

CITY OF ST. HELENA

Water and Wastewater Rate Study

Final Report

March 31, 2011



THE REED GROUP, INC.

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SECTION I. EXECUTIVE SUMMARY

INTRODUCTION AND BACKGROUND

The City of St. Helena retained The Reed Group, Inc. to update the City's five-year financial plans and user rates for the City's water and wastewater utilities. The purpose of the study was to ensure that each utility is meeting financial obligations for ongoing operation and maintenance, debt service, and capital improvements while maintaining prudent reserves. The last comprehensive rate study was completed in 2007, and resulted in scheduled rate adjustments through January 2010.

At this point in time, the City's water and wastewater utilities both face financial challenges. In 2006, the City entered into an agreement with the City of Napa to purchase treated water to supplement the City's Bell Canyon Reservoir and local groundwater supplies. In 2009, the agreement was amended allowing and also requiring the City to purchase more water from Napa. The amended agreement with Napa allows for increased delivery of water for the City's use. Agreement terms related to both minimum water purchases, as well as allowable purchases (under specified conditions) increased with the amendment. As a result of the amended agreement the City's water supply costs increased significantly. In addition, significant capital improvements are needed in both the water and wastewater systems. Aging infrastructure, regulatory requirements, and system demands are all making system upgrades increasingly urgent. In order to undertake planned capital improvement projects, the City will need to finance both water and wastewater projects. The financial planning and rate analyses reflected in this report provide a plan and strategy for financing capital projects over the next five years.

In addition, the City is also considering additional ways to encourage water conservation and efficient water use, as well as improve the equity of both water and wastewater rates across all customer classes. Rate structure recommendations contained herein are intended to help the City achieve these policy objectives.

The scope of services for the water and wastewater rate study included the following:

- ❖ Review financial goals and policy objectives.
- ❖ Review current budgets, existing debt obligations, and capital improvement plans.
- ❖ Prepare a five-year financial plan and determine annual revenue requirements for each utility.
- ❖ Examine the future impact of issuing new long-term debt related to water and wastewater system improvements.
- ❖ Recommend water and wastewater rate structure changes to improve equity and further encourage water conservation, and prepare rate schedules for implementation beginning in July 2011.
- ❖ Present preliminary recommendations to the City Council to review the assumptions and conclusions from the financial plan and rate analyses.

- ❖ Prepare a water and wastewater rate study report (this report) to document the analyses performed during the study.
- ❖ Assist the City in preparing a public notice of proposed water and wastewater rate increases.
- ❖ Present final water and wastewater rate recommendations during a public hearing to adopt new rates.

The purpose of this report is to summarize our findings regarding the water and wastewater rates and to present the financial plan for each utility.

FINANCIAL PLANS AND REVENUE NEEDS

Financial plan findings and recommendations are summarized below for both the water and wastewater utilities.

Water Utility

Until recently, the water utility has been able to cover operating and maintenance costs, including debt service payments, through current rates and other revenues. However, largely as a result of required water purchases from the City of Napa, as well as reduced overall water demands, it is no longer possible for the water utility to cover operating and maintenance costs and meet debt repayment and debt service coverage requirements with current revenues. Debt covenants require the City to maintain water rates and other revenues such that total revenues less operating and maintenance costs are at least 1.20 times annual debt service payments. Proposed increases in water rates are driven primarily by the need to meet this debt covenant. In addition, a significant backlog of capital improvement projects, including removal of the Upper Reservoir Dam, will require the City to issue additional debt to undertake needed projects.

The financial condition of the water utility can be summarized with a few salient points. At present, the City's water utility has:

- Insufficient cash in the operating fund,
- Current annual operating and maintenance costs, including debt service obligations totaling about \$3.8 million, which includes more than \$1.2 million in water purchases from Napa,
- Current annual water utility revenues of about \$2.9 million, and
- Planned water system capital improvements in FY 11-12 totaling about \$6.8 million, with \$3.1 million associated with the Upper Reservoir Dam removal project.

The water utility has insufficient resources to fund the planned capital improvement program. The City plans on issuing additional long-term debt to help finance needed projects, including removal of Upper Reservoir Dam. To provide adequate funding, it is estimated that the City will need to issue about \$7.5 million in new debt for the water system in 2011. Because the wastewater utility will also need financing (about \$2.0 million) to support capital projects in FY 11-12, it is assumed that a joint water and wastewater

issue will be pursued, whereby costs of issuance can be spread over both utilities, improving the economics of the issue. Estimated terms for water system debt financing in 2011 include:

Par Amount	\$7.50 million
Interest Rate	5.50%
Term	30 years
Issuance Costs	3.0% of Par
DS Reserve (funded)	\$518,000
Net Proceeds for Projects	\$6.79 million

Annual debt service on the 2011 water system financing is estimated to be about \$518,000 annually.

Beyond a large water rate increase that is needed immediately, it appears that future water rate increases can be limited to the rate of general inflation, although consideration should be given to potential changes in the rate charged for water by the City of Napa. Because water system costs are largely tied to the cost of water purchased from Napa, it is recommended that the City index its water rates to the larger of (1) changes in general inflation as measured by the San Francisco Bay Area consumer price index (CPI), or (2) changes in the rate charged by the City by Napa for St. Helena's water supply purchases.

It is important to consider, however, that indexing water rates to general inflation will only be effective if water rates are first brought to a level that is fully supportive of the financial needs of the utility, including all necessary ongoing operation and maintenance costs, debt service obligations, and capital program needs, including an annual transfer to the Capital Fund sufficient to support the long-term needs of infrastructure replacement and rehabilitation.

Driven primarily by (1) the cost of purchasing water from the City of Napa, (2) existing debt service coverage requirements, and (3) requirements associated with new water system debt, the following water rate increases may be needed to support the water utility:

July 2011	58%
January 2012	0%
January 2013	3%
January 2014	3%
January 2015	3%
January 2016	3%

It is recommended that the City begin the process necessary to (1) implement new water rates by July 2011 with an overall 58 percent increase in the level of the rates, and (2) adopt a mechanism for automatically adjusting water rates in January of each year based on the higher of general inflation or the change in the rate charged by Napa for the City's water supply purchases. The proposed 58 percent water rate increase would not apply, however, to Meadowood surcharges (described in Section II), as the factors that are driving the overall rate increase do not apply to the costs related to the surcharges. The surcharges, however, should be indexed to inflation, including an estimated 1.0 percent increase for 2011.

Wastewater Utility

While the wastewater utility is in a reasonable financial position for ongoing operations (including current debt service), wastewater rate increases are necessary to maintain adequate operating reserves, to increase contributions to the Capital Projects Fund, and to support new debt obligations.

The wastewater utility's current financial situation can be summarized with a few salient points. At present, the City's wastewater utility has:

- Marginal cash reserves in either the Operating Fund or the Capital Fund,
- Annual operating and maintenance costs, including debt service obligations totaling about \$1.55 million,
- FY 11-12 wastewater system capital improvement program with projects totaling about \$1.5 million, and
- Current annual wastewater revenues totaling about \$1.5 million.

While current revenues nearly cover ongoing operating and maintenance costs, as well as debt service obligations, funding is insufficient for needed capital improvement projects.

In the next two years, the capital improvement plan includes about \$1.8 million in capital projects. In order to fund these projects the City will need to issue additional long-term debt. Because the City plans to issue debt in support of water system improvements, it would be economical to also include wastewater projects in the issuance. To provide adequate funding for planned projects, it is estimated that the City will need to issue about \$2.0 million in new debt for the wastewater system in 2011. For purposes of analyses presented herein water and wastewater debt obligations are shown separately. Estimated terms for wastewater system debt financing in 2011 include:

Par Amount	\$2.00 million
Interest Rate	5.50%
Term	30 years
Issuance Costs	3.0% of Par
DS Reserve (funded)	\$140,000
Net Proceeds for Projects	\$1.8 million

Annual debt service on the 2011 wastewater system financing is estimated to be about \$140,000 annually.

As a condition of issuing long-term debt in 2005, the City agreed to maintain wastewater rates and other utility revenues such that net revenues (net of operating costs) are at least 1.20 times annual debt service. This requirement will likely be extended to any new debt issuance. In order to meet the current and expected future financial obligations of the wastewater utility an estimated overall 26 percent increase in wastewater rates is needed. This increase would likely need to be implemented before the City issues new debt to fund capital projects.

Beyond this initial large wastewater rate increase, it appears that future wastewater rate increases can be limited to the rate of general inflation, at least until such point as the City makes decisions regarding the proposed recycled water project. It is therefore recommended that in addition to the initial 26 percent wastewater rate increase that the City adopt a mechanism for annually adjusting wastewater rates, in January of each year, based on changes in the San Francisco Bay Area CPI.

The City's current capital improvement program includes about \$17.4 million in costs related to the proposed recycled water project from FY 12-13 through FY 15-16. In order to fund these improvements, it is estimated that the City would need to issue about \$19 million in additional long-term debt in FY 12-13. Annual debt service on this issuance is estimated to be about \$1.3 million, and may require an additional wastewater rate increase of about 70 percent at the time of debt issuance.

Driven primarily by (1) supporting ongoing operations and maintenance, (2) gradually increasing transfers in support of the planned capital improvement program, and (3) anticipated future debt obligations, the following wastewater rate increases may be needed to support the wastewater utility:

July 2011	26%
January 2012	0%
January 2013	3%
January 2014	3%
January 2015	3%
January 2016	3%

It is recommended that the City begin the process necessary to (1) implement new wastewater rates by July 2011 with an overall 26 percent increase in the level of the rates, and (2) adopt a mechanism for automatically adjusting water rates in January of each year based on the change in the San Francisco Bay Area CPI.

The financial plan models reflect assumptions and estimates that are believed reasonable at the present time. However, conditions change. It is recommended that the City review the financial condition of the water and wastewater utilities annually as part of the budget process, and perform a more comprehensive financial plan and rate update study every 3 to 5 years, unless otherwise needed sooner.

