	\$887.69	\$929.47	\$968.22	\$1,005.31
	Motel with Food	monthly per account	\$2,617.64	\$2,978.36	\$3,444.90	\$3,681.23	\$3,715.59	\$3,795.12	\$4,057.95	\$4,220.11	\$4,424.57	\$4,614.57	\$4,797.54
	Motel without Food	monthly per account	\$642.15	\$738.08	\$933.28	\$972.87	\$987.93	\$1,002.28	\$1,062.67	\$1,109.72	\$1,157.47	\$1,201.49	\$1,242.73
	Restaurant	monthly per account	\$840.03	\$952.80	\$1,070.03	\$1,153.27	\$1,161.63	\$1,189.23	\$1,275.22	\$1,324.33	\$1,390.92	\$1,452.93	\$1,513.11
	Napa Valley College	monthly per account	\$2,889.93	\$3,341.62	\$4,436.77	\$4,565.57	\$4,651.20	\$4,701.87	\$4,962.71	\$5,194.00	\$5,402.37	\$5,593.58	\$5,769.41
	Service Station	monthly per account	\$93.25	\$107.06	\$134.07	\$140.12	\$142.20	\$144.37	\$153.21	\$159.92	\$166.89	\$173.33	\$179.38
	Winery Production (Merryvale/Spottswode)	monthly per account	\$989.21	\$1,116.93	\$1,199.98	\$1,310.53	\$1,315.85	\$1,351.87	\$1,455.91	\$1,508.79	\$1,588.84	\$1,663.63	\$1,736.98
	Sutter Home Winery	monthly per account	\$876.04	\$1,007.39	\$1,278.85	\$1,331.67	\$1,352.66	\$1,371.89	\$1,454.02	\$1,518.68	\$1,583.65	\$1,643.55	\$1,699.58
	Car Wash	per HCF	\$3.43	\$3.97	\$5.36	\$5.49	\$5.60	\$5.65	\$5.96	\$6.24	\$6.48	\$6.71	\$6.91
	Religious Places/Community Centers	per HCF	\$3.72	\$4.30	\$5.69	\$5.86	\$5.97	\$6.03	\$6.37	\$6.67	\$6.94	\$7.18	\$7.41
	Commercial [1]	per HCF	\$4.27	\$4.92	\$6.31	\$6.55	\$6.66	\$6.75	\$7.15	\$7.47	\$7.78	\$8.07	\$8.34
	Groceries and Mortuaries	per HCF	\$10.30	\$11.68	\$13.10	\$14.12	\$14.22	\$14.56	\$15.62	\$16.22	\$17.03	\$17.79	\$18.53
Laundry	per HCF	\$3.81	\$4.40	\$5.79	\$5.97	\$6.08	\$6.15	\$6.50	\$6.80	\$7.07	\$7.33	\$7.56	
Mixed Retail w/ Food	per HCF	\$6.73	\$7.68	\$9.08	\$9.64	\$9.75	\$9.94	\$10.60	\$11.04	\$11.56	\$12.04	\$12.50	
Motel with Food	per HCF	\$7.91	\$9.00	\$10.41	\$11.12	\$11.23	\$11.47	\$12.26	\$12.75	\$13.37	\$13.94	\$14.50	
Motel without Food	per HCF	\$4.59	\$5.27	\$6.67	\$6.95	\$7.06	\$7.16	\$7.59	\$7.93	\$8.27	\$8.58	\$8.88	
Restaurant	per HCF	\$10.18	\$11.54	\$12.96	\$13.97	\$14.07	\$14.41	\$15.45	\$16.04	\$16.85	\$17.60	\$18.33	
Napa Valley College	per HCF	\$3.67	\$4.24	\$5.63	\$5.79	\$5.90	\$5.97	\$6.30	\$6.59	\$6.86	\$7.10	\$7.32	
Service Station	per HCF	\$4.82	\$5.53	\$6.93	\$7.24	\$7.35	\$7.46	\$7.92	\$8.26	\$8.62	\$8.95	\$9.27	
Winery Production (Merryvale/Spottswode)	per HCF	\$17.31	\$19.55	\$21.00	\$22.93	\$23.03	\$23.66	\$25.48	\$26.40	\$27.80	\$29.11	\$30.40	
Sutter Home Winery	per HCF	\$4.50	\$5.17	\$6.57	\$6.84	\$6.95	\$7.04	\$7.47	\$7.80	\$8.13	\$8.44	\$8.73	
Source: HFC													DATE: 1/1/2027

Source: HEC.

* Dates reflect the current billing cycle; if the billing cycle date changes so will these effective dates.

[1] Commercial includes City buildings.

Prepared by HEC

Exhibit A

Page 20 of 23

Wastewater Rate Study, October 31, 2016

Special user rates are calculated for new industries moving to the City that have special requirements attached to their operating permit with the City. Municipal code 13.20.020E would have to be revised from the current formula of $A(V)+B(BOD)+C(SS)+D$ to remove D, which is no longer applicable under the new rate structure. In the special user charges formula:

V is volume of water in millions of gallons

BOD is biochemical oxygen demand in pounds

SS is total suspended solids in pounds

A is allocated cost for each million gallons of flow

B is allocated cost per pound for biochemical oxygen demand

C is allocated cost per pound of total suspended solids

D is charge for water meter size

Table 14 shows the calculated special user rates through fiscal year 2022.

Table 14
Special User Rates

Municipal Code 13.20.020 E	Current	Fiscal Year Ending					
		2017	2018	2019	2020	2021	2022
Billing Period Beginning * ---->		2/8/2017	11/8/2017	11/8/2018	11/8/2019	11/8/2020	11/8/2021
[1]							
A (per million gallons of flow)	\$2,107.21	\$8,715.32	\$10,206.65	\$14,910.59	\$14,979.88	\$15,353.37	\$15,416.45
B (per pound of BOD)	\$1.02	\$1.85	\$2.07	\$2.08	\$2.32	\$2.32	\$2.39
C (per pound of SS)	\$1.17	\$2.09	\$2.34	\$2.35	\$2.62	\$2.62	\$2.71

Source: City of St. Helena and HEC.

special

* Dates reflect the current billing cycle; if the billing cycle date changes so will these effective dates.

[1] Current rates were set July 2011.

CASH FLOW

Table 15 shows the projected cash flow for the wastewater fund and **Figure 4** demonstrates cash balances with and without rate increases. With adoption of the calculated rates it is anticipated that the City will be able to meet all wastewater enterprise fund obligations, including existing and potential debt service coverage requirements, and achieve at least six months of operating expenses in cash reserves in each year of the projection. The cash flow table demonstrates that a debt service coverage ratio of at least 1.20 will be met. In addition, the City may be able to designate (put aside) up to \$1.7 million by fiscal year ending 2022, and \$3.8 million by fiscal year ending 2027 for future cash funding of system rehabilitation.

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Exhibit A

Page 21 of 23

Wastewater Rate Study, October 31, 2016

Table 15
Projected Cash Flow

Revenues and Expenses	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
<i>New EDUs</i>											
Operating Revenues											
Charges For Services	\$2,533,343	\$3,282,705	\$3,996,014	\$4,410,951	\$4,520,363	\$4,589,140	\$4,802,027	\$5,039,172	\$5,259,709	\$5,472,228	\$5,670,901
Growth in Services		\$4,850	\$5,578	\$7,081	\$7,373	\$7,489	\$7,596	\$8,050	\$8,408	\$8,768	\$9,100
Total Sewer Sales	\$2,533,343	\$3,287,555	\$4,001,591	\$4,418,032	\$4,527,736	\$4,596,629	\$4,809,622	\$5,047,222	\$5,268,118	\$5,480,997	\$5,680,001
Investment Earnings	\$4,615	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sewer Connection Fee	\$900	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Operating Revenues	\$2,538,858	\$3,287,555	\$4,001,591	\$4,418,032	\$4,527,736	\$4,596,629	\$4,809,622	\$5,047,222	\$5,268,118	\$5,480,997	\$5,680,001
Operating Expenses											
	\$1,820,292	\$1,973,928	\$2,246,507	\$2,140,652	\$2,260,874	\$2,478,583	\$2,524,375	\$2,668,756	\$2,822,367	\$2,985,876	\$3,160,007
Operating Revenue before Capital Improvements and Debt Service	\$718,566	\$1,313,627	\$1,755,084	\$2,277,380	\$2,266,862	\$2,118,047	\$2,285,247	\$2,378,466	\$2,445,751	\$2,495,120	\$2,519,994
Debt Service											
Existing Debt	\$252,876	\$253,904	\$256,030	\$252,890	\$253,823	\$255,392	\$250,938	\$251,669	\$252,022	\$252,310	\$251,490
WWTP New Debt - Phase 1	\$0	\$0	\$592,124	\$592,124	\$592,124	\$592,124	\$592,124	\$592,124	\$592,124	\$592,124	\$592,124
WWTP New Debt - Phase 2	\$0	\$0	\$0	\$0	\$0	\$34,951	\$34,951	\$34,951	\$34,951	\$34,951	\$34,951
Total Debt Service	\$252,876	\$253,904	\$848,154	\$845,014	\$845,947	\$882,467	\$875,012	\$878,744	\$879,097	\$879,384	\$878,565
<i>Debt Service Coverage [1]</i>	2.84	5.17	2.07	2.70	2.68	2.40	2.60	2.71	2.78	2.84	2.87
System Rehabilitation	\$356,700	\$391,800	\$459,500	\$532,400	\$560,300	\$626,600	\$690,300	\$712,900	\$732,900	\$775,900	\$797,200
Net Revenues (Deficit)	\$108,989	\$667,923	\$447,430	\$899,967	\$860,615	\$608,980	\$716,935	\$786,822	\$833,754	\$839,836	\$844,230
Beginning Fund Balance [2]	\$1,110,075	\$1,054,742	\$1,687,578	\$2,202,662	\$2,948,848	\$3,982,496	\$3,679,166	\$1,892,423	\$3,156,634	\$4,487,090	\$5,669,380
Net Revenues (Deficit)	\$108,989	\$667,923	\$447,430	\$899,967	\$860,615	\$608,980	\$716,935	\$786,822	\$833,754	\$839,836	\$844,230
Cash Funded Capital Improvements	(\$164,323)	(\$35,087)	\$0	(\$153,781)	\$0	\$0	(\$154,028)	\$0	\$0	\$0	\$0
Add Back System Rehabilitation	\$0	\$0	\$67,654	\$0	\$289,417	\$287,386	\$0	\$477,388	\$496,702	\$342,454	\$546,224
Replace WRF Operations Building and Shop	\$0	\$0	\$0	\$0	(\$116,384)	(\$1,199,695)	(\$2,349,650)	\$0	\$0	\$0	\$0
Ending Fund Balance	\$1,054,742	\$1,687,578	\$2,202,662	\$2,948,848	\$3,982,496	\$3,679,166	\$1,892,423	\$3,156,634	\$4,487,090	\$5,669,380	\$7,059,834
<i>Months of Operating Expenses in Reserve</i>	7	10	12	17	21	18	9	14	19	23	27
Designated Balance [4]	\$0	\$0	\$0	\$800,000	\$1,700,000	\$1,700,000	\$1,700,000	\$1,700,000	\$1,700,000	\$2,600,000	\$3,800,000
Undesignated Balance	\$1,054,742	\$1,687,578	\$2,202,662	\$2,148,848	\$2,282,496	\$1,979,166	\$197,423	\$1,456,634	\$2,787,090	\$3,069,380	\$3,259,834
<i>Months of Operating Expenses in Reserve</i>	7	10	12	12	12	10	1	7	12	12	12
Target Operating Reserves [3]	\$1,820,292	\$1,973,928	\$2,246,507	\$2,140,652	\$2,260,874	\$2,478,583	\$2,524,375	\$2,668,756	\$2,822,367	\$2,985,876	\$3,160,007

Source: HEC.

[1] Debt service coverage should be at least 1.20.

[2] Estimated beginning balance for the operating and capital funds combined per the City 2016/17 Budget.

[3] Minimum six months and target balance is one year of operating expenses.

[4] Designation for future system rehabilitation costs in new, separate fund.

Prepared by HEC

Figure 4
Projected Wastewater Cash Balances

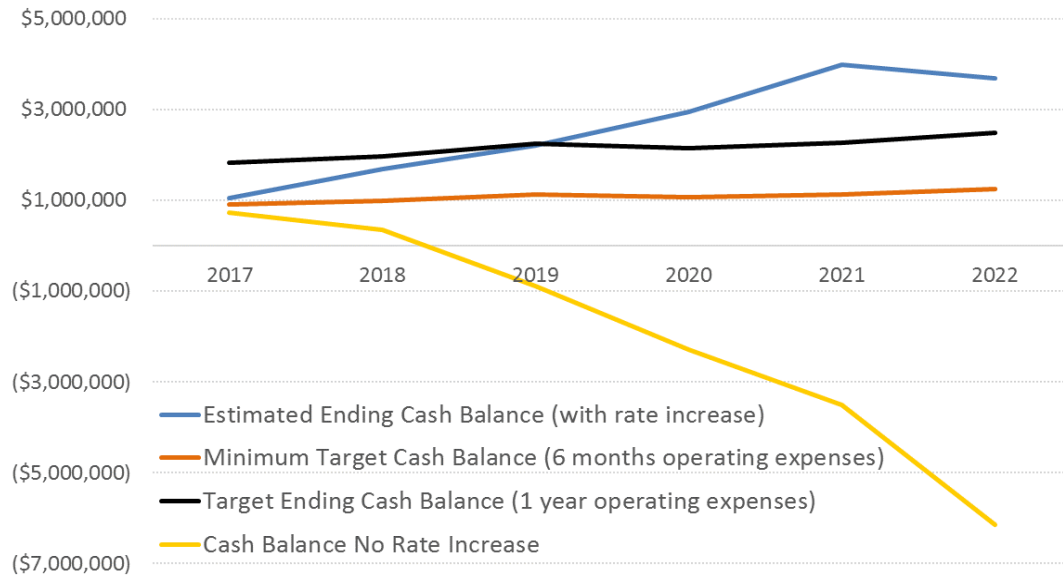


Table 16 on the following page shows the projected cash flow by fund.

Exhibit A

Page 23 of 23

Wastewater Rate Study, October 31, 2016

Table 16
Projected Wastewater Fund Balances

Fund	Fiscal Year Ending										
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Operating Fund 571											
Beginning Balance	(\$79,805)	\$29,184	\$697,108	\$1,212,192	\$2,112,159	\$3,262,191	\$3,658,557	\$1,875,492	\$2,389,702	\$3,720,159	\$4,902,449
Net Revenue	\$108,989	\$667,923	\$447,430	\$899,967	\$860,615	\$608,980	\$716,935	\$786,822	\$833,754	\$839,836	\$844,230
Add Back System Rehabilitation	\$0	\$0	\$67,654	\$0	\$289,417	\$287,386	\$0	\$477,388	\$496,702	\$342,454	\$546,224
Transfer Out to Capital Fund	\$0	\$0	\$0	\$0	\$0	(\$500,000)	(\$2,500,000)	(\$750,000)	\$0	\$0	\$0
Ending Balance	\$29,184	\$697,108	\$1,212,192	\$2,112,159	\$3,262,191	\$3,658,557	\$1,875,492	\$2,389,702	\$3,720,159	\$4,902,449	\$6,292,902
Capital Fund 773											
Beginning Balance	\$1,189,880	\$1,025,557	\$990,470	\$990,470	\$836,689	\$720,305	\$20,610	\$16,932	\$766,932	\$766,932	\$766,932
Transfer In from Operating Fund	\$0	\$0	\$0	\$0	\$0	\$500,000	\$2,500,000	\$750,000	\$0	\$0	\$0
Capital Projects Expenses [1]	(\$164,323)	(\$35,087)	\$0	(\$153,781)	(\$116,384)	(\$1,199,695)	(\$2,503,678)	\$0	\$0	\$0	\$0
Ending Balance	\$1,025,557	\$990,470	\$990,470	\$836,689	\$720,305	\$20,610	\$16,932	\$766,932	\$766,932	\$766,932	\$766,932
Combined Operating and Capital Funds											
	\$1,054,742	\$1,687,578	\$2,202,662	\$2,948,848	\$3,982,496	\$3,679,166	\$1,892,423	\$3,156,634	\$4,487,090	\$5,669,380	\$7,059,834
Impact Fee Fund 774											
Beginning Balance	\$698,783	\$676,115	\$675,355	\$674,546	\$673,683	\$672,767	\$671,793	\$670,760	\$669,665	\$668,505	\$633,753
Fee Revenues [2]	\$4,700	\$4,819	\$4,941	\$5,065	\$5,193	\$5,325	\$5,459	\$5,597	\$5,739	\$5,884	\$6,032
Expenses											
Miscellaneous Maintenance Projects	(\$5,412)	(\$5,578)	(\$5,750)	(\$5,928)	(\$6,110)	(\$6,298)	(\$6,492)	(\$6,692)	(\$6,899)	(\$40,636)	(\$7,330)
Reclamation Field Improvements	(\$21,956)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Project Expenses	(\$27,368)	(\$5,578)	(\$5,750)	(\$5,928)	(\$6,110)	(\$6,298)	(\$6,492)	(\$6,692)	(\$6,899)	(\$40,636)	(\$7,330)
Ending Balance	\$676,115	\$675,355	\$674,546	\$673,683	\$672,767	\$671,793	\$670,760	\$669,665	\$668,505	\$663,753	\$632,455
Source: HEC											

Flow by fund

Source: HEC.

[1] Cash-funded projects only. Projects that are debt-funded are included in the operating fund.

[2] Assumes growth of 5 units per year and the current impact fee of

\$0.47 per building square foot

Fee assumed to grow 2.5% per year.

2,000 average home building square feet

\$940 Average fee per unit

The impact fee needs to be revised for these CIP costs.

Prepared by HEC

Exhibit A

Exhibit A

ATTACHMENT A
WASTEWATER RATE STUDY
SUPPORT TABLES

Exhibit A

Table A-1
City of St. Helena Wastewater Rate Study
Historical Wastewater Fund Financial Performance

Revenues and Expenses	Actual Financials for Fiscal Year Ending					Avg. Annual Percentage Change
	2011	2012	2013	2014	2015	
OPERATING						
Revenues						
Charges For Services	\$1,616,414	\$2,008,709	\$2,050,983	\$2,143,947	\$2,208,105	8.1%
Miscellaneous	\$1,098	\$1,200	\$17,708	\$8,925	\$32,759	133.7%
Subtotal Revenues	\$1,617,512	\$2,009,909	\$2,068,691	\$2,152,872	\$2,240,864	8.5%
Expenses						
Personnel	\$842,317	\$829,804	\$795,479	\$827,027	\$938,472	2.7%
Contracted Services	\$68,782	\$806	\$0	\$0	\$0	-100.0%
Fuel	\$0	\$0	\$0	\$0	\$0	n.a.
Utilities	\$80,906	\$74,339	\$85,819	\$85,755	\$87,970	2.1%
Other Supplies and Expenses	\$313,342	\$327,119	\$361,451	\$429,526	\$525,742	13.8%
Depreciation and Amortization	\$472,561	\$483,070	\$473,784	\$473,784	\$713,189	10.8%
Subtotal Expenses	\$1,777,908	\$1,715,138	\$1,716,533	\$1,816,092	\$2,265,373	6.2%
NON OPERATING						
Gains (Loss) on Capital Asset Disposals	(\$1,169)	(\$2,762)	\$0	\$0	\$0	-100.0%
Interest and Investment Revenue	\$9,180	\$7,990	\$3,478	\$5,515	\$10,347	3.0%
Interest Expense	(\$81,081)	(\$78,070)	(\$86,521)	(\$69,139)	(\$41,398)	-15.5%
Net Operating Revenues	(\$73,070)	(\$72,842)	(\$83,043)	(\$63,624)	(\$31,051)	-19.3%
Capital Contributions	\$94,235	\$217,765	\$98,047	\$4,900	\$19,600	
Change in Net Assets	(\$139,231)	\$439,694	\$367,162	\$278,056	(\$35,960)	
Net Assets Beginning Balance	\$8,421,556	\$8,282,325	\$8,592,123	\$8,959,285	\$9,237,341	
Net Assets Ending Balance	\$8,282,325	\$8,722,019	\$8,959,285	\$9,237,341	\$9,201,381	

Source: City of St. Helena.

cafr

Table A-2
City of St. Helena Wastewater Rate Study
Historical Revenues and Expenditures

Revenues and Expenses	Actuals Fiscal Year Ending				Estimated 2016	Budgeted 2017
	2012	2013	2014	2015		
OPERATING FUND						
Revenues						
Investment Earnings	\$1,380	\$1,532	\$2,697	\$1,000	\$4,500	\$4,615
Annexation Fees	\$500	\$3,428	\$8,925	\$0	\$0	\$0
Rates	\$2,008,709	\$2,050,983	\$2,143,947	\$2,151,615	\$2,260,735	\$2,105,132
Sewer Connection Fee	\$0	\$0	\$4,900	\$0	\$0	\$900
Subtotal Revenues	\$2,010,589	\$2,055,942	\$2,160,470	\$2,152,615	\$2,265,235	\$2,110,647
Expenses						
Salaries & Benefits	\$829,613	\$795,480	\$827,047	\$896,865	\$987,778	\$1,071,519
Services	\$231,717	\$194,235	\$220,039	\$406,364	\$822,159	\$319,189
Supplies	\$48,460	\$55,452	\$80,836	\$41,318	\$91,641	\$75,942
Maintenance	\$81,882	\$72,003	\$68,000	\$118,625	\$167,473	\$130,513
Taxes, Insurances & Contribs.	\$76,885	\$54,533	\$64,460	\$73,328	\$122,416	\$105,967
Capital	\$22,631	\$26,001	\$58,925	\$817	\$170,139	\$101,700
Transfers	\$2,763	\$200,000	\$100,000	\$1,541,664	\$352,634	\$0
Debt	\$78,071	\$86,521	\$69,140	\$41,398	\$258,105	\$252,877
Subtotal Expenses	\$1,372,022	\$1,484,224	\$1,488,447	\$3,120,379	\$2,972,345	\$2,057,707
Operating Fund Net Revenues	\$638,567	\$571,718	\$672,023	(\$967,764)	(\$707,110)	\$52,940
CAPITAL FUND						
Revenues						
Transfers In	\$86,000	\$609,793	\$100,000	\$1,541,664	\$389,087	\$0
Subtotal Revenues	\$86,000	\$609,793	\$100,000	\$1,541,664	\$389,087	\$0
Expenses						
Salaries & Benefits	\$118,932	\$6,737	\$0	\$0	\$0	\$0
Professional Services	\$61,042	\$57,831	\$69,810	\$502,161	\$0	\$0
Advertising	\$344	\$0	\$0	\$803	\$0	\$0
Equipment Rental	\$2,345	\$11,727	\$0	\$0	\$0	\$0
Supplies	\$2,999	\$741	\$4,315	\$464	\$0	\$0
Maintenance	\$8,172	\$0	\$0	\$0	\$0	\$0
Capital Imp Land	\$21,993	\$0	\$0	\$0	\$0	\$0
Capital Projects Budget	\$0	\$0	\$0	\$12,420	\$0	\$0
Capital Equipment	\$0	\$3,261	\$17,765	\$13,831	\$0	\$0
Capital Imp Equipment	\$73,415	\$1,056,244	\$122,351	\$19,229	\$0	\$0
Subtotal Expenses	\$289,243	\$1,136,540	\$214,241	\$548,909	\$0	\$0
Capital Fund Net Revenues	(\$203,243)	(\$526,747)	(\$114,241)	\$992,755	\$389,087	\$0
IMPACT FUND						
Revenues						
Investment Earnings	\$6,423	\$1,872	\$2,818	\$2,587	\$2,000	\$2,500
Other Revenues	\$0	\$14,281	\$0	\$30,625	\$0	\$0
Impact Fees	\$217,766	\$98,047	(\$81,929)	\$19,600	\$15,000	\$18,000
Subtotal Revenues	\$224,188	\$114,200	(\$79,111)	\$52,812	\$17,000	\$20,500
Expenses						
Transfers Out	\$86,000	\$409,793	\$0	\$0	\$0	\$0
Subtotal Expenses	\$86,000	\$409,793	\$0	\$0	\$0	\$0
Impact Fund Net Revenues	\$138,188	(\$295,593)	(\$79,111)	\$52,812	\$17,000	\$20,500

Source: City of St. Helena.

rev exp

Table A-3
City of St. Helena Wastewater Rate Study
Historical Wastewater Operating Fund Expenses by Fund

Expenses	Actuals Fiscal Year Ending				Estimated	Budgeted
	2012	2013	2014	2015	2016	2017
TREATMENT						
Salaries & Benefits	\$304,386	\$283,226	\$333,535	\$311,489	\$374,936	\$383,496
Services	\$108,212	\$125,718	\$140,438	\$185,439	\$439,873	\$124,950
Supplies	\$25,216	\$40,359	\$62,141	\$22,082	\$60,285	\$44,800
Maintenance	\$71,106	\$61,752	\$54,974	\$90,803	\$145,017	\$104,787
Taxes, Insurances & Contribs.	\$8,390	\$7,793	\$14,879	\$8,557	\$17,723	\$16,000
Capital	\$22,631	\$20,729	\$58,911	\$817	\$20,305	\$100,000
Transfers	\$0	\$0	\$0	\$0	\$0	\$0
Debt	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal Treatment	\$539,940	\$539,577	\$664,878	\$619,187	\$1,058,139	\$774,033
COLLECTION						
Salaries & Benefits	\$177,746	\$185,921	\$176,868	\$191,484	\$106,094	\$103,176
Services	\$1,349	\$3,295	\$2,734	\$4,437	\$3,972	\$5,170
Supplies	\$12,655	\$5,382	\$8,690	\$8,918	\$11,926	\$12,550
Maintenance	\$3,833	\$3,293	\$3,164	\$6,400	\$9,410	\$12,729
Taxes, Insurances & Contribs.	\$0	\$0	\$0	\$0	\$0	\$0
Capital	\$0	\$0	\$0	\$0	\$141,600	\$0
Transfers	\$0	\$0	\$0	\$0	\$0	\$0
Debt	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal Collection	\$195,583	\$197,891	\$191,456	\$211,239	\$273,002	\$133,625
OPERATIONS						
Salaries & Benefits	\$347,482	\$326,332	\$316,644	\$393,892	\$506,748	\$584,847
Services	\$122,156	\$65,222	\$76,868	\$216,488	\$378,314	\$189,069
Supplies	\$10,590	\$9,710	\$10,005	\$10,318	\$19,430	\$18,592
Maintenance	\$6,942	\$6,959	\$9,861	\$21,422	\$13,046	\$12,997
Taxes, Insurances & Contribs.	\$68,495	\$46,740	\$49,581	\$64,771	\$104,693	\$89,967
Capital	\$0	\$5,272	\$13	\$0	\$8,234	\$1,700
Transfers	\$2,763	\$200,000	\$100,000	\$1,541,664	\$352,634	\$0
Debt	\$78,071	\$86,521	\$69,140	\$41,398	\$258,105	\$252,877
Subtotal Operations	\$636,498	\$746,756	\$632,112	\$2,289,953	\$1,641,204	\$1,150,049
Total Expenses	\$1,372,022	\$1,484,224	\$1,488,447	\$3,120,379	\$2,972,345	\$2,057,707

Source: City of St. Helena.

op exp

Table A-4
City of St. Helena Wastewater Rate Study
Historical Wastewater Plant Influent Flow

Month	2013	2014	2015
<i>Total Flow (millions of gallons)</i>			
January	17.953	10.586	12.838
February	11.676	17.922	18.802
March	12.789	18.283	12.453
April	12.641	16.041	11.762
May	12.131	11.722	11.142
June	11.461	10.912	10.021
July	11.918	10.851	10.118
August	11.717	10.962	10.162
September	11.405	10.478	9.973
October	11.928	10.802	10.416
November	10.990	10.436	9.539
December	10.546	31.952	12.211
Yearly Total	147.155	170.947	139.4374

Source: City of St. Helena.

inf flow

Table A-5
City of St. Helena Wastewater Rate Study
Wastewater Capital Improvements Schedule in 2016 \$'s

Project	Notes	Total Cost Less		Fiscal Year Ending										
		Total Cost	Existing Funding	2017 Current	2018 Year 1	2019 Year 2	2020 Year 3	2021 Year 4	2022 Year 5	2023 Year 6	2024 Year 7	2025 Year 8	2026 Year 9	2027 Year 10
Estimated Project Costs (2016 \$'s)			[1]											
Sewer Collection System														
Miscellaneous Maintenance Projects		\$550,000	\$550,000	\$35,000	\$35,000	\$35,000	\$35,000	\$35,000	\$35,000	\$35,000	\$35,000	\$35,000	\$200,000	\$35,000
Replace 1% of Sewer Mains Annually		\$1,650,000	\$1,650,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000
Crinella Pump Station Upgrades		\$500,000	\$500,000	\$0	\$0	\$75,000	\$425,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Add Sewer Pump Stations to SCADA		\$150,000	\$150,000	\$0	\$0	\$0	\$0	\$50,000	\$100,000	\$0	\$0	\$0	\$0	\$0
Wet Weather Flow Monitoring		\$50,000	\$50,000	\$0	\$0	\$50,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Update GIS Maps of Sewer System		\$50,000	\$50,000	\$0	\$50,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sewer Master Plan		\$150,000	\$150,000	\$0	\$0	\$150,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Replace Rodding Machine		\$40,000	\$40,000	\$0	\$0	\$40,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
CCTV Program		\$165,000	\$165,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000
Subtotal Sewer Collection		\$3,305,000	\$3,305,000	\$200,000	\$250,000	\$515,000	\$625,000	\$250,000	\$300,000	\$200,000	\$200,000	\$200,000	\$365,000	\$200,000
Treatment Plant														
WWTP Upgrades Ph. 1	Funded by New Debt	\$7,474,108	\$7,474,108	\$232,108	\$700,000	\$3,271,000	\$3,271,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Reclamation Field Improvements		\$142,000	\$142,000	\$142,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pond 2 & 3 Levee		\$120,000	\$120,000	\$60,000	\$0	\$60,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Facilities Automation		\$144,000	\$144,000	\$0	\$144,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
New Well		\$65,000	\$65,000	\$65,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sludge Removal		\$150,000	\$150,000	\$75,000	\$75,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Recycled Water Feasibility Study		\$75,000	\$75,000	\$0	\$0	\$0	\$0	\$0	\$75,000	\$0	\$0	\$0	\$0	\$0
Temp Trailer at WRF		\$28,000	\$28,000	\$5,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$5,000	\$0	\$0	\$0
Replace WRF Operations Building and Shop	Funded by Reserves	\$3,000,000	\$3,000,000	\$0	\$0	\$0	\$0	\$100,000	\$1,000,000	\$1,900,000	\$0	\$0	\$0	\$0
Upgrade Chemical Storage Facilities		\$500,000	\$500,000	\$0	\$0	\$0	\$0	\$0	\$0	\$500,000	\$0	\$0	\$0	\$0
Phase 2 WWTP Upgrades	Funded by New Debt	\$400,000	\$400,000	\$0	\$0	\$0	\$0	\$100,000	\$100,000	\$100,000	\$100,000	\$0	\$0	\$0
Subtotal Treatment Plant		\$12,098,108	\$12,098,108	\$579,108	\$922,000	\$3,334,000	\$3,274,000	\$203,000	\$1,178,000	\$2,503,000	\$105,000	\$0	\$0	\$0
Total Estimated Project Costs (2016 \$'s)		\$15,403,108	\$15,403,108	\$779,108	\$1,172,000	\$3,849,000	\$3,899,000	\$453,000	\$1,478,000	\$2,703,000	\$305,000	\$200,000	\$365,000	\$200,000

Source: City of St. Helena and HEC.

2016 cip

[1] Total Cost Less Existing Funding = Total Cost - Existing Bonds - Existing Grants

Table A-6
City of St. Helena Wastewater Rate Study
Wastewater Capital Improvements Schedule in Future \$'s

Project	Notes	Total Cost	Fiscal Year Ending											
			2017 Current	2018 Year 1	2019 Year 2	2020 Year 3	2021 Year 4	2022 Year 5	2023 Year 6	2024 Year 7	2025 Year 8	2026 Year 9	2027 Year 10	
Estimated Project Costs (Future \$'s) [1]			Annual Increase 3.1%											
Sewer Collection System														
Miscellaneous Maintenance Projects		\$687,508	\$36,078	\$37,190	\$38,336	\$39,517	\$40,734	\$41,989	\$43,283	\$44,617	\$45,991	\$270,904	\$48,869	
Replace 1% of Sewer Mains Annually		\$1,988,624	\$154,621	\$159,385	\$164,296	\$169,358	\$174,576	\$179,954	\$185,499	\$191,214	\$197,105	\$203,178	\$209,438	
Crinella Pump Station Upgrades		\$561,995	\$0	\$0	\$82,148	\$479,847	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Add Sewer Pump Stations to SCADA		\$178,161	\$0	\$0	\$0	\$0	\$58,192	\$119,970	\$0	\$0	\$0	\$0	\$0	
Wet Weather Flow Monitoring		\$54,765	\$0	\$0	\$54,765	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Update GIS Maps of Sewer System		\$53,128	\$0	\$53,128	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Sewer Master Plan		\$164,296	\$0	\$0	\$164,296	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Replace Rodding Machine		\$43,812	\$0	\$0	\$43,812	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
CCTV Program		\$198,862	\$15,462	\$15,939	\$16,430	\$16,936	\$17,458	\$17,995	\$18,550	\$19,121	\$19,711	\$20,318	\$20,944	
Subtotal Sewer Collection		\$3,931,152	\$206,162	\$265,642	\$564,083	\$705,658	\$290,959	\$359,909	\$247,332	\$254,952	\$262,807	\$494,399	\$279,250	
Treatment Plant														
WWTP Upgrades Ph. 1	Funded by New Debt	\$8,258,933	\$239,259	\$743,798	\$3,582,746	\$3,693,130	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Reclamation Field Improvements		\$146,375	\$146,375	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Pond 2 & 3 Levee		\$127,567	\$61,849	\$0	\$65,718	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Facilities Automation		\$153,010	\$0	\$153,010	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
New Well		\$67,003	\$67,003	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Sludge Removal		\$157,003	\$77,311	\$79,693	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Recycled Water Feasibility Study		\$89,977	\$0	\$0	\$0	\$0	\$0	\$89,977	\$0	\$0	\$0	\$0	\$0	
Temp Trailer at WRF		\$32,189	\$5,154	\$3,188	\$3,286	\$3,387	\$3,492	\$3,599	\$3,710	\$6,374	\$0	\$0	\$0	
Replace WRF Operations Building and Shop	Funded by Reserves	\$3,665,729	\$0	\$0	\$0	\$0	\$116,384	\$1,199,695	\$2,349,650	\$0	\$0	\$0	\$0	
Upgrade Chemical Storage Facilities		\$618,329	\$0	\$0	\$0	\$0	\$0	\$0	\$618,329	\$0	\$0	\$0	\$0	
Phase 2 WWTP Upgrades	Funded by New Debt	\$487,495	\$0	\$0	\$0	\$0	\$116,384	\$119,970	\$123,666	\$127,476	\$0	\$0	\$0	
Subtotal Treatment Plant		\$13,803,610	\$596,950	\$979,688	\$3,651,751	\$3,696,517	\$236,259	\$1,413,241	\$3,095,354	\$133,850	\$0	\$0	\$0	
Total Estimated Project Costs (Future \$'s)			\$17,734,763	\$803,112	\$1,245,330	\$4,215,833	\$4,402,174	\$527,219	\$1,773,150	\$3,342,686	\$388,801	\$262,807	\$494,399	\$279,250
Total Estimated Project Costs (2016 \$'s)			\$15,403,108	\$779,108	\$1,172,000	\$3,849,000	\$3,899,000	\$453,000	\$1,478,000	\$2,703,000	\$305,000	\$200,000	\$365,000	\$200,000
Total Estimated Project Costs (Future \$'s)			\$17,734,763	\$803,112	\$1,245,330	\$4,215,833	\$4,402,174	\$527,219	\$1,773,150	\$3,342,686	\$388,801	\$262,807	\$494,399	\$279,250

Source: City of St. Helena and HEC.

future cip

[1] Estimated costs increased by historical ENR Construction Cost Index 20 year average increase.

Table A-7
City of St. Helena Wastewater Rate Study
Existing Customers Share of CIP Costs in 2016 \$'s

Project	Funding Source	Percent Share Existing Customers	Percent Share Existing Customers in Rate Model	Total Cost	Fiscal Year Ending										
					2017 Current	2018 Year 1	2019 Year 2	2020 Year 3	2021 Year 4	2022 Year 5	2023 Year 6	2024 Year 7	2025 Year 8	2026 Year 9	2027 Year 10
Estimated Project Costs (2016 \$'s)															
Sewer Collection System															
Miscellaneous Maintenance Projects	Cash	85%	85%	\$467,500	\$29,750	\$29,750	\$29,750	\$29,750	\$29,750	\$29,750	\$29,750	\$29,750	\$29,750	\$170,000	\$29,750
Replace 1% of Sewer Mains Annually	Cash	100%	100%	\$1,650,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000
Crinella Pump Station Upgrades	Cash	100%	100%	\$500,000	\$0	\$0	\$75,000	\$425,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Add Sewer Pump Stations to SCADA	Cash	100%	100%	\$150,000	\$0	\$0	\$0	\$0	\$50,000	\$100,000	\$0	\$0	\$0	\$0	\$0
Wet Weather Flow Monitoring	Ops Cash	100%	100%	\$50,000	\$0	\$0	\$50,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Update GIS Maps of Sewer System	Ops Cash	100%	100%	\$50,000	\$0	\$50,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sewer Master Plan	Ops Cash	100%	100%	\$150,000	\$0	\$0	\$150,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Replace Rodding Machine	Cash	100%	100%	\$40,000	\$0	\$0	\$40,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
CCTV Program	Ops Cash	100%	100%	\$165,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000
Subtotal Collection System				\$3,222,500	\$194,750	\$244,750	\$509,750	\$619,750	\$244,750	\$294,750	\$194,750	\$194,750	\$194,750	\$335,000	\$194,750
Treatment Plant															
WWTP Upgrades Ph. 1	Debt	100%	100%	\$7,474,108	\$232,108	\$700,000	\$3,271,000	\$3,271,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Reclamation Field Improvements	Cash	85%	85%	\$120,700	\$120,700	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pond 2 & 3 Levee	Cash	100%	100%	\$120,000	\$60,000	\$0	\$60,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Facilities Automation	Cash	100%	100%	\$144,000	\$0	\$144,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
New Well	Cash	100%	100%	\$65,000	\$65,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sludge Removal	Cash	100%	100%	\$150,000	\$75,000	\$75,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Recycled Water Feasibility Study	Ops Cash	100%	100%	\$75,000	\$0	\$0	\$0	\$0	\$0	\$75,000	\$0	\$0	\$0	\$0	\$0
Temp Trailer at WRF	Cash	100%	100%	\$28,000	\$5,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$5,000	\$0	\$0	\$0
Replace WRF Operations Building and Shop	Reserves	100%	100%	\$3,000,000	\$0	\$0	\$0	\$0	\$100,000	\$1,000,000	\$1,900,000	\$0	\$0	\$0	\$0
Upgrade Chemical Storage Facilities	Cash	100%	100%	\$500,000	\$0	\$0	\$0	\$0	\$0	\$0	\$500,000	\$0	\$0	\$0	\$0
Phase 2 WWTP Upgrades	Debt	100%	100%	\$400,000	\$0	\$0	\$0	\$0	\$100,000	\$100,000	\$100,000	\$100,000	\$0	\$0	\$0
Subtotal Treatment				\$12,076,808	\$557,808	\$922,000	\$3,334,000	\$3,274,000	\$203,000	\$1,178,000	\$2,503,000	\$105,000	\$0	\$0	\$0
Total Estimated Project Costs (2016 \$'s)				\$15,299,308	\$752,558	\$1,166,750	\$3,843,750	\$3,893,750	\$447,750	\$1,472,750	\$2,697,750	\$299,750	\$194,750	\$335,000	\$194,750
Cash - Capital Fund				\$3,935,200	\$505,450	\$401,750	\$357,750	\$607,750	\$232,750	\$282,750	\$682,750	\$184,750	\$179,750	\$320,000	\$179,750
Cash - Operations Fund				\$490,000	\$15,000	\$65,000	\$215,000	\$15,000	\$15,000	\$90,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000
Debt - Capital Fund				\$7,874,108	\$232,108	\$700,000	\$3,271,000	\$3,271,000	\$100,000	\$100,000	\$100,000	\$100,000	\$0	\$0	\$0
Reserves				\$3,000,000	\$0	\$0	\$0	\$0	\$100,000	\$1,000,000	\$1,900,000	\$0	\$0	\$0	\$0
Total				\$15,299,308	\$752,558	\$1,166,750	\$3,843,750	\$3,893,750	\$447,750	\$1,472,750	\$2,697,750	\$299,750	\$194,750	\$335,000	\$194,750

Source: City of St. Helena.

2016 exist share

Table A-8
City of St. Helena Wastewater Rate Study
Existing Customers Share of CIP Costs in Future \$'s

Project	Funding Source	Percent Share Existing Customers	Percent Share Existing Customers in Rate Model	Total Cost	Fiscal Year Ending											
					2017 Current	2018 Year 1	2019 Year 2	2020 Year 3	2021 Year 4	2022 Year 5	2023 Year 6	2024 Year 7	2025 Year 8	2026 Year 9	2027 Year 10	
Estimated Project Costs (Future \$'s) [1]					Annual Increase		3.1%									
Sewer Collection System																
Miscellaneous Maintenance Projects	Cash	85%	85%	\$584,382	\$30,667	\$31,611	\$32,585	\$33,589	\$34,624	\$35,691	\$36,791	\$37,924	\$39,093	\$230,268	\$41,538	
Replace 1% of Sewer Mains Annually	Cash	100%	100%	\$1,988,624	\$154,621	\$159,385	\$164,296	\$169,358	\$174,576	\$179,954	\$185,499	\$191,214	\$197,105	\$203,178	\$209,438	
Crinella Pump Station Upgrades	Cash	100%	100%	\$561,995	\$0	\$0	\$82,148	\$479,847	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Add Sewer Pump Stations to SCADA	Cash	100%	100%	\$178,161	\$0	\$0	\$0	\$0	\$58,192	\$119,970	\$0	\$0	\$0	\$0	\$0	
Wet Weather Flow Monitoring	Ops Cash	100%	100%	\$54,765	\$0	\$0	\$54,765	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Update GIS Maps of Sewer System	Ops Cash	100%	100%	\$53,128	\$0	\$53,128	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Sewer Master Plan	Ops Cash	100%	100%	\$164,296	\$0	\$0	\$164,296	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Replace Rodding Machine	Cash	100%	100%	\$43,812	\$0	\$0	\$43,812	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
CCTV Program	Ops Cash	100%	100%	\$198,862	\$15,462	\$15,939	\$16,430	\$16,936	\$17,458	\$17,995	\$18,550	\$19,121	\$19,711	\$20,318	\$20,944	
Subtotal Collection System				\$3,828,026	\$200,750	\$260,064	\$558,332	\$699,730	\$284,849	\$353,610	\$240,839	\$248,259	\$255,908	\$453,764	\$271,920	
Treatment Plant																
WWTP Upgrades Ph. 1	Debt	100%	100%	\$8,258,933	\$239,259	\$743,798	\$3,582,746	\$3,693,130	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Reclamation Field Improvements	Cash	85%	85%	\$124,419	\$124,419	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Pond 2 & 3 Levee	Cash	100%	100%	\$127,567	\$61,849	\$0	\$65,718	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Facilities Automation	Cash	100%	100%	\$153,010	\$0	\$153,010	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
New Well	Cash	100%	100%	\$67,003	\$67,003	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Sludge Removal	Cash	100%	100%	\$157,003	\$77,311	\$79,693	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Recycled Water Feasibility Study	Ops Cash	100%	100%	\$89,977	\$0	\$0	\$0	\$0	\$0	\$89,977	\$0	\$0	\$0	\$0	\$0	
Temp Trailer at WRF	Cash	100%	100%	\$32,189	\$5,154	\$3,188	\$3,286	\$3,387	\$3,492	\$3,599	\$3,710	\$6,374	\$0	\$0	\$0	
Replace WRF Operations Building and Shop	Reserves	100%	100%	\$3,665,729	\$0	\$0	\$0	\$0	\$116,384	\$1,199,695	\$2,349,650	\$0	\$0	\$0	\$0	
Upgrade Chemical Storage Facilities	Cash	100%	100%	\$618,329	\$0	\$0	\$0	\$0	\$0	\$0	\$618,329	\$0	\$0	\$0	\$0	
Phase 2 WWTP Upgrades	Debt	100%	100%	\$487,495	\$0	\$0	\$0	\$0	\$116,384	\$119,970	\$123,666	\$127,476	\$0	\$0	\$0	
Subtotal Treatment				\$13,781,654	\$574,994	\$979,688	\$3,651,751	\$3,696,517	\$236,259	\$1,413,241	\$3,095,354	\$133,850	\$0	\$0	\$0	
Total Estimated Project Costs (Future \$'s)				\$17,609,680	\$775,744	\$1,239,752	\$4,210,083	\$4,396,247	\$521,108	\$1,766,852	\$3,336,193	\$382,109	\$255,908	\$453,764	\$271,920	
2016 \$'s																
Cash - Capital Fund				\$3,935,200	\$505,450	\$401,750	\$357,750	\$607,750	\$232,750	\$282,750	\$682,750	\$184,750	\$179,750	\$320,000	\$179,750	
Cash - Operations Fund				\$490,000	\$15,000	\$65,000	\$215,000	\$15,000	\$15,000	\$90,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	
Debt - Capital Fund				\$7,874,108	\$232,108	\$700,000	\$3,271,000	\$3,271,000	\$100,000	\$100,000	\$100,000	\$100,000	\$0	\$0	\$0	
Reserves				\$3,000,000	\$0	\$0	\$0	\$0	\$100,000	\$1,000,000	\$1,900,000	\$0	\$0	\$0	\$0	
Total				\$15,299,308	\$752,558	\$1,166,750	\$3,843,750	\$3,893,750	\$447,750	\$1,472,750	\$2,697,750	\$299,750	\$194,750	\$335,000	\$194,750	
Future \$'s																
Cash - Capital Fund				\$4,636,494	\$521,023	\$426,887	\$391,846	\$686,181	\$270,883	\$339,214	\$844,328	\$235,512	\$236,198	\$433,446	\$250,976	
Cash - Operations Fund				\$561,029	\$15,462	\$69,067	\$235,491	\$16,936	\$17,458	\$107,973	\$18,550	\$19,121	\$19,711	\$20,318	\$20,944	
Debt - Capital Fund				\$8,746,428	\$239,259	\$743,798	\$3,582,746	\$3,693,130	\$116,384	\$119,970	\$123,666	\$127,476	\$0	\$0	\$0	
Reserves				\$3,665,729	\$0	\$0	\$0	\$0	\$116,384	\$1,199,695	\$2,349,650	\$0	\$0	\$0	\$0	
Total				\$17,609,680	\$775,744	\$1,239,752	\$4,210,083	\$4,396,247	\$521,108	\$1,766,852	\$3,336,193	\$382,109	\$255,908	\$453,764	\$271,920	

Source: City of St. Helena.

future exist share

[1] Estimated costs increased by historical ENR Construction Cost Index 20 year average increase.

Table A-9
City of St. Helena Wastewater Rate Study
Existing Wastewater Debt Service Schedule

Fiscal Year Ending	Principal	Interest	Total	Remaining Principal
2015	\$126,522	\$125,841	\$252,363	\$3,063,478
2016	\$133,696	\$121,538	\$255,233	\$2,929,783
2017	\$135,870	\$117,007	\$252,876	\$2,793,913
2018	\$141,957	\$111,947	\$253,904	\$2,651,957
2019	\$149,130	\$106,900	\$256,030	\$2,502,826
2020	\$151,304	\$101,586	\$252,890	\$2,351,522
2021	\$158,478	\$95,345	\$253,823	\$2,193,044
2022	\$166,739	\$88,653	\$255,392	\$2,026,304
2023	\$168,913	\$82,025	\$250,938	\$1,857,391
2024	\$176,087	\$75,582	\$251,669	\$1,681,304
2025	\$183,261	\$68,762	\$252,022	\$1,498,044
2026	\$191,522	\$60,788	\$252,310	\$1,306,522
2027	\$199,783	\$51,708	\$251,490	\$1,106,739
2028	\$209,130	\$42,220	\$251,351	\$897,609
2029	\$218,478	\$32,763	\$251,241	\$679,131
2030	\$227,826	\$23,359	\$251,185	\$451,304
2031	\$236,087	\$13,584	\$249,671	\$215,217
2032	\$105,435	\$6,500	\$111,935	\$109,783
2033	\$109,783	\$2,196	\$111,978	\$0

Source: City of St. Helena.

debt service

Table A-10
City of St. Helena Wastewater Rate Study
Operating Expenses Cost Escalation Factors

Expenses	Actuals Fiscal Year Ending				Estimated 2016	Total Change	Annual Avg. % Change
	2012	2013	2014	2015			
Salaries & Benefits	\$829,613	\$795,480	\$827,047	\$896,865	\$987,778	\$158,165	4.5%
Services	\$231,717	\$194,235	\$220,039	\$406,364	\$822,159	\$590,442	37.2%
Supplies	\$48,460	\$55,452	\$80,836	\$41,318	\$91,641	\$43,181	17.3%
Maintenance	\$81,882	\$72,003	\$68,000	\$118,625	\$167,473	\$85,591	19.6%
Taxes, Insurances & Contribs.	\$76,885	\$54,533	\$64,460	\$73,328	\$122,416	\$45,531	12.3%
Total Expenses	\$1,268,557	\$1,171,702	\$1,260,382	\$1,536,500	\$2,191,467	\$922,910	14.6%
Engineering News Record	<i>Dec 2011</i>	<i>Dec 2012</i>	<i>Dec 2013</i>	<i>Dec 2014</i>	<i>Dec 2015</i>		
ENR Construction Cost Index 20-City [1]	9,172.00	9,412.00	9,668.00	9,936.00	10,135.00	963.00	2.5%
ENR Construction Cost Index San Francisco	10,204.79	10,355.09	10,898.84	10,915.84	11,155.41	950.62	2.3%
Bureau of Labor Statistics							
Consumer Price Index - California	232.99	237.71	241.53	244.81	250.71	17.73	1.9%
Consumer Price Index - San Francisco	234.33	239.53	245.71	252.27	260.29	25.96	2.7%

Source: City of St. Helena, Bureau of Labor Statistics, and the Engineering New Record.

index

[1] Engineering News Record (ENR) Consumer Cost Index (CCI) change 1995 to 2015:

ENR CCI 1995	5,524	Change	<u>Annual Avg. % Change</u>
ENR CCI 2015	10,135	4,611	3.1%

Table A-11
City of St. Helena Wastewater Rate Study
Existing Asset Depreciation

Asset Category	Current Depreciation
Buildings	\$22,667
Vehicles	\$18,067
Equipment	\$43,216
Improvements	\$239,170
Pipes	\$16,925
Total	\$340,044

Source: City of St. Helena and HEC. cur depr

Table A-12
City of St. Helena Wastewater Rate Study
Estimated Depreciation of Projected Assets

Improvement Type	Average Life of Asset (years)	Fiscal Year Ending										
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
		Current Year	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Sewer Collection System [1]												
Miscellaneous Maintenance Projects	10	\$3,608	\$7,327	\$11,160	\$15,112	\$19,186	\$23,384	\$27,713	\$32,174	\$36,774	\$63,864	\$68,751
Reclamation Field Improvements	50	\$2,927	\$2,927	\$2,927	\$2,927	\$2,927	\$2,927	\$2,927	\$2,927	\$2,927	\$2,927	\$2,927
Replace 1% of Sewer Mains Annually	80	\$1,933	\$3,925	\$5,979	\$8,096	\$10,278	\$12,527	\$14,846	\$17,236	\$19,700	\$22,240	\$24,858
New Well	40	\$1,675	\$1,675	\$1,675	\$1,675	\$1,675	\$1,675	\$1,675	\$1,675	\$1,675	\$1,675	\$1,675
Crinella Pump Station Upgrades	50	\$0	\$0	\$1,643	\$11,240	\$11,240	\$11,240	\$11,240	\$11,240	\$11,240	\$11,240	\$11,240
Add Sewer Pump Stations to SCADA	10	\$0	\$0	\$0	\$0	\$5,819	\$17,816	\$17,816	\$17,816	\$17,816	\$17,816	\$17,816
Wet Weather Flow Monitoring	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Update GIS Maps of Sewer System	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Sewer Master Plan	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Replace Rodding Machine	15	\$0	\$0	\$2,921	\$2,921	\$2,921	\$2,921	\$2,921	\$2,921	\$2,921	\$2,921	\$2,921
CCTV Program	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Subtotal Sewer Collection		\$10,143	\$15,854	\$26,306	\$41,971	\$54,046	\$72,491	\$79,138	\$85,990	\$93,053	\$122,683	\$130,188
Treatment Plant [1]												
WWTP Upgrades Ph. 1	80	\$2,991	\$12,288	\$57,073	\$103,237	\$103,237	\$103,237	\$103,237	\$103,237	\$103,237	\$103,237	\$103,237
Pond 2 & 3 Levee	40	\$1,546	\$1,546	\$3,189	\$3,189	\$3,189	\$3,189	\$3,189	\$3,189	\$3,189	\$3,189	\$3,189
Facilities Automation	20	\$0	\$7,650	\$7,650	\$7,650	\$7,650	\$7,650	\$7,650	\$7,650	\$7,650	\$7,650	\$7,650
Sludge Removal	40	\$1,933	\$3,925	\$3,925	\$3,925	\$3,925	\$3,925	\$3,925	\$3,925	\$3,925	\$3,925	\$3,925
Recycled Water Feasibility Study	5	\$0	\$0	\$0	\$0	\$0	\$17,995	\$17,995	\$17,995	\$17,995	\$17,995	\$17,995
Temp Trailer at WRF	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Replace WRF Operations Building and Shop	80	\$0	\$0	\$0	\$0	\$1,455	\$16,451	\$45,822	\$45,822	\$45,822	\$45,822	\$45,822
Upgrade Chemical Storage Facilities	50	\$0	\$0	\$0	\$0	\$0	\$0	\$12,367	\$12,367	\$12,367	\$12,367	\$12,367
Phase 2 WWTP Upgrades	40	\$0	\$0	\$0	\$0	\$2,910	\$5,909	\$9,000	\$12,187	\$12,187	\$12,187	\$12,187
Subtotal Treatment Plant		\$6,470	\$25,410	\$71,837	\$118,001	\$122,366	\$158,357	\$203,186	\$206,372	\$206,372	\$206,372	\$206,372
Total Cumulative Depreciation		\$16,613	\$41,264	\$98,143	\$159,973	\$176,412	\$230,848	\$282,324	\$292,363	\$299,425	\$329,056	\$336,560

Source: City of St. Helena.

new depr

[1] Depreciation in future dollars.

Table A-13
City of St. Helena Wastewater Rate Study
Calculated Winter Use and Total Billed Water Use for Sewer by Customer Type

Customer Type	Winter Months Jan-Mar 2015	# Units /Accounts /Students	Winter Months Jan-Mar 2015	Average	Average in Gallons
Residential	Total Water Use		Use per Unit per Day in HCF	HCF per Day	GPD
Single Family	34,381	1,503	0.25	0.24	175
Multi-Family	9,259	669	0.15	0.15	106
Mobile Homes (Vineyard Valley)	4,331	211	0.23	0.22	157
Residential	47,971	2,383	0.22	0.21	154
Non-Residential					
Car Wash	126	1	1.40	1.40	1,005
Church/CommCenter	254	13	0.22	0.22	156
Commercial	3,803	126	0.34	0.34	241
Grocery	260	3	0.96	0.96	691
Laundry	524	1	5.82	5.82	4,181
Mixed Retail w/ Food	496	3	1.84	1.84	1,319
Motel w/ Food	1,361	2	7.56	7.56	5,429
Motel w/out Food	2,303	8	3.20	3.20	2,297
Restaurant	3,225	19	1.89	1.89	1,354
Napa Valley College	1,620	1	18.00	18.00	12,925
Service Station	199	5	0.44	0.44	318
Merryvale Winery	235	2	1.31	1.31	937
Sutter Home (industrial) [1]	8,009	1	88.99	4.45	3,195
School	1,304	1,437	0.01	0.01	7

Source: City of St. Helena.

winter

[1] Only 5% of winter water use for this account is estimated to reach the wastewater plant.

Exhibit A

Exhibit A

ATTACHMENT B

MODIFIED WASTEWATER RATE STRUCTURE

METHODOLOGY

1. **Determine Number of Sewer Meter Equivalents** – First establish the daily flow for one EDU (equivalent dwelling unit). This flow is the flow per day for a 5/8" meter since almost all residential units have a 5/8" water meter. Calculate the number of sewer meter equivalents using the current City meter ratios. *Using metered water usage data, it is determined that residential units use 280 gallons per day on average; however, only 180 gallons per day reaches the wastewater treatment plant, determined by average winter water use. **Table B-1** shows the flow per day by meter size and the calculation of estimated sewer meter equivalents for non-residential customers.*
2. **Allocate Revenue Requirement to Residential and Non-Residential** – Single Family residential customers are allocated costs based on percentage of flow. They are then further allocated to fixed base costs collected in flat monthly charges by dwelling unit and use costs collected in consumption charges. Non-residential costs, including multi-family, are allocated based on percentage of flow by non-residential customers. Non-residential costs are further allocated to fixed base costs collected in flat monthly charges by meter size and use costs collected in consumption charges. ***Table B-2** shows the allocation of revenue requirement. Costs are allocated 57% to residential and 43% to non-residential.*
3. **Calculate Rates** – Divide base residential costs by the number of residential units. Divide residential use costs by typical residential winter water use. Divide non-residential base costs by the number of sewer meter equivalents. Divide non-residential use costs by typical non-residential winter water use. *Calculated rates are shown in **Table B-2**.*
4. **Compare Rates** – A comparison of current and calculated wastewater rates for the next ten years, through fiscal year 2027, is included in **Table B-3**.

Exhibit A

Table B-1
City of St. Helena Wastewater Rate Study
Calculation of Non-Residential Meter Equivalents

Item	Number of Meters	Meter Ratios	Flow per Day in Gallons	Estimated Sewer Meter Equivalents
Single Family (One EDU)			180	
Non-Residential				
5/8"	150	1.00	180	150
1"	73	2.43	438	178
1.5"	40	4.82	867	193
2"	32	7.68	1,383	246
3"	7	14.36	2,585	101
4"	7	23.91	4,303	167
6"	6	47.77	8,598	287
Total Estimated Non-Residential Sewer Equivalents				1,321
Source: City of St. Helena and HEC.				m equivs

Table B-2
City of St. Helena Wastewater Rate Study
Allocation of Revenue Requirement to Residential and Non-Residential

Item		Fiscal Year Ending										
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Revenue Requirement		\$2,988,676	\$3,429,719	\$4,279,161	\$4,476,847	\$4,542,121	\$4,612,649	\$4,896,715	\$5,110,400	\$5,334,364	\$5,541,161	\$5,735,771
Residential												
Base Costs	29%	\$866,454	\$994,317	\$1,240,581	\$1,297,893	\$1,316,816	\$1,337,263	\$1,419,618	\$1,481,567	\$1,546,497	\$1,606,450	\$1,662,870
Use Costs	28%	\$840,113	\$964,089	\$1,202,866	\$1,258,435	\$1,276,784	\$1,296,609	\$1,376,460	\$1,436,526	\$1,499,482	\$1,557,612	\$1,612,311
Number of Units (single family only)		1,503	1,508	1,513	1,518	1,523	1,528	1,533	1,538	1,543	1,548	1,553
Base Annual Cost		\$576.48	\$659.36	\$819.95	\$855.00	\$864.62	\$875.17	\$926.04	\$963.31	\$1,002.27	\$1,037.76	\$1,070.75
Monthly Base Charge per Residential Unit		\$48.04	\$54.95	\$68.33	\$71.25	\$72.05	\$72.93	\$77.17	\$80.28	\$83.52	\$86.48	\$89.23
Estimated Annual Billed Usage		186,767	187,212	187,658	188,103	188,548	188,994	189,439	189,884	190,329	190,775	191,220
Use Charge per HCF		\$4.50	\$5.15	\$6.41	\$6.69	\$6.77	\$6.86	\$7.27	\$7.57	\$7.88	\$8.16	\$8.43
Non-Residential												
Base Costs	30%	\$896,865	\$1,029,217	\$1,284,124	\$1,343,447	\$1,363,035	\$1,384,200	\$1,469,444	\$1,533,569	\$1,600,777	\$1,662,835	\$1,721,235
Use Costs	13%	\$385,245	\$442,096	\$551,590	\$577,072	\$585,486	\$594,577	\$631,194	\$658,738	\$687,607	\$714,264	\$739,349
Meter Equivalents		1,321	1,321	1,321	1,321	1,321	1,321	1,321	1,321	1,321	1,321	1,321
Base Charge per Meter Equivalent		\$679.18	\$779.41	\$972.45	\$1,017.37	\$1,032.21	\$1,048.23	\$1,112.79	\$1,161.35	\$1,212.25	\$1,259.24	\$1,303.47
Monthly Base Charge per Meter Equivalent		\$56.60	\$64.95	\$81.04	\$84.78	\$86.02	\$87.35	\$92.73	\$96.78	\$101.02	\$104.94	\$108.62
5/8"	1.0	\$56.60	\$64.95	\$81.04	\$84.78	\$86.02	\$87.35	\$92.73	\$96.78	\$101.02	\$104.94	\$108.62
1"	2.4	\$137.63	\$157.94	\$197.05	\$206.16	\$209.16	\$212.41	\$225.49	\$235.33	\$245.64	\$255.17	\$264.13
1.5"	4.8	\$272.67	\$312.91	\$390.41	\$408.45	\$414.40	\$420.84	\$446.75	\$466.25	\$486.68	\$505.55	\$523.31
2"	7.7	\$434.74	\$498.90	\$622.46	\$651.22	\$660.71	\$670.97	\$712.29	\$743.37	\$775.95	\$806.03	\$834.34
3"	14.4	\$812.89	\$932.84	\$1,163.88	\$1,217.65	\$1,235.40	\$1,254.59	\$1,331.85	\$1,389.97	\$1,450.89	\$1,507.13	\$1,560.06
4"	23.9	\$1,353.10	\$1,552.78	\$1,937.35	\$2,026.86	\$2,056.41	\$2,088.34	\$2,216.95	\$2,313.69	\$2,415.09	\$2,508.71	\$2,596.82
6"	47.8	\$2,703.62	\$3,102.59	\$3,871.01	\$4,049.85	\$4,108.89	\$4,172.70	\$4,429.67	\$4,622.97	\$4,825.57	\$5,012.65	\$5,188.69
Use Charge per HCF	Est. Annual Billed Use											
Car Wash	511	\$3.43	\$3.93	\$4.90	\$5.13	\$5.21	\$5.29	\$5.61	\$5.86	\$6.11	\$6.35	\$6.57
Religious Places/Community Centers	1,030	\$3.72	\$4.27	\$5.33	\$5.57	\$5.65	\$5.74	\$6.09	\$6.36	\$6.64	\$6.90	\$7.14
Commercial	15,423	\$4.27	\$4.90	\$6.12	\$6.40	\$6.49	\$6.59	\$7.00	\$7.30	\$7.62	\$7.92	\$8.20
Groceries and Mortuaries	1,054	\$10.30	\$11.81	\$14.74	\$15.42	\$15.65	\$15.89	\$16.87	\$17.60	\$18.38	\$19.09	\$19.76
Laundry	2,125	\$3.81	\$4.37	\$5.46	\$5.71	\$5.79	\$5.88	\$6.24	\$6.51	\$6.80	\$7.06	\$7.31
Mixed Retail w/ Food	2,012	\$6.73	\$7.72	\$9.64	\$10.08	\$10.23	\$10.39	\$11.03	\$11.51	\$12.01	\$12.48	\$12.92
Motel with Food	5,520	\$7.91	\$9.08	\$11.32	\$11.85	\$12.02	\$12.21	\$12.96	\$13.52	\$14.12	\$14.66	\$15.18
Motel without Food	9,340	\$4.59	\$5.26	\$6.57	\$6.87	\$6.97	\$7.08	\$7.51	\$7.84	\$8.19	\$8.50	\$8.80
Restaurant	13,079	\$10.18	\$11.68	\$14.57	\$15.24	\$15.47	\$15.71	\$16.67	\$17.40	\$18.16	\$18.87	\$19.53
Napa Valley College	6,570	\$3.67	\$4.21	\$5.25	\$5.49	\$5.57	\$5.66	\$6.01	\$6.27	\$6.55	\$6.80	\$7.04
Service Station	807	\$4.82	\$5.53	\$6.90	\$7.22	\$7.32	\$7.44	\$7.89	\$8.24	\$8.60	\$8.93	\$9.25
Winery Production (Merryvale/Spottswoode)	953	\$17.31	\$19.87	\$24.79	\$25.93	\$26.31	\$26.72	\$28.36	\$29.60	\$30.90	\$32.09	\$33.22
Sutter Home Winery	1,624	\$4.50	\$5.16	\$6.44	\$6.74	\$6.84	\$6.94	\$7.37	\$7.69	\$8.03	\$8.34	\$8.63
Schools	5,288	\$1.87	\$2.15	\$2.68	\$2.81	\$2.85	\$2.89	\$3.07	\$3.20	\$3.34	\$3.47	\$3.60

Source: City of St. Helena and HEC.

curr alloc rates

Table B-3
City of St. Helena Wastewater Rate Study
Calculated Wastewater Rates - Modified Current Rate Structure

Land Use	Current Rates Effective	2017 2/8/2017	2018 11/8/2017	2019 11/8/2018	2020 11/8/2019	2021 11/8/2020	2022 11/8/2021	2023 11/8/2022	2024 11/8/2023	2025 11/8/2024	2026 11/8/2025	2027 11/8/2026
Residential												
Flat Monthly Charge per Unit	\$47.35	\$48.04	\$54.95	\$68.33	\$71.25	\$72.05	\$72.93	\$77.17	\$80.28	\$83.52	\$86.48	\$89.23
Use Charge per HCF	\$3.94	\$4.50	\$5.15	\$6.41	\$6.69	\$6.77	\$6.86	\$7.27	\$7.57	\$7.88	\$8.16	\$8.43
Non-Residential												
Flat Monthly Charge per Account												
5/8"	\$42.12	\$56.60	\$64.95	\$81.04	\$84.78	\$86.02	\$87.35	\$92.73	\$96.78	\$101.02	\$104.94	\$108.62
1"	\$102.42	\$137.63	\$157.94	\$197.05	\$206.16	\$209.16	\$212.41	\$225.49	\$235.33	\$245.64	\$255.17	\$264.13
1.5"	\$202.92	\$272.67	\$312.91	\$390.41	\$408.45	\$414.40	\$420.84	\$446.75	\$466.25	\$486.68	\$505.55	\$523.31
2"	\$323.53	\$434.74	\$498.90	\$622.46	\$651.22	\$660.71	\$670.97	\$712.29	\$743.37	\$775.95	\$806.03	\$834.34
3"	\$604.94	\$812.89	\$932.84	\$1,163.88	\$1,217.65	\$1,235.40	\$1,254.59	\$1,331.85	\$1,389.97	\$1,450.89	\$1,507.13	\$1,560.06
4"	\$1,006.96	\$1,353.10	\$1,552.78	\$1,937.35	\$2,026.86	\$2,056.41	\$2,088.34	\$2,216.95	\$2,313.69	\$2,415.09	\$2,508.71	\$2,596.82
6"	\$2,012.00	\$2,703.62	\$3,102.59	\$3,871.01	\$4,049.85	\$4,108.89	\$4,172.70	\$4,429.67	\$4,622.97	\$4,825.57	\$5,012.65	\$5,188.69
Use Charge per HCF												
Car Wash	\$2.85	\$3.43	\$3.93	\$4.90	\$5.13	\$5.21	\$5.29	\$5.61	\$5.86	\$6.11	\$6.35	\$6.57
Religious Places/Community Centers	\$3.64	\$3.72	\$4.27	\$5.33	\$5.57	\$5.65	\$5.74	\$6.09	\$6.36	\$6.64	\$6.90	\$7.14
Commercial	\$3.64	\$4.27	\$4.90	\$6.12	\$6.40	\$6.49	\$6.59	\$7.00	\$7.30	\$7.62	\$7.92	\$8.20
Groceries and Mortuaries	\$11.87	\$10.30	\$11.81	\$14.74	\$15.42	\$15.65	\$15.89	\$16.87	\$17.60	\$18.38	\$19.09	\$19.76
Laundry	\$3.34	\$3.81	\$4.37	\$5.46	\$5.71	\$5.79	\$5.88	\$6.24	\$6.51	\$6.80	\$7.06	\$7.31
Mixed Retail w/ Food	\$6.79	\$6.73	\$7.72	\$9.64	\$10.08	\$10.23	\$10.39	\$11.03	\$11.51	\$12.01	\$12.48	\$12.92
Motel with Food	\$8.75	\$7.91	\$9.08	\$11.32	\$11.85	\$12.02	\$12.21	\$12.96	\$13.52	\$14.12	\$14.66	\$15.18
Motel without Food	\$4.35	\$4.59	\$5.26	\$6.57	\$6.87	\$6.97	\$7.08	\$7.51	\$7.84	\$8.19	\$8.50	\$8.80
Restaurant	\$11.68	\$10.18	\$11.68	\$14.57	\$15.24	\$15.47	\$15.71	\$16.67	\$17.40	\$18.16	\$18.87	\$19.53
Napa Valley College	\$3.64	\$3.67	\$4.21	\$5.25	\$5.49	\$5.57	\$5.66	\$6.01	\$6.27	\$6.55	\$6.80	\$7.04
Service Station	\$4.70	\$4.82	\$5.53	\$6.90	\$7.22	\$7.32	\$7.44	\$7.89	\$8.24	\$8.60	\$8.93	\$9.25
Winery Production (Merryvale/Spottswoode)	\$20.94	\$17.31	\$19.87	\$24.79	\$25.93	\$26.31	\$26.72	\$28.36	\$29.60	\$30.90	\$32.09	\$33.22
Sutter Home Winery	\$4.27	\$4.50	\$5.16	\$6.44	\$6.74	\$6.84	\$6.94	\$7.37	\$7.69	\$8.03	\$8.34	\$8.63
Schools	\$3.17	\$1.87	\$2.15	\$2.68	\$2.81	\$2.85	\$2.89	\$3.07	\$3.20	\$3.34	\$3.47	\$3.60

Source: City of St. Helena and HEC.

calc rates



Report to the City Council
Council Meeting of February 28, 2017

Agenda Section: New Business

Subject: Report to City Council as Directed at the January 17, 2017 Special City Council Meeting of the Following Items:

- 1. Review of Bond Covenants**
- 2. Summary Report on the Major Projects including Funding Assumptions for each Project**
- 3. Overview of Various Financial Mechanisms with Details on Cost Assumptions**
- 4. Review of Perceived Inequity in Allocation Between User Types and Between Base Rate and Usage Rate**

Consideration and proposed approval of a resolution authorizing \$45,000 to be taken from the water and wastewater reserves for contracts with bond counsel, municipal financial advisor, and Hansford Economic Consulting to provide additional analysis of the utility rate study dated October 31, 2016 and adopted on November 29, 2016; and

Consideration and proposed approval of a resolution authorizing a second amendment to the contract with Hansford Economic Consulting for an amount not to exceed \$32,792 for additional technical support regarding the rate study dated October 31, 2016 and adopted on November 29, 2016.

CEQA Status: Not a CEQA project

Prepared By: April Mitts, Finance Director

Approved By: Larry Pennell, Interim City Manager

A handwritten signature in blue ink, appearing to read "LPP", is written over the name "Larry Pennell" in the "Approved By" line.

BACKGROUND

On November 29, 2016 City Council approved Resolutions 2016-163 and 2016-164 establishing revised rates for water and wastewater utilities.

On January 17, 2017 at a Special Meeting of the City Council it was requested of staff to provide additional information on the following as they relate to the Utility Rate Study:

1. Review of Bond Covenants;

2. Summary Report on the Major Projects including Funding Assumptions for each Project;
3. Overview of Various Financial Mechanisms with Details on Cost Assumptions; and
4. Review of Perceived Inequity in Allocation Between User Types and Between Base Rate and Usage Rate.

On February 14, 2017 City Council voted on a motion which includes the following as it relates to the Rate Study:

1. Retain a public sector financial consultant and bond counsel to advise an Ad Hoc committee; and
2. Retain Hansford Economic Consulting to work with the Ad Hoc Committee for further analysis of the Rate Study.

DISCUSSION

Review of Bond Covenants

A Bond Covenant is a legally binding term of agreement between a bond issuer and a bond holder. The City currently has three bonds outstanding for the water and wastewater funds – Series 2005B, Series 2006A, and Series 2012B. These bonds were financed through the California Statewide Communities Development Authority (CSCDA) to finance water and wastewater system improvements. With each bond issued the City must legally follow all components of the Installment Purchase Agreement. The Execution Copy of the 2012B Installment Purchase Agreement for the 2012B – Water and Wastewater Bonds is included as Attachment 1.

This City is, and has been, out of compliance with its installment purchase agreement in regards to its debt service requirement of 1.20 or 120%. This requirement states, the City will, at all times while any of the Installment Payments remain unpaid, fix, prescribe and collect rates, fees and charges and manage the operation of the System for each Fiscal Year to pay the following amounts during such Fiscal Year:

1. All current Operation and Maintenance Costs;
2. The Installment Payments and the payments for the other Parity Debt and other debt obligations;
3. All payments required for compliance with the terms of the Installment Purchase Agreement; and
4. All payments to meet any other obligations of the Participant which are charges, liens or encumbrances upon, or payable from, the System Net Revenues.

In addition to the above requirements, the City is required to fix, prescribe and collect rates, fees and charges and manage the operation of the System (water and wastewater) for each Fiscal Year so as to yield System Net Revenues during such Fiscal Year equal to at least 120% of the Annual Debt Service.

The Installment Purchase Agreement does allow for the City to make or permit to be made adjustments to rates, fees and charges and may make or permit to be made such classifications it deems necessary, but cannot reduce or permit to be reduced rates, fees and charges below those then in effect unless the System Revenues from such reduced rates, fees and charges will at all times be sufficient to meet the requirements in Section 6.8 Amounts of Rates, Fees and Charges (Installment Purchase Agreement, pages 18-19).

System Net Revenues is defined as, "System Revenues less Operations and Maintenance Costs." To have a System Net Revenue of 120% of the debt means revenues must exceed expenses by at least 120% of the total debt service. In using the example of the water fund for FY16, the Net System Revenue and Debt Requirements are illustrated in the Table 1.

Table 1

line		
	Revenue	
	Water Sales	\$4,104,537
	Other Operating Revenue	\$172,982
	Nonoperating Revenue	--
	Interest Income	\$45,562
a	TOTAL SYSTEM REVENUES	\$4,323,081
b	OPERATIONS AND MAINTENANCE EXPENSES	4,006,654
c	SYSTEM NET REVENUES (a-b)	\$316,427
	Debt Service	
	CSCDA Series 2006A	\$592,178
	CSCDA Series 2012B	\$408,756
d	TOTAL DEBT SERVICE	\$1,000,934
e	Debt Service Coverage (b ÷ d)	0.32

As illustrated in Table 1, System Net Revenues consist revenue derived from water sales, other operating revenue, nonoperating revenue, and interest income. Other operating revenue would include revenue collected for annexation into the water/wastewater system, revenues received for replacement of broken meters, etc. and nonoperating revenue includes gains/losses on asset disposals or the sale of assets. Transfer from other funds, such as the General Fund, are not considered part of system revenues. This has been confirmed with BLX Group, LLC who provides the City's annual disclosure agreement and with Orrick, Herrington & Sutcliffe LLP who is bond counsel to the California Statewide Communities Development Authority.

Coinciding with the debt service requirements, there are also financial limits in the amount of debt carried by an organization. The standard ratio used to express the limitation is debt service coverage, as calculated above. This measure shows the extent to which

revenues are available to “cover” annual debt service requirements after operating costs have been paid for. Standard & Poor’s (S&P) has set their standard analytical characterizations for utilities and as stated above the City’s bond covenant establishes coverage ratios. The Table 2 is S&P’s Analytical Characterization of Coverage Ratios for Utilities.

Table 2

S&P Analytical Characterizations of Coverage Ratios for Utilities	
Strong	Greater than 1.50
Good	Between 1.26 and 1.50
Adequate	Between 1.0 and 1.25
Insufficient	Less than 1.0

To determine where the City falls within S&P’s coverage ratios for utilities the amount debt financed must be looked at for both the water and wastewater systems. The City’s water system currently has an outstanding principal balance of \$11.1 million dollars of debt issued through its 2006 and 2012 bond issue (FY 15 CAFR, pages 38-41 and HEC Water Rate Study Technical Memorandum, page 10, Table A-9 – Attachment 2). The combined annual payment a little over \$1.1 million dollars with its final payment in 2033 of \$400,000.

The City’s wastewater system currently has an outstanding principal balance of \$3 million of debt issued through its 2005 and 2012 bond issue (FY 15 CAFR, pages 38-41 and HEC Wastewater Rate Study Technical Memorandum, page 9, Table A-9). The combined annual payment is \$250,000 with final payments of \$111,000 in 2032 and 2033.

As stated earlier a requirement of the City’s bond covenants is that rates, fees and charges are at least 1.2 times the annual debt service. While the wastewater system is currently in compliance, the water system is significantly out of compliance. This is illustrated in Table 3 below. Although the wastewater system is in compliance, for the purposes for our bond rating and the bond covenants, the weaker of the two system is considered, which is the water system at a projected 0.32 at the end of FY 16. Despite the passage of the new rates in November 2016, this percentage will not meet the 1.2 times requirement in FY 17, and is estimated to be in compliance by the end of FY 18. Table 3 is a summary of the estimated debt service coverage.

Table 3 - DEBT SERVICE COVERAGE

SYSTEM	FY 15	FY 16	FY 17 Estimated	FY 18 Estimated	FY 19 Estimated
Water	1.01	0.32	0.27	2.22	2.50
S&P Characterization	Adequate	Insufficient	Insufficient	Strong	Strong

Amount Needed to meet Bond Covenants	\$1,200,010	\$1,205,056	\$1,187,101	\$1,179,499	\$1,402,195
Amount Over/(Short)	(\$189,719)	(\$881,100)	(\$917,385)	\$1,002,574	\$1,519,045
Wastewater	2.77	1.48	1.53	5.17	2.07
S&P Characterization	Strong	Good	Strong	Strong	Strong
Amount Needed to meet Bond Covenants	\$302,836	\$309,486	\$303,451	\$304,685	\$1,017,785
Amount Over/(Short)	\$50,473	\$51,581	\$50,575	\$1,007,999	\$737,894

Another requirement of our bond covenants is that continuous disclosure must be done each year on the City's bonds. The City currently contracts with BLX Group, LLC to provide continuous disclosure for the City's bonds. This notice contains certain operating and financial data relating to the City's water and wastewater systems. It is a way in which bond holders and rating agencies can analyze if the City is in good financial health or if there are any concerns of default. If the City is in default of its Installment Purchase Agreement S.E.C. Rule 15c2-12 requires a Voluntary Event Notice – Non-Payment Related Default to be provided. This notice is required to provide information on matters as to which an average prudent investor ought reasonably to be informed before buying or selling any security. Because the City of St. Helena did not meet its debt service coverage requirement for FY 15 and FY 16 voluntary event notices for non-payment related default were provided by the City and posted on EMMA (Electronic Municipal Market Access) which is the official repository for information on all municipal bonds. EMMA provides free public access to official disclosures, trade data, credit ratings and other information about the municipal securities market (Attachments 3 and 4).

Being out of compliance with our bond covenants can, and will have serious consequences if left unaddressed. Bond covenants cannot be taken lightly and is something the market focuses on and is typically the first indication of a financial problem and can cause red flags for investors, bond insurers, and bond issuers. Staff has reached out to Orrick, Herrington & Sutcliffe, LLP, bond counsel for the CSCDA, Jones Hall which provides bond counsel, BLX Group, LLC who is currently retained by the City to provide mandated continuous disclosure regarding our bonds, two independent municipal financial advisors, and Standard & Poor's (S&P) regarding the issue of non-compliance of our bond covenants. After speaking with the various entities staff has compiled a bullet pointed list of potential consequences of not increasing rates to be in compliance with the current bond covenants, these are listed below.

- Inability to incur additional debt – if the City is not currently meeting its current debt requirement it will not be able to pass the Additional Debt Tests required for Parity Debt (another bond with equal rights to a claim as other bonds already issued).
- Ability to finance future projects will be challenged and more expensive.
- Bonds can be downgraded
- A subordinate debt may be available; however, these will be at a higher interest rate.
- Higher interest rates for future borrowing.
- Inability or difficulty obtaining a Municipal Bond Insurance Policy.
- Obtaining new debt could become an issue due to Fair Securities Laws requiring full disclosure which would include the inability to meet the current bond covenants.
- State Loans through the State Revolving Fund have a debt service requirements similar to bonds, if the City is not currently meeting its bond covenants it will be unable to borrow from SRF.
- S&P rating would be reduced.
- If we do default Bond holders, insurers may decide they want to get out and can call an event of default and accelerate the debt – this would force the rates to ensure compliance with the bond covenants.

Summary Report on the Major Projects including Funding Assumptions for each Project
WATER

Water system capital costs in any one year are dependent on the state of the current infrastructure to serve existing customers and necessary improvements to accommodate potential new customers.

The City has identified a total of \$22.6 million in Capital Improvement Costs (CIP) for the water system in the next 10 years in 2016 dollars (HEC Water Rate Study Technical Memorandum Table A-6). The City already has some funding for these projects in the form of existing bond funds, grants, and impact fees. After deducting existing outside funding, the total amount to be funded by the new rates is \$17.7 million in 2016 dollars, which escalates to \$20.8 million in future dollars (HEC Water Rate Study Technical Memorandum, Table A-7). Costs included are allocated to existing and future customers based on their estimated use of facilities. Out of the \$20.8 million, \$18.8 million benefits existing customers and only \$2 million of the total cost is for projects partially benefiting future customers (HEC Water Rate Study Technical Memorandum Table A-8).

Table 4 provides a summary of all CIP projects included in the recent rate study, the total estimated costs, funding source(s), and the amounts provided by existing outside funding (grants, existing debt, and impact fees). This is a summary of information presented in the HEC Water Rate Study Technical Memorandum, Tables A-6 and A-7).

Table 4

CIP Project	Total Estimated Cost	Existing Outside Funding	New Rates Funding	Assumed Financing
York Creek Upper Dam Removal/Mitigation	\$6,177,117	\$4,481,342	\$1,695,775	--
Meadowood Tank Upgrades	\$500,000	\$120,100	\$379,900	--
Bell Canyon Reservoir Improvements	\$900,000	--	\$900,000	--
Dwyer Road Booster Improvements	\$842,523	--	\$421,262	--
Bell Canyon Intake Mid-Valve Repair	\$14,387	--	\$14,387	--
Bell Valve House Valve Replacement	\$526,105		\$526,105	--
Holmes Tank Upgrade	\$1,383,000	--	\$1,383,000	--
Bell Canyon Creek Flow Measurement	\$750,000	\$257,250	\$492,750	--
Sludge Handling Program	\$150,000	--	\$150,000	--
Raw Water Metering Station	\$100,000	--	\$100,000	--
Tank 2 Rehabilitation	\$750,000	--	\$750,000	--
Well Filter Rehabilitation	\$11,103	--	\$11,103	--
Pump Station Upgrades	\$200,000	--	\$200,000	\$200,000
Replace 12" Transmission Line	\$400,000	--	\$400,000	--
Lower York Creek Dam Rehabilitation	\$480,695	--	\$480,695	--
Bell Canyon Intake Tower Replacement	\$2,000,000	--	\$2,000,000	\$2,000,000
Water Treatment Plant Condition Assessment	\$150,000	--	\$150,000	--
Spill Containment at Bell Creek Intake	\$75,000	--	\$75,000	--
SCADA Improvements (Rutherford & Holmes)	\$150,000	--	\$150,000	--
Spill Containment at Stonebridge Well	\$75,000	--	\$75,000	--

CIP Project	Total Estimated Cost	Existing Outside Funding	New Rates Funding	Assumed Financing
Upgrade at Rutherford Pump Station	\$500,000	--	\$500,000	--
Remove Restriction at Rutherford PS	\$150,000	--	\$150,000	--
Update GIS Maps of Water System	\$50,000	--	\$50,000	--
Water Master Plan Update	\$150,000	--	\$150,000	--
Replace Water Mains < 6"	\$4,000,000	--	\$4,000,000	--
Replace 1% of Water Mains Annually	\$150,000	--	\$150,000	--
Additional Storage	\$1,000,000	--	\$1,000,000	--
Annual Maintenance Program	\$950,000	--	\$950,000	--
Total	\$22,584,930	\$4,858,692	\$17,726,238	\$2,200,000

It is the intent of the City to use cash, existing debt, new debt, grants, impact fees, and reserves to fund the projects listed above. The term "Cash" in the Water and Wastewater Rate Study Technical Memorandum's include impact fees, grants, and use of existing debt. All projects listed above take place over a 10 year period. For estimated project timelines; refer to the Water Rate Study Technical Memorandum, Table A-7.

WASTEWATER

Wastewater system capital costs in any one year are dependent on the state of the current infrastructure to serve existing customers and necessary improvements to accommodate potential new customers.

The City has identified a total of \$15.4 million in Capital Improvement Costs (CIP) for the wastewater system in the next 10 years in 2016 dollars (HEC Wastewater Rate Study Technical Memorandum, Table A-5). The City does not have any existing funding for these projects. After escalating project costs to future dollars in order to account for inflation, the total amount to be funded by the new rates \$17.7 million in future dollars (HEC Wastewater Rate Study Technical Memorandum, Table A-6). Costs included are allocated to existing and future customers based on their estimated use of facilities. Out of the \$17.7 million, \$17.6 million benefits existing customers and only \$100,000 of the total cost is for projects partially benefiting future customers (HEC Wastewater Rate Study Technical Memorandum, Table A-8). Table 5 provides a summary of information

presented in HEC Wastewater Rate Study Technical Memorandum, Tables A-5, A-6, and A-7

Table 5

CIP Project	Total Estimated Cost	New Rates Funding	Assumed Financing
Miscellaneous Maintenance Projects	\$550,000	\$550,000	--
Replace 1% of Sewer Mains Annually	\$1,650,000	\$1,650,000	--
Crinella Pump Station Upgrades	\$500,000	\$500,000	--
Add Sewer Pump Stations to SCADA	\$150,000	\$150,000	--
Wet Weather Flow Monitoring	\$50,000	\$50,000	--
Upgrade GIS Maps of Sewer System	\$50,000	\$50,000	--
Sewer Master Plan	\$150,000	\$150,000	--
Replace Rodding Machine	\$40,000	\$40,000	--
CCTV Program	\$165,000	\$165,000	--
Phase 1 – WWTP Upgrades	\$7,474,108	\$7,474,108	\$7,474,108
Reclamation Field Improvements	\$142,000	\$142,000	--
Pond 2 & 3 Levee	\$120,000	\$120,000	--
Facilities Automation	\$144,000	\$144,000	--
New Well	\$65,000	\$65,000	--
Sludge Removal	\$150,000	\$150,000	--
Recycled Water Feasibility Study	\$75,000	\$75,000	--
Temporary Trailer at WRF	\$28,000	\$28,000	--
Replace WRF Operations Building and Shop	\$3,000,000	\$3,000,000	--

Upgrade Chemical Storage Facilities	\$500,000	\$500,000	--
Phase 2 – WWTP Upgrades	\$400,000	\$400,000	\$400,000
Total	\$15,403,108	\$15,403,108	\$7,874,108

For estimated project timelines; refer to the Wastewater Rate Study Technical Memorandum, Table A-7.

Overview of Various Financial Mechanisms with Details on Cost Assumptions

Engineer's estimates were used for projects with preliminary engineering complete. However, work has not started on many projects and cost estimates (assumptions) are based on typical costs for similar projects by other agencies. In this case, the City retained GHD to provide cost estimates for projects that have not started. In all cases, cost estimates are expected to vary as work begins on projects, the scope of work is developed, engineering designs are prepared, and construction bids are received.

The cost estimates (assumptions) are just that, estimates. There are situations where a cost is estimated and when all design aspects and construction bids are received, it is found the estimate was low. For example, at the time this study was prepared, the Reclamation Field Improvements were estimated to cost \$142,000. This was based on input from the City's wastewater plant operator and materials supplier. Preliminary engineering is now complete and the initial cost estimate is \$1.5 million. The cost increase is due to the engineering consultant and staff spending time to perform a thorough assessment of the condition of the existing system, expanding the scope to include replacement of more piping, and installation of additional sprinklers to achieve increased coverage.

In addition, it is estimated that some of the cost estimates made for this study are low and will, when construction begins, be higher than anticipated. This is a key reason why additional monies are set aside in the reserves to address this as well as unanticipated expenses due to unplanned projects.

WATER

The City has identified a minimum of \$17.7 million, net of grant funds and existing bond proceeds, of water system capital improvement projects to be funded over the next 10 years. This cost is inflated to a total of \$20.8 million dollars over the next 10 years.

New debt service is assumed to be incurred, financed by the State Drinking Water Revolving Fund (DWSRF) for two projects:

1. Bell Canyon intake tower replacement
2. Pump Station upgrades

The total estimated DWSRF-funded project costs are \$2.7 million, which includes a 15% contingency factor. The estimated annual debt service is \$166,000 although an additional 10% is due in the first 10 years due to the first 10 years of the loan to build up a reserve of one year debt service. This will bring the total debt payment for the water fund to a little more than \$1.1 million each fiscal year. Existing customers' share of the debt is 86%; the remaining debt service is for future customers' share of the Bell Canyon intake tower replacement.

A part of the rate study and establishment of rates includes collecting rates to cover system rehabilitation costs. Depreciation of current assets is used as the basis for which to cover system rehabilitation costs. Depreciation is calculated based on existing water facilities and new facilities built in the next 5-year period.

WASTEWATER

The City has identified a minimum of \$15.4 million, net of grant funds and existing bond proceeds, of wastewater system capital improvement projects to be funded over the next 10 years. This cost is inflated to a total of \$17.7 million dollars over the next 10 years. This financial plan assumes that:

- Phase I and II of the wastewater treatment plant upgrades will be debt-financed.
- Reserves will be used to finance \$3.7 million for replacement of the wastewater reclamation facility operations building and shop, which is expected to be accomplished fiscal years 2021 through 2023.
- Cash will fund the remaining CIP costs.

CASH FLOW

With the adoption of the calculated rates it is anticipated that the City will be able to meet all water and wastewater enterprise fund obligations and achieve at least six months of operating expenses in cash reserves in each year of the projection. Additionally, it is anticipated the City will meet its 2012B debt service coverage ratio of at least 120% by the end of FY 18. The City may be able to designate (set aside) up to \$3.1 million in the water fund by fiscal year ending 2027 (HEC Water Rate Study Technical Memorandum, page 25) and up to \$1.7 million by fiscal year ending 2022, and \$3.8 million by fiscal year ending 2027 in the wastewater fund (HEC Wastewater Technical Memorandum, page 20). These funds are designated to pay for system rehabilitation. Essentially the use of the water and wastewater systems by current customers cause "wear and tear" on the current system. Similar to the wear and tear on a vehicle or at a home, items need to be fixed and replaced overtime due to use by the current customers. These funds set aside during the next 10 years can be used to fix or replace portions of the water and wastewater system which were used by current customers.

While the cash flow analysis provided are optimistic, there are situations which arise that can quickly diminish the positive cash flow or amount set aside in reserves. The City has an aging infrastructure which has not had regular maintenance and the rates are needed

to address aging infrastructure and new regulatory requirements. The Capital Improvement Project (CIP) list included in the current rate study is based on currently available information and will change as infrastructure failures occur and as regulatory agency requirements change. Additionally, there could be other projects not currently identified which are critical in nature that would quickly diminish reserves.

Review of Perceived Inequity in Allocation between User Types and between Base Rate and Usage Rate

There are two parts to both the water rates and the wastewater rates. The first is the base rate, or service charge. This rate is fixed and does not change from month to month. The second component to the rate structure is the use (or commodity) rates. These vary each month dependent on actual use of the water and wastewater systems and are measured by Hundred Cubit Feed (HCF). The sections below set out to explain what factors are used in determining base and use rates.

All numbers presented in this section are based on the Fiscal Year ending 2017 numbers presented in the report prepared by HEC.

DETERMINING BASE RATES – WATER SYSTEM

Several factors are involved in determining what base rates are charged to what customer classification. Base (service) costs comprise of customer costs and capacity costs.

Customer Costs

Customer costs are allocated to customers based on the number of water accounts (number of meters). This is done by taking the revenue requirement for Non-Fire Services and dividing the number of meters serviced by the City of St. Helena - 2,451. This gives you a Customer Cost per account, per meter, per month of \$17.69. This is what it costs to have the meter installed on your property.

Capacity Costs

Capacity costs are allocated to customers based on the hydraulic capacity of the meter size. Meter ratio and meter flow figures are based on the American Water Works Association (AWWA) standard meter flow and ratios which is the standard used to determine capacity. Simply put, the larger the meter, the more the water flow, and the larger the meter ratio is. The largest number of meters in St. Helena are the 5/8" and 1" single-family meters which account for 1,987 of the 2,452 meters, or 81% of the meters. Be mindful that there are several meters which serve multiple units. For instance, an apartment complex or mobile home park. They may have 1 or 2 meters, but will serve several residential units. The monthly service charge for capacity costs varies dependent on the size of the meter. For instance a single-family residential meter (5/8", 3/4", and 1") has a monthly capacity cost of \$24.22, a 1" non-residential meter has a monthly capacity cost of \$60.55, and a 6" meter which has a monthly capacity cost of \$1,211.01 per month (Water Rate Study Technical Memorandum, page 19, Table 13). In essence, the larger

the meter, the more capacity it has for water to flow through, and the higher the cost for that meter.

Once Customer Costs and Capacity Costs are determined, the two are added together which will give the base rate for the size of the meter. Using our examples above, a single-family residential meter (5/8", 3/4", and 1") has a monthly base fee of \$41.91, a 1" non-residential meter has a monthly base fee of \$78.25, and a 6" meter has a monthly base fee of \$1,228.70. As seen here; the larger the meter size, the higher the capacity, the higher the monthly base charge.

The final item in determining the base rate for water customers is factoring in the cost of meter replacement by meter size. The HEC Water Rate Study Technical memorandum, page 22, Table 16 outlines the monthly cost per size meter. This cost is added to the monthly base rate established by customer costs and capacity costs to determine the final monthly base rate by meter size. Using the same examples as above a single-family residential meter (5/8", 3/4", and 1") has a monthly base fee of \$43.22, a 1" non-residential meter has a monthly base fee of \$80.08, and a 6" meter has a monthly base fee of \$1,252.50. Meters are typically replaced every 20 years and the HEC study factors routine meter replacement at a rate of 5% per year.

As seen in the examples above, the larger the meter, the more water can flow through, and the greater the cost for the City to maintain the meter.

DETERMINING USE CHARGES – WATER SYSTEM

Use, or commodity charges, are determined by taking the total costs allocated to use charges and dividing them by projected water demand in the peak and off-peak season. This is done to determine the cost per hundred cubic feet (HCF). Water use charges are found in the Water Rate Study Technical Memorandum, page 17, Table 11. For 2017 the use charges are \$3,799,993. Page 21, Table 14 of the same document shows the total allocated cost for use divided by total water consumption equals \$5.88 HCF. There is naturally more demand for water from May through October – this is considered peak season. During the peak months the costs of operating the water system is 11% higher. Due to the higher cost of operations, a seasonal rate structure has been adopted by City Council for use charges. Table 14, as referenced above, shows that 240,040 HCF is consumed during the off-peak season and 405,760 HCF is consumed during the peak season. Based on actual consumption the cost per HCF during the off-peak season is \$5.50 and during the peak season is \$6.11 for the remainder of 2017. Use charges do not vary by meter size or by customer category.

For the purpose of the study, water use over the past five years was used as the basis on which to project water use over the next five year (HEC Water Rate Study Technical Memorandum, page 8).

DETERMINING RATES – WASTEWATER SYSTEM (BASE AND USE)

Similar to the water system, there are two types of rates which are charged to the wastewater system. A base rate and a usage rate. The base rate for residential single family, multi-family, and mobile homes has a flat monthly charge per housing unit. Schools pay a flat monthly charge on a per student basis. Non-Residential pay a flat monthly charge by customer type. The wastewater base fee allocates costs on based on flow and strength customer characters (HEC Wastewater Rate Study Technical Memorandum, page 11). The use (flow) rate charged to all customers for wastewater) is based on the winter average water meter reads.

The following four steps are used to determine how wastewater rates are calculated such that the monthly wastewater rates meet legal requirements for base and use charges.

1. The first step is to establish the Wastewater Customer Base and User Characteristics – The wastewater customer base is as follows:
 - a. Residential (single family, multi-family, and mobile homes),
 - b. Schools,
 - c. Car wash,
 - d. Religious places/community center,
 - e. Commercial, grocery and mortuary,
 - f. Laundry,
 - g. Mixed retail with food,
 - h. Motel with food,
 - i. Motel without food,
 - j. Restaurant,
 - k. Napa Valley College,
 - l. Service station
 - m. Winery production (non-pretreated), and
 - n. Sutter Home (treated) winery users.

The list above defines who uses the wastewater system. The second part of this step is to determine user characteristics. A user characteristic is what type of waste is being put through the wastewater system by user type. Wastewater, or sewer, strength is based in industry standards and is a combination of the Biological Oxygen Demand (BOD) and Total Suspended Solids (TSS or SS). Essentially how strong is the waste which will be traveling through the City's wastewater system. The HEC Wastewater Rate Study Technical Memorandum, page 5, Table 2 provides a summary of the BOD and TSS by user. The stronger the waste, the bigger demand on the City's wastewater system, the higher the amount to be paid by that customer base.

2. The second step in determining wastewater base and use rates is to project revenue requirements and allocate the revenue requirements to collection and

treatment of wastewater – Projections of annual cost and non-rate revenues are used to determine revenue requirement as previously described. The total revenue requirement is allocated between collection and treatment. Of this total cost, approximately 72% is for the treatment plant and 28% is for the collection system.

3. The third step is to allocate revenue requirement based on flow and strength to determine Unit Costs – The revenue requirement is allocated based on flow and strength (load) depending on the percentage distribution of operations and maintenance operations attributed to flow, BOD, or TSS. Per unit revenue requirement for each projected year is determined by dividing the allocated revenue requirement by the demand for each customer type.
4. The fourth, and final, step is to determine the revenue requirement by customer type – Per unit costs are multiplied by the flow and strength characteristics of each customer category to determine the annual costs by customer type. The more the flow, BOD, or TSS, the greater the amount is required of the system and the greater the cost will be for the user.