PROPOSED WATER AND WASTEWATER RATES

Exhibits I-1 and I-2 present proposed water and wastewater rate schedules, respectively, to be implemented in July 2011. Changes are also proposed for the Meadowood surcharges, which are related to pumping to the Meadowood area, as well as the special factors used to determine rates for industrial wastewater users. Changes to these schedules are contained in the body of this report.

Exhibit I-1
City of St. Helena
Current and Proposed Water Rates

	Current		July 2011	
	Inside City	Outside City	Inside City	Outside City
Monthly Fixed Service Charges				
5/8" meter	\$ 15.70	\$ 24.34	\$ 24.81	\$ 38.46
1" meter	\$ 36.40	\$ 56.42	\$ 57.51	\$ 89.14
1 1/2" meter	\$ 70.82	\$ 109.77	\$ 111.89	\$ 173.43
2" meter	\$ 112.13	\$ 173.80	\$ 177.16	\$ 274.60
3" meter	\$ 208.56	\$ 323.26	\$ 329.52	\$ 510.76
4" meter	\$ 346.37	\$ 536.87	\$ 547.26	\$ 848.25
6" meter	\$ 690.53	\$ 1,070.32	\$ 1,091.03	\$ 1,691.10
8" meter	\$ 1,104.40	\$ 1,711.82	\$ 1,744.95	\$ 2,704.67
Residential Water Usage Rates (\$/HCF) (1) (2)				
Tier 1	\$ 1.75	\$ 2.10	\$ 4.05	\$ 4.86
Tier 2	\$ 3.50	\$ 4.20	\$ 6.07	\$ 7.29
Tier 3	\$ 6.26	\$ 7.51		
Non-Residential Water Usage Rates (\$/HCF) (3) (4)				
Tier 1	\$ 2.88	\$ 3.46	\$ 4.05	\$ 4.86
Tier 2	\$ 3.18	\$ 3.82	\$ 6.07	\$ 7.29
Tier 3	\$ 3.49	\$ 4.19		
Landscape Irrigation Rate (\$/HCF) (5)				
All Usage	\$ 3.08	\$ 3.08	\$ 4.71	\$ 4.71

Notes:

- (1) Current monthly residential tier allocations are as follows:
 - Single family: Tier 1 = 0-10 HCF, Tier 2 = 11-40 HCF, and Tier 3 = 41+ HCF
 - Multi-family: Tier 1 = 0-4 HCF, Tier 2 = 5-10 HCF, and Tier 3 = 11+ HCF
- (2) Proposed monthly residential tier allocations are as follows:
 - Single family: Tier 1 = 0-14 HCF, Tier 2 = 15+ HCF
 - Multi-family: Tier 1 = 0-5 HCF, Tier 2 = 6+ HCF
- (3) Current monthly non-residential tier allocations are as follows:
 - 5/8" & 1" meters: Tier 1 = 0-18 HCF, Tier 2 = 19-60 HCF, and Tier 3 = 61+ HCF
 - 1 1/2" meters: Tier 1 = 0-30 HCF, Tier 2 = 31-200 HCF, and Tier 3 = 201+ HCF
 - 2" meters: Tier 1 = 0-50 HCF, Tier 2 = 51-250 HCF, and Tier 3 = 251+ HCF
 - 3" meters: Tier 1 = 0-175 HCF, Tier 2 = 176-500 HCF, and Tier 3 = 501+ HCF
 - 4" meters: Tier 1 = 0-250 HCF, Tier 2 = 251-750 HCF, and Tier 3 = 751+ HCF
 - 6" meters: Tier 1 = 0-350 HCF, Tier 2 = 351-1250 HCF, and Tier 3 = 1251+ HCF
 - 8" meters: Tier 1 = 0-500 HCF, Tier 2 = 501-2000 HCF, and Tier 3 = 2001+ HCF
- (4) Proposed monthly non-residential tier allocations are as follows:
 - 5/8" & 1" meters: Tier 1 = 0-36 HCF, Tier 2 = 37+ HCF
 - 1 1/2" meters: Tier 1 = 0-120 HCF, Tier 2 = 121+ HCF
 - 2" meters: Tier 1 = 0-192 HCF, Tier 2 = 193+ HCF
 - 3" meters: Tier 1 = 0-360 HCF, Tier 2 = 361+ HCF
 - 4" meters: Tier 1 = 0-600 HCF, Tier 2 = 601+ HCF
 - 6" meters: Tier 1 = 0-1,250 HCF, Tier 2 = 1,251+ HCF
 - 8" meters: Tier 1 = 0-1,920 HCF, Tier 2 = 1,921+ HCF
- (5) Rate applies to customers meeting the following criteria:
 - Service must be for landscape irrigation of public space (e.g., 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.

Exhibit I-2
City of St. Helena
Current and Proposed Wastewater Rates

	Current	July 2011
Single Family Residential		
Monthly Service Charge	\$ 48.12	\$ 42.68
Usage Rate (\$/HCF of winter water use) (1)		\$ 3.55
Multi-Family and Non-Residential		
<i>Monthly Service Charge</i>		
5/8" meter	\$ 30.14	\$ 37.97
1" meter	\$ 73.28	\$ 92.33
1 1/2" meter	\$ 145.20	\$ 182.95
2" meter	\$ 231.49	\$ 291.67
3" meter	\$ 432.84	\$ 545.38
4" meter	\$ 720.49	\$ 907.82
6" meter	\$ 1,439.62	\$ 1,813.91
<i>Usage Rate (\$/HCF of water usage)</i>		
Multi-Family Residential	\$ 2.82	\$ 3.55
Car Wash	\$ 2.04	\$ 2.57
Schools	\$ 2.27	\$ 2.86
Laundry/Laundromat	\$ 2.40	\$ 3.02
Churches	\$ 2.61	\$ 3.29
City Buildings	\$ 2.61	\$ 3.29
Commercial - General	\$ 2.61	\$ 3.29
Winery - Sutter Home	\$ 3.05	\$ 3.84
Motels w/o Food	\$ 3.11	\$ 3.92
Service Sta./Auto Repair	\$ 3.36	\$ 4.23
Mixed Retail w/ Food	\$ 4.86	\$ 6.12
Motels w/ Food	\$ 6.26	\$ 7.89
Restaurant	\$ 8.36	\$ 10.53
Grocery	\$ 8.49	\$ 10.70
Mortuary	\$ 8.49	\$ 10.70
Winery - Merryvale	\$ 14.98	\$ 18.87
Winery - Spottswoode	\$ 14.98	\$ 18.87

Notes:

- (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.

The water and wastewater rates presented in this report include rate structure changes. The water rate structure has been simplified from a three-tier structure to a two-tier structure, and tier rates between the residential and non-residential customer classes have been unified. Tier allocations have also been adjusted to provide additional water in the first tier. The rate structure changes reflect the policy objectives of the City, but more importantly they reflect an allocation of water system costs to users based on a proportionate allocation of the costs of service.

The proposed wastewater rate structure includes a change for the rates for single family residential customers. Rather than a single flat rate for all single family customers, the proposed wastewater rates include a fixed service charge, plus a usage charge (similar to water rates). The usage charge is based on each customer's winter water usage (average based on meter reads in January, February, and March). Winter water usage is representative of demands placed on the wastewater system, as irrigation is minimal during these months, and water usage generally equates to wastewater flow. With this change, residential wastewater bills will better reflect the individual demand characteristics of customers. Multi-family, non-residential, and industrial wastewater rates will continue to include fixed service charges based on meter size and usage charges based on water usage, as well as wastewater strength considerations.

In addition to the water and wastewater rate adjustments and rate structure changes, the City plans to convert from bi-monthly utility billing to monthly utility billing beginning with the implementation of the proposed rates.

SECTION II. WATER RATES

This section of the report describes the financial plan and water rate recommendations for the City's water utility. The five-year financial plan is used to determine annual water rate revenue requirements. The annual rate revenue requirement is the amount of revenue needed from water rates to cover planned operating, maintenance, debt service, and capital program costs with consideration of other revenues and financial reserves.

FUND STRUCTURE AND CASH FLOWS

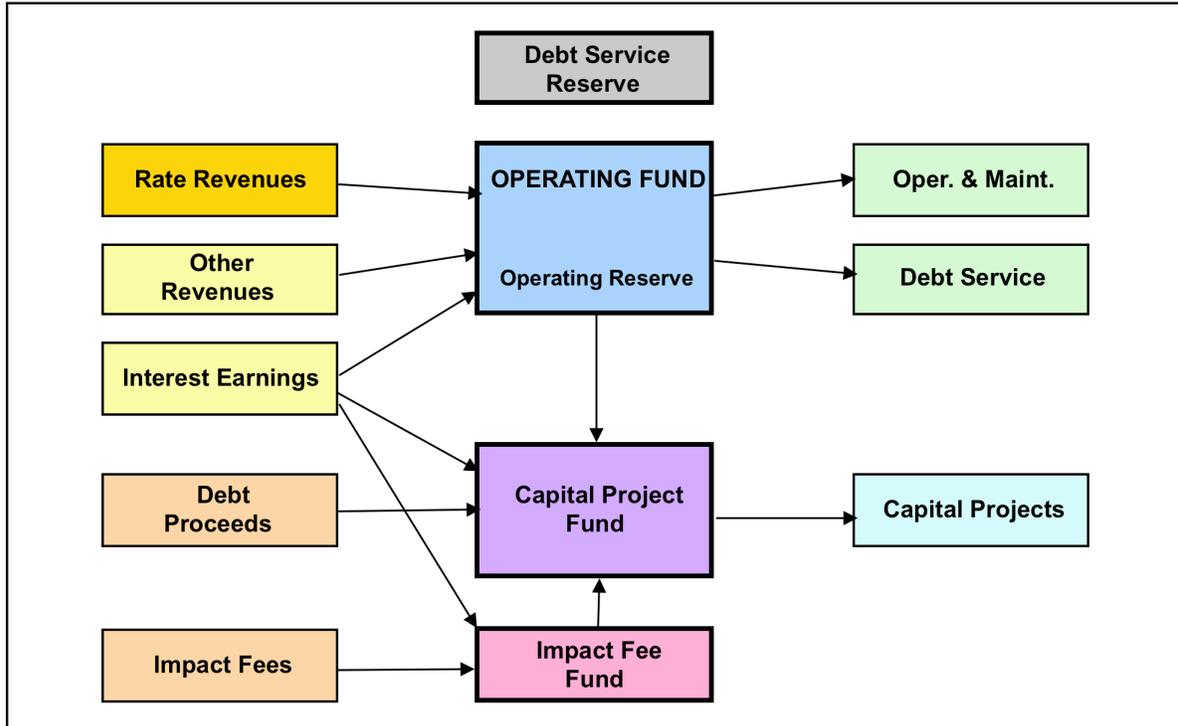
The financial plan is an annual cash flow model. As a cash flow model, it differs from standard accounting income statements, and balance sheets. The financial plan models sources and uses of funds into, out of, and between the various funds and reserves of the water utility.