Historically, residential customers are responsible for 69% of the total costs, schools are responsible for 1% of the total costs, and non-residential customers are responsible for 30% of the total costs. Total treatment cost per hundred cubic feet is greatest for high strength customers such as winery production customers who do not pre-treat, restaurants, groceries and mortuaries, and lowest for customers such as car washes and religious places/community centers which have low strength wastewater (HEC Wastewater Rate Study Technical Memorandum, pages 15 and 19). The difference in the cost to treat the high strength customers can be seen in the difference in the base and use rates established in the rate study. e.g. a single-family home has a wastewater base fee of \$48.04 per month and pays a usage rate of \$4.69 per HCF. A high strength customer such as a winery (non-treated) will have a base fee of \$989.21 per month and a usage rate of \$17.31 per HCF. A third example is a restaurant, also a high strength customer, has a base rate of \$840.03 per month and a usage rate of \$10.18 per HCF. Using these examples it can be seen that a high strength user pays approximately 20x more in base fees and approximately 3x more per HCF than the amount of a single-family home.

WHO USES THE CITY'S WATER AND WASTEWATER SYSTEMS

The City services a population of approximately 6,000 people. The City has approximately 2,600 water connections which services:

- More than 2,900 residential units (some connections have more than one residential unit such as apartment complexes and mobile homes);
- Approximately 260 non-residential establishments including businesses, schools, religious places and community centers;

- Approximately 20 industrial customers; and
- About 30 irrigation-only customers

Residential customers comprise 87% of the total customer base and use approximately 50% of total water deliveries. Industrial customers comprise approximately 1% of the customer base and use approximately 21% of total water deliveries.

The City provides wastewater service to the same households, institutional uses and businesses, with the exception of those with septic systems. Wastewater flow by the various groups is as follows:

- Residential customers – 75% of flow
- Commercial customers – 20% of flow
- Industrial customers – 1% of flow
- Other customers – 4% of flow

In comparing the water and wastewater customer base you will see that residential uses of the water system accounts for approximately 50% of all water deliveries and residential accounts for 75% of the wastewater flow. The difference in water and wastewater use is due to the number of wineries and businesses which are on septic and do not use the City's sewer system.

Source: HEC Water and Wastewater Rate Study Final Document dated October 31, 2016, pages 5-7. Water Rate Study Technical Memorandum, Attachment A, page 4, Table A-4.

In reviewing the number of connections and revenue generated by customer class, Table 6 provides a summary of how much each customer paid in FY16.

Table 6 - AVERAGE AMOUNT PAID ANNUALLY PER CUSTOMER BY CLASS – FY16

	Residential	Industrial	Hotel/Spa	Commercial	Other
Water	\$1,120	\$30,202	\$18,696	\$2,995	\$602
Wastewater	\$977	\$26,044	\$22,310	\$3,761	-
TOTAL Annual Amount Paid Per Customer	\$2,097	\$56,246	\$41,006	\$6,756	\$602

ADDITIONAL ITEMS FOR CONSIDERATION

In addition to the four categories addressed above, City Council directive at the February 14, 2017 included retaining a public sector financial consultant, bond council, and Hansford Consulting to work with and advise an Ad Hoc committee and perform further analysis of the Rate Study.

Staff reached out to Hansford Consulting, two municipal financial consultants, and a bond counsel to inquire on costs associated with further analysis. Below are the costs associated with each entity:

1. Municipal Financial Consultant - It is estimated the cost for a Municipal Financial Consultant will not exceed \$5,000.
2. Hansford Consulting - On February 15, 2017 Finance Director Mitts reached out to Hansford Economic Consulting (HEC) for a quote to retain services to assist in further analysis, work with an Ad Hoc Committee and a municipal financial advisor in determining industrial and residential rates, recommend corrective measures, if any, and generate alternative rate models. The quote for additional services is \$32,792 and is included as Attachment 5 with a contract amendment.
3. Bond Counsel – It is estimated the cost for bond counsel will not to exceed \$5,000

FISCAL IMPACT

The fiscal impact to proceed with contracting a municipal financial consultant, contracting with bond counsel, and retaining Hansford Economic Consulting is estimated to be approximately \$43,000. If City Council directs to move forward, \$21,500 need to be taken from the water and wastewater net position for a total of \$43,000.

RECOMMENDED ACTION

Receive and file report.

Provide staff direction on the retention of a municipal financial advisor, bond counsel, and Hansford Economic Consulting. If directed to proceed, staff is recommending:

1. Approval of Resolution No. 2017-___ approving use of water and wastewater funds for a total of \$43,000 split equally between the funds.
2. Approval of Resolution No. 2017-___ approving a contract with Hansford Economic Consulting to provide additional technical support in regards to the rate study.

ATTACHMENTS

1. Attachment 1 – Installment Purchase Agreement Execution Copy 2012B Bond
2. Attachment 2 – Hansford Economic Consulting Water and Wastewater Rate Study dated October 31, 2016.
3. Attachment 3 – Voluntary Event Notice – Non-Payment Related Default FY15
4. Attachment 4 – Voluntary Event Notice – Non-Payment Related Default FY16
5. Attachment 5 – Quote and Second Contract Amendment for Hansford Economic Consulting for additional technical assistance in regards to the rate study.
6. Attachment 6 – Resolution No. 2017-___ authorizing use of \$22,500 from the water reserves and use of \$22,500 from the wastewater reserves for a total of

Note: Attachment 2 was removed since already provided.

\$43,000 for contracts with bond counsel, municipal financial advisor, and Hansford Economic Consulting to provide additional analysis of the utility rate study dated October 31, 2016 and adopted on November 29, 2016.

7. Attachment 7 – Resolution No. 2017-____ authorizing a contact with Hansford Economic Consulting for a total amount not to exceed \$32,792 for additional technical support regarding the rate study dated October 31, 2016 and adopted on November 29, 2016.

Attachment 1

EXECUTION COPY

INSTALLMENT PURCHASE AGREEMENT

between

CITY OF ST. HELENA

and

CALIFORNIA STATEWIDE COMMUNITIES DEVELOPMENT AUTHORITY

Dated as of June 1, 2012

relating to

**CALIFORNIA STATEWIDE COMMUNITIES DEVELOPMENT AUTHORITY
WATER AND WASTEWATER REVENUE BONDS
SERIES 2012B**

OHSUSA:750126718.3

TABLE OF CONTENTS

	Page
ARTICLE I DEFINITIONS.....	2
Section 1.1 Definitions.....	2
ARTICLE II REPRESENTATIONS AND WARRANTIES.....	9
Section 2.1 Representations by the Participant.....	9
Section 2.2 Representations and Warranties by the Authority	11
ARTICLE III ACQUISITION OF THE PROJECT	11
Section 3.1 Sale and Purchase of Project.....	11
Section 3.2 Title	11
Section 3.3 Changes to the Project	11
ARTICLE IV INSTALLMENT PAYMENTS	11
Section 4.1 Purchase Price	11
Section 4.2 Installment Payments and Additional Payments.....	12
Section 4.3 Appointment of Dissemination Agent and Arbitrage Calculation Service	12
ARTICLE V SECURITY	13
Section 5.1 Pledge of System Net Revenues	13
Section 5.2 Allocation of System Revenues	13
Section 5.3 Additional Parity Debt	15
Section 5.4 Rate Stabilization Fund.....	16
ARTICLE VI COVENANTS OF THE PARTICIPANT	16
Section 6.1 Punctual Payment.....	16
Section 6.2 Legal Existence.....	16
Section 6.3 Against Encumbrances.....	16
Section 6.4 Against Sale or Other Disposition of the System	16
Section 6.5 Maintenance and Operation of System	17
Section 6.6 Insurance	17
Section 6.7 Eminent Domain Proceeds.....	18
Section 6.8 Amounts of Rates, Fees and Charges	18
Section 6.9 Enforcement of and Performance Under Contracts	19
Section 6.10 Collection of Charges, Fees and Rates	19
Section 6.11 No Free Service.....	19
Section 6.12 Prompt Acquisition and Construction of the Projects.....	19
Section 6.13 Payment of Claims.....	20
Section 6.14 Books of Record and Accounts; Financial Statements	20
Section 6.15 Payment of Taxes and Other Charges and Compliance with Governmental Regulations.....	20

Attachment 1

TABLE OF CONTENTS
(continued)

	Page
Section 6.16 Tax Covenants and Matters	20
Section 6.17 Rebate Fund	21
Section 6.18 Continuing Disclosure	22
Section 6.19 Further Assurances.....	22
Section 6.20 Reimbursement of Bond Insurer and Other Provisions Relating to the Bond Insurer.....	22
ARTICLE VII PREPAYMENT OF INSTALLMENT PAYMENTS	23
Section 7.1 Prepayment	23
ARTICLE VIII EVENTS OF DEFAULT AND REMEDIES OF THE AUTHORITY	23
Section 8.1 Events of Default and Acceleration of Maturities	24
Section 8.2 Application of Funds Upon Acceleration	25
Section 8.3 Other Remedies of the Authority	25
Section 8.4 Non-Waiver.....	25
Section 8.5 Remedies Not Exclusive	26
Section 8.6 Notices	26
ARTICLE IX DISCHARGE OF OBLIGATIONS.....	26
Section 9.1 Discharge of Obligations	26
ARTICLE X MISCELLANEOUS	26
Section 10.1 Liability of Participant Limited to System Revenues	26
Section 10.2 Successor Is Deemed Included in all References to Predecessor	27
Section 10.3 Waiver of Personal Liability	27
Section 10.4 Article and Section Headings, Gender and References	27
Section 10.5 Partial Invalidity.....	27
Section 10.6 Assignment	27
Section 10.7 Net Contract.....	28
Section 10.8 Governing Law; Venue.....	28
Section 10.9 Effective Date	28
Section 10.10 Execution in Counterparts.....	28
Section 10.11 Indemnification of Authority	28
Section 10.12 Amendments	30
EXHIBIT A INFORMATION CONCERNING PARTICIPANT	A-1
EXHIBIT B SCHEDULE OF INSTALLMENT PAYMENTS	B-1

Attachment 1

INSTALLMENT PURCHASE AGREEMENT

This INSTALLMENT PURCHASE AGREEMENT, made and entered into as of June 1, 2012, between the CITY OF ST. HELENA, a public agency duly organized and existing under and by virtue of the laws of the State of California (the "Participant"), and CALIFORNIA STATEWIDE COMMUNITIES DEVELOPMENT AUTHORITY, a joint exercise of powers agency duly organized and existing under and by virtue of the laws of the State of California (the "Authority").

WITNESSETH:

WHEREAS, the Participant proposes to finance certain facilities (the "Project") within its enterprise system described in Exhibit A hereto (the "System");

WHEREAS, the Project is a public capital improvement that results in significant public health benefits, including but not limited to more efficient delivery of service and constitutes facilities for the production, storage, transmission, or treatment of water or wastewater;

WHEREAS, the Authority has agreed to assist the Participant in financing the Project;

WHEREAS, the Participant is authorized by the laws of the State of California (the "Law") to enter into this Agreement;

WHEREAS, the Participant and the Authority have duly authorized the execution of this Agreement;

WHEREAS, the Authority will assign its right to receive Installment Payments under this Agreement to Wilmington Trust, N.A., as Trustee under that certain Indenture, dated as of June 1, 2012 relating to the Authority Bonds (as defined below), and will issue its California Statewide Communities Development Authority Water and Wastewater Revenue Bonds, Series 2012B (the "Authority Bonds") to be secured in part by the Installment Payments;

WHEREAS, all acts, conditions and things required by law to exist, to have happened and to have been performed precedent to and in connection with the execution and delivery of this Agreement do exist, have happened and have been performed in regular and due time, form and manner as required by law, and the parties hereto are now duly authorized to execute and enter into this Agreement;

NOW, THEREFORE, IN CONSIDERATION OF THESE PREMISES AND OF THE MUTUAL AGREEMENTS AND COVENANTS CONTAINED HEREIN AND FOR OTHER VALUABLE CONSIDERATION, THE PARTIES HERETO DO HEREBY AGREE AS FOLLOWS:

Attachment 1

ARTICLE I

DEFINITIONS

Section 1.1 Definitions. Unless the context otherwise requires, the terms defined in this Section shall for all purposes hereof and of any amendment hereof or supplement hereto and of any report or other document mentioned herein or therein have the meanings defined herein, the following definitions to be equally applicable to both the singular and plural forms of any of the terms defined herein. Unless the context otherwise requires, all capitalized terms used herein and not defined herein shall have the meanings ascribed thereto in the Indenture.

Agreement

"Agreement" means this Agreement, between the Participant and the Authority, dated as of the date hereof, as originally executed and as it may from time to time be amended or supplemented in accordance herewith.

Annual Debt Service

"Annual Debt Service" means, for any Fiscal Year, the sum of (1) the interest accruing on all Parity Debt during such Fiscal Year, assuming that all Parity Debt is retired as scheduled, plus (2) the principal amount (including principal due as sinking fund installment payments) allocable to all Parity Debt in such Fiscal Year, calculated as if such principal amounts were deemed to accrue daily during such Fiscal Year in equal amounts from, in each case, each payment date for principal or the date of delivery of such Parity Debt (provided that principal shall not be deemed to accrue for greater than a 365-day period prior to any payment date), as the case may be, to the next succeeding payment date for principal, *provided*, that the following adjustments shall be made to the foregoing amounts in the calculation of Annual Debt Service:

(A) with respect to any such Parity Debt bearing or comprising interest at other than a fixed interest rate, the rate of interest used to calculate Annual Debt Service shall be (i) with respect to such Parity Debt then outstanding, one hundred ten per cent (110%) of the greater of (1) the daily average interest rate on such Parity Debt during the twelve (12) calendar months next preceding the date of such calculation (or the portion of the then current Fiscal Year that such Parity Debt has borne interest) or (2) the most recent effective interest rate on such Parity Debt prior to the date of such calculation or (ii) with respect to such Parity Debt then proposed to be issued, 80% of the interest rate on actively traded 30-year United States Treasury obligations;

(B) with respect to any such Parity Debt having twenty-five per cent (25%) or more of the aggregate principal amount thereof due in any one Fiscal Year, Annual Debt Service shall be calculated for the Fiscal Year of determination as if the interest on and principal of such Parity Debt were being paid from the date of incurrence thereof in substantially equal annual amounts over a period of twenty (20) years from the date of such Parity Debt provided, however that the full amount of such Parity Debt shall be included in Annual Debt Service if the date of calculation is within 24 months of the actual maturity of the payment;

Attachment 1

(C) with respect to any such Parity Debt or portions thereof bearing no interest but which are sold at a discount and which discount accretes with respect to such Parity Debt or portions thereof, such accreted discount shall be treated as due when scheduled to be paid;

(D) Annual Debt Service shall not include interest on Parity Debt which is to be paid from amounts constituting capitalized interest; and

(E) if an interest rate swap agreement is in effect with respect to, and is payable on a parity with, any Parity Debt to which it relates, no amounts payable under such interest rate swap in excess of debt service payable under such Parity Debt agreement shall be included in the calculation of Annual Debt Service unless the sum of (i) the interest payable on such Parity Debt, plus (ii) the amounts payable by the Participant under such interest rate swap agreement, less (iii) the amounts receivable by the Participant under such interest rate swap agreement, are greater than the interest payable on such Parity Debt, in which case the amount of such payments to be made that exceed the interest to be paid on such Parity Debt shall be included in such calculation, and for this purpose, the variable amount under any such interest rate swap agreement shall be determined in accordance with the procedure set forth in subparagraph (A) of this definition.

Authority

"Authority" means California Statewide Communities Development Authority, a joint exercise of powers agency duly organized and existing under and by virtue of the laws of the State of California.

Authority Bonds

"Authority Bonds" means the California Statewide Communities Development Authority Water and Wastewater Revenue Bonds, Series 2012B issued by the Authority, and at any time Outstanding pursuant to the Indenture.

Bond Insurer

"Bond Insurer" means Assured Guaranty Municipal Corp., a New York stock insurance company or any successor thereto or assignee thereof.

Business Day

"Business Day" means any day other than a Saturday, a Sunday or a day on which banks located in the city where the Corporate Trust Office is located, are required or authorized to remain closed.

Certificate of the Participant

"Certificate of the Participant" means an instrument in writing signed by the chief executive officer or chief financial officer of the Participant, or by any other officer of the Participant duly authorized by the Participant for that purpose, such authorization to be

Attachment 1

evidenced by a certificate verifying the specimen signatures of such officers at the request of the Trustee.

Code

"Code" means the Internal Revenue Code of 1986, as amended, and the regulations of the United States Department of the Treasury issued thereunder, and in this regard reference to any particular section of the Code shall include reference to all successors to such section of the Code.

Continuing Disclosure Certificate

"Continuing Disclosure Certificate" means that certain Continuing Disclosure Certificate executed by the Participant with respect to the Authority Bonds.

Event of Default

"Event of Default" means an event described in Section 8.1 hereof.

Fiscal Year

"Fiscal Year" means the period beginning on July 1 of each year and ending on the last day of June of the next succeeding year, or any other twelve-month period selected and designated as the official Fiscal Year of the Participant.

Generally Accepted Accounting Principles

"Generally Accepted Accounting Principles" means the uniform accounting and reporting procedures set forth in publications of the American Institute of Certified Public Accountants or its successor, or by any other generally accepted authority on such procedures, and includes, as applicable, the standards set forth by the Governmental Accounting Standards Board or its successor.

Indenture

"Indenture" means the Indenture, dated as of June 1, 2012, between the Authority and the Trustee relating to the Authority Bonds, as it may from time to time be amended or supplemented in accordance with its terms.

Independent Certified Public Accountant

"Independent Certified Public Accountant" means any firm of certified public accountants appointed by the Participant, which is independent of the Participant and the Authority pursuant to the Statement on Auditing Standards No. 1 of the American Institute of Certified Public Accountants.

Attachment 1

Installment Payment Date

"Installment Payment Date" means the fifteenth day of the month prior to each related Interest Payment Date, or if said date is not a Business Day, then the preceding Business Day.

Installment Payments

"Installment Payments" means the Installment Payments of interest and principal scheduled to be paid by the Participant under and pursuant hereto as provided in Exhibit B hereto.

Interest Payment Date

"Interest Payment Date" means the payment dates of the Authority Bonds identified in the Indenture.

Law

"Law" means the laws of the State of California pursuant to which the Participant was formed and operates and Section 5451 of the Government Code of the State of California and in each case all laws amendatory thereof or supplemental thereto.

Maximum Annual Debt Service

"Maximum Annual Debt Service" means, as of any date of calculation, the largest Annual Debt Service during the period from the date of such calculation through the final maturity date of all Parity Debt.

Moody's

"Moody's" means Moody's Investors Service, and its successors and assigns, except that if such shall be dissolved or liquidated or shall no longer perform the services of a municipal securities rating agency, then the term "Moody's" shall be deemed to refer to any other nationally recognized municipal securities rating agency selected by the Participant.

Municipal Bond Insurance Policy

"Municipal Bond Insurance Policy" means the insurance policy issued by the Bond Insurer guaranteeing the scheduled payment of principal of and interest on the Authority Bonds when due.

Net Proceeds

"Net Proceeds" means, when used with respect to any casualty insurance or condemnation award, the proceeds from such insurance or condemnation award remaining after payment of all expenses (including attorneys' fees) incurred in the collection of such proceeds.

Attachment 1

Operation and Maintenance Costs

"Operation and Maintenance Costs" means the reasonable and necessary costs paid or incurred by the Participant for maintaining and operating the System, determined in accordance with Generally Accepted Accounting Principles, including all reasonable expenses of management and repair and all other expenses necessary to maintain and preserve the System in good repair and working order, and including all administrative costs of the Participant that are charged directly or apportioned to the operation of the System, such as salaries and wages of employees, overhead, taxes (if any) and insurance premiums (including payments required to be paid into any self-insurance funds), and including all other reasonable and necessary costs of the Participant or charges required to be paid by it to comply with the terms hereof or of any Supplemental Agreement or of any resolution authorizing the execution of any Parity Debt, such as compensation, reimbursement and indemnification of the Trustee and the Authority and fees and expenses of Independent Certified Public Accountants; but excluding in all cases (i) payment of Parity Debt and Subordinate Obligations, (ii) costs of capital additions, replacements, betterments, extensions or improvements which under Generally Accepted Accounting Principles are chargeable to a capital account, and (iii) depreciation, replacement and obsolescence charges or reserves therefor and amortization of intangibles.

Participant

"Participant" means the City of St. Helena, a public agency duly organized and existing under and by virtue of the laws of the State of California.

Parity Debt

"Parity Debt" means the Installment Payments and any Parity Obligations.

Parity Obligation Payments

"Parity Obligation Payments" means the payments scheduled to be paid by the Participant under and pursuant to the Parity Obligations, which payments are secured by a pledge of System Net Revenues on a parity with the Installment Payments as provided herein.

Parity Obligations

"Parity Obligations" means all obligations of the Participant authorized and executed by the Participant other than the Installment Payments, the Parity Obligation Payments under which are secured by a pledge of the System Net Revenues on a parity with the Installment Payments as provided herein, including but not limited to any Repayment Obligations secured by System Net Revenues on a parity with the Installment Payments.

Participating Underwriter

"Participating Underwriter" shall have the meaning ascribed thereto in the Continuing Disclosure Certificate.

Attachment 1

Prior Liens

"Prior Liens" means those liens, if any, on the System Revenues which are senior to the pledge under this Agreement as identified in Exhibit A hereto.

Project

"Project" means any additions, betterments, extensions and improvements to the System financed or refinanced described in Exhibit A hereto.

Purchase Price

"Purchase Price" means the principal amount plus interest thereon owed by the Participant to the Authority under the terms hereof as provided in Section 4.1.

Rate Stabilization Fund

"Rate Stabilization Fund" means the fund by that name established pursuant to Section 5.4 hereof.

Repayment Obligation

"Repayment Obligation" means the reimbursement obligation or any other payment obligation of the Participant under a written agreement between the Participant and a credit provider to reimburse the credit provider for amounts paid pursuant to a credit facility for the payment of the principal amount or purchase price of and/or interest on any Parity Debt.

Rebate Fund

"Rebate Fund" means the fund by that name established pursuant to Section 4.5 of the Indenture and provided for in Section 6.17 hereof.

Reserve Account

"Reserve Account" means that Account within the Reserve Fund held under the Indenture relating to this Agreement.

Reserve Account Requirement

"Reserve Account Requirement" has the meaning assigned in the Indenture.

Reserve Policy

"Reserve Policy" has the meaning assigned in the Indenture.

Subordinate Obligations

"Subordinate Obligations" means the obligations of the Participant that are subordinate in payment to the Installment Payments.

Attachment 1

Supplemental Agreement

"Supplemental Agreement" means any agreement then in full force and effect which has been entered into by the Participant and the Trustee, amendatory of or supplemental hereto; but only if and to the extent that such Supplemental Agreement is specifically authorized hereunder.

System

"System" means the whole and each and every part of the system identified in Exhibit A hereto of the Participant, including the portion thereof existing on the date hereof, and including all additions, betterments, extensions and improvements to such system or any part thereof hereafter acquired or constructed.

System Net Revenues

"System Net Revenues" means for any period System Revenues less Operation and Maintenance Costs for such period; provided that certain adjustments in the amount of System Net Revenue deemed collected during a Fiscal Year may be made in connection with amounts deposited in the Rate Stabilization Fund as provided in Section 5.4 herein.

System Revenue Fund

"System Revenue Fund" means the fund by that name created pursuant to Section 5.2 hereof.

System Revenues

"System Revenues" means all gross income and revenue received or receivable by the Participant from the ownership or operation of the System, determined in accordance with Generally Accepted Accounting Principles, including all fees (including connection fees), rates, charges and all amounts paid under any contracts received by or owed to the Participant in connection with the operation of the System and all proceeds of insurance relating to the System and investment income allocable to the System and all other income and revenue howsoever derived by the Participant from the ownership or operation of the System or arising from the System, subject to and after satisfaction of any Prior Liens.

Tax Certificate

"Tax Certificate" means collectively all the certificates, each dated the date of the original issuance and delivery of the Authority Bonds, with respect to the requirements of certain provisions of the Code, as each such certificate may from time to time be modified or supplemented in accordance with the terms thereof.

Trustee

"Trustee" means Wilmington Trust, N.A. acting in its capacity as Trustee under and pursuant to the Indenture, and its successors and assigns.

Written Request of the Participant

"Written Request of the Participant" means an instrument in writing signed by the chief executive or chief financial officer of the Participant or their designee, or by any other officer of the duly authorized by the Participant for that purpose, such authorization to be evidenced at the request of the Trustee by a certificate verifying the specimen signatures of such officers.

ARTICLE II

REPRESENTATIONS AND WARRANTIES

Section 2.1 Representations by the Participant. The Participant makes the following representations:

(a) The Participant is a public agency duly organized and existing under and pursuant to the laws of the State of California. The Participant has full legal right, power and authority to enter into this Agreement and carry out its obligations hereunder, to carry out and consummate all transactions contemplated by this Agreement, and the Participant has complied with the provisions of the Law in all matters relating to such transactions. By proper action, the Participant has duly authorized the execution, delivery and due performance of this Agreement.

(b) The officers of the Participant executing this Agreement are duly and properly in office and fully authorized to execute the same.

(c) This Agreement has been duly authorized, executed and delivered by the Participant.

(d) This Agreement, when assigned to the Trustee pursuant to the Indenture, will constitute the legal, valid and binding agreement of the Participant enforceable against the Participant by the Trustee in accordance with its terms for the benefit of the Owners of the Authority Bonds, and any rights of the Authority and obligations of the Participant not so assigned to the Trustee constitute the legal, valid, and binding agreements of the Participant enforceable against the Participant by the Authority in accordance with their terms; except in each case as enforcement may be limited by bankruptcy, insolvency or other laws affecting the enforcement of creditors' rights generally, by the application of equitable principles regardless of whether enforcement is sought in a proceeding at law or in equity and by public policy.

(e) The execution and delivery of this Agreement, the consummation of the transactions herein contemplated and the fulfillment of or compliance with the terms and conditions hereof, will not conflict with or constitute a violation or breach of or default (with due notice or the passage of time or both) under any applicable law or administrative rule or regulation, or any applicable court or administrative decree or order, or any indenture, mortgage, deed of trust, loan agreement, lease, contract or other agreement or instrument to which the Participant is a party or by which it or its properties are otherwise subject or bound, or result in the creation or imposition of any lien, charge or encumbrance of any nature whatsoever upon any of the property or assets of the Participant, which conflict, violation, breach, default, lien, charge or encumbrance might have consequences that would materially and adversely affect the

Attachment 1

consummation of the transactions contemplated by this Agreement, or the financial condition, assets, properties or operations of the System.

(f) No consent or approval of any trustee or holder of any indebtedness of the Participant or any guarantor of indebtedness of or other provider of credit or liquidity of the Participant, and no consent, permission, authorization, order or license of, or filing or registration with, any governmental authority (except with respect to any state securities or "blue sky" laws) is necessary in connection with the execution and delivery of this Agreement, or the consummation of any transaction herein or therein contemplated, or the fulfillment of or compliance with the terms and conditions hereof, except as have been obtained or made and as are in full force and effect.

(g) There is no action, suit, proceeding, inquiry or investigation, before or by any court or federal, state, municipal or other governmental authority, pending, or to the knowledge of the Participant, after reasonable investigation, threatened, against or affecting the Participant or the assets, properties or operations of the Participant which, if determined adversely to the Participant or its interests, would have a material adverse effect upon the consummation of the transactions contemplated by, or the validity of, this Agreement, or upon the financial condition, assets, properties or operations of the System, and the Participant is not in default (and no event has occurred and is continuing which with the giving of notice or the passage of time or both could constitute a default) with respect to any order or decree of any court or any order, regulation or demand of any federal, state, municipal or other governmental authority, which default might have consequences that would materially and adversely affect the consummation of the transactions contemplated by this Agreement, or the financial condition, assets, properties or operations of the System. The Participant enjoys the peaceful and undisturbed possession of all of the premises upon which it is operating the System.

(h) No written information, exhibit or report furnished to the Authority by the Participant in connection with the negotiation of this Agreement contains any untrue statement of a material fact or omits to state a material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading.

(i) The Participant's Comprehensive Annual Financial Report for the year ended June 30, 2011 (copies of which have been furnished to the Authority) fairly present the financial position of the System at such date and the results of operations of the System for the year ended on such date, and since such date there has been no material adverse change in the financial condition or results of operations of the System.

(j) The Participant complies in all material respects with all environmental laws and regulations applicable to the System.

(k) The Participant has determined that it is necessary and proper for Participant uses and purposes within the terms of the Law that the Participant finance and/or refinance the acquisition of the Project in the manner provided for in this Agreement.

Attachment 1

(l) All components of the Project are in compliance with Division 13 (commencing with Section 21000) of the Public Resources Code of the State of California or are not "projects" under that division.

Section 2.2 Representations and Warranties by the Authority. The Authority represents and warrants that the Authority is a joint exercise of powers agency duly organized and in good standing under the laws of the State of California, has full legal right, power and authority to enter into this Agreement and to carry out and consummate all transactions contemplated by this Agreement and by proper action has duly authorized the execution, delivery and due performance of this Agreement.

ARTICLE III

ACQUISITION OF THE PROJECT

Section 3.1 Sale and Purchase of Project. In consideration for the Authority's assistance in financing the Project, the Participant agrees to act as the Authority's agent for purposes of construction and acquisition of the Project. The Authority will make the net proceeds of the Authority Bonds allocable to the Participant available to the Participant for this purpose, as provided in the Indenture.

In consideration for the Installment Payments as set forth in Section 4.2, the Authority agrees to sell, and hereby sells, to the Participant, and the Participant agrees to purchase, and hereby purchases, from the Authority, the Project at the purchase price specified in Section 4.1 hereof and otherwise in the manner and in accordance with the provisions of this Agreement.

Section 3.2 Title. All right, title and interest in the Project shall vest in the Participant immediately upon execution and delivery of this Agreement.

Section 3.3 Changes to the Project. The Participant may at any time substitute other public capital improvements for the then existing components of the Project by submitting a Written Request of the Participant to the Authority and the Trustee specifying the components of the Project to be substituted and the new components.

ARTICLE IV

INSTALLMENT PAYMENTS

Section 4.1 Purchase Price.

(a) The Purchase Price to be paid by the Participant hereunder to the Authority is the sum of the principal amount of the Participant's obligations hereunder plus the interest to accrue on the unpaid balance of such principal amount from the effective date hereof over the term hereof, subject to prepayment as provided in Article VII.

(b) The principal amount of the payments to be made by the Participant hereunder is set forth in Exhibit B hereto.

Attachment 1

(c) The interest to accrue on the unpaid balance of such principal amount is as specified in Section 4.2 and Exhibit B hereto, and shall be paid by the Participant as and constitute interest paid on the principal amount of the Participant's obligations hereunder.

Section 4.2 Installment Payments and Additional Payments. The Participant shall, subject to any rights of prepayment provided in Article VII, pay the Authority the Purchase Price in installment payments of interest and principal in the amounts and on the Installment Payment Dates as set forth in Exhibit B hereto.

Each Installment Payment shall be paid to the Authority in lawful money of the United States of America. In the event the Participant fails to make any of the payments required to be made by it under this Section, such payment shall continue as an obligation of the Participant until such amount shall have been fully paid; and the Participant agrees to pay the same with interest accruing thereon at the rate or rates of interest then applicable to the remaining unpaid principal balance of the Installment Payments if paid in accordance with their terms.

The obligation of the Participant to make the Installment Payments is absolute and unconditional, and until such time as the Purchase Price shall have been paid in full (or provision for the payment thereof shall have been made pursuant to Article IX), the Participant will not discontinue or suspend any Installment Payments required to be made by it under this Section when due, whether or not the System or any part thereof is operating or operable or has been completed, or its use is suspended, interfered with, reduced or curtailed or terminated in whole or in part, and such payments shall not be subject to reduction whether by offset or otherwise and shall not be conditional upon the performance or nonperformance by any party of any agreement for any cause whatsoever.

The Participant shall not be obligated to make payments hereunder or incur any liability as a result of the default of any other public agency under an Installment Purchase Agreement, the obligations under which have been assigned to the Trustee under the Indenture in connection with the Authority Bonds.

In addition to the Installment Payments, the Participant shall also pay such amounts ("Additional Payments") as shall be required for the payment of all fees and administrative costs of the Authority and the Trustee relating to the Authority Bonds and allocable to the Participant, including without limitation all expenses, compensation and indemnification of the Authority and the Trustee payable by the Participant hereunder and under the Indenture, fees of auditors, accountants, attorneys or engineers, and all other necessary administrative costs of the Authority or charges required to be paid by it to comply with the terms hereof (including the fees of the disclosure consultant and arbitrage calculations service provided in Section 4.3), of the Authority Bonds or of the Indenture or to indemnify the Authority and its employees, officers and directors and the Trustee; *provided* that the foregoing obligation shall be limited to those amounts reasonably allocable to the Participant.

Section 4.3 Appointment of Dissemination Agent and Arbitrage Calculation Service. The Participant hereby appoints the firm designated pursuant to Section 4.6 of the Indenture as its dissemination agent to assist in compliance with Section 6.18 hereof. The Participant hereby appoints the firm designated pursuant to the Tax Certificate as its arbitrage calculation service to

comply with Sections 6.16 and 6.17 hereof (provided that if the Participant is a "small governmental issuer" as set forth in Section 148(f)(4)(D) of the Code no such firm need be appointed on the Participant's behalf or such services paid for by the Participant).

ARTICLE V

SECURITY

Section 5.1 Pledge of System Net Revenues. All System Net Revenues and all amounts on deposit in the System Revenue Fund are hereby irrevocably pledged to the payment of the Installment Payments as provided herein and the System Net Revenues shall not be used for any other purpose while any of the Installment Payments remain unpaid; provided that out of the System Revenues there may be apportioned such sums for such purposes as are expressly permitted herein. This pledge, together with the pledge created by all other Parity Debt, shall constitute a first and exclusive lien on System Net Revenues and, subject to application of amounts on deposit therein as permitted herein, the System Revenue Fund and other funds and accounts created hereunder for the payment of the Installment Payments and all other Parity Debt in accordance with the terms hereof and of the Indenture and shall attach, be perfected and be valid and binding from and after delivery by the Trustee of the Authority Bonds, without any physical delivery thereof or further act.

Section 5.2 Allocation of System Revenues. In order to carry out and effectuate the pledge and lien contained herein, the Participant agrees and covenants that all System Revenues shall be received by the Participant in trust hereunder and shall be deposited when and as received in a special fund designated as the "System Revenue Fund", which fund is hereby established and which fund the Participant agrees and covenants to maintain and to hold separate and apart from other funds so long as any Installment Payments remain unpaid. To the extent the Participant has an existing fund which satisfies the foregoing requirements, then such shall be deemed to be the "System Revenue Fund" and the Participant shall not be required to create a new fund. The Participant may maintain separate accounts within the System Revenue Fund. The amounts in the System Revenue Fund shall be invested in Authorized Investments. Moneys in the System Revenue Fund shall be used and applied by the Participant as provided in this Agreement.

The Participant shall, from the moneys in the System Revenue Fund, pay all Operation and Maintenance Costs (including amounts reasonably required to be set aside in contingency reserves for Operation and Maintenance Costs, the payment of which is not then immediately required) as such Operation and Maintenance Costs become due and payable. Thereafter, all remaining moneys in the System Revenue Fund shall be set aside by the Participant at the following times for the transfer to the following respective special funds in the following order of priority; and all moneys in each of such funds shall be held in trust and shall be applied, used and withdrawn only for the purposes set forth in this Section.

(a) **Installment Payments.** On or before the first Business Day of each month, the Participant shall, from the moneys in the System Revenue Fund, transfer to the Trustee the Installment Payment due and payable on any Installment Payment Date occurring in such month. The Participant shall also, from the moneys in the System Revenue Fund, transfer to the

Attachment 1

applicable trustee for deposit in the respective payment fund, without preference or priority, and in the event of any insufficiency of such moneys ratably without any discrimination or preference, any other Parity Obligation Payments becoming due in such month in accordance with the provisions of any Parity Obligation.

(b) Reserve Account. On or before the first Business Day of each month, the Participant shall, from the remaining moneys in the System Revenue Fund, thereafter, without preference or priority, and in the event of any insufficiency of such moneys ratably without any discrimination or preference, transfer to the Trustee as provided in Section 3.2 of the Indenture for deposit in the Revenue Fund for application to the Reserve Account in accordance with the Indenture and to the applicable trustee for such other reserve accounts, if any, as may have been established in connection with Parity Obligations that sum, if any, necessary to restore the Reserve Account to an amount equal to the Reserve Account Requirement and otherwise replenish the Reserve Account for any withdrawals (including draws upon the Reserve Policy or any credit facility) to pay the Installment Payments due hereunder and necessary to restore such other reserve accounts to an amount equal to the amount required to be maintained therein; provided that payments to restore the Reserve Account after a withdrawal may be made in monthly installments equal to 1/12 of the aggregate amount needed to restore the Reserve Account to the Reserve Account Requirement as of the date of the withdrawal. The Participant's obligation to replenish the Reserve Account shall be limited to draws on the Reserve Account relating to the Participant. To the extent that draws on the Reserve Account are from a credit facility as permitted under the definition of Reserve Account Requirement in the Indenture, transfers hereunder to restore the Reserve Account shall be made to reimburse the provider of such credit facility.

The Participant shall be obligated to make payments to the Bond Insurer for draws on the Reserve Policy only to the extent of draws on the Reserve Account relating to this Agreement. Interest shall accrue and be payable on draws under the Reserve Policy and all related reasonable expenses incurred by the Bond Insurer from the date of payment by the Bond Insurer at the Late Payment Rate. "Late Payment Rate" means the lesser of (a) the greater of (i) the per annum rate of interest, publicly announced from time to time by JPMorgan Chase Bank at its principal office in the City of New York, as its prime or base lending rate ("Prime Rate") (any change in such Prime Rate to be effective on the date such change is announced by JPMorgan Chase Bank) plus 3%, and (ii) the then applicable highest rate of interest on the Authority Bonds and (b) the maximum rate permissible under applicable usury or similar laws limiting interest rates. The Late Payment Rate shall be computed on the basis of the actual number of days elapsed over a year of 360 days. In the event JPMorgan Chase Bank ceases to announce its Prime Rate publicly, Prime Rate shall be the publicly announced prime or base lending rate of such national bank as the Bond Insurer shall specify. Repayment of draws and payment of expenses and accrued interest thereon at the Late Payment Rate (collectively, "Policy Costs") shall commence in the first month following each draw, and each such monthly payment shall be in an amount at least equal to 1/12 of the aggregate of Policy Costs related to such draw (provided that the Participant may repay the Policy Costs in full at any time during this period).

If the Participant shall fail to pay any Policy Costs in accordance with the requirements set forth above, the Bond Insurer shall be entitled to exercise any and all legal and equitable remedies available to it, including those provided hereunder and under the Indenture other than

Attachment 1

(i) acceleration of the maturity of the Authority Bonds or (ii) remedies which would adversely affect owners of the Authority Bonds.

For purposes of the additional parity debt test in Section 5.3(c) and the rate covenant in Section 6.8(b), System Net Revenues shall provide at least one times coverage of the Policy Costs then due and owing in addition to the other coverage requirements therein.

(c) Surplus. Moneys on deposit in the System Revenue Fund not necessary to make any of the payments required above, may be expended by the Participant at any time for any purpose permitted by law, including but not limited to payments with respect to Subordinate Obligations and deposits to the Rate Stabilization Fund.

Section 5.3 Additional Parity Debt. The Participant may at any time enter into any Parity Debt; provided:

(a) The Participant shall be in compliance with all agreements, conditions, covenants and terms contained herein and in all Supplemental Agreements required to be observed or performed by it, and a Certificate of the Participant to that effect shall have been filed with the Trustee (with the consent of the Bond Insurer this condition shall not apply where the purpose of the proposed Parity Debt is to cure such non-compliance).

(b) The Parity Debt shall have been duly authorized pursuant to the Law and all applicable laws.

(c) The System Net Revenues for the last completed Fiscal Year or any 12 consecutive months within the last 18 months preceding the date of execution of such Parity Debt, as shown by a Certificate of the Participant on file with the Trustee, plus an allowance for increased System Net Revenues arising from any increase in the rates, fees and charges of the System which was duly adopted by the governing board of the Participant prior to the date of the execution of such Parity Debt but which, during all or any part of such 12 month period, was not in effect, in an amount equal to the amount by which the System Net Revenues would have been increased if such increase in rates, fees and charges had been in effect during the whole of such 12 month period, as shown by a Certificate of the Participant on file with the Trustee, shall have produced a sum equal to at least 120% per cent of the Maximum Annual Debt Service as calculated after the execution of such Parity Debt; *provided*, that in the event that all or a portion of such Parity Debt is to be issued for the purpose of refunding and retiring any Parity Debt then outstanding, interest and principal payments on the Parity Debt to be so refunded and retired from the proceeds of such Parity Debt being issued shall be excluded from the foregoing computation of Maximum Annual Debt Service; *provided further*, that the Participant may at any time issue Parity Debt without compliance with the foregoing conditions if the Annual Debt Service for each Fiscal Year during which such Parity Debt is outstanding will not be increased by reason of the issuance of such Parity Debt; and *provided further*, an adjustment shall be made in the amount of System Net Revenues as provided in Section 5.4 hereof.

Nothing contained in this Section shall limit the issuance of any revenue bonds of the Participant payable from the System Net Revenues and secured by a lien and charge on the System Net Revenues if, after the issuance and delivery of such revenue bonds, none of the

Attachment 1

Installment Payments shall be unpaid. Furthermore, nothing contained in this Section shall limit the issuance of any Subordinate Obligations.

Section 5.4 Rate Stabilization Fund. There is hereby established a special fund to be known as the "Rate Stabilization Fund" which shall be held by the Participant. The Participant may, during or within 210 days after a Fiscal Year, deposit surplus System Net Revenues transferred from the System Revenue Fund attributable to such Fiscal Year (on the basis of Generally Accepted Accounting Principles) into the Rate Stabilization Fund. The Participant may at any time withdraw moneys from the Rate Stabilization Fund and deposit such amounts into the System Revenue Fund. Notwithstanding anything to the contrary provided herein, System Net Revenues deposited into the Rate Stabilization Fund shall not be taken into account as System Net Revenues for purposes of the calculations in Sections 5.3 and 6.8(b) in the Fiscal Year to which such deposit is attributable, and amounts withdrawn from the Rate Stabilization Fund and deposited into the System Revenue Fund, during or within 210 days after a Fiscal Year, may be taken into account as System Revenues for purposes of the calculations required under Sections 5.3 and 6.8(b) in such Fiscal Year; provided that, for purposes of the calculation required under Section 5.3, the amount of System Net Revenues before any credits for withdrawals from the Rate Stabilization Fund may not be less than 100% of Maximum Annual Debt Service for outstanding Parity Debt and the proposed additional Parity Debt. The amounts in the Rate Stabilization Fund shall be invested in the Authorized Investments.

ARTICLE VI

COVENANTS OF THE PARTICIPANT

Section 6.1 Punctual Payment. The Participant will punctually pay the Installment Payments in strict conformity with the terms hereof and will faithfully satisfy, observe and perform all agreements, conditions, covenants and terms hereof and of any Supplemental Agreements.

Section 6.2 Legal Existence. The Participant will use all means legally available to maintain its existence.

Section 6.3 Against Encumbrances. The Participant will not mortgage or otherwise encumber, pledge or place any charge upon any of the System Net Revenues except as provided herein, and will not issue any obligations secured by System Net Revenues senior to the Parity Debt; *provided*, that the Participant may at any time issue any Subordinate Obligations.

Section 6.4 Against Sale or Other Disposition of the System. The Participant will not sell or otherwise dispose of the System or any part thereof essential to the proper operation of the System or to the maintenance of the System Net Revenues, unless the Installment Payments have been fully paid or provision has been made therefor in accordance with Article 9.1 hereof. The Participant will not enter into any lease or agreement which impairs the operation of the System or any part thereof necessary to secure adequate System Net Revenues for the payment of the Installment Payments, or which would otherwise impair the rights of the Owners with respect to the System Net Revenues or the operation of the System.

Attachment 1

Section 6.5 Maintenance and Operation of System. The Participant will maintain and preserve the System in good repair and working order at all times and will operate the System in an efficient and economical manner.

Section 6.6 Insurance.

(a) The Participant will procure and maintain at all times insurance on the System against such risks (including accident to or destruction of the System) as are usually insured in connection with operations similar to the System and, to the extent such insurance is available for reasonable premiums from a reputable insurance company, such insurance shall be adequate in amount and, as to the risks insured against, shall be maintained with responsible insurers; *provided*, that such insurance coverage may be satisfied under a self-insurance program which is actuarially sound.

(b) The Participant shall procure and maintain or cause to be procured and maintained public liability insurance covering claims against the Participant (including its directors, officers and employees) for bodily injury or death, or damage to property occasioned by reason of the Participant's operations, including any use of the System, and such insurance shall afford protection in such amounts as are usually covered in connection with operations similar to the System; *provided*, that such insurance coverage may be satisfied under a self-insurance program which is actuarially sound.

(c) If all or any part of the System shall be damaged or destroyed the Net Proceeds realized by the Participant therefrom and allocable to this Agreement shall be deposited by the Participant with the Trustee in a special fund which the Trustee shall establish as needed in trust and applied by the Participant to the cost of acquiring and constructing additions, betterments, extensions or improvements to the System if (A) the Participant first secures and files with the Trustee a Certificate of the Participant showing (i) the loss in annual System Revenues, if any, suffered, or to be suffered, by the Participant by reason of such damage or destruction, (ii) a general description of the additions, betterments, extensions or improvements to the System then proposed to be acquired and constructed by the Participant from such proceeds, and (iii) an estimate of the additional System Revenues to be derived from such additions, betterments, extensions or improvements; and (B) the Trustee has been furnished a Certificate of the Participant, certifying that such additional System Revenues will sufficiently offset on a timely basis the loss of System Revenues resulting from such damage or destruction so that the ability of the Participant to pay Installment Payments when due will not be substantially impaired, and such Certificate of the Participant shall be final and conclusive, and any balance of such proceeds not required by the Participant for such purpose or pursuant to any other Parity Obligation shall be deposited in the System Revenue Fund and applied as provided in Section 5.2 hereof, *provided*, that if the foregoing conditions are not met, then such proceeds shall be deposited with the Trustee and applied to make Installment Payments as they come due and Parity Obligation Payments as they shall become due.

If such damage or destruction have had no effect, or at most an immaterial effect, upon the System Revenues and the security of the Installment Payments, and a Certificate of the Participant to such effect has been filed with the Trustee, then the Participant shall forthwith

Attachment 1

deposit such proceeds in the System Revenue Fund, to be applied as provided in Section 5.2 hereof.

Section 6.7 Eminent Domain Proceeds. If all or any part of the System shall be taken by eminent domain proceedings, the Net Proceeds realized by the Participant therefrom and allocable to this Agreement shall be deposited by the Participant with the Trustee in a special fund which the Trustee shall establish as needed in trust and applied by the Participant to the cost of acquiring and constructing additions, betterments, extensions or improvements to the System if (A) the Participant first secures and files with the Trustee a Certificate of the Participant showing (i) the loss in annual System Revenues, if any, suffered, or to be suffered, by the Participant by reason of such eminent domain proceedings, (ii) a general description of the additions, betterments, extensions or improvements to the System then proposed to be acquired and constructed by the Participant from such proceeds, and (iii) an estimate of the additional System Revenues to be derived from such additions, betterments, extensions or improvements; and (B) the Trustee has been furnished a Certificate of the Participant, certifying that such additional System Revenues will sufficiently offset on a timely basis the loss of System Revenues resulting from such eminent domain proceedings so that the ability of the Participant to pay Installment Payments when due will not be substantially impaired, and such Certificate of the Participant shall be final and conclusive, and any balance of such proceeds not required by the Participant for such purpose or pursuant to any other Parity Obligation shall be deposited in the System Revenue Fund and applied as provided in Section 5.2 hereof, *provided*, that if the foregoing conditions are not met, then such proceeds shall be deposited with the Trustee and applied to make Installment Payments as they come due and Parity Obligation Payments as they shall become due.

If such eminent domain proceedings have had no effect, or at most an immaterial effect, upon the System Revenues and the security of the Installment Payments, and a Certificate of the Participant to such effect has been filed with the Trustee, then the Participant shall forthwith deposit such proceeds in the System Revenue Fund, to be applied as provided in Section 5.2 hereof.

Section 6.8 Amounts of Rates, Fees and Charges.

(a) The Participant will, at all times while any of the Installment Payments remain unpaid, fix, prescribe and collect rates, fees and charges and manage the operation of the System for each Fiscal Year so as to yield System Revenues at least sufficient, after making reasonable allowances for contingencies and errors in the estimates, to pay the following amounts during such Fiscal Year:

(i) All current Operation and Maintenance Costs.

(ii) The Installment Payments and the payments for the other Parity Debt and the Repayment Obligations and the payment of the Subordinate Obligations as they become due and payable.

Attachment 1

(iii) All payments required for compliance with the terms hereof, including restoration of the Reserve Account to an amount equal to the Reserve Account Requirement, and of any Supplemental Indenture.

(iv) All payments to meet any other obligations of the Participant which are charges, liens or encumbrances upon, or payable from, the System Net Revenues.

(b) In addition to the requirements of the foregoing subsection (a) of this Section, the Participant will, at all times while any Installment Payments remain unpaid, to the maximum extent permitted by law, fix, prescribe and collect rates, fees and charges and manage the operation of the System for each Fiscal Year so as to yield System Net Revenues during such Fiscal Year equal to at least 120% per cent of the Annual Debt Service in such Fiscal Year; *provided*, an adjustment shall be made to the amount of System Net Revenues as provided in Section 5.4 hereof.

The Participant may make or permit to be made adjustments from time to time in such rates, fees and charges and may make or permit to be made such classification thereof as it deems necessary, but shall not reduce or permit to be reduced such rates, fees and charges below those then in effect unless the System Revenues from such reduced rates, fees and charges will at all times be sufficient to meet the requirements of this Section.

Section 6.9 Enforcement of and Performance Under Contracts. The Participant shall enforce all material provisions of any contracts to which it is a party, an assignee, successor in interest to a party or third-party beneficiary, in any case where such contracts provide for material payments or services to be rendered to the System. Further, the Participant will comply with, keep, observe and perform all material agreements, conditions, covenants and terms, express or implied, required to be performed by it, contained in all contracts affecting or involving the System, to the extent that the Participant is a party thereto.

Section 6.10 Collection of Charges, Fees and Rates. The Participant will have in effect at all times rules and regulations requiring each user of the System to pay the applicable charges, fees and rates and providing for the billing thereof and for a due date and a delinquency date for each bill. In each case where such bill remains unpaid in whole or in part after it becomes delinquent, the Participant will enforce the collection procedures contained in such rules and regulations.

Section 6.11 No Free Service. The Participant will not permit any part of the System or any facility thereof to be used or taken advantage of free of charge by any corporation, firm or person, or by any public agency (including the State of California and any city, county, public agency, political subdivision, public corporation or agency or any thereof), unless otherwise required by law or existing written agreements.

Section 6.12 Prompt Acquisition and Construction of the Projects. Prior to completion of any part of the Project, the Participant will acquire and construct the Projects with all practicable dispatch, and such acquisition and construction will be made in an expeditious manner and in conformity with the law so as to complete the same as soon as possible.

Attachment 1

Section 6.13 Payment of Claims. The Participant will pay and discharge any and all lawful claims for labor, materials or supplies which, if unpaid, might become a lien or charge upon the System or upon the System Net Revenues or any part thereof, or upon any funds held by the Trustee, or which might impair the security of the Installment Payments; *provided*, that nothing herein contained shall require the Participant to make any such payments so long as the Participant in good faith shall contest the validity of any such claims and such nonpayment will not materially adversely affect the Participant's ability to perform its obligations hereunder.

Section 6.14 Books of Record and Accounts; Financial Statements. The Participant will keep proper books of record and accounts in which complete and correct entries shall be made of all transactions relating to the System and the System Revenue Fund, and upon request will provide information concerning such books of record and accounts to the Trustee.

The Participant will prepare annually, not later than two hundred ten (210) days after the close of each Fiscal Year, so long as any Installment Payments remain unpaid, an audited financial statement of the Participant relating to the System Revenue Fund and all other accounts or funds established pursuant hereto for the preceding Fiscal Year prepared by an Independent Certified Public Accountant, showing the balances in each such account or fund as of the beginning of such Fiscal Year and all deposits in and withdrawals from each such account or fund during such Fiscal Year and the balances in each such account or fund as of the end of such Fiscal Year, which audited financial statement shall include a statement as to the manner and extent to which the Participant has complied with the provisions hereof and of any Supplemental Agreement as it relates to such accounts and funds. The Participant will furnish a copy of such audited financial statement to the Trustee and the Bond Insurer upon request, and will furnish such reasonable number of copies thereof to investment bankers, security dealers and others interested in the Authority Bonds.

Section 6.15 Payment of Taxes and Other Charges and Compliance with Governmental Regulations. The Participant will pay and discharge all taxes, service charges, assessments and other governmental charges which may hereafter be lawfully imposed upon the System or any properties owned by the Participant, or upon the System Revenues, when the same shall become due; *provided*, that nothing herein contained shall require the Participant to make any such payments so long as the Participant in good faith shall contest the validity of any such taxes, service charges, assessments or other governmental charges and such nonpayment will not materially adversely affect the Participant's ability to perform its obligations hereunder.

The Participant will duly comply with all applicable state, federal and local statutes and all valid regulations and requirements of any governmental authority relative to the operation of the System or any part thereof, but the Participant shall not be required to comply with any regulations or requirements so long as the validity or application thereof shall be contested in good faith and such noncompliance will not materially adversely affect the Participant's ability to perform its obligations hereunder.

Section 6.16 Tax Covenants and Matters.

(a) General. The Participant hereby covenants with the holders of the Authority Bonds that, notwithstanding any other provisions of this Agreement, they shall not take any

Attachment 1

action, or fail to take any action, if any such action or failure to take action would adversely affect the exclusion from gross income of interest on the Authority Bonds under Section 103 of the Code. The Participant shall not, directly or indirectly, use or permit the use of proceeds of the Authority Bonds or any of the property financed or refinanced with proceeds of the Authority Bonds, or any portion thereof, by any person other than a governmental unit (as such term is used in Section 141 of the Code) in such manner or to such extent as would result in the loss of exclusion from gross income for federal income tax purposes of interest on the Authority Bonds.

(b) Arbitrage. The Participant shall not, directly or indirectly, use or permit the use of any proceeds of any Authority Bonds, or of any property financed or refinanced thereby, or other funds of the Participant, or take or omit to take any action, that would cause the Authority Bonds to be "arbitrage bonds" within the meaning of Section 148 of the Code. To that end, the Participant shall comply with all requirements of Section 148 of the Code and all regulations of the United States Department of the Treasury issued thereunder to the extent such requirements are, at the time, in effect and applicable to the Authority Bonds.

(c) Federal Guarantee. The Participant shall not make any use of the proceeds of the Authority Bonds or any other funds of the Participant, or take or omit to take any other action, that would cause the Authority Bonds to be "federally guaranteed" within the meaning of Section 149(b) of the Code.

(d) Compliance with Tax Certificate. In furtherance of the foregoing tax covenants of this Section, the Participant covenants that they will comply with the provisions of the Tax Certificate, which is incorporated herein as if fully set forth herein. These covenants shall survive payment in full or defeasance of the Authority Bonds.

Section 6.17 Rebate Fund.

(a) Establishment. Pursuant to the Indenture, the Trustee will hold a special fund (the "Rebate Fund") for any amounts required to satisfy the requirement to make rebate payments to the United States pursuant to Section 148 of the Code and the Treasury Regulations promulgated thereunder. Such amounts shall be free and clear of any lien under this Agreement and shall be governed by this Section, Section 6.16 of this Agreement, Section 4.5 of the Indenture and by the Tax Certificate executed by the Participant. All money at any time deposited in the Rebate Fund shall be held by the Trustee in trust for payment to the United States Treasury. All amounts on deposit in the Rebate Fund shall be governed by this Section and the Tax Certificate, unless and to the extent that the Participant delivers to the Trustee an opinion of nationally recognized bond counsel that the exclusion from gross income for federal income tax purposes of interest on the Authority Bonds will not be adversely affected if such requirements are not satisfied.

(i) Computation of Rebate Amount. Within 55 days of the end of each fifth Bond Year (as such term is defined in the Tax Certificate), and each Bond Year in which funds remain on deposit in the Project Account relating to the Participant, the Participant shall calculate or cause to be calculated the amount of "rebate amount," in accordance with Section 148(f)(2) of the Code and Section 1.148-3 of the Treasury Regulations (taking into account any applicable exceptions with respect to the computation of the "rebate amount," described, if applicable, in the Tax Certificate (e.g., the temporary

Attachment 1

investments exceptions of Section 148(f)(4)(A)(ii) or Section 148(f)(4)(B) of the Code, the expenditure requirements of Section 148(f)(4)(B) or Section 148(f)(4)(C) of the Code or Section 1.148-7(d) of the Treasury Regulations, the exception for certain "small governmental issuers" as set forth in Section 148(f)(4)(D) of the Code, and taking into account whether the election pursuant to Section 148(f)(4)(C)(vii) of the Code (the "1½% Penalty") has been made)), for this purpose treating the last day of the applicable Bond Year as a computation date, within the meaning of Section 1.148-1(b) of the Treasury Regulations.

(ii) Transfer of Moneys. Within 55 days of the end of each such fifth Bond Year, the Participant shall deposit to the Rebate Fund from any legally available moneys for such purpose, if and to the extent required so that the balance in the Rebate Fund shall equal the "rebate amount" so calculated in accordance with this Section.

(b) Deficiencies in the Rebate Fund. In the event that, prior to the time of any payment required to be made from the Rebate Fund, the amount in the Rebate Fund is not sufficient to make such payment when such payment is due, the Participant shall calculate or cause to be calculated the amount of such deficiency and deposit an amount received from any legally available source equal to such deficiency prior to the time such payment is due.

(c) Record Keeping. The Participant shall retain records of all determinations made hereunder until six years after payment in full of the Installment Payments.

(d) Survival of Defeasance. Notwithstanding anything in this Agreement to the contrary, the obligation to comply with the requirements of this Section shall survive the payment in full or defeasance of the Installment Payments.

Section 6.18 Continuing Disclosure. The Participant hereby covenants and agrees that it will comply with and carry out all of the provisions of the Continuing Disclosure Certificate. Notwithstanding any other provision of this Agreement, failure of the Participant to comply with the Continuing Disclosure Certificate shall not be considered an Event of Default; however, any Participating Underwriter or any holder or beneficial owner of the Authority Bonds may take such actions as described under the Continuing Disclosure Certificate to cause the Participant to comply with its obligations under this Section.

Section 6.19 Further Assurances. The Participant will adopt, make, execute and deliver any and all such further indentures, instruments and assurances as may be reasonably necessary or proper to carry out the intention or to facilitate the performance hereof.

Section 6.20 Reimbursement of Bond Insurer and Other Provisions Relating to the Bond Insurer.

(a) The Participant agrees to pay or reimburse the Bond Insurer any and all charges, fees, costs and expenses which the Insurer may reasonably pay or incur in connection with (i) the administration, enforcement, defense or preservation of any rights or security in respect of this Agreement or the Indenture, (ii) the pursuit of any remedies under the Indenture or this Agreement or otherwise afforded by law or equity, (iii) any amendment, waiver or other action with respect to or related to the Indenture or this Agreement whether or not executed or

Attachment 1

completed (iv) any litigation or other dispute in connection with the Indenture or this Agreement or the transactions contemplated thereby, other than amounts resulting from the failure of the Bond Insurer to honor its obligations under Municipal Bond Insurance Policy. The Bond Insurer shall have the right to charge a reasonable fee as a condition to executing any amendment, waiver or consent proposed in respect of the Indenture or this Agreement. Notwithstanding anything herein to the contrary, the Participant agrees to pay to the Bond Insurer (i) a sum equal to the total amounts paid by the Bond Insurer under the Municipal Bond Insurance Policy (the "Insurer Advances"); and (ii) interest on such Insurer Advances from the date paid by the Bond Insurer until payment thereof in full, payable to the Bond Insurer at the Late Payment Rate per annum (collectively, the "Insurer Reimbursement Amounts"). "Late Payment Rate" means the lesser of (a) the greater (i) the per annum rate of interest, publicly announced from time to time by JPMorgan Chase Bank at its principal office in The City of New York, as its prime or base lending rate (any change in such rate of interest to be effective on the date such change is announced by JPMorgan Chase Bank) plus 3%, and (ii) the then applicable highest rate of interest on the Authority Bonds and (b) the maximum rate permissible under applicable usury or similar laws limiting interest rates. The Late Payment Rate shall be computed on the basis of the actual number of days elapsed over a year of 360 days. The Participant hereby covenants and agrees that the Insurer Reimbursement Amounts are secured solely by a lien on a pledge of the System Net Revenues and payable solely from such System Net Revenues on a parity with the Installment Payments.

(b) The Participant will provide the Bond Insurer with its annual budget within 30 days of its adoption and its annual audited financial statements within 210 days after the end of the Participant's Fiscal Year (together with a certification of the Participant that it is not aware of any default or Event of Default hereunder or under the Indenture) together with such other information, data or reports as the Bond Insurer shall reasonably request from time to time and all information furnished pursuant to the Continuing Disclosure Certificate, simultaneously with the furnishing of such information.

(c) The Participant shall not enter into an interest rate swap agreement with respect to payment obligations payable from System Revenues without the prior consent of the Bond Insurer.

ARTICLE VII

PREPAYMENT OF INSTALLMENT PAYMENTS

Section 7.1 Prepayment. The Participant may prepay the Installment Payments in accordance with the provisions of the Indenture applicable to the redemption prior to maturity of the Authority Bonds.

Before making any prepayment pursuant to this Section, the Participant shall give the Authority and the Trustee thirty (30) days prior notice of such prepayment.

ARTICLE VIII

EVENTS OF DEFAULT AND REMEDIES OF THE AUTHORITY

Attachment 1

Section 8.1 Events of Default and Acceleration of Maturities. If one or more of the following Events of Default shall happen, that is to say:

- (1) if default shall be made by the Participant in the due and punctual payment of any Installment Payment or any Parity Debt when and as the same shall become due and payable;
- (2) if default shall be made by the Participant in the performance of any of the other agreements or covenants required herein to be performed by it, and such default shall have continued for a period of thirty (30) days after the Participant shall have been given notice in writing of such default by the Authority or the Trustee; provided that such default shall not constitute an Event of Default hereunder, if the Participant shall commence to cure such default within such thirty (30) day period and thereafter diligently and in good faith shall proceed to cure such default within a reasonable period of time;
- (3) if the Participant shall file a petition or answer seeking arrangement or reorganization under the federal bankruptcy laws or any other applicable law of the United States of America or any state therein, or if a court of competent jurisdiction shall approve a petition filed with or without the consent of the Participant seeking arrangement or reorganization under the federal bankruptcy laws or any other applicable law of the United States of America or any state therein, or if under the provisions of any other law for the relief or aid of debtors any court of competent jurisdiction shall assume custody or control of the Participant or of the whole or any substantial part of its property; or
- (4) if payment of the principal of any Parity Debt is accelerated in accordance with its terms;

then, and in each and every such case during the continuance of such Event of Default specified in clauses (3) and (4) above, the Authority shall, and for any other such Event of Default the Authority may (and at the direction of the Bond Insurer, shall), by notice in writing to the Participant, declare the entire principal amount of the unpaid Installment Payments and the accrued interest thereon to be due and payable immediately, and upon any such declaration the same shall become immediately due and payable; provided that any such declaration of acceleration shall be subject to the prior written consent of the Bond Insurer. This subsection however, is subject to the condition that if at any time after the entire principal amount of the unpaid Installment Payments and the accrued interest thereon shall have been so declared due and payable and before any judgment or decree for the payment of the moneys due shall have been obtained or entered the Participant shall deposit with the Authority a sum sufficient to pay the unpaid principal amount of the Installment Payments or the unpaid payment of any other Parity Debt referred to in clause (1) above due prior to such declaration and the accrued interest thereon, with interest on such overdue installments, at the rate or rates applicable to the remaining unpaid principal balance of the Installment Payments or such other Parity Debt if paid in accordance with their terms, and the reasonable expenses of the Authority and the Bond Insurer, and any and all other defaults known to the Authority (other than in the payment of the entire principal amount of the unpaid Installment Payments and the accrued interest thereon due

Attachment 1

and payable solely by reason of such declaration) shall have been made good or cured to the satisfaction of the Authority and the Bond Insurer or provision deemed by the Authority and the Bond Insurer to be adequate shall have been made therefor, then and in every such case the Authority and the Bond Insurer, by written notice to the Participant, may rescind and annul such declaration and its consequences; but no such rescission and annulment shall extend to or shall affect any subsequent default or shall impair or exhaust any right or power consequent thereon.

Section 8.2 Application of Funds Upon Acceleration. Upon the date of the declaration of acceleration as provided in Section 8.1, all System Revenues thereafter received shall be applied in the following order:

First, to the payment, without preference or priority, and in the event of any insufficiency of such System Revenues ratably without any discrimination or preference, of the fees, costs and expenses of the Authority and Trustee, if any, in carrying out the provisions of this article, including reasonable compensation to its accountants and counsel;

Second, to the payment of Operation and Maintenance Costs;

Third, to the payment of the entire principal amount of the unpaid Installment Payments and the unpaid principal amount of all other Parity Debt and the accrued interest thereon, with interest on the overdue installments at the rate or rates of interest applicable to the Installment Payments and such other Parity Debt if paid in accordance with their respective terms; and

Fourth, to the Bond Insurer, any amounts owed pursuant to Sections 5.2(b), 6.20 and 8.1 hereof.

Section 8.3 Other Remedies of the Authority. The Authority shall have the right with the written consent of the Bond Insurer and shall at the direction of the Bond Insurer:

(a) by mandamus or other action or proceeding or suit at law or in equity to enforce its rights against the Participant or any director, officer or employee thereof, and to compel the Participant or any such director, officer or employee to perform and carry out its or his duties under the Law and the agreements and covenants required to be performed by it or him contained herein;

(b) by suit in equity to enjoin any acts or things which are unlawful or violate the rights of the Authority; or

(c) by suit in equity upon the happening of an Event of Default to require the Participant and its directors, officers and employees to account as the trustee of an express trust.

Notwithstanding anything contained herein, the Authority shall have no security interest in or mortgage on the Project, the System or other facilities of the Participant or any other real property of the Participant and no default hereunder shall result in the loss of the Project, the System or other facilities of the Participant or any other real property of the Participant.

Section 8.4 Non-Waiver. Nothing in this article or in any other provision hereof shall affect or impair the obligation of the Participant, which is absolute and unconditional, to pay the

Attachment 1

Installment Payments to the Authority at the respective due dates or upon prepayment from the System Net Revenues, the System Revenue Fund and the other funds herein pledged for such payment, or shall affect or impair the right of the Authority, which is also absolute and unconditional, to institute suit to enforce such payment by virtue of the contract embodied herein.

A waiver of any default or breach of duty or contract by the Authority shall not affect any subsequent default or breach of duty or contract or impair any rights or remedies on any such subsequent default or breach of duty or contract. No delay or omission by the Authority to exercise any right or remedy accruing upon any default or breach of duty or contract shall impair any such right or remedy or shall be construed to be a waiver of any such default or breach of duty or contract or an acquiescence therein, and every right or remedy conferred upon the Authority by the Law or by this article may be enforced and exercised from time to time and as often as shall be deemed expedient by the Authority.

If any action, proceeding or suit to enforce any right or exercise any remedy is abandoned or determined adversely to the Authority, the Participant and the Authority shall be restored to their former positions, rights and remedies as if such action, proceeding or suit had not been brought or taken.

Section 8.5 Remedies Not Exclusive. No remedy herein conferred upon or reserved to the Authority is intended to be exclusive of any other remedy, and each such remedy shall be cumulative and shall be in addition to every other remedy given hereunder or now or hereafter existing in law or in equity or by statute or otherwise and may be exercised without exhausting and without regard to any other remedy conferred by the Law or any other law.

Section 8.6 Notices. Notwithstanding any other provision hereof, the Trustee shall immediately notify the Bond Insurer if at any time there are insufficient moneys to make any Installment Payments as required and immediately upon the occurrence of any event of default hereunder.

ARTICLE IX

DISCHARGE OF OBLIGATIONS

Section 9.1 Discharge of Obligations. The obligations hereunder may be discharged in the same manner as Authority Bonds may be discharged pursuant to Article VIII of the Indenture.

ARTICLE X

MISCELLANEOUS

Section 10.1 Liability of Participant Limited to System Revenues. Notwithstanding anything contained herein, the Participant shall not be required to advance any moneys derived from any source of income other than the System Revenues, the System Revenue Fund and the other funds provided herein for the payment of the Installment Payments or for the performance of any agreements or covenants required to be performed by it contained herein. The Participant

Attachment 1

may, however, advance moneys for any such purpose so long as such moneys are derived from a source legally available for such purpose and may be legally used by the Participant for such purpose.

The obligation of the Participant to make the Installment Payments is a special obligation of the Participant payable solely from the System Net Revenues, and does not constitute a debt of the Participant or of the State of California or of any political subdivision thereof in contravention of any constitutional or statutory debt limitation or restriction.

Section 10.2 Successor Is Deemed Included in all References to Predecessor. Whenever either the Participant or the Authority is named or referred to herein, such reference shall be deemed to include the successor to the powers, duties and functions that are presently vested in the Participant or the Authority, and all agreements and covenants required hereby to be performed by or on behalf of the Participant or the Authority shall bind and inure to the benefit of the respective successors thereof whether so expressed or not.

Section 10.3 Waiver of Personal Liability. No member, officer, agent or employee of the Authority or any director, officer or employee of the Participant shall be individually or personally liable for the payment of any principal of, or premium, if any, or interest on the Authority Bonds or any sum hereunder or under the Indenture or be subject to any personal liability or accountability by reason of the execution and delivery of this Agreement; but nothing contained herein shall relieve any such member, director, officer, agent or employee from the performance of any official duty provided by law or this Agreement.

Section 10.4 Article and Section Headings, Gender and References. The headings or titles of the several articles and sections hereof and the table of contents appended hereto shall be solely for convenience of reference and shall not affect the meaning, construction or effect hereof, and words of any gender shall be deemed and construed to include all genders. All references herein to "Articles," "Sections" and other subdivisions or clauses are to the corresponding articles, sections, subdivisions or clauses hereof; and the words "hereby", "herein," "hereof," "hereto," "herewith" and other words of similar import refer to this Agreement as a whole and not to any particular article, section, subdivision or clause hereof.

Section 10.5 Partial Invalidity. If any one or more of the agreements or covenants or portions thereof required hereby to be performed by or on the part of the Participant or the Authority shall be contrary to law, then such agreement or agreements, such covenant or covenants or such portions thereof shall be null and void and shall be deemed separable from the remaining agreements and covenants or portions thereof and shall in no way affect the validity hereof. The Participant and the Authority hereby declare that they would have executed this Agreement, and each and every other article, section, paragraph, subdivision, sentence, clause and phrase hereof irrespective of the fact that any one or more articles, sections, paragraphs, subdivisions, sentences, clauses or phrases hereof or the application thereof to any person or circumstance may be held to be unconstitutional, unenforceable or invalid.

Section 10.6 Assignment. This Agreement and any rights hereunder may be assigned by the Authority, as a whole or in part, without the necessity of obtaining the prior consent of the Participant. The Participant acknowledges and agrees that this Agreement and the Installment

Attachment 1

Payments will be assigned to the Trustee and pledged under the Indenture to the payment of the Authority Bonds.

Section 10.7 Net Contract. This Agreement shall be deemed and construed to be a net contract, and the Participant shall pay absolutely net during the term hereof the Installment Payments and all other payments required hereunder, free of any deductions and without abatement, diminution or set-off whatsoever.

Section 10.8 Governing Law; Venue. This Agreement shall be construed in accordance with and governed by the laws of the State of California applicable to contracts made and performed in the State of California. This Agreement shall be enforceable in the State of California, and any action arising hereunder shall (unless waived by the Authority in writing) be filed and maintained in the Superior Court of California, County of Sacramento.

Section 10.9 Effective Date. This Agreement shall become effective upon its execution and delivery, and shall terminate when the Purchase Price shall have been fully paid (or provision for the payment thereof shall have been made to the satisfaction of the Authority).

Section 10.10 Execution in Counterparts. This Agreement may be executed in several counterparts, each of which shall be deemed an original, and all of which shall constitute but one and the same instrument.

Section 10.11 Indemnification of Authority. To the fullest extent permitted by law, the Participant agrees to indemnify, hold harmless and defend the Authority and the Trustee, and each of their respective officers, governing board members, directors, officials, employees, attorneys and agents (collectively, the "Indemnified Parties"), against any and all losses, damages, claims, actions, liabilities, costs and expenses of any conceivable nature, kind or character (including, without limitation, reasonable attorneys' fees, litigation and court costs, amounts paid in settlement and amounts paid to discharge judgments) to which the Indemnified Parties, or any of them, may become subject under federal or state securities laws or any other statutory law or at common law or otherwise arising out of or based upon or in any way relating to:

(i) the Authority Bonds, the Indenture, this Agreement, the Tax Certificate or the execution or amendment hereof thereof or in connection with transactions contemplated hereby or thereby, including the issuance, sale or resale of the Authority Bonds;

(ii) any act or omission of the Participant or any of its agents, contractors, servants, employees or licensees in connection with the Project or the System, the operation of the Project or the System, or the condition, environmental or otherwise, occupancy, use, possession, conduct or management of work done in or about, or from the planning, design, acquisition, installation or construction of, the Project or the System or any part thereof;

(iii) any lien or charge upon payments by the Participant to the Authority and the Trustee hereunder, or any taxes (including, without limitation, all ad valorem taxes

Attachment 1

and sales taxes), assessments, impositions and other charges imposed on the Authority or the Trustee in respect of any portion of the Project or the System;

(iv) any violation of any environmental law, rule or regulation with respect to, or the release of any toxic substance from, the Project or the System or any part thereof;

(v) the defeasance and/or redemption, in whole or in part, of the Authority Bonds;

(vi) any untrue statement or misleading statement or alleged untrue statement or alleged misleading statement of a material fact furnished by the Participant and contained in any offering or disclosure document or continuing disclosure document for the Authority Bonds or any of the documents relating to the Authority Bonds to which the Participant is a party, or any omission or alleged omission from any offering or disclosure document or continuing disclosure document for the Authority Bonds of any material fact necessary to be stated therein in order to make the statements made therein by the Participant, in the light of the circumstances under which they were made, not misleading;

(vii) any declaration of taxability of interest on the Authority Bonds, or allegations that interest on the Authority Bonds is taxable or any regulatory audit or inquiry regarding whether interest on the Authority Bonds is taxable;

(viii) the Trustee's acceptance or administration of the trust of the Indenture, or the exercise or performance of any of its powers or duties thereunder or under any of the documents relating to the Authority Bonds to which it is a party;

except (a) in the case of the foregoing indemnification of the Trustee or any of their respective officers, members, directors, officials, employees, attorneys and agents, to the extent such damages are caused by the negligence or willful misconduct of such Indemnified Party; or (b) in the case of the foregoing indemnification of the Authority or any of its officers, members, directors, officials, employees, attorneys and agents, to the extent such damages are caused by the willful misconduct of such Indemnified Party. In the event that any action or proceeding is brought against any Indemnified Party with respect to which indemnity may be sought hereunder, the Participant, upon written notice from the Indemnified Party, shall assume the investigation and defense thereof, including the employment of counsel selected by the Indemnified Party, and shall assume the payment of all expenses related thereto, with full power to litigate, compromise or settle the same in its sole discretion; provided that the Indemnified Party shall have the right to review and approve or disapprove any such compromise or settlement. Each Indemnified Party shall have the right to employ separate counsel in any such action or proceeding and participate in the investigation and defense thereof, and the Participant shall pay the reasonable fees and expenses of such separate counsel; provided, however, that such Indemnified Party may only employ separate counsel at the expense of the Participant if in its judgment a conflict of interest exists by reason of common representation or if all parties commonly represented do not agree as to the action (or inaction) of counsel.

Attachment 1

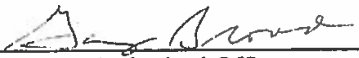
The rights of any persons to indemnity hereunder and rights to payment of fees and reimbursement of expenses pursuant to Section 4.2, hereof shall survive the final payment or defeasance of the Authority Bonds and in the case of the Trustee any resignation or removal. The provisions of this Section shall survive the termination of this Agreement.

Section 10.12 Amendments. This Agreement may only be amended in accordance with the terms of Indenture. Any Ratings Agency rating the Authority Bonds shall receive notice of each amendment to this Agreement and a copy thereof at least 15 days in advance of its execution. The Bond Insurer shall be provided with a full transcript of all proceedings relating to any amendment or supplement hereto.

Attachment 1

IN WITNESS WHEREOF, the parties hereto have executed and attested this Agreement by their officers thereunto duly authorized as of the day and year first written above.

CITY OF ST. HELENA

By: 
Authorized Officer

CALIFORNIA STATEWIDE COMMUNITIES
DEVELOPMENT AUTHORITY

By: _____
Authorized Signatory

OHSUSA:750126718.3

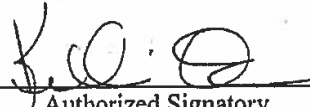
Attachment 1

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CITY OF ST. HELENA

By: _____
Authorized Officer

CALIFORNIA STATEWIDE COMMUNITIES
DEVELOPMENT AUTHORITY

By:  _____
Authorized Signatory

OHSUSA:750126718.3

Attachment 1

EXHIBIT A

INFORMATION CONCERNING PARTICIPANT

Type of System: Wastewater

Description of the Project: New improvements to the Wastewater System, including, but not limited to, levee repair, sewer rehabilitation, aerator replacement, various infrastructure improvements, and vehicle replacements

Prior Liens: None

OHSUSA:750126718.3

A-1

Attachment 1

EXHIBIT B

SCHEDULE OF INSTALLMENT PAYMENTS

1. The principal amount of payments to be made by the Participant hereunder is \$1,555,435.00.

2. The installment payments of principal and interest are payable in the amounts and on the Installment Payment Dates (dates shown are the first day of the month after the Installment Payment Dates which are due on the 15th day of the prior month) as shown in Attachment A.

OHSUSA:750126718.3

B-1

Attachment 1

ATTACHMENT A

<u>Date</u>	<u>Principal Component</u>	<u>Interest Component</u>	<u>Total</u>
10/1/2012	\$ 0	\$16,259	\$ 16,259
4/1/2013	0	29,266	29,266
10/1/2013	55,435	29,266	84,701
4/1/2014	0	28,712	28,712
10/1/2014	56,522	28,712	85,234
4/1/2015	0	27,864	27,864
10/1/2015	58,696	27,864	86,560
4/1/2016	0	26,984	26,984
10/1/2016	60,870	26,984	87,853
4/1/2017	0	26,071	26,071
10/1/2017	61,957	26,071	88,027
4/1/2018	0	24,832	24,832
10/1/2018	64,130	24,832	88,962
4/1/2019	0	24,190	24,190
10/1/2019	66,304	24,190	90,495
4/1/2020	0	22,864	22,864
10/1/2020	68,478	22,864	91,342
4/1/2021	0	21,495	21,495
10/1/2021	71,739	21,495	93,234
4/1/2022	0	20,060	20,060
10/1/2022	73,913	20,060	93,973
4/1/2023	0	18,951	18,951
10/1/2023	76,087	18,951	95,038
4/1/2024	0	17,810	17,810
10/1/2024	78,261	17,810	96,071
4/1/2025	0	16,538	16,538
10/1/2025	81,522	16,538	98,060
4/1/2026	0	14,500	14,500
10/1/2026	84,783	14,500	99,283
4/1/2027	0	12,380	12,380
10/1/2027	89,130	12,380	101,511
4/1/2028	0	10,152	10,152
10/1/2028	93,478	10,152	103,630
4/1/2029	0	8,283	8,283
10/1/2029	97,826	8,283	106,109
4/1/2030	0	6,326	6,326
10/1/2030	101,087	6,326	107,413
4/1/2031	0	4,304	4,304
10/1/2031	105,435	4,304	109,739
4/1/2032	0	2,196	2,196
10/1/2032	109,783	2,196	111,978

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Attachment 2

**HANSFORD ECONOMIC
CONSULTING**



**City of St. Helena (2016)
Water and Wastewater
Rate Study**

FINAL
October 31, 2016

HEC Project #150182

Attachment 2

Attachment 2

TABLE OF CONTENTS

SECTION	PAGE
1. Introduction	1
1.1 Purpose of Study	1
1.2 Background on the Utility Systems	2
1.3 Financial Health of the Utility Funds	3
1.4 Customer Base	5
1.5 Major Assumptions	8
1.6 Rate Structures	10
2. Water Rate Study Summary	12
2.1 Key Findings	12
2.2 Methodology	13
2.3 New Rate Impacts	14
3. Wastewater Rate Study Summary	18
3.1 Key Findings	18
3.2 Methodology	19
3.3 New Rate Impacts	19
4. Combined Utilities Impact	22
4.1 Residential Impacts	22
4.2 Affordability	23
4.3 Large Water Users Impacts	25

Attachment 2

LIST OF TABLES

TABLE	PAGE
1 Calculated Water Rates through Fiscal Year Ending 2022	13
2 Calculated Wastewater Rate Schedule	19
3 Affordability of Water Utility Costs for Residents	24

LIST OF FIGURES

FIGURE	PAGE
1 Projected Water Cash Balances	4
2 Projected Wastewater Cash Balances	5
3 Historical Population Growth	6
4 Water Customers	6
5 Water Use by Customer Type	7
6 Typical Annual Wastewater Flows by Customer Type	7
7 Components of Water Revenue Requirement	14
8 Typical Monthly Bill for the Off-Peak Season	15
9 Typical Monthly Bill for the Peak Season	15
10 Non-Residential Water Rate Impact	16
11 Average Monthly Water Charges for Large Water Users	17
12 Components of Wastewater Revenue Requirement	20
13 Bill Impacts for Single Family Homes	20
14 Average Monthly Bill Impact for Sample Non-Residential Users	21
15 Average Monthly Bill Impact for Large Water Users	21
16 Single Family Home Utility Costs in Off-Peak Months, based on 7 HCF	22
17 Single Family Home Utility Costs in Peak Months, based on 17 HCF	22
18 Impact of Combined Utility Bill Increases	23
19 Combined Utilities Impact on Large Water Users	25

Attachment 2

Section 1: INTRODUCTION**1.1 PURPOSE OF STUDY**

The City's responsibility as a water and wastewater system operator is to first and foremost provide the residents and businesses of the City with clean, safe potable water and a reliable wastewater system that meets State and Federal regulatory requirements; second, to protect its water resources, third to manage and maintain the utility systems infrastructure (assets) to be fiscally responsible to current and future residents, and fourth to support public safety (primarily fire defense).

The purpose of this Water and Wastewater Rate Study (Study) is to determine the level of funding required over the next five years to adequately fund the water and wastewater utility systems. This report provides an explanation and justification of the calculated water and wastewater rates through fiscal year 2022 and it documents adherence to the law regarding setting of rates by a municipality. Per California Constitution Article 13D, water and wastewater rates shall not be extended, imposed, or increased by any agency unless it meets all of the following requirements:

- (1) Revenues derived from the fee or charge shall not exceed the funds required to provide the property related service.
- (2) Revenues derived from the fee or charge shall not be used for any purpose other than that for which the fee or charge was imposed.
- (3) The amount of a fee or charge imposed upon any parcel or person as an incident of property ownership shall not exceed the proportional cost of the service attributable to the parcel.
- (4) No fee or charge may be imposed for a service unless that service is actually used by, or immediately available to, the owner of the property in question. Fees or charges based on potential or future use of a service are not permitted.
- (5) No fee or charge may be imposed for general governmental services including, but not limited to, police, fire, ambulance or library, services, where the service is available to the public at large in substantially the same manner as it is to property owners.

The Study includes two accompanying documents, 'City of St. Helena Water Rate Study Technical Memorandum' and 'City of St. Helena Wastewater Rate Study Technical Memorandum'. These documents provide the detailed calculations for each utility rate study.

The water financial model projects revenues and expenses, and calculates rates for the next ten years; however, the City is only proposing to adopt rates for the next five years with the Proposition 218 notification and hearing.

On May 24, 2016 St. Helena City Council authorized the re-establishment of the Ad Hoc Revenue Source Task Force (Task Force) to review and provide input on the rate study (Resolution No. 2016-

Attachment 2

66). Two meetings were held: one on August 4, 2016 and the other on September 13, 2016. The Rate Study Team, consisting of Hansford Economic Consulting and City staff members, requested feedback on policy decisions related to the Rate Study. These meetings were open to the public and recorded, in the hope of increasing transparency and public participation, as well as providing a place for members of the public to ask questions and receive additional information.

Key acronyms used regularly throughout the report are the following:

City = City of St. Helena
 HCF = Hundred Cubic Feet
 MGD = Million Gallons a Day
 CIP = Capital Improvement Project(s)
 SF = Single Family
 SRF = State Revolving Fund
 MHI = Median Household Income

1.2 BACKGROUND ON THE UTILITY SYSTEMS

The City of St. Helena (City) provides water and wastewater services to residents and businesses inside and outside of the City. The City's water sources include surface water from Bell Canyon Reservoir, groundwater from Stonebridge Wells, and purchased treated water from the City of Napa. The Louis Stralla Water Treatment Plant (water treatment plant), which treats surface water stored in Bell Canyon Reservoir, has a capacity of 4.3 million gallons a day (MGD); however, there are flow limitations in the inlet piping which restricts use of the plant to less than its capacity. Stonebridge Wells includes two active groundwater wells and a filtration facility, including filtration tanks, chlorination facilities, and a backwash return system. The filter removes iron and manganese. Treated water from the City's water sources is distributed via six storage tanks and four pump stations.

The City first entered into an agreement with the City of Napa for delivery of treated water in September 2006. The third amendment to that agreement, entered into in December 2011, increases the minimum annual delivery to 600 acre-feet with optional delivery up to 800 acre-feet. Optional additional delivery of 200 acre-feet may be delivered provided the City of Napa has sufficient water supply. If Napa does not have sufficient supply it will attempt to acquire supplemental dry-year water on a single year basis from an outside source. Price and payment terms of the optional supply will differ from the base supply, as detailed in the agreement.

The City currently distributes over 550 million gallons of clean drinking water each year. Water use fluctuates year to year depending on several factors including, but not limited to, growth, weather, sustained drought, plumbing retrofits, and pricing of water. Untreated water suitable for construction water purposes only is also available for purchase from the Lower Reservoir adjacent to York Creek.

The City's wastewater system consists of a collection system of more than 22 miles of pipe. Effluent is treated at the 0.5 million gallons a day (average daily dry weather flow) treatment plant. The wastewater treatment plant was built in 1967. The secondary level treatment plant discharges to the Napa River or land (City-owned grass fields, redwood/willow trees, and mosquito fish ponds).

Attachment 2

The City's National Pollutant Discharge Elimination System (NPDES) permit was renewed in March 2016; at the same time a Cease and Desist Order (CDO) No. R2-2016-0004 was issued because the City is unable to meet the more stringent effluent requirements of the renewed NPDES permit. A draft feasibility study was prepared for the City in August 2016 which recommends improvements at the wastewater treatment plant so that the City can be in compliance and the CDO lifted.

Separate water and wastewater enterprise funds account for the revenues and expenses associated with each of these services. An enterprise fund is a fund that is intended to recover its costs through user fees and charges. Enterprise funds provide the repayment capacity for, and make debt service payments on, any debt incurred for capital projects; therefore, enterprise fund bond-funded projects do not diminish the City's general fund debt capacity.

Enterprise funds need to be managed in a fiscally responsible manner so that users are paying for their current use of the system. Both utility systems need constant maintenance to prolong the life of the assets. If there is insufficient collection of money for system maintenance future users have to pay for repairs when they become critical and costs are more expensive.

1.3 FINANCIAL HEALTH OF THE UTILITY FUNDS

Currently both utility funds are financially at risk. The City continues to use available reserves for both operating expenses and capital improvement projects (projects are funded on a pay-as-you-go basis). The water operating fund currently has \$525,000 of unrestricted cash; the wastewater operating fund has no cash reserves. Total cash balances for operating and capital funds combined as of July 1, 2016 were \$6.1 million in the water fund and \$1.1 million in the wastewater fund.

Utility system costs typically increase at a greater rate than inflation and while City rates have increased in recent years they have not kept pace with the fiscal needs of the water and wastewater enterprise funds. In addition, the current rates do not collect for system rehabilitation of either system which has resulted in the City having to use reserves and delay necessary capital improvements. The lack of improvements to major infrastructure has resulted in heavy fines to the City. If rates are not increased to pay for these items, the City's General Fund will need to be utilized. These are unsustainable actions that will negatively impact other City services such as parks, streets, and library if not corrected.

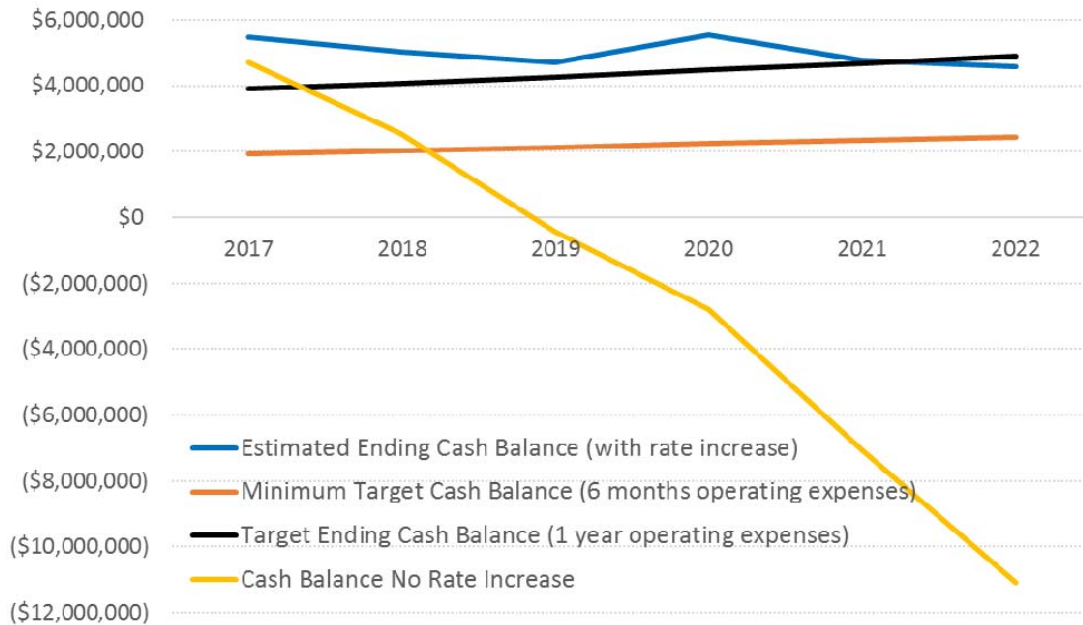
The revenue requirement is the amount that must be raised from rates or other charges for service net of other income such as investment earnings, area surcharges, finance charges, and other miscellaneous revenues. The revenue requirement for the water fund is projected to increase from \$5.5 million to \$8.4 million over the next 5 years. The revenue requirement for the wastewater fund is projected to increase from \$3.0 million to \$4.6 million over the next 5 years.

Including the operating and capital funds for each utility, both the water and wastewater enterprise funds will have negative cash balances within two years without rate increases.

Figure 1 shows the projected cash balances (operating and capital funds combined) for water and **Figure 2** shows the projected cash balances for wastewater (operating and capital funds combined) through fiscal year 2022.

Attachment 2

Figure 1
Projected Water Cash Balances

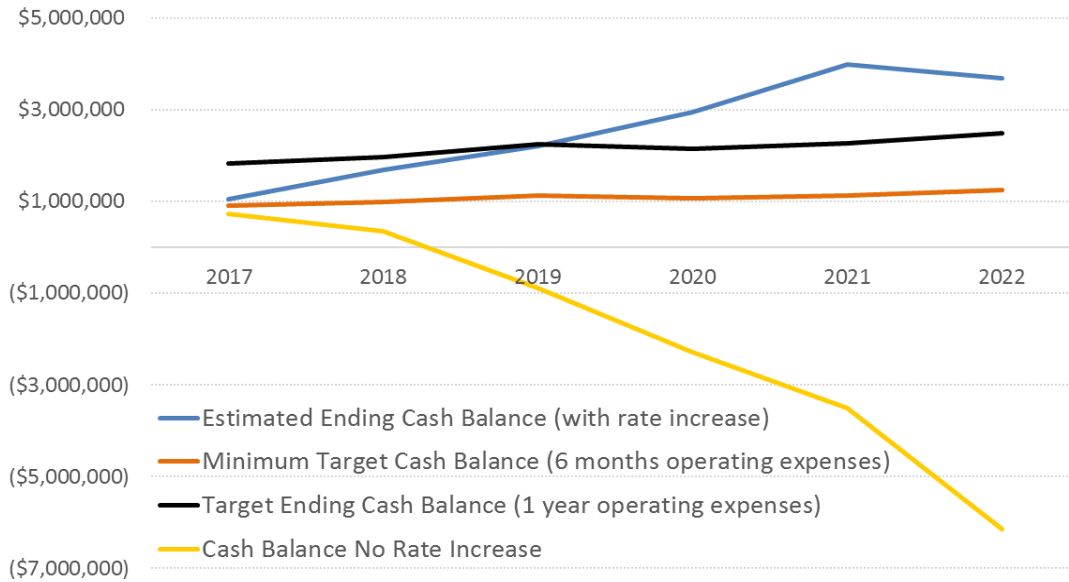


The blue lines show the projected total cash balance with rate increases. The yellow lines show the projected cash balances with no rate increases. The black lines show the target cash balance, equal to one year of operating expenses, and the orange lines show the minimum cash balance at 6 months operating expenses. The goal over time is for the black and blue lines to be as close as possible. These graphs demonstrate that the rate increases are essential.

The projected cash balance for wastewater (with a rate increase) is greater than the target cash balance because of cash outlay necessary in future years for capital improvements, including more than \$2 million for completion of the operations building and shop at the wastewater treatment plant.

Attachment 2

Figure 2
Projected Wastewater Cash Balances



1.4 CUSTOMER BASE

The City services a population of approximately 6,000. The City experienced population decline which began before, and lasted through, the Great Recession (2004 through 2014). Population is now slightly greater than it was in 2000. The average annual population growth from 2000 to 2015 was 0.1%. According to the US Census Bureau there are 2.47 persons per occupied housing unit, a figure that has remained relatively stable since 2000. Historical population change is shown in **Figure 3** below.

The City has approximately 2,600 water connections and serves more than 3,000 residential households, about 260 non-residential establishments, including businesses, schools, religious places and community centers, more than 20 industrial customers, and about 30 irrigation-only customers. A pie chart illustrating the customer base is shown in **Figure 4**.

Water use by residential and non-residential customer type is shown in **Figure 5**. Although residential customers comprise 87% of the total customer base, they use 50% of total water deliveries. Industrial customers, who comprise only 1% of the customer base use 21% of total water deliveries.

Attachment 2

Figure 3
Historical Population Growth

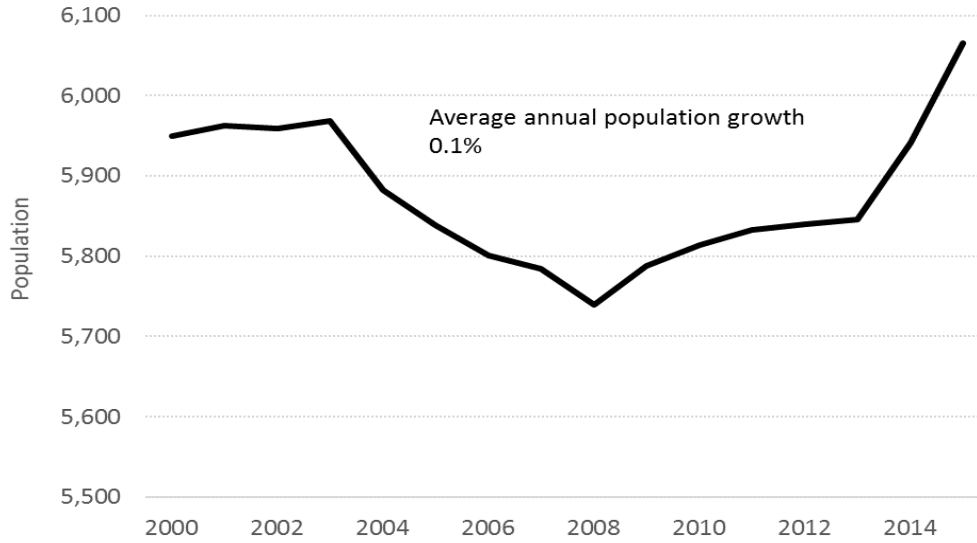
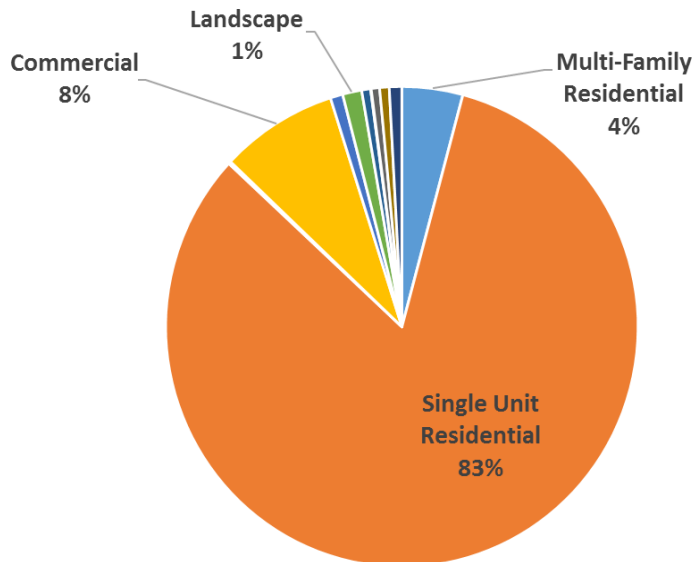
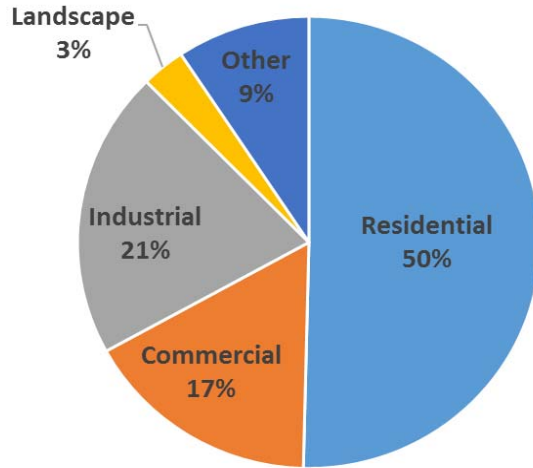


Figure 4
Water Customers



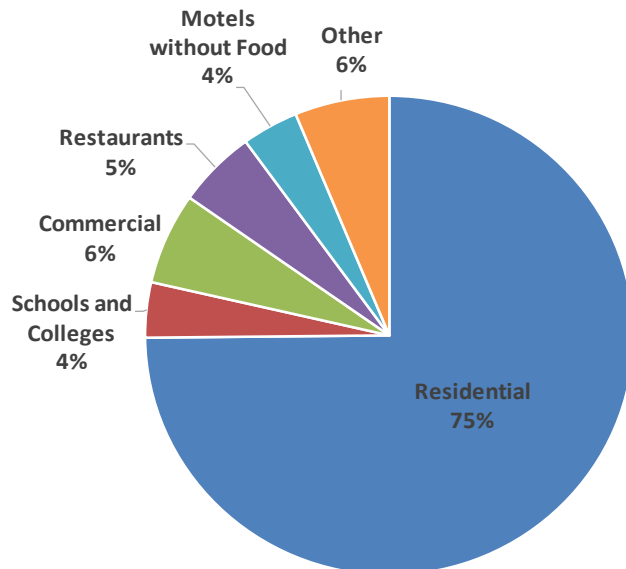
Attachment 2

Figure 5
Water Use by Customer Type



The City provides wastewater service to the same households, institutional uses and businesses, with the exception of those having septic systems. **Figure 6** shows typical annual flow to the wastewater treatment plant by residential and non-residential customer types.

Figure 6
Typical Annual Wastewater Flow by Customer Type



Attachment 2

1.5 MAJOR ASSUMPTIONS

Several major assumptions influence the scope of the report and findings herein. They are summarized here:

- Water CIP Projects will be funded through rates, grants, old and new debt, impact fees, and reserves.** The York Creek upper dam removal and mitigation project as well as the Meadowood tank upgrades project are expected to be partially grant funded, and partially funded by existing bond proceeds. The Bell Canyon Creek flow measurement project will be partially funded by existing bond proceeds. For large infrastructure projects the City will apply to advantageous loan and grant programs. Pump station upgrades and the Bell Canyon intake tower replacement are assumed to be funded by new debt. Spill containment at both the Bell Creek intake and Stonebridge Well, valve replacement at the Bell Valve House, as well as the Bell Canyon reservoir improvements, will be funded by reserves. Rates (cash) will be used for all other capital outlay needs for existing customers. Impact fees will be used to fund capital project costs attributable to new customers. The water enterprise fund will loan the impact fee fund cash to pay for the new customers' share of facility costs.
- Wastewater CIP Projects will be funded through rates, reserves and debt.** Reserves will be used to fund the replacement of the wastewater reclamation facility operations building and shop. Phase 1 and Phase 2 of the wastewater treatment plant upgrades are assumed to be funded by new debt. Cash will be used for all other capital improvement projects. The wastewater impact fee fund has sufficient cash to pay for new customers' share of wastewater facility costs.
- Future users' share of costs updated.** The water and wastewater impact fees must be updated to reflect the CIP presented in the Rate Study. The cash balances for impact fee funds 764 (water) and 774 (wastewater) have not been updated in the Study; with updated CIPs for both utility systems the impact fees need to be updated. An increase in the water impact fee would improve the repayment period from future to existing customers and reduce future rate increases for existing customers.
- System rehabilitation costs are fully accounted for in the rate models.** Both the water and wastewater rate models include a calculated annual cost for long-term replacement of facilities. Facilities include existing and new facilities built in the next five years. The Study projects that a capital repair and replacement reserve of \$1.7 million could be accumulated in the wastewater fund by 2022. It is not anticipated that any reserve for capital repair and replacement could be accumulated in the water fund.
- New growth.** New development is assumed to increase at a pace of five single family units per year. This pace of growth was estimated using the St. Helena average annual change in US Census reported number of occupied housing units from 2000 to 2015, and is consistent with the City's General Plan.

Attachment 2

- **Rate structure is modified for both water and wastewater.** In an effort to allocate costs as equitably as possible with available data, the Study modifies the rate structures for both utilities as described further below and elsewhere in this report.
- **The new rate structures are assumed to be in effect February 8, 2017. The following five rate increases are assumed to be in effect November 8 of each year (November 2017, 2018, 2019, 2020, and 2021).** The rate increases go into effect as soon as possible to increase cash flow, and in the fall when price changes have less impact to customers than in the summer months. The new rates would be reflected on the City's February (and thereafter November) utility bills. The rate change dates are based on the City's current billing cycles; if the dates of the billing cycles change (for example meter reads change from the 8th of each month to the 10th of each month) the rate changes will follow the date of the new billing cycle.
- **Low income utilities subsidies, authorized by City Resolution No. 2006-44, are funded by the City general fund so that some utility customers do not subsidize others.** The general fund transfers the appropriate subsidy amount for low income households into the water and wastewater funds to maintain the revenue requirement.
- **Water-specific Assumptions:**
 - **New water meter replacement fee.** With the useful service life of a meter being approximately 20 years, the City needs to collect funds for a routine meter replacement program, replacing about five percent of the meters in the system each year. There are approximately 2,500 meters to be serviced with an approximate annual cost of \$46,000 in 2016 dollars. The new meter replacement fee is included in the updated service charges.
 - **Meadowood area surcharges are eliminated.** Customers in the Meadowood area, which is outside of the City limits, currently pay a surcharge based on consumption by all using those facilities plus a uniform maintenance surcharge. Per the decision made during the September 13th, 2016 Task Force meeting, Meadowood area customers will no longer pay a surcharge.
 - **The percentage of revenue requirement collected in base (flat) fees/service charges gradually increases.** Fixed costs comprise about 70% of the City's water system total annual operating costs. Currently the City collects 30% of costs in service charges and 70% in use charges. The water rate study gradually increases the base charges from 30% of revenue requirement to 36% of revenue requirement over the next five years. Greater revenue collection from service charges increases revenue stability for the enterprise funds. The increase is gradual to avoid large increases to households on fixed incomes.
 - **Single family residential 1" meter customers pay the same rates as single family residential 5/8" meter customers.** The total number of 5/8" meters was adjusted to include single family 1" meters. Due to CA Residential Code Section R313 (fire sprinklers), almost all new residential development is required to install 1" meters in

Attachment 2

order to have sufficient flow for sprinklers; however, most existing homes built prior to implementation of CA Residential Code Section R313 have a 5/8" or 3/4" meter. Because the 1" residential customers utilize the same average amount of water as the 3/4" and 5/8" customers, it is appropriate for them to pay the same rates, and not be penalized by the fire sprinklers requirement.

- o **The new water rate structure includes a drought period surcharge.** A drought period will be defined in the City municipal code. When the City implements Phase 1 drought restrictions it would also implement drought rates. Drought rates are only applied to use charges (does not affect service charges). Drought rates are 6% higher than non-drought rates because during drought years the cost of water per 1,000 gallons is 6% higher than during non-drought years.

1.6 RATE STRUCTURES

Water Rate Structures

The water rate study calculated water charges under two methods of collection for costs recovered through use charges. A brief summary of the rate structure differences is provided below. The Task Force chose the seasonal rate structure as the preferred water rate structure at the September 13th, 2016 Task Force Meeting; therefore, the Study only presents findings of the seasonal rate structure. Details of the seasonal rate structure, along with results, are presented in Section 2.

WATER STUDY	
Uniform Rate Structure	
Same as current rate structure except no tiers for use charges	
All customers pay a base charge by meter size per month + a uniform use charge for all treated water	
Seasonal Rate Structure	
All customers pay a base charge by meter size per month + a seasonal use charge for all water (higher during the peak than off-peak months)	
Peak = May through October	
Off-Peak = November through April	

Wastewater Rate Structures

In the financial modeling for the wastewater rate study two rate structures were considered for collection of the revenue requirement; a modified rate structure and a new rate structure. A comparison of the two rate structures considered is provided on the following page. Per the August 4th, 2016 and September 13th, 2016 Task Force meetings, the City's Task Force chose the new rate structure as the preferred rate structure; therefore, the Study only presents findings of the new rate structure. For record keeping the modified rate structure findings are presented in Attachment B of the 'City of St. Helena Wastewater Rate Study Technical Memorandum'.

Attachment 2

WASTEWATER STUDY	
Modified Rate Structure	
	Same as current rate structure except religious places/community centers are broken out as their own rate category
	Single family pay monthly flat base rate and a flow charge per Hundred Cubic Feet (HCF) of average winter month water
	Multi-family/mobile homes and non-residential pay monthly flat base rate based on meter size per month and a flow charge per HCF of average winter month water
New Rate Structure	
	Mobile Home parks classified as residential; religious places/community centers are broken out as their own rate category
	All Residential (single family, multi-family and mobile homes) pay flat base rates based on number of dwelling units plus a flow charge per HCF of average winter month water
	Flat monthly charge for schools based on number of students
	Non-residential pay a flat base rate by customer type (per account) plus a flow charge per HCF of average winter month water

Attachment 2

Section 2: WATER RATE STUDY SUMMARY

2.1 KEY FINDINGS

- The City has been pulling from reserves for water system operations. At the end of fiscal year 2016 (June 30) the operating fund had a positive unrestricted net position of roughly \$5 million. At the end of fiscal year 2017, the operating fund is expected to be depleted to an unrestricted net position of about \$525,000. System rehabilitation is being funded from reserves because depreciation is not currently included in the rates. This is unsustainable.
- It is projected that in fiscal year 2017 the water fund will have a 0.72 debt service coverage ratio. The City is out of compliance with its bond covenants to maintain a 1.20 minimum debt service coverage ratio. This must be rectified immediately.
- The City has identified a minimum of \$17.7 million, net of grant funds and existing bond proceeds, of water system capital improvements in today's dollars to be funded over the next 10 years. This cost is inflated to a total of \$20.8 million dollars over the next 10 years.
 - o The funding plan applies two City-awarded grants, which total \$1,787,876, for the York Creek dam removal and creek restoration project, as well as existing water bonds in the amount of \$2.7 million.
 - o Meadowood tank upgrades are partially funded by \$120,100 from existing bond proceeds.
 - o The City will continue to aggressively pursue any grant opportunities.
 - o \$0.2 million for pump station upgrades, and \$2.1 million for Bell Canyon intake tower replacement are assumed to be financed by new debt.
 - o All other system improvement costs will be cash-funded.
 - o The project for installation of smart meters is currently unfunded; however, the project is not anticipated to start in the next five years. The total cost for this project is estimated at \$1.5 million, and
 - o A new water meter replacement fee for routine replacement of existing meters, which is included in the monthly service charge, will fund \$0.3 million of meter replacement costs, not included in the CIP.
- By raising the rates in February 2017 the City will generate sufficient revenue to meet its bond covenants, to begin building a healthy reserve, to fund necessary planned capital improvements, and to fully fund water operations without using other City funds. A healthy reserve is necessary to fund emergencies and other unanticipated capital projects. Without the rate increases the water fund is projected to have a negative balance of <\$11.1> million by the end of fiscal year 2022. The water fund would have to be loaned money from other City funds, taking away money for other essential City services such as parks, library and streets.

Current and calculated water rates are shown in **Table 1**.

Attachment 2

Table 1
Calculated Water Rates through Fiscal Year Ending 2022

Charges	Current	Billing Period Beginning *					
		2/8/2017	11/8/2017	11/8/2018	11/8/2019	11/8/2020	11/8/2021
Service Charge		Monthly Charges per Meter					
5/8" , 3/4" & SF 1"	\$27.52	\$43.22	\$51.71	\$60.59	\$64.78	\$68.91	\$73.27
1"	\$63.80	\$80.08	\$96.76	\$114.44	\$123.35	\$132.22	\$141.61
1.5"	\$124.12	\$141.67	\$172.02	\$204.36	\$221.14	\$237.94	\$255.72
2"	\$196.50	\$215.12	\$261.84	\$311.76	\$337.99	\$364.27	\$392.10
3"	\$365.51	\$413.06	\$503.54	\$600.40	\$651.86	\$703.51	\$758.21
4"	\$607.01	\$640.46	\$780.29	\$930.11	\$1,010.10	\$1,090.44	\$1,175.54
6"	\$1,210.18	\$1,252.50	\$1,528.85	\$1,825.17	\$1,983.80	\$2,143.19	\$2,312.05
Private Fire Protection		Monthly Charges per Fire Service Pipe					
4"	\$4.00	\$8.47	\$9.92	\$11.38	\$11.89	\$12.36	\$12.86
6"	\$6.00	\$24.59	\$28.81	\$33.05	\$34.53	\$35.91	\$37.34
8"	\$8.00	\$52.41	\$61.40	\$70.43	\$73.57	\$76.52	\$79.58
Raw Water <i>per Gallon</i>	\$0.00267	\$0.00273	\$0.00320	\$0.00367	\$0.00383	\$0.00398	\$0.00414
TREATED WATER USE CHARGES PER HCF							
NON-DROUGHT PERIOD	[1]						
Off-Peak (Nov-Apr)		\$5.50	\$6.37	\$7.19	\$7.37	\$7.54	\$7.71
Peak (May-Oct)		\$6.11	\$7.09	\$8.00	\$8.20	\$8.38	\$8.58
DROUGHT PERIOD	[1]						
Off-Peak (Nov-Apr)		\$5.81	\$6.73	\$7.60	\$7.79	\$7.97	\$8.15
Peak (May-Oct)		\$6.46	\$7.49	\$8.45	\$8.66	\$8.86	\$9.06

Source: HEC.

* Dates reflect the current billing cycle; if the billing cycle date changes so will these effective dates.

[1] Current Rate Structure rates as follows:

Tiers by customer category (in hcf):	Tier 1	Tier 2		Tier 1	Tier 2
Single family	0-14	15+	Non-residential <=1"	0-36	37+
Multi-family	0-5	6+	Non-residential 1.5"	0-120	121+
			Non-residential 2"	0-192	193+
Price per HCF	\$4.48	\$6.74	Non-residential 3"	0-360	361+
Price per HCF - Landscape Irrigation	\$5.22		Non-residential 4"	0-600	601+
			Non-residential 6"	0-1,250	1,251+
			Non-residential 8"	0-1,920	1,921+

2.2 METHODOLOGY

The detailed methodology for calculation of rates is presented in the 'City of St. Helena Water Rate Study Technical Memorandum'. Under the new seasonal rate structure, customer bills continue to be comprised of 2 fees: (1) fixed monthly service charges (now also including a meter replacement fee), and (2) variable use charges. The new seasonal rate structure is as follows:

- All customers pay the same usage rate per HCF for treated water off-peak (Nov-Apr) and peak (May-Oct). The peak rate is higher than the off-peak rate to reflect the additional costs of water operations during the peak period. Analysis in the 'City of St. Helena Water Rate

Attachment 2

Study Technical Memorandum’ demonstrates that water operations costs are 11% higher during the peak period.

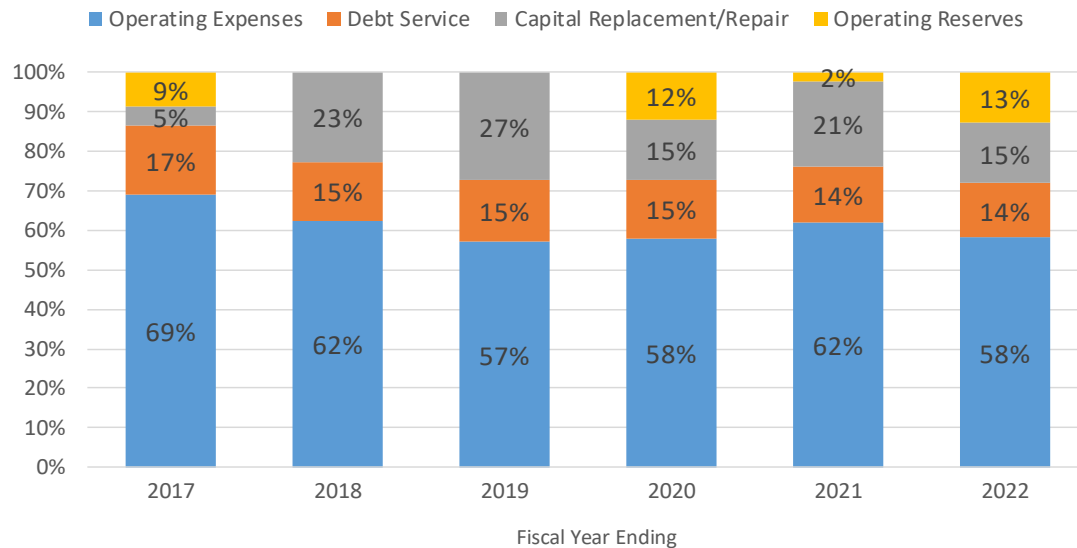
2.3 NEW RATE IMPACTS

Components of revenue requirement are shown in **Figure 7**. Operating expenses are the largest component of cost, followed by capital replacement/repair, debt service, and operating reserves.

Single Family Residential Impacts

Figure 8 shows the water bill impact for a typical single family home in the off-peak months using the seasonal water rate structure in a non-drought period. Single family homes typically use 7 HCF per month in the winter (calculated using January and February data 2011 through 2015). **Figure 9** shows the water bill impact for a typical single family home in the peak months using the seasonal water rate structure in a non-drought period. Single family homes typically use 17 HCF per month in the summer (calculated using July and August data 2011 through 2015).

Figure 7
Components of Water Revenue Requirement



Attachment 2

Figure 8
Typical Water Monthly Bill for the Off-Peak Season

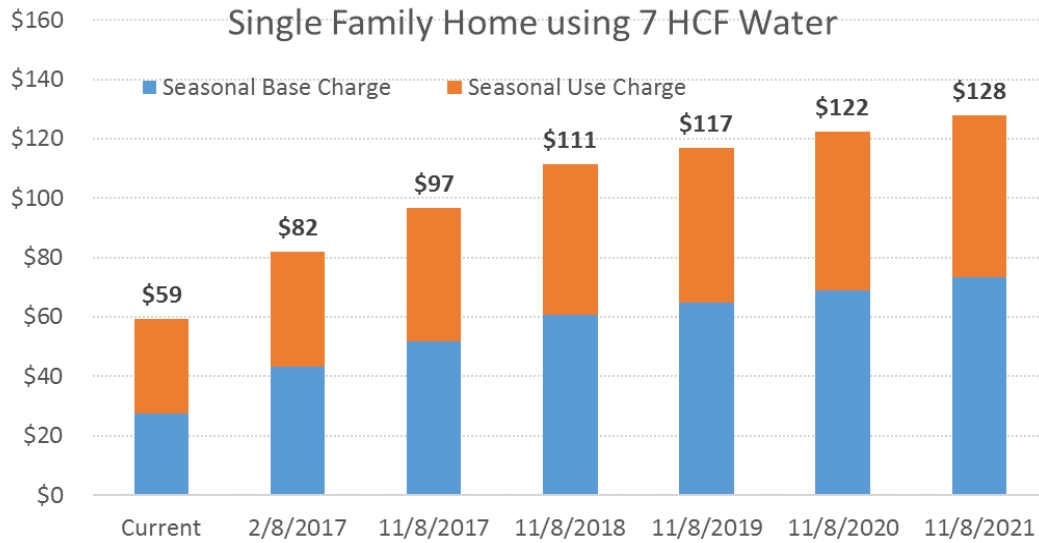
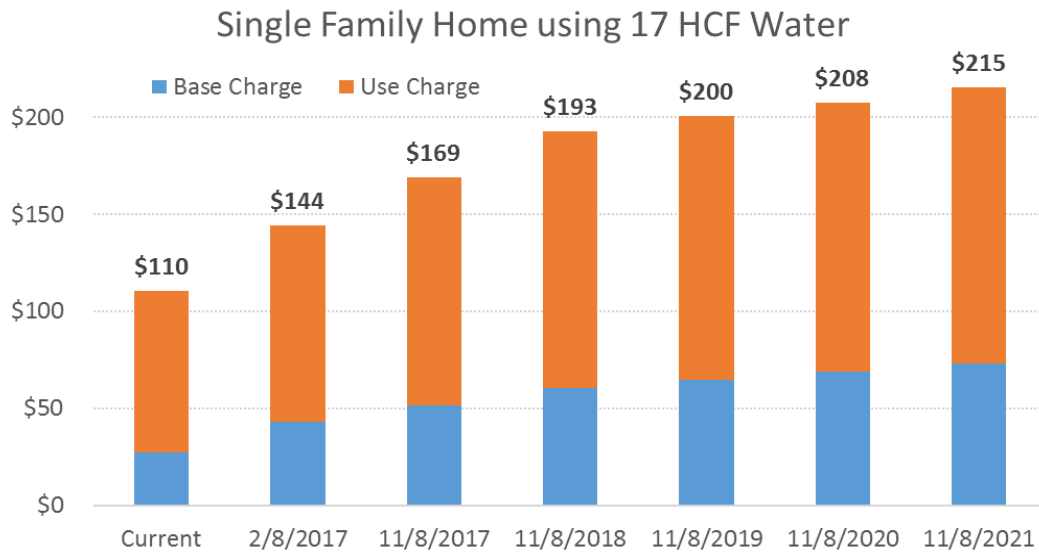


Figure 9
Typical Water Monthly Bill for the Peak Season

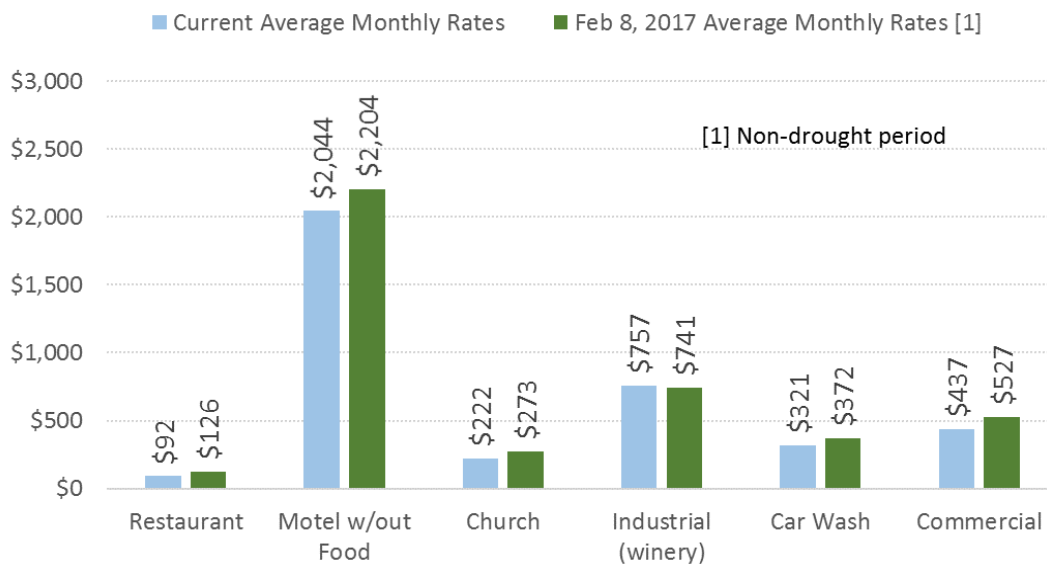


Attachment 2

Non-Residential Users

Six types of non-residential users were selected to illustrate the impacts of water rate increases in February 2017; these include a restaurant, a motel without food, a church, an industrial customer (winery), a cash wash, and a commercial office. **Figure 10** illustrates the impact to each type of water user assuming a non-drought period. Charges are calculated using actual consumption by the customers between January 2015 and December 2015. The impact is greater for all customers with the exception of the industrial customer.

Figure 10
Non-Residential Water Rate Impact

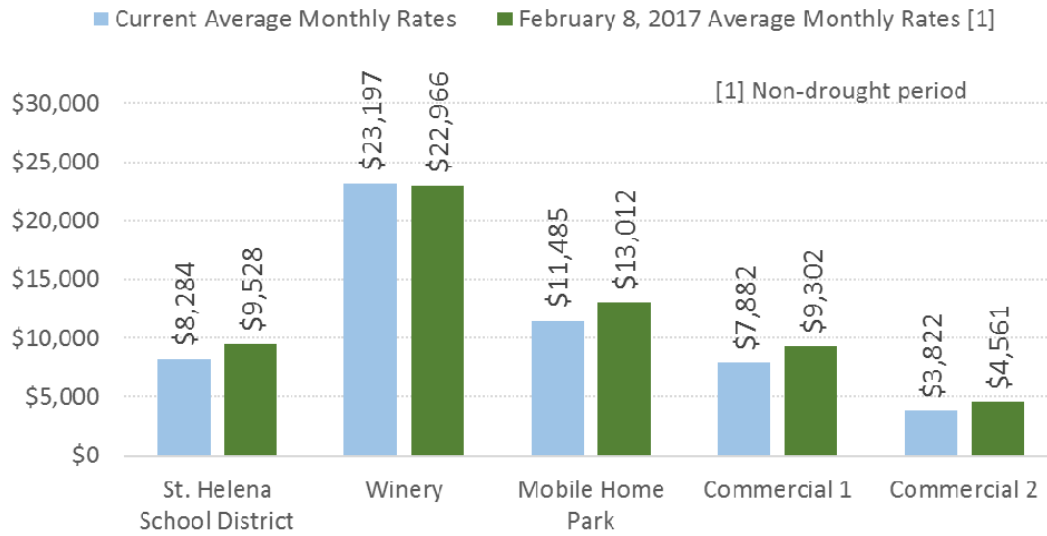
**Large Water Users**

The largest water users in the City include the St. Helena School District, wineries, mobile home park, and some large commercial businesses.

The Study examines the impact to a selection of these users in **Figure 11** using current charges and February 8, 2017 charges assuming a non-drought period. Charges are calculated using actual consumption by the customers between January 2015 and December 2015. In the selection, average monthly charges increase for all customers except the winery. Actual water bills will differ from customer to customer.

Attachment 2

Figure 11
Average Monthly Water Charges for Large Water Users



Attachment 2

Section 3: WASTEWATER RATE STUDY SUMMARY

3.1 KEY FINDINGS

- The City has been using wastewater fund reserves to fund operations. At the end of fiscal year 2016 (June 30) the operating fund had a negative unrestricted net position of <\$79,805>. At the end of fiscal year 2017, the operating fund is expected to have a negative unrestricted net position of <\$27,000>. System rehabilitation is being funded from reserves because depreciation is not currently included in the rates. This is unsustainable.
- The City has identified a minimum of \$15.4 million, net of grant funds and existing bonds, in capital improvements in today's dollars to be funded over the next 10 years. In future dollars this totals \$17.7 million to be funded over the next 10 years. The financing plan assumes that:
 - o Phases 1 and 2 of the wastewater treatment plant upgrades will be debt-financed.
 - o Reserves will be used to finance \$3.7 million for replacement of the wastewater reclamation facility operations building and shop, which is expected to be accomplished fiscal year 2021 through fiscal year 2023.
 - o Cash will fund the remaining CIP costs.
- By raising the rates in February 2017 the City will generate sufficient revenue to meet its bond covenants, to begin building a healthy reserve, to fund necessary capital improvements and to fully fund wastewater operations without using other City funds. A healthy reserve is necessary to fund emergencies and other unanticipated capital projects. Without the rate increase the wastewater fund is projected to have a negative fund balance within two fiscal years and would have to be loaned money from other City funds, taking away money for other essential City services.
- The new rate structure improves equity among certain customer classes by basing rates on typical flow and strength characteristics of each customer type. Multi-family dwellings and mobile home parks, which display characteristics more similar to residential than non-residential, are shifted to residential. Schools pay on a flat monthly rate per student basis. Non-residential customers' water use is determined by average winter water use, by customer type, to account for water that does not go to the wastewater treatment plant (applied outdoors or otherwise does not enter the sewer collection system).

Table 2 on the next page shows the new wastewater rate schedule. The current rate schedule cannot be compared with the new rate schedule because the structure is different; however, a single family unit currently pays a base monthly charge of \$47.35 and a monthly use charge of \$3.94 per HCF of winter water use.

Attachment 2

Table 2
Calculated Wastewater Rate Schedule
- New Rate Structure

Customer Category		Fiscal Year Ending					
		2017	2018	2019	2020	2021	2022
Billing Period Beginning * ----->		2/8/2017	11/8/2017	11/8/2018	11/8/2019	11/8/2020	11/8/2021
Residential							
Single Family	monthly per unit	\$48.04	\$55.24	\$70.13	\$73.03	\$74.18	\$75.23
Multi-Family	monthly per unit	\$29.07	\$33.42	\$42.43	\$44.18	\$44.88	\$45.52
Mobile Homes	monthly per unit	\$43.11	\$49.57	\$62.93	\$65.53	\$66.56	\$67.51
Residential Rate per HCF	per HCF	\$4.69	\$5.39	\$6.84	\$7.12	\$7.23	\$7.34
Schools Flat Rate per Student	monthly per student	\$1.40	\$1.62	\$2.15	\$2.21	\$2.26	\$2.28
Non-Residential							
Car Wash	monthly per account	\$209.93	\$243.25	\$328.36	\$336.45	\$343.13	\$346.45
Religious Places/Community Centers	monthly per account	\$35.34	\$40.85	\$54.06	\$55.68	\$56.71	\$57.34
Commercial [1]	monthly per account	\$62.70	\$72.20	\$92.64	\$96.19	\$97.78	\$99.09
Groceries and Mortuaries	monthly per account	\$433.93	\$492.12	\$552.00	\$595.15	\$599.41	\$613.71
Laundry	monthly per account	\$970.94	\$1,121.45	\$1,475.85	\$1,522.21	\$1,549.87	\$1,567.76
Mixed Retail w/ Food	monthly per account	\$541.20	\$617.30	\$730.21	\$775.32	\$783.78	\$799.17
Motel with Food	monthly per account	\$2,617.64	\$2,978.36	\$3,444.90	\$3,681.23	\$3,715.59	\$3,795.12
Motel without Food	monthly per account	\$642.15	\$738.08	\$933.28	\$972.87	\$987.93	\$1,002.28
Restaurant	monthly per account	\$840.03	\$952.80	\$1,070.03	\$1,153.27	\$1,161.63	\$1,189.23
Napa Valley College	monthly per account	\$2,889.93	\$3,341.62	\$4,436.77	\$4,565.57	\$4,651.20	\$4,701.87
Service Station	monthly per account	\$93.25	\$107.06	\$134.07	\$140.12	\$142.20	\$144.37
Winery Production (Merryvale/Spottswode)	monthly per account	\$989.21	\$1,116.93	\$1,199.98	\$1,310.53	\$1,315.85	\$1,351.87
Sutter Home Winery	monthly per account	\$876.04	\$1,007.39	\$1,278.85	\$1,331.67	\$1,352.66	\$1,371.89
Car Wash	per HCF	\$3.43	\$3.97	\$5.36	\$5.49	\$5.60	\$5.65
Religious Places/Community Centers	per HCF	\$3.72	\$4.30	\$5.69	\$5.86	\$5.97	\$6.03
Commercial [1]	per HCF	\$4.27	\$4.92	\$6.31	\$6.55	\$6.66	\$6.75
Groceries and Mortuaries	per HCF	\$10.30	\$11.68	\$13.10	\$14.12	\$14.22	\$14.56
Laundry	per HCF	\$3.81	\$4.40	\$5.79	\$5.97	\$6.08	\$6.15
Mixed Retail w/ Food	per HCF	\$6.73	\$7.68	\$9.08	\$9.64	\$9.75	\$9.94
Motel with Food	per HCF	\$7.91	\$9.00	\$10.41	\$11.12	\$11.23	\$11.47
Motel without Food	per HCF	\$4.59	\$5.27	\$6.67	\$6.95	\$7.06	\$7.16
Restaurant	per HCF	\$10.18	\$11.54	\$12.96	\$13.97	\$14.07	\$14.41
Napa Valley College	per HCF	\$3.67	\$4.24	\$5.63	\$5.79	\$5.90	\$5.97
Service Station	per HCF	\$4.82	\$5.53	\$6.93	\$7.24	\$7.35	\$7.46
Winery Production (Merryvale/Spottswode)	per HCF	\$17.31	\$19.55	\$21.00	\$22.93	\$23.03	\$23.66
Sutter Home Winery	per HCF	\$4.50	\$5.17	\$6.57	\$6.84	\$6.95	\$7.04

Source: HEC.

* Dates reflect the current billing cycle; if the billing cycle date changes so will these effective dates.

[1] Commercial includes City buildings.

3.2 METHODOLOGY

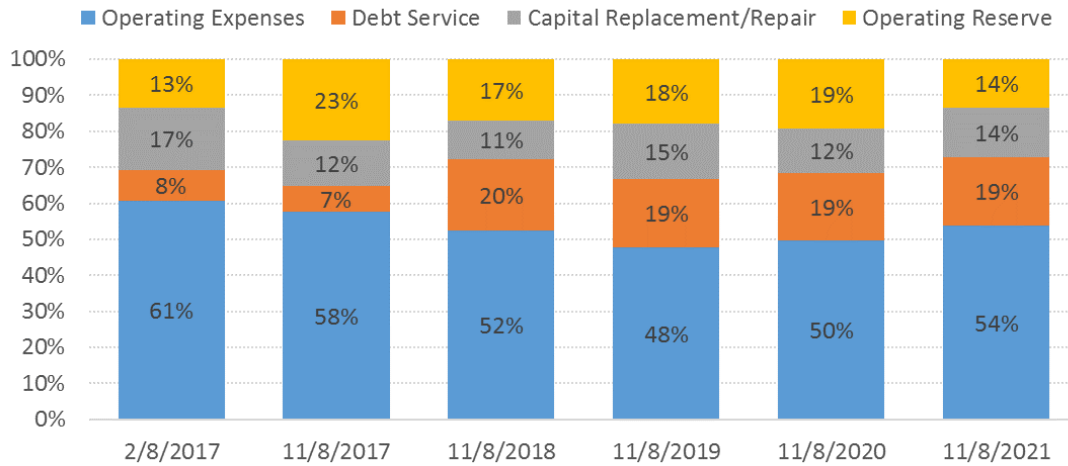
The detailed methodology for calculation of rates is presented in the 'City of St. Helena Wastewater Rate Study Technical Memorandum'.

3.3 NEW RATE IMPACTS

Components of wastewater fund revenue requirement is shown in **Figure 12**. Operating expenses is the largest component of cost (more than 50%).

Attachment 2

Figure 12
Components of Wastewater Revenue Requirement



Residential Bill Impacts

Figure 13 shows monthly bill impacts of the rate increases to single family residential customers under the new rate structure for the next five years.

Figure 13
Wastewater Bill Impact for Single Family Homes

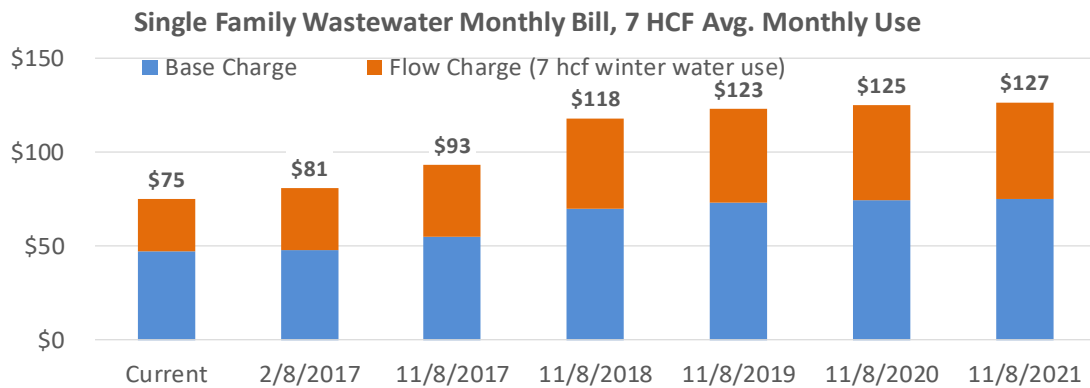


Figure 14 estimates monthly bill impacts of the February 8, 2017 rate changes for a sample of non-residential users. Because monthly bills for non-residential customers will vary from month to month and business type to business type, the examples given are only illustrative. Each non-residential customer will experience a different impact.

Attachment 2

Figure 14
Average Wastewater Monthly Bill Impact for Sample Non-Residential Users

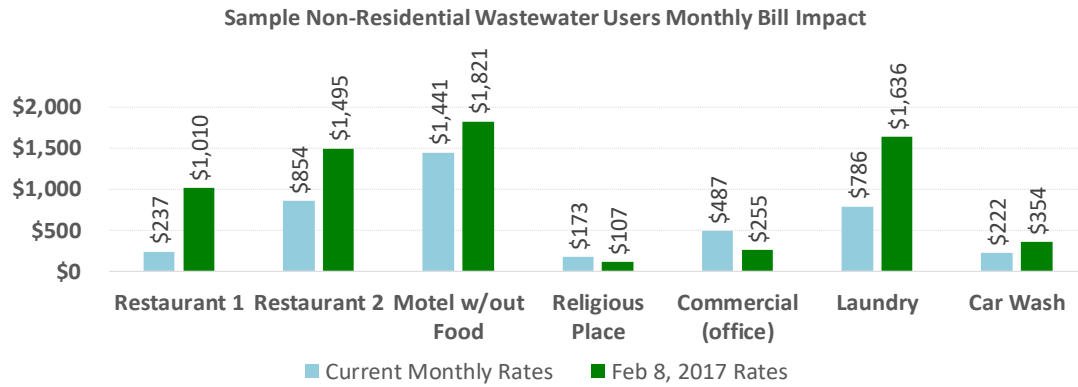
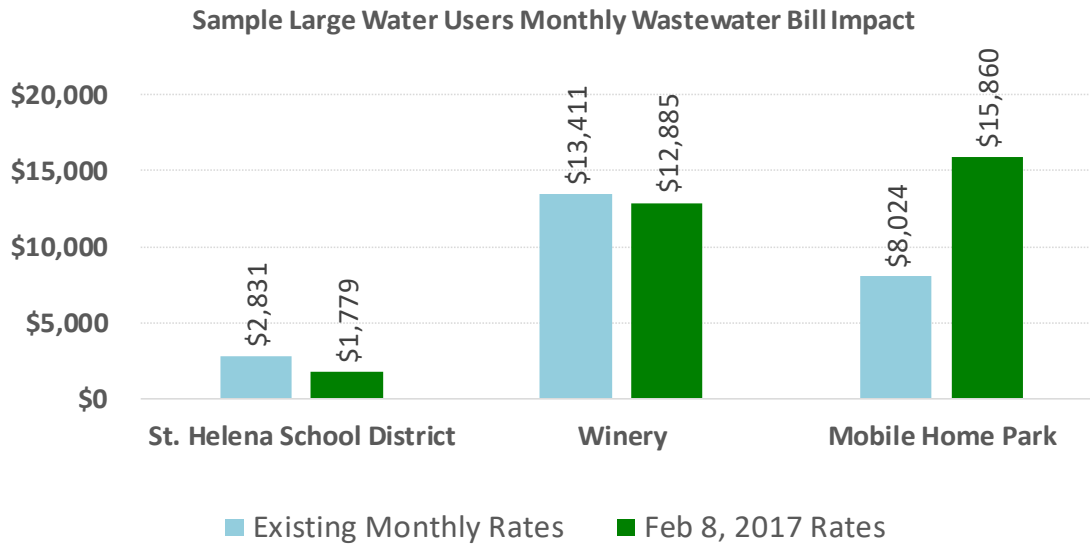


Figure 15 illustrates the impact on the same large water users as in the water rate study, with the exception of the two commercial businesses which do not receive City wastewater service.

Figure 15
Average Wastewater Monthly Bill Impact for Large Water Users



Section 4: COMBINED UTILITIES IMPACT

4.1 RESIDENTIAL IMPACTS

The combined impact of increased water and wastewater rates on typical single family home utility bills is illustrated in **Figure 16** for a typical off-peak month (using 7 HCF water, 7 HCF wastewater), and **Figure 17** for a typical peak month (using 17 HCF water, 7 HCF wastewater). Both comparisons assume a non-drought period.

Figure 16
Single Family Home Utility Costs in Off-Peak Months, based on 7 HCF

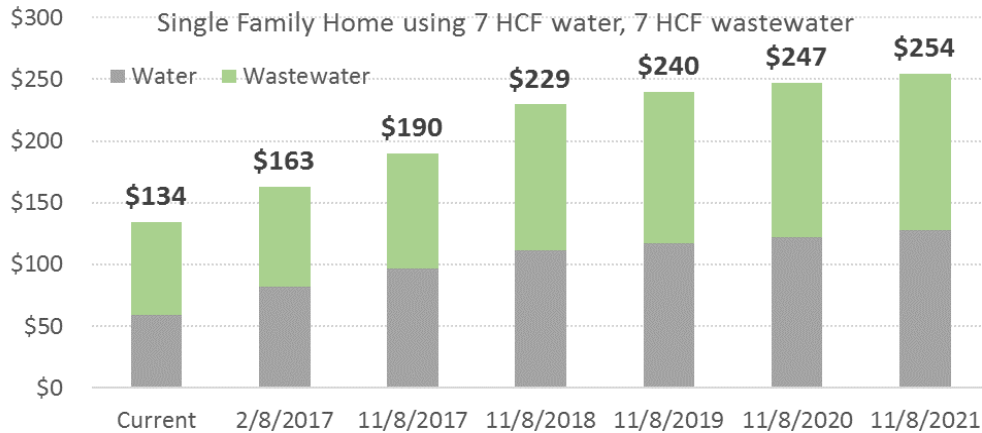
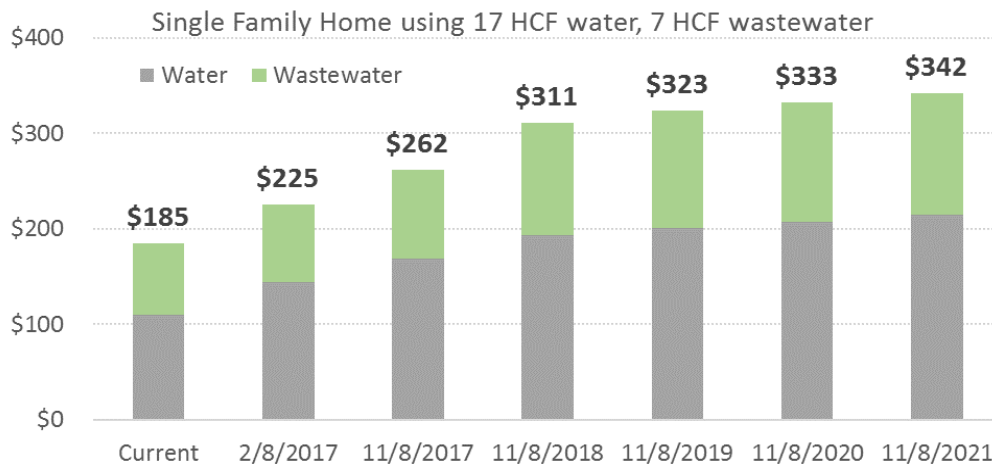


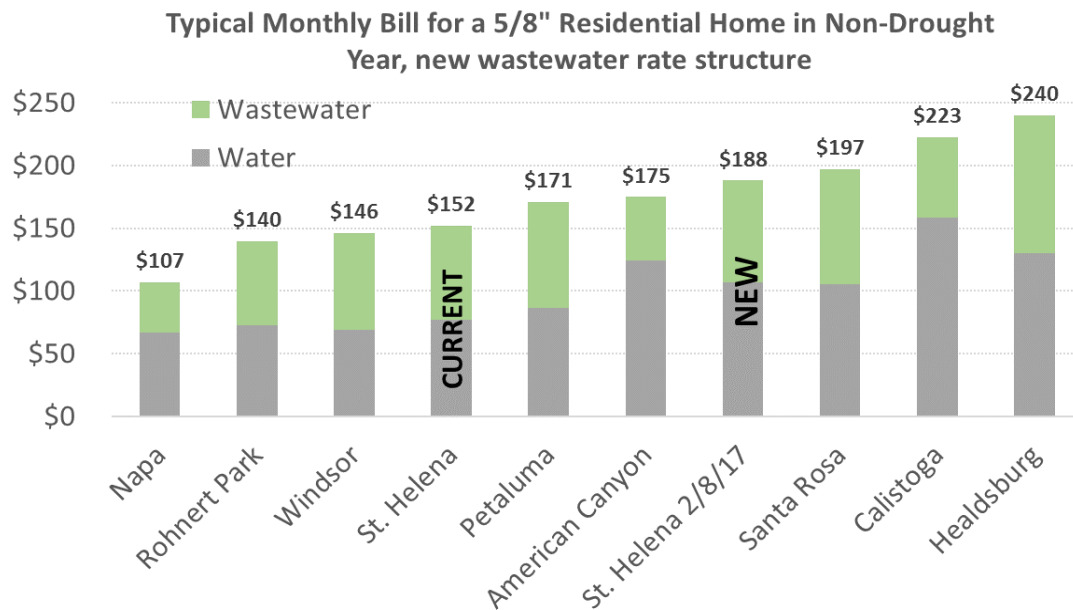
Figure 17
Single Family Home Utility Costs in Peak Months, based on 17 HCF



Attachment 2

Figure 18 illustrates what a household using an average of 11 HCF of water and 7 HCF of wastewater in a month would pay for combined water and wastewater in several comparison cities. For St. Helena, the use rate was calculated using the average of the peak and off-peak use rates. St. Helena's combined water and wastewater rates are currently in the middle of the range and will stay in the middle of the range with the proposed 24% rate increase. Note that the comparison cities utilized may be in the process of rate increases as well; this is a snapshot in time.

Figure 18
Impact of Combined Utility Bill Increases



4.2 AFFORDABILITY

The combined impact of increased utility costs must be considered together since they can increase costs beyond what is considered an affordable threshold. The affordability thresholds are guidelines used by State and Federal funding agencies when determining financing terms for debt-financing projects. The State Revolving Fund (SRF) program bases its evaluation of affordability of water rates on two criteria:

1. The Median Household Income (MHI) of the community compared to the State MHI, and
2. The percentage of MHI spent on water related bills.

Generally, water rates are considered to be burdensome if they are greater than 2.50% of MHI, and wastewater rates are considered to be burdensome if they are greater than 2.00% of MHI (or combined, a total of 4.50% of MHI). If a community's MHI is less than 80 percent of the State MHI, the community is considered "Disadvantaged", in which case a rate greater than 1.5 percent of MHI

Attachment 2

is considered burdensome. St. Helena is not considered disadvantaged, as the City's MHI is more than 127% of the State MHI.

Currently, St. Helena's combined water utility costs are 2.32% of MHI. With the increase in costs in February 2017 water costs will total 1.64% of MHI and wastewater will total 1.24% of MHI. Together, the utilities costs will total 2.88% of MHI. The increased water utility costs are, per the State's definition, well within the affordable threshold. The affordability calculations are shown in **Table 3**.

Table 3
Affordability of Water Utility Costs for Residents

Item	Current Rates	Proposed 2/8/2017 Rates
St. Helena Monthly Median Household Income (MHI) [1]	\$6,535	\$6,535
Monthly Water Bill		
Monthly Water Bill for 11 HCF [2]	\$76.80	\$107.08
Water Bill as Percentage of MHI [3]	1.18%	1.64%
Monthly Wastewater Bill		
Monthly Wastewater Bill for 7 HCF	\$74.93	\$80.84
Wastewater Bill as Percentage of MHI [3]	1.15%	1.24%
Total Monthly Utilities Bill	\$151.73	\$187.92
Monthly Utilities Bill as Percentage of MHI [3]	2.32%	2.88%
Median Household Income (MHI)		
Estimated California [1]	\$61,489	
Estimated St. Helena [1]	\$78,421	
St. Helena MHI as a percentage of the State MHI [4]	127.54%	

Source: HEC, California State Water Resources Control Board, and US Census Bureau.

aff comb

[1] 2014 5-year American Community Survey.

[2] Assumes a non-drought year and average seasonal use rate.

[3] The EPA considers bills unaffordable if combined water and wastewater bills are >4.5% of MHI. The State Clean Water SRF program only provides better loan terms (such as extended term financing, lower interest and principal forgiveness) to communities that are NOT Disadvantaged if the wastewater bill is >4% of MHI.

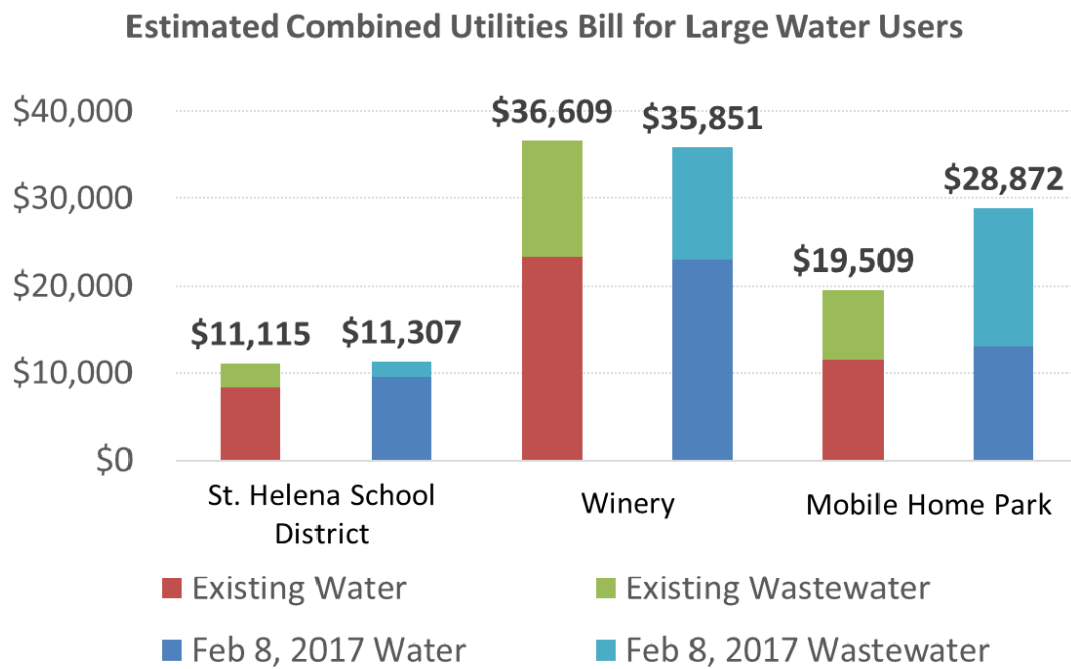
[4] Per the State Water Resources Control Board, a community with an MHI <80% of the Statewide MHI is Disadvantaged.

Attachment 2

4.3 LARGE WATER USERS IMPACTS

Figure 19 shows the cumulative impact of utility rate increases to some of St. Helena’s largest water users in a non-drought period. The St. Helena School District’s water bill increases but its wastewater bill decreases, resulting in a small net increase. The winery’s water bill decreases slightly and its wastewater bill decreases slightly, resulting in a net decrease. The mobile home park’s water bill increases slightly; however, its wastewater bill doubles.

Figure 19
Combined Utilities Impact on Large Water Users



Attachment 2

**HANSFORD ECONOMIC
CONSULTING**



**City of St. Helena (2016)
Water Rate Study
Technical Memorandum**

FINAL
October 31, 2016

HEC Project #150182

Attachment 2

**HANSFORD ECONOMIC
CONSULTING**

PO Box 10384
Truckee, CA 96162

Phone: 530-412-3676
Email: catherine@hansfordecon.com

Technical Memorandum WATER RATE STUDY

To: City of St. Helena

From: Catherine Hansford

Date: October 31, 2016

This technical memorandum presents the detailed water rate study. Support tables are provided in **Attachment A**.

THE WATER FUND

Revenues

The water system is 97% funded by water sales (rates) revenue, 1% by Meadowood area rate surcharges, and 2% by other revenues including investment earnings, finance charges, fees/fines, and other miscellaneous revenues.

Rate revenue is generated according to the current water rate schedule shown in **Table 1**. Under the current rate schedule all customers pay a service charge (or base charge) and a use charge. The service charge is different by meter size, and the use charge varies by customer type. All customers pay use charges in two tiers. The tier 1 rate is applied to single family homes for the first 14 units of water. A unit of water is a hundred cubic feet (HCF). Tier 2 is applied to all water use greater than 14 units consumed each month. The amount of water that tier 1 applies to each month differs by customer type, as shown in **Table 1**.

The Madrone Knoll pump facility (otherwise called the Meadowood pump facility) specifically benefits Meadowood area customers, who are outside the St. Helena city limits. Meadowood area customers pay an additional monthly surcharge for electric use at Meadowood pump facility plus a monthly maintenance fee. The schedule of current Meadowood surcharges is shown in **Table 2**.

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Attachment 2

Page 2 of 27

Water Rate Study, October 31, 2016

Table 1
Current Water Rate Schedule

Customer	Rate Schedule	
Monthly Fixed Service Charge		
Meter Size		Basis of Charge
5/8"	\$27.52	Month
3/4"	\$27.52	Month
1"	\$63.80	Month
1.5"	\$124.12	Month
2"	\$196.50	Month
3"	\$365.51	Month
4"	\$607.01	Month
6"	\$1,210.18	Month
8"	\$1,935.52	Month
Residential Use Charge		[1]
Tier 1 (0-14 Units)	\$4.48	Unit
Tier 2 (15+ Units)	\$6.74	Unit
Multi-Family Residential Use Charge		
Tier 1 (0-5 Units)	\$4.48	Unit
Tier 2 (6+ Units)	\$6.74	Unit
Non-Residential Use Charge		
5/8", 3/4", 1"		
Tier 1 (0-36 Units)	\$4.48	Unit
Tier 2 (37+ Units)	\$6.74	Unit
1.5"		
Tier 1 (0-120 Units)	\$4.48	Unit
Tier 2 (121+ Units)	\$6.74	Unit
2"		
Tier 1 (0-192 Units)	\$4.48	Unit
Tier 2 (193+ Units)	\$6.74	Unit
3"		
Tier 1 (0-360 Units)	\$4.48	Unit
Tier 2 (361+ Units)	\$6.74	Unit
4"		
Tier 1 (0-600 Units)	\$4.48	Unit
Tier 2 (601+ Units)	\$6.74	Unit
6"		
Tier 1 (0-1,250 Units)	\$4.48	Unit
Tier 2 (1,251+ Units)	\$6.74	Unit
8"		
Tier 1 (0-1,920 Units)	\$4.48	Unit
Tier 2 (1,921+ Units)	\$6.74	Unit
Landscape Irrigation Rate (\$ per unit) [2]	\$5.22	Unit

Source: City of St. Helena.

curr rates

[1] 1 unit=100 cubic feet.

[2] Service must be for landscape irrigation of public space (park, school or residential common area). Customer must implement water conservation best management practices, as determined by the city. Customer must accept more stringent water use cutbacks during periods of water shortage, as determined by the City.

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Attachment 2

Page 3 of 27

Water Rate Study, October 31, 2016

Table 2
Current Monthly Meadowood Area Surcharges

Total Water Consumption in HCF used by all accounts served by the same special reservoirs and pumping stations

0-150	\$1.81
151-200	\$1.45
201-250	\$1.25
251-300	\$1.07
301-350	\$0.88
351-400	\$0.80
401-450	\$0.74
451-500	\$0.65
501-550	\$0.56
551-600	\$0.50
601-1,250	\$0.49
1,251-1,500	\$0.48
1,501-1,750	\$0.47
1,751-2,000	\$0.43
2,001-2,250	\$0.40
2,251-2,500	\$0.39
2,501-2,750	\$0.37
2,751-3,000	\$0.36
3,001-3,250	\$0.34
3,251-3,500	\$0.33
3,501-3,750	\$0.32
3,751 and more	\$0.31
Per Residential Unit	\$27.94
Meadowood Complex (99 units + clubhouse)	\$2,793.60

Source: City of St. Helena.

pump

Expenses

The water fund includes an operating and capital fund. Annual operating costs include all water system operating and capital expenses. Over the past five years, personnel costs (salaries and benefits), Napa purchased water, capital projects, other capital fund expenses, and services have been the largest expenditure items. Personnel costs and Napa purchased water have comprised approximately 64 percent of annual costs. Percentage share of historical expenses by expense category is shown in **Figure 1**.

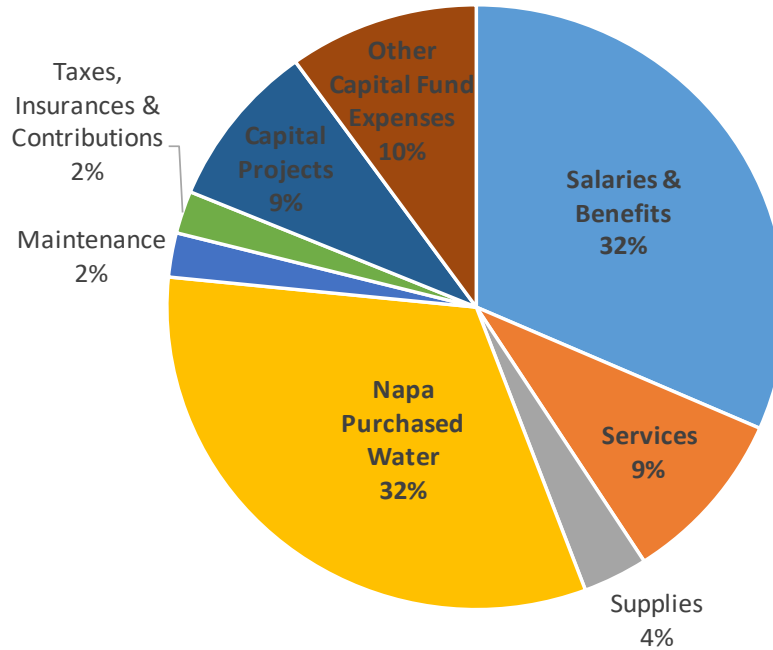
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Attachment 2

Page 4 of 27

Water Rate Study, October 31, 2016

Figure 1
Typical Annual Water Fund Expenses

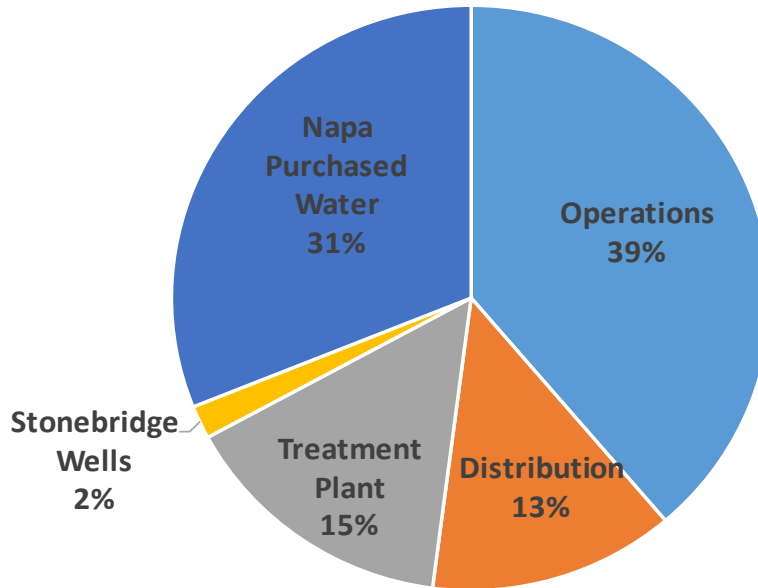


The operating fund expenses are further broken down into operations, distribution, treatment plant, Stonebridge Wells, and Napa purchased water. Percentage share of historical operating annual expenses by these categories is shown in **Figure 2**.

Supporting financial data is provided in Attachment A, **Tables A-1** through **A-3**.

Prepared by HEC

Figure 2
Operating Fund Expenses



THE WATER SYSTEM

The City's water sources include surface water from Bell Canyon Reservoir, groundwater from Stonebridge Wells, and purchased treated water from the City of Napa. The Louis Stralla Water Treatment Plant (water treatment plant), which treats surface water stored in Bell Canyon Reservoir, has a capacity of 4.3 million gallons a day (MGD); however, there are flow limitations in the inlet piping which restricts use of the plant to less than its capacity. Stonebridge Wells includes two active groundwater wells and a filtration facility, including filtration tanks, chlorination facilities and a backwash return system. The filter removes iron and manganese. Treated water from the City's water sources is distributed via six storage tanks and four pump stations.

The City first entered into an agreement with the City of Napa for delivery of treated water in September 2006. The third amendment to that agreement, entered into in December 2011, increases the minimum annual delivery to 600 acre-feet with optional delivery up to 800 acre-feet. Optional additional delivery of 200 acre-feet may be delivered provided the City of Napa has sufficient water supply. If Napa does not have sufficient supply it will attempt to acquire supplemental dry-year water on a single year basis from an outside source. Price and payment terms of the optional supply will differ from the base supply, as detailed in the agreement.

Untreated water available for construction water purposes only is also available for purchase from the Lower Reservoir adjacent to York Creek.

Attachment 2

Page 6 of 27

Water Rate Study, October 31, 2016

Historical system-wide water deliveries are shown in **Table 3**. Almost three-quarters of annual water production is used year-round consistently, and 26% of water production is additional water delivered for increased demand between May and October.

Table 3
Monthly Water Delivery

Month	2013	2014	2015		Avg. Annual Water Delivery (millions of gallons)	Percent of Delivery by Month
<i>millions of gallons</i>						
Jan	27.731	36.865	27.682		30.759	6%
Feb	25.853	24.743	29.805		26.800	5%
Mar	32.701	28.927	39.625		33.751	6%
Apr	43.635	31.822	39.224		38.227	7%
May	59.950	49.464	41.328		50.247	9%
Jun	57.567	50.268	46.679		51.505	10%
Jul	65.613	57.505	51.105		58.074	11%
Aug	67.830	56.303	54.491		59.541	11%
Sep	72.640	55.720	55.173		61.178	11%
Oct	65.278	52.195	52.491		56.655	11%
Nov	44.466	32.516	35.409		37.463	7%
Dec	38.386	30.405	28.648		32.480	6%
Total	601.651	506.733	501.661	A	536.681	100%
Peaking Period (May through October inclusive)				B	337.200	63%
Base Monthly Flow				C	33.247	
Base Annual Flow				D = C*12	398.962	74%
Additional Flow				E = A-D	137.719	26%

Source: City of St. Helena.

delivery

The City uses conjunctive management to preserve its water supplies in the long-term. The share of water supply from one particular source might change month to month. **Figure 3** shows the percentage share of water supply each month using data from 2013 and 2014, both non-drought years. The graph shows that Bell Canyon water is consistently about 40% of the total water supply each month. Water from the City of Napa and Stonebridge Wells fluctuates from year to year but the most variable use of water supply is Stonebridge Wells.

During a non-drought year approximately 40% of water supply is from Bell Canyon, 32% from the City of Napa, and 28% from Stonebridge Wells. This is illustrated in **Figure 4**. During a drought year the City reduces pumping from Stonebridge Wells to preserve groundwater supplies. The percentage share of water supplies during a drought year are 46% from Bell Canyon, 38% from the

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Attachment 2

Page 7 of 27

Water Rate Study, October 31, 2016

City of Napa, and 16% from Stonebridge Wells, as illustrated in **Figure 5**. Total water deliveries are reduced during a drought year. In 2013, a non-drought year, almost 602 million gallons of water were delivered. In 2015, a drought year, almost 502 million gallons of water were delivered.

Figure 3
Water Sources by Month in a Non-Drought Year

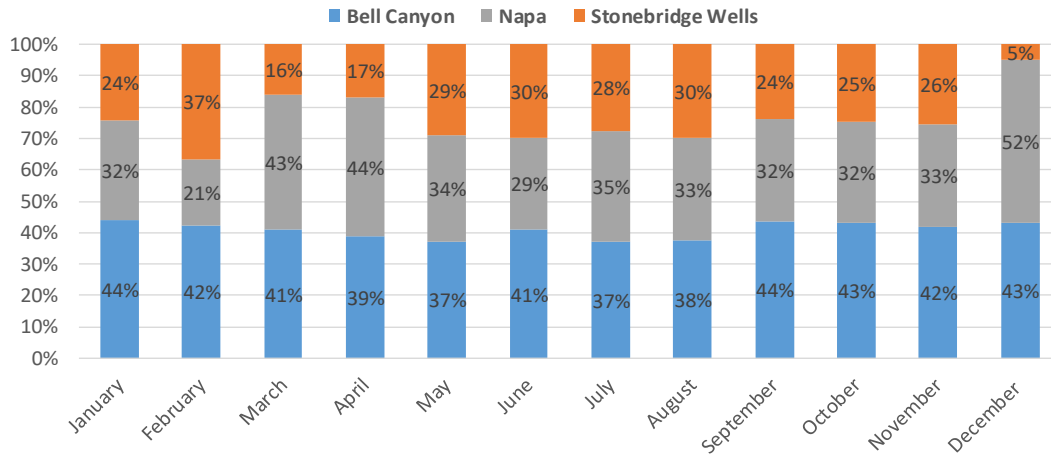
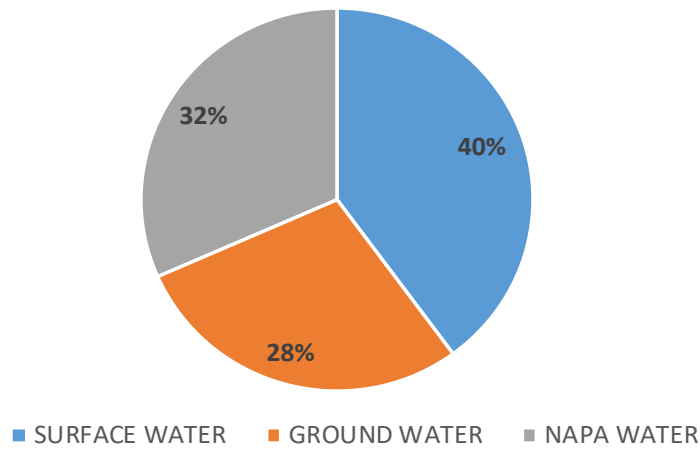
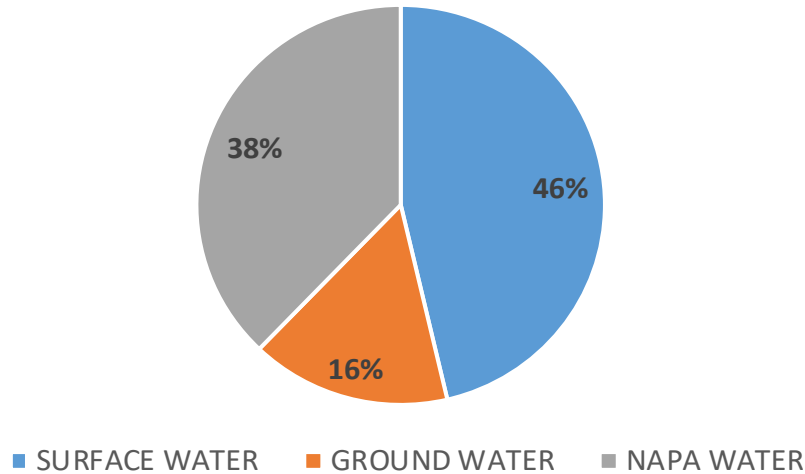


Figure 4
Water Supplies in a Non-Drought Year



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Figure 5
Water Supplies in a Drought Year



WATER USE

Water use fluctuates year to year depending on several factors including, but not limited to, growth, weather, sustained drought, plumbing retrofits, and pricing of water. Average water use by customer type for the past five years is used as the basis on which to project water use over the next five years in the rate study. Historical annual and average annual water use by customer type is shown in **Table A-4**.

Comparison of production and consumption in **Table A-5** shows that unaccounted for water is about 7% of total deliveries which is well within acceptable industry standards. Some unaccounted water will be for hydrant flushing, running to waste at wells and other operational uses of water. Not all unaccounted for water is leaked.

Customer Characteristics

St. Helena experiences greater water demand during summer months than winter months primarily due to outdoor irrigation applications of water. **Table 4** shows average monthly annual use, winter use, and summer use by customer category. With the exception of multi-family, commercial, and laundry customers all water customers use twice as much water, or more, during the summer months than they do in the winter months.

Attachment 2

Page 9 of 27

Water Rate Study, October 31, 2016

Table 4
Customer Usage Characteristics

Customer Type	Number of		Average	Winter	Summer	Summer
	Accounts	Units	Monthly Use	Monthly Average	Monthly Average	to Winter Ratio
			<i>hcf monthly use per unit</i>	[1]	[2]	
Residential						
Single Unit	2,028	2,028	11	7	17	2
Multi-Fam	102	673	7	6	7	1
Mobile Homes	4	247	7	7	13	2
Subtotal Residential	2,134	2,948				
Non-Residential			<i>use per meter</i>			
Commercial	197		34	28	41	1
Industrial	21		541	359	647	2
Landscape	32		53	11	108	10
Religious Places [3]	15		17	9	28	3
Laundry	1		256	265	254	1
Library Schools	14		119	73	164	2
Motel/Hotel	16		152	93	170	2
City Owned	21		52	18	74	4
Subtotal Non-Residential	317					
Total	2,451	2,948				

Source: City of St. Helena and HEC.

char

[1] January and February consumption.

[2] July and August consumption.

[3] Includes community centers.

REVENUE REQUIREMENT

The revenue requirement refers to the amount of money that must be raised for revenue sufficiency of the water fund through rates. The projection of revenue requirement is the cornerstone for calculation of rates. This section explains the derivation of revenue requirement for this Study. Components of revenue requirement include:

- Capital Improvements
- Debt Service
- Meter Replacement Program
- Operations Expenses and Reserves
- System Rehabilitation

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Attachment 2

Page 10 of 27

Water Rate Study, October 31, 2016

Non-water sales revenue projections are credited against projected operations costs. Non-water sales include investment earnings, finance charges (late fees for past due payments), existing Meadowood area surcharges, meter replacement fees, and other miscellaneous revenues.

Capital Improvements

Water system capital costs in any one year are dependent on the state of the current infrastructure to serve existing customers and necessary improvements to accommodate potential new customers. **Table 5** summarizes the capital improvement costs identified by the City as necessary in the next ten years. The costs do not include project costs that already have funding sources identified (i.e. have a grant secured or are to be funded with existing City bond proceeds). All costs are expressed in future dollars. The total ten-year capital improvements projects (CIP) cost is estimated at \$20.8 million. Of this total it is anticipated that \$13.8 million will be spent in the next five years.

Costs are further allocated to existing and future customers based on their estimated use of the facilities. Only \$2.0 million of the total cost is for projects partially benefiting future customers. These projects include Meadowood tank upgrades, Dwyer Road booster improvements, Bell House valve replacement, Holmes tank upgrade, Bell Canyon creek flow measurement, Tank 2 rehabilitation, and Bell Canyon intake tower replacement. **Table A-6** and **Table A-7** provide the water system CIP detail in current and future dollars. Future costs are inflated using the Engineering News Record Construction Cost Index (ENR CCI) past 20-year annual average increase of 3.1%.

Table 5
Capital Improvement Costs Summary

Customer	Estimated CIP Costs in Future Dollars		
	Through 2022	2023 to 2027	Total CIP
Existing Customer Share	\$11,747,982	\$7,006,340	\$18,754,322
Future Customer Share	\$2,045,145	\$0	\$2,045,145
Total Existing and Future	\$13,793,127	\$7,006,340	\$20,799,466

Source: HEC.

cip share

CIP funding sources of costs are shown in **Table 6**, with supporting data in **Table A-8**.

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Attachment 2

Page 11 of 27

Water Rate Study, October 31, 2016

Table 6
Sources of Funding for CIP Costs

Source	Total Cost	Total Through FY 2022	Fiscal Year Ending					
			2017	2018	2019	2020	2021	2022
				Year 1	Year 2	Year 3	Year 4	Year 5
Future \$'s								
Cash - Capital Fund	\$14,571,782	\$7,565,442	\$274,386	\$1,496,091	\$2,069,348	\$1,195,209	\$1,750,606	\$779,802
Cash - Operations Fund	\$405,604	\$405,604	\$0	\$0	\$0	\$56,453	\$349,151	\$0
Debt - Capital Fund	\$2,001,334	\$2,001,334	\$569,522	\$1,431,811	\$0	\$0	\$0	\$0
Reserves	\$1,775,602	\$1,775,602	\$0	\$159,385	\$0	\$0	\$0	\$1,616,217
Existing Customers CIP	\$18,754,322	\$11,747,982	\$843,908	\$3,087,287	\$2,069,348	\$1,251,662	\$2,099,757	\$2,396,019

Source: City of St. Helena and HEC.

exis rates

Debt Service

The City has existing debt service for a water revenue bond sold in 2006. In 2012, the City entered into an installment purchase agreement with the California Statewide Communities Development Authority to finance for water and wastewater system improvements. The debt is secured by a pledge of the net revenues of the water and wastewater system. The installment purchase agreement includes provisions requiring that the City set rates, fees and charges for each fiscal year so as to yield system net revenues during each fiscal year equal to at least 120% of the annual debt service (including parity debt). The City is currently, and has been, out of compliance with this requirement, which will impact the City's rating for future debt if not corrected. Existing yearly debt service payments are shown in **Table A-9**.

New debt service is assumed to be incurred, financed by the State Drinking Water Revolving Fund (DWSRF), for pump station upgrades and Bell Canyon intake tower replacement. The total estimated DWSRF-funded project costs are \$2.3 million. Due to the size of the projects a 15% contingency factor was added to the estimated City cost. The calculated annual new debt service is calculated based on total project costs of \$2.7 million. The estimated annual debt service is \$166,000 although an additional 10% is due in the first 10 years of the loan to build up a reserve of one year of debt service. Existing customers' share of the debt is 86%; the remaining debt service is for future customers' share of the Bell Canyon intake tower replacement costs. The calculated new debt is shown in **Table 7**.

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Attachment 2

Page 12 of 27

Water Rate Study, October 31, 2016

Table 7
Estimated DWSRF New Debt

Item	Construction Fiscal Year
Projects Needed in Next 3 Years	2018
Pump Station Upgrades	\$212,514
Bell Canyon Intake Tower Replacement	\$2,104,494
Subtotal Costs	\$2,317,008
Contingency (15%) [1]	\$347,551
Total	\$2,664,559
Estimated Annual Debt Service [2], [3]	\$166,118
<i>Existing Customers Debt Service</i>	<i>\$143,485</i>
<i>Future Customers Debt Service</i>	<i>\$22,632</i>
Total Debt-Financed Infrastructure Cost	\$2,664,559
Estimated Total Financing Costs	\$657,795

Source: State Water Resources Control Board and HEC.

new debt

[1] State-funded projects typically cost more (more administration as well as American Iron and Steel requirements, and labor reporting).

[2] DWSRF loan assumptions:

Interest Rate (2016 rate is 1.6%)	2.2%
Term (years)	20

[3] Annual debt service is 10% higher for the first 10 years to build one year of reserve.

Meter Replacement Program

The City does not currently collect for replacement of water meters; costs of replacement are currently paid for with reserves, which is unsustainable. This rate study includes calculation of annual costs to replace meters. Each year City crews will replace older water meters that are near the end of their useful life, or which are inaccurately measuring water flow. The cost to replace meters by size of meter was used to determine the annual cost of the meter replacement program. The estimated meter replacement fee revenues are shown in **Table 8**. Meter replacement program costs will increase as the number of City water meters increases and as the cost of installation increases. It is estimated that the meter replacement program will increase from approximately \$47,000 in 2017 to \$54,000 in 2022. Meter replacement costs by size are shown in **Table A-10**.

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Attachment 2

Page 13 of 27

Water Rate Study, October 31, 2016

Table 8
Estimated Meter Replacement Fee Program Cost

Item	Assumption	Fiscal Year Ending					
		2017	2018	2019	2020	2021	2022
			Year 1	Year 2	Year 3	Year 4	Year 5
<i>Projected Growth in Water Meters</i>			5	5	5	5	5
City Water Meters in 2016 [1]		2,485	2,485	2,485	2,485	2,485	2,485
Projected City Water Meters		2,485	2,490	2,495	2,500	2,505	2,510
Estimated Replacement Cost per Meter [2]	3.0%	\$374	\$385	\$397	\$409	\$421	\$434
Percentage of Meters Replaced	20-yr cycle	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Estimated Meter Replacement Program Cost		\$46,494	\$47,985	\$49,524	\$51,112	\$52,751	\$54,442

Source: City of St. Helena and HEC.

meter cost

[1] Includes each meter in compound meters.

[2] Weighted average cost of meters.

Operations Expenses and Reserves

Budgeted fiscal year 2017 expenses are used to project future year expenditures. All operating expenditures are increased 5% each year with the exception of maintenance, taxes, insurances and contributions which are increased at 10% per year, and Napa purchased water, increased at 3% per year per the 2011 amended agreement with the City of Napa. **Table A-11** shows historical annual average operating cost increases of 5.3%.

The water rate study has a target cash reserve of six to twelve months of operating expenses. Additional rate revenue will have to be collected to achieve this reserve fund target within the five-year period.

System Rehabilitation

Depreciation is used as the basis for which to collect rates to cover system rehabilitation costs. Inclusion of system rehabilitation costs demonstrates fiscal responsibility toward the assets to potential future investors and helps to establish good credit¹. Depreciation is calculated based on existing water facilities and new facilities built in the next 5-year period. **Table 9** shows the total annual amount included in the rates for system rehabilitation. Supporting data is provided in **Tables A-12** and **A-13**.

¹ Per Governmental Accounting Standards Board (GASB) 34, local governments must report on the value of their infrastructure assets and plan for asset maintenance (including collecting sufficient revenue) to obtain good credit when issuing bonds or procuring other forms of financing for long-term construction projects.

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Attachment 2

Page 14 of 27

Water Rate Study, October 31, 2016

Table 9
System Rehabilitation Annual Budget Estimate

Depreciation	Fiscal Year Ending					
	2017	2018 Year 1	2019 Year 2	2020 Year 3	2021 Year 4	2022 Year 5
Existing Assets Annual Depreciation	\$875,144	\$902,107	\$929,901	\$958,551	\$988,084	\$1,018,526
New Assets Annual Depreciation	\$25,985	\$72,094	\$104,294	\$158,594	\$268,189	\$309,305
Total Annual Depreciation	\$901,130	\$974,201	\$1,034,195	\$1,117,145	\$1,256,273	\$1,327,831
Percentage of Depreciation in Rates	0%	100%	100%	100%	100%	100%
Estimated System Rehabilitation Cost	\$0	\$974,200	\$1,034,200	\$1,117,100	\$1,256,300	\$1,327,800

Source: HEC.

depr

Meadowood Area Surcharges

Currently approximately \$50,000 each year is generated from surcharges applied in the Meadowood area, which is outside of the City limits. Per the September 13, 2016 Task Force meeting, Meadowood area surcharges are to be eliminated when new rates go into effect February 8, 2017.

Revenue Requirement

Table 10 on page 16 provides the projection of annual costs and revenues and the resulting revenue requirement through fiscal year 2027. Total revenue requirement is projected to increase from \$5.5 million in fiscal year 2017 to \$8.4 million in fiscal year 2022, and \$9.6 million in fiscal year 2027.

COST CLASSIFICATION

After determining a utility's revenue requirements, a utility's next step is determining the cost of service. Utilizing a public agency's approved budget, financial reports, operating data, and capital improvement plans, the rate study categorizes (functionalizes) the costs, expenses, and assets of the water system among major operating functions to determine the cost of service.

After the assets and the costs of operating those assets are properly categorized by function, the rate study allocates those "functionalized costs" to the various customer classes (e.g., single-family residential, multi-family residential and commercial) by determining the characteristics of those classes and the contribution of each to incurred costs such as peaking factors or different delivery costs, service characteristics and demand patterns. Rate design is the final part of the rate-making procedure. The revenue requirement and cost of service analysis are used to determine appropriate rates for each customer class.

Cost classification provides a guideline for the City in determining the portion of revenue requirement to collect through service charges versus use charges. Generally, rates reflect fixed costs in the service charges (flat monthly rates) and variable costs in the use charges (per HCF of

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Attachment 2

Page 15 of 27

Water Rate Study, October 31, 2016

water). Through the cost classification analysis, it is calculated that fixed costs comprise about 70% of St. Helena's water system total annual operating costs. Currently St. Helena collects 30% of costs recovered through rates in service charges and 70% in use charges.

If all fixed costs (70%) were in the service charge the bill increase would be dramatic for people on a fixed income. This rate study gradually increases the allocation of total costs to base charges from 31% in 2017, to 36% in 2022, and to 41% in 2027. Allocation of the projected revenue requirement is shown in **Table 11**. Supporting detail is shown in **Tables A-14 and A-15** in **Appendix A**.

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Attachment 2

Page 16 of 27

Water Rate Study, October 31, 2016

Table 10
Projected Revenue Requirement

Operating Expenses and Revenues		Fiscal Year Ending										
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Annual Increase	Budgeted	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	
Operating Expenses												
Salaries & Benefits	5.0%	\$1,612,243	\$1,692,855	\$1,777,498	\$1,866,373	\$1,959,691	\$2,057,676	\$2,160,560	\$2,268,588	\$2,382,017	\$2,501,118	\$2,626,174
Services	5.0%	\$507,525	\$532,901	\$559,546	\$587,524	\$616,900	\$647,745	\$680,132	\$714,139	\$749,846	\$787,338	\$826,705
Supplies	5.0%	\$138,690	\$145,625	\$152,906	\$160,551	\$168,579	\$177,007	\$185,858	\$195,151	\$204,908	\$215,154	\$225,911
Napa Purchased Water	3.0%	\$1,349,019	\$1,389,490	\$1,431,174	\$1,474,109	\$1,518,333	\$1,563,883	\$1,610,799	\$1,659,123	\$1,708,897	\$1,760,164	\$1,812,969
Maintenance	10.0%	\$157,079	\$172,787	\$190,066	\$209,072	\$229,979	\$252,977	\$278,275	\$306,103	\$336,713	\$370,384	\$407,422
Taxes, Insurances & Contributions	10.0%	\$133,167	\$146,484	\$161,132	\$177,245	\$194,970	\$214,467	\$235,913	\$259,505	\$285,455	\$314,001	\$345,401
Meter Replacement Program		\$19,373	\$47,985	\$49,524	\$51,112	\$52,751	\$54,442	\$56,186	\$57,987	\$59,845	\$61,763	\$63,741
WTP Condition Assessment		\$0	\$0	\$0	\$0	\$174,576	\$0	\$0	\$0	\$0	\$0	\$0
Update GIS Maps of Water System		\$0	\$0	\$0	\$56,453	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Water Master Plan Update		\$0	\$0	\$0	\$0	\$174,576	\$0	\$0	\$0	\$0	\$0	\$0
Total Operating Expenses		\$3,917,096	\$4,128,126	\$4,321,846	\$4,582,439	\$5,090,354	\$4,968,197	\$5,207,724	\$5,460,595	\$5,727,681	\$6,009,921	\$6,308,323
Debt Service												
Existing (2012B & 2006A Bonds)		\$989,251	\$982,916	\$985,767	\$982,373	\$980,513	\$980,132	\$974,551	\$974,027	\$971,916	\$969,490	\$964,087
New Debt for 2018 Improvements		\$0	\$0	\$182,729	\$182,729	\$182,729	\$182,729	\$182,729	\$182,729	\$182,729	\$182,729	\$182,729
Subtotal Debt Service		\$989,251	\$982,916	\$1,168,496	\$1,165,102	\$1,163,243	\$1,162,861	\$1,157,281	\$1,156,757	\$1,154,646	\$1,152,220	\$1,146,816
Capital Projects (cash funded)		\$274,386	\$521,891	\$1,035,148	\$78,109	\$494,306	\$0	\$523,620	\$362,953	\$0	\$0	\$0
System Rehabilitation		\$0	\$974,200	\$1,034,200	\$1,117,100	\$1,256,300	\$1,327,800	\$1,393,200	\$1,472,700	\$1,531,300	\$1,609,700	\$1,665,200
Operating Reserves		\$500,000	\$0	\$0	\$950,000	\$200,000	\$1,069,600	\$600,000	\$700,000	\$965,000	\$800,000	\$650,000
Total Costs		\$5,680,733	\$6,607,133	\$7,559,690	\$7,892,750	\$8,204,202	\$8,528,458	\$8,881,824	\$9,153,004	\$9,378,627	\$9,571,841	\$9,770,340
Non-Operating Credits [Expenses]												
Investment Earnings	constant	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000
Finance Charges	constant	\$36,000	\$36,000	\$36,000	\$36,000	\$36,000	\$36,000	\$36,000	\$36,000	\$36,000	\$36,000	\$36,000
Surcharge-Meadowood [1]		\$48,643	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Revenue	constant	\$32,850	\$32,850	\$32,850	\$32,850	\$32,850	\$32,850	\$32,850	\$32,850	\$32,850	\$32,850	\$32,850
Meter Replacement Fee		\$19,373	\$47,985	\$49,524	\$51,112	\$52,751	\$54,442	\$56,186	\$57,987	\$59,845	\$61,763	\$63,741
Total Non-Operating Credits [Expenses]		\$161,866	\$141,835	\$143,374	\$144,962	\$146,601	\$148,292	\$150,036	\$151,837	\$153,695	\$155,613	\$157,591
Total Revenue Requirement		\$5,518,867	\$6,465,298	\$7,416,316	\$7,747,788	\$8,057,602	\$8,380,166	\$8,731,788	\$9,001,167	\$9,224,932	\$9,416,228	\$9,612,749
Percent Increase in Revenue Requirement [2]		24%	17%	15%	4%	4%	4%	4%	3%	2%	2%	2%

Source: City of St. Helena and HEC.

Source: City of St. Helena and HEC.

[1] FY 2017 costs from 2017 budget for "Surcharge-Meadowood" plus "Pumping Charge". Per Task Force September 13, 2016 meeting, Meadowood surcharges are eliminated.

[2] Percentage increase for FY 2017 based on FY 2016 water sales.

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Attachment 2

Page 17 of 27

Water Rate Study, October 31, 2016

Table 11
Allocation of Revenue Requirement to Service and Use Charges

Costs	Fiscal Year Ending										
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Total Revenue Requirement	\$5,518,867	\$6,465,298	\$7,416,316	\$7,747,788	\$8,057,602	\$8,380,166	\$8,731,788	\$9,001,167	\$9,224,932	\$9,416,228	\$9,612,749
Fire Services	0.48%	\$26,569	\$31,126	\$35,704	\$37,300	\$38,792	\$40,345	\$42,037	\$43,334	\$44,411	\$45,332
Non-Fire Services Rev. Req.											
Customer Charges	9.43%	9.43%	9.43%	9.43%	9.43%	9.43%	9.43%	9.43%	9.43%	9.43%	9.43%
Subtotal in Customer Charges		\$520,435	\$609,684	\$699,366	\$730,624	\$759,840	\$790,258	\$823,416	\$848,819	\$869,920	\$887,960
% in base	[1]	21.23%	22.23%	23.23%	24.23%	25.23%	26.23%	27.23%	28.23%	29.23%	30.23%
Subtotal in Capacity Charges		\$1,171,870	\$1,437,487	\$1,723,098	\$1,877,590	\$2,033,246	\$2,198,443	\$2,378,005	\$2,541,379	\$2,696,806	\$2,846,892
% in use	[1]	68.85%	67.85%	66.85%	65.85%	64.85%	63.85%	62.85%	61.85%	60.85%	59.85%
Subtotal in Use Charges		\$3,799,993	\$4,387,001	\$4,958,147	\$5,102,274	\$5,225,724	\$5,351,120	\$5,488,329	\$5,567,635	\$5,613,794	\$5,636,044
Source: HEC.											
cost alloc											

[1] Percentages shown are rounded to the nearest one hundredth.

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Attachment 2

Page 18 of 27

Water Rate Study, October 31, 2016

RATES ANALYSIS

Service Charges. Service costs are divided into customer costs and capacity costs. Customer costs are allocated to customers based on the number of water accounts (which is the same as the number of meters). Capacity costs are allocated to customers based on the number of equivalent meters, determined by the relative hydraulic capacity of the meter size relative to a 5/8-inch meter. **Table 12** shows the calculation of equivalent meters, calculation of equivalent fire units, and number of meters by meter size. Total number of meters by customer type is shown in **Table A-16**.

The total number of 5/8" meters was adjusted to include single family 1" meters. Due to CA Residential Code Section R313 (fire sprinklers), almost all new residential development is required to install 1" meters in order to have sufficient flow for sprinklers; however, most existing homes built prior to implementation of CA Residential Code Section R313, have a 5/8" or 3/4" meter. Because the 1" residential customers utilize the same average amount of water as the 3/4" and 5/8" customers, it is appropriate for them to pay the same rates, and not be penalized by the fire sprinklers requirement.

Table 12
Estimated Meter and Fire Equivalent Units

Meter Size	Number of Meters	Meter Flow (gpm)	Meter Ratio	Equivalent Meter Units	Number of Fire Services	Pipe Flow	Equivalent Fire Units
		[1]	[1]			[2]	
5/8"	1,987	20	1.0	1,987			
1"	330	50	2.5	825		1	0
1.5"	61	100	5.0	305		3	0
2"	47	160	8.0	376		6	0
3"	7	320	16.0	112		18	0
4"	9	500	25.0	225	79	38	3,027
6"	11	1,000	50.0	550	33	111	3,673
8"	0	1,600	80.0	0	14	237	3,321
Total	2,452			4,380	126		10,021

Source: American Water Works Association, City of St. Helena and HEC.

m equiv

[1] AWWA standard meter flow and ratios - assumes all larger meters are compound meters (AWWA C702). 1.5" meters and smaller are displacement type. 2" and larger are compound type meters.

[2] Hazen-Williams equation for flow through pressure conduits is pipe diameter raised to the 2.63 power.

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Attachment 2

Page 19 of 27

Water Rate Study, October 31, 2016

The calculation of monthly service charges through fiscal year 2022 is shown in **Table 13**. The total service charges include addition of the customer and capacity charges. All 5/8", 3/4" and single family residential 1" meters pay the same service charge.

Table 13
Calculated Monthly Service Charge per Meter

		Fiscal Year Ending					
		2017	2018	2019	2020	2021	2022
Billing Period Beginning*		2/8/2017	11/8/2017	11/8/2018	11/8/2019	11/8/2020	11/8/2021
Customer Costs		\$520,435	\$609,684	\$699,366	\$730,624	\$759,840	\$790,258
Customer Accounts		2,451	2,456	2,461	2,466	2,471	2,476
Cost per Account per Month		\$17.69	\$20.69	\$23.68	\$24.69	\$25.63	\$26.60
Capacity Costs		\$1,171,870	\$1,437,487	\$1,723,098	\$1,877,590	\$2,033,246	\$2,198,443
Est. Billable Meter Equivalents		4,032	4,037	4,042	4,047	4,052	4,057
Meter Size	Meter Ratio	Capacity Costs Monthly Service Charges per Meter					
5/8", 3/4" & SF 1"	1.0	\$24.22	\$29.67	\$35.52	\$38.66	\$41.82	\$45.16
1"	2.5	\$60.55	\$74.18	\$88.81	\$96.66	\$104.54	\$112.89
1.5"	5.0	\$121.10	\$148.37	\$177.62	\$193.31	\$209.08	\$225.79
2"	8.0	\$193.76	\$237.39	\$284.20	\$309.30	\$334.53	\$361.26
3"	16.0	\$387.52	\$474.77	\$568.40	\$618.59	\$669.05	\$722.52
4"	25.0	\$605.50	\$741.83	\$888.12	\$966.55	\$1,045.39	\$1,128.94
6"	50.0	\$1,211.01	\$1,483.66	\$1,776.24	\$1,933.11	\$2,090.78	\$2,257.87
		Total Base Monthly Charges per Meter					
Meter Size							
5/8", 3/4" & SF 1"		\$41.91	\$50.36	\$59.21	\$63.35	\$67.44	\$71.75
1"		\$78.25	\$94.87	\$112.49	\$121.35	\$130.16	\$139.49
1.5"		\$138.80	\$169.05	\$201.31	\$218.00	\$234.70	\$252.38
2"		\$211.46	\$258.07	\$307.88	\$333.99	\$360.15	\$387.86
3"		\$405.22	\$495.46	\$592.08	\$643.28	\$694.68	\$749.12
4"		\$623.20	\$762.52	\$911.80	\$991.24	\$1,071.02	\$1,155.53
6"		\$1,228.70	\$1,504.35	\$1,799.93	\$1,957.80	\$2,116.41	\$2,284.47

Source: City of St. Helena and HEC.

service charge

* Dates reflect the current billing cycle; if the billing cycle date changes so will these effective dates.

Seasonal Rate Structure

Two rate structures were evaluated for collection of use charges: the uniform rate structure and the seasonal rate structure. The September 13th, 2016 Task Force meeting selected the seasonal rate structure as the preferred rate structure for the Study; therefore, only the seasonal rate structure is presented herein.

Total costs allocated to use charges are divided by projected water demand in the peak and off-peak seasons to calculate the use rate per HCF in the peak and off-peak seasons. The use rate during each season is the same for all treated water customers. Water use by season is determined

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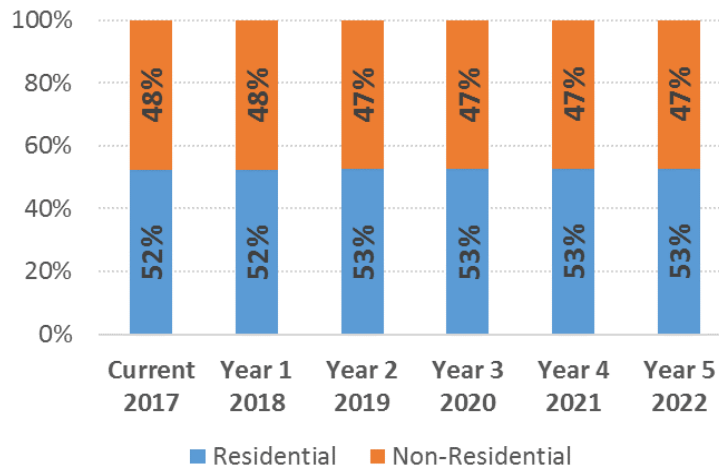
Attachment 2

Page 20 of 27

Water Rate Study, October 31, 2016

in **Table A-17**. Total annual projected water demand is shown in **Figure 6**, with supporting data in **Table A-18**.

Figure 6
Projected Water Demand



The projection of water demand incorporates assumed growth of 5 units per year and an expectation that as water rates increase demand will decrease. The projection of water demand accounts for reduced consumption due to increased rates. The relationship between increased prices and decreased demand is referred to as price elasticity. Price elasticity varies by geography due to many micro-economic variables. Hansford Economic Consulting (HEC) applied industry knowledge to establish assumed price elasticity factors for St. Helena. The price elasticity and water demand analysis is shown in **Tables A-18** through **A-20**.

Off-peak water rates are lower November through April (off-peak months) than during peak months (May through October). During the peak months the costs of operating the water system are 11% higher. Supporting data is provided in **Tables A-17** and **A-21**.

Drought Surcharge

In addition to the seasonal rate structure the City may implement a drought surcharge. The drought surcharge would be implemented when the City enters Phase I drought regulations. **Table A-22** calculates a drought surcharge ratio that would be applied to the seasonal rate structure. The drought surcharge would only be applied to use charges, not to service charges. The analysis demonstrates that during drought years the cost of water is 6% higher than during non-drought years.

The calculation of use charges is shown in **Table 14**.

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Attachment 2

Page 21 of 27

Water Rate Study, October 31, 2016

Table 14
Calculated Use Charges per HCF

		Fiscal Year Ending					
		2017	2018	2019	2020	2021	2022
	Billing Period Beginning*	2/8/2017	11/8/2017	11/8/2018	11/8/2019	11/8/2020	11/8/2021
Allocated Cost		\$3,799,993	\$4,387,001	\$4,958,147	\$5,102,274	\$5,225,724	\$5,351,120
Total Consumption		645,800	643,042	644,175	646,780	647,544	648,219
Cost per HCF		\$5.88	\$6.82	\$7.70	\$7.89	\$8.07	\$8.26
SEASONAL RATE STRUCTURE							
Off-Peak Water Use (Nov-Apr)	37%	240,040	239,015	239,436	240,404	240,688	240,939
Peak Water Use (May-Oct)	63%	405,760	404,027	404,739	406,376	406,856	407,280
Total Consumption		645,800	643,042	644,175	646,780	647,544	648,219
Calculated Cost per HCF by Season -- NON-DROUGHT PERIOD							
Off-Peak Costs per HCF		\$5.50	\$6.37	\$7.19	\$7.37	\$7.54	\$7.71
Peak Costs per HCF	1.11	\$6.11	\$7.09	\$8.00	\$8.20	\$8.38	\$8.58
Calculated Cost per HCF by Season -- DROUGHT PERIOD							
Off-Peak Costs per HCF	1.06	\$5.81	\$6.73	\$7.60	\$7.79	\$7.97	\$8.15
Peak Costs per HCF	1.11	\$6.46	\$7.49	\$8.45	\$8.66	\$8.86	\$9.06

Source: HEC.

use charge

* Dates reflect the current billing cycle; if the billing cycle date changes so will these effective dates.

A small portion of fixed costs are associated with private fire protection. Fire costs are allocated to fire customers based on the number of equivalent fire units. Fire service charges are calculated in **Table 15**.

Calculated meter replacement fees are shown in **Table 16**. Meter replacement fees are calculated using data presented in **Table A-10**. The raw water cost and rate per HCF for February 8, 2017 is calculated in **Table 17**. Raw water may only be taken from the Lower Reservoir for construction-related water applications.

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Attachment 2

Page 22 of 27

Water Rate Study, October 31, 2016

Table 15
Calculation of Fire Service Charges

		2017	2018	2019	2020	2021	2022
Fire Services		Current	Year 1	Year 2	Year 3	Year 4	Year 5
	Billing Period Beginning*	2/8/2017	11/8/2017	11/8/2018	11/8/2019	11/8/2020	11/8/2021
Fire Services Cost Allocation		\$26,569	\$31,126	\$35,704	\$37,300	\$38,792	\$40,345
Equivalent Fire Units		10,021	10,021	10,021	10,021	10,021	10,021
Monthly Cost per Equivalent Fire Unit		\$0.22	\$0.26	\$0.30	\$0.31	\$0.32	\$0.34
Pipe Size	Pipe Flow	Monthly Charge					
1"	1	\$0.22	\$0.26	\$0.30	\$0.31	\$0.32	\$0.34
1.5"	3	\$0.64	\$0.75	\$0.86	\$0.90	\$0.94	\$0.97
2"	6	\$1.37	\$1.60	\$1.84	\$1.92	\$2.00	\$2.08
3"	18	\$3.97	\$4.65	\$5.34	\$5.58	\$5.80	\$6.03
4"	38	\$8.47	\$9.92	\$11.38	\$11.89	\$12.36	\$12.86
6"	111	\$24.59	\$28.81	\$33.05	\$34.53	\$35.91	\$37.34
8"	237	\$52.41	\$61.40	\$70.43	\$73.57	\$76.52	\$79.58

Source: HEC.

fire

* Dates reflect the current billing cycle; if the billing cycle date changes so will these effective dates.

Table 16
Calculated Meter Replacement Fees by Meter Size

Meter Size	Fiscal Year Ending					
	2017	2018	2019	2020	2021	2022
		Year 1	Year 2	Year 3	Year 4	Year 5
Annual escalator						
3/4" or less	\$1.31	\$1.35	\$1.39	\$1.43	\$1.47	\$1.52
1"	\$1.83	\$1.89	\$1.94	\$2.00	\$2.06	\$2.12
1-1/2"	\$2.88	\$2.96	\$3.05	\$3.14	\$3.24	\$3.33
2"	\$3.66	\$3.77	\$3.88	\$4.00	\$4.12	\$4.24
3"	\$7.84	\$8.08	\$8.32	\$8.57	\$8.83	\$9.09
4"	\$17.26	\$17.78	\$18.31	\$18.86	\$19.42	\$20.01
6"	\$23.79	\$24.51	\$25.24	\$26.00	\$26.78	\$27.58

Source: HEC.

meter fee

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Attachment 2

Page 23 of 27

Water Rate Study, October 31, 2016

Table 17
Raw Water Rate Calculation for Fiscal Year 2017

Costs	Estimated Cost FY 2016-17
Total Operating Costs [1]	\$3,897,723
Less Napa Purchased Water	\$1,349,019
Less Stonebridge Wells Costs	\$85,400
Less Distribution Costs	\$685,930
Less Treated Water Costs	\$834,407
Total Raw Water Operating Costs	\$942,967
City Water Supplies (gallons) [2]	345,701,088
Cost per Gallon	\$0.00273
Cost per HCF	\$2.04

Source: City of St. Helena.

raw

[1] Equals total operating costs in the revenue requirement table less the meter replacement program costs, WTP condition assessment costs, updating GIS maps costs, and Water Master Plan update costs.