The financial plan model is based on the fund, reserve, and account structure currently used by the City. **Exhibit II-1** is a schematic diagram of the funds/reserves and major cash flows associated with the financial plan model.

An understanding of the fund/reserve structure is helpful in understanding the financial plan worksheets that model annual cash flows through the water utility from one year to the next. The fund/reserve structure is comprised of:

- **Operating Fund** - The Operating Fund is the primary fund within the water utility. Most of the water system's revenues, including water rate revenues, flow into the Operating Fund and all operating and maintenance costs, including debt service payments, are paid out of this fund. Funds are also transferred from the Operating Fund to the Capital Projects Fund to help pay for capital projects intended to rehabilitate and upgrade facilities. The City has a goal of annually transferring funds from the Operating Fund to the Capital Projects Fund equal to annual accounting depreciation.
 - **Operating Reserve** - The City currently has a policy goal to maintain Operating Reserves within the Operating Fund equal to 15 percent of annual operating and maintenance costs for the water system. The purpose of the Operating Reserve is to provide working capital and funds for unplanned operating and maintenance expenditures. The balance in the Water Operating Fund is currently above the target Operating Reserve. Because of the increased volatility of operating costs related to changing demands and required water purchases from the City of Napa, it is recommended that the City increase the minimum operating reserve target from 15 to 25 percent. This recommended policy change is reflected in the analyses presented in this report.

Exhibit II-1
City of St. Helena
Water Fund/Reserve Structures and Cash Flows



- *Uncommitted Fund Balance* - The balance in the Operating Fund in excess of the target amount for the Operating Reserves is shown in the financial plan as Uncommitted Fund Balance. After all other obligations are met the Uncommitted Fund Balance is available to offset rate increases, and the financial plan model generally seeks to reduce any Uncommitted Fund Balance over time.
- *Capital Projects Fund* - The Capital Projects Fund is used to account for revenues and debt proceeds available for capital project expenditures. Capital projects funded from this fund are intended to rehabilitate, upgrade, and expand the water system to meet current and future needs of the water utility. The financial plan model generally seeks to maintain a positive balance in the Capital Projects Fund while also covering the costs of planned capital improvement projects.
 - *Debt Proceeds* - Proceeds from the issuance of long-term debt are reflected in the Capital Fund. Debt proceeds are to be expended within a timely manner following debt issuance. If not expended the City is required to take steps to avoid arbitrage.
 - *Other Capital Reserves* - The amount in the Capital Projects Fund in excess of Debt Proceeds is identified as Other Capital Reserves. These funds are generally comprised of interest earnings and transfers from the Operating Fund.

- ***Impact Fee Fund*** – The Water Impact Fee Fund is used to account for revenues from water system impact fees. Impact fees are one-time charges to new development to pay for capacity in the water system. Impact fee revenue are used to help pay for capital improvement projects. Because the impact fee calculation is based, in part, on a buy-in to the existing water system, impact fee revenues can be used for any water system capital improvement projects. At present, due to the current state of the economy, impact fee revenues are minimal.
- ***Debt Service Reserve Fund*** – As a condition of issuing long-term debt, the City is required to maintain a debt service reserve fund with monies generally sufficient to cover the maximum annual debt service payment. This reserve is a form of security for lenders. The money in the debt service reserve is restricted and not available for general purposes.

FINANCIAL PLAN ASSUMPTIONS

The financial plan was created to reflect the FY 10-11 budget and financial conditions as of the beginning of the fiscal year. The financial plan also reflects the City's debt service obligations and capital improvement program, as identified by City staff, during the five-year planning period.

The process used to develop the financial plan involved estimating future revenues and expenditures based on inflation and interest rates, water supply and demand projections, anticipated capital improvement needs, and other information. The City does not have formal estimates of future operating and maintenance costs, and capital improvement needs are defined at a planning level. The financial plan is based on the best available information and assumptions are believed to be reasonable; however, no assurance can be provided as to the accuracy and completeness of the estimates.

Primary assumptions reflected in financial plan analyses include:

- ***Interest Rates*** – Interest earned on fund/reserve balances is estimated to be 0.5 percent per year in FY 10-11 and then increasing by 0.5 percent per year each year of the planning period. Interest calculations are based on beginning of year balances. Interest accrues to each of the funds. The City also pays interest on outstanding long-term debt obligations. The interest payments on outstanding debt are those contained in existing contracts and repayment schedules.
- ***Inflation Rates*** – Annual inflation rates for general operating and maintenance costs is 1.0 percent in FY 10-11, 2.0 percent in FY 11-12, and 3.0 percent thereafter. The cost of water supply from the City of Napa is assumed adjusted annually based on changes in the San Francisco Bay Area CPI by the City of Napa. For purposes of this study, the preceding inflation rates have been assumed. Energy and chemical costs are assumed to increase at 5.0 percent annually, due to conditions in the energy, utility, and petroleum sectors. Inflation on construction costs is assumed to increase 4.0 percent annually.
- ***Growth Projections*** – The City of St. Helena experiences very little new growth and development. The financial plan model presented herein does not include

any growth in the customer base. This is a conservative assumption from a financial perspective, and believed reasonable considering current economic trends.

- *Customer Demand* – Customer water demands are assumed to remain constant during the planning period. At the present time, water demand is significantly below recent levels due to factors such as the economy, weather patterns, and conservation efforts. It is reasonable to expect some rebound in demand, but higher water rates (as well as the proposed change in wastewater rates) could also result in continued reduced demand. This uncertainty is one of the factors for recommending that the water utility maintain a higher operating reserve.
- *Operation and Maintenance Costs* – The financial plan model is based on current operating and maintenance costs as reflected in the FY 10-11 operating budget. Changes in water purchase and production costs have been estimated to reflect the requirements for minimum water purchases from the City of Napa. For future years, costs are assumed to increase at an increase based on inflation and changes in supply/demand conditions. In addition to the inflationary adjustment, the financial plan assumes the following new staff positions:
 - Water Conservation Specialist – The City plans to add a water conservation specialist to help expand water conservation efforts midway through FY 11-12.
 - Assistant Engineer (50%) – A new assistant engineer position will be shared between the water and wastewater utility budgets beginning midway through FY 11-12. This position is needed to help plan and implement water and wastewater system improvements.
- *Water Supplies* – The City obtains most of its water supplies from local sources. However, in 2006 the City entered into an agreement with the City of Napa to purchase between 200 and 400 acre-feet (AF) of treated water. In 2009 the agreement was amended to provide for between 400 AF and 800 AF of water. The agreement has provisions for minimum purchases of water. In most years, the take-or-pay provisions require paying for at least 600 AF of water. Agreement terms are outlined in greater detail later in this section. Increased water purchase costs represent a significant new operating cost for the City.
- *Capital Improvement Program* – The water utility's capital improvement plan includes 36 projects totaling about \$11.5 million over a six-year period. About \$1.16 million in 2006 water revenue bond debt proceeds remained unexpended as of June 30, 2010 and is expected to be fully used in 2011. Not all currently planned and identified capital projects can be funded from existing Capital Project Fund reserves, and new debt will be needed in 2011 in order to finance planned projects. The most significant near-term project is the removal of the Upper Reservoir Dam, with an estimated cost to the City of about \$3 million.

Because of the City's desire to keep the required water rate increase to the level needed to meet debt covenants, not all of the planned capital improvement program will be funded during the planning period, even with the planned debt issuance. As a result, approximately \$1.1 million of the planned capital

improvement program has been deferred beyond the planning period used for this study.

- *Debt Obligations* – In 2006, the City issued \$8,885,000 in water revenue bonds through the California Statewide Communities Development Authority (CSCDA). Annual debt service payments total about \$595,000, including principal and interest. The City is also required to maintain a debt service coverage ratio of 1.20¹. New debt, needed in 2011 to fund planned capital improvement projects, is included in the financial plan analyses. Details are provided later in this section.

Exhibit II-2 (displayed on 2 pages) provides the details of the financial plan model for the City's water utility. **Exhibit II-3** graphically summarizes the revenues, expenses, year-end fund balance, and estimated annual rate increases for the water system Operating Fund.

FINANCIAL PLAN FINDINGS AND CONCLUSIONS

The preceding portion of this section described the basic framework and assumptions underlying the financial analyses. Specific findings and conclusions pertaining to the water utility are presented below, beginning with a description of the current situation.

At present, the City's water utility has:

- Insufficient cash in the operating fund,
- Current annual operating and maintenance costs, including debt service obligations totaling about \$3.8 million, which includes more than \$1.2 million in water purchases from Napa,
- Current annual water utility revenues of about \$2.9 million, and
- Planned water system capital improvements in FY 11-12 totaling about \$6.8 million, with \$3.1 million associated with the Upper Reservoir Dam removal project.

In the spring of 2009, the City amended the agreement with the City of Napa regarding purchasing treated water. Under the amended agreement, the City is obligated to purchase 600 AF of water in most years. Under certain hydrologic conditions the minimum purchase is 400 AF, and in other years it may be as much as 800 AF. In FY 09-10, however, the City only took about 89 AF of the required 600 AF supply allotment, in part because facilities were not yet in place to take delivery of the water supply. The City of Napa has agreed to allow the City to take delivery of the remaining 511 AF that should have been taken last fiscal year over the next three years. In addition, water supply conditions in FY 10-11 are such that the minimum quantity this year is 400 AF. As a result of the foregoing, the financial plan assumes the following water purchases from the City of Napa over the planning period.

¹ Net water utility revenues (after operating and maintenance costs) must be at least 1.20 time annual debt service.

FY 10-11	651 AF
FY 11-12	730 AF
FY 12-13	730 AF
FY 13-14	600 AF
FY 14-15	600 AF
FY 15-16	600 AF

**Exhibit II-2
City of St. Helena
Water Utility Financial Plan**

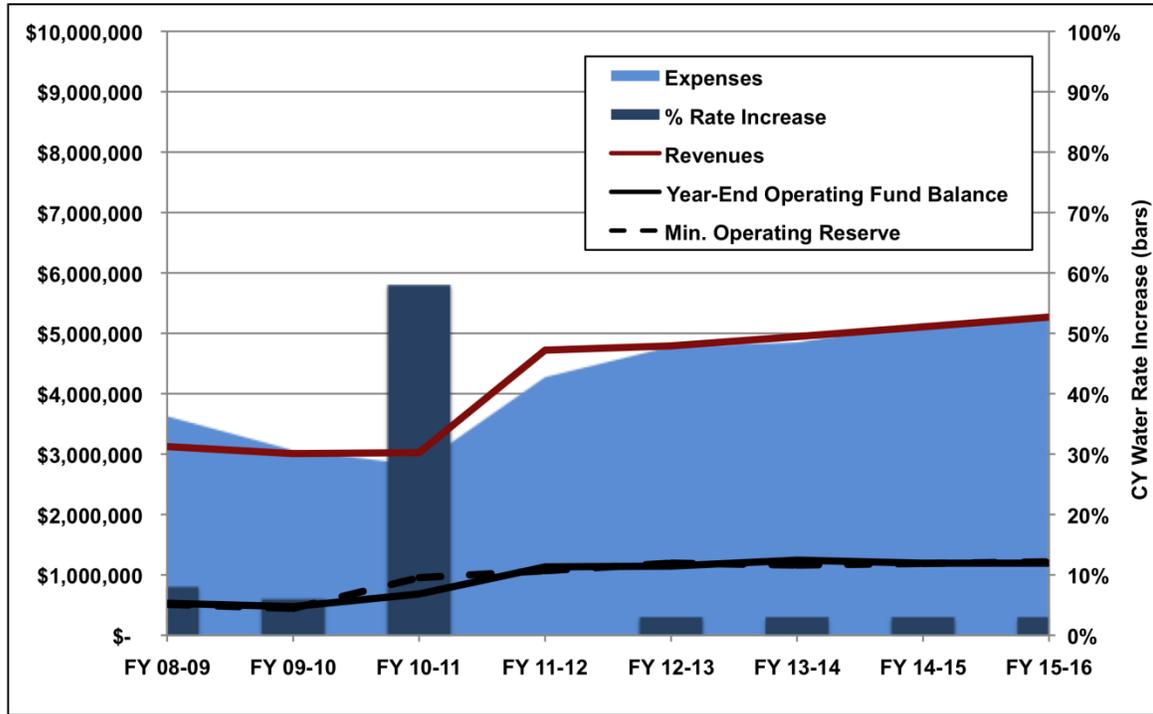
	FY 0	FY 09-10	FY 10-11	FY 11-12	FY 12-13	FY 13-14	FY 14-15	FY 15-16
Water Rate Increases-->			58%	0%	3%	3%	3%	3%
Effective Date-->			July 2011	Jan. 2012	Jan. 2013	Jan. 2014	Jan. 2015	Jan. 2016
WATER OPERATING FUND								
Beginning of Year Balance		\$ 530,397	\$ 475,000	\$ 684,000	\$ 1,133,000	\$ 1,146,000	\$ 1,244,000	\$ 1,194,000
Water Operating Revenues								
Interest Income		\$ 86,995	\$ 5,000	\$ 18,000	\$ 34,000	\$ 45,000	\$ 59,000	\$ 69,000
Water Rate Revenues		\$ 2,794,881	\$ 2,897,000	\$ 4,578,000	\$ 4,630,000	\$ 4,769,000	\$ 4,912,000	\$ 5,060,000
Meadoweed Surcharges		\$ 56,271	\$ 51,826	\$ 53,000	\$ 55,000	\$ 57,000	\$ 59,000	\$ 61,000
Misc. Revenues		\$ 69,985	\$ 71,418	\$ 72,000	\$ 73,000	\$ 75,000	\$ 77,000	\$ 79,000
Total Water Operating Revs.		\$ 3,008,132	\$ 3,025,244	\$ 4,721,000	\$ 4,792,000	\$ 4,946,000	\$ 5,107,000	\$ 5,269,000
Operation & Maint. Expenses								
Stonebridge Wells - Fixed Expenses		\$ 16,849	\$ 17,900	\$ 18,000	\$ 19,000	\$ 20,000	\$ 21,000	\$ 22,000
Utilities and Chemical		\$ 67,955	\$ 76,500	\$ 47,000	\$ 49,000	\$ 63,000	\$ 65,000	\$ 67,000
Water Treatment - Fixed Expenses		\$ 791,712	\$ 470,201	\$ 480,000	\$ 494,000	\$ 509,000	\$ 524,000	\$ 540,000
Utilities and Chemical		\$ 135,160	\$ 160,000	\$ 142,000	\$ 149,000	\$ 165,000	\$ 173,000	\$ 182,000
Water Purchases from Napa		\$ 166,394	\$ 1,224,000	\$ 1,405,000	\$ 1,446,000	\$ 1,224,000	\$ 1,261,000	\$ 1,298,000
Water Distribution		\$ 473,306	\$ 509,995	\$ 520,000	\$ 536,000	\$ 552,000	\$ 569,000	\$ 586,000
Public Works Administration		\$ 106,931	\$ 125,281	\$ 128,000	\$ 132,000	\$ 136,000	\$ 140,000	\$ 144,000
Flood Control		\$ 7,002	\$ 4,395	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000
Finance Department		\$ 213,052	\$ 233,188	\$ 238,000	\$ 245,000	\$ 252,000	\$ 260,000	\$ 268,000
City Administration		\$ 388,754	\$ 397,258	\$ 405,000	\$ 417,000	\$ 430,000	\$ 443,000	\$ 456,000
New Staff Positions		\$ -	\$ -	\$ 84,500	\$ 174,000	\$ 179,000	\$ 184,000	\$ 190,000
Total O&M Expenses		\$ 2,367,115	\$ 3,218,718	\$ 3,472,500	\$ 3,666,000	\$ 3,535,000	\$ 3,645,000	\$ 3,758,000
Debt Service and Capital Program Transfer								
Debt Service - 2006 water bond		\$ 596,387	\$ 597,419	\$ 594,000	\$ 595,000	\$ 596,000	\$ 596,000	\$ 596,000
Debt Service - 2011 water bond		\$ -	\$ -	\$ 206,000	\$ 518,000	\$ 517,000	\$ 516,000	\$ 514,000
Transfer to Cap. Projects Fund		\$ 100,027	\$ (1,000,000)	\$ -	\$ -	\$ 200,000	\$ 400,000	\$ 400,000
Total DS and Cap. Program		\$ 696,414	\$ (402,581)	\$ 800,000	\$ 1,113,000	\$ 1,313,000	\$ 1,512,000	\$ 1,510,000
End of Year Balance		\$ 475,000	\$ 684,107	\$ 1,132,500	\$ 1,146,000	\$ 1,244,000	\$ 1,194,000	\$ 1,195,000
Operating Rsrv. (25% O&M, incl. DS)		\$ 445,000	\$ 954,000	\$ 1,068,000	\$ 1,195,000	\$ 1,162,000	\$ 1,189,000	\$ 1,217,000
Uncommitted Balance		\$ 30,000	\$ (269,893)	\$ 64,500	\$ (49,000)	\$ 82,000	\$ 5,000	\$ (22,000)
DS Coverage (1.20 min.)-->		1.26	0.62	1.89	1.26	1.27	1.31	1.34
WATER DEBT SERVICE RESERVE								
Beginning of Year Balance		\$ 598,875	\$ 598,875	\$ 1,118,000	\$ 1,118,000	\$ 1,118,000	\$ 1,118,000	\$ 1,118,000
Revenues								
Addition from 2011 Debt Proceeds		\$ -	\$ 519,000					
Total Revenue		\$ -	\$ 519,000	\$ -	\$ -	\$ -	\$ -	\$ -
Expenses								
Debt Service Payments		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
End of Year Balance		\$ 598,875	\$ 1,117,875	\$ 1,118,000				

The cost of water from the Napa for FY 10-11 is estimated to be about \$1.2 million with an estimated 1 percent increase in the rate charged by the City. Water purchase costs represent about one-third of annual operating and maintenance costs, including debt service.