[2] Based on annual average production of city groundwater and surface water.

A summary of the calculated water rates schedule through fiscal year 2027 is given in **Table 18**.

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Attachment 2

Page 24 of 27

Water Rate Study, October 31, 2016

Table 18
Calculated Water Rates

Charges		Current	Billing Period Beginning *											
			2/8/2017	11/8/2017	11/8/2018	11/8/2019	11/8/2020	11/8/2021	11/8/2022	11/8/2023	11/8/2024	11/8/2025	11/8/2026	
Service Charge														
5/8", 3/4" & SF 1"		\$27.52	\$43.22	\$51.71	\$60.59	\$64.78	\$68.91	\$73.27	\$78.00	\$82.13	\$85.95	\$89.54	\$93.26	
1"		\$63.80	\$80.08	\$96.76	\$114.44	\$123.35	\$132.22	\$141.61	\$151.81	\$160.89	\$169.40	\$177.51	\$185.90	
1.5"		\$124.12	\$141.67	\$172.02	\$204.36	\$221.14	\$237.94	\$255.72	\$275.02	\$292.36	\$308.70	\$324.35	\$340.54	
2"		\$196.50	\$215.12	\$261.84	\$311.76	\$337.99	\$364.27	\$392.10	\$422.31	\$449.54	\$475.26	\$499.94	\$525.48	
3"		\$365.51	\$413.06	\$503.54	\$600.40	\$651.86	\$703.51	\$758.21	\$817.59	\$871.27	\$922.08	\$970.92	\$1,021.45	
4"		\$607.01	\$640.46	\$780.29	\$930.11	\$1,010.10	\$1,090.44	\$1,175.54	\$1,267.90	\$1,351.51	\$1,430.71	\$1,506.92	\$1,585.75	
6"		\$1,210.18	\$1,252.50	\$1,528.85	\$1,825.17	\$1,983.80	\$2,143.19	\$2,312.05	\$2,495.35	\$2,661.38	\$2,818.75	\$2,970.20	\$3,126.89	
Private Fire Protection														
4"		\$4.00	\$8.47	\$9.92	\$11.38	\$11.89	\$12.36	\$12.86	\$13.40	\$13.81	\$14.15	\$14.45	\$14.75	
6"		\$6.00	\$24.59	\$28.81	\$33.05	\$34.53	\$35.91	\$37.34	\$38.91	\$40.11	\$41.11	\$41.96	\$42.84	
8"		\$8.00	\$52.41	\$61.40	\$70.43	\$73.57	\$76.52	\$79.58	\$82.92	\$85.48	\$87.60	\$89.42	\$91.28	
Raw Water <i>per Gallon [1]</i>		\$0.00267	\$0.00273	\$0.00320	\$0.00367	\$0.00383	\$0.00398	\$0.00414	\$0.00432	\$0.00445	\$0.00456	\$0.00465	\$0.00475	
TREATED WATER USE CHARGES PER HCF														
SEASONAL RATE STRUCTURE														
NON-DROUGHT PERIOD														
Off-Peak (Nov-Apr)	[2]		\$5.50	\$6.37	\$7.19	\$7.37	\$7.54	\$7.71	\$7.90	\$8.01	\$8.06	\$8.08	\$8.11	
Peak (May-Oct)			\$6.11	\$7.09	\$8.00	\$8.20	\$8.38	\$8.58	\$8.79	\$8.90	\$8.97	\$8.99	\$9.02	
DROUGHT PERIOD														
Off-Peak (Nov-Apr)	[2]		\$5.81	\$6.73	\$7.60	\$7.79	\$7.97	\$8.15	\$8.35	\$8.46	\$8.52	\$8.54	\$8.57	
Peak (May-Oct)			\$6.46	\$7.49	\$8.45	\$8.66	\$8.86	\$9.06	\$9.28	\$9.41	\$9.47	\$9.50	\$9.53	
Source: HEC.														

Source: HEC.

* Dates reflect the current billing cycle; if the billing cycle date changes so will these effective dates.

[1] Raw water costs increased from fiscal year 2016-17 by the same percentage increase as the revenue requirement.

[2] Current Rate Structure rates as follows:

Tiers by customer category (in hcf):		Tier 1	Tier 2	Tier 1	Tier 2	Tier 1	Tier 2	Tier 1	Tier 2
Single family		0-14	15+	0-36	37+	0-600	601+	0-1,250	1,251+
Multi-family		0-5	6+	0-120	121+	0-1,920	1,921+		
Price per HCF		\$4.48	\$6.74	0-192	193+				
Price per HCF - Landscape Irrigation		\$5.22		0-360	361+				

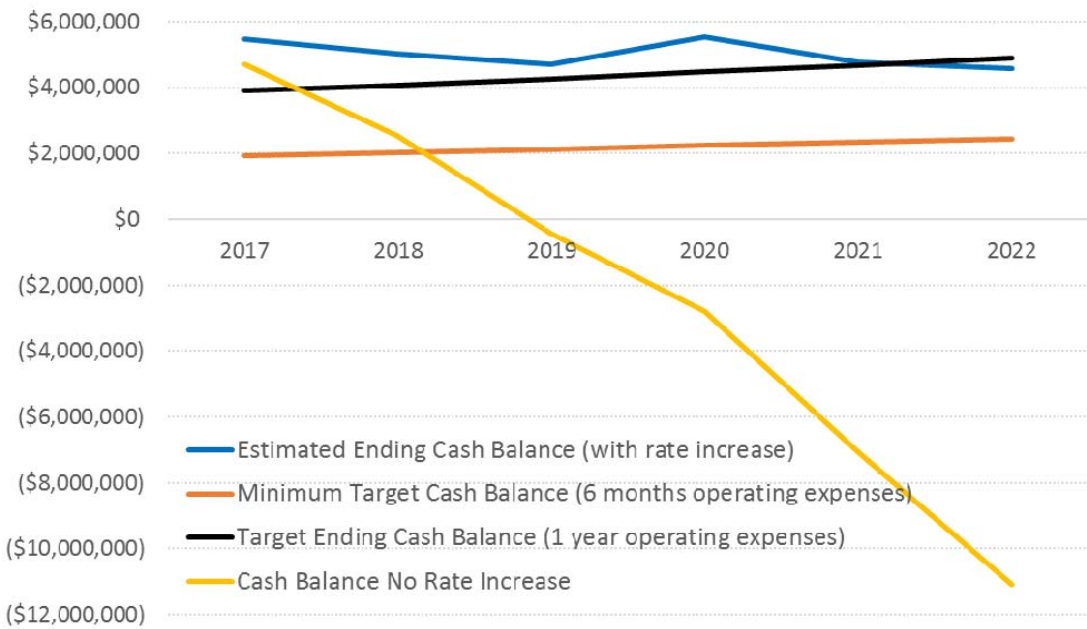
Prepared by HEC

CASH FLOW

Table 19 and **Table 20** on the following pages show the projected cash flow and cash flow by fund, respectively, through fiscal year 2027. With adoption of the calculated rates it is anticipated that the City will be able to meet all water enterprise fund obligations and achieve at least six months of operating expenses in cash reserves in each year of the projection. The cash flow table demonstrates that a debt service coverage ratio of at least 1.20 will be met. In addition, the City may be able to designate (put aside) up to \$3.1 million by fiscal year ending 2027 for future cash funding of system rehabilitation.

Figure 7 shows projected water fund balances with and without rate increases as well as target and minimum operating cash reserves.

Figure 7
Projected Water Fund Cash Balance (Operating and Capital Funds combined)



Attachment 2

Page 26 of 27

Water Rate Study, October 31, 2016

Table 19
Projected Cash Flow

Revenues and Expenses	Fiscal Year Ending										
	2017 Estimated	2018 Year 1	2019 Year 2	2020 Year 3	2021 Year 4	2022 Year 5	2023 Year 6	2024 Year 7	2025 Year 8	2026 Year 9	2027 Year 10
Billing Period Beginning*											
Revenue	2/8/2017	11/8/2017	11/8/2018	11/8/2019	11/8/2020	11/8/2021	11/8/2022	11/8/2023	11/8/2024	11/8/2025	11/8/2026
Water Sales [1]	\$4,459,929	\$6,149,821	\$7,099,310	\$7,637,297	\$7,954,330	\$8,272,645	\$8,614,580	\$8,911,374	\$9,150,344	\$9,352,463	\$9,547,242
Meadowland Surcharge [1]	\$53,088	\$19,770	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Meter Replacement Fee	\$19,373	\$47,612	\$49,139	\$50,715	\$52,341	\$54,019	\$55,750	\$57,537	\$59,381	\$61,283	\$63,247
Other Revenues	\$93,850	\$93,850	\$93,850	\$93,850	\$93,850	\$93,850	\$93,850	\$93,850	\$93,850	\$93,850	\$93,850
Total Revenues	\$4,626,240	\$6,311,054	\$7,242,299	\$7,781,862	\$8,100,521	\$8,420,513	\$8,764,181	\$9,062,761	\$9,303,574	\$9,507,596	\$9,704,338
Operating Expenses	\$3,917,096	\$4,128,126	\$4,321,846	\$4,582,439	\$5,090,354	\$4,968,197	\$5,207,724	\$5,460,595	\$5,727,681	\$6,009,921	\$6,308,323
Net Revenue before Debt Service and System Rehabilitation	\$709,144	\$2,182,928	\$2,920,454	\$3,199,423	\$3,010,168	\$3,452,317	\$3,556,457	\$3,602,166	\$3,575,893	\$3,497,675	\$3,396,015
Debt Service	\$989,251	\$982,916	\$1,168,496	\$1,165,102	\$1,163,243	\$1,162,861	\$1,157,281	\$1,156,757	\$1,154,646	\$1,152,220	\$1,146,816
Debt Service Coverage [2]	0.72	2.22	2.50	2.75	2.59	2.97	3.07	3.11	3.10	3.04	2.96
System Rehabilitation	\$0	\$974,200	\$1,034,200	\$1,117,100	\$1,256,300	\$1,327,800	\$1,393,200	\$1,472,700	\$1,531,300	\$1,609,700	\$1,665,200
Net Revenue	(\$280,107)	\$225,812	\$717,758	\$917,221	\$590,625	\$961,656	\$1,005,976	\$972,709	\$889,947	\$735,755	\$583,998
Beginning Balance [3]	\$6,113,512	\$5,474,019	\$5,018,555	\$4,701,164	\$5,540,276	\$4,766,595	\$4,590,032	\$5,092,389	\$5,722,146	\$7,177,867	\$8,391,982
Net Revenue	(\$280,107)	\$225,812	\$717,758	\$917,221	\$590,625	\$961,656	\$1,005,976	\$972,709	\$889,947	\$735,755	\$583,998
Cash Funded Capital Projects	(\$274,386)	(\$521,891)	(\$1,035,148)	(\$78,109)	(\$494,306)	\$0	(\$523,620)	(\$362,953)	\$0	\$0	\$0
Spill Containment at Bell Creek & Stonebridge	\$0	(\$159,385)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Bell Canyon Reservoir Improvements	\$0	\$0	\$0	\$0	\$0	(\$1,079,726)	\$0	\$0	\$0	\$0	\$0
Bell Valve House Valve Replacement	\$0	\$0	\$0	\$0	\$0	(\$536,491)	\$0	\$0	\$0	\$0	\$0
Bell Canyon Creek Flow Measurement	(\$85,000)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Transfer Out to Impact Fee Fund	\$0	\$0	\$0	\$0	(\$870,000)	(\$70,000)	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
Add Back System Depreciation Net of CIP	\$0	\$0	\$0	\$0	\$0	\$547,998	\$0	\$0	\$545,775	\$458,359	\$548,199
Ending Balance	\$5,474,019	\$5,018,555	\$4,701,164	\$5,540,276	\$4,766,595	\$4,590,032	\$5,092,389	\$5,722,146	\$7,177,867	\$8,391,982	\$9,544,179
Months of Operating Expenses in Reserve	17	15	13	15	11	11	12	13	15	17	18
Designated [4]	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$200,000	\$1,300,000	\$2,400,000	\$3,100,000
Undesignated Ending Balance	\$5,474,019	\$5,018,555	\$4,701,164	\$5,540,276	\$4,766,595	\$4,590,032	\$5,092,389	\$5,522,146	\$5,877,867	\$5,991,982	\$6,444,179
Undesignated Months of Op. Exps. in Reserve	17	15	13	15	11	11	12	12	12	12	12
Target Balance [5]	\$3,897,723	\$4,080,141	\$4,272,322	\$4,474,874	\$4,688,452	\$4,913,755	\$5,151,537	\$5,402,608	\$5,667,836	\$5,948,158	\$6,244,582

flow

* Dates reflect the current billing cycle; if the billing cycle date changes so will these effective dates.

[1] Rates for FY 2017 calculated as 7 months of current rates plus 5 months of rates implemented in February 2017. Rates for all future fiscal years calculated as 4 months of the rates implemented in February of the prior fiscal year plus 8 months of the rates implemented in November of the current fiscal year.

[2] Debt service coverage should be at least 1.20.

[3] Estimated beginning balance for the operating and capital funds combined per the City 2016/17 Budget.

[4] New designated fund for capital repairs and replacement.

[5] Minimum six months and target balance is one year of operating expenses.

Source: City of St. Helena and HEC.

Prepared by HEC

Attachment 2

Page 27 of 27

Water Rate Study, October 31, 2016

Table 20
Projected Cash Flow by Fund

Fund	2017 Estimated	2018 Year 1	2019 Year 2	2020 Year 3	2021 Year 4	2022 Year 5	2023 Year 6	2024 Year 7	2025 Year 8	2026 Year 9	2027 Year 10
Operating Fund 561											
Beginning Balance	\$4,923,632	\$4,643,525	\$4,869,337	\$4,487,094	\$4,854,316	\$4,024,941	\$4,364,595	\$4,740,571	\$4,983,280	\$6,439,002	\$7,653,116
Net Revenue	(\$280,107)	\$225,812	\$717,758	\$917,221	\$590,625	\$961,656	\$1,005,976	\$972,709	\$889,947	\$735,755	\$583,998
Add Back System Depreciation Net of CIP	\$0	\$0	\$0	\$0	\$0	\$547,998	\$0	\$0	\$545,775	\$458,359	\$548,199
Transfer Out to Capital Fund	\$0	\$0	(\$1,100,000)	(\$550,000)	(\$550,000)	(\$1,100,000)	(\$650,000)	(\$750,000)	\$0	\$0	\$0
Transfer In (Out) -Impact Fee Fund	\$0	\$0	\$0	\$0	(\$870,000)	(\$70,000)	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
Ending Balance	\$4,643,525	\$4,869,337	\$4,487,094	\$4,854,316	\$4,024,941	\$4,364,595	\$4,740,571	\$4,983,280	\$6,439,002	\$7,653,116	\$8,805,314
Capital Fund 763											
Beginning Balance	\$1,189,880	\$830,494	\$149,218	\$214,070	\$685,961	\$741,654	\$225,438	\$351,818	\$738,865	\$738,865	\$738,865
Transfer In from Operating Fund	\$0	\$0	\$1,100,000	\$550,000	\$550,000	\$1,100,000	\$650,000	\$750,000	\$0	\$0	\$0
Capital Projects Expenses [1]	(\$359,386)	(\$681,276)	(\$1,035,148)	(\$78,109)	(\$494,306)	(\$1,616,217)	(\$523,620)	(\$362,953)	\$0	\$0	\$0
Ending Balance	\$830,494	\$149,218	\$214,070	\$685,961	\$741,654	\$225,438	\$351,818	\$738,865	\$738,865	\$738,865	\$738,865
Combined Operating and Capital Funds	\$5,474,019	\$5,018,555	\$4,701,164	\$5,540,276	\$4,766,595	\$4,590,032	\$5,092,389	\$5,722,146	\$7,177,867	\$8,391,982	\$9,544,179
Impact Fee Fund 764											
Beginning Balance	\$685,291	\$702,091	\$620,876	\$388,259	\$114,398	\$8,850	\$3,208	\$2,722	\$2,730	\$3,243	\$4,274
Transfer In (Out) -Operating Fund [2]	\$0	\$0	\$0	\$0	\$870,000	\$70,000	(\$20,000)	(\$20,000)	(\$20,000)	(\$20,000)	(\$20,000)
Fee Revenues [3]	\$16,800	\$17,225	\$17,660	\$18,106	\$18,564	\$19,033	\$19,514	\$20,007	\$20,513	\$21,031	\$21,563
Expenses											
Meadowood Tank Upgrades	\$0	\$0	\$136,913	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Dwyer Road Booster	\$0	\$0	\$0	\$259,225	\$223,069	\$0	\$0	\$0	\$0	\$0	\$0
Bell Valve House Valve Replacement	\$0	\$0	\$0	\$0	\$0	\$94,675	\$0	\$0	\$0	\$0	\$0
Holmes Tank Upgrade	\$0	\$0	\$0	\$32,743	\$771,043	\$0	\$0	\$0	\$0	\$0	\$0
Bell Canyon Creek Flow Measurement	\$0	\$88,876	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Tank 2 Rehabilitation	\$0	\$9,563	\$113,364	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Ending Balance	\$702,091	\$620,876	\$388,259	\$114,398	\$8,850	\$3,208	\$2,722	\$2,730	\$3,243	\$4,274	\$5,837

Source: City of St. Helena and HEC.

[1] Cash-funded projects only. Projects that are debt-funded are included in the operating fund.

[2] Future users' share of debt service is approximately \$25,000 each year starting in fiscal year 2019.

[3] Assumes growth of 5 units per year and the current impact fee of \$1.68 per building square foot
2,000 average home building square feet

Fee assumed to grow 2.5% per year.

\$3,360 Average fee per unit

The impact fee needs to be revised for these CIP costs.

Prepared by HEC

Attachment 2

Attachment 2

ATTACHMENT A
WATER RATE STUDY
SUPPORT TABLES

Attachment 2

Attachment 2

Table A-1
City of St. Helena Water Rate Study
Historical Water Fund Financial Performance

Revenues and Expenses	Actual Financials for Fiscal Year Ending					Avg. Annual Percentage Change
	2011	2012	2013	2014	2015	
OPERATING						
Revenues						
Charges For Services	\$3,062,669	\$4,313,393	\$4,731,720	\$4,883,409	\$4,237,307	8.5%
Miscellaneous	\$6,117	\$12,088	\$28,246	\$12,491	\$89,673	95.7%
Total Revenues	\$3,068,786	\$4,325,481	\$4,759,966	\$4,895,900	\$4,326,980	9.0%
Expenses						
Personnel	\$1,207,335	\$1,214,927	\$1,176,559	\$1,131,354	\$1,362,727	3.1%
Contracted Services	\$21,451	\$56,561	\$0	\$0	\$0	-100.0%
Purchased Water	\$787,525	\$1,178,400	\$1,189,925	\$1,327,251	\$1,272,770	12.8%
Utilities	\$105,749	\$106,389	\$147,994	\$170,384	\$161,313	11.1%
Fuel	\$0	\$0	\$0	\$0	\$0	n.a.
Other Supplies and Expenses	\$399,366	\$530,562	\$370,484	\$498,635	\$560,847	8.9%
Depreciation and Amortization	\$617,876	\$657,710	\$792,559	\$792,559	\$1,028,037	13.6%
Subtotal Expenses	\$3,139,302	\$3,744,549	\$3,677,521	\$3,920,183	\$4,385,694	8.7%
NET OPERATING INCOME (LOSS)	(\$70,516)	\$580,932	\$1,082,445	\$975,717	(\$58,714)	
NON OPERATING						
Transfers Out	\$0	(\$55,479)	\$0	\$0	\$0	n.a.
Gains (Loss) on Capital Asset Disposals	\$0	(\$124,356)	\$0	\$0	\$0	n.a.
Interest and Investment Revenue	\$49,268	\$34,746	\$16,909	\$25,476	\$40,968	-4.5%
Interest Expense	(\$387,792)	(\$349,084)	(\$396,126)	(\$343,880)	(\$196,547)	-15.6%
Net Non Operating Revenues (Expenses)	(\$338,524)	(\$494,173)	(\$379,217)	(\$318,404)	(\$155,579)	-17.7%
Capital Contributions	\$190,034	\$321,951	\$169,417	\$287,140	\$152,989	-5.3%
Change in Net Assets	(\$219,006)	\$408,710	\$872,645	\$944,453	(\$61,304)	
Net Assets Beginning Balance	\$10,649,155	\$10,430,149	\$10,502,760	\$11,375,405	\$12,319,858	
Net Assets Ending Balance	\$10,430,149	\$10,838,859	\$11,375,405	\$12,319,858	\$12,258,554	

Source: City of St. Helena.

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Attachment 2

Table A-2
City of St. Helena Water Rate Study
Historical Revenues and Expenditures

Revenues and Expenses	Fiscal Year Ending				Estimated 2016	Budgeted 2017
	2012	2013	2014	2015		
OPERATING FUND						
Revenues						
Investment Earnings	\$33,247	\$16,718	\$24,907	\$30,781	\$24,900	\$25,000
Fire Service Agreement Fees	\$0	\$0	\$0	\$0	\$0	\$0
Raw Water Permit Fees	\$100	\$400	\$550	\$750	\$650	\$800
Water Conservation Fines	\$0	\$0	\$0	\$0	\$0	\$0
Backflow Testing & Insp Fees	\$0	\$300	\$150	\$150	\$150	\$150
Sale Of Capital Asset	\$0	\$0	\$0	\$0	\$0	\$0
Other Revenue	\$11,988	\$6,165	\$11,791	\$7,594	\$5,500	\$8,500
Insurance Receipts	\$0	\$0	\$0	\$0	\$0	\$0
Water Revenue	\$2,251	\$2,089	\$1,306	\$2,327	\$2,300	\$5,500
Surcharge-Meadowood	\$30,210	\$30,223	\$30,223	\$32,223	\$30,223	\$30,223
Pumping Charge	\$23,120	\$23,038	\$23,956	\$22,890	\$23,650	\$18,420
Rates - Inside City Limits	\$3,862,757	\$4,264,423	\$4,381,060	\$3,821,553	\$4,082,365	\$3,343,945
Rates - Outside City Limits	\$337,510	\$364,387	\$385,337	\$345,644	\$359,600	\$359,600
Finance Charges	\$34,418	\$30,514	\$40,533	\$36,142	\$37,150	\$36,000
Sale of Remote Meters	\$571	\$231	\$4,575	\$3,046	\$1,740	\$1,500
Hydrant Rental	\$150	\$150	\$0	\$0	\$0	\$0
Property Rentals	\$8,400	\$8,400	\$8,400	\$8,400	\$8,400	\$8,400
Water Meter Install Fee	\$14,006	\$8,265	\$8,018	\$10,724	\$5,000	\$8,000
Total Revenues	\$4,358,728	\$4,755,303	\$4,920,806	\$4,322,225	\$4,581,628	\$3,846,038
Expenses						
Salaries & Benefits	\$1,217,968	\$1,168,983	\$1,165,302	\$1,299,809	\$1,565,976	\$1,612,243
Services	\$440,097	\$284,472	\$348,495	\$358,264	\$538,363	\$564,625
Supplies	\$147,577	\$100,683	\$82,066	\$117,593	\$142,949	\$151,490
Napa Purchased Water	\$1,178,401	\$1,189,926	\$1,327,251	\$1,272,770	\$1,311,272	\$1,349,019
Maintenance	\$91,794	\$68,433	\$78,880	\$124,006	\$195,116	\$172,579
Taxes, Insurances & Contributions	\$102,988	\$74,528	\$79,111	\$91,930	\$147,415	\$133,167
Capital	\$13,175	\$33,471	\$11,886	\$15,056	\$59,785	\$137,925
Transfers	\$179,836	\$0	\$200,000	\$979,380	\$111,995	\$0
Debt	\$349,084	\$396,126	\$343,980	\$196,547	\$1,008,078	\$1,001,067
Total Expenses	\$3,720,918	\$3,316,623	\$3,636,971	\$4,455,356	\$5,080,949	\$5,122,115
Operating Fund Net Revenues	\$637,810	\$1,438,681	\$1,283,835	(\$133,132)	(\$499,321)	(\$1,276,077)
WATER CAPITAL FUND						
Revenues						
Transfers in	\$182,000	\$92,045	\$200,000	\$979,380	\$75,541	\$0
Total Revenues	\$182,000	\$92,045	\$200,000	\$979,380	\$75,541	\$0
Expenses						
Salaries & Benefits	\$110,984	\$349	\$0	\$0	\$0	\$0
Professional Services	\$233,894	\$430,235	\$1,638,364	\$424,649	\$0	\$0
Training	\$0	\$0	\$0	\$38	\$0	\$0
Supplies	\$0	\$17,802	\$14,030	\$2,382	\$0	\$0
Advertising	\$421	\$0	\$0	\$0	\$0	\$0
Taxes and Charges	\$0	\$0	\$0	\$3,120	\$0	\$0
Capital Projects Budget	\$0	\$0	\$0	\$4,092	\$0	\$0
Capital Equipment	\$0	\$0	\$5,875	\$0	\$0	\$0
Capital Imp Equipment	\$0	\$222,039	\$10,759	\$0	\$0	\$0
Total Expenses	\$345,300	\$670,426	\$1,669,028	\$434,282	\$0	\$0
Capital Fund Net Revenues	(\$163,300)	(\$578,381)	(\$1,469,028)	\$545,098	\$75,541	\$0
WATER IMPACT FUND						
Revenues						
Investment Revenue	\$1,054	\$17	\$569	\$1,787	\$1,500	\$1,800
Other Revenue	\$0	\$21,381	\$0	\$45,937	\$0	\$0
Water Impact Fees	\$321,951	\$169,417	\$287,140	\$152,989	\$110,000	\$100,000
Total Revenues	\$323,005	\$190,815	\$287,709	\$200,713	\$111,500	\$101,800
Expenses						
Transfers Out	\$182,000	\$92,045	\$0	\$0	\$0	\$0
Total Expenses	\$182,000	\$92,045	\$0	\$0	\$0	\$0
Water Impact Fund Net Revenues	\$141,005	\$98,770	\$287,709	\$200,713	\$111,500	\$101,800

Source: City of St. Helena Financial Data.

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Attachment 2

Table A-3
City of St. Helena Water Rate Study
Historical Expenditures

Expenses	Actuals Fiscal Year Ending				Estimated 2016	Budgeted 2017
	2012	2013	2014	2015		
Operations						
Salaries & Benefits	\$509,098	\$442,817	\$448,242	\$507,936	\$678,792	\$706,986
Services	\$271,166	\$91,007	\$127,243	\$137,836	\$290,421	\$311,925
Supplies	\$11,086	\$13,053	\$12,308	\$10,918	\$20,513	\$18,792
Napa Purchased Water	\$0	\$0	\$0	\$0	\$0	\$0
Maintenance	\$6,942	\$6,959	\$10,452	\$21,512	\$13,246	\$13,197
Taxes, Insurances & Contributions	\$86,653	\$64,812	\$68,027	\$79,911	\$123,415	\$113,467
Capital	\$0	\$5,272	\$113	\$551	\$8,234	\$1,925
Transfers	\$179,836	\$0	\$200,000	\$979,380	\$111,995	\$0
Debt	\$349,084	\$396,126	\$343,980	\$196,547	\$1,008,078	\$1,001,067
Subtotal Operations	\$1,413,864	\$1,020,046	\$1,210,366	\$1,934,592	\$2,254,694	\$2,167,359
Distribution						
Salaries & Benefits	\$362,007	\$357,787	\$357,186	\$413,670	\$497,637	\$490,637
Services	\$50,639	\$56,393	\$72,008	\$76,939	\$86,957	\$85,700
Supplies	\$20,493	\$16,111	\$10,127	\$21,459	\$21,810	\$28,298
Napa Purchased Water	\$0	\$0	\$0	\$0	\$0	\$0
Maintenance	\$37,922	\$36,834	\$44,189	\$52,003	\$57,389	\$60,295
Taxes, Insurances & Contributions	\$0	\$0	\$0	\$0	\$0	\$0
Capital	\$12,238	\$0	\$0	\$0	\$26,000	\$21,000
Transfers	\$0	\$0	\$0	\$0	\$0	\$0
Debt	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal Distribution	\$483,298	\$467,126	\$483,510	\$564,071	\$689,793	\$685,930
Treatment						
Salaries & Benefits	\$346,863	\$368,378	\$359,875	\$378,203	\$389,547	\$414,620
Services	\$84,949	\$89,641	\$94,000	\$89,843	\$102,350	\$109,900
Supplies	\$109,114	\$59,140	\$49,245	\$73,764	\$74,988	\$91,600
Napa Purchased Water	\$1,178,401	\$1,189,926	\$1,327,251	\$1,272,770	\$1,311,272	\$1,349,019
Maintenance	\$36,589	\$24,384	\$21,299	\$50,197	\$104,518	\$83,587
Taxes, Insurances & Contributions	\$16,335	\$9,716	\$11,084	\$12,019	\$24,000	\$19,700
Capital	\$937	\$28,199	\$1,356	\$14,505	\$14,776	\$115,000
Transfers	\$0	\$0	\$0	\$0	\$0	\$0
Debt	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal Treatment	\$1,773,187	\$1,769,383	\$1,864,109	\$1,891,301	\$2,021,451	\$2,183,426
Stonebridge Wells						
Salaries & Benefits	\$0	\$0	\$0	\$0	\$0	\$0
Services	\$33,343	\$47,430	\$55,244	\$53,646	\$58,635	\$57,100
Supplies	\$6,884	\$12,380	\$10,386	\$11,452	\$25,638	\$12,800
Napa Purchased Water	\$0	\$0	\$0	\$0	\$0	\$0
Maintenance	\$10,341	\$257	\$2,940	\$294	\$19,963	\$15,500
Taxes, Insurances & Contributions	\$0	\$0	\$0	\$0	\$0	\$0
Capital	\$0	\$0	\$10,416	\$0	\$10,775	\$0
Transfers	\$0	\$0	\$0	\$0	\$0	\$0
Debt	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal Stonebridge Wells	\$50,568	\$60,067	\$78,986	\$65,392	\$115,011	\$85,400
Total Expenses	\$3,720,918	\$3,316,623	\$3,636,971	\$4,455,356	\$5,080,949	\$5,122,115

Source: City of St. Helena.

hist exp

Attachment 2

Table A-4
City of St. Helena Water Rate Study
Historical Water Use by Customer Category

Customer	2011	2012	2013	2014	2015	Average [1]	% of Avg.
<i>Figures in HCF</i>							
Residential							
Single Unit	257,882	287,886	315,468	256,777	249,219	262,941	39%
Multi-Fam	53,603	53,447	54,233	47,016	41,356	48,856	7%
Mobile Homes	28,762	28,086	33,486	26,478	24,777	27,026	4%
Subtotal Residential	340,247	369,419	403,187	330,271	315,352	338,822	50%
Non-Residential							
Commercial	79,633	84,345	88,911	85,056	70,394	79,857	12%
Industrial	154,499	149,776	163,569	131,722	117,691	138,422	21%
Landscape	26,100	28,440	30,349	17,268	10,650	20,615	3%
Churches	3,308	3,462	3,911	2,847	1,895	2,878	0%
Wells	2,584	2,470	2,531	2,705	2,579	2,585	0%
Laundry	3,390	3,317	3,366	2,949	2,412	3,017	0%
Library Schools	20,009	19,613	20,981	18,022	20,162	19,452	3%
Motel/Hotel	28,650	32,351	32,173	27,028	27,720	28,937	4%
City Owned	9,664	10,554	14,963	11,559	13,088	11,216	2%
Subtotal Non-Residential	327,837	334,328	360,754	299,156	266,591	306,978	46%
Raw Water	36,005	27,617	27,393	21,756	21,274	26,663	4%
Total Billable	704,089	731,364	791,334	651,183	603,217	672,463	100%
Non-Billable	62,293	59,636	69,465	61,384	64,609	61,980	
Total Water	766,382	791,000	860,799	712,567	667,826	725,950	

Source: City of St. Helena

use

[1] Average excludes 2013.

Attachment 2

Table A-5
City of St. Helena Water Rate Study
Calculation of Unaccounted for Water

	2013	2014	2015	Average
	Gallons of Water			
Consumption	568,883,172	477,673,548	446,865,672	497,807,464
Production	601,650,524	506,733,207	501,660,534	536,681,422
Consumption as a % of				
Production	95%	94%	89%	93%
Water	5%	6%	11%	7%

Source: City of St. Helena.

unacc

Table A-6
City of St. Helena Water Rate Study
Estimated Ten-Year Schedule of Water Capital Improvements in 2016 \$'s

Project	Notes	Total Cost	Total Cost Less Existing Funding	Fiscal Year Ending										
				2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
				Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	
Estimated Project Costs (2016 \$'s)			[1]	Costs are net of existing bond proceeds and grant funds										
York Creek Upper Dam Removal/Mitigation	Partially funded by grant and City (existing bond proceeds)	\$ 6,177,117	\$1,695,775	\$0	\$847,888	\$847,888	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Meadowood Tank Upgrades	Partially funded by grant and City (existing bond proceeds)	\$500,000	\$379,900	\$0	\$0	\$379,900	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Bell Canyon Reservoir Improvements	Funded by Reserves	\$900,000	\$900,000	\$0	\$0	\$0	\$0	\$0	\$900,000	\$0	\$0	\$0	\$0	\$0
Dwyer Road Booster	Moved out 3 years	\$842,523	\$842,523	\$0	\$0	\$0	\$459,190	\$383,333	\$0	\$0	\$0	\$0	\$0	\$0
Bell Canyon Intake Mid-Valve Repair		\$14,387	\$14,387	\$14,387	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Bell Valve House Valve Replacement	Funded by Reserves	\$526,105	\$526,105	\$0	\$0	\$0	\$0	\$0	\$526,105	\$0	\$0	\$0	\$0	\$0
Holmes Tank Upgrade	Moved out 3 years	\$1,383,000	\$1,383,000	\$0	\$0	\$0	\$58,000	\$1,325,000	\$0	\$0	\$0	\$0	\$0	\$0
	Partially funded by City existing bond proceeds	\$750,000	\$492,750	\$0	\$492,750	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sludge Handling Program	Moved out 2 years	\$150,000	\$150,000	\$0	\$0	\$0	\$150,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Raw Water Metering Station	Moved out 1 year	\$100,000	\$100,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100,000	\$0	\$0
Tank 2 Rehabilitation	Moved out 1 year	\$750,000	\$750,000	\$0	\$60,000	\$690,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Well Filter Rehabilitation		\$11,103	\$11,103	\$11,103	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pump Station Upgrades	Funded by New Debt	\$200,000	\$200,000	\$0	\$200,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Replace 12" Transmission Main	Moved out 1 year	\$400,000	\$400,000	\$0	\$0	\$0	\$0	\$0	\$0	\$400,000	\$0	\$0	\$0	\$0
Lower York Creek Dam Rehab		\$480,695	\$480,695	\$190,695	\$0	\$0	\$0	\$0	\$0	\$0	\$290,000	\$0	\$0	\$0
Bell Canyon Intake Tower Replacement	Funded by New Debt	\$2,000,000	\$2,000,000	\$650,000	\$1,350,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
WTP Condition Assessment	Moved out 2 years	\$150,000	\$150,000	\$0	\$0	\$0	\$0	\$150,000	\$0	\$0	\$0	\$0	\$0	\$0
Spill Containment at Bell Creek Intake	Funded by Reserves	\$75,000	\$75,000	\$0	\$75,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
SCADA Improvements (Rutherford & Holmes)		\$150,000	\$150,000	\$0	\$0	\$0	\$150,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Spill Containment at Stonebridge Well	Funded by Reserves	\$75,000	\$75,000	\$0	\$75,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Upgrade Rutherford Pump Station		\$500,000	\$500,000	\$0	\$0	\$50,000	\$450,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Remove Restriction at Rutherford PS		\$150,000	\$150,000	\$0	\$50,000	\$100,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Install Smart Meters	Unfunded [2]	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Update GIS Maps of Water System		\$50,000	\$50,000	\$0	\$0	\$0	\$50,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Water Master Plan Update		\$150,000	\$150,000	\$0	\$0	\$0	\$0	\$150,000	\$0	\$0	\$0	\$0	\$0	\$0
	Moved out and increased in later years	\$4,000,000	\$4,000,000	\$0	\$0	\$0	\$0	\$400,000	\$600,000	\$600,000	\$600,000	\$600,000	\$600,000	\$600,000
Replace Mains < 6-Inch Diameter		\$150,000	\$150,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$150,000
Replace 1% of Water Mains Annually		\$1,000,000	\$1,000,000	\$0	\$0	\$0	\$0	\$0	\$0	\$500,000	\$500,000	\$0	\$0	\$0
Additional Storage		\$950,000	\$950,000	\$50,000	\$50,000	\$50,000	\$50,000	\$250,000	\$50,000	\$50,000	\$50,000	\$50,000	\$250,000	\$50,000
Annual Maintenance Program														
Total Estimated Project Costs (2016 \$'s)		\$22,584,930	\$17,726,238	\$916,185	\$3,200,638	\$2,117,788	\$1,367,190	\$2,658,333	\$2,076,105	\$1,550,000	\$1,440,000	\$750,000	\$850,000	\$800,000

Source: City of St. Helena and HEC.

2016 cip

[1] Total Cost Less Existing Funding = Total Cost - Existing Bonds - Existing Grants

[2] Installing Smart Meters program is currently unfunded. Total cost for the program is estimated at \$1.5 million.

Table A-7

City of St. Helena Water Rate Study

Estimated Ten-Year Schedule of Water Capital Improvements in Future \$'s

Project	Notes	Existing Funding	Fiscal Year Ending										
			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
			Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	
Estimated Project Costs (Future \$'s) [1]			Annual Increase 3.1%										
York Creek Upper Dam Removal/Mitigation	Partially funded by grant and City (existing bond proceeds)	\$1,829,635	\$0	\$900,939	\$928,696	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Meadowood Tank Upgrades	Partially funded by grant and City (existing bond proceeds)	\$416,107	\$0	\$0	\$416,107	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Bell Canyon Reservoir Improvements	Funded by Reserves	\$1,079,726	\$0	\$0	\$0	\$0	\$0	\$1,079,726	\$0	\$0	\$0	\$0	\$0
Dwyer Road Booster	Moved out 3 years	\$964,587	\$0	\$0	\$0	\$518,449	\$446,137	\$0	\$0	\$0	\$0	\$0	\$0
Bell Canyon Intake Mid-Valve Repair		\$14,830	\$14,830	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Bell Valve House Valve Replacement	Funded by Reserves	\$631,166	\$0	\$0	\$0	\$0	\$0	\$631,166	\$0	\$0	\$0	\$0	\$0
Holmes Tank Upgrade	Moved out 3 years	\$1,607,570	\$0	\$0	\$0	\$65,485	\$1,542,085	\$0	\$0	\$0	\$0	\$0	\$0
Bell Canyon Creek Flow Measurement	Partially funded by City existing bond proceeds	\$523,581	\$0	\$523,581	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sludge Handling Program	Moved out 2 years	\$169,358	\$0	\$0	\$0	\$169,358	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Raw Water Metering Station	Moved out 1 year	\$131,403	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$131,403	\$0	\$0	\$0
Tank 2 Rehabilitation	Moved out 1 year	\$819,515	\$0	\$63,754	\$755,761	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Well Filter Rehabilitation		\$11,445	\$11,445	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pump Station Upgrades	Funded by New Debt	\$212,514	\$0	\$212,514	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Replace 12" Transmission Main		\$494,663	\$0	\$0	\$0	\$0	\$0	\$0	\$494,663	\$0	\$0	\$0	\$0
Lower York Creek Dam Rehab		\$566,250	\$196,570	\$0	\$0	\$0	\$0	\$0	\$0	\$369,680	\$0	\$0	\$0
Bell Canyon Intake Tower Replacement	Funded by New Debt	\$2,104,494	\$670,026	\$1,434,468	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
WTP Condition Assessment	Moved out 2 years	\$174,576	\$0	\$0	\$0	\$0	\$174,576	\$0	\$0	\$0	\$0	\$0	\$0
Spill Containment at Bell Creek Intake	Funded by Reserves	\$79,693	\$0	\$79,693	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
SCADA Improvements (Rutherford & Holmes)		\$169,358	\$0	\$0	\$0	\$169,358	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Spill Containment at Stonebridge Well	Funded by Reserves	\$79,693	\$0	\$79,693	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Upgrade Rutherford Pump Station		\$562,839	\$0	\$0	\$54,765	\$508,073	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Remove Restriction at Rutherford PS		\$162,659	\$0	\$53,128	\$109,531	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Install Smart Meters	Unfunded [2]	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Update GIS Maps of Water System		\$56,453	\$0	\$0	\$0	\$56,453	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Water Master Plan Update		\$174,576	\$0	\$0	\$0	\$0	\$174,576	\$0	\$0	\$0	\$0	\$0	\$0
Replace Mains < 6-Inch Diameter	Moved out and increased in later years	\$5,131,085	\$0	\$0	\$0	\$0	\$465,535	\$719,817	\$741,995	\$764,855	\$788,420	\$812,711	\$837,751
Replace 1% of Water Mains Annually		\$209,438	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$209,438
Additional Storage		\$1,255,708	\$0	\$0	\$0	\$0	\$0	\$0	\$618,329	\$637,379	\$0	\$0	\$0
Annual Maintenance Program		\$1,166,546	\$51,540	\$53,128	\$54,765	\$56,453	\$290,959	\$59,985	\$61,833	\$63,738	\$65,702	\$338,630	\$69,813
Total Estimated Project Costs (Future \$'s)		\$20,799,466	\$944,412	\$3,400,897	\$2,319,626	\$1,543,629	\$3,093,869	\$2,490,694	\$1,916,820	\$1,835,653	\$985,525	\$1,151,341	\$1,117,001

Source: City of St. Helena and HEC.

future clip

[1] Estimated costs increased by historical Engineering News Record Construction Cost Index 20-year average increase.

[2] Installing Smart Meters program is currently unfunded. Total cost for the program is estimated at \$1.5 million.

[3] Total Cost Less Existing Funding = Total Cost - Existing Bonds - Existing Grants

Table A-8
City of St. Helena Water Rate Study
Total Cost by Water System and Share of Cost to Existing Customers

		Percent	Percent		Fiscal Year Ending										
	Funding	Share Existing	Share in	Total Cost	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Project	Source	Customers	Rate Model			Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Estimated Project Costs (2016 \$'s)		per City CIP													
York Creek Upper Dam Removal/Mitigation	Cash	100%	100%	\$1,695,775	\$0	\$847,888	\$847,888	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Meadowood Tank Upgrades	Cash	67%	67%	\$254,900	\$0	\$0	\$254,900	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Bell Canyon Reservoir Improvements	Reserves	100%	100%	\$900,000	\$0	\$0	\$0	\$0	\$0	\$900,000	\$0	\$0	\$0	\$0	\$0
Dwyer Road Booster	Cash	50%	50%	\$421,262	\$0	\$0	\$0	\$229,595	\$191,667	\$0	\$0	\$0	\$0	\$0	\$0
Bell Canyon Intake Mid-Valve Repair	Cash	100%	100%	\$14,387	\$14,387	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Bell Valve House Valve Replacement	Reserves	85%	85%	\$447,189	\$0	\$0	\$0	\$0	\$0	\$447,189	\$0	\$0	\$0	\$0	\$0
Holmes Tank Upgrade	Cash	50%	50%	\$691,500	\$0	\$0	\$0	\$29,000	\$662,500	\$0	\$0	\$0	\$0	\$0	\$0
Bell Canyon Creek Flow Measurement	Cash	83%	83%	\$409,107	\$0	\$409,107	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sludge Handling Program	Cash	100%	100%	\$150,000	\$0	\$0	\$0	\$150,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Raw Water Metering Station	Cash	100%	100%	\$100,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100,000	\$0	\$0
Tank 2 Rehabilitation	Cash	85%	85%	\$637,500	\$0	\$51,000	\$586,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Well Filter Rehabilitation	Cash	100%	100%	\$11,103	\$11,103	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pump Station Upgrades	Debt	100%	100%	\$200,000	\$0	\$200,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Replace 12" Transmission Main	Cash	100%	100%	\$400,000	\$0	\$0	\$0	\$0	\$0	\$0	\$400,000	\$0	\$0	\$0	\$0
Lower York Creek Dam Rehab	Cash	100%	100%	\$480,695	\$190,695	\$0	\$0	\$0	\$0	\$0	\$0	\$290,000	\$0	\$0	\$0
Bell Canyon Intake Tower Replacement	Debt	85%	85%	\$1,700,000	\$552,500	\$1,147,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
WTP Condition Assessment	Ops Cash	100%	100%	\$150,000	\$0	\$0	\$0	\$0	\$150,000	\$0	\$0	\$0	\$0	\$0	\$0
Spill Containment at Bell Creek Intake	Reserves	100%	100%	\$75,000	\$0	\$75,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
SCADA Improvements (Rutherford & Holmes)	Cash	100%	100%	\$150,000	\$0	\$0	\$0	\$150,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Spill Containment at Stonebridge Well	Reserves	100%	100%	\$75,000	\$0	\$75,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Upgrade Rutherford Pump Station	Cash	100%	100%	\$500,000	\$0	\$0	\$50,000	\$450,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Remove Restriction at Rutherford PS	Cash	100%	100%	\$150,000	\$0	\$50,000	\$100,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Install Smart Meters	Unfunded	100%	100%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Update GIS Maps of Water System	Ops Cash	100%	100%	\$50,000	\$0	\$0	\$0	\$50,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Water Master Plan Update	Ops Cash	100%	100%	\$150,000	\$0	\$0	\$0	\$0	\$150,000	\$0	\$0	\$0	\$0	\$0	\$0
Replace Mains < 6-inch Diameter	Cash	100%	100%	\$4,000,000	\$0	\$0	\$0	\$0	\$400,000	\$600,000	\$600,000	\$600,000	\$600,000	\$600,000	\$600,000
Replace 1% of Water Mains Annually	Cash	100%	100%	\$150,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$150,000
Additional Storage	Cash	100%	100%	\$1,000,000	\$0	\$0	\$0	\$0	\$0	\$0	\$500,000	\$500,000	\$0	\$0	\$0
Annual Maintenance Program	Cash	100%	100%	\$950,000	\$50,000	\$50,000	\$50,000	\$50,000	\$250,000	\$50,000	\$50,000	\$50,000	\$50,000	\$250,000	\$50,000
Total Estimated Project Costs (2016 \$'s)				\$15,913,418	\$818,685	\$2,905,495	\$1,889,288	\$1,108,595	\$1,804,167	\$1,997,189	\$1,550,000	\$1,440,000	\$750,000	\$850,000	\$800,000

Table A-8
City of St. Helena Water Rate Study
Total Cost by Water System and Share of Cost to Existing Customers

Project	Funding Source	Percent Share Existing Customers	Percent Share in Rate Model	Total Cost	Fiscal Year Ending										
					2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
					Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	
Estimated Project Costs (Future \$'s) [1]															
York Creek Upper Dam Removal/Mitigation	Cash	100%	100%	\$1,829,635	\$0	\$900,939	\$928,696	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Meadowood Tank Upgrades	Cash	67%	67%	\$279,194	\$0	\$0	\$279,194	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Bell Canyon Reservoir Improvements	Reserves	100%	100%	\$1,079,726	\$0	\$0	\$0	\$0	\$1,079,726	\$0	\$0	\$0	\$0	\$0	\$0
Dwyer Road Booster	Cash	50%	50%	\$482,293	\$0	\$0	\$0	\$259,225	\$223,069	\$0	\$0	\$0	\$0	\$0	\$0
Bell Canyon Intake Mid-Valve Repair	Cash	100%	100%	\$14,830	\$14,830	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Bell Valve House Valve Replacement	Reserves	85%	85%	\$536,491	\$0	\$0	\$0	\$0	\$0	\$536,491	\$0	\$0	\$0	\$0	\$0
Holmes Tank Upgrade	Cash	50%	50%	\$803,785	\$0	\$0	\$0	\$32,743	\$771,043	\$0	\$0	\$0	\$0	\$0	\$0
Bell Canyon Creek Flow Measurement	Cash	83%	83%	\$434,704	\$0	\$434,704	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sludge Handling Program	Cash	100%	100%	\$169,358	\$0	\$0	\$0	\$169,358	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Raw Water Metering Station	Cash	100%	100%	\$131,403	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$131,403	\$0	\$0
Tank 2 Rehabilitation	Cash	85%	85%	\$696,588	\$0	\$54,191	\$642,397	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Well Filter Rehabilitation	Cash	100%	100%	\$11,445	\$11,445	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pump Station Upgrades	Debt	100%	100%	\$212,514	\$0	\$212,514	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Replace 12" Transmission Main	Cash	100%	100%	\$494,663	\$0	\$0	\$0	\$0	\$0	\$0	\$494,663	\$0	\$0	\$0	\$0
Lower York Creek Dam Rehab	Cash	100%	100%	\$566,250	\$196,570	\$0	\$0	\$0	\$0	\$0	\$0	\$369,680	\$0	\$0	\$0
Bell Canyon Intake Tower Replacement	Debt	85%	85%	\$1,788,820	\$569,522	\$1,219,298	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
WTP Condition Assessment	Ops Cash	100%	100%	\$174,576	\$0	\$0	\$0	\$0	\$174,576	\$0	\$0	\$0	\$0	\$0	\$0
Spill Containment at Bell Creek Intake	Reserves	100%	100%	\$79,693	\$0	\$79,693	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
SCADA Improvements (Rutherford & Holmes)	Cash	100%	100%	\$169,358	\$0	\$0	\$0	\$169,358	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Spill Containment at Stonebridge Well	Reserves	100%	100%	\$79,693	\$0	\$79,693	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Upgrade Rutherford Pump Station	Cash	100%	100%	\$562,839	\$0	\$0	\$54,765	\$508,073	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Remove Restriction at Rutherford PS	Cash	100%	100%	\$162,659	\$0	\$53,128	\$109,531	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Install Smart Meters	Unfunded	100%	100%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Update GIS Maps of Water System	Ops Cash	100%	100%	\$56,453	\$0	\$0	\$0	\$56,453	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Water Master Plan Update	Ops Cash	100%	100%	\$174,576	\$0	\$0	\$0	\$0	\$174,576	\$0	\$0	\$0	\$0	\$0	\$0
Replace Mains < 6-Inch Diameter	Cash	100%	100%	\$5,131,085	\$0	\$0	\$0	\$0	\$465,535	\$719,817	\$741,995	\$764,855	\$788,420	\$812,711	\$837,751
Replace 1% of Water Mains Annually	Cash	100%	100%	\$209,438	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$209,438
Additional Storage	Cash	100%	100%	\$1,255,708	\$0	\$0	\$0	\$0	\$0	\$0	\$618,329	\$637,379	\$0	\$0	\$0
Annual Maintenance Program	Cash	100%	100%	\$1,166,546	\$51,540	\$53,128	\$54,765	\$56,453	\$290,959	\$59,985	\$61,833	\$63,738	\$65,702	\$338,630	\$69,813
Total Estimated Project Costs (Future \$'s)				\$18,754,322	\$843,908	\$3,087,287	\$2,069,348	\$1,251,662	\$2,099,757	\$2,396,019	\$1,916,820	\$1,835,653	\$985,525	\$1,151,341	\$1,117,001
2016 \$'s															
Cash - Capital Fund				\$12,166,229	\$266,185	\$1,407,995	\$1,889,288	\$1,058,595	\$1,504,167	\$650,000	\$1,550,000	\$1,440,000	\$750,000	\$850,000	\$800,000
Cash - Operations Fund				\$350,000	\$0	\$0	\$0	\$50,000	\$300,000	\$0	\$0	\$0	\$0	\$0	\$0
Debt - Capital Fund				\$1,900,000	\$552,500	\$1,347,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Reserves				\$1,497,189	\$0	\$150,000	\$0	\$0	\$0	\$1,347,189	\$0	\$0	\$0	\$0	\$0
Total				\$15,913,418	\$818,685	\$2,905,495	\$1,889,288	\$1,108,595	\$1,804,167	\$1,997,189	\$1,550,000	\$1,440,000	\$750,000	\$850,000	\$800,000
Future \$'s															
Cash - Capital Fund				\$14,571,782	\$274,386	\$1,496,091	\$2,069,348	\$1,195,209	\$1,750,606	\$779,802	\$1,916,820	\$1,835,653	\$985,525	\$1,151,341	\$1,117,001
Cash - Operations Fund				\$405,604	\$0	\$0	\$0	\$56,453	\$349,151	\$0	\$0	\$0	\$0	\$0	\$0
Debt - Capital Fund				\$2,001,334	\$569,522	\$1,431,811	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Reserves				\$1,775,602	\$0	\$159,385	\$0	\$0	\$0	\$1,616,217	\$0	\$0	\$0	\$0	\$0
Total				\$18,754,322	\$843,908	\$3,087,287	\$2,069,348	\$1,251,662	\$2,099,757	\$2,396,019	\$1,916,820	\$1,835,653	\$985,525	\$1,151,341	\$1,117,001

Source: City of St. Helena and HEC.

exist share

[1] Estimated costs increased by historical Engineering News Record Construction Cost Index 20-year average increase.

Attachment 2

Table A-9
City of St. Helena Water Rate Study
Existing Annual Debt Service

Fiscal Year Ending	Principal	Interest	Total	Remaining Principal
2017	\$514,130	\$475,121	\$989,251	\$11,121,087
2018	\$528,043	\$454,873	\$982,916	\$10,593,043
2019	\$550,870	\$434,897	\$985,767	\$10,042,174
2020	\$568,696	\$413,677	\$982,373	\$9,473,478
2021	\$591,522	\$388,991	\$980,513	\$8,881,956
2022	\$618,261	\$361,871	\$980,132	\$8,263,696
2023	\$641,087	\$333,464	\$974,551	\$7,622,609
2024	\$668,913	\$305,114	\$974,027	\$6,953,696
2025	\$696,739	\$275,177	\$971,916	\$6,256,956
2026	\$728,478	\$241,012	\$969,490	\$5,528,478
2027	\$760,217	\$203,870	\$964,087	\$4,768,261
2028	\$800,870	\$166,167	\$967,037	\$3,967,391
2029	\$836,522	\$128,353	\$964,874	\$3,130,870
2030	\$877,174	\$90,504	\$967,678	\$2,253,696
2031	\$908,913	\$51,095	\$960,008	\$1,344,783
2032	\$949,565	\$23,400	\$972,965	\$395,217
2033	\$395,217	\$7,904	\$403,122	\$0

Source: City of St. Helena and HEC.

debt serv

Attachment 2

Table A-10
City of St. Helena Water Rate Study
Meter Replacement Costs Estimate

Item	Assumption / Total	Meter Size							
		5/8"	3/4"	1"	1-1/2"	2"	3"	4"	6"
New Meter with Transponder [1]		\$200	\$250	\$350	\$550	\$700	\$1,500	\$3,300	\$4,550
Installation Costs [2]	20%	\$40	\$50	\$70	\$110	\$140	\$300	\$660	\$910
Administration Costs	3%	\$6	\$8	\$11	\$17	\$21	\$45	\$99	\$137
Total Cost per Meter	\$374	\$246	\$308	\$431	\$677	\$861	\$1,845	\$4,059	\$5,597
Replacement Interval (years)		20	20	20	20	20	20	20	20
Cost per Meter per Year		\$12	\$15	\$22	\$34	\$43	\$92	\$203	\$280
Monthly Cost per Meter		\$1.03	\$1.28	\$1.79	\$2.82	\$3.59	\$7.69	\$16.91	\$23.32
Monthly Cost per Billing Meter [3]		\$1.05	\$1.31	\$1.83	\$2.88	\$3.66	\$7.84	\$17.26	\$23.79

Source: City of St. Helena and HEC.

meter prog

[1] Approximate prices based on HEC experience.

[2] Actual installation costs vary by meter size as a percentage of meter cost.

[3] Accounts for an estimated vacancy rate of: 2%

Attachment 2

Table A-11
City of St. Helena Water Rate Study
Comparison of Historical Operating Expenses to Standard Indices

Historical Water Operating Expenses	Actuals Fiscal Year Ending				Estimated 2016	Change	
	2012	2013	2014	2015		Total	Avg. Annual
Salaries & Benefits	\$1,217,968	\$1,168,983	\$1,165,302	\$1,299,809	\$1,565,976	\$348,008	6.5%
Services	\$440,097	\$284,472	\$348,495	\$358,264	\$538,363	\$98,266	5.2%
Supplies	\$147,577	\$100,683	\$82,066	\$117,593	\$142,949	(\$4,628)	-0.8%
Napa Purchased Water	\$1,178,401	\$1,189,926	\$1,327,251	\$1,272,770	\$1,311,272	\$132,872	2.7%
Maintenance	\$91,794	\$68,433	\$78,880	\$124,006	\$195,116	\$103,322	20.7%
Taxes, Insurances & Contributions	\$102,988	\$74,528	\$79,111	\$91,930	\$147,415	\$44,427	9.4%
Total Expenses	\$3,178,823	\$2,887,026	\$3,081,105	\$3,264,373	\$3,901,091	\$722,268	5.3%
Engineering News Record							
	<i>Dec 2011</i>	<i>Dec 2012</i>	<i>Dec 2013</i>	<i>Dec 2014</i>	<i>Dec 2015</i>		
ENR Construction Cost Index 20-City [1]	9,172.00	9,412.00	9,668.00	9,936.00	10,135.00	963.00	2.5%
ENR Construction Cost Index San Francisco	10,204.79	10,355.09	10,898.84	10,915.84	11,155.41	950.62	2.3%
Bureau of Labor Statistics							
Consumer Price Index - California	232.99	237.71	241.53	244.81	250.71	17.73	1.9%
Consumer Price Index - San Francisco	234.33	239.53	245.71	252.27	260.29	25.96	2.7%

Source: City of St. Helena, California Department of Finance, and the Engineering News Record.

indices

[1] Engineering News Record (ENR) Consumer Cost Index (CCI) change 1995 to 2015:

ENR CCI 1995	5,524	Change	<u>Annual Avg. % Change</u>
ENR CCI 2015	10,135	4,611	3.1%

Table A-12
City of St. Helena Water Rate Study
Estimated Depreciation of New Assets

New Asset	Asset Life	Fiscal Year Ending										
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
	years											
York Creek Upper Dam Removal/Mitigation	n.a.	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Meadowood Tank Upgrades	50	\$0	\$0	\$8,322.14	\$8,322	\$8,322	\$8,322	\$8,322	\$8,322	\$8,322	\$8,322	\$8,322
Bell Canyon Reservoir Improvements	80	\$0	\$0	\$0	\$0	\$0	\$13,497	\$13,497	\$13,497	\$13,497	\$13,497	\$13,497
Dwyer Road Booster	50	\$0	\$0	\$0	\$10,369	\$19,292	\$19,292	\$19,292	\$19,292	\$19,292	\$19,292	\$19,292
Bell Canyon Intake Mid-Valve Repair	10	\$1,483	\$1,483	\$1,483	\$1,483	\$1,483	\$1,483	\$1,483	\$1,483	\$1,483	\$1,483	\$1,483
Bell Valve House Valve Replacement	50	\$0	\$0	\$0	\$0	\$0	\$12,623	\$12,623	\$12,623	\$12,623	\$12,623	\$12,623
Holmes Tank Upgrade	50	\$0	\$0	\$0	\$1,310	\$32,151	\$32,151	\$32,151	\$32,151	\$32,151	\$32,151	\$32,151
Bell Canyon Creek Flow Measurement	40	\$0	\$13,090	\$13,090	\$13,090	\$13,090	\$13,090	\$13,090	\$13,090	\$13,090	\$13,090	\$13,090
Sludge Handling Program	40	\$0	\$0	\$0	\$4,234	\$4,234	\$4,234	\$4,234	\$4,234	\$4,234	\$4,234	\$4,234
Raw Water Metering Station	15	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$8,760	\$8,760	\$8,760
Tank 2 Rehabilitation	50	\$0	\$1,275	\$16,390	\$16,390	\$16,390	\$16,390	\$16,390	\$16,390	\$16,390	\$16,390	\$16,390
Well Filter Rehabilitation	10	\$1,145	\$1,145	\$1,145	\$1,145	\$1,145	\$1,145	\$1,145	\$1,145	\$1,145	\$1,145	\$1,145
Pump Station Upgrades	50	\$0	\$4,250	\$4,250	\$4,250	\$4,250	\$4,250	\$4,250	\$4,250	\$4,250	\$4,250	\$4,250
Replace 12" Transmission Main	80	\$0	\$0	\$0	\$0	\$0	\$0	\$6,183	\$6,183	\$6,183	\$6,183	\$6,183
Lower York Creek Dam Rehab	20	\$9,829	\$9,829	\$9,829	\$9,829	\$9,829	\$9,829	\$9,829	\$28,313	\$28,313	\$28,313	\$28,313
Bell Canyon Intake Tower Replacement	80	\$8,375	\$26,306	\$26,306	\$26,306	\$26,306	\$26,306	\$26,306	\$26,306	\$26,306	\$26,306	\$26,306
WTP Condition Assessment	10	\$0	\$0	\$0	\$0	\$17,458	\$17,458	\$17,458	\$17,458	\$17,458	\$17,458	\$17,458
Spill Containment at Bell Creek Intake	50	\$0	\$1,594	\$1,594	\$1,594	\$1,594	\$1,594	\$1,594	\$1,594	\$1,594	\$1,594	\$1,594
SCADA Improvements (Rutherford & Holmes)	10	\$0	\$0	\$0	\$16,936	\$16,936	\$16,936	\$16,936	\$16,936	\$16,936	\$16,936	\$16,936
Spill Containment at Stonebridge Well	50	\$0	\$1,594	\$1,594	\$1,594	\$1,594	\$1,594	\$1,594	\$1,594	\$1,594	\$1,594	\$1,594
Upgrade Rutherford Pump Station	50	\$0	\$0	\$1,095	\$11,257	\$11,257	\$11,257	\$11,257	\$11,257	\$11,257	\$11,257	\$11,257
Remove Restriction at Rutherford PS	50	\$0	\$1,063	\$3,253	\$3,253	\$3,253	\$3,253	\$3,253	\$3,253	\$3,253	\$3,253	\$3,253
Install Smart Meters	15	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Update GIS Maps of Water System	10	\$0	\$0	\$0	\$5,645	\$5,645	\$5,645	\$5,645	\$5,645	\$5,645	\$5,645	\$5,645
Water Master Plan Update	10	\$0	\$0	\$0	\$0	\$17,458	\$17,458	\$17,458	\$17,458	\$17,458	\$17,458	\$17,458
Replace Mains < 6-Inch Diameter	80	\$0	\$0	\$0	\$0	\$5,819	\$14,817	\$24,092	\$33,653	\$43,508	\$53,667	\$64,139
Replace 1% of Water Mains Annually	80	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,618
Additional Storage	50	\$0	\$0	\$0	\$0	\$0	\$0	\$12,367	\$25,114	\$25,114	\$25,114	\$25,114
Annual Maintenance Program	10	\$5,154	\$10,467	\$15,943	\$21,589	\$50,685	\$56,683	\$62,866	\$69,240	\$75,810	\$109,673	\$116,655
Total Estimated Annual Depreciation		\$25,985	\$72,094	\$104,294	\$158,594	\$268,189	\$309,305	\$343,313	\$390,479	\$415,665	\$459,687	\$479,758

Source: City of St. Helena and HEC.

new dep

Attachment 2

Table A-13
City of St. Helena Water Rate Study
Depreciation of Existing Assets

Asset Category	Current Depreciation
Buildings	\$36,008
Vehicles	\$8,383
Equipment	\$155,600
Improvements	\$559,834
Pipes	\$115,319
Total	\$875,144

Source: City of St. Helena.

curr depr

Attachment 2

Table A-14
City of St. Helena Water Rate Study
Allocation of Plant in Service

Facility	Percent Allocation					Cost Allocation				
	Customer	Capacity	Fire		Total	Customer	Capacity	Fire		Cost Basis
			Capacity	Use				Capacity	Use	
Buildings	100%				100%	\$1,656,932	\$0	\$0	\$0	\$1,656,932
Vehicles	25%	40%		35%	100%	\$10,522	\$16,835	\$0	\$14,730	\$42,086
Equipment	10%	50%		40%	100%	\$206,127	\$1,030,636	\$0	\$824,509	\$2,061,272
Improvements		75%	10%	15%	100%	\$0	\$7,482,162	\$997,622	\$1,496,432	\$9,976,217
Pipes		75%		25%	100%	\$0	\$2,887,942	\$0	\$962,647	\$3,850,589
Total Plant in Service						\$1,873,580	\$11,417,575	\$997,622	\$3,298,319	\$17,587,095
% of Plant in Service						11%	65%	6%	19%	100%

Source: City of St. Helena and HEC.

plant

Attachment 2

Table A-15
City of St. Helena Water Rate Study
Functional Allocation of Revenue Requirement

Expenditures	BUDGET 2016/17	Allocation Basis	Customer	Capacity	Fire Capacity	Use	Unclassified
Operations							
Salaries & Benefits	\$706,986	Avg. of Classified	0%	0%	0%	0%	100%
Services	\$311,925	Customers	100%	0%	0%	0%	0%
Supplies	\$18,792	Avg. of Classified	0%	0%	0%	0%	100%
Maintenance	\$13,197	Plant In Service	11%	65%	6%	19%	0%
Taxes, Insurances & Contributions	\$113,467	Avg. of Classified	0%	0%	0%	0%	100%
Capital	\$1,925	Plant In Service	11%	65%	6%	19%	0%
Debt	\$1,001,067	Ratio Avg. to Peak Month	0%	74%	0%	26%	0%
Subtotal Operations	\$2,167,359						
Distribution							
Salaries & Benefits	\$490,637	Avg. of Classified	0%	0%	0%	0%	100%
Services & Supplies	\$52,228	Avg. of Classified	0%	0%	0%	0%	100%
Utilities	\$61,770	Avg. of Classified	0%	0%	0%	0%	100%
Maintenance	\$60,295	Plant In Service	11%	65%	6%	19%	0%
Capital	\$21,000	Plant In Service	11%	65%	6%	19%	0%
Subtotal Distribution	\$685,930						
Treatment							
Salaries & Benefits	\$414,620	Ratio Avg. to Peak Month	0%	74%	0%	26%	0%
Services & Supplies	\$64,000	Ratio Avg. to Peak Month	0%	74%	0%	26%	0%
Utilities & Chemicals	\$137,500	Utilities & Chemicals	0%	0%	0%	100%	0%
Maintenance	\$83,587	Plant In Service	11%	65%	6%	19%	0%
Taxes, Insurances & Contributions	\$19,700	Avg. of Classified	0%	0%	0%	0%	100%
Capital	\$115,000	Plant In Service	11%	65%	6%	19%	0%
Subtotal Treatment	\$834,407						
Stonebridge Wells							
Services	\$57,100	Utilities & Chemicals	0%	0%	0%	100%	0%
Supplies	\$12,800	Utilities & Chemicals	0%	0%	0%	100%	0%
Maintenance	\$15,500	Plant In Service	11%	65%	6%	19%	0%
Subtotal Stonebridge Wells	\$85,400						
Napa Purchased Water	\$1,349,019	Napa	0%	75%	0%	25%	0%
TOTAL OPERATING EXPENDITURES	\$5,122,115		\$345,003	\$2,313,324	\$17,613	\$982,594	\$1,463,580
Reallocate As All Others			\$138,017	\$925,435	\$7,046	\$393,082	
ALLOCATION OF OP. EXP.	\$5,122,115		\$483,021	\$3,238,759	\$24,659	\$1,375,676	
	100%		9.4%	63.2%	0.5%	26.9%	

Source: City of St. Helena and HEC.

func

Table A-16
City of St. Helena Water Rate Study
Number of Meters

Meter Size	TOTAL	Customer Type											
		Commercial	Industrial	Residential			Landscape	Churches [2]	Laundry	Library/Schools	Motel/Hotel	All Other	City-Owned
				SF	MF	Mob							
	[1]							[2]					
5/8"	1,987	131	12	1,776	36	1	12	7	0	1	5	0	6
1"	330	40	0	232	36	0	6	6	0	1	2	0	7
1.5"	61	11	1	11	20	1	6	1	1	3	2	0	4
2"	47	11	1	8	6	1	7	1	0	6	4	0	2
3"	7	1	0	0	3	0	1	0	0	0	1	0	1
4"	9	2	1	1	0	0	0	0	0	3	1	1	0
6"	11	1	6	0	1	1	0	0	0	0	1	0	1
Total	2,452	197	21	2,028	102	4	32	15	1	14	16	1	21

Source: City of St. Helena.

meters

[1] Compound meters counted only once.

[2] Includes all religious places and community centers

Table A-17
City of St. Helena Water Rate Study
Calculated Consumption Charges for Seasonal Water Rates

Allocated Peak & Off-Peak	Fiscal Year Ending										
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Allocated Cost	\$3,799,993	\$4,387,001	\$4,958,147	\$5,102,274	\$5,225,724	\$5,351,120	\$5,488,329	\$5,567,635	\$5,613,794	\$5,636,044	\$5,657,543
Off-Peak Water Use (Nov-Apr) 37%	240,040	239,015	239,436	240,404	240,688	240,939	241,176	241,506	241,799	242,079	242,329
Peak Water Use (May-Oct) 63%	405,760	404,027	404,739	406,376	406,856	407,280	407,682	408,238	408,734	409,208	409,631
Total Water Use	645,800	643,042	644,175	646,780	647,544	648,219	648,858	649,744	650,533	651,287	651,960
Off-Peak Costs per HCF	\$5.50	\$6.37	\$7.19	\$7.37	\$7.54	\$7.71	\$7.90	\$8.01	\$8.06	\$8.08	\$8.11
Peak Costs per HCF 1.11	\$6.11	\$7.09	\$8.00	\$8.20	\$8.38	\$8.58	\$8.79	\$8.90	\$8.97	\$8.99	\$9.02

Source: City of St. Helena and HEC.

seasonal rates

Table A-18
City of St. Helena Water Rate Study
Projection of Water Demand

Customer	Fiscal Year Ending										
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Residential	All figures in Hundreds of Cubic Feet										
Single Unit	262,941	261,914	262,758	264,154	264,862	265,537	266,199	266,954	267,672	268,377	269,052
Multi-Fam	48,856	48,665	48,696	48,830	48,836	48,836	48,833	48,848	48,856	48,861	48,861
Mobile Homes	27,026	26,920	26,938	27,012	27,015	27,015	27,014	27,022	27,026	27,029	27,029
Subtotal Residential	338,822	337,499	338,393	339,995	340,713	341,388	342,046	342,823	343,554	344,267	344,942
Non-Residential											
Commercial	79,857	79,272	79,369	79,778	79,797	79,797	79,789	79,834	79,857	79,874	79,873
Industrial	138,422	138,084	138,140	138,377	138,387	138,387	138,383	138,409	138,422	138,432	138,432
Landscape	20,615	20,413	20,447	20,587	20,594	20,594	20,591	20,606	20,615	20,620	20,620
Churches	2,878	2,867	2,869	2,876	2,877	2,877	2,877	2,878	2,878	2,878	2,878
Wells	2,585	2,585	2,585	2,585	2,585	2,585	2,585	2,585	2,585	2,585	2,585
Laundry	3,017	3,010	3,011	3,016	3,016	3,016	3,016	3,017	3,017	3,017	3,017
Library Schools	19,452	19,357	19,372	19,439	19,442	19,442	19,441	19,448	19,452	19,454	19,454
Motel/Hotel	28,937	28,768	28,796	28,914	28,920	28,920	28,918	28,930	28,937	28,942	28,942
City Owned	11,216	11,189	11,193	11,213	11,213	11,213	11,213	11,215	11,216	11,217	11,217
Subtotal Non-Residential	306,978	305,543	305,782	306,785	306,831	306,831	306,812	306,921	306,979	307,020	307,018
Total Billable	645,800	643,042	644,175	646,780	647,544	648,219	648,858	649,744	650,533	651,287	651,960
Non-Billable [1]	61,980	61,980	61,980	61,980	61,980	61,980	61,980	61,980	61,980	61,980	61,980
Total Water	707,781	705,022	706,155	708,760	709,525	710,199	710,838	711,724	712,513	713,267	713,941

Source: City of St. Helena and HEC.

demand

[1] Non-Billable water includes unaccounted and/or unbilled water e.g. leaks, and certain city agreements.

Table A-19
City of St. Helena Water Rate Study
Assumptions for the Effect of Increasing Prices on Water Demand (Price Elasticity)

Customer Type	Estimated Elasticity	2018 Year 1	2019 Year 2	2020 Year 3	2021 Year 4	2022 Year 5	2023 Year 6	2024 Year 7	2025 Year 8	2026 Year 9	2027 Year 10
% Change in Price to Meet Revenue Requirement		17.1%	14.7%	4.5%	4.0%	4.0%	4.2%	3.1%	2.5%	2.1%	2.1%
Assumption for Inflation		2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
Price Increase Adjusted for Inflation		14.6%	12.2%	2.0%	1.5%	1.5%	1.7%	0.6%	0.0%	-0.4%	-0.4%
Residential											
Single Unit	-0.08	-1.2%	-1.0%	-0.2%	-0.1%	-0.1%	-0.1%	0.0%	0.0%	0.0%	0.0%
Multi-Fam	-0.08	-1.2%	-1.0%	-0.2%	-0.1%	-0.1%	-0.1%	0.0%	0.0%	0.0%	0.0%
Mobile Homes	-0.08	-1.2%	-1.0%	-0.2%	-0.1%	-0.1%	-0.1%	0.0%	0.0%	0.0%	0.0%
Non-Residential											
Commercial	-0.15	-2.2%	-1.8%	-0.3%	-0.2%	-0.2%	-0.3%	-0.1%	0.0%	0.1%	0.1%
Industrial	-0.05	-0.7%	-0.6%	-0.1%	-0.1%	-0.1%	-0.1%	0.0%	0.0%	0.0%	0.0%
Landscape	-0.20	-2.9%	-2.4%	-0.4%	-0.3%	-0.3%	-0.3%	-0.1%	0.0%	0.1%	0.1%
Churches	-0.08	-1.2%	-1.0%	-0.2%	-0.1%	-0.1%	-0.1%	0.0%	0.0%	0.0%	0.0%
Laundry	-0.05	-0.7%	-0.6%	-0.1%	-0.1%	-0.1%	-0.1%	0.0%	0.0%	0.0%	0.0%
Library Schools	-0.10	-1.5%	-1.2%	-0.2%	-0.1%	-0.2%	-0.2%	-0.1%	0.0%	0.0%	0.0%
Motel/Hotel	-0.12	-1.8%	-1.5%	-0.2%	-0.2%	-0.2%	-0.2%	-0.1%	0.0%	0.1%	0.0%
City Owned	-0.05	-0.7%	-0.6%	-0.1%	-0.1%	-0.1%	-0.1%	0.0%	0.0%	0.0%	0.0%

Source: HEC.

elasticity

Attachment 2

Table A-20
City of St. Helena Water Rate Study
Projected Changes in Water Demand due to Price Changes

Customer Type	Fiscal Year Ending									
	2018 Year 1	2019 Year 2	2020 Year 3	2021 Year 4	2022 Year 5	2023 Year 6	2024 Year 7	2025 Year 8	2026 Year 9	2027 Year 10
Residential										
Single Unit [1]	262,941	263,617	264,292	264,968	265,644	266,320	266,995	267,671	268,347	269,023
Multi-Fam	48,856	48,856	48,856	48,856	48,856	48,856	48,856	48,856	48,856	48,856
Mobile Homes	27,026	27,026	27,026	27,026	27,026	27,026	27,026	27,026	27,026	27,026
Subtotal Residential	338,822	339,498	340,174	340,849	341,525	342,201	342,877	343,552	344,228	344,904
Non-Residential										
Commercial	79,857	79,857	79,857	79,857	79,857	79,857	79,857	79,857	79,857	79,857
Industrial	138,422	138,422	138,422	138,422	138,422	138,422	138,422	138,422	138,422	138,422
Landscape	20,615	20,615	20,615	20,615	20,615	20,615	20,615	20,615	20,615	20,615
Churches	2,878	2,878	2,878	2,878	2,878	2,878	2,878	2,878	2,878	2,878
Wells	2,585	2,585	2,585	2,585	2,585	2,585	2,585	2,585	2,585	2,585
Laundry	3,017	3,017	3,017	3,017	3,017	3,017	3,017	3,017	3,017	3,017
Library Schools	19,452	19,452	19,452	19,452	19,452	19,452	19,452	19,452	19,452	19,452
Motel/Hotel	28,937	28,937	28,937	28,937	28,937	28,937	28,937	28,937	28,937	28,937
City Owned	11,216	11,216	11,216	11,216	11,216	11,216	11,216	11,216	11,216	11,216
Subtotal Non-Residential	306,978	306,978	306,978	306,978	306,978	306,978	306,978	306,978	306,978	306,978
Total Billable Water	645,800	953,454	954,129	954,805	955,481	956,157	956,832	957,508	958,184	958,860
Change in Demand due to Price [2]										
Residential										
Single Unit	-1,027	-858	-139	-106	-106	-120	-42	1	31	30
Multi-Fam	-191	-159	-26	-20	-20	-22	-8	0	6	5
Mobile Homes	-106	-88	-14	-11	-11	-12	-4	0	3	3
Subtotal Residential	-1,324	-1,105	-179	-136	-137	-155	-53	1	39	38
Non-Residential										
Commercial	-585	-488	-79	-60	-60	-68	-23	1	17	16
Industrial	-338	-282	-45	-35	-35	-39	-13	0	10	10
Landscape	-201	-168	-27	-21	-21	-23	-8	0	6	6
Churches	-11	-9	-2	-1	-1	-1	0	0	0	0
Laundry	-7	-6	-1	-1	-1	-1	0	0	0	0
Library Schools	-95	-79	-13	-10	-10	-11	-4	0	3	3
Motel/Hotel	-170	-141	-23	-17	-17	-20	-7	0	5	5
City Owned	-27	-23	-4	-3	-3	-3	-1	0	1	1
Subtotal Non-Residential	-1,435	-1,196	-193	-147	-147	-166	-57	1	42	40
Total Billable Water	-2,758	-2,301	-372	-283	-284	-321	-111	3	81	78

Source: HEC.

elas demand

[1] Assumes growth of 5 units per year.

[2] Change applied to summer months consumption only.

Percent of Year	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%

Attachment 2

Table A-21
City of St. Helena Water Rate Study
Operating Expenses (FY2016) Peak to Off-Peak Ratio

Expenses	TOTAL Excl. Debt	Percent of Year Total
Jul-15	\$280,972	8%
Aug-15	\$156,745	5%
Sep-15	\$373,717	11%
Oct-15	\$367,289	11%
Nov-15	\$297,387	9%
Dec-15	\$391,236	11%
Jan-16	\$256,759	7%
Feb-16	\$158,108	5%
Mar-16	\$267,578	8%
Apr-16	\$252,836	7%
May-16	\$155,424	5%
Jun-16	\$471,651	14%
TOTAL	\$3,429,701	100%
PEAK	\$1,805,798	
PEAK AS % OF TOTAL	53%	
OFF-PEAK	\$1,623,903	
PEAK AVG.	\$300,966	
OFF-PEAK AVG.	\$270,650	
PEAK TO OFF-PEAK RATIO	1.11	

Source: City of St. Helena.

exp monthly 2

[1] Excludes operating costs not influenced by seasonal changes; debt, taxes, insurance, and capital.

Attachment 2

Table A-22
City of St. Helena Water Rate Study
Calculated Drought and Non-Drought Year Water Costs

Source Costs	Imported <i>City of Napa</i>	Surface Water <i>Bell Canyon</i>	Ground Water <i>Stonebridge Wells</i>	Total <i>All Sources</i>
<u>Fiscal Year 2015</u>				
Cost per 1,000 Galls	\$6.70	\$2.82	\$0.65	
DROUGHT YEAR				
Wtd. Avg. Cost per 1,000 Galls.	\$2.53	\$1.31	\$0.10	\$3.94
Source of Supply	38%	46%	16%	100%
NON-DROUGHT YEAR				
Wtd. Avg. Cost per 1,000 Galls.	\$2.12	\$1.13	\$0.19	\$3.43
Source of Supply	32%	40%	28%	100%
All Other Operations Costs (assumed not to change) [1]				\$1,814,740
All Other Operations Costs per 1,000 Gallons of City produced water				\$5.68
TOTAL DROUGHT YEAR COST PER 1,000 GALLONS				\$9.62
TOTAL NON-DROUGHT YEAR COSTS PER 1,000 GALLONS				\$9.10
<i>Ratio of Drought to Non-Drought</i>			<i>1.06</i>	

Source: City of St. Helena and HEC.

cost by source

[1] Includes general operations costs; excludes distribution costs, debt, capital, and transfers.

Attachment 2

**HANSFORD ECONOMIC
CONSULTING**



**City of St. Helena (2016)
Wastewater Rate Study
Technical Memorandum**

FINAL
October 31, 2016

HEC Project #150182

Attachment 2

**HANSFORD ECONOMIC
CONSULTING**

PO Box 10384
Truckee, CA 96162

Phone: 530-412-3676
Email: catherine@hansfordecon.com

Technical Memorandum WASTEWATER RATE STUDY

To: City of St. Helena

From: Catherine Hansford

Date: October 31, 2016

This technical memorandum presents the detailed wastewater rate study. Support tables are provided in **Attachment A**.

THE WASTEWATER FUND

Table A-1 in **Attachment A** shows comprehensive audited financial report data for the wastewater fund from 2011 through 2015. Detailed historical revenues and expenses are shown in **Table A-2**, with supporting data in **Table A-3**.

Revenues

The wastewater system is funded through rates, annexation fees, investment earnings, and sewer connection fees. More than 99% of revenue is from wastewater rates. Rate revenue is generated according to the current wastewater rate schedule shown on the following page in **Table 1**. Under the current rate schedule all customers pay a service charge (or base charge) and a flow charge per HCF based on average winter month water use. Residential single family customers pay a flat monthly base charge, and a flow charge. For non-residential customers, including residential multi-family customers, the service charge is different by meter size, and the flow charge is different by customer type.

Expenses

Figure 1 displays the components of expenditures for the past five years for the wastewater capital and operating funds combined. Personnel costs (salaries and benefits), services, and capital projects have been the largest expenditure items.

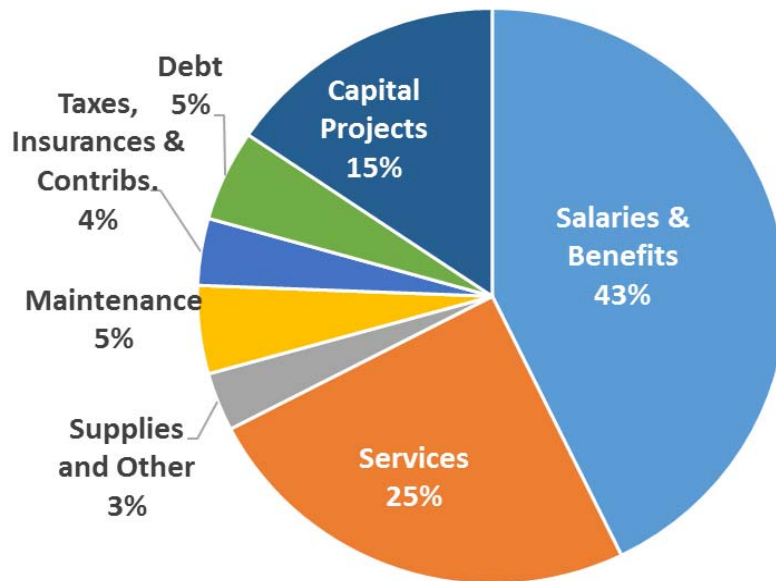
Prepared by HEC

Attachment 2

Page 2 of 23

Wastewater Rate Study, October 31, 2016

Figure 1
Typical Annual Wastewater Fund Expenditures



Prepared by HEC

Attachment 2

Page 3 of 23

Wastewater Rate Study, October 31, 2016

Table 1
Current Wastewater Rate Schedule

Land Use	Base Monthly Rate (2016)	Usage Rate (\$ per hcf of Winter Water Use)
Residential		[1]
Single Family	\$47.35	\$3.94
Multi-family	[2]	\$3.94
Non-Residential Base Rates		
5/8" & 3/4" Meter	\$42.12	
1" Meter	\$102.42	
1 1/2" Meter	\$202.92	
2" Meter	\$323.53	
3" Meter	\$604.94	
4" Meter	\$1,006.96	
6" Meter	\$2,012.00	
Non-Residential Usage Rates (per hcf)		
Car Wash		\$2.85
Schools		\$3.17
Laundry/Laundromat		\$3.34
Churches		\$3.64
City Buildings		\$3.64
Commercial (General)		\$3.64
Winery (Sutter Home)		\$4.27
Motels without Food		\$4.35
Service Stations/Auto Repair		\$4.70
Mixed Retail with Food		\$6.79
Motels with Food		\$8.75
Restaurant		\$11.68
Grocery		\$11.87
Mortuary		\$11.87
Winery (Merryvale)		\$20.94
Winery (Spottswode)		\$20.94

Source: City of St. Helena.

curr

[1] Single family usage charge based on average winter water use, determined as average monthly usage for billing cycles with read dates from January through March. Months with zero usage are to be excluded from the averaging. Usage charge to be adjusted annually in April, based on the newest winter average.

[2] Multi-family pays same base charges based on meter size as non-residential.

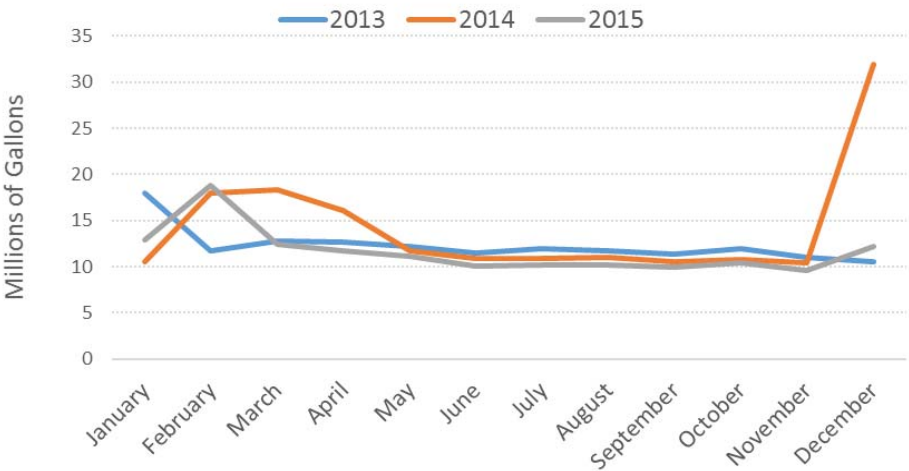
Prepared by HEC

THE WASTEWATER SYSTEM

The City’s wastewater system consists of a collection system of more than 22 miles of pipe. Effluent is treated at the 0.5 million gallons a day (average daily dry weather flow) treatment plant. The wastewater treatment plant was built in 1967. The secondary level treatment plant discharges to the Napa River or land (City-owned grass fields, redwood/willow trees, and mosquito fish ponds). The City’s National Pollutant Discharge Elimination System (NPDES) permit was renewed in March 2016; at the same time a Cease and Desist Order (CDO) No. R2-2016-0004 was issued because the City is unable to meet the more stringent effluent requirements of the renewed NPDES permit. A draft feasibility study was prepared for the City in August 2016 which recommends improvements at the wastewater treatment plant so that the City can be in compliance and the CDO lifted.

Figure 2 shows historical monthly influent at the wastewater treatment plant. Data is provided in **Table A-4**. Wastewater inflow at the treatment plant currently averages 0.4 million gallons per day (MGD).

Figure 2
Historical Wastewater Plant Monthly Influent Flow



Customer Characteristics

The number of customers and total calculated flow for each customer and customer category, BOD and TSS characteristics are summarized in **Table 2**.

Attachment 2

Page 5 of 23

Wastewater Rate Study, October 31, 2016

Table 2
Summary of User Characteristics

Customer Category	Billing Basis	No. Billing Units	Wastewater Characteristics				Existing Treatment Capacity/Load				Total Annual Capacity/Load			
			Flow	BOD	SS	Flow	BOD	SS	Flow	BOD	SS			
			GPD	MG/L	MG/L	MGD	Lbs/Day	Lbs/Day	MG	Lbs/Year	Lbs/Year			
		(A)	(B)	(C)	(D)	(E)=(A)(B)/1000000	(F)=(C)(E)(8.34)	(G)=(D)(E)(8.34)	(H)=(E)(365)	(I)=(F)(365)	(J)=(G)(365)			
[1]														
Residential														
Single Family	Unit	1,503	175	200	200	0.26	439.25	439.25	96.12	160,328	160,328	160,328		
Multi-Family	Unit	669	106	200	200	0.07	118.29	118.29	25.89	43,177	43,177	43,177		
Mobile Homes (Vineyard Valley)	Unit	211	157	200	200	0.03	55.33	55.33	12.11	20,197	20,197	20,197		
School	Student	1,437	8	130	100	0.01	11.68	8.99	1.94	2,103	1,618			
Non-Residential														
Car Wash	Account	1	1,005	20	150	0.00	0.17	1.26	0.37	61	459			
Religious Places/Community Centers	Account	13	156	130	110	0.00	2.20	1.86	0.74	802	679			
Commercial [2]	Account	126	241	150	200	0.03	37.96	50.61	11.08	13,855	18,473			
Groceries and Mortuaries	Account	3	691	800	800	0.00	13.84	13.84	0.76	5,052	5,052			
Laundry	Account	1	4,181	150	110	0.00	5.23	3.84	1.53	1,909	1,400			
Mixed Retail w/ Food	Account	3	1,319	240	600	0.00	7.92	19.80	1.44	2,891	7,228			
Motel with Food	Account	2	5,429	500	600	0.01	45.28	54.34	3.96	16,528	19,833			
Motel without Food	Account	8	2,297	310	120	0.02	47.51	18.39	6.71	17,340	6,712			
Restaurant	Account	19	1,354	1,000	600	0.03	214.60	128.76	9.39	78,328	46,997			
Napa Valley College	Account	1	12,925	130	100	0.01	14.01	10.78	4.72	5,115	3,935			
Service Station	Account	5	318	180	280	0.00	2.38	3.71	0.58	870	1,353			
Winery Production (Merryvale/Spottswoode)	Account	2	937	2,800	400	0.00	43.78	6.25	0.68	15,981	2,283			
Sutter Home Winery	Account	1	3,195	200	200	0.00	5.33	5.33	1.17	1,945	1,945			
TOTAL (ADWF 0.5 MGD)						0.50	1,064.78	940.64	179.17	386,483	341,669			
Source: City of St. Helena, California Department of Education, Educational Demographics Unit, and HEC														

Source: City of St. Helena, California Department of Education Educational Demographics Unit, and HEC.

[1] Schools multiplied by 180 days per year.

[2] Commercial includes City buildings.

Prepared by HEC

Attachment 2

Page 6 of 23

Wastewater Rate Study, October 31, 2016

REVENUE REQUIREMENT

The revenue requirement refers to the amount of money that must be raised through rates. The projection of revenue requirement is the cornerstone for calculation of rates. This section explains the derivation of revenue requirement for this Study. Components of revenue requirement include:

- Capital Improvements
- Debt Service
- Operations Expenses and Reserves
- System Rehabilitation
- Wastewater Fund Reserves

Non-water sales revenue projections are credited against projected operations costs. Non-water sales include investment earnings and sewer connection fees.

Capital Improvements

Table 3 summarizes the capital improvement costs identified by the City as necessary in the next ten years. The costs do not include project costs that already have funding sources identified (i.e. have a grant secured or are to be funded with existing City bond proceeds). All costs are expressed in future dollars. The total ten-year capital improvement projects (CIP) costs is estimated at \$17.7 million. Of this total it is anticipated that \$13.0 million will be spent in the next five years.

Table A-5 and **Table A-6** provide the wastewater system CIP list of facilities, provided by the City for the next 10 years, in current and future dollars respectively. Major necessary improvements include phase 1 upgrades to the wastewater treatment plant, replacing the wastewater reclamation facility operations building and shop, and sewer mains replacement or rehabilitation.

Costs are further allocated to existing and future customers based on their estimated use of the facilities. Only \$125,000 of the total cost is for projects partially benefiting future customers. These projects include reclamation field facilities and miscellaneous maintenance improvements. Supporting data is provided in **Table A-7**, in 2016 dollars, and **Table A-8**, in future dollars. All other CIP items are allocated entirely to existing customers. Existing customers' costs included in rates are shown in **Table A-9**.

Future costs are inflated using the Engineering News Record Construction Cost Index (ENR CCI) past 20-year annual average increase of 3.1%.

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Attachment 2

Page 7 of 23

Wastewater Rate Study, October 31, 2016

Table 3
Wastewater Capital Improvement Costs by Customer Share

Customer	Estimated CIP Costs in Future Dollars		
	Through 2022	2023 to 2027	Total CIP
Existing Customer Share	\$12,909,786	\$4,699,894	\$17,609,680
Future Customer Share	\$57,033	\$68,049	\$125,082
Total Existing and Future	\$12,966,819	\$4,767,944	\$17,734,763

Source: HEC.

cip share

CIP funding sources of costs are shown in **Table 4**.

Table 4
Sources of Funding for Existing Customers CIP Costs

Project	Total Cost Less Existing Funding	Total Through FY 2022	Fiscal Year Ending					
			2017	2018	2019	2020	2021	2022
Future \$'s								
Cash - Capital Fund	\$4,636,494	\$2,636,034	\$521,023	\$426,887	\$391,846	\$686,181	\$270,883	\$339,214
Cash - Operations Fund	\$561,029	\$462,386	\$15,462	\$69,067	\$235,491	\$16,936	\$17,458	\$107,973
Debt - Capital Fund	\$8,746,428	\$8,495,287	\$239,259	\$743,798	\$3,582,746	\$3,693,130	\$116,384	\$119,970
Reserves	\$3,665,729	\$1,316,079	\$0	\$0	\$0	\$0	\$116,384	\$1,199,695
Total CIP	\$17,609,680	\$12,909,786	\$775,744	\$1,239,752	\$4,210,083	\$4,396,247	\$521,108	\$1,766,852

Source: City of St. Helena and HEC.

exis rates

Debt Service

The City has wastewater system debt associated with a 2005 bond issue, and refunding of that bond issue in 2012. Yearly debt service for the wastewater system is shown in **Table A-9**.

New debt is anticipated to be incurred for phase 1 and phase 2 of the wastewater treatment plant (WWTP) upgrades. For the rate study it is assumed these projects are funded with a Clean Water State Revolving Fund (CWSRF) loan. Due to the size of the projects, a 15% contingency factor was added to the estimated City cost. The estimated new CWSRF debt service is shown in **Table 5**. A year of debt service must be accumulated prior to repayment of the loan, which begins one year after completion of construction.

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Attachment 2

Page 8 of 23

Wastewater Rate Study, October 31, 2016

Table 5
Estimated CWSRF Debt Financing for WWTP Upgrades

Item	Construction Fiscal Year
Treatment Plant Phase 1	2019
Construction Cost Estimate	\$8,258,933
Contingency (15%) [1]	\$1,238,840
Total	\$9,497,773
Estimated Annual Debt Service [2]	\$592,124
Estimated Total Financing Costs	\$2,344,700
Treatment Plant Phase 2	2022
Construction Cost Estimate	\$487,495
Contingency (15%) [1]	\$73,124
Total	\$560,619
Estimated Annual Debt Service [2]	\$34,951
Estimated Total Financing Costs	\$138,399
Total Debt-Financed Infrastructure Cost	\$10,058,393
Estimated Total Financing Costs	\$2,483,099

Source: State Water Resources Control Board and HEC.

new debt

[1] State-funded projects typically cost more (more administration as well as American Iron and Steel requirements, and labor reporting).

[2] CWSRF loan assumptions:

Interest Rate	2.2%
Term (years)	20

Operations Expenses and Reserves

Estimated fiscal year 2015/16 operating expenses are used to project future year operating expenditures. All operating expenditures are increased 5% each year with the exception of capital, which is increased at 3% per year, and maintenance, taxes, insurances and contributions which are increased at 10% per year to be more consistent with higher historical increases for these expenses. **Table A-10** shows historical annual average operating cost increases of 14.6%. Fiscal year 2015/16 was abnormally high. Taking this out of the calculation, the data shows historical annual average operating cost increases of only 4.9%.

System Rehabilitation Costs

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Attachment 2

Page 9 of 23

Wastewater Rate Study, October 31, 2016

Depreciation is used as the basis for which to collect rates to cover system rehabilitation costs. Inclusion of system rehabilitation costs demonstrates fiscal responsibility toward the assets to potential future investors and helps to establish good credit¹. Depreciation is calculated based on existing wastewater assets and new assets added to the wastewater system in the next five years. **Table 6** shows the total annual amount of depreciation for existing and new assets included in the rate study. If the collected revenue is not applied to a CIP rehabilitation project it should be designated within the fund for the purposes of repair and rehabilitation only. Supporting data is provided in **Tables A-11** and **A-12**.

Table 6
System Rehabilitation Annual Costs

Asset List	Fiscal Year Ending					
	2017	2018	2019	2020	2021	2022
Existing Assets	\$340,044	\$350,521	\$361,320	\$372,452	\$383,928	\$395,756
Projected Assets Annual Depreciation	\$16,613	\$41,264	\$98,143	\$159,973	\$176,412	\$230,848
Total Annual Depreciation	\$356,657	\$391,785	\$459,463	\$532,425	\$560,339	\$626,604
<i>Percent Depreciation for System Rehabilitation</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>
System Rehabilitation	\$356,700	\$391,800	\$459,500	\$532,400	\$560,300	\$626,600

Source: City of St. Helena and HEC.

depr

Revenue Requirement

Table 7 on the next page provides the projection of annual costs and revenues and the resulting revenue requirement through fiscal year ending 2027. Total revenue requirement is projected to increase from \$3.0 million in the fiscal year 2017 to \$4.6 million in fiscal year 2022 to \$5.7 million in fiscal year 2027.

¹ Per Governmental Accounting Standards Board (GASB) 34, local governments must report on the value of their infrastructure assets and plan for asset maintenance (including collecting sufficient revenue) to obtain good credit when issuing bonds or procuring other forms of financing for long-term construction projects.