**Exhibit II-2 -- Continued
City of St. Helena
Water Utility Financial Plan**

	FY 0	FY 09-10	FY 10-11	FY 11-12	FY 12-13	FY 13-14	FY 14-15	FY 15-16
WATER CAPITAL PROJECTS FUND								
<i>Beginning of Year Balance</i>		\$ 4,106,263	\$ 3,369,354	\$ 1,525,000	\$ 1,462,000	\$ 176,000	\$ (35,000)	\$ 12,000
<i>Revenues and Transfers In</i>								
Transfer from Operations Fund		\$ 100,027	\$(1,000,000)	\$ -	\$ -	\$ 200,000	\$ 400,000	\$ 400,000
Transfer from Impact Fee Fund		\$ 93,473	\$ -					
Loan from General Fund			\$ 138,613					
Debt Proceeds				\$ 6,759,000				
Interest Earnings		\$ 15,000	\$ 17,000	\$ 15,000	\$ 22,000	\$ 4,000	\$ (1,000)	\$ -
Total Revenues		\$ 208,500	\$ (844,387)	\$ 6,774,000	\$ 22,000	\$ 204,000	\$ 399,000	\$ 400,000
<i>Capital Program Expenses</i>								
Previous Capital Proj. Expend.		\$ 945,409						
WTP								
Bell Creek Inflow Weir Design, Permit, Construction		\$ 377,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Holmes Tank Upgrades		\$ -	\$ -	\$ -	\$ -	\$ 84,000	\$ 88,000	\$ 91,000
Water Treatment Plant Upgrades		\$ -	\$ 163,000	\$ -	\$ -	\$ -	\$ -	\$ -
Bell Canyon Reservoir Improvements		\$ 93,105	\$ 275,000	\$ 286,000	\$ -	\$ -	\$ -	\$ -
Bell Canyon Intake Tower		\$ 25,000	\$ 52,000	\$ 216,000	\$ -	\$ -	\$ -	\$ -
Water Rights Renewal (Dependent on Strategy)		\$ 125,000	\$ 130,000	\$ -	\$ -	\$ -	\$ -	\$ -
WTP Worker Housing		\$ -	\$ 26,000	\$ 27,000	\$ 28,000	\$ 29,000	\$ 29,000	\$ 30,000
Stonebridge Well Upgrades		\$ -	\$ 114,000	\$ 119,000	\$ 124,000	\$ -	\$ -	\$ -
Tank 1A Construction		\$ -	\$ 1,040,000	\$ -	\$ -	\$ -	\$ -	\$ -
Bell Valve House Release Valve Replacement		\$ 31,035	\$ 183,000	\$ -	\$ -	\$ -	\$ -	\$ -
Bell Valve House Energy Dissipator		\$ 31,035	\$ 183,000	\$ -	\$ -	\$ -	\$ -	\$ -
Bell Valve House Energy Dissipator Mitigation		\$ 31,035	\$ 183,000	\$ -	\$ -	\$ -	\$ -	\$ -
GAC for tthm and HA5 future regulations		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Sludge Handling Program		\$ -	\$ 62,000	\$ -	\$ -	\$ -	\$ -	\$ -
Replace Telemetry at LSWTP		\$ -	\$ 16,000	\$ -	\$ -	\$ -	\$ -	\$ -
Surge Protection at LSWTP & Wells		\$ 25,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Fixed Gas Chlorine Analyzer		\$ -	\$ 6,000	\$ -	\$ -	\$ -	\$ -	\$ -
High Service Pump		\$ -	\$ 23,000	\$ -	\$ -	\$ -	\$ -	\$ -
Influent Valve Actuator		\$ -	\$ 9,000	\$ -	\$ -	\$ -	\$ -	\$ -
Lower Reservoir Water Treatment		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 61,000
Vehicle Replacement Program		\$ -	\$ 10,000	\$ 11,000	\$ 11,000	\$ 12,000	\$ 12,000	\$ 12,000
WATER								
Corp Yard Improvements		\$ 12,000	\$ 50,000	\$ -	\$ -	\$ -	\$ -	\$ -
Upper Reservoir Dam Removal (7.5 mil) 35% + 100%		\$ -	\$ 3,140,000	\$ -	\$ -	\$ -	\$ -	\$ -
York Creek Mitigation and Monitoring Plan		\$ -	\$ 16,000	\$ 16,000	\$ 17,000	\$ 18,000	\$ 18,000	\$ 18,000
Rutherford Booster Station		\$ 100,000	\$ 468,000	\$ 487,000	\$ -	\$ -	\$ -	\$ -
Recycled Water Mains		\$ 25,000	\$ 26,000	\$ 27,000	\$ 28,000	\$ 29,000	\$ 30,000	\$ 30,000
Dwyer Road Booster Station Engineering		\$ 100,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Dwyer Road Booster Station Construction		\$ -	\$ 520,000	\$ -	\$ -	\$ -	\$ -	\$ -
Raw Water Metering Station		\$ -	\$ 26,000	\$ -	\$ -	\$ -	\$ -	\$ -
Toilet Retrofit Program		\$ 25,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Radio Repeater/Infrastructure		\$ -	\$ 2,000	\$ -	\$ -	\$ -	\$ -	\$ -
Pratt Avenue Transmission Main		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Community Drive		\$ -	\$ -	\$ -	\$ -	\$ -	\$ 47,000	\$ -
Howell Mountain Road		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Pratt Ave Bridge Crossing		\$ -	\$ 104,000	\$ 108,000	\$ 112,000	\$ 117,000	\$ 117,000	\$ 122,000
Vehicle Replacement Program		\$ -	\$ 10,000	\$ 11,000	\$ 11,000	\$ 12,000	\$ 12,000	\$ 12,000
Total Capital Program		\$ 945,409	\$ 1,000,210	\$ 6,837,000	\$ 1,308,000	\$ 415,000	\$ 352,000	\$ 376,000
<i>End of Year Balance</i>		\$ 3,369,354	\$ 1,524,757	\$ 1,462,000	\$ 176,000	\$ (35,000)	\$ 12,000	\$ 36,000
Remaining Bond Proceeds		\$ 1,157,500	\$ 157,290	\$ 79,290	\$ -	\$ -	\$ -	\$ -
Other Capital Reserves		\$ 2,211,854	\$ 1,367,467	\$ 1,382,710	\$ 176,000	\$ (35,000)	\$ 12,000	\$ 36,000
WATER IMPACT FEE FUND								
<i>Beginning of Year Balance</i>		\$ 50,703	\$ 50,230	\$ 50,500	\$ 51,000	\$ 51,800	\$ 52,800	\$ 54,100
<i>Impact Fee Revenues</i>								
Impact Fee Revenue		\$ 89,000	\$ 76,800	\$ -	\$ -	\$ -	\$ -	\$ -
Interest Earnings		\$ 4,000	\$ 300	\$ 500	\$ 800	\$ 1,000	\$ 1,300	\$ 1,600
Total Revenue		\$ 93,000	\$ 77,100	\$ 500	\$ 800	\$ 1,000	\$ 1,300	\$ 1,600
<i>Capital Program Transfer</i>								
Transfer to Cap. Projects Fund		\$ 93,473	\$ 76,800	\$ -	\$ -	\$ -	\$ -	\$ -
<i>End of Year Balance</i>		\$ 50,230	\$ 50,530	\$ 51,000	\$ 51,800	\$ 52,800	\$ 54,100	\$ 55,700

Exhibit II-3
 City of St. Helena
 Summary of Water System Financial Plan



Due largely to the increased cost of water supply purchases, current water rates are insufficient to meet required debt service coverage obligations. A large water rate increase is needed in order to meet this existing financial obligation. The obligation requires the City to maintain water rates and other water system revenues such that total revenue minus ongoing operation and maintenance expenses equal or exceed 1.20 times annual debt service.

As a condition of issuing long-term debt in 2006, the City agreed to maintain water rates and other utility revenues such that net revenues (net of operating costs) are at least 1.20 times annual debt service. As a result of the amended water supply agreement with the City of Napa the water utility’s operating costs have increased materially. This, in turn, is resulting in a need to adjust water rates to meet debt service coverage requirements.

Historically, the City sought to transfer money from the Operating Fund to the Capital Projects Fund equal to annual accounting depreciation. The FY 08-09 financial statements indicate annual depreciation of about \$425,000. For FY 10-11 the City has an insufficient balance in the Operating Fund to make a transfer to the Capital Fund. In fact, a transfer in the other direction (Capital Fund to Operating Fund) of \$1,000,000 is needed to provide the cash required to maintain a prudent Operating Reserve in the Operating Fund. In FY 13-14 the financial plan model begins to re-establish annual transfers from the Operating Fund to the Capital Fund. The annual transfer begins at \$200,000 in FY 13-14 then increases to \$400,000 annually. If additional amounts are needed to support the capital improvement

program, the City may need to revisit plans for annually adjusting water rates based on general inflation.

The City has about \$1.6 million in proceeds from debt issued in 2006. The City should continue efforts to expend these proceeds on capital projects as soon as possible. If not expended in a timely manner, the City may need to take steps to avoid arbitrage concerns or risk losing tax-exempt status of the debt.

Remaining debt proceeds, transfers from the Operations Fund, and water system impact fee revenue, in aggregate, will be insufficient to fund the planned capital improvement program. The City has planned on issuing additional long-term debt to help finance needed projects, including removal of Upper Reservoir Dam. To provide additional funding, it is estimated that the City will need to issue about \$7.5 million in new debt for the water system in 2011. Because the wastewater utility will also need financing (about \$2.0 million) to support capital projects in 2011, it is assumed that a joint water and wastewater issue will be pursued. For purposes of analyses presented herein water and wastewater debt obligations are shown separately. Terms for water system debt financing in 2011 include:

Par Amount	\$7.50 million
Interest Rate	5.50%
Term	30 years
Issuance Costs	3.0% of Par
DS Reserve (funded)	\$518,000
Net Proceeds for Projects	\$6.76 million

Annual debt service on the 2011 water system financing is estimated to be about \$518,000 annually.

Beyond a large water rate increase that is needed immediately, it appears that future water rate increases may be limited to the rate of general inflation (capital improvement program funding needs notwithstanding), although consideration should be given to potential changes in the rate charged for water by the City of Napa. At present, the City of Napa adjusts its water rates (including the rate applicable to the City of St. Helena) based on changes in the San Francisco Bay Area CPI. However, nothing in the agreement between the cities prevents Napa from modifying the rate charged to the City on any other basis. Because water system costs are largely tied to the cost of water purchased from Napa, it is recommended that the City index its water rates to the larger of (1) changes in general inflation as measured by the San Francisco Bay Area consumer price index (CPI), or (2) changes in the rate charged by the City by Napa for St. Helena's water supply purchases.

It is important to consider, however, that indexing water rates to general inflation will only be effective if water rates are first brought to a level that is fully supportive of the financial needs of the utility, including all necessary ongoing operation and maintenance costs, debt service obligations, and capital program needs, including an annual transfer to the Capital Fund sufficient to support the long-term needs of infrastructure replacement and rehabilitation.