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Attachment 2

Page 10 of 23

Wastewater Rate Study, October 31, 2016

Table 7
Projected Revenue Requirement

Revenues and Expenses		Assumptions	Fiscal Year Ending											
			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	
Operating Expenses	Budgeted													
	Salaries & Benefits	**	\$1,071,519	\$1,125,095	\$1,181,350	\$1,240,417	\$1,302,438	\$1,367,560	\$1,435,938	\$1,507,735	\$1,583,122	\$1,662,278	\$1,745,392	\$1,828,511
	Services	5.0%	\$319,189	\$335,148	\$351,906	\$369,501	\$387,976	\$407,375	\$427,744	\$449,131	\$471,588	\$495,167	\$519,925	\$545,884
	Supplies	5.0%	\$75,942	\$79,739	\$83,726	\$87,912	\$92,308	\$96,923	\$101,770	\$106,858	\$112,201	\$117,811	\$123,702	\$130,313
	Maintenance	**	\$130,513	\$143,564	\$157,921	\$173,713	\$191,084	\$210,192	\$231,212	\$254,333	\$279,766	\$307,743	\$338,517	\$371,551
	Taxes, Insurances & Contribs.	**	\$105,967	\$116,564	\$128,220	\$141,042	\$155,146	\$170,661	\$187,727	\$206,500	\$227,150	\$249,865	\$274,851	\$300,566
	Capital	**	\$101,700	\$104,751	\$107,894	\$111,130	\$114,464	\$117,898	\$121,435	\$125,078	\$128,831	\$132,695	\$136,677	\$141,701
	Wet Weather Flow Monitoring	3.0%	\$0	\$0	\$54,765	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Update GIS Maps of Sewer System		\$0	\$53,128	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Sewer Master Plan		\$0	\$0	\$164,296	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Operating Expenses	CCTV Program		\$15,462	\$15,939	\$16,430	\$16,936	\$17,458	\$17,995	\$18,550	\$19,121	\$19,711	\$20,318	\$20,944	\$21,592
	Recycled Water Feasibility Study		\$0	\$0	\$0	\$0	\$0	\$0	\$89,977	\$0	\$0	\$0	\$0	\$0
	Total Operating Expenses		\$1,820,292	\$1,973,928	\$2,246,507	\$2,140,652	\$2,260,874	\$2,478,583	\$2,524,375	\$2,668,756	\$2,822,367	\$2,985,876	\$3,160,007	\$3,348,819
	Debt Service													
	Existing Debt		\$252,876	\$253,904	\$256,030	\$252,890	\$253,823	\$255,392	\$250,938	\$251,669	\$252,022	\$252,310	\$251,490	\$250,671
	WWTP New Debt - Phase 1		\$0	\$0	\$592,124	\$592,124	\$592,124	\$592,124	\$592,124	\$592,124	\$592,124	\$592,124	\$592,124	\$592,124
	WWTP New Debt - Phase 2		\$0	\$0	\$0	\$0	\$0	\$34,951	\$34,951	\$34,951	\$34,951	\$34,951	\$34,951	\$34,951
	Total Debt Service	**	\$252,876	\$253,904	\$848,154	\$845,014	\$845,947	\$882,467	\$878,012	\$878,744	\$879,097	\$879,384	\$878,565	\$877,746
	Capital Projects		\$164,323	\$35,087	\$0	\$153,781	\$0	\$0	\$154,028	\$0	\$0	\$0	\$0	\$0
	System Rehabilitation		\$356,700	\$391,800	\$459,500	\$532,400	\$560,300	\$626,600	\$690,300	\$712,900	\$732,900	\$775,900	\$797,200	\$820,000
Operating Expenses	Operating Reserves		\$400,000	\$775,000	\$725,000	\$805,000	\$875,000	\$625,000	\$650,000	\$850,000	\$900,000	\$900,000	\$900,000	\$900,000
	SUBTOTAL Annual Cost		\$2,994,191	\$3,429,719	\$4,279,161	\$4,476,847	\$4,542,121	\$4,612,649	\$4,896,715	\$5,110,400	\$5,334,364	\$5,541,161	\$5,735,771	\$5,941,551
	Base		\$1,662,575	\$1,743,878	\$2,423,538	\$2,511,316	\$2,609,080	\$2,748,778	\$2,854,324	\$2,972,389	\$3,097,965	\$3,231,965	\$3,374,001	\$3,520,001
	Use		\$1,331,616	\$1,685,841	\$1,855,623	\$1,965,531	\$1,933,042	\$1,863,871	\$2,042,391	\$2,138,010	\$2,236,399	\$2,309,196	\$2,361,771	\$2,421,550
	Credits													
	Investment Earnings		\$4,615	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Sewer Connection Fee		\$900	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Total Credits		\$5,515	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	REVENUE REQUIREMENT		\$2,988,676	\$3,429,719	\$4,279,161	\$4,476,847	\$4,542,121	\$4,612,649	\$4,896,715	\$5,110,400	\$5,334,364	\$5,541,161	\$5,735,771	\$5,941,551
	Annual Percentage Change		42%	15%	25%	5%	1%	2%	6%	4%	4%	4%	4%	4%
Base Costs Percentage		56%	51%	57%	56%	57%	60%	58%	58%	58%	58%	59%	59%	
Use Costs Percentage		44%	49%	43%	44%	43%	40%	42%	42%	42%	42%	41%	41%	

Source: HEC.

** Amounts included in Base Costs

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Attachment 2

Page 11 of 23

Wastewater Rate Study, October 31, 2016

RATES ANALYSIS

In the financial modeling for the wastewater rate study two rate scenarios were considered for collection of the revenue requirement; a modified rate structure and a new rate structure. Under the modified rate structure:

- Residential single family continues to pay a flat monthly charge per unit, plus a flow charge per HCF of winter water use.
- Non-Residential, including multi-family and mobile homes, pay a flat monthly charge by water meter size plus a flow charge per HCF of winter water use by customer type.
- Religious paces/community centers are placed into their own customer category (previously included as commercial).

Under the new rate structure:

- Residential single family, multi-family, and mobile homes pay a flat monthly charge per housing unit.
- Schools pay a flat monthly charge on a per student basis.
- Non-Residential pay a flat monthly charge by customer type plus a flow charge by customer type per HCF of winter water use.

In the new rate structure, there are no charges based on water meter size and all costs are allocated on flow and strength customer characteristics.

Per the August 4th, 2016 and September 13th, 2016 Task Force meetings, the City's Task Force chose the new rate structure as the preferred rate structure; therefore, the body of this memorandum includes the methodology and results of the new rate structure only. For record keeping the modified rate structure is presented in **Attachment B**.

New Rate Structure

The following four steps outline how wastewater rates are calculated such that the monthly wastewater rates meet legal requirements. The accompanying tables show the calculations for the first year of the analysis, fiscal year 2016-17, in order to demonstrate the model and illustrate how the rates are calculated. The same cost allocation methodology is used for all years considered in this analysis.

- 1. Establish the Wastewater Customer Base and User Characteristics** – The wastewater customer base includes residential (single family, multi-family, and mobile homes), schools, car wash, religious places/community center, commercial, grocery and mortuary, laundry, mixed retail with food, motel with food, motel without food, restaurant, Napa Valley College, service station, winery production, and Sutter Home Winery users. Wastewater flow parameters are based on City winter average (January through March) water meter reads and sewer strength is based on industry standards. *Wastewater inflow at the treatment plant currently averages 0.5 million gallons per day (MGD). The number of customers and total calculated flow for each customer and customer category, Biological Oxygen Demand (BOD) and Total Suspended Solids (TSS) characteristics were summarized earlier in the report in Table 2.*

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Attachment 2

Page 12 of 23

Wastewater Rate Study, October 31, 2016

2. **Project Revenue Requirement and Allocate to Collection and Treatment** –Projections of annual costs and non-rate revenues are used to determine revenue requirement as previously described. *The revenue requirement (the amount to be funded through wastewater service charges/rates) for fiscal year 2016-17 is \$3.0 million. The revenue requirement is allocated between collection and treatment. Of this total cost, approximately 72% is for the treatment plant and 28% for the collection system. Table 8 shows the allocation of projected costs between the wastewater collection system and the treatment plant for fiscal year 2016-17.*
3. **Allocate Revenue Requirement based on Flow and Strength and Determine Unit Costs** – The revenue requirement is allocated based on flow and load (strength) depending on the percentage distribution of operations and maintenance operations attributed to flow, BOD, or TSS. Per unit revenue requirement for each projected year is determined by dividing the allocated revenue requirement by the demand for each customer type.

Costs are allocated to customer categories as follows:

- A. Allocate the costs (by Cost Category) to flow, BOD and TSS
- B. Determine the Unit Cost by Cost Category

Each of these steps is described in greater detail below.

A. Cost Allocation to Flow, BOD, and SS

Costs are allocated to flow, BOD, and SS based on percentage allocation or distribution factors. These percentage allocation factors are based on the estimated distribution of the treatment and collection facilities O&M activities between or related to flow, BOD, and TSS.

Table 9 shows the calculation of unit costs by cost category for flow, BOD, and TSS. Collection costs are strictly related to flow and therefore, 100 percent of the collection costs are allocated to flow. Treatment plant costs are allocated by cost category for flow, BOD and TSS using the subtotal percentages from the collection and treatment cost allocations.

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Attachment 2

Page 13 of 23

Wastewater Rate Study, October 31, 2016

Table 8

Revenue Requirement Distributed between Collection and Treatment

- New Rate Structure based on Flow and Strength

FY 2017

Expenditures	Projected Total	Allocation		Collection		Treatment	
		Collection	Treatment	Operations	Capital	Operations	Capital
Salaries & Benefits	\$1,071,519	21%	79%	\$227,165		\$844,354	
Services	\$319,189	4%	96%	\$12,682		\$306,507	
Supplies	\$75,942	22%	78%	\$16,619		\$59,323	
Maintenance	\$130,513	11%	89%	\$14,137		\$116,376	
Taxes, Insurances & Contribs.	\$105,967	0%	100%	\$0		\$105,967	
Capital	\$101,700	0%	100%	\$0		\$101,700	
Wet Weather Flow Monitoring	\$0	100%	0%		\$0		\$0
Update GIS Maps of Sewer System	\$0	50%	50%		\$0		\$0
Sewer Master Plan	\$0	50%	50%		\$0		\$0
CCTV Program	\$15,462	100%	0%		\$15,462		\$0
Recycled Water Feasibility Study	\$0	0%	100%		\$0		\$0
Total Debt Service	\$252,876	100%	0%		\$252,876		\$0
Capital Projects	\$164,323	0%	100%		\$0		\$164,323
System Rehabilitation	\$356,700	50%	50%		\$178,350		\$178,350
Total Operating Expenses	\$2,594,191	28%	72%	\$270,603	\$446,689	\$1,534,227	\$342,673
Operating Reserve	\$400,000						
Less Offsetting Revenue	(\$5,515)						
Total	\$2,988,676						

alloc

Source: HEC.

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Attachment 2

Page 14 of 23

Wastewater Rate Study, October 31, 2016

Table 9
Unit Cost Determination
- New Rate Structure based on Flow and Strength

FY 2017

Cost Category	Percent Allocation			Cost			Total Influent			Unit Cost Per:		
	Allocated Costs	Flow	BOD	SS	Flow	BOD	SS	Flow	BOD	Mgal of Flow	Klb of BOD	Klb of SS
	(A)	(B)	(C)	(D)	(E) = (A)*(B)	(F) = (A)*(C)	(G) = (A)*(D)	(H)	(I)	(K) = (E)/(H)	(L) = (F)/(I)	(M) = (G)/(I)
Operating Costs	Table 8											
Collection System Costs	\$270,603	100%	0%	0%	\$270,603	\$0	\$0	179	386	\$1,510.29	\$0.00	\$0.00
Treatment Costs	\$1,534,227	34%	33%	33%	\$521,637	\$506,295	\$506,295	179	386	\$2,911.36	\$1,310.01	\$1,481.83
Capital Costs												
Collection System Costs	\$446,689	100%	0%	0%	\$446,689	\$0	\$0	179	386	\$2,493.05	\$0.00	\$0.00
Treatment Costs	\$342,673	34%	33%	33%	\$116,509	\$113,082	\$113,082	179	386	\$650.26	\$292.59	\$330.97
Subtotal Collection Costs	\$717,291	100%	0%	0%	\$717,291	\$0	\$0	179	386	\$4,003.34	\$0.00	\$0.00
Subtotal Treatment Costs	\$1,876,900	34%	33%	33%	\$638,146	\$619,377	\$619,377	179	386	\$3,561.61	\$1,602.60	\$1,812.80
Subtotal Costs	\$2,594,191	52%	24%	24%	\$1,355,437	\$619,377	\$619,377			\$7,564.96	\$1,602.60	\$1,812.80
Other Costs												
Operating Reserve	\$400,000	52%	24%	24%	\$208,996	\$95,502	\$95,502	179	386	\$1,166.45	\$247.11	\$279.52
Less Offsetting Revenue	(\$5,515)	52%	24%	24%	(\$2,882)	(\$1,317)	(\$1,317)	179	386	(\$16.08)	(\$3.41)	(\$3.85)
Subtotal Other Costs	\$394,485	52%	24%	24%	\$206,114	\$94,185	\$94,185			\$1,150.36	\$243.70	\$275.66
TOTAL COSTS	\$2,988,676				\$1,561,552	\$713,562	\$713,562			\$8,715.32	\$1,846.30	\$2,088.46

unit

Source: HEC.

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Attachment 2

Page 15 of 23

Wastewater Rate Study, October 31, 2016

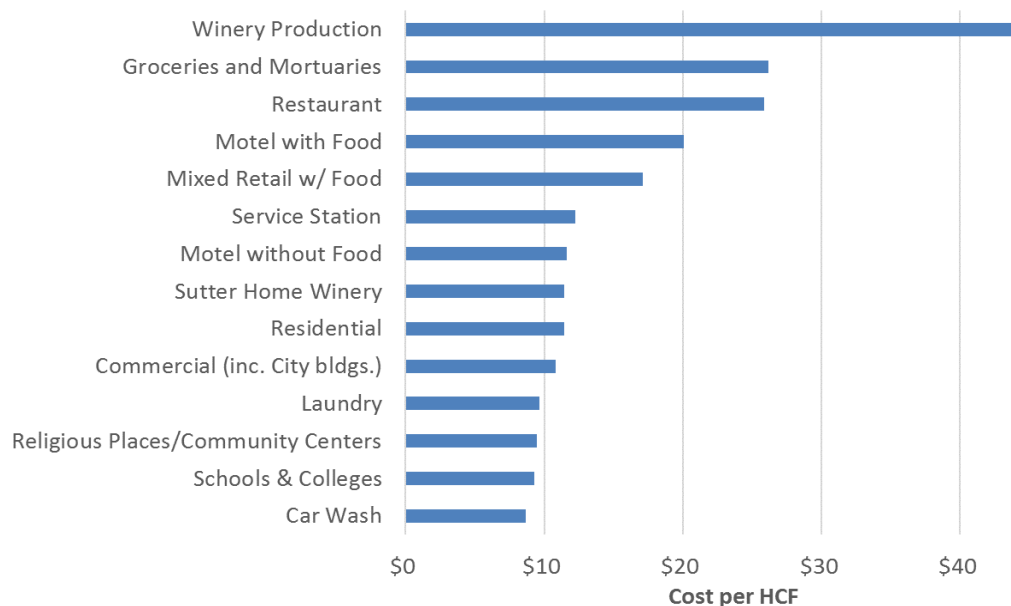
B. Unit Cost by Cost Category

The allocated costs are then divided by total annual capacity from **Table 2** to determine the unit cost by flow, BOD, and TSS units of measurement. These unit costs are used to determine the cost allocated to each customer type in the next step.

4. **Determine Revenue Requirement by Customer Type** – The per unit costs are multiplied by the flow and strength characteristics of each customer category to determine the annual cost by customer type. *The unit costs determined in **Table 9** are multiplied by the flow, BOD, or TSS for each customer type. These costs are then summed to determine the total costs allocated to each customer type, as shown in **Table 10**.*

Total allocated costs to each customer category are shown in **Table 11**. Residential customers are responsible for 69% of the total costs, schools are responsible for 1% of the total costs, and non-residential customers are responsible for 30% of the total costs. Total treatment cost per hundred cubic feet is greatest for high strength customers such as winery production customers, restaurants, groceries and mortuaries, and lowest for customers such as car washes and religious places/community centers which have low strength wastewater. This data is shown graphically in **Figure 3**.

Figure 3
Cost per Hundred Cubic Feet by Customer Type



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Attachment 2

Page 16 of 23

Wastewater Rate Study, October 31, 2016

Table 10

Allocation of Costs to Flow, BOD, and SS by Customer Category

- New Rate Structure based on Flow and Strength

FY 2017

Unit Cost/Customer Category	Flow MG/Yr	BOD Klb/Yr	SS Klb/Yr	Collection			Treatment			Other			TOTAL
				Flow (\$/Mgal)	Flow (\$/Mgal)	Flow (\$/Mgal)	Flow (\$/Klb)	BOD (\$/Klb)	SS (\$/Klb)	Flow (\$/Mgal)	BOD (\$/Klb)	SS (\$/Klb)	
Unit Cost													
				\$4,003.34	\$3,561.61	\$1,602.60	\$1,812.80			\$1,150.36	\$243.70	\$275.66	
Residential													
Single Family	96	160	160	\$384,800	\$342,342	\$256,941	\$290,642			\$110,573	\$39,072	\$44,196	\$1,468,566
Multi-Family	26	43	43	\$103,629	\$92,195	\$69,196	\$78,271			\$29,778	\$10,522	\$11,902	\$395,493
Mobile Homes	12	20	20	\$48,474	\$43,125	\$32,367	\$36,612			\$13,929	\$4,922	\$5,567	\$184,996
School	2	2	2	\$7,766	\$6,909	\$3,371	\$2,933			\$2,232	\$513	\$446	\$24,170
Non-Residential													
Car Wash	0	0	0	\$1,469	\$1,307	\$98	\$832			\$422	\$15	\$127	\$4,270
Religious Places/Community Centers	1	1	1	\$2,961	\$2,635	\$1,285	\$1,230			\$851	\$195	\$187	\$9,345
Commercial [1]	11	14	18	\$44,338	\$39,445	\$22,204	\$33,488			\$12,740	\$3,376	\$5,092	\$160,685
Groceries and Mortuaries	1	5	5	\$3,031	\$2,697	\$8,096	\$9,158			\$871	\$1,231	\$1,393	\$26,477
Laundry	2	2	1	\$6,109	\$5,435	\$3,059	\$2,538			\$1,755	\$465	\$386	\$19,748
Mixed Retail w/ Food	1	3	7	\$5,783	\$5,145	\$4,633	\$13,103			\$1,662	\$705	\$1,993	\$33,022
Motel with Food	4	17	20	\$15,867	\$14,117	\$26,488	\$35,954			\$4,559	\$4,028	\$5,467	\$106,480
Motel without Food	7	17	7	\$26,850	\$23,887	\$27,789	\$12,168			\$7,715	\$4,226	\$1,850	\$104,485
Restaurant	9	78	47	\$37,599	\$33,450	\$125,529	\$85,196			\$10,804	\$19,089	\$12,955	\$324,622
Napa Valley College	5	5	4	\$18,887	\$16,803	\$8,197	\$7,133			\$5,427	\$1,247	\$1,085	\$58,778
Service Station	1	1	1	\$2,320	\$2,064	\$1,394	\$2,453			\$667	\$212	\$373	\$9,483
Winery Production (Merryvale/Spottswode)	1	16	2	\$2,740	\$2,437	\$25,612	\$4,139			\$787	\$3,895	\$629	\$40,239
Sutter Home Winery	1	2	2	\$4,669	\$4,154	\$3,117	\$3,526			\$1,342	\$474	\$536	\$17,818
TOTAL	179	386	342	\$717,291	\$638,146	\$619,377	\$619,377			\$206,114	\$94,185	\$94,185	\$2,988,676

Source: HEC.

[1] Commercial includes City buildings.

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Attachment 2

Page 17 of 23

Wastewater Rate Study, October 31, 2016

Table 11
Calculated Cost per Hundred Cubic Feet
- New Rate Structure based on Flow and Strength

FY 2017

Customer Category	Allocated Cost	Percentage of Cost	Annual Flow (MG)	Cost per 1,000 Gallons	Cost per HCF
Residential					
Single Family	\$1,468,566	49%	96.12	\$15.28	\$11.43
Multi-Family	\$395,493	13%	25.89	\$15.28	\$11.43
Mobile Homes	\$184,996	6%	12.11	\$15.28	\$11.43
Subtotal Residential	\$2,049,055	69%	134.11	\$15.28	\$11.43
School	\$24,170	1%	1.94	\$12.46	\$9.32
Non-Residential					
Car Wash	\$4,270	0%	0.37	\$11.64	\$8.70
Religious Places/Community Centers	\$9,345	0%	0.74	\$12.63	\$9.45
Commercial [1]	\$160,685	5%	11.08	\$14.51	\$10.85
Groceries and Mortuaries	\$26,477	1%	0.76	\$34.97	\$26.16
Laundry	\$19,748	1%	1.53	\$12.94	\$9.68
Mixed Retail w/ Food	\$33,022	1%	1.44	\$22.86	\$17.10
Motel with Food	\$106,480	4%	3.96	\$26.87	\$20.10
Motel without Food	\$104,485	3%	6.71	\$15.58	\$11.65
Restaurant	\$324,622	11%	9.39	\$34.56	\$25.85
Napa Valley College	\$58,778	2%	4.72	\$12.46	\$9.32
Service Station	\$9,483	0%	0.58	\$16.36	\$12.24
Winery Production (Merryvale/Spottswode)	\$40,239	1%	0.68	\$58.80	\$43.98
Sutter Home Winery	\$17,818	1%	1.17	\$15.28	\$11.43
Subtotal Non-Residential	\$915,452	31%	43.12	\$21.23	\$15.88
TOTAL	\$2,988,676	100%	179.17	\$16.68	\$12.48

Source: HEC.

flow cost

[1] Commercial includes City buildings.

Table 12 presents the calculated rates for February 8, 2017. The total allocated costs to each customer category provide the basis for the rates. It is projected that 59% of costs will be recovered through flat monthly charges (residential and school customers, as well as base charges for non-residential customers) and 41% of costs will be recovered through consumption charges. Customers with consumption charges pay for average monthly winter water passing through the water meter, measured from January through March.

Table 13 shows the projected wastewater rate schedule through fiscal year 2027.

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Attachment 2

Page 18 of 23

Wastewater Rate Study, October 31, 2016

Table 12
Wastewater Rates Calculations for February 8, 2017
- New Rate Structure based on Flow and Strength

FY 2017

Customer Category	Billing Basis	No. Billing Units	Allocated Cost	Base 59%	Flow 41%	Annual Cost per Billing Unit		Monthly Cost	
						Base	Flow	Base	Usage per HCF
Residential									
Single Family	Unit	1,503	\$1,468,566	\$866,454	\$602,112	\$576	\$401	\$48.04	\$4.69
Multi-Family	Unit	669	\$395,493	\$233,341	\$162,152	\$349	\$242	\$29.07	\$4.69
Mobile Homes	Unit	211	\$184,996	\$109,148	\$75,848	\$517	\$359	\$43.11	\$4.69
Residential			\$2,049,055	\$1,208,943	\$840,113				
School	Student	1,437	\$24,170	\$14,260	\$9,910	\$10	\$7	\$1.40	
Non-Residential (\$ per hcf of Winter Water Use)									
Car Wash	Account	1	\$4,270	\$2,519	\$1,751	\$2,519	\$1,751	\$209.93	\$3.43
Religious Places/Community Centers	Account	13	\$9,345	\$5,513	\$3,831.32	\$424	\$295	\$35.34	\$3.72
Commercial [1]	Account	126	\$160,685	\$94,804	\$65,881	\$752	\$523	\$62.70	\$4.27
Groceries and Mortuaries	Account	3	\$26,477	\$15,621	\$10,856	\$5,207	\$3,619	\$433.93	\$10.30
Laundry	Account	1	\$19,748	\$11,651	\$8,097	\$11,651	\$8,097	\$970.94	\$3.81
Mixed Retail w/ Food	Account	3	\$33,022	\$19,483	\$13,539	\$6,494	\$4,513	\$541.20	\$6.73
Motel with Food	Account	2	\$106,480	\$62,823	\$43,657	\$31,412	\$21,828	\$2,617.64	\$7.91
Motel without Food	Account	8	\$104,485	\$61,646	\$42,839	\$7,706	\$5,355	\$642.15	\$4.59
Restaurant	Account	19	\$324,622	\$191,527	\$133,095	\$10,080	\$7,005	\$840.03	\$10.18
Napa Valley College	Account	1	\$58,778	\$34,679	\$24,099	\$34,679	\$24,099	\$2,889.93	\$3.67
Service Station	Account	5	\$9,483	\$5,595	\$3,888	\$1,119	\$778	\$93.25	\$4.82
Winery Production (Merryvale/Spottswoode)	Account	2	\$40,239	\$23,741	\$16,498	\$11,871	\$8,249	\$989.21	\$17.31
Sutter Home Winery	Account	1	\$17,818	\$10,512	\$7,305	\$10,512	\$7,305	\$876.04	\$4.50
Non-Residential and Schools			\$939,621	\$554,376	\$385,245				
TOTAL			\$2,988,676	\$1,763,319	\$1,225,357				

rates

Source: City of St. Helena, California Department of Education Educational Demographics Unit, and HEC.

[1] Commercial includes City buildings.

Prepared by HEC

Attachment 2

Page 19 of 23

Wastewater Rate Study, October 31, 2016

Table 13
Projected Wastewater Rate Schedule
- New Rate Structure based on Flow and Strength

Customer Category	Billing Period Beginning *----->	Fiscal Year Ending											
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	
Residential		2/8/2017	11/8/2017	11/8/2018	11/8/2019	11/8/2020	11/8/2021	11/8/2022	11/8/2023	11/8/2024	11/8/2025	11/8/2026	11/8/2027
	Single Family	monthly per unit	\$48.04	\$55.24	\$70.13	\$73.03	\$74.18	\$75.23	\$79.74	\$83.28	\$86.84	\$90.13	\$93.20
	Multi-Family	monthly per unit	\$29.07	\$33.42	\$42.43	\$44.18	\$44.88	\$45.52	\$48.24	\$50.39	\$52.54	\$54.53	\$56.39
	Mobile Homes	monthly per unit	\$43.11	\$49.57	\$62.93	\$65.53	\$66.56	\$67.51	\$71.55	\$74.73	\$77.93	\$80.87	\$83.63
	Residential Rate per HCF	per HCF	\$4.69	\$5.39	\$6.84	\$7.12	\$7.23	\$7.34	\$7.78	\$8.12	\$8.47	\$8.79	\$9.09
Schools Flat Rate per Student	monthly per student	\$1.40	\$1.62	\$2.15	\$2.21	\$2.26	\$2.28	\$2.41	\$2.52	\$2.62	\$2.71	\$2.80	
Non-Residential													
	Car Wash	monthly per account	\$209.93	\$243.25	\$328.36	\$336.45	\$343.13	\$346.45	\$365.12	\$382.42	\$397.39	\$411.10	\$423.62
	Religious Places/Community Centers	monthly per account	\$35.34	\$40.85	\$54.06	\$55.68	\$56.71	\$57.34	\$60.54	\$63.35	\$65.91	\$68.25	\$70.41
	Commercial [1]	monthly per account	\$62.70	\$72.20	\$92.64	\$96.19	\$97.78	\$99.09	\$104.91	\$109.63	\$114.25	\$118.51	\$122.47
	Groceries and Mortuaries	monthly per account	\$433.93	\$492.12	\$552.00	\$595.15	\$599.41	\$613.71	\$658.17	\$683.48	\$717.89	\$749.95	\$781.06
	Laundry	monthly per account	\$970.94	\$1,121.45	\$1,475.85	\$1,522.21	\$1,549.87	\$1,567.76	\$1,656.08	\$1,732.56	\$1,802.98	\$1,867.65	\$1,927.33
	Mixed Retail w/ Food	monthly per account	\$541.20	\$617.30	\$730.21	\$775.32	\$783.78	\$799.17	\$852.68	\$887.69	\$929.47	\$968.22	\$1,005.31
	Motel with Food	monthly per account	\$2,617.64	\$2,978.36	\$3,444.90	\$3,681.23	\$3,715.59	\$3,795.12	\$4,057.95	\$4,220.11	\$4,424.57	\$4,614.57	\$4,797.54
	Motel without Food	monthly per account	\$840.03	\$952.80	\$1,070.03	\$1,153.27	\$1,161.63	\$1,189.23	\$1,275.22	\$1,324.33	\$1,390.92	\$1,452.93	\$1,513.11
	Napa Valley College	monthly per account	\$2,889.93	\$3,341.62	\$4,436.77	\$4,565.57	\$4,651.20	\$4,701.87	\$4,962.71	\$5,194.00	\$5,402.37	\$5,593.58	\$5,769.41
	Service Station	monthly per account	\$93.25	\$107.06	\$134.07	\$140.12	\$142.20	\$144.37	\$153.21	\$159.92	\$166.89	\$173.33	\$179.38
	Winery Production (Merryvale/Spottswode)	monthly per account	\$989.21	\$1,116.93	\$1,199.98	\$1,310.53	\$1,315.85	\$1,351.87	\$1,455.91	\$1,508.79	\$1,588.84	\$1,663.63	\$1,736.98
	Sutter Home Winery	monthly per account	\$876.04	\$1,007.39	\$1,278.85	\$1,331.67	\$1,352.66	\$1,371.89	\$1,454.02	\$1,518.68	\$1,583.65	\$1,643.55	\$1,699.58
	Car Wash	per HCF	\$3.43	\$3.97	\$5.36	\$5.49	\$5.60	\$5.65	\$5.96	\$6.24	\$6.48	\$6.71	\$6.91
	Religious Places/Community Centers	per HCF	\$3.72	\$4.30	\$5.69	\$5.86	\$5.97	\$6.03	\$6.37	\$6.67	\$6.94	\$7.18	\$7.41
	Commercial [1]	per HCF	\$4.27	\$4.92	\$6.31	\$6.55	\$6.66	\$6.75	\$7.15	\$7.47	\$7.78	\$8.07	\$8.34
	Groceries and Mortuaries	per HCF	\$10.30	\$11.68	\$13.10	\$14.12	\$14.22	\$14.56	\$15.62	\$16.22	\$17.03	\$17.79	\$18.53
	Laundry	per HCF	\$3.81	\$4.40	\$5.79	\$5.97	\$6.08	\$6.15	\$6.50	\$6.80	\$7.07	\$7.33	\$7.56
Mixed Retail w/ Food	per HCF	\$6.73	\$7.68	\$9.08	\$9.64	\$9.75	\$9.94	\$10.60	\$11.04	\$11.56	\$12.04	\$12.50	
Motel with Food	per HCF	\$7.91	\$9.00	\$10.41	\$11.12	\$11.23	\$11.47	\$12.26	\$12.75	\$13.37	\$13.94	\$14.50	
Motel without Food	per HCF	\$4.59	\$5.27	\$6.67	\$6.95	\$7.06	\$7.16	\$7.59	\$7.93	\$8.27	\$8.58	\$8.88	
Restaurant	per HCF	\$10.18	\$11.54	\$12.96	\$13.97	\$14.07	\$14.41	\$15.45	\$16.04	\$16.85	\$17.60	\$18.33	
Napa Valley College	per HCF	\$3.67	\$4.24	\$5.63	\$5.79	\$5.90	\$5.97	\$6.30	\$6.59	\$6.86	\$7.10	\$7.32	
Service Station	per HCF	\$4.82	\$5.53	\$6.93	\$7.24	\$7.35	\$7.46	\$7.92	\$8.26	\$8.62	\$8.95	\$9.27	
Winery Production (Merryvale/Spottswode)	per HCF	\$17.31	\$19.55	\$21.00	\$22.93	\$23.03	\$23.66	\$25.48	\$26.40	\$27.80	\$29.11	\$30.40	
Sutter Home Winery	per HCF	\$4.50	\$5.17	\$6.57	\$6.84	\$6.95	\$7.04	\$7.47	\$7.80	\$8.13	\$8.44	\$8.73	
	per HCF												

Source: HEC

* Dates reflect the current billing cycle; if the billing cycle date changes so will these effective dates.

[1] Commercial includes City buildings.

Prepared by HEC

Attachment 2

Page 20 of 23

Wastewater Rate Study, October 31, 2016

Special user rates are calculated for new industries moving to the City that have special requirements attached to their operating permit with the City. Municipal code 13.20.020E would have to be revised from the current formula of $A(V)+B(BOD)+C(SS)+D$ to remove D, which is no longer applicable under the new rate structure. In the special user charges formula:

V is volume of water in millions of gallons

BOD is biochemical oxygen demand in pounds

SS is total suspended solids in pounds

A is allocated cost for each million gallons of flow

B is allocated cost per pound for biochemical oxygen demand

C is allocated cost per pound of total suspended solids

D is charge for water meter size

Table 14 shows the calculated special user rates through fiscal year 2022.

Table 14
Special User Rates

Municipal Code 13.20.020 E	Current	Fiscal Year Ending					
		2017	2018	2019	2020	2021	2022
Billing Period Beginning * ---->		2/8/2017	11/8/2017	11/8/2018	11/8/2019	11/8/2020	11/8/2021
[1]							
A (per million gallons of flow)	\$2,107.21	\$8,715.32	\$10,206.65	\$14,910.59	\$14,979.88	\$15,353.37	\$15,416.45
B (per pound of BOD)	\$1.02	\$1.85	\$2.07	\$2.08	\$2.32	\$2.32	\$2.39
C (per pound of SS)	\$1.17	\$2.09	\$2.34	\$2.35	\$2.62	\$2.62	\$2.71

Source: City of St. Helena and HEC.

special

* Dates reflect the current billing cycle; if the billing cycle date changes so will these effective dates.

[1] Current rates were set July 2011.

CASH FLOW

Table 15 shows the projected cash flow for the wastewater fund and **Figure 4** demonstrates cash balances with and without rate increases. With adoption of the calculated rates it is anticipated that the City will be able to meet all wastewater enterprise fund obligations, including existing and potential debt service coverage requirements, and achieve at least six months of operating expenses in cash reserves in each year of the projection. The cash flow table demonstrates that a debt service coverage ratio of at least 1.20 will be met. In addition, the City may be able to designate (put aside) up to \$1.7 million by fiscal year ending 2022, and \$3.8 million by fiscal year ending 2027 for future cash funding of system rehabilitation.

Prepared by HEC

Attachment 2

Page 21 of 23

Wastewater Rate Study, October 31, 2016

Table 15
Projected Cash Flow

Revenues and Expenses	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
<i>New EDUs</i>											
Operating Revenues											
Charges For Services	\$2,533,343	\$3,282,705	\$3,996,014	\$4,410,951	\$4,520,363	\$4,589,140	\$4,802,027	\$5,039,172	\$5,259,709	\$5,472,228	\$5,670,901
Growth in Services		\$4,850	\$5,578	\$7,081	\$7,373	\$7,489	\$7,596	\$8,050	\$8,408	\$8,768	\$9,100
Total Sewer Sales	\$2,533,343	\$3,287,555	\$4,001,591	\$4,418,032	\$4,527,736	\$4,596,629	\$4,809,622	\$5,047,222	\$5,268,118	\$5,480,997	\$5,680,001
Investment Earnings	\$4,615	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sewer Connection Fee	\$900	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Operating Revenues	\$2,538,858	\$3,287,555	\$4,001,591	\$4,418,032	\$4,527,736	\$4,596,629	\$4,809,622	\$5,047,222	\$5,268,118	\$5,480,997	\$5,680,001
Operating Expenses											
	\$1,820,292	\$1,973,928	\$2,246,507	\$2,140,652	\$2,260,874	\$2,478,583	\$2,524,375	\$2,668,756	\$2,822,367	\$2,985,876	\$3,160,007
Operating Revenue before Capital Improvements and Debt Service	\$718,566	\$1,313,627	\$1,755,084	\$2,277,380	\$2,266,862	\$2,118,047	\$2,285,247	\$2,378,466	\$2,445,751	\$2,495,120	\$2,519,994
Debt Service											
Existing Debt	\$252,876	\$253,904	\$256,030	\$252,890	\$253,823	\$255,392	\$250,938	\$251,669	\$252,022	\$252,310	\$251,490
WWTP New Debt - Phase 1	\$0	\$0	\$592,124	\$592,124	\$592,124	\$592,124	\$592,124	\$592,124	\$592,124	\$592,124	\$592,124
WWTP New Debt - Phase 2	\$0	\$0	\$0	\$0	\$0	\$34,951	\$34,951	\$34,951	\$34,951	\$34,951	\$34,951
Total Debt Service	\$252,876	\$253,904	\$848,154	\$845,014	\$845,947	\$882,467	\$875,012	\$878,744	\$875,097	\$879,384	\$878,565
<i>Debt Service Coverage [1]</i>	2.84	5.17	2.07	2.70	2.68	2.40	2.60	2.71	2.78	2.84	2.87
System Rehabilitation	\$356,700	\$391,800	\$459,500	\$532,400	\$560,300	\$626,600	\$690,300	\$712,900	\$732,900	\$775,900	\$797,200
Net Revenues (Deficit)	\$108,989	\$667,923	\$447,430	\$895,967	\$860,615	\$608,980	\$716,935	\$786,822	\$833,754	\$839,836	\$844,230
Beginning Fund Balance [2]	\$1,110,075	\$1,054,742	\$1,687,578	\$2,202,662	\$2,948,848	\$3,982,496	\$3,679,166	\$1,892,423	\$3,156,634	\$4,487,090	\$5,669,380
Net Revenues (Deficit)	\$108,989	\$667,923	\$447,430	\$895,967	\$860,615	\$608,980	\$716,935	\$786,822	\$833,754	\$839,836	\$844,230
Cash Funded Capital Improvements	(\$164,323)	(\$35,087)	\$0	(\$153,781)	\$0	\$0	(\$154,028)	\$0	\$0	\$0	\$0
Add Back System Rehabilitation	\$0	\$0	\$67,654	\$0	\$289,417	\$287,386	\$0	\$477,388	\$496,702	\$342,454	\$546,224
Replace WRF Operations Building and Shop	\$0	\$0	\$0	\$0	(\$116,384)	(\$1,199,695)	(\$2,349,650)	\$0	\$0	\$0	\$0
Ending Fund Balance	\$1,054,742	\$1,687,578	\$2,202,662	\$2,948,848	\$3,982,496	\$3,679,166	\$1,892,423	\$3,156,634	\$4,487,090	\$5,669,380	\$7,059,834
<i>Months of Operating Expenses in Reserve</i>	7	10	12	17	21	18	9	14	19	23	27
Designated Balance [4]	\$0	\$0	\$0	\$800,000	\$1,700,000	\$1,700,000	\$1,700,000	\$1,700,000	\$1,700,000	\$2,600,000	\$3,800,000
Undesignated Balance	\$1,054,742	\$1,687,578	\$2,202,662	\$2,148,848	\$2,282,496	\$1,979,166	\$197,423	\$1,456,634	\$2,787,090	\$3,069,380	\$3,259,834
<i>Months of Operating Expenses in Reserve</i>	7	10	12	12	12	10	1	7	12	12	12
Target Operating Reserves [3]	\$1,820,292	\$1,973,928	\$2,246,507	\$2,140,652	\$2,260,874	\$2,478,583	\$2,524,375	\$2,668,756	\$2,822,367	\$2,985,876	\$3,160,007

Source: HEC.

[1] Debt service coverage should be at least 1.20.

[2] Estimated beginning balance for the operating and capital funds combined per the City 2016/17 Budget.

[3] Minimum six months and target balance is one year of operating expenses.

[4] Designation for future system rehabilitation costs in new, separate fund.

Prepared by HEC

Figure 4
Projected Wastewater Cash Balances

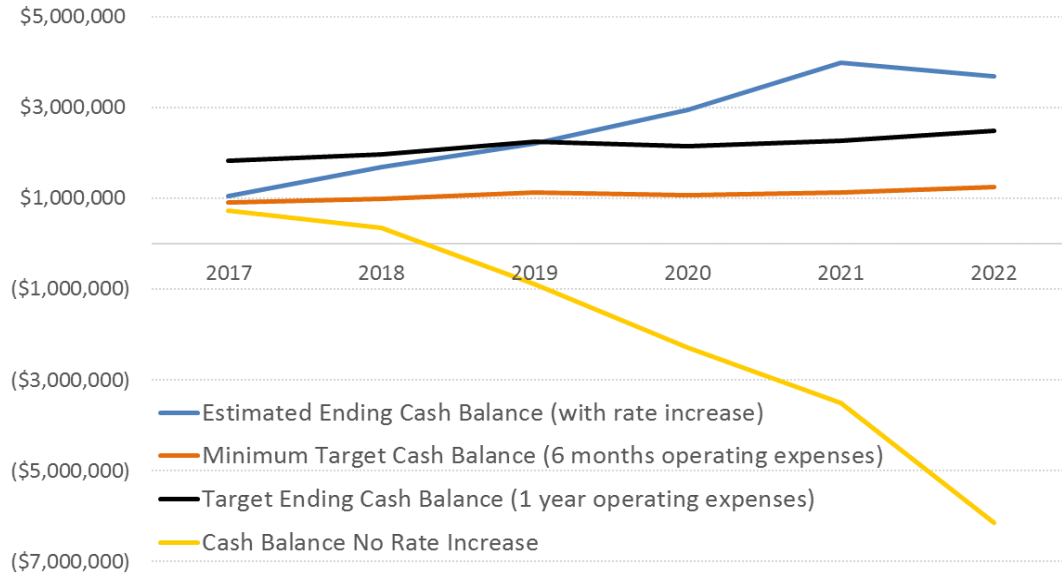


Table 16 on the following page shows the projected cash flow by fund.

Attachment 2

Page 23 of 23

Wastewater Rate Study, October 31, 2016

Table 16
Projected Wastewater Fund Balances

Fund	Fiscal Year Ending										
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Operating Fund 571											
Beginning Balance	(\$79,805)	\$29,184	\$697,108	\$1,212,192	\$2,112,159	\$3,262,191	\$3,658,557	\$1,875,492	\$2,389,702	\$3,720,159	\$4,902,449
Net Revenue	\$108,989	\$667,923	\$447,430	\$899,967	\$860,615	\$608,980	\$716,935	\$786,822	\$833,754	\$839,836	\$844,230
Add Back System Rehabilitation	\$0	\$0	\$67,654	\$0	\$289,417	\$287,386	\$0	\$477,388	\$496,702	\$546,224	\$546,224
Transfer Out to Capital Fund	\$0	\$0	\$0	\$0	\$0	(\$500,000)	(\$2,500,000)	(\$750,000)	\$0	\$0	\$0
Ending Balance	\$29,184	\$697,108	\$1,212,192	\$2,112,159	\$3,262,191	\$3,658,557	\$1,875,492	\$2,389,702	\$3,720,159	\$4,902,449	\$6,292,902
Capital Fund 773											
Beginning Balance	\$1,189,880	\$1,025,557	\$990,470	\$990,470	\$836,689	\$720,305	\$20,610	\$16,932	\$766,932	\$766,932	\$766,932
Transfer In from Operating Fund	\$0	\$0	\$0	\$0	\$0	\$500,000	\$2,500,000	\$750,000	\$0	\$0	\$0
Capital Projects Expenses [1]	(\$164,323)	(\$35,087)	\$0	(\$153,781)	(\$116,384)	(\$1,199,695)	(\$2,503,678)	\$0	\$0	\$0	\$0
Ending Balance	\$1,025,557	\$990,470	\$990,470	\$836,689	\$720,305	\$20,610	\$16,932	\$766,932	\$766,932	\$766,932	\$766,932
Combined Operating and Capital Funds	\$1,054,742	\$1,687,578	\$2,202,662	\$2,948,848	\$3,982,496	\$3,679,166	\$1,892,423	\$3,156,634	\$4,487,090	\$5,669,380	\$7,059,834
Impact Fee Fund 774											
Beginning Balance	\$698,783	\$676,115	\$675,355	\$674,546	\$673,683	\$672,767	\$671,793	\$670,760	\$669,665	\$668,505	\$633,753
Fee Revenues [2]	\$4,700	\$4,819	\$4,941	\$5,065	\$5,193	\$5,325	\$5,459	\$5,597	\$5,739	\$5,884	\$6,032
Expenses											
Miscellaneous Maintenance Projects	(\$5,412)	(\$5,578)	(\$5,750)	(\$5,928)	(\$6,110)	(\$6,298)	(\$6,492)	(\$6,692)	(\$6,899)	(\$40,636)	(\$7,330)
Reclamation Field Improvements	(\$21,956)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Project Expenses	(\$27,368)	(\$5,578)	(\$5,750)	(\$5,928)	(\$6,110)	(\$6,298)	(\$6,492)	(\$6,692)	(\$6,899)	(\$40,636)	(\$7,330)
Ending Balance	\$676,115	\$675,355	\$674,546	\$673,683	\$672,767	\$671,793	\$670,760	\$669,665	\$668,505	\$663,753	\$632,455
Sources: HEC											

Flow by fund

Source: HEC.

[1] Cash-funded projects only. Projects that are debt-funded are included in the operating fund.

[2] Assumes growth of 5 units per year and the current impact fee of \$0.47 per building square foot

Fee assumed to grow 2.5% per year.

The impact fee needs to be revised for these CIP costs.

\$940 Average fee per unit

Prepared by HEC

Attachment 2

Attachment 2

ATTACHMENT A
WASTEWATER RATE STUDY
SUPPORT TABLES

Attachment 2

Attachment 2

Table A-1
City of St. Helena Wastewater Rate Study
Historical Wastewater Fund Financial Performance

Revenues and Expenses	Actual Financials for Fiscal Year Ending					Avg. Annual Percentage Change
	2011	2012	2013	2014	2015	
OPERATING						
Revenues						
Charges For Services	\$1,616,414	\$2,008,709	\$2,050,983	\$2,143,947	\$2,208,105	8.1%
Miscellaneous	\$1,098	\$1,200	\$17,708	\$8,925	\$32,759	133.7%
Subtotal Revenues	\$1,617,512	\$2,009,909	\$2,068,691	\$2,152,872	\$2,240,864	8.5%
Expenses						
Personnel	\$842,317	\$829,804	\$795,479	\$827,027	\$938,472	2.7%
Contracted Services	\$68,782	\$806	\$0	\$0	\$0	-100.0%
Fuel	\$0	\$0	\$0	\$0	\$0	n.a.
Utilities	\$80,906	\$74,339	\$85,819	\$85,755	\$87,970	2.1%
Other Supplies and Expenses	\$313,342	\$327,119	\$361,451	\$429,526	\$525,742	13.8%
Depreciation and Amortization	\$472,561	\$483,070	\$473,784	\$473,784	\$713,189	10.8%
Subtotal Expenses	\$1,777,908	\$1,715,138	\$1,716,533	\$1,816,092	\$2,265,373	6.2%
NON OPERATING						
Gains (Loss) on Capital Asset Disposals	(\$1,169)	(\$2,762)	\$0	\$0	\$0	-100.0%
Interest and Investment Revenue	\$9,180	\$7,990	\$3,478	\$5,515	\$10,347	3.0%
Interest Expense	(\$81,081)	(\$78,070)	(\$86,521)	(\$69,139)	(\$41,398)	-15.5%
Net Operating Revenues	(\$73,070)	(\$72,842)	(\$83,043)	(\$63,624)	(\$31,051)	-19.3%
Capital Contributions	\$94,235	\$217,765	\$98,047	\$4,900	\$19,600	
Change in Net Assets	(\$139,231)	\$439,694	\$367,162	\$278,056	(\$35,960)	
Net Assets Beginning Balance	\$8,421,556	\$8,282,325	\$8,592,123	\$8,959,285	\$9,237,341	
Net Assets Ending Balance	\$8,282,325	\$8,722,019	\$8,959,285	\$9,237,341	\$9,201,381	

Source: City of St. Helena.

cafr

Attachment 2

Table A-2
City of St. Helena Wastewater Rate Study
Historical Revenues and Expenditures

Revenues and Expenses	Actuals Fiscal Year Ending				Estimated 2016	Budgeted 2017
	2012	2013	2014	2015		
OPERATING FUND						
Revenues						
Investment Earnings	\$1,380	\$1,532	\$2,697	\$1,000	\$4,500	\$4,615
Annexation Fees	\$500	\$3,428	\$8,925	\$0	\$0	\$0
Rates	\$2,008,709	\$2,050,983	\$2,143,947	\$2,151,615	\$2,260,735	\$2,105,132
Sewer Connection Fee	\$0	\$0	\$4,900	\$0	\$0	\$900
Subtotal Revenues	\$2,010,589	\$2,055,942	\$2,160,470	\$2,152,615	\$2,265,235	\$2,110,647
Expenses						
Salaries & Benefits	\$829,613	\$795,480	\$827,047	\$896,865	\$987,778	\$1,071,519
Services	\$231,717	\$194,235	\$220,039	\$406,364	\$822,159	\$319,189
Supplies	\$48,460	\$55,452	\$80,836	\$41,318	\$91,641	\$75,942
Maintenance	\$81,882	\$72,003	\$68,000	\$118,625	\$167,473	\$130,513
Taxes, Insurances & Contribs.	\$76,885	\$54,533	\$64,460	\$73,328	\$122,416	\$105,967
Capital	\$22,631	\$26,001	\$58,925	\$817	\$170,139	\$101,700
Transfers	\$2,763	\$200,000	\$100,000	\$1,541,664	\$352,634	\$0
Debt	\$78,071	\$86,521	\$69,140	\$41,398	\$258,105	\$252,877
Subtotal Expenses	\$1,372,022	\$1,484,224	\$1,488,447	\$3,120,379	\$2,972,345	\$2,057,707
Operating Fund Net Revenues	\$638,567	\$571,718	\$672,023	(\$967,764)	(\$707,110)	\$52,940
CAPITAL FUND						
Revenues						
Transfers In	\$86,000	\$609,793	\$100,000	\$1,541,664	\$389,087	\$0
Subtotal Revenues	\$86,000	\$609,793	\$100,000	\$1,541,664	\$389,087	\$0
Expenses						
Salaries & Benefits	\$118,932	\$6,737	\$0	\$0	\$0	\$0
Professional Services	\$61,042	\$57,831	\$69,810	\$502,161	\$0	\$0
Advertising	\$344	\$0	\$0	\$803	\$0	\$0
Equipment Rental	\$2,345	\$11,727	\$0	\$0	\$0	\$0
Supplies	\$2,999	\$741	\$4,315	\$464	\$0	\$0
Maintenance	\$8,172	\$0	\$0	\$0	\$0	\$0
Capital Imp Land	\$21,993	\$0	\$0	\$0	\$0	\$0
Capital Projects Budget	\$0	\$0	\$0	\$12,420	\$0	\$0
Capital Equipment	\$0	\$3,261	\$17,765	\$13,831	\$0	\$0
Capital Imp Equipment	\$73,415	\$1,056,244	\$122,351	\$19,229	\$0	\$0
Subtotal Expenses	\$289,243	\$1,136,540	\$214,241	\$548,909	\$0	\$0
Capital Fund Net Revenues	(\$203,243)	(\$526,747)	(\$114,241)	\$992,755	\$389,087	\$0
IMPACT FUND						
Revenues						
Investment Earnings	\$6,423	\$1,872	\$2,818	\$2,587	\$2,000	\$2,500
Other Revenues	\$0	\$14,281	\$0	\$30,625	\$0	\$0
Impact Fees	\$217,766	\$98,047	(\$81,929)	\$19,600	\$15,000	\$18,000
Subtotal Revenues	\$224,188	\$114,200	(\$79,111)	\$52,812	\$17,000	\$20,500
Expenses						
Transfers Out	\$86,000	\$409,793	\$0	\$0	\$0	\$0
Subtotal Expenses	\$86,000	\$409,793	\$0	\$0	\$0	\$0
Impact Fund Net Revenues	\$138,188	(\$295,593)	(\$79,111)	\$52,812	\$17,000	\$20,500

Source: City of St. Helena.

rev exp

Attachment 2

Table A-3
City of St. Helena Wastewater Rate Study
Historical Wastewater Operating Fund Expenses by Fund

Expenses	Actuals Fiscal Year Ending				Estimated	Budgeted
	2012	2013	2014	2015	2016	2017
TREATMENT						
Salaries & Benefits	\$304,386	\$283,226	\$333,535	\$311,489	\$374,936	\$383,496
Services	\$108,212	\$125,718	\$140,438	\$185,439	\$439,873	\$124,950
Supplies	\$25,216	\$40,359	\$62,141	\$22,082	\$60,285	\$44,800
Maintenance	\$71,106	\$61,752	\$54,974	\$90,803	\$145,017	\$104,787
Taxes, Insurances & Contribs.	\$8,390	\$7,793	\$14,879	\$8,557	\$17,723	\$16,000
Capital	\$22,631	\$20,729	\$58,911	\$817	\$20,305	\$100,000
Transfers	\$0	\$0	\$0	\$0	\$0	\$0
Debt	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal Treatment	\$539,940	\$539,577	\$664,878	\$619,187	\$1,058,139	\$774,033
COLLECTION						
Salaries & Benefits	\$177,746	\$185,921	\$176,868	\$191,484	\$106,094	\$103,176
Services	\$1,349	\$3,295	\$2,734	\$4,437	\$3,972	\$5,170
Supplies	\$12,655	\$5,382	\$8,690	\$8,918	\$11,926	\$12,550
Maintenance	\$3,833	\$3,293	\$3,164	\$6,400	\$9,410	\$12,729
Taxes, Insurances & Contribs.	\$0	\$0	\$0	\$0	\$0	\$0
Capital	\$0	\$0	\$0	\$0	\$141,600	\$0
Transfers	\$0	\$0	\$0	\$0	\$0	\$0
Debt	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal Collection	\$195,583	\$197,891	\$191,456	\$211,239	\$273,002	\$133,625
OPERATIONS						
Salaries & Benefits	\$347,482	\$326,332	\$316,644	\$393,892	\$506,748	\$584,847
Services	\$122,156	\$65,222	\$76,868	\$216,488	\$378,314	\$189,069
Supplies	\$10,590	\$9,710	\$10,005	\$10,318	\$19,430	\$18,592
Maintenance	\$6,942	\$6,959	\$9,861	\$21,422	\$13,046	\$12,997
Taxes, Insurances & Contribs.	\$68,495	\$46,740	\$49,581	\$64,771	\$104,693	\$89,967
Capital	\$0	\$5,272	\$13	\$0	\$8,234	\$1,700
Transfers	\$2,763	\$200,000	\$100,000	\$1,541,664	\$352,634	\$0
Debt	\$78,071	\$86,521	\$69,140	\$41,398	\$258,105	\$252,877
Subtotal Operations	\$636,498	\$746,756	\$632,112	\$2,289,953	\$1,641,204	\$1,150,049
Total Expenses	\$1,372,022	\$1,484,224	\$1,488,447	\$3,120,379	\$2,972,345	\$2,057,707

Source: City of St. Helena.

op exp

Attachment 2

Table A-4
City of St. Helena Wastewater Rate Study
Historical Wastewater Plant Influent Flow

Month	2013	2014	2015
<i>Total Flow (millions of gallons)</i>			
January	17.953	10.586	12.838
February	11.676	17.922	18.802
March	12.789	18.283	12.453
April	12.641	16.041	11.762
May	12.131	11.722	11.142
June	11.461	10.912	10.021
July	11.918	10.851	10.118
August	11.717	10.962	10.162
September	11.405	10.478	9.973
October	11.928	10.802	10.416
November	10.990	10.436	9.539
December	10.546	31.952	12.211
Yearly Total	147.155	170.947	139.4374

Source: City of St. Helena.

inf flow

Table A-5
City of St. Helena Wastewater Rate Study
Wastewater Capital Improvements Schedule in 2016 \$'s

Project	Notes	Total Cost Less		Fiscal Year Ending										
		Total Cost	Existing Funding	2017 Current	2018 Year 1	2019 Year 2	2020 Year 3	2021 Year 4	2022 Year 5	2023 Year 6	2024 Year 7	2025 Year 8	2026 Year 9	2027 Year 10
Estimated Project Costs (2016 \$'s)			[1]											
Sewer Collection System														
Miscellaneous Maintenance Projects		\$550,000	\$550,000	\$35,000	\$35,000	\$35,000	\$35,000	\$35,000	\$35,000	\$35,000	\$35,000	\$35,000	\$200,000	\$35,000
Replace 1% of Sewer Mains Annually		\$1,650,000	\$1,650,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000
Crinella Pump Station Upgrades		\$500,000	\$500,000	\$0	\$0	\$75,000	\$425,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Add Sewer Pump Stations to SCADA		\$150,000	\$150,000	\$0	\$0	\$0	\$0	\$50,000	\$100,000	\$0	\$0	\$0	\$0	\$0
Wet Weather Flow Monitoring		\$50,000	\$50,000	\$0	\$0	\$50,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Update GIS Maps of Sewer System		\$50,000	\$50,000	\$0	\$50,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sewer Master Plan		\$150,000	\$150,000	\$0	\$0	\$150,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Replace Rodding Machine		\$40,000	\$40,000	\$0	\$0	\$40,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
CCTV Program		\$165,000	\$165,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000
Subtotal Sewer Collection		\$3,305,000	\$3,305,000	\$200,000	\$250,000	\$515,000	\$625,000	\$250,000	\$300,000	\$200,000	\$200,000	\$200,000	\$365,000	\$200,000
Treatment Plant														
WWTP Upgrades Ph. 1	Funded by New Debt	\$7,474,108	\$7,474,108	\$232,108	\$700,000	\$3,271,000	\$3,271,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Reclamation Field Improvements		\$142,000	\$142,000	\$142,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pond 2 & 3 Levee		\$120,000	\$120,000	\$60,000	\$0	\$60,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Facilities Automation		\$144,000	\$144,000	\$0	\$144,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
New Well		\$65,000	\$65,000	\$65,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sludge Removal		\$150,000	\$150,000	\$75,000	\$75,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Recycled Water Feasibility Study		\$75,000	\$75,000	\$0	\$0	\$0	\$0	\$0	\$75,000	\$0	\$0	\$0	\$0	\$0
Temp Trailer at WRF		\$28,000	\$28,000	\$5,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$5,000	\$0	\$0	\$0
Replace WRF Operations Building and Shop	Funded by Reserves	\$3,000,000	\$3,000,000	\$0	\$0	\$0	\$0	\$100,000	\$1,000,000	\$1,900,000	\$0	\$0	\$0	\$0
Upgrade Chemical Storage Facilities		\$500,000	\$500,000	\$0	\$0	\$0	\$0	\$0	\$0	\$500,000	\$0	\$0	\$0	\$0
Phase 2 WWTP Upgrades	Funded by New Debt	\$400,000	\$400,000	\$0	\$0	\$0	\$0	\$100,000	\$100,000	\$100,000	\$100,000	\$0	\$0	\$0
Subtotal Treatment Plant		\$12,098,108	\$12,098,108	\$579,108	\$922,000	\$3,334,000	\$3,274,000	\$203,000	\$1,178,000	\$2,503,000	\$105,000	\$0	\$0	\$0
Total Estimated Project Costs (2016 \$'s)		\$15,403,108	\$15,403,108	\$779,108	\$1,172,000	\$3,849,000	\$3,899,000	\$453,000	\$1,478,000	\$2,703,000	\$305,000	\$200,000	\$365,000	\$200,000

Source: City of St. Helena and HEC.

2016 cip

[1] Total Cost Less Existing Funding = Total Cost - Existing Bonds - Existing Grants

Table A-6
City of St. Helena Wastewater Rate Study
Wastewater Capital Improvements Schedule in Future \$'s

Project	Notes		Fiscal Year Ending										
			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
		Total Cost	Current	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Estimated Project Costs (Future \$'s) [1]				Annual Increase	3.1%								
Sewer Collection System													
Miscellaneous Maintenance Projects		\$687,508	\$36,078	\$37,190	\$38,336	\$39,517	\$40,734	\$41,989	\$43,283	\$44,617	\$45,991	\$270,904	\$48,869
Replace 1% of Sewer Mains Annually		\$1,988,624	\$154,621	\$159,385	\$164,296	\$169,358	\$174,576	\$179,954	\$185,499	\$191,214	\$197,105	\$203,178	\$209,438
Crinella Pump Station Upgrades		\$561,995	\$0	\$0	\$82,148	\$479,847	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Add Sewer Pump Stations to SCADA		\$178,161	\$0	\$0	\$0	\$0	\$58,192	\$119,970	\$0	\$0	\$0	\$0	\$0
Wet Weather Flow Monitoring		\$54,765	\$0	\$0	\$54,765	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Update GIS Maps of Sewer System		\$53,128	\$0	\$53,128	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sewer Master Plan		\$164,296	\$0	\$0	\$164,296	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Replace Rodding Machine		\$43,812	\$0	\$0	\$43,812	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
CCTV Program		\$198,862	\$15,462	\$15,939	\$16,430	\$16,936	\$17,458	\$17,995	\$18,550	\$19,121	\$19,711	\$20,318	\$20,944
Subtotal Sewer Collection		\$3,931,152	\$206,162	\$265,642	\$564,083	\$705,658	\$290,959	\$359,909	\$247,332	\$254,952	\$262,807	\$494,399	\$279,250
Treatment Plant													
WWTP Upgrades Ph. 1	Funded by New Debt	\$8,258,933	\$239,259	\$743,798	\$3,582,746	\$3,693,130	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Reclamation Field Improvements		\$146,375	\$146,375	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pond 2 & 3 Levee		\$127,567	\$61,849	\$0	\$65,718	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Facilities Automation		\$153,010	\$0	\$153,010	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
New Well		\$67,003	\$67,003	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sludge Removal		\$157,003	\$77,311	\$79,693	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Recycled Water Feasibility Study		\$89,977	\$0	\$0	\$0	\$0	\$0	\$89,977	\$0	\$0	\$0	\$0	\$0
Temp Trailer at WRF		\$32,189	\$5,154	\$3,188	\$3,286	\$3,387	\$3,492	\$3,599	\$3,710	\$6,374	\$0	\$0	\$0
Replace WRF Operations Building and Shop	Funded by Reserves	\$3,665,729	\$0	\$0	\$0	\$0	\$116,384	\$1,199,695	\$2,349,650	\$0	\$0	\$0	\$0
Upgrade Chemical Storage Facilities		\$618,329	\$0	\$0	\$0	\$0	\$0	\$0	\$618,329	\$0	\$0	\$0	\$0
Phase 2 WWTP Upgrades	Funded by New Debt	\$487,495	\$0	\$0	\$0	\$0	\$116,384	\$119,970	\$123,666	\$127,476	\$0	\$0	\$0
Subtotal Treatment Plant		\$13,803,610	\$596,950	\$979,688	\$3,651,751	\$3,696,517	\$236,259	\$1,413,241	\$3,095,354	\$133,850	\$0	\$0	\$0
Total Estimated Project Costs (Future \$'s)		\$17,734,763	\$803,112	\$1,245,330	\$4,215,833	\$4,402,174	\$527,219	\$1,773,150	\$3,342,686	\$388,801	\$262,807	\$494,399	\$279,250
Total Estimated Project Costs (2016 \$'s)		\$15,403,108	\$779,108	\$1,172,000	\$3,849,000	\$3,899,000	\$453,000	\$1,478,000	\$2,703,000	\$305,000	\$200,000	\$365,000	\$200,000
Total Estimated Project Costs (Future \$'s)		\$17,734,763	\$803,112	\$1,245,330	\$4,215,833	\$4,402,174	\$527,219	\$1,773,150	\$3,342,686	\$388,801	\$262,807	\$494,399	\$279,250

Source: City of St. Helena and HEC.

future cip

[1] Estimated costs increased by historical ENR Construction Cost Index 20 year average increase.

Table A-7
City of St. Helena Wastewater Rate Study
Existing Customers Share of CIP Costs in 2016 \$'s

Project	Funding Source	Percent Share Existing Customers	Percent Share Existing Customers in Rate Model	Total Cost	Fiscal Year Ending										
					2017 Current	2018 Year 1	2019 Year 2	2020 Year 3	2021 Year 4	2022 Year 5	2023 Year 6	2024 Year 7	2025 Year 8	2026 Year 9	2027 Year 10
Estimated Project Costs (2016 \$'s)															
Sewer Collection System															
Miscellaneous Maintenance Projects	Cash	85%	85%	\$467,500	\$29,750	\$29,750	\$29,750	\$29,750	\$29,750	\$29,750	\$29,750	\$29,750	\$29,750	\$170,000	\$29,750
Replace 1% of Sewer Mains Annually	Cash	100%	100%	\$1,650,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000
Crinella Pump Station Upgrades	Cash	100%	100%	\$500,000	\$0	\$0	\$75,000	\$425,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Add Sewer Pump Stations to SCADA	Cash	100%	100%	\$150,000	\$0	\$0	\$0	\$0	\$50,000	\$100,000	\$0	\$0	\$0	\$0	\$0
Wet Weather Flow Monitoring	Ops Cash	100%	100%	\$50,000	\$0	\$0	\$50,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Update GIS Maps of Sewer System	Ops Cash	100%	100%	\$50,000	\$0	\$50,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sewer Master Plan	Ops Cash	100%	100%	\$150,000	\$0	\$0	\$150,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Replace Rodding Machine	Cash	100%	100%	\$40,000	\$0	\$0	\$40,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
CCTV Program	Ops Cash	100%	100%	\$165,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000
Subtotal Collection System				\$3,222,500	\$194,750	\$244,750	\$509,750	\$619,750	\$244,750	\$294,750	\$194,750	\$194,750	\$194,750	\$335,000	\$194,750
Treatment Plant															
WWTP Upgrades Ph. 1	Debt	100%	100%	\$7,474,108	\$232,108	\$700,000	\$3,271,000	\$3,271,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Reclamation Field Improvements	Cash	85%	85%	\$120,700	\$120,700	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pond 2 & 3 Levee	Cash	100%	100%	\$120,000	\$60,000	\$0	\$60,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Facilities Automation	Cash	100%	100%	\$144,000	\$0	\$144,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
New Well	Cash	100%	100%	\$65,000	\$65,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sludge Removal	Cash	100%	100%	\$150,000	\$75,000	\$75,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Recycled Water Feasibility Study	Ops Cash	100%	100%	\$75,000	\$0	\$0	\$0	\$0	\$0	\$75,000	\$0	\$0	\$0	\$0	\$0
Temp Trailer at WRF	Cash	100%	100%	\$28,000	\$5,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$5,000	\$0	\$0	\$0
Replace WRF Operations Building and Shop	Reserves	100%	100%	\$3,000,000	\$0	\$0	\$0	\$0	\$100,000	\$1,000,000	\$1,900,000	\$0	\$0	\$0	\$0
Upgrade Chemical Storage Facilities	Cash	100%	100%	\$500,000	\$0	\$0	\$0	\$0	\$0	\$0	\$500,000	\$0	\$0	\$0	\$0
Phase 2 WWTP Upgrades	Debt	100%	100%	\$400,000	\$0	\$0	\$0	\$0	\$100,000	\$100,000	\$100,000	\$100,000	\$0	\$0	\$0
Subtotal Treatment				\$12,076,808	\$557,808	\$922,000	\$3,334,000	\$3,274,000	\$203,000	\$1,178,000	\$2,503,000	\$105,000	\$0	\$0	\$0
Total Estimated Project Costs (2016 \$'s)				\$15,299,308	\$752,558	\$1,166,750	\$3,843,750	\$3,893,750	\$447,750	\$1,472,750	\$2,697,750	\$299,750	\$194,750	\$335,000	\$194,750
Cash - Capital Fund				\$3,935,200	\$505,450	\$401,750	\$357,750	\$607,750	\$232,750	\$282,750	\$682,750	\$184,750	\$179,750	\$320,000	\$179,750
Cash - Operations Fund				\$490,000	\$15,000	\$65,000	\$215,000	\$15,000	\$15,000	\$90,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000
Debt - Capital Fund				\$7,874,108	\$232,108	\$700,000	\$3,271,000	\$3,271,000	\$100,000	\$100,000	\$100,000	\$100,000	\$0	\$0	\$0
Reserves				\$3,000,000	\$0	\$0	\$0	\$0	\$100,000	\$1,000,000	\$1,900,000	\$0	\$0	\$0	\$0
Total				\$15,299,308	\$752,558	\$1,166,750	\$3,843,750	\$3,893,750	\$447,750	\$1,472,750	\$2,697,750	\$299,750	\$194,750	\$335,000	\$194,750

Source: City of St. Helena.

2016 exist share

Table A-8
City of St. Helena Wastewater Rate Study
Existing Customers Share of CIP Costs in Future \$'s

Project	Funding Source	Percent Share Existing Customers	Percent Share Existing Customers in Rate Model	Total Cost	Fiscal Year Ending										
					2017 Current	2018 Year 1	2019 Year 2	2020 Year 3	2021 Year 4	2022 Year 5	2023 Year 6	2024 Year 7	2025 Year 8	2026 Year 9	2027 Year 10
Estimated Project Costs (Future \$'s) [1]					Annual Increase		3.1%								
Sewer Collection System															
Miscellaneous Maintenance Projects	Cash	85%	85%	\$584,382	\$30,667	\$31,611	\$32,585	\$33,589	\$34,624	\$35,691	\$36,791	\$37,924	\$39,093	\$230,268	\$41,538
Replace 1% of Sewer Mains Annually	Cash	100%	100%	\$1,988,624	\$154,621	\$159,385	\$164,296	\$169,358	\$174,576	\$179,954	\$185,499	\$191,214	\$197,105	\$203,178	\$209,438
Crinella Pump Station Upgrades	Cash	100%	100%	\$561,995	\$0	\$0	\$82,148	\$479,847	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Add Sewer Pump Stations to SCADA	Cash	100%	100%	\$178,161	\$0	\$0	\$0	\$0	\$58,192	\$119,970	\$0	\$0	\$0	\$0	\$0
Wet Weather Flow Monitoring	Ops Cash	100%	100%	\$54,765	\$0	\$0	\$54,765	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Update GIS Maps of Sewer System	Ops Cash	100%	100%	\$53,128	\$0	\$53,128	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sewer Master Plan	Ops Cash	100%	100%	\$164,296	\$0	\$0	\$164,296	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Replace Rodding Machine	Cash	100%	100%	\$43,812	\$0	\$0	\$43,812	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
CCTV Program	Ops Cash	100%	100%	\$198,862	\$15,462	\$15,939	\$16,430	\$16,936	\$17,458	\$17,995	\$18,550	\$19,121	\$19,711	\$20,318	\$20,944
Subtotal Collection System				\$3,828,026	\$200,750	\$260,064	\$558,332	\$699,730	\$284,849	\$353,610	\$240,839	\$248,259	\$255,908	\$453,764	\$271,920
Treatment Plant															
WWTP Upgrades Ph. 1	Debt	100%	100%	\$8,258,933	\$239,259	\$743,798	\$3,582,746	\$3,693,130	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Reclamation Field Improvements	Cash	85%	85%	\$124,419	\$124,419	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pond 2 & 3 Levee	Cash	100%	100%	\$127,567	\$61,849	\$0	\$65,718	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Facilities Automation	Cash	100%	100%	\$153,010	\$0	\$153,010	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
New Well	Cash	100%	100%	\$67,003	\$67,003	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sludge Removal	Cash	100%	100%	\$157,003	\$77,311	\$79,693	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Recycled Water Feasibility Study	Ops Cash	100%	100%	\$89,977	\$0	\$0	\$0	\$0	\$0	\$89,977	\$0	\$0	\$0	\$0	\$0
Temp Trailer at WRF	Cash	100%	100%	\$32,189	\$5,154	\$3,188	\$3,286	\$3,387	\$3,492	\$3,599	\$3,710	\$6,374	\$0	\$0	\$0
Replace WRF Operations Building and Shop	Reserves	100%	100%	\$3,665,729	\$0	\$0	\$0	\$0	\$116,384	\$1,199,695	\$2,349,650	\$0	\$0	\$0	\$0
Upgrade Chemical Storage Facilities	Cash	100%	100%	\$618,329	\$0	\$0	\$0	\$0	\$0	\$0	\$618,329	\$0	\$0	\$0	\$0
Phase 2 WWTP Upgrades	Debt	100%	100%	\$487,495	\$0	\$0	\$0	\$0	\$116,384	\$119,970	\$123,666	\$127,476	\$0	\$0	\$0
Subtotal Treatment				\$13,781,654	\$574,994	\$979,688	\$3,651,751	\$3,696,517	\$236,259	\$1,413,241	\$3,095,354	\$133,850	\$0	\$0	\$0
Total Estimated Project Costs (Future \$'s)				\$17,609,680	\$775,744	\$1,239,752	\$4,210,083	\$4,396,247	\$521,108	\$1,766,852	\$3,336,193	\$382,109	\$255,908	\$453,764	\$271,920
2016 \$'s															
Cash - Capital Fund				\$3,935,200	\$505,450	\$401,750	\$357,750	\$607,750	\$232,750	\$282,750	\$682,750	\$184,750	\$179,750	\$320,000	\$179,750
Cash - Operations Fund				\$490,000	\$15,000	\$65,000	\$215,000	\$15,000	\$15,000	\$90,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000
Debt - Capital Fund				\$7,874,108	\$232,108	\$700,000	\$3,271,000	\$3,271,000	\$100,000	\$100,000	\$100,000	\$100,000	\$0	\$0	\$0
Reserves				\$3,000,000	\$0	\$0	\$0	\$0	\$100,000	\$1,000,000	\$1,900,000	\$0	\$0	\$0	\$0
Total				\$15,299,308	\$752,558	\$1,166,750	\$3,843,750	\$3,893,750	\$447,750	\$1,472,750	\$2,697,750	\$299,750	\$194,750	\$335,000	\$194,750
Future \$'s															
Cash - Capital Fund				\$4,636,494	\$521,023	\$426,887	\$391,846	\$686,181	\$270,883	\$339,214	\$844,328	\$235,512	\$236,198	\$433,446	\$250,976
Cash - Operations Fund				\$561,029	\$15,462	\$69,067	\$235,491	\$16,936	\$17,458	\$107,973	\$18,550	\$19,121	\$19,711	\$20,318	\$20,944
Debt - Capital Fund				\$8,746,428	\$239,259	\$743,798	\$3,582,746	\$3,693,130	\$116,384	\$119,970	\$123,666	\$127,476	\$0	\$0	\$0
Reserves				\$3,665,729	\$0	\$0	\$0	\$0	\$116,384	\$1,199,695	\$2,349,650	\$0	\$0	\$0	\$0
Total				\$17,609,680	\$775,744	\$1,239,752	\$4,210,083	\$4,396,247	\$521,108	\$1,766,852	\$3,336,193	\$382,109	\$255,908	\$453,764	\$271,920

Source: City of St. Helena.

fut exist share

[1] Estimated costs increased by historical ENR Construction Cost Index 20 year average increase.

Attachment 2

Table A-9
City of St. Helena Wastewater Rate Study
Existing Wastewater Debt Service Schedule

Fiscal Year Ending	Principal	Interest	Total	Remaining Principal
2015	\$126,522	\$125,841	\$252,363	\$3,063,478
2016	\$133,696	\$121,538	\$255,233	\$2,929,783
2017	\$135,870	\$117,007	\$252,876	\$2,793,913
2018	\$141,957	\$111,947	\$253,904	\$2,651,957
2019	\$149,130	\$106,900	\$256,030	\$2,502,826
2020	\$151,304	\$101,586	\$252,890	\$2,351,522
2021	\$158,478	\$95,345	\$253,823	\$2,193,044
2022	\$166,739	\$88,653	\$255,392	\$2,026,304
2023	\$168,913	\$82,025	\$250,938	\$1,857,391
2024	\$176,087	\$75,582	\$251,669	\$1,681,304
2025	\$183,261	\$68,762	\$252,022	\$1,498,044
2026	\$191,522	\$60,788	\$252,310	\$1,306,522
2027	\$199,783	\$51,708	\$251,490	\$1,106,739
2028	\$209,130	\$42,220	\$251,351	\$897,609
2029	\$218,478	\$32,763	\$251,241	\$679,131
2030	\$227,826	\$23,359	\$251,185	\$451,304
2031	\$236,087	\$13,584	\$249,671	\$215,217
2032	\$105,435	\$6,500	\$111,935	\$109,783
2033	\$109,783	\$2,196	\$111,978	\$0

Source: City of St. Helena.

debt service

Attachment 2

Table A-10
City of St. Helena Wastewater Rate Study
Operating Expenses Cost Escalation Factors

Expenses	Actuals Fiscal Year Ending				Estimated 2016	Total Change	Annual Avg. % Change
	2012	2013	2014	2015			
Salaries & Benefits	\$829,613	\$795,480	\$827,047	\$896,865	\$987,778	\$158,165	4.5%
Services	\$231,717	\$194,235	\$220,039	\$406,364	\$822,159	\$590,442	37.2%
Supplies	\$48,460	\$55,452	\$80,836	\$41,318	\$91,641	\$43,181	17.3%
Maintenance	\$81,882	\$72,003	\$68,000	\$118,625	\$167,473	\$85,591	19.6%
Taxes, Insurances & Contribs.	\$76,885	\$54,533	\$64,460	\$73,328	\$122,416	\$45,531	12.3%
Total Expenses	\$1,268,557	\$1,171,702	\$1,260,382	\$1,536,500	\$2,191,467	\$922,910	14.6%
Engineering News Record	<i>Dec 2011</i>	<i>Dec 2012</i>	<i>Dec 2013</i>	<i>Dec 2014</i>	<i>Dec 2015</i>		
ENR Construction Cost Index 20-City [1]	9,172.00	9,412.00	9,668.00	9,936.00	10,135.00	963.00	2.5%
ENR Construction Cost Index San Francisco	10,204.79	10,355.09	10,898.84	10,915.84	11,155.41	950.62	2.3%
Bureau of Labor Statistics							
Consumer Price Index - California	232.99	237.71	241.53	244.81	250.71	17.73	1.9%
Consumer Price Index - San Francisco	234.33	239.53	245.71	252.27	260.29	25.96	2.7%

Source: City of St. Helena, Bureau of Labor Statistics, and the Engineering New Record.

index

[1] Engineering News Record (ENR) Consumer Cost Index (CCI) change 1995 to 2015:

ENR CCI 1995	5,524	Change	<u>Annual Avg. % Change</u>
ENR CCI 2015	10,135	4,611	3.1%

Attachment 2

Table A-11
City of St. Helena Wastewater Rate Study
Existing Asset Depreciation

Asset Category	Current Depreciation
Buildings	\$22,667
Vehicles	\$18,067
Equipment	\$43,216
Improvements	\$239,170
Pipes	\$16,925
Total	\$340,044

Source: City of St. Helena and HEC. cur depr

Table A-12
City of St. Helena Wastewater Rate Study
Estimated Depreciation of Projected Assets

Improvement Type	Average Life of Asset (years)	Fiscal Year Ending										
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
		Current Year	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Sewer Collection System [1]												
Miscellaneous Maintenance Projects	10	\$3,608	\$7,327	\$11,160	\$15,112	\$19,186	\$23,384	\$27,713	\$32,174	\$36,774	\$63,864	\$68,751
Reclamation Field Improvements	50	\$2,927	\$2,927	\$2,927	\$2,927	\$2,927	\$2,927	\$2,927	\$2,927	\$2,927	\$2,927	\$2,927
Replace 1% of Sewer Mains Annually	80	\$1,933	\$3,925	\$5,979	\$8,096	\$10,278	\$12,527	\$14,846	\$17,236	\$19,700	\$22,240	\$24,858
New Well	40	\$1,675	\$1,675	\$1,675	\$1,675	\$1,675	\$1,675	\$1,675	\$1,675	\$1,675	\$1,675	\$1,675
Crinella Pump Station Upgrades	50	\$0	\$0	\$1,643	\$11,240	\$11,240	\$11,240	\$11,240	\$11,240	\$11,240	\$11,240	\$11,240
Add Sewer Pump Stations to SCADA	10	\$0	\$0	\$0	\$0	\$5,819	\$17,816	\$17,816	\$17,816	\$17,816	\$17,816	\$17,816
Wet Weather Flow Monitoring	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Update GIS Maps of Sewer System	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Sewer Master Plan	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Replace Rodding Machine	15	\$0	\$0	\$2,921	\$2,921	\$2,921	\$2,921	\$2,921	\$2,921	\$2,921	\$2,921	\$2,921
CCTV Program	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Subtotal Sewer Collection		\$10,143	\$15,854	\$26,306	\$41,971	\$54,046	\$72,491	\$79,138	\$85,990	\$93,053	\$122,683	\$130,188
Treatment Plant [1]												
WWTP Upgrades Ph. 1	80	\$2,991	\$12,288	\$57,073	\$103,237	\$103,237	\$103,237	\$103,237	\$103,237	\$103,237	\$103,237	\$103,237
Pond 2 & 3 Levee	40	\$1,546	\$1,546	\$3,189	\$3,189	\$3,189	\$3,189	\$3,189	\$3,189	\$3,189	\$3,189	\$3,189
Facilities Automation	20	\$0	\$7,650	\$7,650	\$7,650	\$7,650	\$7,650	\$7,650	\$7,650	\$7,650	\$7,650	\$7,650
Sludge Removal	40	\$1,933	\$3,925	\$3,925	\$3,925	\$3,925	\$3,925	\$3,925	\$3,925	\$3,925	\$3,925	\$3,925
Recycled Water Feasibility Study	5	\$0	\$0	\$0	\$0	\$0	\$17,995	\$17,995	\$17,995	\$17,995	\$17,995	\$17,995
Temp Trailer at WRF	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Replace WRF Operations Building and Shop	80	\$0	\$0	\$0	\$0	\$1,455	\$16,451	\$45,822	\$45,822	\$45,822	\$45,822	\$45,822
Upgrade Chemical Storage Facilities	50	\$0	\$0	\$0	\$0	\$0	\$0	\$12,367	\$12,367	\$12,367	\$12,367	\$12,367
Phase 2 WWTP Upgrades	40	\$0	\$0	\$0	\$0	\$2,910	\$5,909	\$9,000	\$12,187	\$12,187	\$12,187	\$12,187
Subtotal Treatment Plant		\$6,470	\$25,410	\$71,837	\$118,001	\$122,366	\$158,357	\$203,186	\$206,372	\$206,372	\$206,372	\$206,372
Total Cumulative Depreciation		\$16,613	\$41,264	\$98,143	\$159,973	\$176,412	\$230,848	\$282,324	\$292,363	\$299,425	\$329,056	\$336,560

Source: City of St. Helena.

new depr

[1] Depreciation in future dollars.

Attachment 2

Table A-13
City of St. Helena Wastewater Rate Study
Calculated Winter Use and Total Billed Water Use for Sewer by Customer Type

Customer Type	Winter Months Jan-Mar 2015	# Units /Accounts /Students	Winter Months Jan-Mar 2015	Average	Average in Gallons
Residential	Total Water Use		Use per Unit per Day in HCF	HCF per Day	GPD
Single Family	34,381	1,503	0.25	0.24	175
Multi-Family	9,259	669	0.15	0.15	106
Mobile Homes (Vineyard Valley)	4,331	211	0.23	0.22	157
Residential	47,971	2,383	0.22	0.21	154
Non-Residential					
Car Wash	126	1	1.40	1.40	1,005
Church/CommCenter	254	13	0.22	0.22	156
Commercial	3,803	126	0.34	0.34	241
Grocery	260	3	0.96	0.96	691
Laundry	524	1	5.82	5.82	4,181
Mixed Retail w/ Food	496	3	1.84	1.84	1,319
Motel w/ Food	1,361	2	7.56	7.56	5,429
Motel w/out Food	2,303	8	3.20	3.20	2,297
Restaurant	3,225	19	1.89	1.89	1,354
Napa Valley College	1,620	1	18.00	18.00	12,925
Service Station	199	5	0.44	0.44	318
Merryvale Winery	235	2	1.31	1.31	937
Sutter Home (industrial) [1]	8,009	1	88.99	4.45	3,195
School	1,304	1,437	0.01	0.01	7

Source: City of St. Helena.

winter

[1] Only 5% of winter water use for this account is estimated to reach the wastewater plant.

Attachment 2

ATTACHMENT B

MODIFIED WASTEWATER RATE STRUCTURE

METHODOLOGY

1. **Determine Number of Sewer Meter Equivalents** – First establish the daily flow for one EDU (equivalent dwelling unit). This flow is the flow per day for a 5/8" meter since almost all residential units have a 5/8" water meter. Calculate the number of sewer meter equivalents using the current City meter ratios. *Using metered water usage data, it is determined that residential units use 280 gallons per day on average; however, only 180 gallons per day reaches the wastewater treatment plant, determined by average winter water use. **Table B-1** shows the flow per day by meter size and the calculation of estimated sewer meter equivalents for non-residential customers.*
2. **Allocate Revenue Requirement to Residential and Non-Residential** – Single Family residential customers are allocated costs based on percentage of flow. They are then further allocated to fixed base costs collected in flat monthly charges by dwelling unit and use costs collected in consumption charges. Non-residential costs, including multi-family, are allocated based on percentage of flow by non-residential customers. Non-residential costs are further allocated to fixed base costs collected in flat monthly charges by meter size and use costs collected in consumption charges. ***Table B-2** shows the allocation of revenue requirement. Costs are allocated 57% to residential and 43% to non-residential.*
3. **Calculate Rates** – Divide base residential costs by the number of residential units. Divide residential use costs by typical residential winter water use. Divide non-residential base costs by the number of sewer meter equivalents. Divide non-residential use costs by typical non-residential winter water use. *Calculated rates are shown in **Table B-2**.*
4. **Compare Rates** – A comparison of current and calculated wastewater rates for the next ten years, through fiscal year 2027, is included in **Table B-3**.

Attachment 2

Attachment 2

Table B-1
City of St. Helena Wastewater Rate Study
Calculation of Non-Residential Meter Equivalents

Item	Number of Meters	Meter Ratios	Flow per Day in Gallons	Estimated Sewer Meter Equivalents
Single Family (One EDU)			180	
Non-Residential				
5/8"	150	1.00	180	150
1"	73	2.43	438	178
1.5"	40	4.82	867	193
2"	32	7.68	1,383	246
3"	7	14.36	2,585	101
4"	7	23.91	4,303	167
6"	6	47.77	8,598	287
Total Estimated Non-Residential Sewer Equivalents				1,321
Source: City of St. Helena and HEC.				m equivs

Table B-2
City of St. Helena Wastewater Rate Study
Allocation of Revenue Requirement to Residential and Non-Residential

		Fiscal Year Ending										
Item		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Revenue Requirement		\$2,988,676	\$3,429,719	\$4,279,161	\$4,476,847	\$4,542,121	\$4,612,649	\$4,896,715	\$5,110,400	\$5,334,364	\$5,541,161	\$5,735,771
Residential												
Base Costs	29%	\$866,454	\$994,317	\$1,240,581	\$1,297,893	\$1,316,816	\$1,337,263	\$1,419,618	\$1,481,567	\$1,546,497	\$1,606,450	\$1,662,870
Use Costs	28%	\$840,113	\$964,089	\$1,202,866	\$1,258,435	\$1,276,784	\$1,296,609	\$1,376,460	\$1,436,526	\$1,499,482	\$1,557,612	\$1,612,317
Number of Units (single family only)		1,503	1,508	1,513	1,518	1,523	1,528	1,533	1,538	1,543	1,548	1,553
Base Annual Cost		\$576.48	\$659.36	\$819.95	\$855.00	\$864.62	\$875.17	\$926.04	\$963.31	\$1,002.27	\$1,037.76	\$1,070.75
Monthly Base Charge per Residential Unit		\$48.04	\$54.95	\$68.33	\$71.25	\$72.05	\$72.93	\$77.17	\$80.28	\$83.52	\$86.48	\$89.23
Estimated Annual Billed Usage		186,767	187,212	187,658	188,103	188,548	188,994	189,439	189,884	190,329	190,775	191,220
Use Charge per HCF		\$4.50	\$5.15	\$6.41	\$6.69	\$6.77	\$6.86	\$7.27	\$7.57	\$7.88	\$8.16	\$8.43
Non-Residential												
Base Costs	30%	\$896,865	\$1,029,217	\$1,284,124	\$1,343,447	\$1,363,035	\$1,384,200	\$1,469,444	\$1,533,569	\$1,600,777	\$1,662,835	\$1,721,235
Use Costs	13%	\$385,245	\$442,096	\$551,590	\$577,072	\$585,486	\$594,577	\$631,194	\$658,738	\$687,607	\$714,264	\$739,349
Meter Equivalents		1,321	1,321	1,321	1,321	1,321	1,321	1,321	1,321	1,321	1,321	1,321
Base Charge per Meter Equivalent		\$679.18	\$779.41	\$972.45	\$1,017.37	\$1,032.21	\$1,048.23	\$1,112.79	\$1,161.35	\$1,212.25	\$1,259.24	\$1,303.47
Monthly Base Charge per Meter Equivalent		\$56.60	\$64.95	\$81.04	\$84.78	\$86.02	\$87.35	\$92.73	\$96.78	\$101.02	\$104.94	\$108.62
5/8"	1.0	\$56.60	\$64.95	\$81.04	\$84.78	\$86.02	\$87.35	\$92.73	\$96.78	\$101.02	\$104.94	\$108.62
1"	2.4	\$137.63	\$157.94	\$197.05	\$206.16	\$209.16	\$212.41	\$225.49	\$235.33	\$245.64	\$255.17	\$264.13
1.5"	4.8	\$272.67	\$312.91	\$390.41	\$408.45	\$414.40	\$420.84	\$446.75	\$466.25	\$486.68	\$505.55	\$523.31
2"	7.7	\$434.74	\$498.90	\$622.46	\$651.22	\$660.71	\$670.97	\$712.29	\$743.37	\$775.95	\$806.03	\$834.34
3"	14.4	\$812.89	\$932.84	\$1,163.88	\$1,217.65	\$1,235.40	\$1,254.59	\$1,331.85	\$1,389.97	\$1,450.89	\$1,507.13	\$1,560.06
4"	23.9	\$1,353.10	\$1,552.78	\$1,937.35	\$2,026.86	\$2,056.41	\$2,088.34	\$2,216.95	\$2,313.69	\$2,415.09	\$2,508.71	\$2,596.82
6"	47.8	\$2,703.62	\$3,102.59	\$3,871.01	\$4,049.85	\$4,108.89	\$4,172.70	\$4,429.67	\$4,622.97	\$4,825.57	\$5,012.65	\$5,188.69
Use Charge per HCF	Est. Annual Billed Use											
Car Wash	511	\$3.43	\$3.93	\$4.90	\$5.13	\$5.21	\$5.29	\$5.61	\$5.86	\$6.11	\$6.35	\$6.57
Religious Places/Community Centers	1,030	\$3.72	\$4.27	\$5.33	\$5.57	\$5.65	\$5.74	\$6.09	\$6.36	\$6.64	\$6.90	\$7.14
Commercial	15,423	\$4.27	\$4.90	\$6.12	\$6.40	\$6.49	\$6.59	\$7.00	\$7.30	\$7.62	\$7.92	\$8.20
Groceries and Mortuaries	1,054	\$10.30	\$11.81	\$14.74	\$15.42	\$15.65	\$15.89	\$16.87	\$17.60	\$18.38	\$19.09	\$19.76
Laundry	2,125	\$3.81	\$4.37	\$5.46	\$5.71	\$5.79	\$5.88	\$6.24	\$6.51	\$6.80	\$7.06	\$7.31
Mixed Retail w/ Food	2,012	\$6.73	\$7.72	\$9.64	\$10.08	\$10.23	\$10.39	\$11.03	\$11.51	\$12.01	\$12.48	\$12.92
Motel with Food	5,520	\$7.91	\$9.08	\$11.32	\$11.85	\$12.02	\$12.21	\$12.96	\$13.52	\$14.12	\$14.66	\$15.18
Motel without Food	9,340	\$4.59	\$5.26	\$6.57	\$6.87	\$6.97	\$7.08	\$7.51	\$7.84	\$8.19	\$8.50	\$8.80
Restaurant	13,079	\$10.18	\$11.68	\$14.57	\$15.24	\$15.47	\$15.71	\$16.67	\$17.40	\$18.16	\$18.87	\$19.53
Napa Valley College	6,570	\$3.67	\$4.21	\$5.25	\$5.49	\$5.57	\$5.66	\$6.01	\$6.27	\$6.55	\$6.80	\$7.04
Service Station	807	\$4.82	\$5.53	\$6.90	\$7.22	\$7.32	\$7.44	\$7.89	\$8.24	\$8.60	\$8.93	\$9.25
Winery Production (Merryvale/Spottswoode)	953	\$17.31	\$19.87	\$24.79	\$25.93	\$26.31	\$26.72	\$28.36	\$29.60	\$30.90	\$32.09	\$33.22
Sutter Home Winery	1,624	\$4.50	\$5.16	\$6.44	\$6.74	\$6.84	\$6.94	\$7.37	\$7.69	\$8.03	\$8.34	\$8.63
Schools	5,288	\$1.87	\$2.15	\$2.68	\$2.81	\$2.85	\$2.89	\$3.07	\$3.20	\$3.34	\$3.47	\$3.60

Source: City of St. Helena and HEC.

curr alloc rates

Table B-3
City of St. Helena Wastewater Rate Study
Calculated Wastewater Rates - Modified Current Rate Structure

Land Use	Current Rates Effective	2017 2/8/2017	2018 11/8/2017	2019 11/8/2018	2020 11/8/2019	2021 11/8/2020	2022 11/8/2021	2023 11/8/2022	2024 11/8/2023	2025 11/8/2024	2026 11/8/2025	2027 11/8/2026
Residential												
Flat Monthly Charge per Unit	\$47.35	\$48.04	\$54.95	\$68.33	\$71.25	\$72.05	\$72.93	\$77.17	\$80.28	\$83.52	\$86.48	\$89.23
Use Charge per HCF	\$3.94	\$4.50	\$5.15	\$6.41	\$6.69	\$6.77	\$6.86	\$7.27	\$7.57	\$7.88	\$8.16	\$8.43
Non-Residential												
Flat Monthly Charge per Account												
5/8"	\$42.12	\$56.60	\$64.95	\$81.04	\$84.78	\$86.02	\$87.35	\$92.73	\$96.78	\$101.02	\$104.94	\$108.62
1"	\$102.42	\$137.63	\$157.94	\$197.05	\$206.16	\$209.16	\$212.41	\$225.49	\$235.33	\$245.64	\$255.17	\$264.13
1.5"	\$202.92	\$272.67	\$312.91	\$390.41	\$408.45	\$414.40	\$420.84	\$446.75	\$466.25	\$486.68	\$505.55	\$523.31
2"	\$323.53	\$434.74	\$498.90	\$622.46	\$651.22	\$660.71	\$670.97	\$712.29	\$743.37	\$775.95	\$806.03	\$834.34
3"	\$604.94	\$812.89	\$932.84	\$1,163.88	\$1,217.65	\$1,235.40	\$1,254.59	\$1,331.85	\$1,389.97	\$1,450.89	\$1,507.13	\$1,560.06
4"	\$1,006.96	\$1,353.10	\$1,552.78	\$1,937.35	\$2,026.86	\$2,056.41	\$2,088.34	\$2,216.95	\$2,313.69	\$2,415.09	\$2,508.71	\$2,596.82
6"	\$2,012.00	\$2,703.62	\$3,102.59	\$3,871.01	\$4,049.85	\$4,108.89	\$4,172.70	\$4,429.67	\$4,622.97	\$4,825.57	\$5,012.65	\$5,188.69
Use Charge per HCF												
Car Wash	\$2.85	\$3.43	\$3.93	\$4.90	\$5.13	\$5.21	\$5.29	\$5.61	\$5.86	\$6.11	\$6.35	\$6.57
Religious Places/Community Centers	\$3.64	\$3.72	\$4.27	\$5.33	\$5.57	\$5.65	\$5.74	\$6.09	\$6.36	\$6.64	\$6.90	\$7.14
Commercial	\$3.64	\$4.27	\$4.90	\$6.12	\$6.40	\$6.49	\$6.59	\$7.00	\$7.30	\$7.62	\$7.92	\$8.20
Groceries and Mortuaries	\$11.87	\$10.30	\$11.81	\$14.74	\$15.42	\$15.65	\$15.89	\$16.87	\$17.60	\$18.38	\$19.09	\$19.76
Laundry	\$3.34	\$3.81	\$4.37	\$5.46	\$5.71	\$5.79	\$5.88	\$6.24	\$6.51	\$6.80	\$7.06	\$7.31
Mixed Retail w/ Food	\$6.79	\$6.73	\$7.72	\$9.64	\$10.08	\$10.23	\$10.39	\$11.03	\$11.51	\$12.01	\$12.48	\$12.92
Motel with Food	\$8.75	\$7.91	\$9.08	\$11.32	\$11.85	\$12.02	\$12.21	\$12.96	\$13.52	\$14.12	\$14.66	\$15.18
Motel without Food	\$4.35	\$4.59	\$5.26	\$6.57	\$6.87	\$6.97	\$7.08	\$7.51	\$7.84	\$8.19	\$8.50	\$8.80
Restaurant	\$11.68	\$10.18	\$11.68	\$14.57	\$15.24	\$15.47	\$15.71	\$16.67	\$17.40	\$18.16	\$18.87	\$19.53
Napa Valley College	\$3.64	\$3.67	\$4.21	\$5.25	\$5.49	\$5.57	\$5.66	\$6.01	\$6.27	\$6.55	\$6.80	\$7.04
Service Station	\$4.70	\$4.82	\$5.53	\$6.90	\$7.22	\$7.32	\$7.44	\$7.89	\$8.24	\$8.60	\$8.93	\$9.25
Winery Production (Merryvale/Spottswoode)	\$20.94	\$17.31	\$19.87	\$24.79	\$25.93	\$26.31	\$26.72	\$28.36	\$29.60	\$30.90	\$32.09	\$33.22
Sutter Home Winery	\$4.27	\$4.50	\$5.16	\$6.44	\$6.74	\$6.84	\$6.94	\$7.37	\$7.69	\$8.03	\$8.34	\$8.63
Schools	\$3.17	\$1.87	\$2.15	\$2.68	\$2.81	\$2.85	\$2.89	\$3.07	\$3.20	\$3.34	\$3.47	\$3.60

Source: City of St. Helena and HEC.

calc rates

Attachment 3

S.E.C. Rule 15c2-12
Voluntary Event Notice – Non-Payment Related Default

The City of St. Helena (the "City") hereby provides notice of the following voluntary notice related to the following bonds (the "Bonds"):

- \$21,560,000 California Statewide Communities Development Authority Water Revenue Bonds (Pooled Financing Program) Series 2006A City of St. Helena (Napa County)
- \$7,155,000 California Statewide Communities Development Authority Water and Wastewater Revenue Bonds Series 2012B City of St. Helena (Napa County)

Each maturity of the Bonds is identified by the corresponding CUSIP Number set forth below:

Maturity Date (October 1)	Series 2006A CUSIP	Series 2012B CUSIP
2016	13077WDY3	13078AVU8
2017	13077WDZ0	13078AVV6
2018	13077WEA4	13078AVW4
2019	13077WEB2	13078AVX2
2020	13077WEC0	13078AVY0
2021	13077WED8	13078AVZ7
2022		13078AWA1
2023		13078AWB9
2024		13078AWC7
2026	13077WEE6	
2027		13078AWD5
2031	13077WEF3	
2032		13078AWE3

Note: *The CUSIP number above is being provided for the convenience of Bondholders. The City is not responsible for the accuracy or completeness of such numbers.*

Voluntary Notice – Non-Payment Related Default: The Installment Purchase Agreements contain a covenant of the City to ensure in each Fiscal Year that System Revenues are at least sufficient to pay Operation and Maintenance Costs, Installment Payments and certain other expenses during such Fiscal Year and that System Net Revenues are at least equal to 120% of Annual Debt Service in such Fiscal Year. As a result of the Governor's declaration of a drought and the requirement to cut water usage, revenues in the Fiscal Year 2015 were lower than anticipated. For the Fiscal Year ended 2015, Net Revenues were less than 120% of Annual Debt Service. The City entered into a contract with Hansford Economic Consulting on November 10, 2015 to provide a Utility Rate Study in an effort to re-evaluate the rates currently being charged for water and sewer services. It is anticipated the study will be complete and new rates implemented by July 1, 2016.