Driven primarily by (1) the cost of purchasing water from the City of Napa, (2) existing debt service coverage requirements, and (3) requirements associated with new water system debt, the following water rate increases may be needed to support the water utility:

July 2011	58%
January 2012	0%
January 2013	3%
January 2014	3%
January 2015	3%
January 2016	3%

It is recommended that the City begin the process necessary to (1) implement new water rates by July 2011 with an overall 58 percent increase in the level of the rates, and (2) adopt a mechanism for automatically adjusting water rates in January of each year based on the higher of general inflation or the change in the rate charged by Napa for the City's water supply purchases. The proposed 58 percent water rate increase would not apply, however, to Meadowood surcharges (described later in this section), as the factors that are driving the overall rate increase do not apply to the costs related to the surcharges. The surcharges, however, should be indexed to inflation, including an estimated 1.0 percent increase for 2011.

The financial plan model reflects assumptions and estimates that are believed reasonable at the present time. However, conditions change. It is recommended that the City review the financial condition of the water utility annually as part of the budget process, and perform a more comprehensive financial plan and water rate update study every 3 to 5 years, unless otherwise needed sooner.

Specific recommendations related to the water rate structure and schedule for 2011, as well as the automatic adjustment mechanism, are described below.

WATER RATES

The City of St. Helena provides water service to about 2,450 customers, including nearly 2,100 single family residences. About 350 accounts are located outside the City.

The City's current water rates were last adjusted in January 2010 and are summarized in **Exhibit II-4**. Current water rates include a bi-monthly service charge based on the size of the water meter and 3-tier water rates for both residential and non-residential customers. The City also maintains a landscape irrigation rate that applies to customers that meet specific criteria related to water use efficiency. Water rates for customers outside the City's limits are higher than those inside the City for a variety of reasons that were evaluated in 2005. In addition to the water rates shown in Exhibit II-4, special surcharges apply to customers in Meadowood. These surcharges are related to extra pumping facilities needed to provide service to that area. Current Meadowood surcharges are summarized in **Exhibit II-5**.

The current 3-tier water usage rates are intended to discourage excessive water use and encourage customers to conserve water. About 71 percent of the City's water rate revenues are derived from water usage charges. This amount of revenue from water usage charges

exceeds the standard for water conservation rates established by the California Water Conservation Council (CUWCC). In June 2006, the CUWCC revised the water conservation best management practice for water conservation regarding water rates (BMP #11) to a minimum of 70 percent of water rate revenue from water usage charges. This aspect of the rate structure means that as demand changes (up or down) revenues will also change. In addition, the change in revenue will be greater than the change in costs. This condition of potential revenue variability was a factor in suggesting that a larger operating reserve be maintained by the water utility.

Exhibit II-4
City of St. Helena
Current (2010) Water Rates

	Inside City	Outside City
Bi-Monthly Fixed Service Charges		
5/8" meter	\$ 31.40	\$ 48.67
1" meter	\$ 72.80	\$ 112.84
1 1/2" meter	\$ 141.63	\$ 219.53
2" meter	\$ 224.25	\$ 347.59
3" meter	\$ 417.11	\$ 646.52
4" meter	\$ 692.73	\$ 1,073.73
6" meter	\$ 1,381.05	\$ 2,140.63
8" meter	\$ 2,208.80	\$ 3,423.64
Residential Water Usage Rates (\$/HCF) (1)		
Tier 1	\$ 1.75	\$ 2.10
Tier 2	\$ 3.50	\$ 4.20
Tier 3	\$ 6.26	\$ 7.51
Non-Residential Water Usage Rates (\$/HCF) (2)		
Tier 1	\$ 2.88	\$ 3.46
Tier 2	\$ 3.18	\$ 3.82
Tier 3	\$ 3.49	\$ 4.19
Landscape Irrigation Rate (\$/HCF) (3)		
All Usage	\$ 3.08	\$ 3.08

Notes:

- (1) Residential tier allocations are as follows:
 - Single family: Tier 1 = 0-20 HCF, Tier 2 = 21-80 HCF, and Tier 3 = 81+ HCF
 - Multi-family: Tier 1 = 0-8 HCF, Tier 2 = 9-20 HCF, and Tier 3 = 21+ HCF
- (2) Non-residential tier allocations are as follows:
 - 5/8" & 1" meters: Tier 1 = 0-35 HCF, Tier 2 = 36-120 HCF, and Tier 3 = 121+ HCF
 - 1 1/2" meters: Tier 1 = 0-60 HCF, Tier 2 = 61-400 HCF, and Tier 3 = 401+ HCF
 - 2" meters: Tier 1 = 0-100 HCF, Tier 2 = 101-500 HCF, and Tier 3 = 501+ HCF
 - 3" meters: Tier 1 = 0-350 HCF, Tier 2 = 351-1000 HCF, and Tier 3 = 1001+ HCF
 - 4" meters: Tier 1 = 0-500 HCF, Tier 2 = 501-1500 HCF, and Tier 3 = 1501+ HCF
 - 6" meters: Tier 1 = 0-700 HCF, Tier 2 = 701-2500 HCF, and Tier 3 = 2501+ HCF
 - 8" meters: Tier 1 = 0-1000 HCF, Tier 2 = 1001-4000 HCF, and Tier 3 = 4001+ HCF
- (3) Rate applies to customers meeting the following criteria:
 - Service must be for landscape irrigation of public space (e.g., 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

**Exhibit II-5
City of St. Helena
Current (2010) Meadowood Surcharges**

Bi-Monthly Pumping Surcharges	
Total Water Consumption in HCF used by all accounts served by same special reservoirs and pumping stations	Pumping Cost Charge (\$/HCF)
0-300	\$ 1.619
301-400	\$ 1.297
401-500	\$ 1.116
501-600	\$ 0.957
601-700	\$ 0.789
701-800	\$ 0.718
801-900	\$ 0.659
901-1000	\$ 0.578
1001-1100	\$ 0.499
1101-1200	\$ 0.448
1201-2500	\$ 0.442
2501-3000	\$ 0.426
3001-3500	\$ 0.417
3501-4000	\$ 0.387
4001-4500	\$ 0.361
4501-5000	\$ 0.346
5001-5500	\$ 0.329
5501-6000	\$ 0.320
6001-6500	\$ 0.305
6501-7000	\$ 0.296
7001-7500	\$ 0.288
7501 and above	\$ 0.273
Bi-Monthly Maintenance Surcharge	
Per Residential Unit	\$ 49.88
Meadowood Complex (99 units + clubhouse)	\$ 4,987.24

Water Rate Structure

The City Council considered water rate issues at five separate meetings during the rate study process. As a result of discussions, consultant presentations, customer comments, and financial and rate information, it was determined that the water rate structure should

be changed in two ways. First, the three-tier structure should be reduced to a two-tier structure. Second, the tier rates should be unified between the residential customer class and the non-residential rates. In addition, and overarching all rate analysis, was the requirement that water rates reflect the cost of providing water service.

While encouraging water conservation continues to be an important objective for the water rates, the City believes that the third tier water rate (particularly for residential customers) can be viewed as punitive and counter to a desire to maintain green landscapes in St. Helena. As a result, after considering a variety of alternatives, a two-tier structure was found strike an appropriate balance between achieving the desired conservation incentive and not being perceived as punitive. By eliminating the third tier, the marginal cost for water is also reduced. This can have a beneficial impact on the water utility's revenue variability.

In recent years, the City received a number of comments about the differences between the residential and non-residential tier structure. While the residential tiers are fairly steep, the non-residential tier structure is relatively shallow in comparison. The current tier structures were justified in prior rate analyses due to the diverse patterns of water use within the non-residential customer class. However, in moving to a two-tier structure, much of the concern regarding the potential affects of the tier structure on non-residential customers was mollified. In addition, the increase in the proposed tier structure, from the first to the second tier, is a midway between the current residential and non-residential tier structures. More precisely, whereas the rate increase between the first two tiers is currently 100 percent for residential customers and 10 percent for non-residential customers, under the proposed two-tier structure the tier step is 50 percent between the two tiers.

Because of the large overall increase in the level of the rates, as well as the effects of eliminating the third tier, the allocation of water in the first tier has been increased for all customer classes. The specific tier break points are an important component to maintaining equity in the rate structure, in that the average rate for water (weighted across the two tiers) is intended to be the same within each customer class. While it may appear that non-residential customers are receiving an unfair higher allocation of water at the first tier, in fact the allocations reflect the relative portions of water in the first and second tiers for each customer class, as well as across meter sizes for non-residential customers. With the proposed two-tier rate structure, about two-thirds of the water usage occurs within the first tier, and about one-third in the second tier. The tier rates are a composite reflection of the costs of local water supplies and the costs of water purchased from the City of Napa, as well as other costs of providing service that are recovered through the water usage rates.

No changes are proposed for the fixed monthly service charges, except that they too are adjusted to meet the overall revenue needs of the water utility. Under the proposed rates, the water utility will continue to generate more than 70 percent of water rate revenue from water usage charges, and no more than 30 percent from fixed service charges. This meets the requirements for the CUWCC's best management practice regarding water conservation-oriented water rates.

Exhibit II-6 presents current and proposed water rate schedules for the City's water utility for July 2011. The rates proposed for July 2001 are estimated to result in an increase

in overall water rate revenue of 58 percent, as determined necessary based on the financial plan analyses contained herein. **Exhibit II-7** presents current and proposed surcharges for the Meadowood area. Those charges are proposed to increase based solely on the change in inflation of 1.0 percent. The issues affecting the large overall water rate increase do not affect the specific costs covered by the special surcharges.