Other Matters - This notice is provided pursuant to the Continuing Disclosure Agreements executed in connection with the Bonds (the "Disclosure Certificates"). The filing of this notice does not constitute or imply any representation regarding any other financial or operating information about the City or any representation that no other circumstances or events have occurred which may have a bearing on the City's financial condition or an investor's decision to buy, sell or hold the Bonds.

Dated: January 29, 2016

CITY OF ST. HELENA

Attachment 4

S.E.C. Rule 15c2-12
Voluntary Event Notice – Non-Payment Related Default

The City of St. Helena (the "City") hereby provides notice of the following voluntary notice related to the following bonds (the "Bonds"):

- \$21,560,000 California Statewide Communities Development Authority Water Revenue Bonds (Pooled Financing Program) Series 2006A City of St. Helena (Napa County)
- \$7,155,000 California Statewide Communities Development Authority Water and Wastewater Revenue Bonds Series 2012B City of St. Helena (Napa County)

Each maturity of the Bonds is identified by the corresponding CUSIP Number set forth below:

Maturity Date (October 1)	Series 2006A CUSIP	Series 2012B CUSIP
2017	13077WDZ0	13078AVV6
2018	13077WEA4	13078AVW4
2019	13077WEB2	13078AVX2
2020	13077WEC0	13078AVY0
2021	13077WED8	13078AVZ7
2022		13078AWA1
2023		13078AWB9
2024		13078AWC7
2026	13077WEE6	
2027		13078AWD5
2031	13077WEF3	
2032		13078AWE3

Note: *The CUSIP number above is being provided for the convenience of Bondholders. The City is not responsible for the accuracy or completeness of such numbers.*

Voluntary Notice – Non-Payment Related Default: The Installment Purchase Agreements contain a covenant of the City to ensure in each Fiscal Year that System Revenues are at least sufficient to pay Operation and Maintenance Costs, Installment Payments and certain other expenses during such Fiscal Year and that System Net Revenues are at least equal to 120% of Annual Debt Service in such Fiscal Year. As a result of the Governor's declaration of a drought and the requirement to cut water usage, revenues in the Fiscal Years 2015 and 2016 were lower than anticipated. For the Fiscal Years ended 2015 and 2016, Net Revenues were less than 120% of Annual Debt Service. The City entered into a contract with Hansford Economic Consulting on November 10, 2015 to provide a Utility Rate Study in an effort to re-evaluate the rates currently being charged for water and sewer services. Based on the Utility Rate Study, the City adopted new rates implemented such new rates effective January 9, 2017. A copy of the City Resolutions and new rate schedule are attached hereto as Appendix A.

Other Matters - This notice is provided pursuant to the Continuing Disclosure Agreements executed in connection with the Bonds (the "Disclosure Certificates"). The filing of this notice does not constitute or imply any representation regarding any other financial or operating information about the City or any representation that no other circumstances or events have occurred which may have a bearing on the City's financial condition or an investor's decision to buy, sell or hold the Bonds.

Dated: January 26, 2017

CITY OF ST. HELENA

Attachment 4

**APPENDIX A
CITY RESOLUTIONS**

Attachment 4

CITY OF ST. HELENA

RESOLUTION No. 2016-163

Resolution Establishing a Revised Schedule for Water Rates

RECITALS

- A. The City of St. Helena provides water services throughout the City, including to certain customers outside the boundaries of the City; and
- B. The City of St. Helena's water system is operated as a self-supporting utility enterprise; and
- C. The City operates and maintains both a water and wastewater utilities including treatment, collection and distribution systems and has determined that the current rate structure will not support the current and future costs of the systems, therefor the City wishes to update the rates for water service; and
- D. On October 25, 2016 the first reading of Ordinance No. 2016-13 was held to amend Chapters 13.04 Water Service System, 13.12 Water Use Efficiency and Use Guidelines, 13.20 Sewer Service System and Section 17.112.140 Water Efficient Landscaping, with the second reading and approval of the municipal code updates held on November 29, 2016, with the effective date being January 9, 2017; and
- E. Ordinance 2016-13, updated Chapter 13.04 to become effective January 9, 2016, the updated Section 13.04.080 establishes that water rates will be established by Council Resolution; and
- F. Current Water and Wastewater Rates were last reviewed in 2011. The 2011 rate changes implemented annual rate increases for five years based on the Consumer Price Index (CPI). The last annual rate increase was in January 2016, in accordance with the St. Helena municipal code; and
- G. The current Water and Wastewater Rates do not provide adequate funding for the water and wastewater systems; and
- H. Hansford Economic Consulting (HEC) prepared a cost of service analysis entitled St. Helena (2016) Water and Wastewater Rate Study (Rate Study) containing analyses and recommendation for adjusting the City's utility rates. The purpose of this study was to evaluate the rate structure to ensure if it adequately provided for the maintenance, operation and replacement/rehabilitation of its water and wastewater

Attachment 4

systems, and determine the level of funding required to adequately fund the water and wastewater systems, providing the residents and businesses with safe and reliable water and wastewater systems that meets State and Federal requirements; and

- I. On September 27, 2016 Council accepted the draft 2016 Rate Study, and on November 29, 2016 Council accepted the St. Helena (2016) Water and Wastewater Rate Study final document; and
- J. On May 24, 2016 City Council authorized Resolution 2016-66, approving the re-establishment of the Ad Hoc Revenue Source Task Force (Task Force). The Resolutions stated "The City Council desires to re-establish the Ad Hoc Revenue Task Force to function in an advisory capacity to the City Council to review the structure, methodology and equitability of the proposed water and waste water rates; and provide feedback to Staff". Two meetings were held one on August 4, 2016 and the other on September 13, 2016, these meetings were open to the public, recorded and all materials were posted online; and
- K. Pursuant to the provisions of Article 13D, Section 6, of the California Constitution (e.g., Proposition 218), prior to an increase in water or sewer (wastewater) rates, property owners shall be provided at least 45 days' notice of a public hearing to consider an increase in any such water and sewer rates together with an explanation of: (1) the amount of the propose rate increase, (2) the basis on which the rate increase is calculated, (3) the reason for the rate increase, and (4) the date, time and place of a public hearing to consider the rate increase, together with an explanation of the rights of property owners to submit written protests to the proposed rate increase. The proposed rate increases may not be imposed if written protests are submitted by a majority of the property owners subject to the increased rates; and
- L. On October 4, 2016 the City mailed over 3500 copies a Notice of Proposed Increase in Water and Wastewater Rates and Public Hearing regarding such increases to property owners and to utility customers; and
- M. Notice of Public Hearing was also published in the newspaper each week for two weeks prior to the date of the public hearing; and
- N. On November 29, 2016, prior to the adoption of this Resolution, the City Council conducted and concluded a duly noticed public hearing concerning the proposed water and wastewater rate increase and considered all written and oral comments presented; and at its conclusion the City Clerk tabulated the number of protests received, and reported that there was not a majority protest of the proposed water or wastewater rates by owners or tenants of identified parcel receiving such services; and
- O. In accordance with the requirements of the California Environmental Quality Act ("CEQA"), California Public Resources Code section 21000 et seq., the State CEQA

Attachment 4

Guidelines, California Code of Regulations, Title 14, Chapter 3, sections 15000 et seq., and the Environmental Impact Report Guidelines of the City of St. Helena, City staff has reviewed the proposed rate increase and recommends that the approval of the rate increase is Statutorily Exempt pursuant to CEQA Guidelines Section 15273 as it applies only to rates to obtain funds necessary to operate and maintain service for the water and wastewater system; and

P. All legal prerequisites have occurred prior to the adoption of this Resolution.

RESOLUTION

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

1. The procedures followed and the rate schedules proposed herein are in compliance with the California Constitution Article XIII D.
2. The City Council hereby finds that the above recitations are true and correct and, accordingly, are incorporated as a material part of this Resolution.
3. The City Council hereby finds that the rate increase is Statutorily Exempt pursuant to CEQA Guidelines section 15273 as it applies only to rates to obtain funds necessary to operate and maintain service for the water and sewer system.
4. Water Rate Schedule
 - a. The City Council adopts the water rate schedule in "Exhibit A" attached hereto and incorporated herein by this reference.
5. Time of Effectiveness
 - a. The charges for both water and wastewater will become effective on January 9, 2017 and a rate increase will occur every billing period beginning in November for the next five (5) years (2017, 2018, 2019, 2020 and 2021) pursuant to "Exhibit A".

Approved at a Special Meeting of the St. Helena City Council on November 29, 2016, by the following vote:

Mayor Galbraith:	Yes
Vice Mayor White:	Yes
Councilmember Crull:	Yes
Councilmember Dohring:	Yes
Councilmember Pitts:	Yes

Attachment 4

APPROVED:


Alan Galbraith, Mayor

ATTEST:


Cindy Black, City Clerk



Attachment 4

Exhibit A
Calculated Water Rates through Fiscal Year Ending 2022

Charges	Current	Billing Period Beginning *					
		2/8/2017	11/8/2017	11/8/2018	11/8/2019	11/8/2020	11/8/2021
Service Charge							
5/8", 3/4" & SF 1"	\$27.52	\$43.22	\$51.71	\$60.59	\$64.78	\$68.91	\$73.27
1"	\$63.80	\$80.08	\$96.76	\$114.44	\$123.35	\$132.22	\$141.61
1.5"	\$124.12	\$141.67	\$172.02	\$204.36	\$221.14	\$237.94	\$255.72
2"	\$196.50	\$215.12	\$261.84	\$311.76	\$337.99	\$364.27	\$392.10
3"	\$365.51	\$413.06	\$503.54	\$600.40	\$651.86	\$703.51	\$758.21
4"	\$607.01	\$640.46	\$780.29	\$930.11	\$1,010.10	\$1,090.44	\$1,175.54
6"	\$1,210.18	\$1,252.50	\$1,528.85	\$1,825.17	\$1,983.80	\$2,143.19	\$2,312.05
Private Fire Protection							
4"	\$4.00	\$8.47	\$9.92	\$11.38	\$11.89	\$12.36	\$12.86
6"	\$6.00	\$24.59	\$28.81	\$33.05	\$34.53	\$35.91	\$37.34
8"	\$8.00	\$52.41	\$61.40	\$70.43	\$73.57	\$76.52	\$79.58
Raw Water per Gallon	\$0.00267	\$0.00273	\$0.00320	\$0.00367	\$0.00383	\$0.00398	\$0.00414
TREATED WATER USE CHARGES PER HCF							
NON-DROUGHT PERIOD	[1]						
Off-Peak (Nov-Apr)		\$5.50	\$6.37	\$7.19	\$7.37	\$7.54	\$7.71
Peak (May-Oct)		\$6.11	\$7.09	\$8.00	\$8.20	\$8.38	\$8.58
DROUGHT PERIOD	[1]						
Off-Peak (Nov-Apr)		\$5.81	\$6.73	\$7.60	\$7.79	\$7.97	\$8.15
Peak (May-Oct)		\$6.46	\$7.49	\$8.45	\$8.66	\$8.86	\$9.06

Source: HEC.

* Dates reflect the current billing cycle; if the billing cycle date changes so will these effective dates.

[1] Current Rate Structure rates as follows:

Tiers by customer category (in hcf):		<u>Tier 1</u>	<u>Tier 2</u>		<u>Tier 1</u>	<u>Tier 2</u>
Single family	0-14	15+	Non-residential <=1"		0-36	37+
Multi-family	0-5	6+	Non-residential 1.5"		0-120	121+
			Non-residential 2"		0-192	193+
Price per HCF	\$4.48	\$6.74	Non-residential 3"		0-360	361+
Price per HCF - Landscape Irrigation	\$5.22		Non-residential 4"		0-600	601+
			Non-residential 6"		0-1,250	1,251+
			Non-residential 8"		0-1,920	1,921+

Attachment 4

CITY OF ST. HELENA

RESOLUTION No. 2016-164

Resolution Establishing a Revised Schedule for Wastewater Rates

RECITALS

- A. The City of St. Helena provides wastewater services throughout the City, including to certain customers outside the boundaries of the City; and
- B. The City of St. Helena's wastewater system is operated as a self-supporting utility enterprise; and
- C. The City operates and maintains both a water and wastewater utilities including treatment, collection and distribution systems and has determined that the current rate structure will not support the current and future costs of the systems, therefor the City wishes to update the rates for wastewater service; and
- D. On October 25, 2016 the first reading of Ordinance No. 2016-13 was held to amend Chapters 13.04 Water Service System, 13.12 Water Use Efficiency and Use Guidelines, 13.20 Sewer Service System and Section 17.112.140 Water Efficient Landscaping, with the second reading and approval of the municipal code updates held on November 29, 2016, with the effective date being January 9, 2017; and
- E. Ordinance 2016-13, updated Chapter 13.20 to become effective January 9, 2016, the updated Section 13.20.020 establishes that wastewater rates will be established by Council Resolution; and
- F. Current Water and Wastewater Rates were last reviewed in 2011. The 2011 rate changes implemented annual rate increases for five years based on the Consumer Price Index (CPI). The last annual rate increase was in January 2016, in accordance with the St. Helena municipal code; and
- G. The current Water and Wastewater Rates do not provide adequate funding for the water and wastewater systems; and
- H. Hansford Economic Consulting (HEC) prepared a cost of service analysis entitled St. Helena (2016) Water and Wastewater Rate Study (Rate Study) containing analyses and recommendation for adjusting the City's utility rates. The purpose of this study was to evaluate the rate structure to ensure if it adequately provided for the maintenance, operation and replacement/rehabilitation of its water and wastewater

Attachment 4

systems, and determine the level of funding required to adequately fund the water and wastewater systems, providing the residents and businesses with safe and reliable water and wastewater systems that meets State and Federal requirements; and

- I. On September 27, 2016 Council accepted the draft 2016 Rate Study, and on November 29, 2016 Council accepted the St. Helena (2016) Water and Wastewater Rate Study final document; and
- J. On May 24, 2016 City Council authorized Resolution 2016-66, approving the re-establishment of the Ad Hoc Revenue Source Task Force (Task Force). The Resolutions stated "The City Council desires to re-establish the Ad Hoc Revenue Task Force to function in an advisory capacity to the City Council to review the structure, methodology and equitability of the proposed water and waste water rates; and provide feedback to Staff". Two meetings were held one on August 4, 2016 and the other on September 13, 2016, these meetings were open to the public, recorded and all materials were posted online; and
- K. Pursuant to the provisions of Article 13D, Section 6, of the California Constitution (e.g., Proposition 218), prior to an increase in water or sewer (wastewater) rates, property owners shall be provided at least 45 days' notice of a public hearing to consider an increase in any such water and sewer rates together with an explanation of: (1) the amount of the propose rate increase, (2) the basis on which the rate increase is calculated, (3) the reason for the rate increase, and (4) the date, time and place of a public hearing to consider the rate increase, together with an explanation of the rights of property owners to submit written protests to the proposed rate increase. The proposed rate increases may not be imposed if written protests are submitted by a majority of the property owners subject to the increased rates; and
- L. On October 4, 2016 the City mailed over 3500 copies a Notice of Proposed Increase in Water and Wastewater Rates and Public Hearing regarding such increases to property owners and to utility customers; and
- M. Notice of Public Hearing was also published in the newspaper each week for two weeks prior to the date of the public hearing; and
- N. On November 29, 2016, prior to the adoption of this Resolution, the City Council conducted and concluded a duly noticed public hearing concerning the proposed water and wastewater rate increase and considered all written and oral comments presented; and at its conclusion the City Clerk tabulated the number of protests received, and reported that there was not a majority protest of the proposed water or wastewater rates by owners or tenants of identified parcel receiving such services; and
- O. In accordance with the requirements of the California Environmental Quality Act ("CEQA"), California Public Resources Code section 21000 et seq., the State CEQA

Attachment 4

Guidelines, California Code of Regulations, Title 14, Chapter 3, sections 15000 et seq., and the Environmental Impact Report Guidelines of the City of St. Helena, City staff has reviewed the proposed rate increase and recommends that the approval of the rate increase is Statutorily Exempt pursuant to CEQA Guidelines Section 15273 as it applies only to rates to obtain funds necessary to operate and maintain service for the water and wastewater system; and

P. All legal prerequisites have occurred prior to the adoption of this Resolution.

RESOLUTION

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

1. The procedures followed and the schedules proposed herein are in compliance with the California Constitution Article XIII D.
2. The City Council hereby finds that the above recitations are true and correct and, accordingly, are incorporated as a material part of this Resolution.
3. The City Council hereby finds that the rate increase is Statutorily Exempt pursuant to CEQA Guidelines section 15273 as it applies only to rates to obtain funds necessary to operate and maintain service for the water and sewer system.
4. Wastewater Rate Schedule
 - a. The City Council adopts the wastewater (sewer) rate schedule in Exhibit "A" attached hereto and incorporated herein by this reference.
5. Time of Effectiveness
 - a. The charges for both water and wastewater will become effective on January 9, 2017 and a rate increase will occur every billing period beginning in November for the next five (5) years (2017, 2018, 2019, 2020 and 2021) pursuant to "Exhibit A".

Approved at a Special Meeting of the St. Helena City Council on November 29, 2016, by the following vote:

Mayor Galbraith:	Yes
Vice Mayor White:	Yes
Councilmember Crull:	Yes
Councilmember Dohring:	Yes
Councilmember Pitts:	Yes

Attachment 4

APPROVED:


Alan Galbraith, Mayor

ATTEST:


Cindy Black, City Clerk



Attachment 4

Exhibit A**Calculated Wastewater Rates through Fiscal Year Ending 2022 - New Rate Structure**

Customer Category		Fiscal Year Ending					
		2017	2018	2019	2020	2021	2022
	Billing Period Beginning * ---->	2/8/2017	11/8/2017	11/8/2018	11/8/2019	11/8/2020	11/8/2021
Residential							
Single Family	monthly per unit	\$48.04	\$55.24	\$70.13	\$73.03	\$74.18	\$75.23
Multi-Family	monthly per unit	\$29.07	\$33.42	\$42.43	\$44.18	\$44.88	\$45.52
Mobile Homes	monthly per unit	\$43.11	\$49.57	\$62.93	\$65.53	\$66.56	\$67.51
Residential Rate per HCF	per HCF	\$4.69	\$5.39	\$6.84	\$7.12	\$7.23	\$7.34
Schools Flat Rate per Student	monthly per student	\$1.40	\$1.62	\$2.15	\$2.21	\$2.26	\$2.28
Non-Residential							
Car Wash	monthly per account	\$209.93	\$243.25	\$328.36	\$336.45	\$343.13	\$346.45
Religious Places/Community Centers	monthly per account	\$35.34	\$40.85	\$54.06	\$55.68	\$56.71	\$57.34
Commercial [1]	monthly per account	\$62.70	\$72.20	\$92.64	\$96.19	\$97.78	\$99.09
Groceries and Mortuaries	monthly per account	\$433.93	\$492.12	\$552.00	\$595.15	\$599.41	\$613.71
Laundry	monthly per account	\$970.94	\$1,121.45	\$1,475.85	\$1,522.21	\$1,549.87	\$1,567.76
Mixed Retail w/ Food	monthly per account	\$541.20	\$617.30	\$730.21	\$775.32	\$783.78	\$799.17
Motel with Food	monthly per account	\$2,617.64	\$2,978.36	\$3,444.90	\$3,681.23	\$3,715.59	\$3,795.12
Motel without Food	monthly per account	\$642.15	\$738.08	\$933.28	\$972.87	\$987.93	\$1,002.28
Restaurant	monthly per account	\$840.03	\$952.80	\$1,070.03	\$1,153.27	\$1,161.63	\$1,189.23
Napa Valley College	monthly per account	\$2,889.93	\$3,341.62	\$4,436.77	\$4,565.57	\$4,651.20	\$4,701.87
Service Station	monthly per account	\$93.25	\$107.06	\$134.07	\$140.12	\$142.20	\$144.37
Winery Production (Merryvale/Spottswode)	monthly per account	\$989.21	\$1,116.93	\$1,199.98	\$1,310.53	\$1,315.85	\$1,351.87
Sutter Home Winery	monthly per account	\$876.04	\$1,007.39	\$1,278.85	\$1,331.67	\$1,352.66	\$1,371.89
Car Wash	per HCF	\$3.43	\$3.97	\$5.36	\$5.49	\$5.60	\$5.65
Religious Places/Community Centers	per HCF	\$3.72	\$4.30	\$5.69	\$5.86	\$5.97	\$6.03
Commercial [1]	per HCF	\$4.27	\$4.92	\$6.31	\$6.55	\$6.66	\$6.75
Groceries and Mortuaries	per HCF	\$10.30	\$11.68	\$13.10	\$14.12	\$14.22	\$14.56
Laundry	per HCF	\$3.81	\$4.40	\$5.79	\$5.97	\$6.08	\$6.15
Mixed Retail w/ Food	per HCF	\$6.73	\$7.68	\$9.08	\$9.64	\$9.75	\$9.94
Motel with Food	per HCF	\$7.91	\$9.00	\$10.41	\$11.12	\$11.23	\$11.47
Motel without Food	per HCF	\$4.59	\$5.27	\$6.67	\$6.95	\$7.06	\$7.16
Restaurant	per HCF	\$10.18	\$11.54	\$12.96	\$13.97	\$14.07	\$14.41
Napa Valley College	per HCF	\$3.67	\$4.24	\$5.63	\$5.79	\$5.90	\$5.97
Service Station	per HCF	\$4.82	\$5.53	\$6.93	\$7.24	\$7.35	\$7.46
Winery Production (Merryvale/Spottswode)	per HCF	\$17.31	\$19.55	\$21.00	\$22.93	\$23.03	\$23.66
Sutter Home Winery	per HCF	\$4.50	\$5.17	\$6.57	\$6.84	\$6.95	\$7.04

Source: HEC.

* Dates reflect the current billing cycle; if the billing cycle date changes so will these effective dates.

[1] Commercial includes City buildings.

Attachment 4

CITY OF ST. HELENA

RESOLUTION No. 2016-165

Resolution Establishing a Revised Schedule for Non-Treated (Raw) Water Charges

RECITALS

- A. The City of St. Helena provides non-treated (raw) water from the lower reservoir via the Elmhurst pump station to be used for grading, dust control, street, pipeline, or similar construction activities, as well as for irrigation. Customers wanting to utilize non-treated water available at the lower creek reservoir, must obtain a permit through the City on a quarterly basis; and
- B. Charges for non-treated water are not imposed on property owners as an incident of property ownership and therefore are not subject to the same legal requirements for rate setting as potable water; and
- C. City staff requested the non-treated water rates to be included in the rate study; and
- D. The rates for non-treated water were evaluated and set based on the actual cost of providing non-treated water in St. Helena.
- E. On September 27, 2016 Council accepted the draft 2016 Rate Study, and on November 29, 2016 Council accepted the St. Helena (2016) Water and Wastewater Rate Study final document; and
- F. Notice of Public Hearing was also published in the newspaper each week for two weeks prior to the date of the public hearing; and
- G. In accordance with the requirements of the California Environmental Quality Act ("CEQA"), California Public Resources Code section 21000 et seq., the State CEQA Guidelines, California Code of Regulations, Title 14, Chapter 3, sections 15000 et seq., and the Environmental Impact Report Guidelines of the City of St. Helena, City staff has reviewed the proposed rate increase and recommends that the approval of the rate increase is Statutorily Exempt pursuant to CEQA Guidelines Section 15273 as it applies only to rates to obtain funds necessary to operate and maintain non-treated water service; and
- H. All legal prerequisites have occurred prior to the adoption of this Resolution.

Attachment 4

RESOLUTION

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

1. The City Council hereby finds that the above recitations are true and correct and, accordingly, are incorporated as a material part of this Resolution.
2. The City Council hereby finds that the rate increase is Statutorily Exempt pursuant to CEQA Guidelines section 15273 as it applies only to rates to obtain funds necessary to operate and maintain non-treated water service.
3. Amount of Fees
 - a. The amount of non-treated (raw) water charges shall be as set forth per the table below which is incorporated herein by this reference.

	<i>Current</i>	2/8/2017	11/8/2017	11/8/2018	11/8/2019	11/8/2020	11/8/2021
Raw Water per Gallon	\$0.00267	\$0.00273	\$0.00320	\$0.00367	\$0.00383	\$0.00398	\$0.00414

4. Time of Effectiveness
 - a. The charges for both water and wastewater will become effective on January 9, 2017 and a rate increase will occur every billing period beginning in November for the next five (5) years (2017, 2018, 2019, 2020 and 2021) pursuant to "Exhibit A".

Approved at a Special Meeting of the St. Helena City Council on November 29, 2016, by the following vote:

Mayor Galbraith: Yes
 Vice Mayor White: Yes
 Councilmember Crull: Yes
 Councilmember Dohring: Yes
 Councilmember Pitts: Yes

APPROVED:


 Alan Galbraith, Mayor

ATTEST:


 Cindy Black, City Clerk



Attachment 5

February 21, 2017

April Mitts, Finance Director
1480 Main St.
St. Helena, CA

Subject: Water and Wastewater Rate Studies Review

Dear April:

It has been a great privilege to work on the City of St. Helena (City) water and wastewater rates update. New rates were adopted by City Council November 29, 2016.

As of January, 2017 the City has a new City Council (some continuing members and some new). The new City Council has approved further work to be undertaken on the rate studies. The additional work includes review of the studies, engaging a public financial consultant, forming a new ad hoc committee, and potentially revising rates prior to November 2017. HEC has prepared the following scope of services to assist the City with these efforts.

SCOPE OF SERVICES

The proposed scope of services includes the following tasks:

Task 1. Prepare Memorandum

As part of the review of the rate studies, HEC will provide further information and explanation of rate study elements that the City would like further clarification on. In particular, HEC will provide greater depth of explanation on the functional allocation used to allocate costs among customer groups so that it is clear that the rates adopted by City Council are defensible and upholdable. The memorandum may be prepared before or after Task 2 (meetings with City staff and City Council members).

Task 2: Attend Informational Meetings

HEC will meet with City staff and City Council members on an individual basis to review the rate studies; discussing all key elements. HEC anticipates conducting these meetings over the course of one day in St. Helena. These meetings may occur before or after tasks 3 and 4.

Task 3: Ad Hoc Committee Materials and Presentations

The City is forming a new ad hoc committee to review the water and wastewater rate study. The City is also engaging a public financial consultant to advise the ad hoc committee on available financing options for the capital improvement projects, and other key assumptions of the study.

In this task HEC will work with the City's financial consultant and the ad hoc committee and may make changes to the water and wastewater rate models based on their input and

Page 2 of 3
February 21, 2017

direction. Presentation materials, communications, and other aspects necessary to coordinate efforts with the ad hoc committee and the financial consultant will be conducted under this task. HEC has included two trips to St. Helena for this task.

Task 4: Run Additional Financial Scenarios

Additional financial scenarios may be generated as a result of discussions under Task 3. Such scenarios may include more debt financing, for example. HEC will run additional scenarios as asked, and summarize findings in a Power Point format. Note that because it is unknown at this point how many scenarios need to be run, and the extent of the changes to the model, the budget associated with this task is difficult to estimate.

Task 5: City Council Presentation/Workshop

After discussing rate study key elements and assumptions with individuals, HEC will attend a council meeting, which will likely be in workshop format. At the workshop, HEC will review all of the rate study items that the City Council members requested clarification on, and answer any further questions.

Task 6: Contingency

It is difficult to know the extent of the work necessary for tasks 1 through 5 at this stage, and particularly Task 4. As ad hoc committee members and/or City Council members ask questions, the nature of work needed may change. HEC recommends providing a contingency of 15% in the scope of services for changing needs as they arise.

ESTIMATED BUDGET

Table 1 on the following page summarizes the estimated cost based on HEC's understanding of the work to be completed.

HEC looks forward to continuing to work with the City. Please review this proposal and call me with any questions or comments.

Sincerely,



Catherine R. Hansford
HANSFORD ECONOMIC CONSULTING

Page 3 of 3
February 21, 2017

Table 1
Estimated Cost

Task		2017 billing rates	Hansford \$165	Kirkpatrick \$120	Gustafson \$95	Clerical \$75	Total Estimated Cost
Task 1	Prepare Memorandum		15.0	0.0	10.0	5.0	\$3,800
Task 2	Attend Informational Meetings		14.0	0.0	14.0	5.0	\$4,015
Task 3	Ad Hoc Committee Materials & Presentations		24.0	24.0	0.0	5.0	\$7,215
Task 4	Run Additional Financial Scenarios		20.0	20.0	20.0	5.0	\$7,975
Task 5	Conduct Public Presentation/Workshop		10.0	0.0	15.0	5.0	\$3,450
Task 6	Contingency (15%)						\$3,968
Total Estimated Staff Cost							\$30,423
Estimated Reimbursable Costs [1]							\$2,368
Total Estimated Cost							\$32,792

Note: HEC reserves the right to move budget between tasks as necessary to complete the scope of work up to the authorized budget amount.

[1]	Includes 5 trips to St Helena:	
	Mileage @ Fed. Reimbursement rate	\$968
	Lodging (3 nights/2 persons)	\$1,200
	Meals	\$200
	Total Estimated Reimbursable	\$2,368

Attachment 6

CITY OF ST. HELENA

RESOLUTION NO. 2017-_____

**RESOLUTION APPROVING USE OF
WATER RESERVES OF \$22,500 AND USE
OF WASTEWATER RESERVES OF \$22,500
FOR A TOTAL OF \$43,000 FOR
CONTRACTS WITH BOND COUNSEL,
MUNICIPAL FINANCIAL ADVISOR, AND
HANSFORD ECONOMIC CONSULTING
TO PROVIDE ADDITIONAL ANALYSIS OF
THE UTILITY RATE STUDY DATED
OCTOBER 31, 2016 AND ADOPTED ON
NOVEMBER 29, 2016**

RECITALS

WHEREAS, on February 14, 2017 City Council voted on a motion which included retaining a public sector financial consultant and bond counsel to advise an Ad Hoc committee on the rate study dated October 31, 2016 and adopted on November 29, 2016; and

WHEREAS, City Council requested to retain Hansford Economic Consulting to work with the Ad Hoc committee, bond counsel, and the municipal financial advisor for further analysis on the rate study; and

WHEREAS, the total costs for additional analysis was not a budgeted item in FY 16/17; and

WHEREAS, funds needed to complete this analysis must be taken from the water and wastewater reserves.

RESOLUTION

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

1. Use of \$22,500 from the water fund reserves for additional analysis of the October 31, 2016 rate study; and

2. Use of \$22,500 from the wastewater fund reserves for additional analysis of the October 31, 2016 rate study.

Approved at a Regular Meeting of the St. Helena City Council on February 28, 2017, by the following vote:

Mayor Galbraith:	_____
Vice Mayor White:	_____
Councilmember Dohring:	_____
Councilmember Koberstein:	_____
Councilmember Ellsworth:	_____

APPROVED:

ATTEST:

Alan Galbraith, Mayor

Cindy Black, City Clerk

Attachment 7

CITY OF ST. HELENA

RESOLUTION NO. 2017-_____

**RESOLUTION APPROVING THE SECOND
AMENDMENT TO THE CONTRACT WITH
HANSFORD ECONOMIC CONSULTING
FOR AN AMOUNT NOT TO EXCEED
\$32,792 FOR ADDITIONAL TECHNICAL
SUPPORT REGARDING THE RATE
STUDY DATED OCTOBER 31, 2016 AND
ADOPTED ON NOVEMBER 29, 2016**

RECITALS

WHEREAS, on February 14, 2017 City Council voted on a motion which included retaining Hansford Economic Consulting to work with the Ad Hoc committee, bond counsel, and the municipal financial advisor for further analysis on the rate study; and

WHEREAS, the City desires to employ Consultant to furnish additional services relating to the rate study dated October 31, 2016 and prepared by Hansford Economic Consulting.

RESOLUTION

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

1. The City approves the Second Amendment to the contract with Hansford Economic Consultant for an additional \$32,792; and
2. The City Council authorizes the City Manager to execute the agreement on behalf of the City.

Approved at a Regular Meeting of the St. Helena City Council on February 28, 2017, by the following vote:

Mayor Galbraith: _____

Vice Mayor White: _____

Councilmember Dohring: _____

Councilmember Koberstein: _____

Councilmember Ellsworth: _____

APPROVED:

ATTEST:

Alan Galbraith, Mayor

Cindy Black, City Clerk



Report to City Council Rate Study

By: April Mitts, Finance Director

Finance Department

February 28, 2017 City Council Meeting



City Council Request – January 17, 2017

- Review Bond Covenants
- Summary Report on the Major Projects including Funding Assumptions for each Project
- Overview of Various Financial Mechanisms with Details on Cost Assumptions
- Review of Perceived Inequity in Allocation Between User Types and Between Base Rate and Usage Fees



City Council Request – January 17, 2017 Bond Covenants

- Bonds
 - Series 2005B – Wastewater \$2,200,000 – 25 years
 - Series 2006A – Water \$8,885,000 – 25 years
 - Series 2012B – Water \$5,599,565 and Wastewater \$1,555,435 – 20 years



City Council Request – January 17, 2017

Bond Covenants

- Bonds
 - Water System – outstanding principal balance of \$11.1 million
 - \$1 million annually
 - Final Payment in 2033
 - Wastewater System – outstanding principal balance of \$3 million
 - \$250,000 annually
 - Final payment in 2033



City Council Request – January 17, 2017

Bond Covenants

- Installment Purchase Agreement – Attachment 1
 - Definitions
 - Representations and Warranties
 - Acquisition of the Project
 - Installment Payments
 - Security
 - Covenants of the Participant
 - Prepayment of Installment Payments
 - Events of Default and Remedies
 - Discharge of Obligations
 - Miscellaneous



City Council Request – January 17, 2017 Bond Covenants

- Bond Covenant – a legally binding term of agreement between a bond issuer and a bond holder.
- The City is currently out of compliance with its Bond Covenants in regards to debt service
 - Requirement – The City must have System Net Revenues equal to at least 1.2 or 120% of the Annual Debt Service



City Council Request – January 17, 2017

Bond Covenants

- System Net Revenues are:
 - System Revenues - Operations and Maintenance Costs
- System Revenues are defined as:
 - Water/Wastewater Sales
 - Operating Revenue
 - New connections
 - Monies received from damaged to system
 - Nonoperating Revenue
 - Sale of assets
 - Interest Income



City Council Request – January 17, 2017 Bond Covenants

- Operations and Maintenance Costs are defined as:
 - Reasonable and necessary costs paid or incurred for maintaining and operating the system
 - Expenses of management and repair and all other expenses necessary to maintain and preserve the system in good repair and working order
 - All administrative costs charged directly or apportioned to the operations of the system



City Council Request – January 17, 2017

Bond Covenants

line	FY 2015/16 – Water Fund	
	Revenue	
	Water Sales	\$4,104,537
	Other Operating Revenue	\$172,982
	Nonoperating Revenue	--
	Interest Income	\$45,562
a	TOTAL SYSTEM REVENUES	\$4,323,081
b	OPERATIONS AND MAINTENANCE EXPENSES	4,006,654
c	SYSTEM NET REVENUES (a-b)	\$316,427
	Debt Service	
	CSCDA Series 2006A	\$592,178
	CSCDA Series 2012B	\$408,756
d	TOTAL DEBT SERVICE	\$1,000,934
e	Debt Service Coverage (c ÷ d)	9 0.32



City Council Request – January 17, 2017 Bond Covenants

- Debt Service Requirements through Bonds
- Financial Limits in the Amount of Debt Carried by an Organization
 - Shows the extent to which revenues are available to “cover” annual debt service requirements after operating costs have been paid for
 - Standard & Poor’s (S&P) has set standard analytical characterizations for utilities



City Council Request – January 17, 2017 Bond Covenants

S&P Analytical Characterizations of Coverage Ratios for Utilities

Strong	Greater than 1.50
Good	Between 1.26 and 1.50
Adequate	Between 1.0 and 1.25
Insufficient	Less than 1.0



City Council Request – January 17, 2017

Bond Covenants

SYSTEM	FY 15	FY 16	FY 17 Estimated	FY 18 Estimated	FY 19 Estimated
Water	1.01	0.32	0.27	2.22	2.50
S&P Characterization	Adequate	Insufficient	Insufficient	Strong	Strong
Amount Needed to meet Bond Covenants	\$1,200,010	\$1,205,056	\$1,187,101	\$1,179,499	\$1,402,195
Amount Over/(Short)	(\$189,719)	(\$881,100)	(\$917,385)	\$1,002,574	\$1,519,045



City Council Request – January 17, 2017 Bond Covenants

SYSTEM	FY 15	FY 16	FY 17 Estimated	FY 18 Estimated	FY 19 Estimated
Wastewater	2.77	1.48	1.53	5.17	2.07
S&P Characterization	Strong	Good	Strong	Strong	Strong
Amount Needed to meet Bond Covenants	\$302,836	\$309,486	\$303,451	\$304,685	\$1,017,785
Amount Over/(Short)	\$50,473	\$51,581	\$50,575	\$1,007,999	\$737,894



City Council Request – January 17, 2017 Bond Covenants

- City's bond covenants require:
 - Rates, fees and charges are set at least 1.2 times of the annual debt service
 - The City can not reduce rates, fees, and charges unless those charges will at all times be sufficient to meet the bond covenants
 - Continuous disclosure of City's financials
 - A way for bond holders and rating agencies to analyze the financial health of the City



City Council Request – January 17, 2017 Bond Covenants

If in default of the Installment Purchase Agreement, S.E.C. Rule 15c2-12 requires a Voluntary Event Notice – Non-Payment Related to Default

- This notice is required to provide information on matters an average prudent investor ought reasonably to be informed of before buying or selling any security
 - Filed in FY 14/15
 - Filed in FY 15/16
 - Will be filed in FY 16/17 (based on projections)



City Council Request – January 17, 2017 Bond Covenants

Being out of compliance with our Bond Covenants:

- Can not be taken lightly
- Something the market focuses on
- Typically the first indication of a financial problem
- Can cause red flags for investors, bond insurers, and bond issuers is not remedied



City Council Request – January 17, 2017 Bond Covenants

Staff reached out to regarding compliance:

- Orrick, Herrington & Sutcliffe, LLP (Bond Counsel)
- Jones Hall (Bond Counsel)
- BLX Group, LLC (Provides Continuous Disclosure)
- Two independent municipal financial advisors
- Standard & Poor's



City Council Request – January 17, 2017 Bond Covenants

Potential Consequences of Non-Compliance:

- Inability to incur additional debt
- Ability to finance future projects will be challenged and more expensive
- Bonds can be downgraded
- Higher interest rates for borrowing
- Inability or difficulty obtaining a Municipal Bond Insurance Policy



City Council Request – January 17, 2017 Bond Covenants

Potential Consequences of Non-Compliance (con't):

- Obtaining new debt could become an issue due to Fair Securities Laws requiring full disclosure which would include the inability to meet the current bond covenants
- State loans through SRF have debt service requirements, if City is not meeting current bond covenants it will be unable to borrow from SRF
- Standard & Poor's rating would be reduced



City Council Request – January 17, 2017 Bond Covenants

Potential Consequences of Non-Compliance (con't):

- Insurers may call an event of default and accelerate the debt – this would force the rates to ensure compliance with the bond covenants



City Council Request – January 17, 2017 Bond Covenants - Summary

- City is currently out of compliance
- Reducing the current rates is not possible until the 1.2 debt service ratio is met
- Being out of compliance is serious and will hurt the ability of the City to borrow for future projects



City Council Request – January 17, 2017

Major Projects Including Funding Assumptions



City Council Request – January 17, 2017

Major Projects including Funding Assumptions

How is it decided what is paid for using debt vs. cash

- Who does it benefit?
 - Current Customers
 - Future Customers
 - Both
- What is the lifespan of the project?
- How much debt can be borrowed?
- What are the Project Characteristics that Support Use of Debt?
 - GFOA Financial Policies states, “A project may have specific characteristics that support debt usage. A project that represents a one-time investment (e.g., construction of a new facility) is usually considered more appropriate use of debt than a project addressing an ongoing need (e.g., maintenance of the facility)”



City Council Request – January 17, 2017 Major Projects including Funding Assumptions Water System

- Identified a total of \$22.6 million in Capital Improvement Costs (CIPs)
- Over the next 10 years
- Total amount to be funded:
 - \$17.7 million – 2016 Dollars
 - \$20.8 million – Future Dollars
 - \$18.8 million benefits current customers
 - \$2 million partially benefits future customers



City Council Request – January 17, 2017

Major Projects including Funding Assumptions

Water System

CIP Project	Timeline	Total Estimated Cost	Existing Outside Funding	New Rates Funding	Assumed Financing
York Creek Upper Dam Removal/Mitigation	2018-2019	\$6,177,117	\$4,481,342	\$1,695,775	--
Meadowood Tank Upgrades	2019	\$500,000	\$120,100	\$379,900	--
Bell Canyon Reservoir Improvements	2022	\$900,000	--	\$900,000	--
Dwyer Road Booster Improvements	2020-2021	\$842,523	--	\$421,262	--
Bell Canyon Intake Mid-Valve Repair	2017	\$14,387	--	\$14,387	--
Bell Valve House Valve Replacement	2022	\$526,105		\$526,105	--
Holmes Tank Upgrade	2020-2021	\$1,383,000	--	\$1,383,000	--



City Council Request – January 17, 2017

Major Projects including Funding Assumptions

Water System

CIP Project	Timeline	Total Estimated Cost	Existing Outside Funding	New Rates Funding	Assumed Financing
Bell Canyon Creek Flow Measurement	2018	\$750,000	\$257,250	\$492,750	--
Sludge Handling Program	2020	\$150,000	--	\$150,000	--
Raw Water Metering Station	2025	\$100,000	--	\$100,000	--
Tank 2 Rehabilitation	2018-2019	\$750,000	--	\$750,000	--
Well Filter Rehabilitation	2017	\$11,103	--	\$11,103	--
Pump Station Upgrades	2018	\$200,000	--	\$200,000	\$200,000
Replace 12" Transmission Line	2023	\$400,000	--	\$400,000	26 --



City Council Request – January 17, 2017

Major Projects including Funding Assumptions

Water System

CIP Project	Timeline	Total Estimated Cost	Existing Outside Funding	New Rates Funding	Assumed Financing
Lower York Creek Dam Rehabilitation	2017 2024	\$480,695	--	\$480,695	--
Bell Canyon Intake Tower Replacement	2017-2018	\$2,000,000	--	\$2,000,000	\$2,000,000
Water Treatment Plant Condition Assessment	2021	\$150,000	--	\$150,000	--
Spill Containment at Bell Creek Intake	2018	\$75,000	--	\$75,000	--
SCADA Improvements (Rutherford & Holmes)	2020	\$150,000	--	\$150,000	--
Spill Containment at Stonebridge Well	2018	\$75,000	--	\$75,000	--
Upgrade at Rutherford Pump Station	2019-2020	\$500,000	--	\$500,000	27 --



City Council Request – January 17, 2017

Major Projects including Funding Assumptions

Water System

CIP Project	Timeline	Total Estimated Cost	Existing Outside Funding	New Rates Funding	Assumed Financing
Remove Restriction at Rutherford PS	2018-2019	\$150,000	--	\$150,000	--
Update GIS Maps of Water System	2020	\$50,000	--	\$50,000	--
Water Master Plan Update	2021	\$150,000	--	\$150,000	--
Replace Water Mains < 6	2021-2027	\$4,000,000	--	\$4,000,000	--
Replace 1% of Water Mains Annually	2027	\$150,000	--	\$150,000	--
Additional Storage	2023-2024	\$1,000,000	--	\$1,000,000	--
Annual Maintenance Program	2017-2027	\$950,000	--	\$950,000	28 --



City Council Request – January 17, 2017

Major Projects including Funding Assumptions

Water System

CIP Project	Total Estimated Cost	Existing Outside Funding	New Rates Funding	Assumed Financing
Total	\$22,584,930	\$4,858,692	\$17,726,238	\$2,200,000



City Council Request – January 17, 2017 Major Projects including Funding Assumptions Wastewater System

- Identified a total of \$15.4 million in Capital Improvement Costs (CIPs)
- Over the next 10 years
- Total amount to be funded:
 - \$15.4 – 2016 Dollard
 - \$17.7 million – Future Dollars
 - \$17.6 million benefits current customers
 - \$100,000 partially benefits future customers



City Council Request – January 17, 2017

Major Projects including Funding Assumptions

Wastewater System

CIP Project	Timeline	Total Estimated Cost	New Rates Funding	Assumed Financing
Miscellaneous Maintenance Projects	2017-2027	\$550,000	\$550,000	--
Replace 1% of Sewer Mains Annually	2017-2027	\$1,650,000	\$1,650,000	--
Crinella Pump Station Upgrades	2019-2020	\$500,000	\$500,000	--
Add Sewer Pump Stations to SCADA	2021-2022	\$150,000	\$150,000	--
Wet Weather Flow Monitoring	2019	\$50,000	\$50,000	--
Upgrade GIS Maps of Sewer System	2018	\$50,000	\$50,000	--
Sewer Master Plan	2019	\$150,000	\$150,000	--



City Council Request – January 17, 2017

Major Projects including Funding Assumptions

Wastewater System

CIP Project	Timeline	Total Estimated Cost	New Rates Funding	Assumed Financing
Replace Rodding Machine	2019	\$40,000	\$40,000	--
CCTV Program	2017-2027	\$165,000	\$165,000	--
Phase 1 – WWTP Upgrades	2017-2020	\$7,474,108	\$7,474,108	\$7,474,108
Reclamation Field Improvements	2017	\$142,000	\$142,000	--
Pond 2 & 3 Levee	2017 2019	\$120,000	\$120,000	--
Facilities Automation	2018	\$144,000	\$144,000	--
New Well	2017	\$65,000	\$65,000	--



City Council Request – January 17, 2017

Major Projects including Funding Assumptions

Wastewater System

CIP Project	Timeline	Total Estimated Cost	New Rates Funding	Assumed Financing
Sludge Removal	2017-2018	\$150,000	\$150,000	--
Recycled Water Feasibility Study	2022	\$75,000	\$75,000	--
Temporary Trailer at WRF	2017-2024	\$28,000	\$28,000	--
Replace WRF Operations Building and Shop	2021-2023	\$3,000,000	\$3,000,000	--
Upgrade Chemical Storage Facilities	2023	\$500,000	\$500,000	--
Phase 2 – WWTP Upgrades	2021-2024	\$400,000	\$400,000	\$400,000
	TOTAL	\$15,403,108	\$15,403,108	\$7,874,108



City Council Request – January 17, 2017

Overview of Various Financial Mechanisms with Details on Cost Assumptions



City Council Request – January 17, 2017

Overview of Various Financial Mechanisms with Details on Cost Assumptions

Cost Assumptions (estimates)

- Engineer's estimates used for projects with preliminary engineering complete
- Where work has not started cost assumptions are based on typical costs for similar projects by other agencies
- City retained GHD to provide cost assumptions for projects not yet started



City Council Request – January 17, 2017 Overview of Various Financial Mechanisms with Details on Cost Assumptions

- Cost assumptions (estimates) are expected to vary as work begins on projects
 - Scope of work is developed
 - Engineering designs are prepared
 - Construction bids are received



City Council Request – January 17, 2017 Overview of Various Financial Mechanisms with Details on Cost Assumptions

- Cost assumptions are just that, assumptions
 - e.g., Reclamation Field Improvements
 - Estimated - \$142,000 for the rate study based on input from the City's wastewater plant operator and materials supplier
 - Actual - \$1.5 million after preliminary engineering is complete
 - Condition of the existing system
 - Expanding to scope to replace more piping
 - Installation of additional sprinklers to achieve increased coverage



City Council Request – January 17, 2017 Overview of Various Financial Mechanisms with Details on Cost Assumptions

- Staff believe most cost estimates in the study are low and when actual construction begins costs will be much higher
- This is a key reason why additional monies are set aside in the reserves to address this as well as unanticipated expenses due to unplanned projects
 - Water main break on Crane
 - Process chemicals for the WWTP



City Council Request – January 17, 2017 Overview of Various Financial Mechanisms with Details on Cost Assumptions

- Water – New Debt - \$2.7 million
 - Bell Canyon intake tower replacement
 - Pump Station upgrades
- Total debt service for the water fund - \$13.8 million
- \$1.1 million annually in debt service
- 1.2 ratio = \$1.3 million Net System Revenues



City Council Request – January 17, 2017 Overview of Various Financial Mechanisms with Details on Cost Assumptions

- Wastewater – New Debt - \$7.9 million
 - Phase I – WWTP Upgrades - \$7,474,108
 - Phase II – WWTP Upgrades - \$400,000
- Total debt service for the wastewater fund - \$10.9 million
- \$880,000 annually in debt service
- 1.2 ratio = \$1.1 million Net System Revenues



City Council Request – January 17, 2017

Overview of Various Financial Mechanisms with Details on Cost Assumptions

- Cash Flow
 - Anticipated the City will meet its 2012B debt service coverage of at least 120% by end of FY 18
 - May be able to designate up to \$3.1 million in the water fund by FY 27
 - May be able to designate up to \$2.7 million in the wastewater fund by FY 27
 - These funds are designated for system rehabilitation
 - wear and tear by existing customers



City Council Request – January 17, 2017

Overview of Various Financial Mechanisms with Details on Cost Assumptions

- Cash Flow
 - Optimistic cash flow projections
 - Situations which could diminish cash flow
 - Infrastructure failure
 - New regulatory requirements
 - Higher than projected project costs
 - Unanticipated projects



City Council Request – January 17, 2017

Review of Perceived Inequity in Allocation Between User Types and Between Base Rate and Usage Rate



City Council Request – January 17, 2017 Review of Perceived Inequity

- What are customers charged for
 - Base Rate or Service Charge
 - Fixed Rate
 - Does not change from month to month
 - Use Rate or Commodity Rate
 - Vary each month
 - Charged based on the amount of water used



City Council Request – January 17, 2017 Review of Perceived Inequity

Determining Base Rates – Water

There are three sections to the Base Rate:

- Customer Costs
 - Revenue Requirement divided by the number of meters
 - \$17.69 per month for every type of user (2,452 meters)
 - What it costs to have the meter installed on your property



City Council Request – January 17, 2017

Review of Perceived Inequity

Determining Base Rates – Water

- Capacity Costs
 - Allocated to customers based on the hydraulic capacity of the meter size
 - Meter ratio and meter flow figures are based on the American Water Works Association (AWWA)
 - Simply put, the larger the meter, the more the water flow, the larger the meter ratio is



City Council Request – January 17, 2017

Review of Perceived Inequity

Determining Base Rates – Water

- Capacity Costs
 - The largest number of meters in St. Helena are the 5/8” and 1” single-family meters
 - 1,987 or the 2,452 meters – 81%
 - There are several meters not included above which serve multiple units – apartment complexes, mobile homes



City Council Request – January 17, 2017

Review of Perceived Inequity

Determining Base Rates – Water

- Capacity Costs
 - Monthly service charge varies dependent on the meter size

Size/Type	Monthly Cost
Single-Family up to 1"	\$24.22
Non-Residential 1"	\$60.55
6"	\$1,211.01



City Council Request – January 17, 2017 Review of Perceived Inequity

Determining Base Rates – Water

- Customer Costs and Capacity Costs and then added to the meter replacement costs to get the base rate for the size meter

Size/Type	Customer Cost	Capacity Costs	Meter Replacement	Total Monthly Cost
Single-Family up to 1"	\$17.69	\$24.22	\$1.31	\$43.22
Non-Residential 1"	\$17.69	\$60.55	\$1.84	\$80.08
6"	\$17.69	\$1,211.01	\$23.80	\$1,252.50



City Council Request – January 17, 2017 Review of Perceived Inequity

Determining Base Rates – Water

- The larger the meter
- The more water can flow through
- The greater the cost for the City to maintain the meter



City Council Request – January 17, 2017 Review of Perceived Inequity

Determining Use Rate – Water

- Determined by taking the total costs allocated to use charges and dividing them by the projected water demand in the peak and off-peak season
- This is done to determine the cost per hundred cubic feet (HRF)



City Council Request – January 17, 2017 Review of Perceived Inequity in Allocation Between User Types and Between Base Rate and Usage Rate

Determining Use Rate – Water

- Peak – 405,760 HFC is consumed – 63%
 - \$5.50 per HCF
- Off-Peak – 240,040 HFC is consumed – 37%
 - \$6.11 per HCF
- Use charge (HCF) do not vary by meter size or by customer category



City Council Request – January 17, 2017

Review of Perceived Inequity

Determining Base and Use (flow) Rate – Wastewater

- Residential Single-Family, Multi-Family, and Mobile Homes – flat monthly charge per housing unit (base)
- Schools – flat monthly charge per student (base)
- Non-Residential – flat monthly charge by customer type
- Base fee is allocated based on flow and strength customer characteristics



City Council Request – January 17, 2017

Review of Perceived Inequity

Determining Base and Use (flow) Rate – Wastewater

- The Use (flow) rate is charged to all customers for wastewater based on the winter average water meter reads
- 4 steps used to determine how wastewater rates are calculated so the monthly wastewater rates meet legal requirements for base and use charges



City Council Request – January 17, 2017

Review of Perceived Inequity

Determining Base and Use (flow) Rate – Wastewater

1. Establish Wastewater Customer Base and User Characteristics

Customer Base

Residential	Schools	Car Wash
Religious Places/Community Center	Commercial, Grocery, Mortuary	Laundry
Mixed Retail with Food	Motel with Food	Motel without Food
Restaurant	Napa Valley College	Service Station
Winery Production (non-treated)	Winery Production (pretreated)	



City Council Request – January 17, 2017

Review of Perceived Inequity

Determining Base and Use (flow) Rate – Wastewater

1. Establish Wastewater Customer Base and User Characteristics

User Characteristics – what type of waste is being put through the system by Customer Base

- Wastewater, or sewer, strength is based on industry standards and a combination of:
 - Biological Oxygen Demand (BOD)
 - Total Suspended Solids (TSS or SS)



City Council Request – January 17, 2017

Review of Perceived Inequity

Determining Base and Use (flow) Rate – Wastewater

1. Establish Wastewater Customer Base and User Characteristics

- BOD and TSS measure how strong is the waste that is traveling through the City's wastewater system
- The stronger the waste, the bigger demand on the City's wastewater system, the higher the amount to be paid by that customer



City Council Request – January 17, 2017

Review of Perceived Inequity

Determining Base and Use (flow) Rate – Wastewater

2. Project revenue requirements and allocate requirements to collection and treatment
 - Treatment – 72%
 - Collection – 28%



City Council Request – January 17, 2017 Review of Perceived Inequity

Determining Base and Use (flow) Rate – Wastewater

3. Allocate revenue requirement based on flow and strength to determine Unit Costs based on:
 - Percentage distribution of operations (treatment vs. collection)
 - Maintenance of operations attributed to Flow, BOD, or TSS



City Council Request – January 17, 2017 Review of Perceived Inequity

Determining Base and Use (flow) Rate – Wastewater

4. Determine the revenue requirement by customer type
 - Per unit costs are multiplied by the flow and strength characteristics of each customer category to determine the annual costs by customer type
 - The more flow, BOD, or TSS, the greater amount is required of the system and the greater the cost will be for the user



City Council Request – January 17, 2017 Review of Perceived Inequity

Determining Base and Use (flow) Rate – Wastewater

- Residential – 69% of the total costs
- Schools – 1% of the total costs
- Non-Residential – 30% of the costs



City Council Request – January 17, 2017 Review of Perceived Inequity

Determining Base and Use (flow) Rate – Wastewater

- Treatment cost per hundred cubic feet (HCF)
 - Greatest for high strength customers such as winery production who does not pretreat, restaurants, groceries and mortuaries
 - Lowest for customers such as car washes and religious places/community centers



City Council Request – January 17, 2017 Review of Perceived Inequity

Determining Base and Use (flow) Rate – Wastewater

- Difference in the cost to treat high and low strength customers can be seen in the difference in the base and use rate for the wastewater system

Customer Type	Base	Use per HCF
Single Family Home	\$48.04	\$4.69
Restaurant	\$840.03	\$10.18
Winery (non-treated)	\$989.21	\$17.31

63



City Council Request – January 17, 2017 Review of Perceived Inequity

Determining Base and Use (flow) Rate – Wastewater

- High Strength customers pay approximately 20x more in base fees and approximately 3x more in HCF than a single-family home



City Council Request – January 17, 2017

Users of the City's Water and Wastewater Systems



City Council Request – January 17, 2017

Users of the City's Water and Wastewater Systems

- Water – 2,600 connections
 - 2,900 residential units (multi-family, mobile homes included)
 - 260 non-residential (businesses, schools, religious places)
 - 20 industrial
 - 30 irrigation-only
 - Residential – 87% of total customer base and 50% of water deliveries
 - Industrial customers – 1% of the customer base and 21% of water deliveries



City Council Request – January 17, 2017

Users of the City's Water and Wastewater Systems

- Wastewater
 - Residential – 75% of flow*
 - Commercial – 20% of flow
 - Industrial – 1% of flow
 - Other customers – 4% of flow

*difference between water and wastewater is the number of wineries and businesses on septic and not using the wastewater system



City Council Request – January 17, 2017

Users of the City's Water and Wastewater Systems

AVERAGE AMOUNT PAID ANNUALLY PER CUSTOMER CLASS

	Residential	Industrial	Hotel/Spa	Commercial	Other
Water	\$1,120	\$30,202	\$18,696	\$2,995	\$602
Wastewater	\$977	\$26,044	\$22,310	\$3,761	-
TOTAL Annual Amount Paid Per Customer	\$2,097	\$56,246	\$41,006	\$6,756	\$602



City Council Request – January 17, 2017 Additional Items for Consideration

February 14, 2017 City Council Directive:

- Retain public sector financial consultant
- Retain Bond Counsel
- Retain Hansford Consulting
- Form an Ad Hoc committee to work with the above and perform further analysis of the Rate Study



City Council Request – January 17, 2017 Additional Items for Consideration

February 14, 2017 City Council Directive – Direct Costs:

- Retain public sector financial consultant - \$5,000
- Retain Bond Counsel - \$5,000
- Retain Hansford Consulting - \$32,792



City Council Request – January 17, 2017 Additional Items for Consideration

February 14, 2017 City Council Directive – Fiscal Impact

- \$43,000
 - \$21,500 from the water net position (reserves)
 - \$21,500 from the wastewater net position (reserves)



City Council Request – January 17, 2017 Recommended Action

- File and Receive Report
- Provide staff direction on the retention of the municipal financial advisor, bond counsel, and Hansford Economic Consulting. If directed, staff is recommending:
 - Approval of resolution authorizing use of water and wastewater net position for a total of \$43,000 split equally between the funds
 - Approval of resolution approving contract amendment with Hansford Economic Consulting to provide additional technical support in regards to the rate study

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION**

CEASE AND DESIST ORDER No. R2-2016-0004

**CITY OF ST. HELENA
WASTEWATER TREATMENT AND RECLAMATION PLANT
ST. HELENA, NAPA COUNTY**

WHEREAS the California Regional Water Quality Control Board, San Francisco Bay Region (Regional Water Board), finds the following:

1. The City of St. Helena (Discharger) owns and operates the City of St. Helena Wastewater Treatment and Reclamation Plant (Plant), located at 1 Chaix/Thomann Lane, St. Helena. The Plant provides secondary treatment for domestic and commercial wastewater from the City of St. Helena. The Plant has an average dry weather treatment capacity of 0.5 million gallons per day (MGD) and can treat up to 2.8 MGD during wet weather. Plant treatment processes include a comminuter (solids grinder), a series of treatment ponds, chlorine disinfection, and dechlorination (by natural decomposition or ascorbic acid addition).
2. During dry weather conditions, the Plant discharges to spray irrigation fields in accordance with waste discharge requirements (Order No. 87-090). During wet weather, when the irrigation fields are saturated and discharge is necessary, the Plant discharges to the Napa River in accordance with NPDES permit No. CA0038016 (Order No. R2-2016-0003) (hereinafter, the 2016 Permit).
3. Basin Plan Table 4-1, Discharge Prohibition 1, prohibits discharges to non-tidal waters. The Napa River is non-tidal in the vicinity of St. Helena. Basin Plan section 4.2 provides for exceptions to Basin Plan Discharge Prohibition 1 under certain circumstances, including when an inordinate burden would be placed on a discharger relative to the beneficial uses protected, and an equivalent level of environmental protection can be achieved by alternate means. In reissuing the 2016 Permit, the Regional Water Board found that requiring the Discharger to build an outfall to tidal waters (over 40 miles away) or to not discharge under any circumstances, including wet weather, would impose an undue burden. In granting the exception to the discharge prohibition, the Regional Water Board determined that the Discharger must provide equivalent protection when discharging to the Napa River by ensuring that treated effluent meets the limits in Table 1 below. Therefore, the 2016 Permit imposed new, more stringent biochemical oxygen demand (BOD) and total suspended solids (TSS) effluent limits reflective of levels that can be met by implementing advanced secondary treatment:

Table 1: 2016 Permit BOD and TSS Effluent Limits

	Weekly Average	Monthly Average
BOD	25	15
TSS	20	15

Abbreviations:

BOD = biochemical oxygen demand
TSS = total dissolved solids

4. The Plant is currently designed to provide only secondary treatment, not advanced secondary treatment. Plant effluent monitoring data from January 2010 through August 2015 show many instances when the Discharger would not immediately comply with the 2016 Permit's new BOD and TSS effluent limits. Of 66 monthly results, 40 exceed the new monthly BOD limit and 58 exceed the new monthly TSS limit. Because samples were collected roughly weekly, individual results can be compared to the weekly average effluent limits. Of 162 results, 47 exceed the new weekly BOD limit and 95 exceed the new weekly TSS limits.
5. The Plant currently relies on a series of treatment ponds that use aerobic and anaerobic bacteria to reduce organic matter concentrations. To meet the 2016 Permit's new BOD and TSS effluent limits, the Discharger will likely need to incorporate filtration or another process into its treatment system. Such a process could offer an added benefit if the effluent met requirements for unrestricted recycled water use. In its May 2006 "Plant Upgrade and Water Recycling Design Memorandum," the Discharger identified about 65 acres of turf and 4,700 acres of vineyard area that could potentially be irrigated with recycled water. Of these 4,700 acres of vineyard area, 1,148 acres are within City of St. Helena limits.
6. In its March 2015 *Wastewater Facilities Evaluation Update* (Bennett Engineering Services), the Discharger described several potential modifications it could make to improve Plant performance. While the report did not analyze the feasibility of the various options to achieve advanced secondary treatment, it provided three recommendations: (1) construct solids management systems outside the treatment train to manage solids accumulation (in Pond 1) within design recommendations, (2) automate disinfection and dechlorination during river discharges, and (3) construct a rock filter system between Pond 3 and the disinfection facility to improve removal of TSS from algae growth in the ponds. If implemented, the construction of a rock filter system could facilitate compliance with the 2016 Permit's effluent limits.
7. Water Code section 13301 authorizes the Regional Water Board to issue a cease and desist order when it finds that a waste discharge is taking place, or threatening to take place, in violation of requirements or discharge prohibitions prescribed by the Regional Water Board.
8. Because the Discharger will violate or threatens to violate the effluent limits in the 2016 Permit shown in Table 1, this Cease and Desist Order is necessary to ensure that the Discharger achieves compliance. This Order establishes interim requirements and a time schedule for the Discharger to complete necessary actions to address its imminent and threatened violations.
9. Pursuant to Water Code section 13385(j)(3), mandatory minimum penalties required by Water Code sections 13385(h) and (i) do not apply when a discharger complies with a cease and desist order issued pursuant to Water Code section 13301 if the following conditions are met:
 - a. The cease and desist order specifies actions the discharger must take to correct the violations that would otherwise be subject to mandatory minimum penalties;
 - b. The discharger is unable to consistently comply with effluent limits because the effluent limits are new, more stringent, or modified regulatory requirements; new or modified

control measures are necessary to comply with the effluent limits; and the new or modified control measures cannot be designed, installed, and put into operation within 30 calendar days;

- c. The Regional Water Board establishes a time schedule of no more than five years for bringing the discharge into compliance. The time schedule must be as short as possible, taking into account the technological, operational, and economic factors that affect the design, development, and implementation of the control measures necessary to comply with the effluent limits. If the time schedule exceeds one year, it must include interim requirements and the dates for their achievement. The interim requirements must include effluent limits for the pollutants of concern and actions and milestones leading to compliance with the limits; and
 - d. The discharger has prepared and is implementing in a timely and proper manner a pollution prevention plan pursuant to Water Code section 13263.3.
- 10.** Based on Water Code section 13385(j)(3), mandatory minimum penalties required by Water Code sections 13385(h) and (i) do not apply for the following reasons:
- a. This Cease and Desist Order (Provisions 1 and 2 below) specifies actions the Discharger must take to correct the violations that would otherwise be subject to mandatory minimum penalties.
 - b. As explained in Finding 4, above, the Discharger is unable to consistently comply with the new, more stringent effluent limits in the 2016 Permit. Moreover, any control measures necessary to comply with the effluent limits (described in Findings 5 and 6, above) cannot be designed, installed, and put into operation within 30 calendar days.
 - c. This Cease and Desist Order (Provision 2, below) establishes a time schedule of no more than five years for bringing the discharge into compliance. The time schedule is as short as possible because it is the minimum amount of time necessary for the Discharger to modify or rebuild its treatment plant to comply with its effluent limits. As specified in Table 2, the Discharger must evaluate its potential alternatives, and then fund, design, and construct the selected alternative. These tasks are likely to take the allotted time specified in the schedule.
- Although the time schedule exceeds one year, this Cease and Desist Order (Provisions 1 and 2, below) imposes interim requirements that include interim BOD and TSS effluent limits and actions and milestones leading to compliance with the limits.
- d. The Discharger has prepared and is implementing a pollution prevention plan pursuant to permit requirements. The Discharger's pollution prevention plan meets the substantive requirements of Water Code section 13263.3. The pollution prevention plan aims to reduce influent concentrations of all pollutants of concern.
- 11.** The interim effluent limits in Table 2 are based on the NPDES permit effluent limits in place prior to adoption of the 2016 Permit (i.e., those in Order No. R2-2010-0105). They are

intended to ensure that the Discharger maintains at least its existing performance while completing all tasks the time schedule requires.

12. This Cease and Desist Order is an enforcement action and, as such, is exempt from the provisions of the California Environmental Quality Act (Public Resources Code § 21000 et seq.) in accordance with Title 14 of the California Code of Regulations, section 15321.
13. The Regional Water Board notified the Discharger and other interested parties of its intent to consider adoption of this Cease and Desist Order and provided an opportunity to submit written comments and appear at a public hearing. The Regional Water Board, in a public hearing, heard and considered all comments.

IT IS HEREBY ORDERED, in accordance with Water Code section 13301, that the Discharger shall cease and desist from discharging and threatening to discharge wastes in violation of its NPDES permit by complying with the following provisions:

1. **Interim Effluent Limitations.** The Discharger shall comply with the following interim effluent limits:

Table 2: Interim BOD and TSS Effluent Limits

	Weekly Average (mg/L)	Monthly Average (mg/L)
BOD	45	30
TSS	45	30

Unit:

mg/L = milligrams per liter

Abbreviations:

BOD = biochemical oxygen demand

TSS = total dissolved solids

2. **Tasks and Time Schedule.** The Discharger shall complete the actions listed in Table 3 in accordance with the time schedule provided therein. The Discharger shall implement all actions set forth for each deliverable. Upon a written request from the Discharger, with justification, the Executive Officer may modify the deadlines for tasks 2.e through 2.g to account for delays beyond the reasonable control of the Discharger, such as permitting delays by other agencies.

Table 3: Tasks and Time Schedule

Task	Deadline
a. Submit a Draft Feasibility Study that analyzes various options to meet the NPDES permit effluent limits in Table 1. The study shall analyze all of the options described in the March 2015 <i>Wastewater Facilities Evaluation Update</i> and include other options that would achieve compliance. For each option considered, evaluate (i) the anticipated effectiveness and reliability of the treatment, (ii) the amount of time it will take to implement, (iii) the ability to produce recycled water (recycled water uses to be considered shall include those that offset local potable water use or provide environmental enhancement, including but not limited to turf and vineyard irrigation) or the additional efforts required to produce such recycled water, and (iv) the costs.	September 1, 2016
b. Submit a Final Feasibility Study that addresses any Executive Officer comments on the Draft Feasibility Study and identifies a preferred option.	December 1, 2016

Task	Deadline
c. Submit a Draft Workplan for implementation of the preferred option identified in task 2.b and a schedule for implementation. Include a plan and schedule for funding the project.	June 1, 2017
d. Submit a Final Workplan that addresses any Executive Officer comments on the Draft Workplan required by task 2.c.	September 1, 2017
e. Submit notification documenting the beginning of implementation of the Final Workplan.	March 1, 2019
f. Submit documentation of the completion of Final Workplan implementation and begin operation of the new or modified treatment system.	September 1, 2020
g. Submit a report evaluating the effectiveness of the new or modified treatment system and whether it is likely to meet the requirements of the NPDES permit. If the system appears unlikely to meet the requirements of the NPDES permit, identify and implement measures to ensure compliance.	December 1, 2020
h. Achieve full compliance with the 2016 Permit effluent limits listed in Table 1 of this Cease and Desist Order.	February 28, 2021

3. **Consequences of Non-Compliance.** If the Discharger fails to comply with the provisions of this Cease and Desist Order, the Executive Officer is hereby authorized to request the Attorney General to take appropriate actions against the Discharger in accordance with Water Code sections 13331 and 13350. Such actions may include judicial injunctive and civil remedies and/or administrative civil liabilities.
4. **Force Majeure.**¹ If the Discharger is delayed, interrupted, or prevented from meeting the provisions and time schedules of this Cease and Desist Order due to a force majeure, the Discharger shall notify the Executive Officer in writing within ten days of the date the Discharger first knows of the force majeure. The Discharger shall demonstrate that timely compliance with the Cease and Desist Order or any affected deadlines will be actually and necessarily delayed, and that it has taken measures to avoid or mitigate the delay by exercising all reasonable precautions and efforts, whether before or after the occurrence of the force majeure.
5. **Mandatory Minimum Penalties.** Violations of the NPDES permit effluent limits listed in Table 1 shall not be subject to the mandatory minimum penalties required by Water Code sections 13385(h) and (i) as long as the Discharger complies with this Cease and Desist Order in its entirety. If the Discharger fails to comply with this Cease and Desist Order in any way, including but not limited to any interim effluent limit in Table 2 or any requirement of Table 3, the Discharger shall be subject to mandatory minimum penalties for all NPDES permit violations for the entire calendar month during which the Cease and Desist Order non-compliance occurs. If the Discharger returns to compliance, violations of the NPDES permit

¹ A “force majeure” is an event that could not have been anticipated by and is beyond the control of the Discharger, such as an act of God; earthquake, flood, or other natural disaster; civil disturbance or strike; fire or explosion; declared war within the United States; embargo; or other event of similar import and character. “Force majeure” does not include delays caused by funding, contractor performance, equipment delivery and quality, weather, permitting, other construction-related issues, CEQA challenges, initiative litigation, adverse legislation, or legal matters (with the exception of an injunction issued by a court of law specifically preventing construction from occurring).

effluent limits in Table 1 shall again not be subject to mandatory minimum penalties as of the first day of the month following the return to full compliance.

6. **Effective Date.** This Cease and Desist Order shall become effective on the effective date of the 2016 Permit.

I, Bruce H. Wolfe, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of a Cease and Desist Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on January 13, 2016.

Bruce H. Wolfe
Executive Officer

EXEMPT FROM FILING FEES
PER GOVERNMENT CODE § 6103

Case No. G048969

In the
Court of Appeal
of the
State of California
FOURTH APPELLATE DISTRICT
DIVISION THREE

CAPISTRANO TAXPAYERS ASSOCIATION, INC.

Appellee and Plaintiff

vs.

CITY OF SAN JUAN CAPISTRANO,

Appellant and Defendant.

Appeal from the Superior Court of California, County of Orange
Case No. 30-2012-00594579

Honorable Gregory Munoz, Judge Presiding,

**APPLICATION FOR PERMISSION TO FILE
AMICUS CURIAE BRIEF**

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TABLE OF CONTENTS

	Page
I. INTRODUCTION AND INTEREST OF AMICUS CURIAE	3
II. FACTS AND PROCEDURAL HISTORY	7
III. ARGUMENT	7
A. CALIFORNIA CONSTITUTION ARTICLE X, SECTION 2 MANDATES WATER CONSERVATION AND RESOURCE MANAGEMENT	7
B. THE WATER CONSERVATION MANDATES OF CALIFORNIA CONSTITUTION ARTICLE X, SECTION 2 MAY BE HARMONIZED WITH THE SUBSTANTIVE LIMITATIONS OF CALIFORNIA CONSTITUTION ARTICLE XIII D, SECTION 6, SUBDIVISION B	16
C. THE CITY'S ALLOCATION OF THE COSTS OF SERVICE COMPLIES WITH THE SUBSTANTIVE REQUIREMENTS OF ARTICLE XIII D, SECTION 6(B)	27
1. THE ADMINISTRATIVE RECORD DEMONSTRATES COMPLIANCE	27
2. RECYCLED WATER USERS ARE SIMPLY ANOTHER CUSTOMER CLASS	33
3. RECYCLED WATER BENEFITS ALL WATER CUSTOMERS; POTABLE WATER SERVICE FEES MAY FUND A PORTION OF THE COSTS OF RECYCLED WATER	36
IV. CONCLUSION	41

TABLE OF AUTHORITIES

	Page(s)
Federal Cases	
<i>Marbury v. Madison</i> (1803) 5 U.S. (1 Cranch) 137	25
State Cases	
<i>Apartment Association of Los Angeles County v. City of Los Angeles</i> (2001) 24 Cal.4th 830	23
<i>In re Bay Delta Prog. E.I.R. Coordinated Proceedings</i> (2008) 43 Cal.4th 1143	15
<i>Bd. of Supervisors of San Diego County v. Loneragan</i> (1980) 27 Cal.3d 855	22
<i>Bighorn-Desert View Water Agency v. Verjil</i> (2006) 39 Cal.4th 205.....	8
<i>Brydon v. East Bay Municipal Utility District</i> (1994) 24 Cal.App.4th 178	18, 19, 20, 21, 22, 23
<i>Calif. Bldg. Indus. Ass'n v. San Joaquin Valley Air Pollution Control Dist.</i> (2009) 178 Cal.App.4th 120	35, 40
<i>Calif. Bldg. Industry Ass'n v. Governing Bd. of the Newhall Sch. Dist.</i> (1988) 206 Cal.App.3d 212	22, 35, 40
<i>California Farm Bureau Federation v. State Water Resources Control Board</i> (2011) 51 Cal.4th 421	34, 35, 40
<i>City and County of San Francisco v. County of San Mateo</i> (1995) 10 Cal.4th 554	25
<i>City of Palmdale v. Palmdale Water District</i> (2011) 198 Cal.App.4th 926	27, 28, 29, 33
<i>Environmental Defense Fund, Inc. v. E. Bay Mun. Util. Dist.</i> (1980) 26 Cal.3d 183	9

<i>Greene v. Marin County Flood Control & Water Conservation Dist.</i> (2010) 49 Cal.4th 277	25
<i>Griffith v. Pajaro Valley Water Mgmt. Agency</i> (2013) 220 Cal.App.4th 586 ..14, 15, 29, 30, 31, 32, 33, 34, 36, 37, 38, 39	
<i>Howard Jarvis Taxpayers Ass'n v. City Fresno</i> (2005) 127 Cal.App.4th 914 (2005)	35, 38
<i>Howard Jarvis Taxpayers Ass'n v. City of Riverside</i> (1999) 73 Cal.App.4th 679	22
<i>Howard Jarvis Taxpayers Ass'n v. City of Roseville</i> (2002) 97 Cal.App.4th 637	35, 38, 39
<i>Morgan v. Imperial Irrigation Dist.</i> (2014) 223 Cal.App.4th 892	32, 34, 36
<i>Pacific Legal Foundation v. Brown</i> (1981) 29 Cal.3d 168	25
<i>Pajaro Valley Water Management Agency v. Amrhein</i> (2007) 150 Cal.App.4th 1364	23, 30, 31
<i>Paland v. Brooktrails Township Cmty. Serv. Dist. Bd. of Dir.</i> (2009) 179 Cal.App.4th 1358	35
<i>San Diego Gas & Elec. Co. v. San Diego County Air Pollution Control Dist.</i> (1988) 203 Cal.App.3d 1132	20
<i>SBAM Partners v. Wang</i> (2008) 164 Cal.App.4th 903	22
<i>Silicon Valley Taxpayers Ass'n v. Santa Clara Open Space Authority</i> (2008) 44 Cal.4th 431	21
<i>Tulare Irrigation Dist. v. Lindsay-Strathmore Dist.</i> (1935) 3 Cal.2d 489	8
<i>U.S. v. State Water Res. Control Bd.</i> (1986) 182 Cal.App.3d 82	9

*Vineyard Area Citizens for Responsible Growth, Inc. v. City
of Rancho Cordova*
(2007) 40 Cal 4th 412 – 434..... 15

Wright v. Goleta Water Dist.
(1985) 174 Cal.App.3d 74..... 9

State Statutes

Cal. Gov't Code § 53750 15

Cal. Water Code § 100 9

Cal. Water Code § 106 10

Cal. Water Code § 106.5 10

Cal. Water Code § 350 18

Cal. Water Code § 370 10, 24, 26

Cal. Water Code §§ 370 – 374 11

Cal. Water Code § 375 11, 19

Cal. Water Code § 10608.16 11

Cal. Water Code § 13510 13, 40

Cal. Water Code § 13511 39

Cal. Water Code § 13550 39, 40

Cal. Water Code § 78500.2 10

Government Code § 50075 19

Government Code § 50075 19

Government Code § 50076 18, 19, 22, 34

Proposition 218 Omnibus Implementation Act of 1997,
Government Code § 53750 *et seq.* 25

Rules

California Rules of Court, Rule 8.200(c) 1

Constitutional Provisions

Cal. Const. Article XIII C, § 1(b) and Article XIII D, § 2(a)	6
Cal. Const. Article XIII D, §§ 6(b)(1)-(5).....	17
Cal. Const. Article XIII D, §§ 6(b)(1) & 6(b)(3)	18
Cal. Const. Article XIII D, § 6(b)(5).....	28
Cal. Const. Article II, § 7	25
Cal. Const. Article X.....	4, 7, 9, 14, 16, 19, 21, 24, 27
Cal. Const. Article X, § 2.....	7, 16
Cal. Const. Article XIII A, § 4.....	19
Cal. Const. Article XIII D, § 6.....	1, 4, 6, 8, 9, 18, 21, 23, 30, 31, 36
Cal. Const. Article XIII D, § 6, subd. B.....	16
Cal. Const. Article XIV, § 3.....	7

Other Authorities

Assembly Bill 2882.....	23
Senate Bill 7X7 (2009-2010 7th Ex. Sess.)	11
<i>Southern California</i> , Water Science and Policy Center, University of California, Riverside Working Paper (2013), http://wspc.ucr.edu/working_papers/WSPC-WP-01-0913_block%20rate%20water%20budgets%20so%20cal%20v2.pdf	26
State of California http://www.gov.ca.gov/news.php?id=18368 [as of May 13, 2014]	3

TO THE HONORABLE PRESIDING JUSTICE:

Pursuant to California Rules of Court, Rule 8.200(c), the Association of California Water Agencies, the League of California Cities, and the California State Association of Counties jointly apply to this Court and respectfully request permission to file the amicus curiae brief that is combined with this application. This proposed brief, below, is in support of Defendant and Appellant City of San Juan Capistrano (the "City"). Amici jointly have a substantial interest in this case because their member public agencies are local governments, many of which are charged with the responsibility to provide a sustainable and reliable supply of water. Water conservation-based pricing structures, such as tiered and allocation-based rate structures, and the development of new supplies, including affordable recycled water, are proven techniques for managing water resources. As such, Amici have a substantial interest in litigation that interprets the statutory and constitutional requirements for imposing and structuring water service fees and charges, including the requirements of California Constitution article XIII D, section 6 ("Article XIII D, section 6"), adopted in 1996 through voter approval of Proposition 218. Many, if not most, local public agency water purveyors, after following the procedures required by article XIII D, have established some form of conservation-based water rate structure, and many have developed recycled water as part

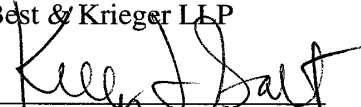
of their overall water supply portfolio and management strategy. Thus, because the Amici believe that conservation-based water pricing structures and affordable recycled water are important water resource management tools that are consistent with the requirements of the Constitution, they request permission to file the amicus curiae brief to support overturning the decision of the trial court.

For the reasons stated in this application and further developed in the Introduction and Interest of Amicus Curiae portion of the proposed brief, the Association of California Water Agencies, the League of California Cities, and the California State Association of Counties respectfully request leave to file the amicus curiae brief that is combined with this application. The amicus curiae brief was authored by Kelly J. Salt, Best Best & Krieger LLP and no person made a monetary contribution to its preparation and submission.

Dated: June 2, 2014

Respectfully submitted:

Best Best & Krieger LLP

By: 

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I.**INTRODUCTION AND INTEREST OF AMICUS CURIAE**

Thomas Fuller observed, “We never know the worth of water till the well runs dry.” This case is about determining the worth of water before the well runs dry. Stated another way, this case is about whether a local public agency water purveyor may charge those who use water inefficiently or unreasonably more than those who use it wisely and responsibly in order to achieve an integrated, reliable, and secure water supply for all customers, and what discretion a public agency has in allocating costs to users to achieve these purposes.

This case comes before the Court in the context of an ongoing water management crisis gripping California. On January 17, 2014, California’s Governor “proclaimed a State of Emergency and directed state officials to take all necessary actions to prepare for these drought conditions.” (Governor Brown Declares Drought State of Emergency (Jan. 17, 2014) State of California <http://www.gov.ca.gov/news.php?id=18368> [as of May 13, 2014].) But solving today’s water management challenges requires planning, design, engineering, and construction of local, regional, and statewide water facilities, that take time and considerable resources. This case involves critical questions of how to pay for the costs of responsible water management and supply development activities of a city that was

planning ahead to meet the water challenges of the future using time-tested techniques to implement the water conservation and reasonable use mandates of California Constitution Article X ("Article X"). These techniques included both demand management through a tiered water rate structure to encourage conservation and discourage unreasonable use, and expansion of total water supplies (and associated conservation of potable water) through development of recycled water. The City did so in a way that sought to harmonize the water management mandates of Article X with the limitations on local government fees under Article XIII D, section 6. Unfortunately, the trial court failed to achieve similar harmony and instead sowed discord through an unnecessarily restrictive and narrow interpretation Article XIII D, section 6. Action by this court is necessary to restore harmony.

Local public agency water purveyors throughout the State of California have faced the dual challenge of developing water service rate structures that are sufficient to fund their operations and effective to manage their limited water resources. The ability of local public agency water purveyors to meet these demands is circumscribed by Constitutional mandates that require that they: (1) demonstrate a clear nexus between the amount of the fee to be imposed and the cost of providing the service and (2) allocate the cost of providing the service among their customers proportionate to the cost of serving them. Some have suggested that the

Constitution now requires local public agency water purveyors to charge the same unit price to all water users—i.e., flat fees. Others, such as Plaintiff and Respondent Capistrano Taxpayers Association (the “CTA”), also suggest that the Constitution requires each molecule of water be separately traced from source to user and its cost accounted for and priced in structuring water rates. Amici agree with the City that the Constitution does not mandate such impossibly demanding accounting.

The Association of California Water Agencies (“ACWA”), organized in 1910, is a California nonprofit public benefit corporation. ACWA is comprised of over 450 water agencies, including cities, municipal water districts, irrigation districts, county water districts, California water districts, and special purpose public agencies. ACWA’s Legal Affairs Committee, comprised of attorneys from each of ACWA’s regional divisions throughout the State, monitors litigation and has determined that this case involves issues of significance to ACWA’s member agencies.

The League of California Cities (“League”) is an association of 472 California cities dedicated to protecting and restoring local control to provide for the public health, safety, and welfare of their residents, and to enhance the quality of life for all Californians. The League is advised by its Legal Advocacy Committee, comprised of 24 city attorneys from all

regions of the State. The Legal Advocacy Committee monitors litigation of concern to cities, and identifies those cases that have statewide or nationwide significance. The Committee has identified this case as having statewide significance for cities.

The California State Association of Counties (“CSAC”) is a nonprofit corporation. The CSAC membership consists of the 58 California counties. CSAC sponsors a Litigation Coordination Program, which is administered by the County Counsels’ Association of California and is overseen by the Association’s Litigation Overview Committee, comprised of county counsels throughout the state. The Litigation Overview Committee monitors litigation of concern to counties statewide and has determined that this case is a matter affecting all counties.

The outcome of this case will impact Amici’s public agency members because they are local governments, many of which are authorized to provide water service subject to the requirements of various statutes governing the imposition and structuring of service fees and charges, as well as the substantive and procedural requirements of Article XIII D, section 6. See Cal. Const. art. XIII C, § 1(b) and art. XIII D, § 2(a) (defining the “local agencies” to which Proposition 218 applies). The local agencies represented by Amici have significant interest in cases, such as this one, that involve statutory and constitutional limitations on their ability

to establish budgets, allocate fiscal resources, and structure their water rates to achieve integrated, reliable, and secure water supplies. Additionally, many of Amici's member agencies have established conservation-based pricing of one form or another and have developed recycled water as part of their overall water supply portfolio and management strategy and therefore may be impacted by this case.

II.

FACTS AND PROCEDURAL HISTORY

Rather than restate the facts and procedural history in detail, Amici adopt the Statement of the Facts and Statement of the Case as set forth in the Appellant's Opening Brief.

III.

ARGUMENT

A. CALIFORNIA CONSTITUTION ARTICLE X, SECTION 2 MANDATES WATER CONSERVATION AND RESOURCE MANAGEMENT

An integrated, reliable, and secure water supply is essential to sustaining life and our economy. As early as 1928 water conservation has been recognized as a necessity in California with the adoption of former California Constitution article XIV, section 3, now Article X. Article X, declares:

because of the conditions prevailing in this State the general welfare requires that the water resources of the State be put to beneficial use to the fullest extent of which they are capable, and that the waste or unreasonable use or unreasonable method of use of water be prevented, and that the conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare.

This constitutional mandate reflects the overriding statewide concern to responsibly and reasonably conserve and manage this vital public resource. As the courts observed shortly after this language was added to our Constitution: "What is a beneficial use at one time may, because of changed conditions, become waste of water at a later time." *Tulare Irrigation Dist. v. Lindsay-Strathmore Dist.* (1935) 3 Cal.2d 489, 525.

In November 1996, California voters approved Proposition 218, adding articles XIII C and XIII D to the California Constitution. Article XIII D, section 6 established procedural requirements for imposing new, or increasing existing, property related fees and charges and placed substantive limitations on the use of the revenue collected from such fees and charges. Ten years later, in *Bighorn-Desert View Water Agency v. Verjil* (2006) 39 Cal.4th 205, the California Supreme Court determined that a public agency's ongoing water delivery fees for the volume of water essential to most uses of property are property related fees and charges subject to the provisions of Article XIII D. At issue in this case is whether

the City's tiered rate structure complies both with the conservation mandate of Article X and the substantive limitations of Article XIII D, section 6.

"[A]ll water use is now governed by California Constitution Article X, and accordingly, all use of water in this state must conform to the standard of reasonable use." *Wright v. Goleta Water Dist.* (1985) 174 Cal.App.3d 74, 87. The courts have recognized the difficulty local public agency water purveyors face in determining reasonable use and managing their water resources to promote this State policy. "The scope and technical complexity of issues concerning water resource management are unequalled by virtually any other type of activity presented to the courts. What constitutes reasonable water use is dependent upon not only the entire circumstances presented but varies as the current situation changes. ...' '[W]hat is reasonable use of water depends on the circumstances of each case, such inquiry cannot be resolved *in vacuo* from statewide considerations of transcendent importance.'" *U.S. v. State Water Res. Control Bd.* (1986) 182 Cal.App.3d 82, 129-130 (quoting *Environmental Defense Fund, Inc. v. E. Bay Mun. Util. Dist.* (1980) 26 Cal.3d 183, 194.

The State Legislature has adopted legislation to support and promote the policy of Article X. Water Code section 100 restates the proposition that the policy of the State of California is to prevent the waste of water and that the water of this State be conserved in the interest of the people and for

the public welfare. This policy is further amplified in Water Code section 106, which declares “that it is the established policy of this State that the use of water for domestic purposes is the highest use of water and the next highest use is for irrigation,” and in additional provisions of the California Water Code governing water.¹ Similarly, Water Code section 78500.2—adopted by Proposition 204 on the same ballot as Proposition 218 and by a larger number of votes—acknowledges that the limited water resources of this State must be protected and conserved, and that water conservation is

¹ See also Cal. Water Code § 106.5 (declares that no municipality shall acquire or hold any right to waste water, or to use water for other than municipal purposes, or to prevent the appropriation and application of water in excess of its reasonable and existing needs to useful purposes); § 109 (states that the growing water needs of the State require the use of water in an efficient manner and that the efficient use of water requires certainty in the definition of property rights to the use of water and transferability of such rights); § 350 *et seq.* (authorize a local agency water purveyor to declare a water shortage emergency condition whenever it finds and determines that the ordinary demands and requirements of water consumers cannot be satisfied without depleting its water supply such that there would be insufficient water for human consumption, sanitation, and fire protection); § 370 *et seq.*, (provide additional, alternate authority for public entities to encourage conservation through rate structure design; § 1009 (provides that water conservation programs are an authorized water supply function for all municipal water providers in the state); §§ 520 – 529.7 (require water meters and recognize that metered water rates are an important conservation tool); § 535 (requires installation of meters to measure landscape water); § 1011 (further the water conservation policies of the State by providing that a water appropriator does not lose an appropriative water right due to water conservation programs); § 10631 (establishes water conservation pricing as a recognized water demand management measure for purposes of Urban Water Management Plans); § 12922 (declares the policy of the State to prevent irreparable damage to ground water basins caused by overdraft and depletion).

essential to the State's long-term economic and environmental sustainability. Water conservation through rate structure design has been expressly authorized by the Legislature since 1993, (Cal. Water Code § 375, subd. (b).²) After the *Bighorn* decision, the Legislature in 2008 added further authorization for allocation-based conservation pricing, expressly invoking Article X. Cal. Water Code §§ 370 – 374.

After California began to emerge from its last major water shortage in November 2009, a bipartisan package of five bills addressing California's mounting water crisis emerged from the Legislature's 2009 Extraordinary Session. Among those signed into law was Senate Bill 7X7 (2009-2010 7th Ex. Sess.) ("SB 7"). SB 7 requires the State to achieve a twenty percent reduction in urban per capita water use by December 31, 2020, with incremental progress measured by a ten percent reduction by December 31, 2015 (the so-called "20 by 2020" legislation). Cal. Water Code § 10608.16. Urban retail water suppliers are required to determine in urban water management plans their own targets and methods for achieving this conservation and to assess the present and proposed means and methods for achieving the conservation targets. *Id.* at §§ 10608.20, 10608.36. Thus, urban water suppliers must develop long-term strategies

² In an uncodified portion of the bill adopting Water Code section 375, the Legislature specifically acknowledged that conservation is an important part of the State's water policy and that water conservation pricing is a best management practice. (Stats. 1993, c. 313, § 1 (A.B. 1712)).

for developing water conservation and water resource management programs and practices that will be sufficient to reach their State mandated interim and overall water use targets. Similarly, agricultural water suppliers must develop and implement efficient water management programs and practices in order to comply with the 20 by 2020 legislation.

As is evident in our constitutional and legislative history, water conservation is a way of life and a necessity in California. This is even more evident today. California's Water Year 2014 (October 1, 2013 through September 30, 2014) has been one of the driest in decades and follows two consecutive dry years throughout the State. On January 17, 2014, Governor Jerry Brown issued a drought state of emergency declaration in response to record-low water levels in California's rivers and reservoirs as well as an abnormally small snowpack. On April 25, 2014, Governor Brown issued a second proclamation suspending the California Environmental Quality Act (CEQA) to allow for the implementation of water reduction plans to reduce potable water usage for outdoor irrigation at recreational facilities and large institutional complexes, and the adoption of emergency regulations by the State Water Resources Control Board relating to water conservation. The current drought is endemic of California's unpredictable and variable hydrologic cycle.

Modern experience shows that water is not a perfectly renewable resource. Although California's water supply is limited and continues to diminish, the State's population and economy continue to grow. Further, climate change and federal and State mandates for the restoration of ecosystems further exacerbate water supply challenges. The integration of groundwater and surface water resources, development of alternative water sources—such as recycled wastewater, storm water capture and reuse, desalination of brackish groundwater and seawater, and development of previously unused local groundwater supplies—and the implementation of other water resource management practices is therefore critical to the long-term sustainable use of water in California.

Recycled water is clearly a component of the State's overall water supply and demand management policy. The State Legislature has established the following policies with regard to recycled water:

It is hereby declared that the people of the state have a primary interest in the development of facilities to recycle water containing waste to supplement existing surface and underground water supplies and to assist in meeting the future water requirements of the state.

Cal. Water Code § 13510.

The Legislature finds and declares that a substantial portion of the future water requirements of this state may be economically met by beneficial use of recycled water.

The Legislature further finds and declares that the utilization of recycled water by local communities for domestic, agricultural, industrial, recreational, and fish and wildlife purposes will contribute to the peace, health, safety and welfare of the people of the state. Use of recycled water constitutes the development of "new basic water supplies" as that term is used in Chapter 5 (commencing with Section 12880) of Part 6 of Division 6.

Id. at § 13512.

It is the intention of the Legislature that the state undertake all possible steps to encourage development of water recycling facilities so that recycled water may be made available to help meet the growing water requirements of the state.

Id. at § 13512.

The Legislature hereby finds and declares that the use of potable domestic water for nonpotable uses, including, but not limited to, cemeteries, golf courses, parks, highway landscaped areas, and industrial and irrigation uses, is a waste or an unreasonable use of the water within the meaning of Section 2 of Article X of the California Constitution if recycled water is available.

Id. at § 13550.

In sum, "water service" means more than just supplying water; it includes managing and ensuring an ongoing, potable supply of water for all users, including the development and use of recycled water. *See Griffith v.*

Pajaro Valley Water Mgmt. Agency (2013) 220 Cal.App.4th 586, 595.³

The cost of water service, therefore, must reflect all the costs of water resource management. Today local public agency water purveyors are faced with managing water in the face of current drought conditions, climate change, environmental constraints on water supply, and statutory and common law requirements intended to ensure a sustainable water supply.⁴ As stewards of this vital public resource, local public agency water purveyors must develop long-term water management strategies that incorporate water conservation and resource management as key components of preserving our water supplies. Water conservation through rate-structure design must be a component of this overall strategy, as well as development of alternative water supplies such as recycled water.

Management of water resources through rate structure design ensures full cost recovery while also requiring those who place the greatest

³ Shortly after adoption of Proposition 218, the Legislature defined “water” for the purposes of that Article XIII D as “any system of public improvements intended to provide for the production, storage, supply, treatment, or distribution of water.” Cal. Gov’t Code § 53750(m). The court in *Griffith* applied this definition in reaching its conclusions.

⁴ See, e.g., *In re Bay Delta Prog. E.I.R. Coordinated Proceedings* (2008) 43 Cal.4th 1143, 1153 – 1161 (Supreme Court discusses history of statewide water supply infrastructure and state and federal efforts to reconcile competing demands for water for both people and the environment through management of the Bay-Delta); *Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal 4th 412, 430 – 434 (Supreme Court discusses the standards for CEQA review of water supply sufficiency in connection with land use planning and development approval).

burdens and demands on a water system bear the greatest cost. Most often, water rate structure incentives are seen in the form of inclining block rates or the establishment of water-allocation or water-budget-based rates as were adopted by the City and are at issue in this case. Although public agencies are subject to certain constraints on their power to establish rates for water service, Amici assert that these constitutional requirements are not contrary to, but are fully consistent with, water rates structured to encourage water conservation and resource management and to discourage water overuse. Further, as discussed below, the trial court in this case failed to recognize the City's rate structure complies both with the conservation and reasonable use mandates of Article X and the substantive limitations of Article XIII D, section 6(b).

B. THE WATER CONSERVATION MANDATES OF CALIFORNIA CONSTITUTION ARTICLE X, SECTION 2 MAY BE HARMONIZED WITH THE SUBSTANTIVE LIMITATIONS OF CALIFORNIA CONSTITUTION ARTICLE XIII D, SECTION 6, SUBDIVISION B

Article XIII D, section 6's substantive provisions appear in section 6, subdivisions (b)(1)-(5). In accordance with these provisions, a property related fee must meet all of the following requirements:

- (1) revenues derived from the fee must not exceed the funds required to provide the property related service;

(2) revenues from the fee must not be used for any purpose other than that for which the fee is imposed;

(3) the amount of a fee imposed upon any parcel or person as an incident of property ownership must not exceed the proportional cost of the service attributable to the parcel;

(4) the fee may not be imposed for a service, unless the service is actually used by, or immediately available to, the owner of the property subject to the fee. A fee based on potential or future use of a service is not permitted, and stand-by charges must be classified as assessments subject to the ballot protest and proportionality requirements for assessments;

(5) no fee or charge may be imposed for general governmental services, such as police, fire, ambulance, or libraries, where the service is available to the public in substantially the same manner as it is to property owners.

Cal. Const. art. XIII D, §§ 6(b)(1)-(5). These substantive requirements limit: (i) the use of the revenue collected from property related fees and charges and (ii) the allocation of costs recovered by such fees and charges to ensure that they are proportionate to the cost of providing the service. At issue in this case are the requirements set forth in subdivisions (b)(1), (3) and (4).

Inclining block rate structures are intended to establish economic incentives to conserve water (or put another way, disincentives to unreasonably or excessively use), and generally impose higher charges per unit of water as consumption increases. Such a rate structure for water service fees and charges was first validated in *Brydon v. East Bay Municipal Utility District*, (1994) 24 Cal.App.4th 178, a case determined prior to the adoption of Article XIII D. There the court concluded that inclining block rates are not special taxes which require voter approval under Proposition 13 but are instead fees measured by the cost of service. After the adoption of Article XIII D, section 6, concerns have been expressed by some, and challenges have been brought by others, that inclining block rates may violate the substantive provisions of Article XIII D, section 6(b). Specifically, the concern has been that an inclining block rate may exceed the total cost of providing water service and the proportional cost of the water service to particular customers or classes of customers. Cal. Const. art. XIII D, §§ 6(b)(1) & 6(b)(3). A review of *Brydon*, however, demonstrates that inclining block rates fully comport with the substantive limitations placed on water rates pursuant to Article XIII D, section 6(b).

In *Brydon*, the utility district declared a water shortage emergency pursuant to Water Code section 350 and adopted a drought management

program that included a revenue-neutral⁵ inclining block rate structure. The rate structure was challenged as a non-voter-approved special tax in violation of California Constitution, article XIII A, section 4 (“Article XIII A”). Article XIII A was added to the California Constitution by Proposition 13 in 1978 and was intended to provide taxpayer relief by limiting the property tax rate and requiring voter approval of “special taxes” imposed by cities, counties, and special districts. To implement the authorizations granted to public agencies in Article XIII A, the State Legislature enacted Government Code sections 50075 and 50076. Government Code section 50075 states the Legislature’s intent to provide all public agencies with authority to impose special taxes, pursuant to Proposition 13. Government Code section 50076 then excludes from the definition of special tax “any fee which does not exceed the reasonable cost of providing the service or regulatory activity for which the fee is charged and which is not levied for general revenue purposes.”

Looking to Article X, the *Brydon* court found that the rate structure was designed in response to constitutionally mandated water resource conservation requirements. The court also recognized that Water Code section 375 permits the adoption and enforcement of water conservation programs to achieve these requirements and specifically permits the

⁵ By “revenue-neutral” the utility district intended no net increase in its overall revenues.

enactment of ordinances to encourage water conservation through rate structure design. *Brydon*, 24 Cal.App.4th 178 at 193, 195. “In pursuing a constitutionally and statutorily mandated conservation program, cost allocations for services provided are to be judged by a standard of reasonableness with some flexibility permitted to account for system-wide complexity.” *Id.* at 193 (citing *San Diego Gas & Elec. Co. v. San Diego County Air Pollution Control Dist.* (1988) 203 Cal.App.3d 1132 [air emission permit application fee based on volume of pollutants to be emitted was not special tax under Prop. 13]). The court deemed it appropriate to shift:

the costs of environmental degradation from the general public to those most responsible The inclining block rate structure is a reasonable reflection of the fact that it is the profligate usage of water which compels the initiation of regulated conservation measures In the [court’s] view it is reasonable to allocate costs based on the premise that the more unreasonable the water use, “the greater the regulatory job of the district.” *Id.* (citation omitted).

Stated another way, inclining block rates reasonably reflect the proportionate cost of providing water service attributable to those parcels which use the most water. Such costs include not only the costs of regulating and promoting conservation, but of managing a limited public resource in the interest of the people and for the public welfare—e.g., the

costs of purchasing, producing, delivering, and replenishing water, and obtaining or developing additional sources of water such as recycled water. Managing this vital public resource from year to year and generation to generation is a fundamental responsibility of water purveyors throughout the State. *See Carlton Santee Corp. Padre Dam Mun. Water Dist.* (1981) 120 Cal.App.3d 14, 26 (long-term planning needs of waste water utility justify capacity charge imposed pre-connection). Paying for such resource management through rate structure design is an essential component to fulfilling that responsibility.

In conclusion, the *Brydon* court found nothing in Article XIII A to suggest that it was intended to subvert Article X, “which mandates water conservation and precludes ‘the waste or unreasonable use or unreasonable method of use of water,’” or that it was intended “to accomplish the essential destruction of the rate setting structure of public utilities, nor the evisceration of the constitutional mandates compelling water conservation.” *Brydon*, 24 Cal.App.4th at 194-195. Although *Brydon* addressed the competing concerns of Article X with those of Article XIII A, the court’s conclusion and analysis is equally applicable to Article XIII D, section 6.

The provisions of Article X should be given equal dignity to those of Article XIII D, section 6(b). *See Silicon Valley Taxpayers Ass’n v. Santa Clara Open Space Authority* (2008) 44 Cal.4th 431, 447-448 (harmonizing

California Constitution article XIII D, section 4 with the separation of powers principle of California Constitution article III, section 3). The California courts have recognized that when two constitutional provisions appear to compete, their terms must be harmonized to effectuate their purposes.

[C]onstitutional provisions must not be examined in isolation but rather in view of other provisions in the Constitution which bear on the same subject so that respective provisions can be harmonized (1) to avoid conflict, (2) to give effect to the scheme as a whole and (3) to avoid an implied repeal or partial repeal of a constitutional provision.

Calif. Bldg. Industry Ass'n v. Governing Bd. of the Newhall Sch. Dist. (1988) 206 Cal.App.3d 212, 229 (citations omitted); *accord Bd. of Supervisors of San Diego County v. Loneragan* (1980) 27 Cal.3d 855, 868-869; *SBAM Partners v. Wang* (2008) 164 Cal.App.4th 903, 909.

Like Proposition 13's Article XIII A, Proposition 218's Article XIII D was enacted to buttress Proposition 13's limitations on *ad valorem* property taxes and special assessments by placing analogous restrictions on assessments, fees, and charges. Neither was intended to compromise water conservation and resource management efforts, which are governed by Article X. See *Howard Jarvis Taxpayers Ass'n v. City of Riverside* (1999) 73 Cal.App.4th 679, 682 (purpose of Proposition 218); *Brydon*, 24 Cal.App.4th at 187-188 (purpose of Proposition 13). To paraphrase

Brydon, an inclining block rate structure bears none of the indicia of taxation without voter approval which Article XIII D, section 6 sought to restrict. Such a rate structure imposes fees on water consumers in accordance with patterns of usage, thereby not passing on the cost of excessive water usage to other property owners. *See Brydon*, 24 Cal.App.4th at 194. Inherent in the cost of excessive water usage are the costs of water conservation and resource management. Inclining block rates internalize these costs and proportionately allocate them as a component of the cost of providing water service to those parcels that use the most water. *See Pajaro Valley Water Management Agency v. Amrhein* (2007) 150 Cal.App.4th 1364, 1389-1390 (“The juxtaposition of that decision [i.e., *Apartment Association of Los Angeles County v. City of Los Angeles* (2001) 24 Cal.4th 830] with *Bighorn* suggests the possibility that a fee falls outside Article XIII D to the extent it is charged for consumption of a public service for purposes or in quantities exceeding what is required for basic (i.e., residential) use of the property.”) Inclining block rates therefore harmonize the competing constitutional mandates of Article X and Article XIII D, section 6(b).

Any doubt about the harmony existing between Article X and Article XIII D, section 6 was eliminated in 2009 when the Legislature adopted Assembly Bill 2882 (“AB 2882”). Effective January 1, 2009, AB 2882 amended the Water Code to add Chapter 3.4 (commencing with

section 370). Chapter 3.4 authorizes the adoption and implementation of allocation-based conservation water pricing, such as that adopted by the City, to effectuate the constitutional mandates of Article X—to prevent the waste and unreasonable use of water—and Article XIII D, section 6(b)—to ensure that water service fees are proportionate to the cost of service. The provisions of Water Code section 370 clearly reflect this legislative intent:

(a) The use of allocation-based conservation water pricing by public entities that sell and distribute water is one effective means by which waste or unreasonable use of water can be prevented and water can be saved in the interest of the people and for the public welfare, within the contemplation of Section 2 of Article X of the California Constitution.

(b) It is in the best interest of the people of California to encourage public entities to voluntarily use allocation-based conservation water pricing, tailored to local needs and conditions, as a means of increasing efficient uses of water, and further discouraging wasteful or unreasonable use of water under both normal and dry-year hydrologic conditions.

(c) The Legislature intends that allocation-based conservation water pricing is an alternative method that can be used by public entities to encourage water users to conserve water, increase efficient uses of water, and further discourage waste of water. The Legislature does not intend to limit the discretion of public entities to evaluate and select among different methods for conserving water or to create a presumption that the election to not use a particular method is a waste or unreasonable use of water by the public entity.

(d) Nothing in this chapter is intended to limit, or dictate, the design of rate structures that public entities may use to promote conservation by water users.⁶

⁶ In *Greene v. Marin County Flood Control & Water Conservation Dist.* (2010) 49 Cal.4th 277), the California Supreme Court was required to reconcile the secret-ballot provisions of California Constitution article II, section 7 with the voter approval process for certain property related fees under of Article XIII D, section 6, subdivision (c). The Court looked to the Proposition 218 Omnibus Implementation Act of 1997, Government Code section 53750 *et seq.*, and specifically noted the deference the courts give such Legislative enactments:

Moreover ‘[i]n cases of ambiguity we also may consult any contemporaneous constructions of the constitutional provision made by the Legislature or by administrative agencies.’ *City and County of San Francisco v. County of San Mateo* (1995) 10 Cal.4th 554, 563 [41 Cal. Rptr. 2d 88, 896 P.2d 181].) ‘[O]ur past cases establish that the presumption of constitutionality accorded to legislative acts is particularly appropriate when the Legislature has enacted a statute with the relevant constitutional prescriptions clearly in mind. [Citation.] In such a case, the statute represents a considered legislative judgment as to the appropriate reach of the constitutional provision. Although the ultimate constitutional interpretation must rest, of course, with the judiciary (see *Marbury v. Madison* (1803) 5 U.S. (1 Cranch) 137, 176–180 [2 L. Ed. 60]), a focused legislative judgment on the question enjoys significant weight and deference by the courts.’ (*Pacific Legal Foundation v. Brown* (1981) 29 Cal.3d 168, 180 [172 Cal. Rptr. 487, 624 P.2d 1215].)”

Id. at 290-291.

Allocation-based water pricing is a form of inclining block rate. Water allocations, sometimes referred to as or “water budgets,” are volumetric allotments of water to customers based on customer-specific characteristics and water resource standards. An allocation-based water rate structure will generally establish inclining block rates with the blocks defined differently for each customer based on his or her water allocation. Research has demonstrated that inclining block rates and allocation-based rates such as those adopted by the City do in fact result in reductions in the demand for water and are an important water resource management tool. K. Baerenklau, K. Schwabe, & A. Dinar, *Do Increasing Block Rate Water Budgets Reduce Residential Demand? A Case Study in Southern California*, Water Science and Policy Center, University of California, Riverside Working Paper (2013), http://wspc.ucr.edu/working_papers/WSPC-WP-01-0913_block%20rate%20water%20budgets%20so%20cal%20v2.pdf.

The City adopted tiered rates consistent with the provisions of Water Code section 370 *et seq.* The rates were structured to promote water conservation, prevent excessive and wasteful water use, and assist the City in managing its water resources. As discussed below, the rates were also consistent with the substantive provisions of Article XIII D, section 6(b), subdivisions (1), (3), and (4).

C. THE CITY'S ALLOCATION OF THE COSTS OF SERVICE COMPLIES WITH THE SUBSTANTIVE REQUIREMENTS OF ARTICLE XIII D, SECTION 6(B)

1. THE ADMINISTRATIVE RECORD DEMONSTRATES COMPLIANCE

In *City of Palmdale v. Palmdale Water District* (2011) 198 Cal.App.4th 926 ("*Palmdale*"), the court acknowledged that Article X may be harmonized with Article XIII D, section 6(b). In *Palmdale*, the water district's allocation-based water rate structure was challenged as failing to comply with the substantive provisions of Article XIII D, section 6(b). Significantly, the court noted that "California Constitution, Article X is not at odds with article XIII D so long as, for example, conservation is attained in a manner that 'shall not exceed the proportional cost of service attributable to the parcel.'" *City of Palmdale*, 198 Cal.App.4th at 936-937. In that instance, however, the court found that the water district made no showing that the cost of delivering water service to irrigation customers is higher than its cost of delivering water service to other customers. Indeed, the water utility had made arbitrary changes to the formal rate study with no regard to the actual cost responsibility of each customer class. That is not the case here.

Palmdale generated some confusion among local public agency water purveyors because, if read too broadly, it appears to imply a requirement for parity in the rates charged to the different customer classes. In fact, the court did not hold that an allocation-based rate structure violates

the substantive provisions of Article XIII D, section 6(b), but simply that the Palmdale Water District failed to demonstrate the proportionality of its rates. To be clear, the *Palmdale* court did not say that rates may not differ by customer class, but rather that insufficient justification was provided to justify the rates at issue in *Palmdale*. Such is not the case here.

The essential holding of *Palmdale* is that utilities must make a good administrative record of the methodology used for developing rates and the evidence to support the application of that methodology to the local agency's own service costs. That record may be a rate study and a rate model, such as that prepared in this case by the City's rate consultant Black & Veatch. There is nothing in Article XIII D, section 6(b) that requires a local public agency water purveyor state in a narrative fashion how costs are allocated; rather its burden is to demonstrate compliance with the substantive provisions of Article XIII D, section 6(b). Cal. Const. art. XIII D, § 6(b)(5). Compliance may just as easily be demonstrated, as the City did in part here, in a numerical fashion such as the rate model's complex and inter-related spreadsheets.

The trial court incorrectly concluded that the City "failed to identify any support in the record for the inequality between tiers depending on the category of use." Final Statement of Decision and Judgment, filed August 28, 2013, 4:1-2. As discussed in Appellant's Opening Brief, the

administrative record for the City demonstrates at length how costs were allocated among the various user classes in proportion to the cost of serving each. Unlike the water district in *Palmdale*, the City did not make arbitrary changes to the formal rate study with no regard to the actual cost responsibility of each customer class. Rather, the City followed the recommendations of its rate consultant which applied nationally recognized industry ratemaking standards established by the American Water Works Association, *Principles of Water Rates, Fees and Charges: Manual of Water Supply Practices M1* (the “M1 Manual”).

The 6th District Court of Appeal’s recent decision in *Griffith v. Pajaro Valley Water Management Agency* (2013) 220 Cal.App.4th 586 provides considerable guidance as to how local public agency water purveyors may comply with the substantive requirements of Article XIII D, section 6(b) in setting water service fees. *Griffith* was decided after the trial court’s decision against the City on appeal here. The trial court therefore did not have the benefit of this analysis when it ruled. The *Griffith* decision and its reasoned analysis should, however, be considered by this court.

The *Griffith* case challenged the Pajaro Valley Water Management Agency’s (the “Agency”) groundwater augmentation charges. The Agency was created to manage the water resources of the Pajaro Valley Groundwater Basin. The Agency is authorized to levy groundwater

augmentation charges on the extraction of groundwater “for the purposes of paying the costs of purchasing, capturing, storing, and distributing supplemental water for use within the [A]gency’s boundaries.” *Griffith*, 220 Cal.App.4th at 591 (quoting *Pajaro Valley Water Management Agency v. Amrhein* (2007) 150 Cal.App.4th 1364, 1372). The Pajaro Valley Groundwater Basin has been subjected to chronic overuse, resulting in overdraft and seawater intrusion, particularly near the coast. To protect the groundwater basin, the Agency implemented a program to deliver supplemental water to some coastal users and develop other supplemental water projects.⁷ The cost of the program was to be shared by all properties served by a well within the boundaries of the Agency.⁸

In 2002, the Agency adopted groundwater augmentation charges. The charges were subsequently increased in 2003 and 2004. The charges and subsequent increases were challenged on the grounds that the Agency failed to comply with Article XIII D, section 6. In *Pajaro Groundwater Management Agency v. Amrhein* (2007) 150 Cal.App.4th 1364, 1370, the 6th District Court of Appeal held that the groundwater augmentation

⁷ The groundwater management strategy is “to use recycled wastewater, supplemental wells, captured storm runoff, and a coastal distribution system.” *Griffith*, 220 Cal.App.4th at 590.

⁸ The evidence in the *Pajaro* Agency’s administrative record showed that “even those taking water from [inland] wells benefit from the delivery of water to [coastal users], as that reduces the amount of groundwater those [coastal users] will extract [from their own wells], thereby keeping water in [all] wells from becoming too salty.” *Id.* at 590-591.

charges were property related fees governed by Article XIII D, section 6. The court, however, did not determine whether the charges were fees or charges for “water service” and therefore exempt from the election requirement for other property related fees pursuant to Article XIII D, section 6(c).⁹

Beginning in 2010, the Agency adopted a three-tiered groundwater augmentation charge increase to fund the supplemental water projects and groundwater management program and conducted a majority protest hearing pursuant to Article XIII D, section 6(a) for that purpose. *Griffith*, 220 Cal.App.4th at 593. Several of the objections to the *Pajaro* rates concerned whether the charges complied with the substantive provisions of Article XIII D, section 6(b), including whether the method by which the Agency determined the amount of the charges violated this subdivision.¹⁰ The Agency used a “revenue-requirements” model whereby it budgeted the rates of the augmentation charges by:

⁹ The court held that, for purposes of Article XIII D, section 6, the augmentation charge did not differ materially “from a charge on *delivered* water.” *Amrhein*, 150 Cal.App.4th at 1388-1389, original emphasis.

¹⁰ The plaintiffs challenged the Agency’s groundwater augmentation charges on several grounds, including its conduct of a mailed-ballot election among customers under Article XIII D, section 6(c). Among the Agency’s defenses was that its rates were “water service” charges exempt from this election requirement. Both the trial and appeal court concluded that the *Pajaro* charges were fees or charges for water service exempt from this election requirement.

- (1) calculating its total costs of the chargeable activities;
- (2) subtracting all other sources of revenue other than the augmentation charges; and
- (3) apportioning the remaining revenue requirement among the augmentation charge customer classes.

Id. at 600. The court acknowledged that this revenue requirements method for allocating costs is consistent with industry standards established by the M1 Manual.¹¹ *Id.* The M1 Manual is the most widely used rate setting manual among public water purveyors nationally.

The cost of service allocations used by the City in the “Revenue Requirements, Cost of Service Allocations, and Rate Design for the Water and Wastewater Utilities Final Report” prepared by Black & Veatch in 2009 were prepared using the “revenue requirements model” of the M1Manual and are consistent with industry standards. The *Griffith* court acknowledged that the principles and methodologies established in the M1 Manual for structuring rates for water service fees comply with the proportionality requirements of Article XIII D, section 6(b). *Id.* at 600; *see also Morgan v. Imperial Irrigation Dist.* (2014) 223 Cal.App.4th 892, 899

¹¹ The revenue requirement analysis “[c]ompare[s] the revenues of the utility to its operating and capital costs to determine the adequacy of the existing rates to recover the utility’s costs.” American Water Works Association, *Principles of Water Rates, Fees and Charges: Manual of Water Supply Practices M1 5* (6th ed. 2012).

(the cost of service study followed commonly accepted professional standards developed by the American Water Works Association for cost of service studies).

2. RECYCLED WATER USERS ARE SIMPLY ANOTHER CUSTOMER CLASS

The *Griffith* plaintiffs also asserted that the Agency's use of the revenue requirements methodology and its apportionment of the costs among different classes of users were contrary to *Palmdale*, which, they claimed, requires rates be proportional to the cost of service on a "parcel-by-parcel" basis. The court rejected this claim, noting that *Palmdale* did not require a parcel-by-parcel analysis. Rather, it held that the water district failed to carry its burden to justify disparate treatment of its customer classes. *Griffith*, 220 Cal.App.4th at 601.

In addressing this claim, the *Griffith* court provided a framework for how a public agency may demonstrate compliance with the proportionality requirements of Article XIII D, section 6(b). The court found that Article XIII D, section 6(b) does not require that property related fees be calculated on a parcel-by-parcel or customer-by-customer basis; rather, the court determined that grouping similar users together (i.e., calculating fees on a class-by-class basis) is a reasonable method of allocating the costs of service. In reaching this conclusion, the court recognized that:

[a]pportionment is not a determination that lends itself to precise calculation. ... Given that

Proposition 218 prescribes no particular method for apportioning a fee or charge other than the amount shall not exceed the proportional cost of the service attributable to the parcel, [the Agency's] method of grouping similar users together for the same ... rate and charging the users according to usage is a *reasonable* way to apportion the cost of service. That there may be other methods favored by plaintiffs does not render [the Agency's] method unconstitutional. Proposition 218 does not require a more finely calibrated apportion.

Id. (citations omitted) (emphasis added). *See also*, Morgan, 223 Cal.App.4th at 899 (“The Cost of Service Study took into account the character of the District and its customers. Most of the District’s water system and its delivery costs are shared by all users. However, some types of service require extra costs, and therefore, the study allocated those costs only to the corresponding more expensive services.”) In support of this ruling, the court cited the California Supreme Court’s decision in *California Farm Bureau Federation v. State Water Resources Control Board* (2011) 51 Cal.4th 421, in which a regulatory fee was challenged as a tax under Proposition 13. There, the California Supreme Court held that:

[t]he question of *proportionality is not measured on an individual basis*. Rather it is measured collectively, considering all rate payors. Thus, permissible fees must be related to the overall cost of the government regulation. *They need not be finely calibrated to the precise benefit each individual fee payor might derive.*

Calif. Farm Bureau Fed'n, 51 Cal.4th at 438 (citations omitted) (emphasis added). Most notably, the court held that, in applying these principles, public agencies may employ a flexible assessment of proportionality within a range of reasonableness. *Id.* at 442; *Calif. Bldg. Indus. Ass'n v. San Joaquin Valley Air Pollution Control Dist.* (2009) 178 Cal.App.4th 120, 132.¹²

The court's ruling that the proportionality requirements can be met at the customer class level affirms a local public agency water purveyor's discretion in rate-making. Thus, so long as the costs of providing a property related service are *reasonably* allocated across customer classes, the fee complies with the proportionality requirements of Article XIII D, section 6(b). *See also, Howard Jarvis Taxpayers Ass'n v. City of Roseville* (2002) 97 Cal.App.4th 637, 647-648; *Howard Jarvis Taxpayers Ass'n v.*

¹² *See also Paland v. Brooktrails Township Cmty. Serv. Dist. Bd. of Dir.* (2009) 179 Cal.App.4th 1358, 1370 (court refused to look at individual property owner activity to determine whether service was "immediately available" as required for a fee pursuant to California Constitution article XIII D, section 6(b)(4).); American Water Works Association, *Principles of Water Rates, Fees and Charges: Manual of Water Supply Practices M1* at p. 75 (6th ed. 2012) (In allocating costs, the M1 Manual notes: "The ideal solution to developing rates for water utility customers is to assign cost responsibility to each individual customer served and to develop rates to derive that cost. Unfortunately, it is neither economically practical nor often possible to determine the cost responsibility and applicable rates for each customer served. However, the cost of providing water service can reasonably be determined for groups or classes of customers that have similar water-use characteristics and for special customers having unusual water-use or service requirements.")

City Fresno (2005) 127 Cal.App.4th 914, 922-923 (2005) (Article XIII D, section 6 requires cities to reasonably determine the costs of service); *Morgan*, 223 Cal.App.4th at 899, 916 (different services may cost more and different users create special costs; there is no requirement that the data determining rates be perfect). The City's recycled water customers are simply one of many customer classes. As demonstrated in Appellant's Opening Brief, the costs of providing water service were reasonably allocated among the various customer classes, including the recycled water customer class and those customer classes that receive potable water. Thus, the City's fees were related to the *overall cost of service*; such overall cost of service includes the costs of providing all water within the City's service area, not just from a single supply source.

3. RECYCLED WATER BENEFITS ALL WATER CUSTOMERS; POTABLE WATER SERVICE FEES MAY FUND A PORTION OF THE COSTS OF RECYCLED WATER

The *Griffith* plaintiffs—inland well users—also argued that the amount imposed on their property was disproportionate to the cost of the service provided because they do not use any of the services, emphasizing that many of the services were delivered to coastal property owners closest to the salt water intrusion zone. Rejecting this argument, the court stated that plaintiffs' argument overlooks the fact that “the management of the water resources . . . for agricultural, municipal, industrial, and other

beneficial uses is in the public interest . . .’ and [the Agency] was created to manage the resources ‘for the common benefit of all water users.’” *Id.* at 600. The court therefore found that the groundwater augmentation charges did not exceed the proportionate cost of providing the service because the record evidence demonstrated that all groundwater users benefit from the Agency’s groundwater management activities, not just the coastal users receiving supplemental water. *Griffith*, 220 Cal.App.4th at 600, 602.

The trial court in this case concluded that the City’s administrative record “reflects the City imposed a fee on all ratepayers for recycled water services and delivery of recycled water, despite the fact that not all ratepayers used recycled water or have it immediately available to them or would ever be able to use it.” Final Statement of Decision and Judgment, 4:6-9. The trial court, however, failed to recognize that the recycled water provided by the City is no different than the Agency’s recycled water that was blended with well water and delivered to the coastal well users. *Id.* at 599. Recycled water provides a benefit to all water users within the City’s service area, even those who do not receive it, because it displaces the demand for scarce potable water resources. As such, it is appropriate to allocate a portion of the costs of recycled water to all water users just as it is to charge them for other water supplies.

The *Griffith* plaintiffs also claimed that the groundwater augmentation charges were being used to fund a service that is not immediately available to property owners because the ordinance provided that the charge will be used to identify and plan for future supply projects. *Id.* The court dismissed this argument and held that identifying and planning for the future needs of the Agency is part of the cost of the Agency's current services. Thus, the costs of planning for future needs may be recovered from charges imposed on current users. *Id.* at 602.

This aspect of the case supports the City's practice of charging present day potable water customer's its cost to plan and fund recycled water capital projects through current rates. Charging current users for future capital projects that benefit all water users is also consistent with the *Howard Jarvis Taxpayers Association v. City of Roseville* court's determination that the "costs to provide such services includes all the required costs of providing service, *short-term and long-term*, including operation, maintenance, financial, and *capital expenditures*." *Roseville*, (2002) 97 Cal.App.4th 637, 647-648 (emphasis added); *see also Fresno*, (2005) 127 Cal.App 4th 914, 922 ("Cities are still entitled to recover all of their costs for utility services through user fees.").

Based on water resource operations and management practices it is appropriate to allocate to all potable water customers a portion of the costs

of ongoing operations and maintenance and future capital projects of a recycled water system because recycled water benefits all water users, including potable water users who do not receive the recycled water. Imposing these costs on such potable water customers does not result in a fee for a service that is not immediately available to them because it is a cost of an agency's overall costs of providing water service. *Griffith*, 220 Cal.App.4th at 600, 602; *see Roseville* (2002) 97 Cal.App.4th 637, 647-648.

First, recycled water is simply another source of water supply similar to groundwater, surface water, and imported water. Water Code § 13511 ("use of recycled water constitutes the development of 'new basic' water supplies"). A public agency should not have to separately account for every drop of water in its total water supply portfolio from source to user to charge that user for that supply. It is appropriate to allocate all costs of supplying all water to all customers who receive water service. *Griffith*, 220 Cal.App.4th at 600, 602; *see Cal. Water Code* § 13550(a)(2) (recycled water may be furnished at reasonable cost). In determining the reasonable cost of water service, a local public agency water purveyor may consider all relevant factors, including, but not limited to, the present and projected costs of supplying, delivering, and treating potable domestic water, the present and projected costs of delivering recycled water, and other

programs to encourage conservation and reduce competition for limited supplies. *See id.*

Second, recycled water is a water resource management tool that benefits all water users. Cal. Water Code §§ 13510 (recycled water supplements existing surface and underground water supplies and helps meet future water requirements); 13512 (recycled water helps meet growing water requirements). As noted above, recycled water benefits all water users within a local public agency water purveyor's service area, even those who do not take recycled water, because it displaces demand for scarce potable water resources and reduces the need for conservation by potable water customers. The primary difference between recycled water and other water supplies is that there are restrictions on the application of recycled water. *See id.* at §§ 13520 *et seq.* Ultimately, in allocating these water supply costs, local public agency water purveyors must be allowed to reasonably employ a flexible assessment of proportionality in calculating the amount and distribution of its fees. *See Calif. Farm Bureau Fed'n*, 51 Cal.4th at 442; *Calif. Bldg. Indus. Ass'n v. San Joaquin Valley Air Pollution Control Dist.*, (2009) 178 Cal.App.4th 120, 132.

Third, if the logic of the trial court ruling regarding the funding of its recycled water is extended, all water, regardless of the source of its production—whether by treatment of waste water, or desalination of

seawater or brackish groundwater, or capture and treatment of storm water, or transfer of conserved water, or importing water from one part of the State to another, or any other means of production or supply—would have to be traced from the source to the customer for rate setting purposes. “Melding” costs of various water supplies into a single supply cost for rate setting purposes is an extremely common practice of water purveyors throughout the State. There is nothing in Article XIII D, section 6(b) that requires an end to this practice.

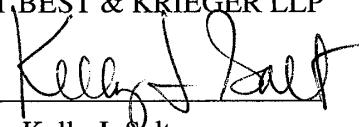
IV.

CONCLUSION

For all of the reasons stated above, Amici respectfully request this Court reverse the trial court judgment on the merits and provide declaratory relief that the City’s rates are lawful and may be enforced.

Dated: June 2, 2014

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CERTIFICATE OF WORD COUNT

The text of this Appellant's Opening Brief consists of 8,341 words as counted by the Microsoft Word 2010 word-processing program used to generate said document.

Dated: June 2, 2014

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CERTIFICATE OF SERVICE

I, Lisa Grennon, declare:

I am a resident of the State of California and over the age of eighteen years, and not a party to the within action; my business address is Best Best & Krieger LLP, 655 West Broadway, Fifteenth Floor, San Diego, California 92101-3542. On June 2, 2014, I served the within document(s):

**APPLICATION FOR PERMISSION TO FILE
AMICUS CURIAE BRIEF**

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I declare under penalty of perjury under the laws of the State of California that the above is true and correct. Executed on June 2, 2014, at San Diego, California.

A handwritten signature in cursive script, reading "Lisa Grennon", written over a horizontal line.

Lisa Grennon

St. Helena, California

Capital Improvement Plan

2016-2021



Safety



Infrastructure



Community

DRAFT June 27, 2016



TABLE OF CONTENTS

Introduction.....	3
A Quick Look at Infrastructure.....	4
Funding Sources.....	5
Project Category Summaries	9
Civic	9
Streets.....	11
Wastewater	13
Water	15
Appendix A – Completed Projects	17
Appendix B – Project Details.....	21

INTRODUCTION

The City of St. Helena's five-year Capital Improvement Plan (CIP) is a multi-year planning instrument to guide the construction of new facilities/infrastructure; and for the expansion, rehabilitation or replacement of existing City-owned assets. The five-year CIP is developed by City Staff and adopted City Council, then becomes the guiding document for the prioritization of projects.

The information included in the CIP is based on the current information available and updated regularly to reflect changing priorities, funding availability and project completion. A new five-year CIP will be submitted to City Council annually with recommended adjustments to project budgets, funding sources, descriptions, and/or schedules. Inclusion of a project in the CIP does not commit the City to specific expenditures or appropriations for any particular project.

The CIP includes all projects and programs expected to be undertaken during the next five fiscal years. Specific projects and related schedules are selected based upon:

- Implementation of the City's General Plan
- Availability of funding
- Minimizing disruptions associated with construction activity
- City Council direction

Approximately \$18.7 million CIP programs and projects over the next five years have been identified. The estimated project expenditures planned for the five-year CIP are broken into four major categories: Civic, Streets, Wastewater, and Water. The following table includes an overview of funding by project category for FY 16/17 – FY 20/21.

FY 16/17 – FY 20/21 Capital Improvement Plan						
Funding by Project Category						
	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	Five Year Total
Civic	\$331,000	\$20,000	\$20,000	\$20,000	\$20,000	\$411,000
Streets	\$801,665	\$290,000	\$125,000	\$850,000	\$850,000	\$2,916,665
Wastewater	\$692,070	\$427,000	\$588,000	\$528,000	\$38,000	\$2,273,070
Water	\$4,801,319	\$7,179,173	\$1,078,433	\$0	\$0	\$13,058,925
Total	\$6,626,054	\$7,916,173	\$1,811,433	\$1,398,000	\$908,000	\$18,656,660

A QUICK LOOK AT INFRASTRUCTURE

What is infrastructure, and why is it important?

Infrastructure includes the basic physical structures, systems, and facilities needed to provide services to residents and for the functioning of a community and its economy; such as sidewalks, streets, parks, fire stations, police facilities, and the water and wastewater systems. Infrastructure impacts public health, safety, and the quality of life for residents of St. Helena as well as other industries which are an important part of the City's economy. Decisions made regarding infrastructure projects are very important because they are generally large and expensive, and the assets created will require decades of public use.

What infrastructure is within the City's area of responsibility?

The City of St. Helena is responsible for maintaining storm drains, streets, water treatment and distribution system, wastewater collection and treatment system, parks, and City government buildings and facilities. Napa County, State of California, and U.S. governments may also have responsibility for certain assets within the City of St. Helena. For example, the California Department of Transportation (Caltrans) has jurisdiction and responsibility for State Route 29 (Main Street).

What happens when infrastructure assets are not maintained?

Providing ongoing maintenance and repair, such as resurfacing streets and repairing or replacing water and wastewater piping, is vital for maintaining the condition of assets. When maintenance and repair is not fully funded, deferred maintenance and capital improvement costs increase significantly. The City has not fully funded maintenance and repair due to tight budgetary constraints and competing priorities for several years. As a result the City now has a multi-million dollar backlog in deferred maintenance of storm drains, streets, water treatment and distribution system, wastewater collection and treatment system, parks, and City government buildings and facilities. For example, the 2014 Pavement Management Program Update calculated a \$6.2 million backlog for street maintenance in St. Helena. Without adequate investment, these deferred maintenance costs will increase significantly over time.

Compounding the problem, as assets continue to deteriorate, the cost of repair exponentially increases and can result in peripheral damage. For example, deferring roof replacement could later result in needing to replace the roof structural members, walls, and floor of a building.

How does the CIP process work?



FUNDING SOURCES

The Five-Year CIP is funded by various unrestricted and restricted funds. Unrestricted funds are free from external restrictions and can be used for any purpose, as directed by the City Council. The City's General Fund is an unrestricted fund. The General Fund is made up of funding from property tax revenues, sales tax, and transient occupancy taxes. Restricted funds are legally required to be used for a specific purpose. For example, water enterprise funds can only be used to operate, maintain, and improve the City's water treatment and distribution system. Other examples of restricted funding sources include local, state, and federal grants; and wastewater enterprise funds. A detailed description of the various funding sources is presented in the following table.

Funding Source	Description and Restrictions
Gas Tax	Description: The Gas Tax Fund collects revenue resulting from a tax on the sale of gasoline. The City's share of gas tax revenue is based on a formula that takes into account vehicle registration, assessed property valuation, and population.
	Restrictions: These funds must be used to perform research, planning, construction, improvement, maintenance, and operation of public streets and highways (and their related public facilities for non-motorized traffic), including the mitigation of their environmental effects, the payment for property taken or damaged for such purposes, and the administrative costs necessarily incurred in the foregoing purposes. There are currently five separate Gas Tax funds each with additional specific criteria.
General	Description:

Fund	The primary reporting vehicle for current government revenues and operations, this fund accounts for all financial resources not required by law or City Council actions to be accounted for in another fund.
	Restrictions: General Fund monies are one of the least restrictive funding sources, funding can be used for salaries, capital improvements, supplies and other municipal related expenses.
Grant Funding	Description: Some projects are entirely or partially funded by grants and reimbursements from the State and federal government, as well as other agencies.
	Restrictions: Funding restrictions related to grant funding can vary greatly, and each grant will have specific project restrictions related to the funding source.
Impact Fees	Description: In 2013, the City retained Colgan Consulting Corporation to prepare an impact fee study, analyzing the impact of development on certain capital facilities and to calculate impact fees based on that analysis. The methods used to calculate impact fees in the study were intended to satisfy all legal requirements.
	Restrictions: By Law impact fees can only be collected to cover the impact of new development on existing infrastructure. Impact fees cannot be used to correct "existing deficiencies". CIVIC IMPACT: This fund is used to accumulate restricted funds from new development's proportionate share of the depreciated replacement cost of a range of facility types including City Hall, corporation yard facilities, as well as library and recreation facilities. PUBLIC SAFETY IMPACT FEES: Section 22.5 of the City Code establishes this fund to accumulate revenues from fees on building permits to be used solely for equipment and facilities' costs for Police and the Fire Departments. Vehicles, capital equipment, and building improvements are approved uses. PARK IMPACT: This fund is used to accumulate funds from new or proposed residential development solely for park land acquisition and park improvements. TRAFFIC MITIGATION (STREET) IMPACT: This fund is used to accumulate funds from new or proposed development to pay for circulation improvements to reduce the impacts of traffic generated

	by new development within the City. WATER IMPACT: This fund is used to accumulate funds from new or proposed development to pay for Water System Capital Improvements needed to support new development. WASTEWATER (SEWER) IMPACT: This fund is established to account for the costs of constructing and improving the Wastewater Treatment Plant and Sewer Collection System in order to support new development.
Measure T	Description: Measure T resulted in a countywide half-cent sales tax increase. Money generated from the sales tax increase will be used for road repairs in the county. The amount raised by the tax is expected to be about \$300 million countywide and St. Helena will receive 5.9% of the annual revenues. Funding from Measure T will first be available to the City in 2018 and the tax will expire in 25 years. Restrictions: Measure T requires that 99% of the funds raised be spent on street maintenance and rehabilitation and only 1% can be used for administrative and reporting costs. The funds cannot be used for new roads or congestion relief —the tax is only for maintenance of local streets. Funds cannot be used to offset current City funding for road maintenance.
Wastewater Utility	Description: This fund is used to account for the costs of providing sewer services to the general public on a continuing basis. The intent is to recover costs through user charges and fees. Restrictions: The fund is operated in a manner similar to a private business enterprise. Funding must be used to operate, maintain, and improve the sewer system and cannot be used for other purposes.
Water and Wastewater Bonds	Description: California Statewide Communities Development authority Water and Wastewater revenue bonds Series 2012B. Restrictions: Funds must be expended in accordance with project descriptions in the official Statement for the bond issuance, dated May 30, 2012.
Water Utility	Description: This fund is used to account for the costs of providing water services to the general public on a continuing basis. The intent is to recover costs through user charges and fees.

	Restrictions: The fund is operated in a manner similar to a private business enterprise. Funding must be used to operate, maintain, and improve the water system and cannot be used for other purposes.

IMPORTANT FACTS: CIP FUNDING

- In addition to one-time construction projects, the CIP also includes ongoing maintenance and repair programs and projects. These are typically smaller projects that are expected to last for less than one year.
- The City uses “phased funding” for certain complex or expensive CIP projects. For example, a project will be started when it has sufficient funds to complete planning and design. The remaining funds needed for project completion are shown in the budget as “unidentified funding.” It is anticipated that funding to complete the construction of the project will be identified when it is needed in a future fiscal year. In some cases, funding cannot be identified when needed, resulting in a project being put on hold. The projects are generally shown in the CIP budget as “unfunded or underfunded.”
- Unless additional revenue sources are pursued, the General Fund and Water Enterprise Fund are projected to have annual operating deficits for the foreseeable future. For this reason, Capital Projects in these two categories are funded from the existing CIP fund balance and no new transfers from the General Fund or Water Enterprise Fund are proposed at this time.
- New or expanded infrastructure will frequently increase operations and maintenance costs for the asset-owning department, thus impacting the General Fund.
- The last CIP was adopted in 2012 and over the past several years funding and priorities have shifted dramatically. This is not a complete list of all the capital or infrastructure needs for the City, but the CIP is a planning tool to help guide decision making on capital projects.

PROJECT CATEGORY SUMMARIES

CIVIC

The Civic Improvements category comprises general government projects that focus on constructing or improving existing facilities and buildings. These projects cover all departments and focus on a variety of improvements. Funding for Civic Improvements is comprised of General Fund, grants and special restricted fund such as: the Bocce Fund or the Ryan Library Trust. At this time there is minimal funding in the special restricted funds, and no projects are planned to utilize the special restricted funding sources. The table below summarizes the funding source for Civic projects by fiscal year.

CIVIC FUNDING BY SOURCE							
Funding Source	<u>FY16/17</u>	<u>FY17/18</u>	<u>FY18/19</u>	<u>FY19/20</u>	<u>FY20/21</u>	<u>Total</u>	<u>%</u>
General Fund	\$331,000	\$20,000	\$20,000	\$20,000	\$20,000	\$411,000	100%
Total	\$331,000	\$20,000	\$20,000	\$20,000	\$20,000	\$411,000	100%

Civic improvement projects programmed in the Capital Improvement Plan, 2016-2021 are listed below. A project is only listed if there is funding programmed during Fiscal Year 2016/17 through Fiscal Year 2020/21, or if the project was listed in the current CIP and is being deferred to future years. Projects from prior CIPs that have been completed are listed in Appendix A. Detailed project costs estimates with expenditure plans for each project listed below are included in Appendix B.

CIVIC

PROJECT NUMBER	PROJECT NAME	FY16/17 BUDGET	ESTIMATED EXPENDITURES 2016-2021	TOTAL ESTIMATED PROJECT COSTS	UNFUNDED AMOUNT	NOTES
C-09	Signorelli Barn	\$0	\$0	TBD		The funding for this project has been reallocated to other Civic Projects
C-19	Misc. Building Repairs	\$20,000	\$100,000	\$144,858		
C-46	Softball Lights	\$20,000	\$20,000	\$20,000		
C-62	Library HVAC System*	\$0	\$0			Project was completed in FY15/16
C-69	Library Roof Repairs*	\$0	\$0			Project was completed in FY15/16
C-75	City Hall/Police Facility	\$0	\$0	TBD		Project is unfunded at this time
C-80	Shooting Range Cleanup*	\$0	\$0			Project was completed in FY15/16
C-82	Downtown Restrooms	\$291,000	\$291,000	\$296,000		
Total		\$331,000	\$411,000	\$460,858		

STREETS

The Streets category includes projects that upgrade and maintain pavement, striping, curb and gutter, street lighting, access ramps, sidewalks and storm drain infrastructure. Funding for Streets is comprised of General Fund, Gas Tax, grants, sales tax, Measure T (funding beginning in 2018) and development impact fees. The table below summarizes the funding source for Streets projects by fiscal year.

Streets							
	<u>FY16/17</u>	<u>FY17/18</u>	<u>FY18/19</u>	<u>FY19/20</u>	<u>FY20/21</u>	<u>Total</u>	<u>%</u>
Gas Tax	\$701,665	\$290,000	\$125,000	\$125,000	\$125,000	\$1,366,665	47%
General Fund	\$0	\$0	\$0	\$125,000	\$125,000	\$250,000	9%
Grant-TFCA	\$30,000	\$0	\$0	\$0	\$0	\$30,000	1%
Grant-TDA	\$61,500	\$0	\$0	\$0	\$0	\$61,500	2%
Street Impact Fee	\$8,500	\$0	\$0	\$0	\$0	\$8,500	0%
Measure T	\$0	\$0	\$0	\$600,000	\$600,000	\$1,200,000	41%
Grant-STIP	\$0	\$0	\$0	\$0	\$0	\$0	0%
Total	\$801,665	\$290,000	\$125,000	\$850,000	\$850,000	\$2,916,665	100%

Street improvement projects programmed in the Capital Improvement Plan, 2016-2021 are listed below. A project is only listed if there is funding programmed during Fiscal Year 2016/17 through Fiscal Year 2020/21, or if the project was listed in the current CIP and is being deferred to future years. Projects from prior CIPs that have been completed are listed in Appendix A. Detailed project costs estimates with expenditure plans for each project listed below are included in Appendix B.

STREETS						
PROJECT NUMBER	PROJECT NAME	FY 16/17 BUDGET	ESTIMATED EXPENDITURES 2016-2021	TOTAL ESTIMATED PROJECT COSTS	UNFUNDED AMOUNT	NOTES
R-05	Main Street Mills Lane/Grayson	\$8,500	\$8,500	\$138,340		
R-15	Access Ramps	\$20,000	\$150,000	\$150,000		
R-29	Curb, Gutter & Sidewalk Repair	\$20,000	\$250,000	\$250,000		
R-30	Pope Street Bike Lane	\$33,000	\$33,000	\$43,000		
R-38	Downtown Renaissance		\$0	TBD		
R-73	Hunt Ave & RLS Bike/Ped Improvements	\$0	\$0	\$400,000	\$400,000	Project is unfunded at this time
R-74	2015 Pavement Rehabilitation	\$264,665	\$2,019,665	\$2,039,495		
R-75	Valley View Street Bike Lanes	\$0	\$0	\$25,578		Project is complete
R-76	Mitchell Street Sidewalk	\$10,000	\$10,000	\$126,000		
R-77	Railroad Avenue Curb Ramp	\$61,500	\$61,500	\$61,500		
R-78	2016 Pavement Overlay	\$384,000	\$384,000	\$403,830		
Total		\$801,665	\$2,916,665	\$3,637,743		

WASTEWATER

Wastewater collection and treatment includes projects focused on upgrading and improving the infrastructure of the wastewater system. Many of the improvements that have been identified as maintenance needs were identified through the Sewer System Management Plan (SSMP) updated in 2014. In addition to the needs identified in the SSMP, the City complies with all Regional Water Quality Control Board directives and regulatory permits. Funding for Wastewater is comprised of Wastewater rates (paid by consumers) and development impact fees. Wastewater is an enterprise fund and all improvements are planned to be constructed without General Fund contributions. The table below summarizes the funding source for Wastewater projects by fiscal year.

Wastewater							
	<u>FY16/17</u>	<u>FY17/18</u>	<u>FY18/19</u>	<u>FY19/20</u>	<u>FY20/21</u>	<u>Total</u>	<u>%</u>
Wastewater Utility	\$650,970	\$410,500	\$582,750	\$522,750	\$32,750	\$2,199,720	97%
Wastewater Impact Fee	\$37,800	\$16,500	\$5,250	\$5,250	\$5,250	\$70,050	3%
Bonds	\$0	\$0	\$0	\$0	\$0	\$0	0%
Total	\$688,770	\$427,000	\$588,000	\$528,000	\$38,000	\$2,269,770	100%

Wastewater improvement projects programmed in the Capital Improvement Plan, 2016-2021 are listed below. A project is only listed if there is funding programmed during Fiscal Year 2016/17 through Fiscal Year 2020/21, or if the project was listed in the current CIP and is being deferred to future years. Projects from prior CIPs that have been completed are listed in Appendix A. Detailed project costs estimates with expenditure plans for each project listed below are included in Appendix B.

WASTEWATER

PROJECT NUMBER	PROJECT NAME	FY 16/17 BUDGET	ESTIMATED EXPENDITURES 2016-2021	TOTAL ESTIMATED PROJECT COSTS	UNFUNDED AMOUNT	NOTES
S-09	Recycled Water (Tertiary Treatment)	\$0	\$0		TBD	Project is unfunded at this time
S-16	Misc. Maintenance Projects	\$35,000	\$175,000	\$210,000	\$0	
S-47	Regulatory Compliance Permit Renewal	\$0	\$0			Complete
S-50	Algae Removal Device	\$0	\$0	\$0	\$0	Combined with S-52
S-52	WWTRP Upgrades Phase 1	\$232,108	\$1,382,108	\$1,442,108	\$0	
S-53	Reclamation Field Improvements	\$142,000	\$142,000	\$142,000	\$0	
S-59	Split Pond 3	\$0	\$0	\$0	\$0	Combined with S-52
S-61	Pond 2 & 3 Levee	\$60,000	\$120,000	\$120,000	\$0	
S-62	Automation for Disinfection and Dechlorination	\$0	\$144,000	\$157,000	\$0	
S-64	Oak Avenue Sewer Line Replacement	\$0	\$0		TBD	Project is unfunded at this time
S-65	Improve Solids Management Ponds	\$0	\$0	\$0	\$0	Combined with S-52
S-66	New Well	\$65,000	\$65,000	\$65,000	\$0	
S-67	Sludge Removal	\$75,000	\$150,000	\$150,000	\$0	
S-68	Charter Oak Sewer Repair	\$77,962	\$77,962	\$467,049	\$0	
S-69	Install and Operate Temp WWTRP Office	\$5,000	\$17,000	\$17,000	\$0	
Total		\$692,070	\$2,273,070	\$2,770,157		

WATER

The Water category includes projects that support delivery of water throughout the city, upgrading infrastructure and improvements to existing water system. The City complies with all applicable local, state and federal regulations related to water. Funding for Water is comprised of Water rates (paid by consumers), bonds, grants, and development impact fees. Water is an enterprise fund and all improvements are planned to be constructed without General Fund contributions. The table below summarizes the funding source for Water projects by fiscal year.

Water							
	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Total	%
Water Utility	\$843,186	\$3,389,274	\$641,667	\$0	\$0	\$4,874,126	37%
Water Bond	\$2,109,908	\$747,808	\$120,100	\$0	\$0	\$2,977,816	23%
Water Impact Fee	\$141,900	\$1,300,267	\$316,667	\$0	\$0	\$1,758,833	13%
Unfunded	\$847,888	\$847,887	\$0	\$0	\$0	\$1,695,775	13%
Grants	\$893,938	\$893,938	\$0	\$0	\$0	\$1,787,876	14%
Total	\$4,836,820	\$7,179,173	\$1,078,433	\$0	\$0	\$13,094,426	100%

Water improvement projects programmed in the Capital Improvement Plan, 2016-2021 are listed below. A project is only listed if there is funding programmed during Fiscal Year 2016/17 through Fiscal Year 2020/21, or if the project was listed in the current CIP and is being deferred to future years. Projects from prior CIPs that have been completed are listed in Appendix A. Detailed project costs estimates with expenditure plans for each project listed below are included in Appendix B.

WATER

PROJECT NUMBER	PROJECT NAME	FY 16/17 BUDGET	ESTIMATED EXPENDITURES 2016-2021	TOTAL ESTIMATED PROJECT COSTS	UNFUNDED AMOUNT	NOTES
W-26	York Creek Upper Dam Removal/Mitigation	\$3,737,134	\$6,177,117	\$6,500,000	\$1,695,775	
W-27	Meadowood Tank Upgrade		\$245,100	\$398,948		
W-35	Bell Canyon Reservoir Improvements			TBD	TBD	Unfunded
W-70	Recycled Water Mains			TBD	TBD	Unfunded
W-80	Dwyer Road Booster		\$842,524	\$2,590,000		
W-82	Water Rights and Permitting					Moved to operating budget
W-84	Bell Canyon Intake Mid-Valve Repair	\$44,888	\$44,888	\$287,325		
W-85	Bell Valve House Valve Replacement			\$575,135	\$526,105	Unfunded
W-86	Holmes Tank Upgrade	\$58,000	\$1,383,000	\$1,428,000		
W-90	High Service Pump					Moved to operating budget
W-91	Bell Canyon Creek Inflow Measurement	\$85,000	\$750,000	\$872,645		
W-93	Sludge Handling Program					Moved to operating budget
W-94	Replace Telemetry at LSWTP				TBD	Unfunded
W-95	Influent Valve Actuator				TBD	Unfunded
W-96	Lower Reservoir Water Treatment				TBD	Unfunded
W-97	Raw Water Metering Station				TBD	Unfunded
W-100	VFD Controllers					Moved to operating budget
W-101	Tank 2 Rehabilitation	\$60,000	\$750,000	\$750,000		
W-102	Well Filter Rehabilitation	\$11,103	\$11,103	\$265,541		
W-105	Sludge Handling					Complete
W-106	Pump Station Upgrades		\$200,000	\$200,000		
W-107	Replace 12" Transmission Main				TBD	Unfunded
W-108	Lower York Creek Dam Rehab	\$190,695	\$190,695	\$500,695	\$290,000	
W-109	Bell Canyon Intake Tower Replacement	\$650,000	\$2,000,000	\$2,000,000		
W-110	Upgrade Rutherford Pump Station		\$500,000	\$500,000		
Total		\$4,836,820	\$13,094,427	\$16,868,289		

APPENDIX A – COMPLETED PROJECTS

CIVIC	
C-20	Financial Software
C-26	Wappo Park Restrooms & Path
C-44	Library Capital Repairs (C-30)
C-44	Baldwin Bridge (C-41)
C-50	Skate Park
C-51	Bocce Court
C-61	Impact Fee Study
C-63	R.I.M.S. Extension MDC
C-65	Meily Park
C-66	Fire Truck
C-67	Lyman Park
C-68	Wappo Park-Pope Street Bike Trail
C-70	Police Radio Repeaters
C-72	Financial Software Upgrade
C-73	McCorkle Avenue
C-74	McCullagh Park
C-76	Parks Equipment
C-77	Police Equipment
C-78	Admin Equipment
C-81	FD Vehicle Replacement

STREETS

R-04 Pope Street Bridge Re-Alignment
 R-19 Channelization
 R-32 Replacement Main Street Electroliers
 R-39 Ten-Wheeler Used Dump Truck
 R-40 Radar Speed Check Display Sign
 R-41 Micro-Surfacing
 R-42 Slurry Seal Rehabilitation
 R-44 Solar Message Board
 R-46 Citywide Street Sign Replacement
 R-47 Annual Cracked Seal Maintenance
 R-48 Annual Slurry Seal Maintenance
 R-69 Pope-Starr Lighted Cross Walk
 R-70 Sentinel Street Sweeper Overhaul
 R-71 SH Street Repair/Rehab Project 2013
 R-72 Streets Equipment Replacement

*Projects R-49 through R-68 were identified as individual projects in the previous CIP. As funding becomes available these projects will be grouped as one capital project.

WASTEWATER

S-06 Sulphur Springs Sewer Extension
 S-28 Chlorine Analyzer/SCADA System
 S-30 Pond 2 Walkway
 S-33 Rock Slope Protection & Levee Repair
 S-37 Charter Oak (SS & FM Construction)
 S-38 Main Street Sewer Rehabilitation
 S-41 Brush Aerators
 S-43 WWTP Diffuser Permits
 S-46 Front End Loader
 S-49 Crinella Pump Station
 S-51 Rehabilitation - Pond 1A
 S-54 Security Gate
 S-55 Shop HVAC
 S-56 Radio Repeater/Infrastructure
 S-57 Oak Ave Infrastructure
 S-58 Chlorine Pump
 S-60 Sealing of Pond 1A
 S-63 Sewer Equipment Replacement
 S57-01 Collections Vehicle Replacement Program
 S57-02 Treatment Vehicle Replacement

WATER

W-01	Bale Slough (Rutherford W-28)
W-02	Tank 2 - PAX Mixer
W-08	Pratt Avenue Transmission Bridge
W-12	Community Drive
W-13	Howell Mountain Road
W-28	Rutherford
W-31	Water Treatment Plant Upgrades
W-37	Corp Yard Improvements
W-38	Machinery & Equipment
W-42	SCADA
W-57	WTP Worker Housing
W-62	Water Valve Replacement
W-67	Charter Oak Water Main Replacement
W-69	Stonebridge Well Upgrades
W-83	Tank 1A Design/Construction
W-88	Surge Protection at LSWTP & SBW
W-89	Fixed Gas Chlorine Analyzer
W-98	Toilet Retrofit Program
W-99	Radio Repeater/Infrastructure
W76-01	Distribution Vehicle Replacement Program
W76-02	Treatment Vehicle Replacement Program
W-103	Stonebridge Well Roof
W-104	412 Crystal Springs Road Roof

APPENDIX B – PROJECT DETAILS

DRAFT

CIVIC PROJECTS DETAIL

C-09: SIGNORELLI BARN

Project Name: Signorelli Barn
 Project Number: C09
 Project Description: Restore/rehabilitate barn
 Funding Sources:

Sources	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
General Fund	49,846							
Impact Fee (11.6%)	0							
Total	49,846	0	0	0	0	0	TBD	TBD

Project Cost Estimate:

Elements	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Preliminary Engineering	49,846							
Environmental		0						0
Land/ROW Acquisition								0
Construction Engineering			0	0				0
Construction Contract			0	0				0
Other CIP Costs								0
Total	49,846	0	0	0	0	0	TBD	TBD

C-19: MISCELLANEOUS BUILDING REPAIRS

Project Name: Miscellaneous Building Repairs
 Project Number: C19
 Project Description: Miscellaneous Building Repairs
 Funding Sources:

Sources	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
General Fund	44,858	20,000	20,000	20,000	20,000	20,000		144,858
Total	44,858	20,000	20,000	20,000	20,000	20,000	0	144,858

Project Cost Estimate:

Elements	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Preliminary Engineering								0
Environmental								0
Land/ROW Acquisition								0
Construction Engineering	0	0						0
Construction Contract	0	20,000	20,000	20,000	20,000	20,000	0	100,000
Other CIP Costs	44,858							44,858
Total	44,858	20,000	20,000	20,000	20,000	20,000	0	144,858

CIVIC PROJECTS DETAIL

C-46: SOFTBALL LIGHTS

Project Name: Softball Lights
 Project Number: C46
 Project Description: Softball Lights
 Funding Sources:

Sources	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
General Fund	0	20,000						20,000
Total	0	20,000	0	0	0	0	0	20,000

Project Cost Estimate:

Elements	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Preliminary Engineering								0
Environmental								0
Land/ROW Acquisition								0
Construction Engineering	0	0						0
Construction Contract	0	20,000	0	0	0	0	0	20,000
Other CIP Costs	0							0
Total	0	20,000	0	0	0	0	0	20,000

C-75 CITY HALL/POLICE FACILITY

Project Name: City Hal/Police Facility
 Project Number: C75
 Project Description: Remodel police facility
 Funding Sources:

Sources	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
General Fund	0							0
Water Utility								0
Total	0	0	0	0	0	0	TBD	TBD

Project Cost Estimate:

Elements	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Preliminary Engineering								0
Environmental								0
Land/ROW Acquisition								0
Construction Engineering	0	0						0
Construction Contract	0	0	0	0	0	0		0
Other CIP Costs	0							0
Total	0	0	0	0	0	0	TBD	TBD

CIVIC PROJECTS DETAIL

C-82: DOWNTOWN RESTROOMS

Project Name: Downtown Restrooms
 Project Number: C82
 Project Description: Construct restrooms downtown
 Funding Sources:

Sources	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
General Fund	5,000	291,000						296,000
Total	5,000	291,000	0	0	0	0	0	296,000

Project Cost Estimate:

Elements	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Preliminary Engineering	5,000	48,650						53,650
Environmental								0
Land/ROW Acquisition								0
Construction Engineering		23,000		0				23,000
Construction Contract		219,350		0				219,350
Other CIP Costs								0
Total	5,000	291,000	0	0	0	0	0	296,000

STREET PROJECTS DETAIL

R-05: MAIN STREET AT GRAYSON SIGNALIZATION

Project Name: Main Street at Grayson Traffic Signal
 Project Number: R05
 Project Description: Install 3-way traffic signal at Main Street and Grayson

Funding Sources:

Sources	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
General Fund		0						0
Impact Fee (100%)	138,340	8,500						146,840
State Grants - STIP								0
Total	138,340	8,500	0	0	0	0	0	146,840

Project Cost Estimate:

Elements	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Preliminary Engineering	138,340							138,340
Environmental		8,500						8,500
Land/ROW Acquisition								0
Construction Engineering			0	0				0
Construction Contract			0	0				0
Other CIP Costs								0
Other - TBD								0
Total	138,340	8,500	0	0	0	0	0	146,840

R-15: ACCESS RAMPS UPGRADES

Project Name: Access Ramp Upgrades
 Project Number: R15
 Project Description: Annual installation and replacement of curb ramps to meet accessibility requirements

Funding Sources:

Sources	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Gas Tax Fund		20,000	20,000	20,000	20,000	20,000		100,000
Measure					25,000	25,000		50,000
Total	0	20,000	20,000	20,000	45,000	45,000	0	150,000

Project Cost Estimate:

Elements	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Preliminary Engineering								0
Environmental								0
Land/ROW Acquisition								0
Construction Engineering								0
Construction Contract		20,000	20,000	20,000	45,000	45,000		150,000
Other CIP Costs								0
Other - TBD								0
Total	0	20,000	20,000	20,000	45,000	45,000	0	150,000

STREET PROJECTS DETAIL

R-29: CURB, GUTTER AND SIDEWALK REPAIR

Project Name: Curb, Gutter, Sidewalk Repair
 Project Number: R29
 Project Description: Annual installation and replacement of damaged curb, gutter, and sidewalk
 Funding Sources:

Sources	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Gas Tax Fund		20,000	20,000	20,000	20,000	20,000	0	100,000
Measure					75,000	75,000		150,000
Total	0	20,000	20,000	20,000	95,000	95,000	0	250,000

Project Cost Estimate:

Elements	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Preliminary Engineering								0
Environmental								0
Land/ROW Acquisition								0
Construction Engineering								0
Construction Contract		20,000	20,000	20,000	95,000	95,000		250,000
Other CIP Costs								0
Other - TBD								0
Total	0	20,000	20,000	20,000	95,000	95,000	0	250,000

R-30: POPE STREET BIKE LANES

Project Name: Pope Street Bike Lanes
 Project Number: R30
 Project Description: Install bike lanes on Pope Street
 Funding Sources:

Sources	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY19/20	Future Years	Total
Gas Tax Fund		3,000						3,000
Grant - TFCA	10,000	30,000						40,000
Total	10,000	33,000	0	0	0	0	0	43,000

Project Cost Estimate:

Elements	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY19/20	Future Years	Total
Preliminary Engineering	5,000	3,000						8,000
Environmental	5,000							5,000
Land/ROW Acquisition								0
Construction Engineering		4,500						4,500
Construction Contract		25,500						25,500
Other CIP Costs								0
Other - TBD								0
Total	10,000	33,000	0	0	0	0	0	43,000

STREET PROJECTS DETAIL

R-38 DOWNTOWN RENAISSANCE

Project Name: Downtown Renaissance
 Project Number: R38
 Project Description: Improve pedestrian access downtown
 Funding Sources:

Sources	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Unfunded							TBD	TBD
Total	0	0	0	0	0	0	TBD	TBD

Project Cost Estimate:

Elements	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Preliminary Engineering								TBD
Environmental								TBD
Land/ROW Acquisition								TBD
Construction Engineering								TBD
Construction Contract								TBD
Other CIP Costs								TBD
Other - TBD								TBD
Total	0	0	0	0	0	0	0	TBD

R-73: HUNT AVE & RLS BIKE/PED IMPROVEMENTS

Project Name: Hunt Ave & RLS Bike and Pedestrian Improvements
 Project Number: R73
 Project Description: Construct sidewalk in gaps along Hunt Ave, trail connection to Adams St, and various sidewalks near RLS Middle School
 Funding Sources:

Sources	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Unfunded							400,000	400,000
Total	0	0	0	0	0	0	0	0

Project Cost Estimate:

Elements	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Preliminary Engineering							60,000	60,000
Environmental							10,000	10,000
Land/ROW Acquisition								0
Construction Engineering						0	40,000	40,000
Construction Contract						0	290,000	290,000
Other CIP Costs								0
Other - TBD								0
Total	0	0	0	0	0	0	400,000	400,000

STREET PROJECTS DETAIL

R-74: 2015 PAVEMENT REHABILITATION

Project Name: 2015 Pavement Rehabilitation

Project Number: R74

Project Description: 2015 Slurry Seal Program

Funding Sources:

Sources	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
General Fund		0			125,000	125,000		250,000
Gas Tax Fund	19,830	264,665	250,000	85,000	85,000	85,000		789,495
Measure					500,000	500,000		1,000,000
Total	19,830	264,665	250,000	85,000	710,000	710,000		2,039,495

Project Cost Estimate:

Elements	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Preliminary Engineering	16,830		5,000	30,000	30,000	30,000		111,830
Environmental								0
Land/ROW Acquisition								0
Construction Engineering	3,000	28,450	25,000	8,500	71,000	71,000		206,950
Construction Contract		236,215	220,000	46,500	609,000	609,000		1,720,715
Other CIP Costs								0
Other - TBD								0
Total	19,830	264,665	250,000	85,000	710,000	710,000		2,039,495

R-76: MITCHELL STREET SIDEWALK

Project Name: Mitchell Street Sidewalk

Project Number: R76

Project Description: Construct sidewalk on north side of Mitchell Drive between Oak Avenue and St James Drive

Funding Sources:

Sources	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Gas Tax Fund	18,722							18,722
Grant - TDA-3	97,278	10,000						107,278
Total	116,000	10,000	0	0	0	0	0	126,000

Project Cost Estimate:

Elements	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Preliminary Engineering	14,790	0						14,790
Environmental								0
Land/ROW Acquisition								0
Construction Engineering	10,700							10,700
Construction Contract	90,510	10,000						100,510
Other CIP Costs								0
Other - TBD								0
Total	116,000	10,000	0	0	0	0	0	126,000

STREET PROJECTS DETAIL

R-77: RAILROAD AVE CURB RAMP

Project Name: Railroad Avenue Curb Ramp Upgrade
 Project Number: R77
 Project Description: Remove and construct 6 existing non-compliant ADA curb ramps on Railroad Avenue from Fulton Lane to Hunt Avenue

Funding Sources:

Sources	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Gas Tax Fund		10,000						10,000
Grant - TDA-3		51,500						51,500
Total	0	61,500	0	0	0	0	0	61,500

Project Cost Estimate:

Elements	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Preliminary Engineering		8,000						8,000
Environmental								0
Land/ROW Acquisition								0
Construction Engineering		6,150						6,150
Construction Contract		47,350						47,350
Other CIP Costs								0
Other - TBD								0
Total	0	61,500	0	0	0	0	0	61,500

R-78: 2016 PAVEMENT OVERLAY

Project Name: 2016 Overlay
 Project Number: R78
 Project Description: Overlay Charter Oak Avenue and Allison Avenue

Funding Sources:

Sources	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
General Fund		0						0
Gas Tax Fund	19,830	384,000						403,830
Measure								0
Total	19,830	384,000						403,830

Project Cost Estimate:

Elements	Prior Years	FY16/17					Future Years	Total
Preliminary Engineering	16,830	18,000						34,830
Environmental								0
Land/ROW Acquisition								0
Construction Engineering	3,000	36,000						39,000
Construction Contract		330,000						330,000
Other CIP Costs								0
Other - TBD								0
Total	19,830	384,000	0	0	0	0		403,830

WASTEWATER PROJECTS DETAIL

S-09: RECYCLED WATER (TERTIARY TREATMENT)

Project Name: Recycled Water (Tertiary Treatment)
 Project Number: S09
 Project Description: Create tertiary treatment at the waste water treatment plant
 Funding Sources:

Sources	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Unfunded							TBD	TBD
Total	0	0	0	0	0	0	TBD	TBD

Project Cost Estimate:

Elements	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Preliminary Engineering								TBD
Environmental								TBD
Land/ROW Acquisition								TBD
Construction Engineering								TBD
Construction Contract								TBD
Other CIP Costs								TBD
Other - TBD								TBD
Total	0	0	0	0	0	0	0	TBD

S-16: MISCELLANEOUS MAINTENANCE PROJECTS

Project Name: Misc. Maintenance Projects
 Project Number: S-16
 Project Description: Various Annual Maintenance Projects
 Funding Sources:

Sources	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Wastewater Utility	29,750	29,750	29,750	29,750	29,750	29,750		178,500
Wastewater Impact Fee (15%)	5,250	5,250	5,250	5,250	5,250	5,250		31,500
Total	35,000	35,000	35,000	35,000	35,000	35,000	0	210,000

Project Cost Estimate:

Elements	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Preliminary Engineering	35,000	5,250	5,250	5,250	5,250	5,250		61,250
Environmental								0
Land/ROW Acquisition								0
Construction Engineering								0
Construction Contract		29,750	29,750	29,750	29,750	29,750		148,750
Other CIP Costs								0
Other - TBD								0
Total	35,000	35,000	35,000	35,000	35,000	35,000	0	210,000

WASTEWATER PROJECTS DETAIL

S-52: CONSTRUCT SOLIDS MANAGEMENT PONDS

Project Name: Wastewater Treatment & Reclamation Plant Upgrades Phase 1
Project Number: S-52
Project Description: Feasibility study, work plan, and Phase 1 Improvements as required by CDO Regional Board Order R2-2016-0004 (WFE Improvement Number 1a)

Funding Sources:

Sources	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Wastewater Utility	60,000	232,108	170,000	490,000	490,000			1,442,108
Total	60,000	232,108	170,000	490,000	490,000	0	0	1,442,108

Project Cost Estimate:

Elements	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Preliminary Engineering	60,000	232,108	130,000					422,108
Environmental			40,000					40,000
Land/ROW Acquisition								0
Construction Engineering				40,000	40,000			80,000
Construction Contract				450,000	450,000			900,000
Other CIP Costs								0
Other - TBD								0
Total	60,000	232,108	170,000	490,000	490,000	0	0	1,442,108

S-53: RECLAMATION FIELD IMPROVEMENTS

Project Name: Reclamation fields improvement
Project Number: S-53
Project Description: Improve irrigation facilities in reclamation field

Funding Sources:

Sources	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Wastewater Utility		120,700						120,700
Wastewater Impact Fee (15%)		21,300						21,300
Total	0	142,000	0	0	0	0	0	142,000

Project Cost Estimate:

Elements	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Preliminary Engineering		21,000						21,000
Environmental								0
Land/ROW Acquisition								0
Construction Engineering		11,000						11,000
Construction Contract		110,000						110,000
Other CIP Costs								0
Other - TBD								0
Total	0	142,000	0	0	0	0	0	142,000

WASTEWATER PROJECTS DETAIL

S-61: POND 2 & 3 LEVEE REPAIR

Project Name: Pond 2 & 3 Levee Repair
 Project Number: S-61
 Project Description: Repair levees between ponds and install rock slope protection
 Funding Sources:

Sources	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Wastewater Utility		60,000		60,000				120,000
Total	0	60,000	0	60,000	0	0	0	120,000

Project Cost Estimate:

Elements	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Preliminary Engineering		9,000		9,000				18,000
Environmental								0
Land/ROW Acquisition								0
Construction Engineering		6,000		6,000				12,000
Construction Contract		45,000		45,000				90,000
Other CIP Costs								0
Other - TBD								0
Total	0	60,000	0	60,000	0	0	0	120,000

S-62: AUTOMATION FOR DISINFECTION

Project Name: Automation for Disinfection and Dechlorination
 Project Number: S-62
 Project Description: Automate disinfection and dechlorination facilities per WFE Improvement Number 2
 Funding Sources:

Sources	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Wastewater Utility	13,000		144,000					157,000
Total	13,000	0	144,000	0	0	0	0	157,000

Project Cost Estimate:

Elements	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Preliminary Engineering	6,000		16,500					22,500
Environmental								0
Land/ROW Acquisition								0
Construction Engineering			12,500					12,500
Construction Contract	7,000		115,000					122,000
Other CIP Costs								0
Other - TBD								0
Total	13,000	0	144,000	0	0	0	0	157,000

WASTEWATER PROJECTS DETAIL

S-64: OAK AVENUE SEWER LINE REPLACEMENT

Project Name: Oak Avenue Sewer Line Replacement
 Project Number: S-64
 Project Description: Reconstruct or rehabilitate sewer line in Oak Avenue
 Funding Sources:

Sources	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Wastewater Utility								0
Wastewater Impact Fee (15%)								0
Total	0	0	0	0	0	0	TBD	0

Project Cost Estimate:

Elements	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Preliminary Engineering								0
Environmental								0
Land/ROW Acquisition								0
Construction Engineering								0
Construction Contract								0
Other CIP Costs								0
Other - TBD								0
Total	0	0	0	0	0	0	TBD	0

S-66: NEW WELL

Project Name: New Well
 Project Number: S-66
 Project Description: Install new well at wastewater treatment and reclamation plant
 Funding Sources:

Sources	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Wastewater Utility		65,000						65,000
Total	0	65,000	0	0	0	0	0	65,000

Project Cost Estimate:

Elements	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Preliminary Engineering		10,000						10,000
Environmental								0
Land/ROW Acquisition								0
Construction Engineering		5,000						5,000
Construction Contract		50,000						50,000
Other CIP Costs								0
Other - TBD								0
Total	0	65,000	0	0	0	0	0	65,000

WASTEWATER PROJECTS DETAIL

S-67: SLUDGE REMOVAL

Project Name: Sludge Removal
 Project Number: S-67
 Project Description: Remove accumulated sludge from Ponds 1B and 2
 Funding Sources:

Sources	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Wastewater Utility		63,750	63,750					127,500
Wastewater Impact Fee (15%)		11,250	11,250					22,500
Total	0	75,000	75,000	0	0	0	0	150,000

Project Cost Estimate:

Elements	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Preliminary Engineering		20,000						20,000
Environmental								0
Land/ROW Acquisition								0
Construction Engineering		5,000	10,000					15,000
Construction Contract		50,000	65,000					115,000
Other CIP Costs								0
Other - TBD								0
Total	0	75,000	75,000	0	0	0	0	150,000

S-68: CHARTER OAK SEWER REPAIR

Project Name: Charter Oak Sewer Repair
 Project Number: S-68
 Project Description: Repair failed sewer line at Charter Oak and Highway 29
 Funding Sources:

Sources	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Wastewater Utility	352,633	77,962						430,595
Water Utility	36,454							36,454
Total	389,087	77,962	0	0	0	0	0	467,049

Project Cost Estimate:

Elements	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Preliminary Engineering								0
Environmental								0
Land/ROW Acquisition								0
Construction Engineering	49,783	22,962						72,745
Construction Contract	264,642	55,000						319,642
Other CIP Costs								0
Other - TBD								0
Total	314,425	77,962	0	0	0	0	0	392,387

WASTEWATER PROJECTS DETAIL

S-69: INSTALL AND OPERATE TEMP WWTP OFFICE

Project Name: Install & Operate Temporary WWTRP Office Building

Project Number: S-69

Project Description: Install & Operate Temporary WWTRP Office Building

Funding Sources:

Sources	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Wastewater Utility		5,000	3,000	3,000	3,000	3,000		17,000
Total	0	5,000	3,000	3,000	3,000	3,000	0	17,000

Project Cost Estimate:

Elements	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Preliminary Engineering								0
Environmental								0
Land/ROW Acquisition								0
Construction Engineering								0
Construction Contract		5,000	3,000	3,000	3,000	3,000		17,000
Other CIP Costs								0
Other - TBD								0
Total	0	5,000	3,000	3,000	3,000	3,000	0	17,000

WATER PROJECTS DETAIL

W-26: YORK CREEK UPPER DAM REMOVAL

Project Name: Upper York Creek Dam Removal
 Project Number: W-26
 Project Description: Remove Upper York Creek Dam and restore creek habitat

Funding Sources:

Sources	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Water Bond	322,883	1,995,308	698,158					3,016,349
Unfunded		847,888	847,887					1,695,775
EPA Grant SFBWQIF		493,938	493,938					987,876
Proposition 84		400,000	400,000					800,000
Total	322,883	3,737,134	2,439,983	0	0	0	0	6,500,000

Project Cost Estimate:

Elements	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Preliminary Engineering	322,883	262,123						585,006
Environmental		262,123						262,123
Land/ROW Acquisition								0
Construction Engineering		125,000	125,718					250,718
Construction Contract		3,087,888	2,314,265					5,402,153
Other CIP Costs								0
Other - TBD								0
Total	322,883	3,737,134	2,439,983	0	0	0	0	6,500,000

W-27: MEADOWOOD & HOLMES TANK UPGRADES

Project Name: Meadowood Tank Upgrade
 Project Number: W-27
 Project Description: Replace and upgrade Meadowood Tanks and associated systems

Funding Sources:

Sources	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Water Utility	148,948	0						148,948
Water Impact Fee (50%)				125,000				125,000
Water Bond	4,900			120,100				125,000
Total	153,848	0	0	245,100	0	0	0	398,948

Project Cost Estimate:

Elements	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Preliminary Engineering	153,848			17,100				170,948
Environmental				3,000				3,000
Land/ROW Acquisition								0
Construction Engineering				20,000				20,000
Construction Contract				205,000				205,000
Other CIP Costs								0
Other - TBD								0
Total	153,848	0	0	245,100	0	0	0	398,948

WATER PROJECTS DETAIL

W-35: BELL CANYON RESERVOIR IMPROVEMENTS

Project Name: Bell Canyon Reservoir Improvements
 Project Number: W-35
 Project Description: Dredging to restore storage capacity lost by sediment accumulation

Financial ImpactFunding Sources:

Sources	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Water Utility								
Total	0	0	0	0	0	0	TBD	TBD

Project Cost Estimate:

Elements	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Preliminary Engineering								0
Environmental								0
Land/ROW Acquisition								0
Construction Engineering								0
Construction Contract								0
Other CIP Costs								0
Other - TBD								0
Total	0	0	0	0	0	0	TBD	TBD

W-70: RECYCLED WATER MAINS

Project Name: Recycled Water Mains
 Project Number: W-70
 Project Description: Install recycled water mains in the City

Funding Sources:

Sources	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Water Utility							TBD	TBD
Total	0	0	0	0	0	0	0	0

Project Cost Estimate:

Elements	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Preliminary Engineering								0
Environmental								0
Land/ROW Acquisition								0
Construction Engineering								0
Construction Contract								0
Other CIP Costs								0
Other - TBD							TBD	TBD
Total	0	0	0	0	0	0	0	0

WATER PROJECTS DETAIL

W-80: DWYER ROAD BOOSTER (PUMP STATION)

Project Name: Dwyer Road Pump Station

Project Number: W-80

Project Description: Contribute a fair share contribution to the City of Napa for a pump station to deliver water to St Helena and Calistoga. Project will improve system reliability and increase pressure in the southern end of the system.

Project Status: Project is in preliminary engineering phase. A grant/loan application has been submitted to the State Revolving Fund. City share for engineering phase is \$110,000

Funding Sources:

Sources	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Water Utility			222,524	191,667				414,190
Water Impact Fee (50%)			236,667	191,667				428,333
Water Bond	34,143							34,143
Total	34,143	0	459,190	383,333	0	0	0	876,667

Project Cost Estimate:

Elements	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Preliminary Engineering	102,429		187,571					290,000
Environmental								0
Land/ROW Acquisition								0
Construction Engineering			150,000	150,000				300,000
Construction Contract			1,000,000	1,000,000				2,000,000
Other CIP Costs								0
Other - TBD								0
Total	102,429	0	1,337,571	1,150,000	0	0	0	2,590,000

W-84: BELL CANYON INTAKE MID-VALVE REPAIR

Project Name: Bell Canyon Intake Tower Repair

Project Number: W-84

Project Description: Replace and repair mid-valve on the intake tower

Funding Sources:

Sources	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Water Utility	168,021	44,888						212,909
Water Impact Fee (15%)								0
Water Bond	74,416							74,416
Total	242,437	44,888	0	0	0	0	0	287,325

Project Cost Estimate:

Elements	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Preliminary Engineering	134,079							134,079
Environmental								0
Land/ROW Acquisition								0
Construction Engineering	25,000							25,000
Construction Contract	83,358	44,888						128,246
Other CIP Costs								0
Other - TBD								0
Total	242,437	14,387	0	0	0	0	0	287,325

WATER PROJECTS DETAIL

W-85: BELL VALVE HOUSE IMPROVEMENTS

Project Name: Bell Canyon Valve House Improvements
 Project Number: W-85
 Project Description: Improve valve house at Bell Canyon Reservoir

Funding Sources:

Sources	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Water Utility	49,030						447,189	496,219
Water Impact Fee (15%)							78,916	78,916
Total	49,030	0	0	0	0	0	526,105	575,135

Project Cost Estimate:

Elements	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Preliminary Engineering	49,030						50,000	99,030
Environmental								0
Land/ROW Acquisition								0
Construction Engineering							50,000	50,000
Construction Contract							426,105	426,105
Other CIP Costs								0
Other - TBD								0
Total	49,030	0	0	0	0	0	526,105	575,135

W-86: HOLMES TANK UPGRADE

Project Name: Holmes Tank Upgrade
 Project Number: W-86
 Project Description: Replace and upgrade Holmes Tank and associated systems

Funding Sources:

Sources	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Water Utility	22,500	29,000	662,500					714,000
Water Impact Fee (50%)	22,500	29,000	662,500					714,000
Total	45,000	58,000	1,325,000	0	0	0	0	1,428,000

Project Cost Estimate:

Elements	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Preliminary Engineering	45,000	53,000						98,000
Environmental		5,000						5,000
Land/ROW Acquisition								0
Construction Engineering			125,000					125,000
Construction Contract			1,200,000					1,200,000
Other CIP Costs								0
Other - TBD								0
Total	45,000	58,000	1,325,000	0	0	0	0	1,428,000

WATER PROJECTS DETAIL

W-91: BELL CREEK INFLOW MEASUREMENT

Project Name: Bell Canyon Creek Inflow Measurement
 Project Number: W-91
 Project Description: Install stilling basin and inflow measuring devices

Funding Sources:

Sources	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Water Utility	22,645		550,250					572,895
Water Impact Fee (15%)		12,750	99,750					112,500
Water Bonds	100,000	72,250	15,000					187,250
Total	122,645	85,000	665,000	0	0	0	0	872,645

Project Cost Estimate:

Elements	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Preliminary Engineering	122,645	65,000						187,645
Environmental		20,000						20,000
Land/ROW Acquisition								0
Construction Engineering			60,000					60,000
Construction Contract			605,000					605,000
Other CIP Costs								0
Other - TBD								0
Total	122,645	85,000	665,000	0	0	0	0	872,645

W-94: REPLACE TELEMETRY AT LSWTP

Project Name: Replace Telemetry At LSWTP
 Project Number: W-94
 Project Description:

Funding Sources:

Sources	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Water Utility								
Total	0	0	0	0	0	0	TBD	TBD

Project Cost Estimate:

Elements	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Preliminary Engineering								0
Environmental								0
Land/ROW Acquisition								0
Construction Engineering								0
Construction Contract								0
Other CIP Costs								0
Other - TBD								0
Total	0	0	0	0	0	0	TBD	TBD

WATER PROJECTS DETAIL

W-95: INFLUENT VALVE ACTUATOR

Project Name: Influent Valve Actuator

Project Number: W-95

Project Description:

Funding Sources:

Sources	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Water Utility								
Total	0	0	0	0	0	0	TBD	TBD

Project Cost Estimate:

Elements	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Preliminary Engineering								0
Environmental								0
Land/ROW Acquisition								0
Construction Engineering								0
Construction Contract								0
Other CIP Costs								0
Other - TBD								0
Total	0	0	0	0	0	0	TBD	TBD

W-96: LOWER RESERVOIR WATER TREATMENT

Project Name: Lower Reservoir Water Treatment

Project Number: W-96

Project Description:

Funding Sources:

Sources	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Water Utility								
Total	0	0	0	0	0	0	TBD	TBD

Project Cost Estimate:

Elements	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Preliminary Engineering								0
Environmental								0
Land/ROW Acquisition								0
Construction Engineering								0
Construction Contract								0
Other CIP Costs								0
Other - TBD								0
Total	0	0	0	0	0	0	TBD	TBD

WATER PROJECTS DETAIL

W-97: RAW WATER METERING STATION

Project Name: Raw Water Metering Station

Project Number: W-97

Project Description:

Funding Sources:

Sources	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Water Utility								
Total	0	0	0	0	0	0	TBD	TBD

Project Cost Estimate:

Elements	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Preliminary Engineering								0
Environmental								0
Land/ROW Acquisition								0
Construction Engineering								0
Construction Contract								0
Other CIP Costs								0
Other - TBD								0
Total	0	0	0	0	0	0	TBD	TBD

W-101: TANK 2 REHABILITATION

Project Name: Tank 2 Rehabilitation

Project Number: W-101

Project Description: Rehabilitate Tank 2

Funding Sources:

Sources	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Water Utility		51,000	586,000					637,000
Water Impact Fee (15%)		9,000	104,000					113,000
Total	0	60,000	690,000	0	0	0	0	750,000

Project Cost Estimate:

Elements	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Preliminary Engineering		60,000						60,000
Environmental								0
Land/ROW Acquisition								0
Construction Engineering			69,000					69,000
Construction Contract			621,000					621,000
Other CIP Costs								0
Other - TBD								0
Total	0	60,000	690,000	0	0	0	0	750,000

WATER PROJECTS DETAIL

W-102: WELL FILTER REHABILITATION

Project Name: Well Filter Rehabilitation

Project Number: W-102

Project Description: Rehabilitate well filters

Funding Sources:

Sources	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Water Utility	254,438	11,103						265,541
Total	254,438	11,103	0	0	0	0	0	265,541

Project Cost Estimate:

Elements	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Preliminary Engineering	30,183	0						30,183
Environmental		0						0
Land/ROW Acquisition								0
Construction Engineering	51,304	2,000	0					53,304
Construction Contract	172,951	9,103						182,054
Other CIP Costs								0
Other - TBD								0
Total	254,438	11,103	0	0	0	0	0	265,541

W-106: PUMP STATION UPGRADES

Project Name: Pump Station Upgrades

Project Number: W-106

Project Description: Upgrade existing pump stations to provide backup power. This upgrade is required by the Department of Public Health

Funding Sources:

Sources	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Water Utility			200,000					200,000
Total	0	0	200,000	0	0	0	0	200,000

Project Cost Estimate:

Elements	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Preliminary Engineering			20,000					20,000
Environmental								0
Land/ROW Acquisition								0
Construction Engineering			20,000					20,000
Construction Contract			160,000					160,000
Other CIP Costs								0
Other - TBD								0
Total	0	0	200,000	0	0	0	0	200,000

WATER PROJECTS DETAIL

W-107: REPLACE 12" TRANSMISSION MAIN

Project Name: Replace 12" Transmission Main
 Project Number: W-107
 Project Description: Replace 12" Water Transmission Main from Rutherford Pump Station to City of Napa

Funding Sources:

Sources	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Water Utility								
Total	0	0	0	0	0	0	TBD	TBD

Project Cost Estimate:

Elements	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Preliminary Engineering								0
Environmental								0
Land/ROW Acquisition								0
Construction Engineering								0
Construction Contract								0
Other CIP Costs								0
Other - TBD								0
Total	0	0	0	0	0	0	TBD	TBD

W-108: LOWER YORK CREEK DAM REHAB

Project Name: Lower York Creek Dam Rehab
 Project Number: W-108
 Project Description: Rehab Lower York Creek Dam as required by Division of Dam Safety. Repair 12" diameter gate in the outlet tower, repair 24" diameter spillway gate, geotechnical investigation and stability analysis, seismic stability analysis of intake tower, and survey and rehab 12" dia low level outlet pipe

Funding Sources:

Sources	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Water Utility	20,000	190,695	0				290,000	500,695
Total	20,000	190,695	0	0	0	0	290,000	500,695

Project Cost Estimate:

Elements	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Preliminary Engineering	20,000	145,695						165,695
Environmental								0
Land/ROW Acquisition								0
Construction Engineering							20,000	20,000
Construction Contract		45,000					270,000	315,000
Other CIP Costs								0
Other - TBD								0
Total	20,000	190,695	0	0	0	0	290,000	500,695

WATER PROJECTS DETAIL

W-109: BELL CANYON INTAKE TOWER REPLACEMENT

Project Name: Bell Canyon Intake Tower Replacement

Project Number: W-109

Project Description: Replace intake tower

Funding Sources:

Sources	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY19/20	Future Years	Total
Water Utility		516,500	1,118,000					1,634,500
Water Impact Fee (15%)		91,150	197,350					288,500
Water Bond		42,350	34,650				0	77,000
Total	0	650,000	1,350,000	0	0	0	0	2,000,000

Project Cost Estimate:

Elements	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY19/20	Future Years	Total
Preliminary Engineering		200,000						200,000
Environmental								0
Land/ROW Acquisition								0
Construction Engineering		50,000	150,000					200,000
Construction Contract		400,000	1,200,000					1,600,000
Other CIP Costs								0
Other - TBD								0
Total	0	650,000	1,350,000	0	0	0	0	2,000,000

W-110: UPGRADE RUTHERFORD PUMP STATION

Project Name: Upgrade Rutherford Pump Station

Project Number: W-110

Project Description: Upgrade electrical equipment and install permanent structure

Funding Sources:

Sources	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Water Utility			50,000	450,000				500,000
Water Impact Fee (15%)								0
Water Bond							0	0
Total	0	0	50,000	450,000	0	0	0	500,000

Project Cost Estimate:

Elements	Prior Years	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Future Years	Total
Preliminary Engineering			50,000					50,000
Environmental								0
Land/ROW Acquisition								0
Construction Engineering				60,000				60,000
Construction Contract				390,000				390,000
Other CIP Costs								0
Other - TBD								0
Total	0	0	50,000	450,000	0	0	0	500,000

Open & Public V

A GUIDE TO THE RALPH M. BROWN ACT

REVISED APRIL 2016



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A GUIDE TO THE RALPH M. BROWN ACT
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CHAPTER 1: IT IS THE PEOPLE’S BUSINESS 5

CHAPTER 2: LEGISLATIVE BODIES 11

CHAPTER 3: MEETINGS 17

CHAPTER 4: AGENDAS, NOTICES, AND PUBLIC PARTICIPATION 29

CHAPTER 5: CLOSED SESSIONS 41

CHAPTER 6: REMEDIES 55

TABLE OF CONTENTS

TABLE OF CONTENTS

CHAPTER 1: IT IS THE PEOPLE’S BUSINESS 5

 The right of access 6

 Broad coverage 6

 Narrow exemptions 7

 Public participation in meetings 7

 Controversy 8

 Beyond the law — good business practices.....8

 Achieving balance 9

 Historical note 9

CHAPTER 2: LEGISLATIVE BODIES..... 11

 What is a “legislative body” of a local agency? 12

 What is not a “legislative body” for purposes of the Brown Act? 14

CHAPTER 3: MEETINGS..... 17

 Brown Act meetings..... 18

 Six exceptions to the meeting definition 18

 Collective briefings.....21

 Retreats or workshops of legislative bodies.....21

 Serial meetings.....21

 Informal gatherings 24

 Technological conferencing 24

 Location of meetings.....25

CHAPTER 4: AGENDAS, NOTICES, AND PUBLIC PARTICIPATION 29

 Agendas for regular meetings..... 30

 Mailed agenda upon written request..... 31

 Notice requirements for special meetings 32

 Notices and agendas for adjourned and continued meetings and hearings 32

 Notice requirements for emergency meetings 32

 Notice of compensation for simultaneous or serial meetings 33

 Educational agency meetings 33

 Notice requirements for tax or assessment meetings and hearings..... 33

Non-agenda items 34

Responding to the public 34

The right to attend and observe meetings 35

Records and recordings 36

The public’s place on the agenda 37

CHAPTER 5: CLOSED SESSIONS 41

Agendas and reports..... 42

Litigation..... 43

Real estate negotiations 45

Public employment 46

Labor negotiations 47

Labor negotiations — school and community college districts 48

Other Education Code exceptions 48

Joint Powers Authorities 48

License applicants with criminal records 49

Public security 49

Multijurisdictional law enforcement agency 49

Hospital peer review and trade secrets..... 49

Other legislative bases for closed session..... 50

Who may attend closed sessions 50

The confidentiality of closed session discussions 50

CHAPTER 6: REMEDIES 55

Invalidation 56

Applicability to Past Actions 57

Civil action to prevent future violations..... 57

Costs and attorney’s fees 58

Criminal complaints 58

Voluntary resolution 59





Chapter 1

IT IS THE PEOPLE’S BUSINESS

The right of access..... 6

Broad coverage 6

Narrow exemptions 7

Public participation in meetings 7

Controversy..... 8

Beyond the law — good business practices 8

Achieving balance..... 9

Historical note..... 9

CHAPTER 1: IT IS THE PEOPLE'S BUSINESS

Chapter 1

IT IS THE PEOPLE'S BUSINESS



The right of access

Two key parts of the Brown Act have not changed since its adoption in 1953. One is the Brown Act's initial section, declaring the Legislature's intent:

"In enacting this chapter, the Legislature finds and declares that the public commissions, boards and councils and the other public agencies in this State exist to aid in the conduct of the people's business. It is the intent of the law that their actions be taken openly and that their deliberations be conducted openly."

"The people of this State do not yield their sovereignty to the agencies which serve them. The people, in delegating authority, do not give their public servants the right to decide what is good for the people to know and what is not good for them to know. The people insist on remaining informed so that they may retain control over the instruments they have created."¹

The people reconfirmed that intent 50 years later in the November 2004 election by adopting Proposition 59, amending the California Constitution to include a public right of access to government information:

"The people have the right of access to information concerning the conduct of the people's business, and, therefore, the meetings of public bodies and the writings of public officials and agencies shall be open to public scrutiny."²

The Brown Act's other unchanged provision is a single sentence:

"All meetings of the legislative body of a local agency shall be open and public, and all persons shall be permitted to attend any meeting of the legislative body of a local agency, except as otherwise provided in this chapter."³

That one sentence is by far the most important of the entire Brown Act. If the opening is the soul, that sentence is the heart of the Brown Act.

Broad coverage

The Brown Act covers members of virtually every type of local government body, elected or appointed, decision-making or advisory. Some types of private organizations are covered, as are newly-elected members of a legislative body, even before they take office.

Similarly, meetings subject to the Brown Act are not limited to face-to-face gatherings. They also include any communication medium or device through which a majority of a legislative body

PRACTICE TIP: The key to the Brown Act is a single sentence. In summary, all meetings shall be **open and public** except when the Brown Act authorizes otherwise.

discusses, deliberates or takes action on an item of business outside of a noticed meeting. They include meetings held from remote locations by teleconference.

New communication technologies present new Brown Act challenges. For example, common email practices of forwarding or replying to messages can easily lead to a serial meeting prohibited by the Brown Act, as can participation by members of a legislative body in an internet chatroom or blog dialogue. Communicating during meetings using electronic technology (such as laptop computers, tablets, or smart phones) may create the perception that private communications are influencing the outcome of decisions; some state legislatures have banned the practice. On the other hand, widespread cablecasting and web streaming of meetings has greatly expanded public access to the decision-making process.

Narrow exemptions

The express purpose of the Brown Act is to assure that local government agencies conduct the public's business openly and publicly. Courts and the California Attorney General usually broadly construe the Brown Act in favor of greater public access and narrowly construe exemptions to its general rules.⁴

Generally, public officials should think of themselves as living in glass houses, and that they may only draw the curtains when it is in the public interest to preserve confidentiality. Closed sessions may be held only as specifically authorized by the provisions of the Brown Act itself.

The Brown Act, however, is limited to meetings among a majority of the members of multi-member government bodies when the subject relates to local agency business. It does not apply to independent conduct of individual decision-makers. It does not apply to social, ceremonial, educational, and other gatherings as long as a majority of the members of a body do not discuss issues related to their local agency's business. Meetings of temporary advisory committees — as distinguished from standing committees — made up solely of less than a quorum of a legislative body are not subject to the Brown Act.

The law does not apply to local agency staff or employees, but they may facilitate a violation by acting as a conduit for discussion, deliberation, or action by the legislative body.⁵

The law, on the one hand, recognizes the need of individual local officials to meet and discuss matters with their constituents. On the other hand, it requires — with certain specific exceptions to protect the community and preserve individual rights — that the decision-making process be public. Sometimes the boundary between the two is not easy to draw.

Public participation in meetings

In addition to requiring the public's business to be conducted in open, noticed meetings, the Brown Act also extends to the public the right to participate in meetings. Individuals, lobbyists, and members of the news media possess the right to attend, record, broadcast, and participate in public meetings. The public's participation is further enhanced by the Brown Act's requirement that a meaningful agenda be posted in advance of meetings, by limiting discussion and action to matters listed on the agenda, and by requiring that meeting materials be made available.

Legislative bodies may, however, adopt reasonable regulations on public testimony and the conduct of public meetings, including measures to address disruptive conduct and irrelevant speech.

PRACTICE TIP: Think of the government's house as being made of glass. The curtains may be drawn only to further the public's interest. A local policy on the use of laptop computers, tablets, and smart phones during Brown Act meetings may help avoid problems.

CHAPTER 1: IT IS THE PEOPLE'S BUSINESS

Controversy

Not surprisingly, the Brown Act has been a source of confusion and controversy since its inception. News media and government watchdogs often argue the law is toothless, pointing out that there has never been a single criminal conviction for a violation. They often suspect that closed sessions are being misused.

Public officials complain that the Brown Act makes it difficult to respond to constituents and requires public discussions of items better discussed privately — such as why a particular person should not be appointed to a board or commission. Many elected officials find the Brown Act inconsistent with their private business experiences. Closed meetings can be more efficient; they eliminate grandstanding and promote candor. The techniques that serve well in business — the working lunch, the sharing of information through a series of phone calls or emails, the backroom conversations and compromises — are often not possible under the Brown Act.

As a matter of public policy, California (along with many other states) has concluded that there is more to be gained than lost by conducting public business in the open. Government behind closed doors may well be efficient and business-like, but it may be perceived as unresponsive and untrustworthy.

PRACTICE TIP: Transparency is a foundational value for ethical government practices. The Brown Act is a floor, not a ceiling, for conduct.

Beyond the law — good business practices

Violations of the Brown Act can lead to invalidation of an agency's action, payment of a challenger's attorney fees, public embarrassment, even criminal prosecution. But the Brown Act is a floor, not a ceiling for conduct of public officials. This guide is focused not only on the Brown Act as a minimum standard, but also on meeting practices or activities that, legal or not, are likely

to create controversy. Problems may crop up, for example, when agenda descriptions are too brief or vague, when an informal get-together takes on the appearance of a meeting, when an agency conducts too much of its business in closed session or discusses matters in closed session that are beyond the authorized scope, or when controversial issues arise that are not on the agenda.

The Brown Act allows a legislative body to adopt practices and requirements for greater access to meetings for itself and its subordinate committees and bodies that are more stringent than the law itself requires.⁶ Rather than simply restate the basic requirements of the Brown Act, local open meeting policies should strive to anticipate and prevent problems in areas where the Brown Act does not provide full guidance. As with the adoption of any other significant policy, public comment should be solicited.



A local policy could build on these basic Brown Act goals:

- A legislative body's need to get its business done smoothly;
- The public's right to participate meaningfully in meetings, and to review documents used in decision-making at a relevant point in time;
- A local agency's right to confidentially address certain negotiations, personnel matters, claims and litigation; and
- The right of the press to fully understand and communicate public agency decision-making.

An explicit and comprehensive public meeting and information policy, especially if reviewed periodically, can be an important element in maintaining or improving public relations. Such a policy exceeds the absolute requirements of the law — but if the law were enough, this guide would be unnecessary. A narrow legalistic approach will not avoid or resolve potential controversies. An agency should consider going beyond the law, and look at its unique circumstances and determine if there is a better way to prevent potential problems and promote public trust. At the very least, local agencies need to think about how their agendas are structured in order to make Brown Act compliance easier. They need to plan carefully to make sure public participation fits smoothly into the process.

Achieving balance

The Brown Act should be neither an excuse for hiding the ball nor a mechanism for hindering efficient and orderly meetings. The Brown Act represents a balance among the interests of constituencies whose interests do not always coincide. It calls for openness in local government, yet should allow government to function responsively and productively.

There must be both adequate notice of what discussion and action is to occur during a meeting as well as a normal degree of spontaneity in the dialogue between elected officials and their constituents.

The ability of an elected official to confer with constituents or colleagues must be balanced against the important public policy prohibiting decision-making outside of public meetings.

In the end, implementation of the Brown Act must ensure full participation of the public and preserve the integrity of the decision-making process, yet not stifle government officials and impede the effective and natural operation of government.

Historical note

In late 1951, *San Francisco Chronicle* reporter Mike Harris spent six weeks looking into the way local agencies conducted meetings. State law had long required that business be done in public, but Harris discovered secret meetings or caucuses were common. He wrote a 10-part series on “Your Secret Government” that ran in May and June 1952.

Out of the series came a decision to push for a new state open meeting law. Harris and Richard (Bud) Carpenter, legal counsel for the League of California Cities, drafted such a bill and Assembly Member Ralph M. Brown agreed to carry it. The Legislature passed the bill and Governor Earl Warren signed it into law in 1953.

The Ralph M. Brown Act, known as the Brown Act, has evolved under a series of amendments and court decisions, and has been the model for other open meeting laws — such as the Bagley-Keene Act, enacted in 1967 to cover state agencies.

Assembly Member Brown is best known for the open meeting law that carries his name. He was elected to the Assembly in 1942 and served 19 years, including the last three years as Speaker. He then became an appellate court justice.

PRACTICE TIP: The Brown Act should be viewed as a tool to facilitate the business of local government agencies. Local policies that go beyond the minimum requirements of law may help instill public confidence and avoid problems.