Exhibit II-6
City of St. Helena
Current and Proposed Water Rates

	Current		July 2011	
	Inside City	Outside City	Inside City	Outside City
Monthly Fixed Service Charges				
5/8" meter	\$ 15.70	\$ 24.34	\$ 24.81	\$ 38.46
1" meter	\$ 36.40	\$ 56.42	\$ 57.51	\$ 89.14
1 1/2" meter	\$ 70.82	\$ 109.77	\$ 111.89	\$ 173.43
2" meter	\$ 112.13	\$ 173.80	\$ 177.16	\$ 274.60
3" meter	\$ 208.56	\$ 323.26	\$ 329.52	\$ 510.76
4" meter	\$ 346.37	\$ 536.87	\$ 547.26	\$ 848.25
6" meter	\$ 690.53	\$ 1,070.32	\$ 1,091.03	\$ 1,691.10
8" meter	\$ 1,104.40	\$ 1,711.82	\$ 1,744.95	\$ 2,704.67
Residential Water Usage Rates (\$/HCF) (1) (2)				
Tier 1	\$ 1.75	\$ 2.10	\$ 4.05	\$ 4.86
Tier 2	\$ 3.50	\$ 4.20	\$ 6.07	\$ 7.29
Tier 3	\$ 6.26	\$ 7.51		
Non-Residential Water Usage Rates (\$/HCF) (3) (4)				
Tier 1	\$ 2.88	\$ 3.46	\$ 4.05	\$ 4.86
Tier 2	\$ 3.18	\$ 3.82	\$ 6.07	\$ 7.29
Tier 3	\$ 3.49	\$ 4.19		
Landscape Irrigation Rate (\$/HCF) (5)				
All Usage	\$ 3.08	\$ 3.08	\$ 4.71	\$ 4.71

Notes:

- (1) Current monthly residential tier allocations are as follows:
 - Single family: Tier 1 = 0-10 HCF, Tier 2 = 11-40 HCF, and Tier 3 = 41+ HCF
 - Multi-family: Tier 1 = 0-4 HCF, Tier 2 = 5-10 HCF, and Tier 3 = 11+ HCF
- (2) Proposed monthly residential tier allocations are as follows:
 - Single family: Tier 1 = 0-14 HCF, Tier 2 = 15+ HCF
 - Multi-family: Tier 1 = 0-5 HCF, Tier 2 = 6+ HCF
- (3) Current monthly non-residential tier allocations are as follows:
 - 5/8" & 1" meters: Tier 1 = 0-18 HCF, Tier 2 = 19-60 HCF, and Tier 3 = 61+ HCF
 - 1 1/2" meters: Tier 1 = 0-30 HCF, Tier 2 = 31-200 HCF, and Tier 3 = 201+ HCF
 - 2" meters: Tier 1 = 0-50 HCF, Tier 2 = 51-250 HCF, and Tier 3 = 251+ HCF
 - 3" meters: Tier 1 = 0-175 HCF, Tier 2 = 176-500 HCF, and Tier 3 = 501+ HCF
 - 4" meters: Tier 1 = 0-250 HCF, Tier 2 = 251-750 HCF, and Tier 3 = 751+ HCF
 - 6" meters: Tier 1 = 0-350 HCF, Tier 2 = 351-1250 HCF, and Tier 3 = 1251+ HCF
 - 8" meters: Tier 1 = 0-500 HCF, Tier 2 = 501-2000 HCF, and Tier 3 = 2001+ HCF
- (4) Proposed monthly non-residential tier allocations are as follows:
 - 5/8" & 1" meters: Tier 1 = 0-36 HCF, Tier 2 = 37+ HCF
 - 1 1/2" meters: Tier 1 = 0-120 HCF, Tier 2 = 121+ HCF
 - 2" meters: Tier 1 = 0-192 HCF, Tier 2 = 193+ HCF
 - 3" meters: Tier 1 = 0-360 HCF, Tier 2 = 361+ HCF
 - 4" meters: Tier 1 = 0-600 HCF, Tier 2 = 601+ HCF
 - 6" meters: Tier 1 = 0-1,250 HCF, Tier 2 = 1,251+ HCF
 - 8" meters: Tier 1 = 0-1,920 HCF, Tier 2 = 1,921+ HCF
- (5) Rate applies to customers meeting the following criteria:
 - Service must be for landscape irrigation of public space (e.g., 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.

Exhibit II-7
City of St. Helena
Current and Proposed Meadowood Surcharges

	Current	July 2011
Monthly Meadowood Pumping Surcharges		
Total Water Consumption in HCF used by all accounts served by same special reservoirs and pumping stations	Pumping Cost Charge (\$/HCF)	
0-150	\$ 1.619	\$ 1.635
151-200	\$ 1.297	\$ 1.310
201-250	\$ 1.116	\$ 1.127
251-300	\$ 0.957	\$ 0.967
301-350	\$ 0.789	\$ 0.797
351-400	\$ 0.718	\$ 0.725
401-450	\$ 0.659	\$ 0.666
451-500	\$ 0.578	\$ 0.584
501-550	\$ 0.499	\$ 0.504
551-600	\$ 0.448	\$ 0.452
1201-1250	\$ 0.442	\$ 0.446
1251-1500	\$ 0.426	\$ 0.430
1501-1750	\$ 0.417	\$ 0.421
1751-2000	\$ 0.387	\$ 0.391
2001-2250	\$ 0.361	\$ 0.365
2251-2500	\$ 0.346	\$ 0.349
2501-2750	\$ 0.329	\$ 0.332
2751-3000	\$ 0.320	\$ 0.323
3001-3250	\$ 0.305	\$ 0.308
3251-3500	\$ 0.296	\$ 0.299
3501-3750	\$ 0.288	\$ 0.291
3751 and above	\$ 0.273	\$ 0.276
Monthly Meadowood Maintenance Surcharge		
Per Residential Unit	\$ 24.94	\$ 25.19
Meadowood Complex (99 units + clubhouse)	\$ 2,493.62	\$ 2,518.56

Exhibit II-8 summarizes how single family residential customers may be affected by the proposed water rates based on low, average, high, and very high water usage. Sample bills are presented on a monthly basis, as the City plans to begin billing for utility services on a monthly basis in July 2011.

Exhibit II-8
City of St. Helena
Typical Monthly Single Family Water Bills

		Current	July 2011
<i>Monthly Single Family Water Bills</i>			
Low User	8 HCF	\$ 29.70	\$ 57.19
Average User	16 HCF	\$ 54.20	\$ 105.77
High User	30 HCF	\$ 103.20	\$ 190.77
Very High User	50 HCF	\$ 200.80	\$ 312.20

SECTION III. WASTEWATER RATES

This section of the report describes the financial plan and wastewater rate recommendations for the City's wastewater utility. The five-year financial plan is used to determine annual wastewater rate revenue requirements. The annual rate revenue requirement is the amount of revenue needed from wastewater rates to cover planned operating, maintenance, debt service, and capital program costs with consideration of other revenues and financial reserves. The organization of the section is similar to the preceding section on water.

FUND STRUCTURE AND CASH FLOWS

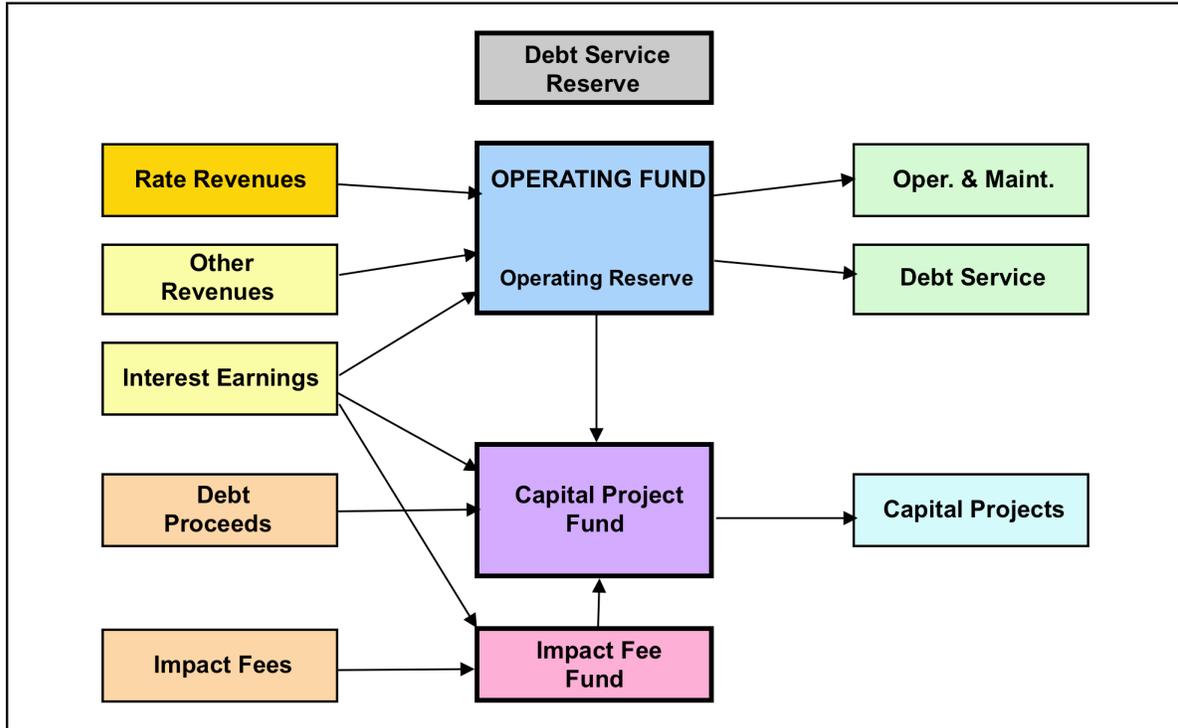
The financial plan is an annual cash flow model. As a cash flow model, it differs from standard accounting income statements, and balance sheets. The financial plan models sources and uses of funds into, out of, and between the various funds and reserves of the wastewater utility.

The financial plan model is based on the fund, reserve, and account structure currently used by the City. **Exhibit III-1** is a schematic diagram of the funds/reserves and major cash flows associated with the financial plan model.