CHAPTER 1: IT IS THE PEOPLE'S BUSINESS

ENDNOTES:

- 1 California Government Code section 54950
- 2 California Constitution, Art. 1, section 3(b)(1)
- 3 California Government Code section 54953(a)
- 4 This principle of broad construction when it furthers public access and narrow construction if a provision limits public access is also stated in the amendment to the State's Constitution adopted by Proposition 59 in 2004. California Constitution, Art. 1, section 3(b)(2).
- 5 California Government Code section 54952.2(b)(2) and (c)(1); *Wolfe v. City of Fremont* (2006) 144 Cal.App.4th 533
- 6 California Government Code section 54953.7

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Chapter 2

LEGISLATIVE BODIES

What is a “legislative body” of a local agency? 12

What is not a “legislative body” for purposes of the Brown Act? 14

CHAPTER 2: LEGISLATIVE BODIES

Chapter 2

LEGISLATIVE BODIES

The Brown Act applies to the legislative bodies of local agencies. It defines “legislative body” broadly to include just about every type of decision-making body of a local agency.¹



What is a “legislative body” of a local agency?

A “legislative body” includes:

- **The “governing body”** of a local agency” and certain of its subsidiary bodies; “or any other local body created by state or federal statute.”² This includes city councils, boards of supervisors, school boards and boards of trustees of special districts. A “local agency” is any city, county, city and county, school district, municipal corporation, successor agency to a redevelopment agency, district, political subdivision or other local public agency.³ A housing authority is a local agency under the Brown Act even though it is created by and is an agent of the state.⁴ The California Attorney General has opined that air pollution control districts and regional open space districts are also covered.⁵ Entities created pursuant to joint powers agreements are also local agencies within the meaning of the Brown Act.⁶

- **Newly-elected members** of a legislative body who have not yet assumed office must conform to the requirements of the Brown Act as if already in office.⁷ Thus, meetings between incumbents and newly-elected members of a legislative body, such as a meeting between two outgoing members and a member-elect of a five-member body, could violate the Brown Act.

PRACTICE TIP: The prudent presumption is that an advisory committee or task force is subject to the Brown Act. Even if one clearly is not, it may want to comply with the Brown Act. Public meetings may reduce the possibility of misunderstandings and controversy.

- Q.** On the morning following the election to a five-member legislative body of a local agency, two successful candidates, neither an incumbent, meet with an incumbent member of the legislative body for a celebratory breakfast. Does this violate the Brown Act?
- A.** *It might, and absolutely would if the conversation turns to agency business. Even though the candidates-elect have not officially been sworn in, the Brown Act applies. If purely a social event, there is no violation but it would be preferable if others were invited to attend to avoid the appearance of impropriety.*

- **Appointed bodies** — whether permanent or temporary, decision-making or advisory — including planning commissions, civil service commissions and other subsidiary committees, boards, and bodies. Volunteer groups, executive search committees, task forces, and blue ribbon committees created by formal action of the governing body are legislative bodies. When the members of two or more legislative bodies are appointed to serve on an entirely separate advisory group, the resulting body may be subject to the

Brown Act. In one reported case, a city council created a committee of two members of the city council and two members of the city planning commission to review qualifications of prospective planning commissioners and make recommendations to the council. The court held that their joint mission made them a legislative body subject to the Brown Act. Had the two committees remained separate; and met only to exchange information and report back to their respective boards, they would have been exempt from the Brown Act.⁸

- **Standing committees** of a legislative body, irrespective of their composition, which have either: (1) a continuing subject matter jurisdiction; or (2) a meeting schedule fixed by charter, ordinance, resolution, or formal action of a legislative body.⁹ Even if it comprises less than a quorum of the governing body, a standing committee is subject to the Brown Act. For example, if a governing body creates long-term committees on budget and finance or on public safety, those are standing committees subject to the Brown Act. Further, according to the California Attorney General, function over form controls. For example, a statement by the legislative body that the advisory committee “shall not exercise continuing subject matter jurisdiction” or the fact that the committee does not have a fixed meeting schedule is not determinative.¹⁰ “Formal action” by a legislative body includes authorization given to the agency’s executive officer to appoint an advisory committee pursuant to agency-adopted policy.¹¹
- The governing body of any **private organization** either: (1) created by the legislative body in order to exercise authority that may lawfully be delegated by such body to a private corporation, limited liability company or other entity; or (2) that receives agency funding and whose governing board includes a member of the legislative body of the local agency appointed by the legislative body as a full voting member of the private entity’s governing board.¹² These include some nonprofit corporations created by local agencies.¹³ If a local agency contracts with a private firm for a service (for example, payroll, janitorial, or food services), the private firm is not covered by the Brown Act.¹⁴ When a member of a legislative body sits on a board of a private organization as a private person and is not appointed by the legislative body, the board will not be subject to the Brown Act. Similarly, when the legislative body appoints someone other than one of its own members to such boards, the Brown Act does not apply. Nor does it apply when a private organization merely receives agency funding.¹⁵

PRACTICE TIP: It can be difficult to determine whether a subcommittee of a body falls into the category of a standing committee or an exempt temporary committee. Suppose a committee is created to explore the renewal of a franchise or a topic of similarly limited scope and duration. Is it an exempt temporary committee or a non-exempt standing committee? The answer may depend on factors such as how meeting schedules are determined, the scope of the committee’s charge, or whether the committee exists long enough to have “continuing jurisdiction.”

Q: The local chamber of commerce is funded in part by the city. The mayor sits on the chamber’s board of directors. Is the chamber board a legislative body subject to the Brown Act?

A: *Maybe. If the chamber’s governing documents require the mayor to be on the board and the city council appoints the mayor to that position, the board is a legislative body. If, however, the chamber board independently appoints the mayor to its board, or the mayor attends chamber board meetings in a purely advisory capacity, it is not.*

Q: If a community college district board creates an auxiliary organization to operate a campus bookstore or cafeteria, is the board of the organization a legislative body?

A: *Yes. But, if the district instead contracts with a private firm to operate the bookstore or cafeteria, the Brown Act would not apply to the private firm.*

- **Certain types of hospital operators.** A lessee of a hospital (or portion of a hospital)

CHAPTER 2: LEGISLATIVE BODIES

first leased under Health and Safety Code subsection 32121(p) after January 1, 1994, which exercises “material authority” delegated to it by a local agency, whether or not such lessee is organized and operated by the agency or by a delegated authority.¹⁶

What is not a “legislative body” for purposes of the Brown Act?

- A temporary advisory committee composed **solely of less than a quorum** of the legislative body that serves a limited or single purpose, that is not perpetual, and that will be dissolved once its specific task is completed is not subject to the Brown Act.¹⁷ Temporary committees are sometimes called *ad hoc* committees, a term not used in the Brown Act. Examples include an advisory committee composed of less than a quorum created to interview candidates for a vacant position or to meet with representatives of other entities to exchange information on a matter of concern to the agency, such as traffic congestion.¹⁸
- Groups advisory to a single decision-maker or appointed by staff are not covered. The Brown Act applies only to committees created by formal action of the legislative body and not to committees created by others. A committee advising a superintendent of schools would not be covered by the Brown Act. However, the same committee, if created by formal action of the school board, would be covered.¹⁹

Q. A member of the legislative body of a local agency informally establishes an advisory committee of five residents to advise her on issues as they arise. Does the Brown Act apply to this committee?

A. *No, because the committee has not been established by formal action of the legislative body.*

Q. During a meeting of the city council, the council directs the city manager to form an advisory committee of residents to develop recommendations for a new ordinance. The city manager forms the committee and appoints its members; the committee is instructed to direct its recommendations to the city manager. Does the Brown Act apply to this committee?

A. *Possibly, because the direction from the city council might be regarded as a formal action of the body notwithstanding that the city manager controls the committee.*

- Individual decision makers who are not elected or appointed members of a legislative body are not covered by the Brown Act. For example, a disciplinary hearing presided over by a department head or a meeting of agency department heads are not subject to the Brown Act since such assemblies are not those of a legislative body.²⁰
- Public employees, each acting individually and not engaging in collective deliberation on a specific issue, such as the drafting and review of an agreement, do not constitute a legislative body under the Brown Act, even if the drafting and review process was established by a legislative body.²¹
- County central committees of political parties are also not Brown Act bodies.²²

ENDNOTES:

1 *Taxpayers for Livable Communities v. City of Malibu* (2005) 126 Cal.App.4th 1123, 1127

- 2 California Government Code section 54952(a) and (b)
- 3 California Government Code section 54951; Health and Safety Code section 34173(g) (successor agencies to former redevelopment agencies subject to the Brown Act). But see Education Code section 35147, which exempts certain school councils and school site advisory committees from the Brown Act and imposes upon them a separate set of rules.
- 4 *Torres v. Board of Commissioners of Housing Authority of Tulare County* (1979) 89 Cal.App.3d 545, 549-550
- 5 71 Ops.Cal.Atty.Gen. 96 (1988); 73 Ops.Cal.Atty.Gen. 1 (1990)
- 6 *McKee v. Los Angeles Interagency Metropolitan Police Apprehension Crime Task Force* (2005) 134 Cal. App.4th 354, 362
- 7 California Government Code section 54952.1
- 8 *Joiner v. City of Sebastopol* (1981) 125 Cal.App.3d 799, 804-805
- 9 California Government Code section 54952(b)
- 10 79 Ops.Cal.Atty.Gen. 69 (1996)
- 11 *Frazer v. Dixon Unified School District* (1993) 18 Cal.App.4th 781, 793
- 12 California Government Code section 54952(c)(1). Regarding private organizations that receive local agency funding, the same rule applies to a full voting member appointed prior to February 9, 1996 who, after that date, is made a non-voting board member by the legislative body. California Government Code section 54952(c)(2)
- 13 California Government Code section 54952(c)(1)(A); *International Longshoremen's and Warehousemen's Union v. Los Angeles Export Terminal, Inc.* (1999) 69 Cal.App.4th 287, 300; *Epstein v. Hollywood Entertainment Dist. II Business Improvement District* (2001) 87 Cal.App.4th 862, 876; see also 85 Ops.Cal.Atty.Gen. 55 (2002)
- 14 *International Longshoremen's and Warehousemen's Union v. Los Angeles Export Terminal* (1999) 69 Cal. App.4th 287, 300 fn. 5
- 15 "The Brown Act, Open Meetings for Local Legislative Bodies," California Attorney General's Office (2003), p. 7
- 16 California Government Code section 54952(d)
- 17 California Government Code section 54952(b); see also *Freedom Newspapers, Inc. v. Orange County Employees Retirement System Board of Directors* (1993) 6 Cal.4th 821, 832.
- 18 *Taxpayers for Livable Communities v. City of Malibu* (2005) 126 Cal.App.4th 1123, 1129
- 19 56 Ops.Cal.Atty.Gen. 14, 16-17 (1973)
- 20 *Wilson v. San Francisco Municipal Railway* (1973) 29 Cal.App.3d 870, 878-879
- 21 *Golightly v. Molina* (2014) 229 Cal.App.4th 1501, 1513
- 22 59 Ops.Cal.Atty.Gen. 162, 164 (1976)

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Chapter 3

MEETINGS

Brown Act meetings 18

Six exceptions to the meeting definition..... 18

Collective briefings..... 21

Retreats or workshops of legislative bodies..... 21

Serial meetings 21

Informal gatherings 24

Technological conferencing 24

Location of meetings 25

Chapter 3

MEETINGS



The Brown Act only applies to meetings of local legislative bodies. The Brown Act defines a meeting as: "... and any congregation of a majority of the members of a legislative body at the same time and location, including teleconference location as permitted by Section 54953, to hear, discuss, deliberate, or take any action on any item that is within the subject matter jurisdiction of the legislative body."¹ The term "meeting" is not limited to gatherings at which action is taken but includes deliberative gatherings as well. A hearing before an individual hearing officer is not a meeting under the Brown Act because it is not a hearing before a legislative body.²

Brown Act meetings

Brown Act meetings include a legislative body's regular meetings, special meetings, emergency meetings, and adjourned meetings.

- **"Regular meetings"** are meetings occurring at the dates, times, and location set by resolution, ordinance, or other formal action by the legislative body and are subject to 72-hour posting requirements.³
- **"Special meetings"** are meetings called by the presiding officer or majority of the legislative body to discuss only discrete items on the agenda under the Brown Act's notice requirements for special meetings and are subject to 24-hour posting requirements.⁴
- **"Emergency meetings"** are a limited class of meetings held when prompt action is needed due to actual or threatened disruption of public facilities and are held on little notice.⁵
- **"Adjourned meetings"** are regular or special meetings that have been adjourned or re-adjourned to a time and place specified in the order of adjournment, with no agenda required for regular meetings adjourned for less than five calendar days as long as no additional business is transacted.⁶

Six exceptions to the meeting definition

The Brown Act creates six exceptions to the meeting definition:⁷

Individual Contacts

The first exception involves individual contacts between a member of the legislative body and any other person. The Brown Act does not limit a legislative body member acting on his or her own. This exception recognizes the right to confer with constituents, advocates, consultants, news reporters, local agency staff, or a colleague.

Individual contacts, however, cannot be used to do in stages what would be prohibited in one step. For example, a series of individual contacts that leads to discussion, deliberation, or action among a majority of the members of a legislative body is prohibited. Such serial meetings are discussed below.

Conferences

The second exception allows a legislative body majority to attend a conference or similar gathering open to the public that addresses issues of general interest to the public or to public agencies of the type represented by the legislative body.

Among other things, this exception permits legislative body members to attend annual association conferences of city, county, school, community college, and other local agency officials, so long as those meetings are open to the public. However, a majority of members cannot discuss among themselves, other than as part of the scheduled program, business of a specific nature that is within their local agency's subject matter jurisdiction.



Community Meetings

The third exception allows a legislative body majority to attend an open and publicized meeting held by another organization to address a topic of local community concern. A majority cannot discuss among themselves, other than as part of the scheduled program, business of a specific nature that is within the legislative body's subject matter jurisdiction. Under this exception, a legislative body majority may attend a local service club meeting or a local candidates' night if the meetings are open to the public.

"I see we have four distinguished members of the city council at our meeting tonight," said the chair of the Environmental Action Coalition. "I wonder if they have anything to say about the controversy over enacting a slow growth ordinance?"

The Brown Act permits a majority of a legislative body to attend and speak at an open and publicized meeting conducted by another organization. The Brown Act may nevertheless be violated if a majority discusses, deliberates, or takes action on an item during the meeting of the other organization. There is a fine line between what is permitted and what is not; hence, members should exercise caution when participating in these types of events.

- Q.** The local chamber of commerce sponsors an open and public candidate debate during an election campaign. Three of the five agency members are up for re-election and all three participate. All of the candidates are asked their views of a controversial project scheduled for a meeting to occur just after the election. May the three incumbents answer the question?
- A.** Yes, because the Brown Act does not constrain the incumbents from expressing their views regarding important matters facing the local agency as part of the political process the same as any other candidates.

CHAPTER 3: MEETINGS

*Other Legislative Bodies*

The fourth exception allows a majority of a legislative body to attend an open and publicized meeting of: (1) another body of the local agency; and (2) a legislative body of another local agency.⁸ Again, the majority cannot discuss among themselves, other than as part of the scheduled meeting, business of a specific nature that is within their subject matter jurisdiction. This exception allows, for example, a city council or a majority of a board of supervisors to attend a controversial meeting of the planning commission.

Nothing in the Brown Act prevents the majority of a legislative body from sitting together at such a meeting. They may choose not to, however, to preclude any possibility of improperly discussing local agency business and to avoid the appearance of a Brown Act violation. Further, aside

from the Brown Act, there may be other reasons, such as due process considerations, why the members should avoid giving public testimony or trying to influence the outcome of proceedings before a subordinate body.

- Q.** The entire legislative body intends to testify against a bill before the Senate Local Government Committee in Sacramento. Must this activity be noticed as a meeting of the body?
- A.** *No, because the members are attending and participating in an open meeting of another governmental body which the public may attend.*
- Q.** The members then proceed upstairs to the office of their local Assembly member to discuss issues of local interest. Must this session be noticed as a meeting and be open to the public?
- A.** *Yes, because the entire body may not meet behind closed doors except for proper closed sessions. The same answer applies to a private lunch or dinner with the Assembly member.*

Standing Committees

The fifth exception authorizes the attendance of a majority at an open and noticed meeting of a standing committee of the legislative body, provided that the legislative body members who are not members of the standing committee attend only as observers (meaning that they cannot speak or otherwise participate in the meeting).⁹

- Q.** The legislative body establishes a standing committee of two of its five members, which meets monthly. A third member of the legislative body wants to attend these meetings and participate. May she?
- A.** *She may attend, but only as an observer; she may not participate.*

Social or Ceremonial Events

The final exception permits a majority of a legislative body to attend a purely social or ceremonial occasion. Once again, a majority cannot discuss business among themselves of a specific nature that is within the subject matter jurisdiction of the legislative body.

Nothing in the Brown Act prevents a majority of members from attending the same football game, party, wedding, funeral, reception, or farewell. The test is not whether a majority of a legislative body attends the function, but whether business of a specific nature within the subject matter jurisdiction of the body is discussed. So long as no such business is discussed, there is no violation of the Brown Act.

Grand Jury Testimony

In addition, members of a legislative body, either individually or collectively, may give testimony in private before a grand jury.¹⁰ This is the equivalent of a seventh exception to the Brown Act's definition of a "meeting."

Collective briefings

None of these exceptions permits a majority of a legislative body to meet together with staff in advance of a meeting for a collective briefing. Any such briefings that involve a majority of the body in the same place and time must be open to the public and satisfy Brown Act meeting notice and agenda requirements.

Retreats or workshops of legislative bodies

Gatherings by a majority of legislative body members at the legislative body's retreats, study sessions, or workshops are covered under the Brown Act. This is the case whether the retreat, study session, or workshop focuses on long-range agency planning, discussion of critical local issues, or team building and group dynamics.¹¹



Q. The legislative body wants to hold a team-building session to improve relations among its members. May such a session be conducted behind closed doors?

A. *No, this is not a proper subject for a closed session, and there is no other basis to exclude the public. Council relations are a matter of public business.*

Serial meetings

One of the most frequently asked questions about the Brown Act involves serial meetings. At any one time, such meetings involve only a portion of a legislative body, but eventually involve a majority. The Brown Act provides that "[a] majority of the members of a legislative body shall not, outside a meeting ... use a series of communications of any kind, directly or through intermediaries, to discuss, deliberate, or take action on any item of business that is within the subject matter jurisdiction of the legislative body."¹² The problem with serial meetings is the process, which deprives the public of an opportunity for meaningful observation of and participation in legislative body decision-making.

CHAPTER 3: MEETINGS

The serial meeting may occur by either a “daisy chain” or a “hub and spoke” sequence. In the daisy chain scenario, Member A contacts Member B, Member B contacts Member C, Member C contacts Member D and so on, until a quorum has discussed, deliberated, or taken action on an item within the legislative body’s subject matter jurisdiction. The hub and spoke process involves at least two scenarios. In the first scenario, Member A (the hub) sequentially contacts Members B, C, and D and so on (the spokes), until a quorum has been contacted. In the second scenario, a staff member (the hub), functioning as an intermediary for the legislative body or one of its members,



communicates with a majority of members (the spokes) one-by-one for for discussion, deliberation, or a decision on a proposed action.¹³ Another example of a serial meeting is when a chief executive officer (the hub) briefs a majority of members (the spokes) prior to a formal meeting and, in the process, information about the members’ respective views is revealed. Each of these scenarios violates the Brown Act.

A legislative body member has the right, if not the duty, to meet with constituents to address their concerns. That member also has the right to confer with a colleague (but not with a majority of the body, counting the member) or appropriate staff about local agency business. An employee or official of a local agency may engage in separate conversations or communications outside of an open and noticed meeting “with members of a legislative body in order to answer questions or provide information regarding a matter that is within the subject matter jurisdiction of

the local agency if that person does not communicate to members of the legislative body the comments or position of any other member or members of the legislative body.”¹⁴

The Brown Act has been violated, however, if several one-on-one meetings or conferences leads to a discussion, deliberation, or action by a majority. In one case, a violation occurred when a quorum of a city council, by a letter that had been circulated among members outside of a formal meeting, directed staff to take action in an eminent domain proceeding.¹⁵

A unilateral written communication to the legislative body, such as an informational or advisory memorandum, does not violate the Brown Act.¹⁶ Such a memo, however, may be a public record.¹⁷

The phone call was from a lobbyist. “Say, I need your vote for that project in the south area. How about it?”

“Well, I don’t know,” replied Board Member Aletto. “That’s kind of a sticky proposition. You sure you need my vote?”

“Well, I’ve got Bradley and Cohen lined up and another vote leaning. With you I’d be over the top.”

Moments later, the phone rings again. “Hey, I’ve been hearing some rumbles on that south area project,” said the newspaper reporter. “I’m counting noses. How are you voting on it?”

Neither the lobbyist nor the reporter has violated the Brown Act, but they are facilitating

a violation. The board member may have violated the Brown Act by hearing about the positions of other board members and indeed coaxing the lobbyist to reveal the other board members' positions by asking "You sure you need my vote?" The prudent course is to avoid such leading conversations and to caution lobbyists, staff, and news media against revealing such positions of others.

The mayor sat down across from the city manager. "From now on," he declared, "I want you to provide individual briefings on upcoming agenda items. Some of this material is very technical, and the council members don't want to sound like idiots asking about it in public. Besides that, briefings will speed up the meeting."

Agency employees or officials may have separate conversations or communications outside of an open and noticed meeting "with members of a legislative body in order to answer questions or provide information regarding a matter that is within the subject matter jurisdiction of the local agency if that person does not communicate to members of the legislative body the comments or position of any other member or members of the legislative body."¹⁸ Members should always be vigilant when discussing local agency business with anyone to avoid conversations that could lead to a discussion, deliberation or action taken among the majority of the legislative body.

"Thanks for the information," said Council Member Kim. "These zoning changes can be tricky, and now I think I'm better equipped to make the right decision."

"Glad to be of assistance," replied the planning director. "I'm sure Council Member Jones is OK with these changes. How are you leaning?"

"Well," said Council Member Kim, "I'm leaning toward approval. I know that two of my colleagues definitely favor approval."

The planning director should not disclose Jones' prospective vote, and Kim should not disclose the prospective votes of two of her colleagues. Under these facts, there likely has been a serial meeting in violation of the Brown Act.

PRACTICE TIP: When briefing legislative body members, staff must exercise care not to disclose other members' views and positions.

- Q.** The agency's website includes a chat room where agency employees and officials participate anonymously and often discuss issues of local agency business. Members of the legislative body participate regularly. Does this scenario present a potential for violation of the Brown Act?
- A.** Yes, because it is a technological device that may serve to allow for a majority of members to discuss, deliberate, or take action on matters of agency business.
- Q.** A member of a legislative body contacts two other members on a five-member body relative to scheduling a special meeting. Is this an illegal serial meeting?
- A.** No, the Brown Act expressly allows a majority of a body to call a special meeting, though the members should avoid discussing the merits of what is to be taken up at the meeting.

CHAPTER 3: MEETINGS

Particular care should be exercised when staff briefings of legislative body members occur by email because of the ease of using the “reply to all” button that may inadvertently result in a Brown Act violation.

Informal gatherings

Often members are tempted to mix business with pleasure — for example, by holding a post-meeting gathering. Informal gatherings at which local agency business is discussed or transacted violate the law if they are not conducted in conformance with the Brown Act.¹⁹ A luncheon gathering in a crowded dining room violates the Brown Act if the public does not have an opportunity to attend, hear, or participate in the deliberations of members.

Thursday at 11:30 a.m., as they did every week, the board of directors of the Dry Gulch Irrigation District trooped into Pop’s Donut Shoppe for an hour of talk and fellowship. They sat at the corner window, fronting on Main and Broadway, to show they had nothing to hide. Whenever he could, the managing editor of the weekly newspaper down the street hurried over to join the board.

A gathering like this would not violate the Brown Act if board members scrupulously avoided talking about irrigation district issues — which might be difficult. This kind of situation should be avoided. The public is unlikely to believe the board members could meet regularly without discussing public business. A newspaper executive’s presence in no way lessens the potential for a violation of the Brown Act.

Q. The agency has won a major victory in the Supreme Court on an issue of importance. The presiding officer decides to hold an impromptu press conference in order to make a statement to the print and broadcast media. All the other members show up in order to make statements of their own and be seen by the media. Is this gathering illegal?

A. *Technically there is no exception for this sort of gathering, but as long as members do not state their intentions as to future action to be taken and the press conference is open to the public, it seems harmless.*



Technological conferencing

Except for certain nonsubstantive purposes, such as scheduling a special meeting, a conference call including a majority of the members of a legislative body is an unlawful meeting. But, in an effort to keep up with information age technologies, the Brown Act specifically allows a legislative body to use any type of teleconferencing to meet, receive public comment and testimony, deliberate, or conduct a closed session.²⁰ While the Brown Act contains specific requirements for conducting a teleconference, the decision to use teleconferencing is entirely discretionary with the body. No person has a right under the Brown Act to have a meeting by teleconference.

“Teleconference” is defined as “a meeting of a legislative body, the members of which are in different locations, connected by electronic means, through either

audio or video, or both.”²¹ In addition to the specific requirements relating to teleconferencing, the meeting must comply with all provisions of the Brown Act otherwise applicable. The Brown Act contains the following teleconferencing requirements:²²

- Teleconferencing may be used for all purposes during any meeting;
- At least a quorum of the legislative body must participate from locations within the local agency’s jurisdiction;
- Additional teleconference locations may be made available for the public;
- Each teleconference location must be specifically identified in the notice and agenda of the meeting, including a full address and room number, as may be applicable;
- Agendas must be posted at each teleconference location, even if a hotel room or a residence;
- Each teleconference location, including a hotel room or residence, must be accessible to the public and have technology, such as a speakerphone, to enable the public to participate;
- The agenda must provide the opportunity for the public to address the legislative body directly at each teleconference location; and
- All votes must be by roll call.

Q. A member on vacation wants to participate in a meeting of the legislative body and vote by cellular phone from her car while driving from Washington, D.C. to New York. May she?

A. *She may not participate or vote because she is not in a noticed and posted teleconference location.*

The use of teleconferencing to conduct a legislative body meeting presents a variety of issues beyond the scope of this guide to discuss in detail. Therefore, before teleconferencing a meeting, legal counsel for the local agency should be consulted.

Location of meetings

The Brown Act generally requires all regular and special meetings of a legislative body, including retreats and workshops, to be held within the boundaries of the territory over which the local agency exercises jurisdiction.²³

An open and publicized meeting of a legislative body may be held outside of agency boundaries if the purpose of the meeting is one of the following:²⁴

- Comply with state or federal law or a court order, or attend a judicial conference or administrative proceeding in which the local agency is a party;
- Inspect real or personal property that cannot be conveniently brought into the local agency’s territory, provided the meeting is limited to items relating to that real or personal property;

Q. The agency is considering approving a major retail mall. The developer has built other similar malls, and invites the entire legislative body to visit a mall outside the jurisdiction. May the entire body go?

A. *Yes, the Brown Act permits meetings outside the boundaries of the agency for specified reasons and inspection of property is one such reason. The field trip must be treated as a meeting and the public must be allowed to attend.*

CHAPTER 3: MEETINGS

- Participate in multiagency meetings or discussions; however, such meetings must be held within the boundaries of one of the participating agencies, and all of those agencies must give proper notice;
- Meet in the closest meeting facility if the local agency has no meeting facility within its boundaries, or meet at its principal office if that office is located outside the territory over which the agency has jurisdiction;
- Meet with elected or appointed federal or California officials when a local meeting would be impractical, solely to discuss a legislative or regulatory issue affecting the local agency and over which the federal or state officials have jurisdiction;
- Meet in or nearby a facility owned by the agency, provided that the topic of the meeting is limited to items directly related to the facility; or
- Visit the office of its legal counsel for a closed session on pending litigation, when to do so would reduce legal fees or costs.²⁵

In addition, the governing board of a school or community college district may hold meetings outside of its boundaries to attend a conference on nonadversarial collective bargaining techniques, interview candidates for school district superintendent, or interview a potential

employee from another district.²⁶ A school board may also interview members of the public residing in another district if the board is considering employing that district's superintendent.

Similarly, meetings of a joint powers authority can occur within the territory of at least one of its member agencies, and a joint powers authority with members throughout the state may meet anywhere in the state.²⁷

Finally, if a fire, flood, earthquake, or other emergency makes the usual meeting place unsafe, the presiding officer can designate another meeting place for the duration of the emergency. News media that have requested notice of meetings must be notified of the designation by the most rapid means of communication available.²⁸

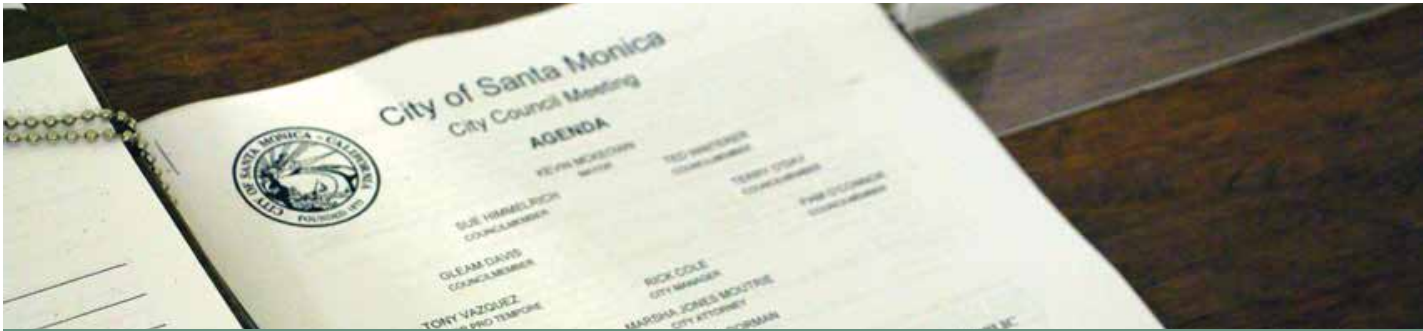


Endnotes:

- 1 California Government Code section 54952.2(a)
- 2 *Wilson v. San Francisco Municipal Railway* (1973) 29 Cal.App.3d 870
- 3 California Government Code section 54954(a)
- 4 California Government Code section 54956
- 5 California Government Code section 54956.5
- 6 California Government Code section 54955
- 7 California Government Code section 54952.2(c)
- 8 California Government Code section 54952.2(c)(4)
- 9 California Government Code section 54952.2(c)(6)
- 10 California Government Code section 54953.1
- 11 “*The Brown Act*,” California Attorney General (2003), p. 10
- 12 California Government Code section 54952.2(b)(1)
- 13 *Stockton Newspaper Inc. v. Redevelopment Agency* (1985) 171 Cal.App.3d 95
- 14 California Government Code section 54952.2(b)(2)
- 15 *Common Cause v. Stirling* (1983) 147 Cal.App.3d 518
- 16 *Roberts v. City of Palmdale* (1993) 5 Cal.4th 363
- 17 California Government Code section 54957.5(a)
- 18 California Government Code section 54952.2(b)(2)
- 19 California Government Code section 54952.2; 43 Ops.Cal.Atty.Gen. 36 (1964)
- 20 California Government Code section 54953(b)(1)
- 21 California Government Code section 54953(b)(4)
- 22 California Government Code section 54953
- 23 California Government Code section 54954(b)
- 24 California Government Code section 54954(b)(1)-(7)
- 25 94 Ops.Cal.Atty.Gen. 15 (2011)
- 26 California Government Code section 54954(c)
- 27 California Government Code section 54954(d)
- 28 California Government Code section 54954(e)

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Chapter 4

AGENDAS, NOTICES, AND PUBLIC PARTICIPATION

Agendas for regular meetings 30

Mailed agenda upon written request 31

Notice requirements for special meetings 32

Notices and agendas for adjourned and continued meetings and hearings 32

Notice requirements for emergency meetings 32

Notice of compensation for simultaneous or serial meetings 33

Educational agency meetings 33

Notice requirements for tax or assessment meetings and hearings 33

Non-agenda items 34

Responding to the public 34

The right to attend and observe meetings 35

Records and recordings 36

The public’s place on the agenda 37

CHAPTER 4: AGENDAS, NOTICES, AND PUBLIC PARTICIPATION

Chapter 4

AGENDAS, NOTICES, AND PUBLIC PARTICIPATION



Effective notice is essential for an open and public meeting. Whether a meeting is open or how the public may participate in that meeting is academic if nobody knows about the meeting.

Agendas for regular meetings

Every regular meeting of a legislative body of a local agency — including advisory committees, commissions, or boards, as well as standing committees of legislative bodies — must be preceded by a posted agenda that advises the public of the meeting and the matters to be transacted or discussed.

The agenda must be posted at least 72 hours before the regular meeting in a location “freely accessible to members of the public.”¹ The courts have not definitively interpreted the “freely accessible” requirement. The California Attorney General has interpreted this

provision to require posting in a location accessible to the public 24 hours a day during the 72-hour period, but any of the 72 hours may fall on a weekend.² This provision may be satisfied by posting on a touch screen electronic kiosk accessible without charge to the public 24 hours a day during the 72-hour period.³ While posting an agenda on an agency’s Internet website will not, by itself, satisfy the “freely accessible” requirement since there is no universal access to the internet, an agency has a supplemental obligation to post the agenda on its website if: (1) the local agency has a website; and (2) the legislative body whose meeting is the subject of the agenda is either (a) a governing body, or (b) has members that are compensated, with one or more members that are also members of a governing body.⁴

Q. May the meeting of a governing body go forward if its agenda was either inadvertently not posted on the city’s website or if the website was not operational during part or all of the 72-hour period preceding the meeting?

A. *At a minimum, the Brown Act calls for “substantial compliance” with all agenda posting requirements, including posting to the agency website.⁵ Should website technical difficulties arise, seek a legal opinion from your agency attorney. The California Attorney General has opined that technical difficulties which cause the website agenda to become inaccessible for a portion of the 72 hours preceding a meeting do not automatically or inevitably lead to a Brown Act violation, provided the agency can demonstrate substantial compliance.⁶ This inquiry requires a fact-specific examination of whether the agency or its legislative body made “reasonably effective efforts to notify interested persons of a public meeting” through online posting and other available means.⁷ The Attorney General’s opinion suggests that this examination would include an evaluation of how long a technical problem persisted, the efforts made to correct the problem or otherwise ensure that the public was informed, and the actual effect the problem had on public*

awareness, among other factors.⁸ The City Attorneys' Department has taken the position that obvious website technical difficulties do not require cancellation of a meeting, provided that the agency meets all other Brown Act posting requirements and the agenda is available on the website once the technical difficulties are resolved.

The agenda must state the meeting time and place and must contain "a brief general description of each item of business to be transacted or discussed at the meeting, including items to be discussed in closed session."⁹ Special care should be taken to describe on the agenda each distinct action to be taken by the legislative body, and avoid overbroad descriptions of a "project" if the "project" is actually a set of distinct actions that must each be separately listed on the agenda.¹⁰

PRACTICE TIP: Putting together a meeting agenda requires careful thought.

Q. The agenda for a regular meeting contains the following items of business:

- Consideration of a report regarding traffic on Eighth Street; and
- Consideration of contract with ABC Consulting.

Are these descriptions adequate?

A. *If the first is, it is barely adequate. A better description would provide the reader with some idea of what the report is about and what is being recommended. The second is not adequate. A better description might read "consideration of a contract with ABC Consulting in the amount of \$50,000 for traffic engineering services regarding traffic on Eighth Street."*

Q. The agenda includes an item entitled City Manager's Report, during which time the city manager provides a brief report on notable topics of interest, none of which are listed on the agenda.

Is this permissible?

A. *Yes, so long as it does not result in extended discussion or action by the body.*

A brief general description may not be sufficient for closed session agenda items. The Brown Act provides safe harbor language for the various types of permissible closed sessions. Substantial compliance with the safe harbor language is recommended to protect legislative bodies and elected officials from legal challenges.

Mailed agenda upon written request

The legislative body, or its designee, must mail a copy of the agenda or, if requested, the entire agenda packet, to any person who has filed a written request for such materials. These copies shall be mailed at the time the agenda is posted. If requested, these materials must be made available in appropriate alternative formats to persons with disabilities.

A request for notice is valid for one calendar year and renewal requests must be filed following January 1 of each year. The legislative body may establish a fee to recover the cost of providing the service. Failure of the requesting person to receive the agenda does not constitute grounds for invalidation of actions taken at the meeting.¹¹



CHAPTER 4: AGENDAS, NOTICES, AND PUBLIC PARTICIPATION

Notice requirements for special meetings

There is no express agenda requirement for special meetings, but the notice of the special meeting effectively serves as the agenda and limits the business that may be transacted or discussed.

Written notice must be sent to each member of the legislative body (unless waived in writing by that member) and to each local newspaper of general circulation, and radio or television station that has requested such notice in writing. This notice must be delivered by personal delivery or any other means that ensures receipt, at least 24 hours before the time of the meeting.



The notice must state the time and place of the meeting, as well as all business to be transacted or discussed. It is recommended that the business to be transacted or discussed be described in the same manner that an item for a regular meeting would be described on the agenda — with a brief general description. As noted above, closed session items should be described in accordance with the Brown Act's safe harbor provisions to protect legislative bodies and elected officials from challenges of noncompliance with notice requirements.

The special meeting notice must also be posted at least 24 hours prior to the special meeting using the same methods as posting an agenda for a regular meeting: (1) at a site that is freely accessible to the public, and (2) on the agency's website if: (1) the local agency has a website; and (2) the legislative body whose meeting is the subject of the agenda is either (a) a governing body, or (b) has members that are compensated, with one or more members that are also members of a governing body.¹²

Notices and agendas for adjourned and continued meetings and hearings

A regular or special meeting can be adjourned and re-adjourned to a time and place specified in the order of adjournment.¹³ If no time is stated, the meeting is continued to the hour for regular meetings. Whoever is present (even if they are less than a quorum) may so adjourn a meeting; if no member of the legislative body is present, the clerk or secretary may adjourn the meeting. If a meeting is adjourned for less than five calendar days, no new agenda need be posted so long as a new item of business is not introduced.¹⁴ A copy of the order of adjournment must be posted within 24 hours after the adjournment, at or near the door of the place where the meeting was held.

A hearing can be continued to a subsequent meeting. The process is the same as for continuing adjourned meetings, except that if the hearing is continued to a time less than 24 hours away, a copy of the order or notice of continuance must be posted immediately following the meeting.¹⁵

Notice requirements for emergency meetings

The special meeting notice provisions apply to emergency meetings, except for the 24-hour notice.¹⁶ News media that have requested written notice of special meetings must be notified by telephone at least one hour in advance of an emergency meeting, and all telephone numbers provided in that written request must be tried. If telephones are not working, the notice requirements are deemed waived. However, the news media must be notified as soon as possible of the meeting and any action taken.

News media may make a practice of having written requests on file for notification of special or emergency meetings. Absent such a request, a local agency has no legal obligation to notify news media of special or emergency meetings — although notification may be advisable in any event to avoid controversy.

Notice of compensation for simultaneous or serial meetings

A legislative body that has convened a meeting and whose membership constitutes a quorum of another legislative body, may convene a simultaneous or serial meeting of the other legislative body only after a clerk or member of the convened legislative body orally announces: (1) the amount of compensation or stipend, if any, that each member will be entitled to receive as a result of convening the meeting of the other legislative body; and (2) that the compensation or stipend is provided as a result of convening the meeting of that body.¹⁷

No oral disclosure of the amount of the compensation is required if the entire amount of such compensation is prescribed by statute and no additional compensation has been authorized by the local agency. Further, no disclosure is required with respect to reimbursements for actual and necessary expenses incurred in the performance of the member's official duties, such as for travel, meals, and lodging.

Educational agency meetings

The Education Code contains some special agenda and special meeting provisions.¹⁸ However, they are generally consistent with the Brown Act. An item is probably void if not posted.¹⁹ A school district board must also adopt regulations to make sure the public can place matters affecting the district's business on meeting agendas and to address the board on those items.²⁰

Notice requirements for tax or assessment meetings and hearings

The Brown Act prescribes specific procedures for adoption by a city, county, special district, or joint powers authority of any new or increased tax or assessment imposed on businesses.²¹ Though written broadly, these Brown Act provisions do not apply to new or increased real property taxes or assessments as those are governed by the California Constitution, Article XIII C or XIII D, enacted by Proposition 218. At least one public meeting must be held to allow public testimony on the tax or assessment. In addition, there must also be at least 45 days notice of a public hearing at which the legislative body proposes to enact or increase the tax or assessment. Notice of the public meeting and public hearing must be provided at the same time and in the same document. The public notice relating to general taxes must be provided by newspaper publication. The public notice relating to new or increased business assessments must be provided through a mailing to all business owners proposed to be subject to the new or increased assessment. The agency may recover the reasonable costs of the public meetings, hearings, and notice.

The Brown Act exempts certain fees, standby or availability charges, recurring assessments, and new or increased assessments that are subject to the notice and hearing requirements of the Constitution.²² As a practical matter, the Constitution's notice requirements have preempted this section of the Brown Act.



CHAPTER 4: AGENDAS, NOTICES, AND PUBLIC PARTICIPATION

Non-agenda items

The Brown Act generally prohibits any action or discussion of items not on the posted agenda. However, there are three specific situations in which a legislative body can act on an item not on the agenda:²³

- When a majority decides there is an “emergency situation” (as defined for emergency meetings);
- When two-thirds of the members present (or all members if less than two-thirds are present) determine there is a need for immediate action and the need to take action “came to the attention of the local agency subsequent to the agenda being posted.” This exception requires a degree of urgency. Further, an item cannot be considered under this provision if the legislative body or the staff knew about the need to take immediate action before the agenda was posted. A new need does not arise because staff forgot to put an item on the agenda or because an applicant missed a deadline; or
- When an item appeared on the agenda of, and was continued from, a meeting held not more than five days earlier.

The exceptions are narrow, as indicated by this list. The first two require a specific determination by the legislative body. That determination can be challenged in court and, if unsubstantiated, can lead to invalidation of an action.

“I’d like a two-thirds vote of the board, so we can go ahead and authorize commencement of phase two of the East Area Project,” said Chair Lopez.

“It’s not on the agenda. But we learned two days ago that we finished phase one ahead of schedule — believe it or not — and I’d like to keep it that way. Do I hear a motion?”

The desire to stay ahead of schedule generally would not satisfy “a need for immediate action.” Too casual an action could invite a court challenge by a disgruntled resident. The prudent course is to place an item on the agenda for the next meeting and not risk invalidation.

“We learned this morning of an opportunity for a state grant,” said the chief engineer at the regular board meeting, “but our application has to be submitted in two days. We’d like the board to give us the go ahead tonight, even though it’s not on the agenda.”

A legitimate immediate need can be acted upon even though not on the posted agenda by following a two-step process:

- First, make two determinations: 1) that there is an immediate need to take action, and 2) that the need arose after the posting of the agenda. The matter is then placed on the agenda.
- Second, discuss and act on the added agenda item.

Responding to the public

The public can talk about anything within the jurisdiction of the legislative body, but the legislative body generally cannot act on or discuss an item not on the agenda. What happens when a member of the public raises a subject not on the agenda?

PRACTICE TIP: Subject to very limited exceptions, the Brown Act prohibits any action or discussion of an item not on the posted agenda.

While the Brown Act does not allow discussion or action on items not on the agenda, it does allow members of the legislative body, or its staff, to “briefly respond” to comments or questions from members of the public, provide a reference to staff or other resources for factual information, or direct staff to place the issue on a future agenda. In addition, even without a comment from the public, a legislative body member or a staff member may ask for information, request a report back, request to place a matter on the agenda for a subsequent meeting (subject to the body’s rules or procedures), ask a question for clarification, make a brief announcement, or briefly report on his or her own activities.²⁴ However, caution should be used to avoid any discussion or action on such items.

Council Member Jefferson: I would like staff to respond to Resident Joe’s complaints during public comment about the repaving project on Elm Street — are there problems with this project?

City Manager Frank: The public works director has prepared a 45-minute power point presentation for you on the status of this project and will give it right now.

Council Member Brown: Take all the time you need; we need to get to the bottom of this. Our residents are unhappy.

It is clear from this dialogue that the Elm Street project was not on the council’s agenda, but was raised during the public comment period for items not on the agenda. Council Member A properly asked staff to respond; the city manager should have given at most a brief response. If a lengthy report from the public works director was warranted, the city manager should have stated that it would be placed on the agenda for the next meeting. Otherwise, both the long report and the likely discussion afterward will improperly embroil the council in a matter that is not listed on the agenda.



The right to attend and observe meetings

A number of Brown Act provisions protect the public’s right to attend, observe, and participate in meetings.

Members of the public cannot be required to register their names, provide other information, complete a questionnaire, or otherwise “fulfill any condition precedent” to attending a meeting. Any attendance list, questionnaire, or similar document posted at or near the entrance to the meeting room or circulated at a meeting must clearly state that its completion is voluntary and that all persons may attend whether or not they fill it out.²⁵

No meeting can be held in a facility that prohibits attendance based on race, religion, color, national origin, ethnic group identification, age, sex, sexual orientation, or disability, or that is inaccessible to the disabled. Nor can a meeting be held where the public must make a payment or purchase in order to be present.²⁶ This does not mean, however, that the public is entitled to free entry to a conference attended by a majority of the legislative body.²⁷

While a legislative body may use teleconferencing in connection with a meeting, the public must be given notice of and access to the teleconference location. Members of the public must be able to address the legislative body from the teleconference location.²⁸

CHAPTER 4: AGENDAS, NOTICES, AND PUBLIC PARTICIPATION

Action by secret ballot, whether preliminary or final, is flatly prohibited.²⁹

All actions taken by the legislative body in open session, and the vote of each member thereon, must be disclosed to the public at the time the action is taken.³⁰

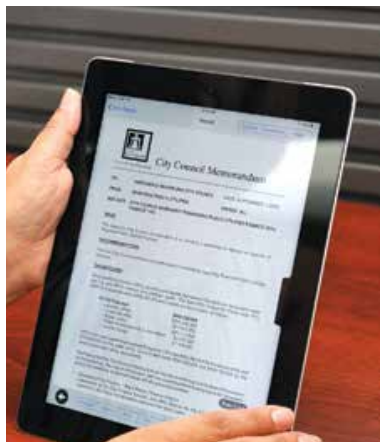
Q: The agenda calls for election of the legislative body's officers. Members of the legislative body want to cast unsigned written ballots that would be tallied by the clerk, who would announce the results. Is this voting process permissible?

A: *No. The possibility that a public vote might cause hurt feelings among members of the legislative body or might be awkward — or even counterproductive — does not justify a secret ballot.*

The legislative body may remove persons from a meeting who willfully interrupt proceedings.³¹ Ejection is justified only when audience members actually disrupt the proceedings.³² If order cannot be restored after ejecting disruptive persons, the meeting room may be cleared. Members of the news media who have not participated in the disturbance must be allowed to continue to attend the meeting. The legislative body may establish a procedure to re-admit an individual or individuals not responsible for the disturbance.³³

Records and recordings

The public has the right to review agendas and other writings distributed by any person to a majority of the legislative body in connection with a matter subject to discussion or consideration at a meeting. Except for privileged documents, those materials are public records and must be made available upon request without delay.³⁴ A fee or deposit as permitted by the California Public Records Act may be charged for a copy of a public record.³⁵



Q: In connection with an upcoming hearing on a discretionary use permit, counsel for the legislative body transmits a memorandum to all members of the body outlining the litigation risks in granting or denying the permit. Must this memorandum be included in the packet of agenda materials available to the public?

A: *No. The memorandum is a privileged attorney-client communication.*

Q: In connection with an agenda item calling for the legislative body to approve a contract, staff submits to all members of the body a financial analysis explaining why the terms of the contract favor the local agency. Must this memorandum be included in the packet of agenda materials available to the public?

A: *Yes. The memorandum has been distributed to the majority of the legislative body, relates to the subject matter of a meeting, and is not a privileged communication.*

A legislative body may discuss or act on some matters without considering written materials. But if writings are distributed to a majority of a legislative body in connection with an agenda item, they must also be available to the public. A non-exempt or otherwise privileged writing distributed to a majority of the legislative body less than 72 hours before the meeting must be made available for inspection at the time of distribution at a public office or location designated for that purpose; and the agendas for all meetings of the legislative body must include the address of this office or location.³⁶ A writing distributed during a meeting must be made public:

- At the meeting if prepared by the local agency or a member of its legislative body; or
- After the meeting if prepared by some other person.³⁷

Any tape or film record of an open and public meeting made for whatever purpose by or at the direction of the local agency is subject to the California Public Records Act; however, it may be erased or destroyed 30 days after the taping or recording. Any inspection of a video or tape recording is to be provided without charge on a video or tape player made available by the local agency.³⁸ The agency may impose its ordinary charge for copies that is consistent with the California Public Records Act.³⁹

In addition, the public is specifically allowed to use audio or video tape recorders or still or motion picture cameras at a meeting to record the proceedings, absent a reasonable finding by the legislative body that noise, illumination, or obstruction of view caused by recorders or cameras would persistently disrupt the proceedings.⁴⁰

Similarly, a legislative body cannot prohibit or restrict the public broadcast of its open and public meetings without making a reasonable finding that the noise, illumination, or obstruction of view would persistently disrupt the proceedings.⁴¹

The public's place on the agenda

Every agenda for a regular meeting must allow members of the public to speak on any item of interest, so long as the item is within the subject matter jurisdiction of the legislative body. Further, the public must be allowed to speak on a specific item of business before or during the legislative body's consideration of it.⁴²

Q. Must the legislative body allow members of the public to show videos or make a power point presentation during the public comment part of the agenda, as long as the subject matter is relevant to the agency and is within the established time limit?

A. *Probably, although the agency is under no obligation to provide equipment.*

Moreover, the legislative body cannot prohibit public criticism of policies, procedures, programs, or services of the agency or the acts or omissions of the legislative body itself. But the Brown Act provides no immunity for defamatory statements.⁴³



PRACTICE TIP: Public speakers cannot be compelled to give their name or address as a condition of speaking. The clerk or presiding officer may request speakers to complete a speaker card or identify themselves for the record, but must respect a speaker's desire for anonymity.

CHAPTER 4: AGENDAS, NOTICES, AND PUBLIC PARTICIPATION

Q. May the presiding officer prohibit a member of the audience from publicly criticizing an agency employee by name during public comments?

A. *No, as long as the criticism pertains to job performance.*

Q. During the public comment period of a regular meeting of the legislative body, a resident urges the public to support and vote for a candidate vying for election to the body. May the presiding officer gavel the speaker out of order for engaging in political campaign speech?

A. *There is no case law on this subject. Some would argue that campaign issues are outside the subject matter jurisdiction of the body within the meaning of Section 54954.3(a). Others take the view that the speech must be allowed under paragraph (c) of that section because it is relevant to the governing of the agency and an implicit criticism of the incumbents.*



The legislative body may adopt reasonable regulations, including time limits, on public comments. Such regulations should be enforced fairly and without regard to speakers' viewpoints. The legislative body has discretion to modify its regulations regarding time limits on public comment if necessary. For example, the time limit could be shortened to accommodate a lengthy agenda or lengthened to allow additional time for discussion on a complicated matter.⁴⁴

The public does not need to be given an opportunity to speak on an item that has already been considered by a committee made up exclusively of members of the legislative body at a public meeting, if all interested members of the public had the opportunity to speak on the item before or during its consideration, and if the item has not been substantially changed.⁴⁵

Notices and agendas for special meetings must also give members of the public the opportunity to speak before or during consideration of an item on the agenda but need not allow members of the public an opportunity to speak on other matters within the jurisdiction of the legislative body.⁴⁶

Endnotes:

- 1 California Government Code section 54954.2(a)(1)
- 2 78 Ops.Cal.Atty.Gen. 327 (1995)
- 3 88 Ops.Cal.Atty.Gen. 218 (2005)
- 4 California Government Code sections 54954.2(a)(1) and 54954.2(d)
- 5 California Government Code section 54960.1(d)(1)
- 6 ___ Ops.Cal.Atty.Gen. ___, No. 14-1204 (January 19, 2016) 16 Cal. Daily Op. Serv. 937 (Cal.A.G.), 2016 WL 375262
- 7 *North Pacifica LLC v. California Coastal Commission* (2008) 166 Cal.App.4th 1416, 1432
- 8 ___ Ops.Cal.Atty.Gen. ___, No. 14-1204 (January 19, 2016) 16 Cal. Daily Op. Serv. 937 (Cal.A.G.), 2016 WL 375262, Slip Op. at p. 8
- 9 California Government Code section 54954.2(a)(1)
- 10 *San Joaquin Raptor Rescue v. County of Merced* (2013) 216 Cal.App.4th 1167 (legislative body's approval of CEQA action (mitigated negative declaration) without specifically listing it on the agenda violates Brown Act, even if the agenda generally describes the development project that is the subject of the CEQA analysis.)

- 11 California Government Code section 54954.1
- 12 California Government Code sections 54956(a) and (c)
- 13 California Government Code section 54955
- 14 California Government Code section 54954.2(b)(3)
- 15 California Government Code section 54955.1
- 16 California Government Code section 54956.5
- 17 California Government Code section 54952.3
- 18 Education Code sections 35144, 35145 and 72129
- 19 *Carlson v. Paradise Unified School District* (1971) 18 Cal.App.3d 196
- 20 California Education Code section 35145.5
- 21 California Government Code section 54954.6
- 22 See Cal.Const.Art.XIIIC, XIIID and California Government Code section 54954.6(h)
- 23 California Government Code section 54954.2(b)
- 24 California Government Code section 54954.2(a)(2)
- 25 California Government Code section 54953.3
- 26 California Government Code section 54961(a); California Government Code section 11135(a)
- 27 California Government Code section 54952.2(c)(2)
- 28 California Government Code section 54953(b)
- 29 California Government Code section 54953(c)
- 30 California Government Code section 54953(c)(2)
- 31 California Government Code section 54957.9.
- 32 *Norse v. City of Santa Cruz* (9th Cir. 2010) 629 F.3d 966 (silent and momentary Nazi salute directed towards mayor is not a disruption); *Acosta v. City of Costa Mesa* (9th Cir. 2013) 718 F.3d 800 (city council may not prohibit “insolent” remarks by members of the public absent actual disruption).
- 33 California Government Code section 54957.9
- 34 California Government Code section 54957.5
- 35 California Government Code section 54957.5(d)
- 36 California Government Code section 54957.5(b)
- 37 California Government Code section 54957.5(c)
- 38 California Government Code section 54953.5(b)
- 39 California Government Code section 54957.5(d)
- 40 California Government Code section 54953.5(a)
- 41 California Government Code section 54953.6
- 42 California Government Code section 54954.3(a)
- 43 California Government Code section 54954.3(c)
- 44 California Government Code section 54954.3(b); *Chaffee v. San Francisco Public Library Com.* (2005) 134 Cal.App.4th 109; 75 Ops.Cal.Atty.Gen. 89 (1992)
- 45 California Government Code section 54954.3(a)
- 46 California Government Code section 54954.3(a)

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Chapter 5

CLOSED SESSIONS

Agendas and reports.....	42
Litigation.....	43
Real estate negotiations	45
Public employment	46
Labor negotiations	47
Labor negotiations — school and community college districts	48
Other Education Code exceptions.....	48
Joint Powers Authorities.....	48
License applicants with criminal records	49
Public security.....	49
Multijurisdictional law enforcement agency	49
Hospital peer review and trade secrets	49
Other legislative bases for closed session	50
Who may attend closed sessions.....	50
The confidentiality of closed session discussions.....	50

CHAPTER 5: CLOSED SESSIONS

Chapter 5

CLOSED SESSIONS

A closed session is a meeting of a legislative body conducted in private without the attendance of the public or press. A legislative body is authorized to meet in closed session only to the extent expressly authorized by the Brown Act.¹



As summarized in Chapter 1 of this Guide, it is clear that the Brown Act must be interpreted liberally in favor of open meetings, and exceptions that limit public access (including the exceptions for closed session meetings) must be narrowly construed.² The most common purposes of the closed session provisions in the Brown Act are to avoid revealing confidential information (e.g., prejudicing the city's position in litigation or compromising the privacy interests of employees). Closed sessions should be conducted keeping those narrow purposes in mind. It is not enough that a subject is sensitive, embarrassing, or controversial. Without specific authority in the Brown Act for a closed session, a matter to be considered by a legislative body must be discussed in public. As an example, a board of police commissioners cannot meet in closed session to provide general policy guidance to a police chief, even though some matters are sensitive and the commission considers their disclosure contrary to the public interest.³

PRACTICE TIP: Some problems over closed sessions arise because secrecy itself breeds distrust. The Brown Act does not require closed sessions and legislative bodies may do well to resist the tendency to call a closed session simply because it may be permitted. A better practice is to go into closed session only when necessary.

In this chapter, the grounds for convening a closed session are called “exceptions” because they are exceptions to the general rule that meetings must be conducted openly. In some circumstances, none of the closed session exceptions apply to an issue or information the legislative body wishes to discuss privately. In these cases, it is not proper to convene a closed session, even to protect confidential information. For example, although the Brown Act does authorize closed sessions related to specified types of contracts (e.g., specified provisions of real property agreements, employee labor agreements, and litigation settlement agreements),⁴ the Brown Act does not authorize closed sessions for other contract negotiations.

Agendas and reports

Closed session items must be briefly described on the posted agenda and the description must state the specific statutory exemption.⁵ An item that appears on the open meeting portion of the agenda may not be taken into closed session until it has been properly agendized as a closed session item or unless it is properly added as a closed session item by a two-thirds vote of the body after making the appropriate urgency findings.⁶

The Brown Act supplies a series of fill in the blank sample agenda descriptions for various types of authorized closed sessions, which provide a “safe harbor” from legal attacks. These sample

agenda descriptions cover license and permit determinations, real property negotiations, existing or anticipated litigation, liability claims, threats to security, public employee appointments, evaluations and discipline, labor negotiations, multi-jurisdictional law enforcement cases, hospital boards of directors, medical quality assurance committees, joint powers agencies, and audits by the California State Auditor's Office.⁷

If the legislative body intends to convene in closed session, it must include the section of the Brown Act authorizing the closed session in advance on the agenda and it must make a public announcement prior to the closed session discussion. In most cases, the announcement may simply be a reference to the agenda item.⁸

Following a closed session, the legislative body must provide an oral or written report on certain actions taken and the vote of every elected member present. The timing and content of the report varies according to the reason for the closed session and the action taken.⁹ The announcements may be made at the site of the closed session, so long as the public is allowed to be present to hear them.

If there is a standing or written request for documentation, any copies of contracts, settlement agreements, or other documents finally approved or adopted in closed session must be provided to the requestor(s) after the closed session, if final approval of such documents does not rest with any other party to the contract or settlement. If substantive amendments to a contract or settlement agreement approved by all parties requires retyping, such documents may be held until retyping is completed during normal business hours, but the substance of the changes must be summarized for any person inquiring about them.¹⁰

The Brown Act does not require minutes, including minutes of closed sessions. However, a legislative body may adopt an ordinance or resolution to authorize a confidential "minute book" be kept to record actions taken at closed sessions.¹¹ If one is kept, it must be made available to members of the legislative body, provided that the member asking to review minutes of a particular meeting was not disqualified from attending the meeting due to a conflict of interest.¹² A court may order the disclosure of minute books for the court's review if a lawsuit makes sufficient claims of an open meeting violation.

Litigation

There is an attorney/client relationship, and legal counsel may use it to protect the confidentiality of privileged written and oral communications to members of the legislative body — outside of meetings. But protection of the attorney/client privilege cannot by itself be the reason for a closed session.¹³

The Brown Act expressly authorizes closed sessions to discuss what is considered pending litigation. The rules that apply to holding a litigation closed session involve complex, technical definitions and procedures. The essential thing to know is that a closed session can be held by the body to confer with, or receive advice from, its legal counsel when open discussion would prejudice the position of the local agency in litigation in which the agency is, or could become, a party.¹⁴ The litigation exception under the Brown Act is narrowly construed and does not permit activities beyond a legislative body's conferring with its own legal counsel and required support staff.¹⁵ For example, it is not permissible to hold a closed session in which settlement negotiations take place between a legislative body, a representative of an adverse party, and a mediator.¹⁶

PRACTICE TIP: Pay close attention to closed session agenda descriptions. Using the wrong label can lead to invalidation of an action taken in closed session if not substantially compliant.

CHAPTER 5: CLOSED SESSIONS

The California Attorney General has opined that if the agency's attorney is not a participant, a litigation closed session cannot be held.¹⁷ In any event, local agency officials should always consult the agency's attorney before placing this type of closed session on the agenda in order to be certain that it is being done properly.

Before holding a closed session under the pending litigation exception, the legislative body must publicly state the basis for the closed session by identifying one of the following three types of matters: existing litigation, anticipated exposure to litigation, or anticipated initiation of litigation.¹⁸

Existing litigation

- Q.** May the legislative body agree to settle a lawsuit in a properly-noticed closed session, without placing the settlement agreement on an open session agenda for public approval?
- A.** *Yes, but the settlement agreement is a public document and must be disclosed on request. Furthermore, a settlement agreement cannot commit the agency to matters that are required to have public hearings.*

Existing litigation includes any adjudicatory proceedings before a court, administrative body exercising its adjudicatory authority, hearing officer, or arbitrator. The clearest situation in which a closed session is authorized is when the local agency meets with its legal counsel to discuss a pending matter that has been filed in a court or with an administrative agency and names the local

agency as a party. The legislative body may meet under these circumstances to receive updates on the case from attorneys, participate in developing strategy as the case develops, or consider alternatives for resolution of the case. Generally, an agreement to settle litigation may be approved in closed session. However, an agreement to settle litigation cannot be approved in closed session if it commits the city to take an action that is required to have a public hearing.¹⁹

Anticipated exposure to litigation against the local agency

Closed sessions are authorized for legal counsel to inform the legislative body of a significant exposure to litigation against the local agency, but only if based on "existing facts and circumstances" as defined by the Brown Act.²⁰ The legislative body may also meet under this exception to determine whether a closed session is authorized based on information provided by legal counsel or staff. In general, the "existing facts and

circumstances" must be publicly disclosed unless they are privileged written communications or not yet known to a potential plaintiff.

Anticipated initiation of litigation by the local agency

A closed session may be held under the exception for the anticipated initiation of litigation when the legislative body seeks legal advice on whether to protect the agency's rights and interests by initiating litigation.

Certain actions must be reported in open session at the same meeting following the closed



session. Other actions, as where final approval rests with another party or the court, may be announced when they become final and upon inquiry of any person.²¹ Each agency attorney should be aware of and make the disclosures that are required by the particular circumstances.

Real estate negotiations

A legislative body may meet in closed session with its negotiator to discuss the purchase, sale, exchange, or lease of real property by or for the local agency. A "lease" includes a lease renewal or renegotiation. The purpose is to grant authority to the legislative body's negotiator on price and terms of payment.²² Caution should be exercised to limit discussion to price and terms of payment without straying to other related issues such as site design, architecture, or other aspects of the project for which the transaction is contemplated.²³



Q. May other terms of a real estate transaction, aside from price and terms of payment, be addressed in closed session?

A. *No. However, there are differing opinions over the scope of the phrase "price and terms of payment" in connection with real estate closed sessions. Many agency attorneys argue that any term that directly affects the economic value of the transaction falls within the ambit of "price and terms of payment." Others take a narrower, more literal view of the phrase.*

The agency's negotiator may be a member of the legislative body itself. Prior to the closed session, or on the agenda, the legislative body must identify its negotiators, the real property that the negotiations may concern²⁴ and the names of the parties with whom its negotiator may negotiate.²⁵

After real estate negotiations are concluded, the approval and substance of the agreement must be publicly reported. If its own approval makes the agreement final, the body must report in open session at the public meeting during which the closed session is held. If final approval rests with another party, the local agency must report the approval and the substance of the agreement upon inquiry by any person, as soon as the agency is informed of it.²⁶

"Our population is exploding, and we have to think about new school sites," said Board Member Jefferson.

"Not only that," interjected Board Member Tanaka, "we need to get rid of a couple of our older facilities."

"Well, obviously the place to do that is in a closed session," said Board Member O'Reilly. "Otherwise we're going to set off land speculation. And if we even mention closing a school, parents are going to be in an uproar."

A closed session to discuss potential sites is not authorized by the Brown Act. The exception is limited to meeting with its negotiator over specific sites — which must be identified at an open and public meeting.

CHAPTER 5: CLOSED SESSIONS

PRACTICE TIP: Discussions of who to appoint to an advisory body and whether or not to censure a fellow member of the legislative body must be held in the open.

Public employment

The Brown Act authorizes a closed session “to consider the appointment, employment, evaluation of performance, discipline, or dismissal of a public employee or to hear complaints or charges brought against the employee.”²⁷ The purpose of this exception — commonly referred to as the “personnel exception” — is to avoid undue publicity or embarrassment for an employee or applicant for employment and to allow full and candid discussion by the legislative body; thus, it is restricted to discussing individuals, not general personnel policies.²⁸ The body must possess the power to appoint, evaluate, or dismiss the employee to hold a closed session under this exception.²⁹ That authority may be delegated to a subsidiary appointed body.³⁰

An employee must be given at least 24 hours notice of any closed session convened to hear specific complaints or charges against him or her. This occurs when the legislative body is reviewing evidence, which could include live testimony, and adjudicating conflicting testimony offered as evidence. A legislative body may examine (or exclude) witnesses,³¹ and the California Attorney General has opined that, when an affected employee and advocate have an official or essential role to play, they may be permitted to participate in the closed session.³² The employee has the right to have the specific complaints and charges discussed in a public session rather than closed session.³³ If the employee is not given the 24-hour prior notice, any disciplinary action is null and void.³⁴

However, an employee is not entitled to notice and a hearing where the purpose of the closed session is to consider a performance evaluation. The Attorney General and the courts have determined that personnel performance evaluations do not constitute complaints and charges, which are more akin to accusations made against a person.³⁵

Q. Must 24 hours notice be given to an employee whose negative performance evaluation is to be considered by the legislative body in closed session?

A. *No, the notice is reserved for situations where the body is to hear complaints and charges from witnesses.*

Correct labeling of the closed session on the agenda is critical. A closed session agenda that identified discussion of an employment contract was not sufficient to allow dismissal of an employee.³⁶ An incorrect agenda description can result in invalidation of an action and much embarrassment.

For purposes of the personnel exception, “employee” specifically includes an officer or an independent contractor who functions as an officer or an employee. Examples of the former include a city manager, district general manager or superintendent. Examples of the latter include a legal counsel or engineer hired on contract to act as local agency attorney or chief engineer.

Elected officials, appointees to the governing body or subsidiary bodies, and independent contractors other than those discussed above are not employees for purposes of the personnel exception.³⁷ Action on individuals who are not “employees” must also be public — including discussing and voting on appointees to committees, or debating the merits of independent contractors, or considering a complaint against a member of the legislative body itself.

The personnel exception specifically prohibits discussion or action on proposed compensation in closed session, except for a disciplinary reduction in pay. Among other things, that means there can be no personnel closed sessions on a salary change (other than a disciplinary reduction) between any unrepresented individual and the legislative body. However, a legislative body may address the compensation of an unrepresented individual, such as a city manager, in a closed session as part of a labor negotiation (discussed later in this chapter), yet another example of the importance of using correct agenda descriptions.

Reclassification of a job must be public, but an employee's ability to fill that job may be considered in closed session.

Any closed session action to appoint, employ, dismiss, accept the resignation of, or otherwise affect the employment status of a public employee must be reported at the public meeting during which the closed session is held. That report must identify the title of the position, but not the names of all persons considered for an employment position.³⁸ However, a report on a dismissal or non-renewal of an employment contract must be deferred until administrative remedies, if any, are exhausted.³⁹

"I have some important news to announce," said Mayor Garcia. "We've decided to terminate the contract of the city manager, effective immediately. The council has met in closed session and we've negotiated six months severance pay."

"Unfortunately, that has some serious budget consequences, so we've had to delay phase two of the East Area Project."

This may be an improper use of the personnel closed session if the council agenda described the item as the city manager's evaluation. In addition, other than labor negotiations, any action on individual compensation must be taken in open session. Caution should be exercised to not discuss in closed session issues, such as budget impacts in this hypothetical, beyond the scope of the posted closed session notice.

Labor negotiations

The Brown Act allows closed sessions for some aspects of labor negotiations. Different provisions (discussed below) apply to school and community college districts.

A legislative body may meet in closed session to instruct its bargaining representatives, which may be one or more of its members,⁴⁰ on employee salaries and fringe benefits for both represented ("union") and non-represented employees. For represented employees, it may also consider working conditions that by law require negotiation. For the purpose of labor negotiation closed sessions, an "employee" includes an officer or an independent contractor who functions as an officer or an employee, but independent contractors who do not serve in the capacity of an officer or employee are not covered by this closed session exception.⁴¹

These closed sessions may take place before or during negotiations with employee representatives. Prior to the closed session, the legislative body must hold an open and public session in which it identifies its designated representatives.

PRACTICE TIP: The personnel exception specifically prohibits discussion or action on proposed compensation in closed session except for a disciplinary reduction in pay.

CHAPTER 5: CLOSED SESSIONS

PRACTICE TIP: Prior to the closed session, the legislative body must hold an open and public session in which it identifies its designated representatives.

During its discussions with representatives on salaries and fringe benefits, the legislative body may also discuss available funds and funding priorities, but only to instruct its representative. The body may also meet in closed session with a conciliator who has intervened in negotiations.⁴²

The approval of an agreement concluding labor negotiations with represented employees must be reported after the agreement is final and has been accepted or ratified by the other party. The report must identify the item approved and the other party or parties to the negotiation.⁴³ The labor closed sessions specifically cannot include final action on proposed compensation of one or more unrepresented employees.

Labor negotiations — school and community college districts

Employee relations for school districts and community college districts are governed by the Rodda Act, where different meeting and special notice provisions apply. The entire board, for example, may negotiate in closed sessions.

Four types of meetings are exempted from compliance with the Rodda Act:

1. A negotiating session with a recognized or certified employee organization;
2. A meeting of a mediator with either side;
3. A hearing or meeting held by a fact finder or arbitrator; and
4. A session between the board and its bargaining agent, or the board alone, to discuss its position regarding employee working conditions and instruct its agent.⁴⁴

Public participation under the Rodda Act also takes another form.⁴⁵ All initial proposals of both sides must be presented at public meetings and are public records. The public must be given reasonable time to inform itself and to express its views before the district may adopt its initial proposal. In addition, new topics of negotiations must be made public within 24 hours. Any votes on such a topic must be followed within 24 hours by public disclosure of the vote of each member.⁴⁶ The final vote must be in public.

Other Education Code exceptions

The Education Code governs student disciplinary meetings by boards of school districts and community college districts. District boards may hold a closed session to consider the suspension or discipline of a student, if a public hearing would reveal personal, disciplinary, or academic information about the student contrary to state and federal pupil privacy law. The student's parent or guardian may request an open meeting.⁴⁷

Community college districts may also hold closed sessions to discuss some student disciplinary matters, awarding of honorary degrees, or gifts from donors who prefer to remain anonymous.⁴⁸ Kindergarten through 12th grade districts may also meet in closed session to review the contents of the statewide assessment instrument.⁴⁹

PRACTICE TIP: Attendance by the entire legislative body before a grand jury would not constitute a closed session meeting under the Brown Act.

Joint Powers Authorities

The legislative body of a joint powers authority may adopt a policy regarding limitations on disclosure of confidential information obtained in closed session, and may meet in closed session to discuss information that is subject to the policy.⁵⁰

License applicants with criminal records

A closed session is permitted when an applicant, who has a criminal record, applies for a license or license renewal and the legislative body wishes to discuss whether the applicant is sufficiently rehabilitated to receive the license. The applicant and the applicant's attorney are authorized to attend the closed session meeting. If the body decides to deny the license, the applicant may withdraw the application. If the applicant does not withdraw, the body must deny the license in public, immediately or at its next meeting. No information from the closed session can be revealed without consent of the applicant, unless the applicant takes action to challenge the denial.⁵¹

Public security

Legislative bodies may meet in closed session to discuss matters posing a threat to the security of public buildings, essential public services, including water, sewer, gas, or electric service, or to the public's right of access to public services or facilities over which the legislative body has jurisdiction. Closed session meetings for these purposes must be held with designated security or law enforcement officials including the Governor, Attorney General, district attorney, agency attorney, sheriff or chief of police, or their deputies or agency security consultant or security operations manager.⁵² Action taken in closed session with respect to such public security issues is not reportable action.



Multijurisdictional law enforcement agency

A joint powers agency formed to provide law enforcement services (involving drugs; gangs; sex crimes; firearms trafficking; felony possession of a firearm; high technology, computer, or identity theft; human trafficking; or vehicle theft) to multiple jurisdictions may hold closed sessions to discuss case records of an on-going criminal investigation, to hear testimony from persons involved in the investigation, and to discuss courses of action in particular cases.⁵³

The exception applies to the legislative body of the joint powers agency and to any body advisory to it. The purpose is to prevent impairment of investigations, to protect witnesses and informants, and to permit discussion of effective courses of action.⁵⁴

Hospital peer review and trade secrets

Two specific kinds of closed sessions are allowed for district hospitals and municipal hospitals, under other provisions of law.⁵⁵

1. A meeting to hear reports of hospital medical audit or quality assurance committees, or for related deliberations. However, an applicant or medical staff member whose staff privileges are the direct subject of a hearing may request a public hearing.
2. A meeting to discuss "reports involving trade secrets" — provided no action is taken.

A "trade secret" is defined as information which is not generally known to the public or competitors and which: 1) "derives independent economic value, actual or potential" by virtue of its restricted knowledge; 2) is necessary to initiate a new hospital service or program or facility; and 3) would, if prematurely disclosed, create a substantial probability of depriving the hospital of a substantial economic benefit.

The provision prohibits use of closed sessions to discuss transitions in ownership or management, or the district's dissolution.⁵⁶

CHAPTER 5: CLOSED SESSIONS



Other legislative bases for closed session

Since any closed session meeting of a legislative body must be authorized by the Legislature, it is important to carefully review the Brown Act to determine if there is a provision that authorizes a closed session for a particular subject matter. There are some less frequently encountered topics that are authorized to be discussed by a legislative body in closed session under the Brown Act, including: a response to a confidential final draft audit report from the Bureau of State Audits,⁵⁷ consideration of the purchase or sale of particular pension fund investments by a legislative body of a local agency that invests pension funds,⁵⁸ hearing a charge or complaint from a member enrolled in a health plan by a legislative body of a local agency that provides Medi-Cal services,⁵⁹ discussions by a county board of supervisors that governs a health plan licensed pursuant to the Knox-Keene Health Care Services Plan Act related to trade secrets or contract negotiations

concerning rates of payment,⁶⁰ and discussions by an insurance pooling joint powers agency related to a claim filed against, or liability of, the agency or a member of the agency.⁶¹

PRACTICE TIP: Meetings are either open or closed. There is nothing “in between.”⁶²

Who may attend closed sessions

Meetings of a legislative body are either fully open or fully closed; there is nothing in between. Therefore, local agency officials and employees must pay particular attention to the authorized attendees for the particular type of closed session. As summarized above, the authorized attendees may differ based on the topic of the closed session. Closed sessions may involve only the members of the legislative body and only agency counsel, management and support staff, and consultants necessary for consideration of the matter that is the subject of closed session, with very limited exceptions for adversaries or witnesses with official roles in particular types of hearings (e.g., personnel disciplinary hearings and license hearings). In any case, individuals who do not have an official role in the closed session subject matters must be excluded from closed sessions.⁶³

Q. May the lawyer for someone suing the agency attend a closed session in order to explain to the legislative body why it should accept a settlement offer?

A. *No, attendance in closed sessions is reserved exclusively for the agency’s advisors.*

The confidentiality of closed session discussions

The Brown Act explicitly prohibits the unauthorized disclosure of confidential information acquired in a closed session by any person present, and offers various remedies to address breaches of confidentiality.⁶⁴ It is incumbent upon all those attending lawful closed sessions to protect the confidentiality of those discussions. One court has held that members of a legislative body cannot be compelled to divulge the content of closed session discussions through the discovery process.⁶⁵ Only the legislative body acting as a body may agree to divulge confidential closed session information; regarding attorney/client privileged communications, the entire body is the holder of the privilege and only the entire body can decide to waive the privilege.⁶⁶

Before adoption of the Brown Act provision specifically prohibiting disclosure of closed session communications, agency attorneys and the Attorney General long opined that officials have a fiduciary duty to protect the confidentiality of closed session discussions. The Attorney General issued an opinion that it is “improper” for officials to disclose information received during a closed session regarding pending litigation,⁶⁷ though the Attorney General has also concluded that a local agency is preempted from adopting an ordinance criminalizing public disclosure of closed session discussions.⁶⁸ In any event, in 2002, the Brown Act was amended to prescribe particular remedies for breaches of confidentiality. These remedies include injunctive relief; and, if the breach is a willful disclosure of confidential information, the remedies include disciplinary action against an employee, and referral of a member of the legislative body to the grand jury.⁶⁹

The duty of maintaining confidentiality, of course, must give way to the responsibility to disclose improper matters or discussions that may come up in closed sessions. In recognition of this public policy, under the Brown Act, a local agency may not penalize a disclosure of information learned during a closed session if the disclosure: 1) is made in confidence to the district attorney or the grand jury due to a perceived violation of law; 2) is an expression of opinion concerning the propriety or legality of actions taken in closed session, including disclosure of the nature and extent of the illegal action; or 3) is information that is not confidential.⁷⁰

The interplay between these possible sanctions and an official’s first amendment rights is complex and beyond the scope of this guide. Suffice it to say that this is a matter of great sensitivity and controversy.

“I want the press to know that I voted in closed session against filing the eminent domain action,” said Council Member Chang.

“Don’t settle too soon,” reveals Council Member Watson to the property owner, over coffee. “The city’s offer coming your way is not our bottom line.”

The first comment to the press may be appropriate if it is a part of an action taken by the City Council in closed session that must be reported publicly.⁷¹ The second comment to the property owner is not — disclosure of confidential information acquired in closed session is expressly prohibited and harmful to the agency.

PRACTICE TIP: There is a strong interest in protecting the confidentiality of proper and lawful closed sessions.

CHAPTER 5: CLOSED SESSIONS

ENDNOTES:

- 1 California Government Code section 54962
- 2 California Constitution, Art. 1, section 3
- 3 61 Ops.Cal.Atty.Gen. 220 (1978); but see California Government Code section 54957.8 (multijurisdictional law enforcement agencies are authorized to meet in closed session to discuss the case records of ongoing criminal investigations, and other related matters).
- 4 California Government Code section 54957.1
- 5 California Government Code section 54954.5
- 6 California Government Code section 54954.2
- 7 California Government Code section 54954.5
- 8 California Government Code sections 54956.9 and 54957.7
- 9 California Government Code section 54957.1(a)
- 10 California Government Code section 54957.1(b)
- 11 California Government Code section 54957.2
- 12 *Hamilton v. Town of Los Gatos* (1989) 213 Cal.App.3d 1050; 2 Cal.Code Regs. section 18707
- 13 *Roberts v. City of Palmdale* (1993) 5 Cal.4th 363
- 14 California Government Code section 54956.9; *Shapiro v. Board of Directors of Center City Development Corp.* (2005) 134 Cal.App.4th 170 (agency must be a party to the litigation).
- 15 82 Ops.Cal.Atty.Gen. 29 (1999)
- 16 *Page v. Miracosta Community College District* (2009) 180 Cal.App.4th 471
- 17 “The Brown Act,” California Attorney General (2003), p. 40
- 18 California Government Code section 54956.9(g)
- 19 *Trancas Property Owners Association v. City of Malibu* (2006) 138 Cal.App.4th 172
- 20 Government Code section 54956.9(e)
- 21 California Government Code section 54957.1
- 22 California Government Code section 54956.8
- 23 *Shapiro v. San Diego City Council* (2002) 96 Cal.App.4th 904; see also 93 Ops.Cal.Atty.Gen. 51 (2010) (redevelopment agency may not convene a closed session to discuss rehabilitation loan for a property already subleased to a loan recipient, even if the loan incorporates some of the sublease terms and includes an operating covenant governing the property); 94 Ops.Cal.Atty.Gen. 82 (2011) (real estate closed session may address form, manner and timing of consideration and other items that cannot be disclosed without revealing price and terms).
- 24 73 Ops.Cal.Atty.Gen. 1 (1990)
- 25 California Government Code sections 54956.8 and 54954.5(b)
- 26 California Government Code section 54957.1(a)(1)
- 27 California Government Code section 54957(b)
- 28 63 Ops.Cal.Atty.Gen. 153 (1980); but see *Duvall v. Board of Trustees* (2000) 93 Cal.App.4th 902 (board may discuss personnel evaluation criteria, process and other preliminary matters in closed session but only if related to the evaluation of a particular employee).
- 29 *Gillespie v. San Francisco Public Library Commission* (1998) 67 Cal.App.4th 1165; 85 Ops.Cal.Atty.Gen. 77 (2002)
- 30 *Gillespie v. San Francisco Public Library Commission* (1998) 67 Cal.App.4th 1165; 80 Ops.Cal.Atty. Gen. 308 (1997). Interviews of candidates to fill a vacant staff position conducted by a temporary committee appointed by the governing body may be done in closed session.

- 31 California Government Code section 54957(b)(3)
- 32 88 Ops.Cal.Atty.Gen. 16 (2005)
- 33 *Morrison v. Housing Authority of the City of Los Angeles* (2003) 107 Cal.App.4th 860
- 34 California Government Code section 54957(b); but see *Bollinger v. San Diego Civil Service Commission* (1999) 71 Cal.App.4th 568 (notice not required for closed session deliberations regarding complaints or charges, when there was a public evidentiary hearing prior to closed session).
- 35 78 Ops.Cal.Atty.Gen. 218 (1995); *Bell v. Vista Unified School District* (2000) 82 Cal.App.4th 672; *Furtado v. Sierra Community College* (1998) 68 Cal.App.4th 876; *Fischer v. Los Angeles Unified School District* (1999) 70 Cal.App.4th 87
- 36 *Moreno v. City of King* (2005) 127 Cal.App.4th 17
- 37 California Government Code section 54957
- 38 *Gillespie v. San Francisco Public Library Commission* (1998) 67 Cal.App.4th 1165
- 39 California Government Code section 54957.1(a)(5)
- 40 California Government Code section 54957.6
- 41 California Government Code section 54957.6(b); see also 98 Ops.Cal.Atty.Gen. 41 (2015) (a project labor agreement between a community college district and workers hired by contractors or subcontractors is not a proper subject of closed session for labor negotiations because the workers are not “employees” of the district).
- 42 California Government Code section 54957.6; and 51 Ops.Cal.Atty.Gen. 201 (1968)
- 43 California Government Code section 54957.1(a)(6)
- 44 California Government Code section 3549.1
- 45 California Government Code section 3540
- 46 California Government Code section 3547
- 47 California Education Code section 48918; but see *Rim of the World Unified School District v. Superior Court* (2003) 104 Cal.App.4th 1393 (Section 48918 preempted by the Federal Family Educational Right and Privacy Act in regard to expulsion proceedings).
- 48 California Education Code section 72122
- 49 California Education Code section 60617
- 50 California Government Code section 54956.96
- 51 California Government Code section 54956.7
- 52 California Government Code section 54957
- 53 *McKee v. Los Angeles Interagency Metropolitan Police Apprehension Crime Task Force* (2005) 134 Cal. App.4th 354
- 54 California Government Code section 54957.8
- 55 California Government Code section 54962
- 56 California Health and Safety Code section 32106
- 57 California Government Code section 54956.75
- 58 California Government Code section 54956.81
- 59 California Government Code section 54956.86
- 60 California Government Code section 54956.87
- 61 California Government Code section 54956.95
- 62 46 Ops.Cal.Atty.Gen. 34 (1965)
- 63 82 Ops.Cal.Atty.Gen. 29 (1999)

CHAPTER 5: CLOSED SESSIONS

- 64 Government Code section 54963
- 65 *Kleitman v. Superior Court* (1999) 74 Cal.App.4th 324, 327; see also California Government Code section 54963.
- 66 *Roberts v. City of Palmdale* (1993) 5 Cal.4th 363
- 67 80 Ops.Cal.Atty.Gen. 231 (1997)
- 68 76 Ops.Cal.Atty.Gen. 289 (1993)
- 69 California Government Code section 54963
- 70 California Government Code section 54963
- 71 California Government Code section 54957.1

Updates to this publication responding to changes in the Brown Act or new court interpretations are available at www.cacities.org/opengovernment. A current version of the Brown Act may be found at www.leginfo.ca.gov.



Chapter 6

REMEDIES

Invalidation.....	56
Applicability to Past Actions	57
Civil action to prevent future violations	57
Costs and attorney’s fees	58
Criminal complaints	58
Voluntary resolution.....	59

Chapter 6

REMEDIES



Certain violations of the Brown Act are designated as misdemeanors, although by far the most commonly used enforcement provisions are those that authorize civil actions to invalidate specified actions taken in violation of the Brown Act and to stop or prevent future violations. Still, despite all the safeguards and remedies to enforce them, it is ultimately impossible for the public to monitor every aspect of public officials' interactions. Compliance ultimately results from regular training and a good measure of self-regulation on the part of public officials. This chapter discusses the remedies available to the public when that self-regulation is ineffective.

Invalidation

Any interested person, including the district attorney, may seek to invalidate certain actions of a legislative body on the ground that they violate the Brown Act.¹ Violations of the Brown Act, however, cannot be invalidated if they involve the following types of actions:

- Those taken in substantial compliance with the law. No Brown Act violation is found when the given notice substantially complies with the Brown Act, even when the notice erroneously cites to the wrong Brown Act section, but adequately advises the public that the Board will meet with legal counsel to discuss potential litigation in closed session;²
- Those involving the sale or issuance of notes, bonds or other indebtedness, or any related contracts or agreements;
- Those creating a contractual obligation, including a contract awarded by competitive bid for other than compensation for professional services, upon which a party has in good faith relied to its detriment;
- Those connected with the collection of any tax; or
- Those in which the complaining party had actual notice at least 72 hours prior to the regular meeting or 24 hours prior to the special meeting, as the case may be, at which the action is taken.

Before filing a court action seeking invalidation, a person who believes that a violation has occurred must send a written "cure or correct" demand to the legislative body. This demand must clearly describe the challenged action and the nature of the claimed violation. This demand must be sent within 90 days of the alleged violation or 30 days if the action was taken in open session but in violation of Section 54954.2, which requires (subject to specific exceptions) that only properly agendaized items are acted on by the governing body during a meeting.³ The legislative body then has up to 30 days to cure and correct its action. If it does not act, any lawsuit must be filed within the next 15 days. The purpose of this requirement is to offer the body an opportunity to consider whether a violation has occurred and to weigh its options before litigation is filed.

Although just about anyone has standing to bring an action for invalidation,⁴ the challenger must show prejudice as a result of the alleged violation.⁵ An action to invalidate fails to state a cause of action against the agency if the body deliberated but did not take an action.⁶

Applicability to Past Actions

Any interested person, including the district attorney, may file a civil action to determine whether past actions of a legislative body occurring on or after January 1, 2013 constitute violations of the Brown Act and are subject to a mandamus, injunction, or declaratory relief action.⁷ Before filing an action, the interested person must, within nine months of the alleged violation of the Brown Act, submit a “cease and desist” letter to the legislative body, clearly describing the past action and the nature of the alleged violation.⁸ The legislative body has 30 days after receipt of the letter to provide an unconditional commitment to cease and desist from the past action.⁹ If the body fails to take any action within the 30-day period or takes an action other than an unconditional commitment, a lawsuit may be filed within 60 days.¹⁰

The legislative body’s unconditional commitment must be approved at a regular or special meeting as a separate item of business and not on the consent calendar.¹¹ The unconditional commitment must be substantially in the form set forth in the Brown Act.¹² No legal action may thereafter be commenced regarding the past action.¹³ However, an action of the legislative body in violation of its unconditional commitment constitutes an independent violation of the Brown Act and a legal action consequently may be commenced without following the procedural requirements for challenging past actions.¹⁴

The legislative body may rescind its prior unconditional commitment by a majority vote of its membership at a regular meeting as a separate item of business not on the consent calendar. At least 30 days written notice of the intended rescission must be given to each person to whom the unconditional commitment was made and to the district attorney. Upon rescission, any interested person may commence a legal action regarding the past actions without following the procedural requirements for challenging past actions.¹⁵

Civil action to prevent future violations

The district attorney or any interested person can file a civil action asking the court to:

- Stop or prevent violations or threatened violations of the Brown Act by members of the legislative body of a local agency;
- Determine the applicability of the Brown Act to actions or threatened future action of the legislative body;
- Determine whether any rule or action by the legislative body to penalize or otherwise discourage the expression of one or more of its members is valid under state or federal law; or
- Compel the legislative body to tape record its closed sessions.

PRACTICE TIP: A lawsuit to invalidate must be preceded by a demand to cure and correct the challenged action in order to give the legislative body an opportunity to consider its options. The Brown Act does not specify how to cure or correct a violation; the best method is to rescind the action being complained of and start over, or reaffirm the action if the local agency relied on the action and rescinding the action would prejudice the local agency.

CHAPTER 6: REMEDIES



It is not necessary for a challenger to prove a past pattern or practice of violations by the local agency in order to obtain injunctive relief. A court may presume when issuing an injunction that a single violation will continue in the future where the public agency refuses to admit to the alleged violation or to renounce or curtail the practice.¹⁶ Note, however, that a court may not compel elected officials to disclose their recollections of what transpired in a closed session.¹⁷

Upon finding a violation of the Brown Act pertaining to closed sessions, a court may compel the legislative body to tape record its future closed sessions. In a subsequent lawsuit to enforce the Brown Act alleging a violation occurring in closed session, a court may upon motion of the plaintiff review the tapes if there is good cause to think the Brown Act has been violated, and make public the relevant portion of the closed session recording.

Costs and attorney's fees

Someone who successfully invalidates an action taken in violation of the Brown Act or who successfully enforces one of the Brown Act's civil remedies may seek court costs and reasonable attorney's fees. Courts have held that attorney's fees must be awarded to a successful plaintiff unless special circumstances exist that would make a fee award against the public agency unjust.¹⁸ When evaluating how to respond to assertions that the Brown Act has been violated, elected officials and their lawyers should assume that attorney's fees will be awarded against the agency if a violation of the Act is proven.

An attorney's fee award may only be directed against the local agency and not the individual members of the legislative body. If the local agency prevails, it may be awarded court costs and attorney's fees if the court finds the lawsuit was clearly frivolous and lacking in merit.¹⁹

Criminal complaints

A violation of the Brown Act by a member of the legislative body who acts with the improper intent described below is punishable as a misdemeanor.²⁰

A criminal violation has two components. The first is that there must be an overt act — a member of a legislative body must attend a meeting at which action is taken in violation of the Brown Act.²¹

"Action taken" is not only an actual vote, but also a collective decision, commitment or promise by a majority of the legislative body to make a positive or negative decision.²² If the meeting involves mere deliberation without the taking of action, there can be no misdemeanor penalty.

A violation occurs for a tentative as well as final decision.²³ In fact, criminal liability is triggered by a member's participation in a meeting in violation of the Brown Act — not whether that member has voted with the majority or minority, or has voted at all.

The second component of a criminal violation is that action is taken with the intent of a member "to deprive the public of information to which the member knows or has reason to know the public is entitled" by the Brown Act.²⁴

PRACTICE TIP: Attorney's fees will likely be awarded if a violation of the Brown Act is proven.

As with other misdemeanors, the filing of a complaint is up to the district attorney. Although criminal prosecutions of the Brown Act are uncommon, district attorneys in some counties aggressively monitor public agencies' adherence to the requirements of the law.

Some attorneys and district attorneys take the position that a Brown Act violation may be pursued criminally under Government Code section 1222.²⁵ There is no case law to support this view; if anything, the existence of an express criminal remedy within the Brown Act would suggest otherwise.²⁶

Voluntary resolution

Arguments over Brown Act issues often become emotional on all sides. Newspapers trumpet relatively minor violations, unhappy residents fume over an action, and legislative bodies clam up about information better discussed in public. Hard lines are drawn and rational discussion breaks down. The district attorney or even the grand jury occasionally becomes involved. Publicity surrounding alleged violations of the Brown Act can result in a loss of confidence by constituents in the legislative body. There are times when it may be preferable to consider re-noticing and rehearing, rather than litigating, an item of significant public interest, particularly when there is any doubt about whether the open meeting requirements were satisfied.

At bottom, agencies that regularly train their officials and pay close attention to the requirements of the Brown Act will have little reason to worry about enforcement.

ENDNOTES:

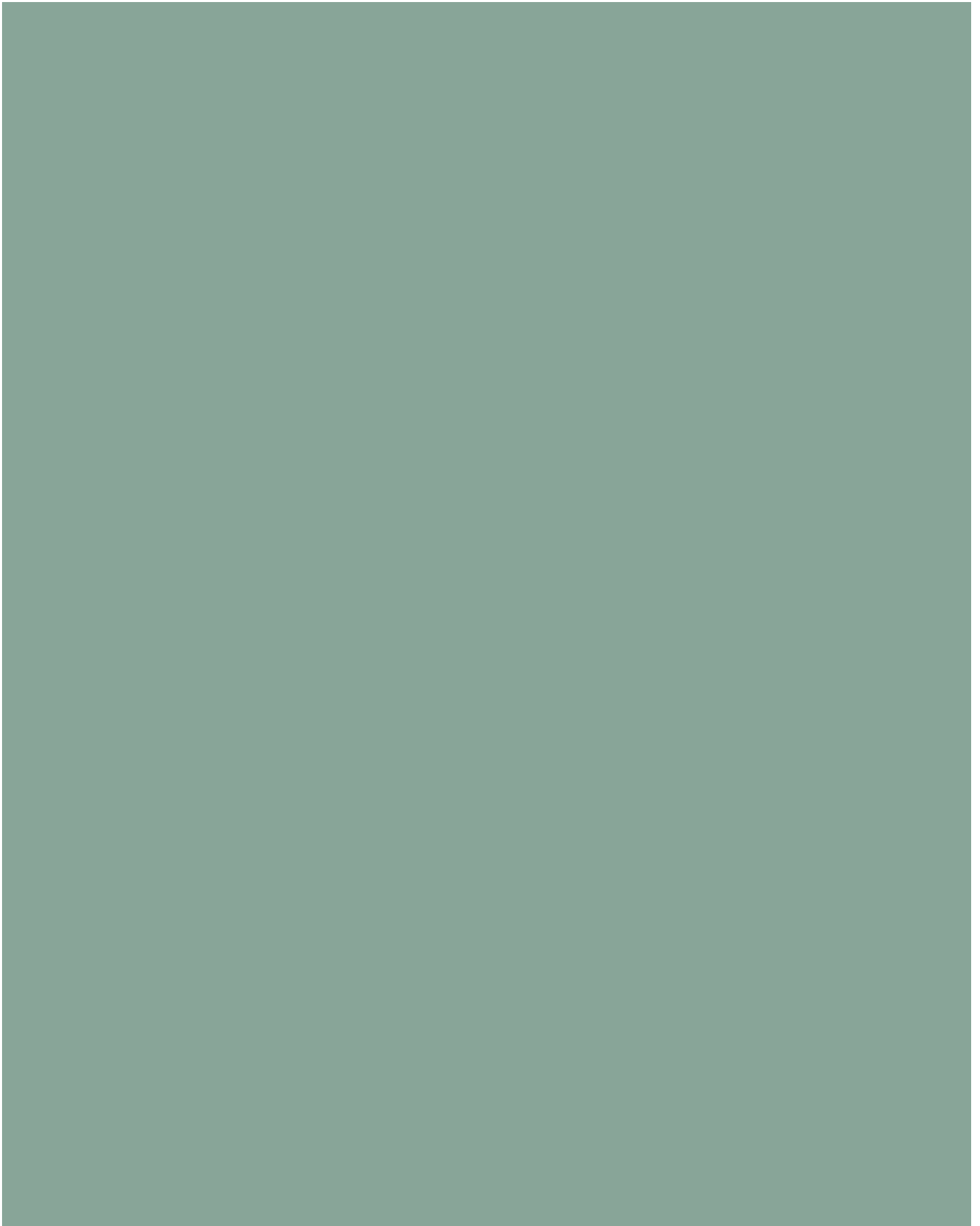
- 1 California Government Code section 54960.1. Invalidation is limited to actions that violate the following sections of the Brown Act: section 54953 (the basic open meeting provision); sections 54954.2 and 54954.5 (notice and agenda requirements for regular meetings and closed sessions); 54954.6 (tax hearings); 54956 (special meetings); and 54596.5 (emergency situations). Violations of sections not listed above cannot give rise to invalidation actions, but are subject to the other remedies listed in section 54960.1.
- 2 *Castaic Lake Water Agency v. Newhall County Water District* (2015) 238 Cal.App.4th 1196, 1198
- 3 California Government Code section 54960.1 (b) and (c)(1)
- 4 *McKee v. Orange Unified School District* (2003) 110 Cal. App.4th 1310, 1318-1319
- 5 *Cohan v. City of Thousand Oaks* (1994) 30 Cal.App.4th 547, 556, 561
- 6 *Boyle v. City of Redondo Beach* (1999) 70 Cal.App.4th 1109, 1116-17, 1118
- 7 Government Code Section 54960.2(a); Senate Bill No. 1003, Section 4 (2011-2012 Session)
- 8 Government Code Sections 54960.2(a)(1), (2)
- 9 Government Code Section 54960.2(b)



CHAPTER 6: REMEDIES

- 10 Government Code Section 54960.2(a)(4)
- 11 Government Code Section 54960.2(c)(2)
- 12 Government Code Section 54960.2(c)(1)
- 13 Government Code Section 54960.2(c)(3)
- 14 Government Code Section 54960.2(d)
- 15 Government Code Section 54960.2(e)
- 16 *California Alliance for Utility Safety and Education (CAUSE) v. City of San Diego* (1997) 56 Cal.App.4th 1024; *Common Cause v. Stirling* (1983) 147 Cal.App.3d 518, 524; *Accord Shapiro v. San Diego City Council* (2002) 96 Cal. App. 4th 904, 916 & fn.6
- 17 *Kleitman v. Superior Court* (1999) 74 Cal.App.4th 324, 334-36
- 18 *Los Angeles Times Communications, LLC v. Los Angeles County Board of Supervisors* (2003) 112 Cal. App.4th 1313, 1327-29 and cases cited therein
- 19 California Government Code section 54960.5
- 20 California Government Code section 54959. A misdemeanor is punishable by a fine of up to \$1,000 or up to six months in county jail, or both. California Penal Code section 19. Employees of the agency who participate in violations of the Brown Act cannot be punished criminally under section 54959. However, at least one district attorney instituted criminal action against employees based on the theory that they criminally conspired with the members of the legislative body to commit a crime under section 54949.
- 21 California Government Code section 54959
- 22 California Government Code section 54952.6
- 23 61 Ops.Cal.Atty.Gen.283 (1978)
- 24 California Government Code section 54959
- 25 California Government Code section 1222 provides that “[e]very wilful omission to perform any duty enjoined by law upon any public officer, or person holding any public trust or employment, where no special provision is made for the punishment of such delinquency, is punishable as a misdemeanor.”
- 26 The principle of statutory construction known as *expressio unius est exclusio alterius* supports the view that section 54959 is the exclusive basis for criminal liability under the Brown Act.

Updates to this publication responding to changes in the Brown Act or new court interpretations are available at www.cacities.org/opengovernment. A current version of the Brown Act may be found at www.leginfo.ca.gov.





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