An understanding of the fund/reserve structure is helpful in understanding the financial plan worksheets that model annual cash flows through the wastewater utility from one year to the next. The fund/reserve structure is comprised of:

- **Operating Fund** - The Operating Fund is the primary fund within the wastewater utility. Most of the wastewater system's revenues, including wastewater rate revenues, flow into the Operating Fund and all operating and maintenance costs, including debt service payments, are paid out of this fund. Funds are also transferred from the Operating Fund to the Capital Projects Fund to help pay for capital projects intended to rehabilitate and upgrade facilities. The City has a goal of annually transferring funds from the Operating Fund to the Capital Projects Fund equal to annual accounting depreciation.
 - **Operating Reserve** - The City currently has a policy goal to maintain Operating Reserves within the Operating Fund equal to 15 percent of annual operating and maintenance costs for the wastewater system. The purpose of the Operating Reserve is to provide working capital and funds for unplanned operating and maintenance expenditures. The balance in the Wastewater Operating Fund is currently above the target Operating Reserve. Consistent with the water utility, it is recommended that the City increase the minimum operating reserve target from 15 to 25 percent. This recommended policy change is reflected in the analyses presented in this report.

**Exhibit III-1
City of St. Helena
Wastewater Fund/Reserve Structures and Cash Flows**



- *Uncommitted Fund Balance* - The balance in the Operating Fund in excess of the target amount for the Operating Reserves is shown in the financial plan as Uncommitted Fund Balance. After all other obligations are met the Uncommitted Fund Balance is available to offset rate increases, and the financial plan model generally seeks to reduce any Uncommitted Fund Balance over time.
- *Capital Projects Fund* - The Capital Projects Fund is used to account for revenues and debt proceeds available for capital project expenditures. Capital projects funded from this fund are intended to rehabilitate, upgrade, and expand the wastewater system to meet current and future needs of the wastewater utility. The financial plan model generally seeks to maintain a positive balance in the Capital Projects Fund while also covering the costs of planned capital improvement projects.
 - *Debt Proceeds* - Proceeds from the issuance of long-term debt are reflected in the Capital Fund. Debt proceeds are to be expended within a timely manner following debt issuance. If not expended the City is required to take steps to avoid arbitrage.
 - *Other Capital Reserve* - The amount in the Capital Projects Fund in excess of Debt Proceeds is identified as Other Capital Reserves. These funds are generally comprised of wastewater system impact fee revenue, interest earnings, and transfers from the Operating Fund.

- *Debt Service Reserve Fund* – As a condition of issuing long-term debt, the City is required to maintain a debt service reserve fund with monies generally sufficient to cover the maximum annual debt service payment. This reserve is a form of security for lenders. The money in the debt service reserve is restricted and not available for general purposes.

FINANCIAL PLAN ASSUMPTIONS

The financial plan was created to reflect the FY 10-11 budget and financial conditions as of the beginning of the fiscal year. The financial plan also reflects the City's debt service obligations and capital improvement program, as identified by City staff during the five-year planning period.

The process used to develop the financial plan involved estimating future revenues and expenditures based on inflation and interest rates, growth projections, anticipated capital improvement needs, and other information. The City does not have formal estimates of future operating and maintenance costs, and capital improvement needs are defined at a planning level. The financial plan is based on the best available information and assumptions are believed to be reasonable; however, no assurance can be provided as to the accuracy and completeness of the estimates.

Primary assumptions reflected in financial plan analyses include:

- *Interest Rates* – Interest earned on fund/reserve balances is estimated to be 0.5 percent per year in FY 10-11 and then increasing by 0.5 percent per year each year of the planning period. Interest calculations are based on beginning of year balances. Interest accrues to both each of the funds. The City also pays interest on outstanding long-term debt obligations. The interest payments on outstanding debt are those contained in existing contracts and repayment schedules.
- *Inflation Rates* – Annual inflation rates for general operating and maintenance costs is 1.0 percent in FY 10-11, 2.0 percent in FY 11-12, and 3.0 percent thereafter. Energy and chemical costs are assumed to increase at 5.0 percent annually, due to conditions in the energy, utility, and petroleum sectors. Inflation on construction costs is assumed to increase 4.0 percent annually.
- *Growth Projections* – The City of St. Helena experiences very little new growth and development. The financial plan model presented herein does not include any growth in the customer base. This is a conservative assumption from a financial perspective, and believed reasonable considering current economic trends.
- *Operation and Maintenance Costs* – The financial plan model is based on current operating and maintenance costs as reflected in the FY 10-11 operating budget. For future years, costs are assumed to increase at increase based on inflation and changes in customer demands. In addition to the inflationary adjustment, the financial plan assumes the following new staff positions:

- Wastewater Operator II – The City plans to add a wastewater operator II midway through FY 11-12 to aid in the operation of the City’s wastewater treatment facility.
- Assistant Engineer (50%) – A new assistant engineer position is to be shared between the water and wastewater utility budgets beginning midway through FY 11-12. This position is needed to help plan and implement water and wastewater system improvements.
- *Capital Improvement Program* – The City’s wastewater capital improvement plan includes about 26 projects totaling about \$21.4 million over a six-year period. However, about \$17.4 million is related to the recycled water project scheduled to begin in FY 12-13. Final decisions on that project have not been made. In order to proceed with the recycled water project the City would likely need to issue additional long-term debt. Preliminary analysis suggest that an additional wastewater rate increase on the order of 70 percent may be needed to support new debt service associated with this project. Because of the scale and scope of this project, and because key decisions related to it have not been made, the recycled water project has been excluded from the financial plan and rate analysis included in this report.

The other 24 projects in the wastewater capital improvement program total about \$4.0 million over a six-year period, and average about \$670,000 per year. This level of expenditure is significantly higher than annual depreciation and higher than annual transfers to the Capital Fund have been in past years. Not all planned capital projects can be funded from existing Capital Project Fund reserves, and new debt (issued jointly with the water utility) in 2011 is planned to help finance planned projects.

Because of the City’s desire to keep the required wastewater rate increase to the level needed to meet debt covenants, not all of the planned capital improvement program will be funded during the planning period, even with the planned debt issuance. As a result, four projects scheduled for FY 15-16 totaling approximately \$1.4 million have been deferred beyond the planning period used for this study.

- *Debt Obligations* – In 2005, the City issued \$2,200,000 in wastewater revenue bonds through the California Statewide Communities Development Authority (CSCDA). Annual debt service payments total about \$140,000, including principal and interest. The City is also required to maintain a debt service coverage ratio of 1.20². New debt, needed in 2011 to fund planned capital improvement projects, is included in the financial plan analyses. Details are provided later in this section.

Exhibit III-2 (displayed on 2 pages) provides the details of the financial plan model for the City’s wastewater utility. **Exhibit III-3** graphically shows the revenues, expenses, fund balance, and annual rate adjustments for the wastewater Operating Fund.

² Net water utility revenues (after operating and maintenance costs) must be at least 1.20 time annual debt service.

Exhibit III-2
City of St. Helena
Wastewater Utility Financial Plan

	FY 09-10	FY 10-11	FY 11-12	FY 12-13	FY 13-14	FY 14-15	FY 15-16
Rate Increases-->		26%	0%	3%	3%	3%	3%
Effective Date-->		July 2011	Jan. 2012	Jan. 2013	Jan. 2014	Jan. 2015	Jan. 2016
WASTEWATER OPERATING FUND							
Beginning of Year Balance	\$ 344,429	\$ 374,155	\$ 372,000	\$ 564,000	\$ 533,000	\$ 512,000	\$ 506,000
Wastewater Operating Revenues							
Interest Income	\$ 39,479	\$ 3,000	\$ 7,000	\$ 13,000	\$ 16,000	\$ 20,000	\$ 24,000
Wastewater Rate Revenues	\$ 1,464,596	\$ 1,536,000	\$ 1,936,000	\$ 1,964,000	\$ 2,023,000	\$ 2,084,000	\$ 2,147,000
Misc. Revenues	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Wastewater Oper. Revs.	\$ 1,504,075	\$ 1,539,000	\$ 1,943,000	\$ 1,977,000	\$ 2,039,000	\$ 2,104,000	\$ 2,171,000
Operation & Maint. Expenses							
Wastewater Collection System	\$ 205,563	\$ 198,027	\$ 202,000	\$ 208,000	\$ 214,000	\$ 220,000	\$ 227,000
Wastewater Treatment & Disposal	\$ 462,556	\$ 500,844	\$ 511,000	\$ 526,000	\$ 542,000	\$ 558,000	\$ 575,000
Utilities & Chemicals	\$ 118,000	\$ 113,000	\$ 119,000	\$ 125,000	\$ 131,000	\$ 138,000	\$ 145,000
Public Works Administration	\$ 133,267	\$ 125,576	\$ 128,000	\$ 132,000	\$ 136,000	\$ 140,000	\$ 144,000
Finance Department	\$ 151,236	\$ 156,032	\$ 159,000	\$ 164,000	\$ 169,000	\$ 174,000	\$ 179,000
City Administration	\$ 257,887	\$ 298,702	\$ 305,000	\$ 314,000	\$ 323,000	\$ 333,000	\$ 343,000
New Staff Positions	\$ -	\$ -	\$ 75,000	\$ 154,000	\$ 159,000	\$ 164,000	\$ 169,000
Total O&M Expenses	\$ 1,328,509	\$ 1,392,181	\$ 1,499,000	\$ 1,623,000	\$ 1,674,000	\$ 1,727,000	\$ 1,782,000
Debt Service and Capital Program							
2005 CSCDA WW Rev. Bonds	\$ 145,840	\$ 148,738	\$ 147,000	\$ 145,000	\$ 148,000	\$ 146,000	\$ 148,000
2011 WW Rev. Bonds (Est.)	\$ -	\$ -	\$ 55,000	\$ 140,000	\$ 138,000	\$ 137,000	\$ 135,000
2013 WW Rev. Bonds (Est.)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Transfer to Cap. Projects Fund	\$ -	\$ -	\$ 50,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000
Total DS and Cap. Program	\$ 145,840	\$ 148,738	\$ 252,000	\$ 385,000	\$ 386,000	\$ 383,000	\$ 383,000
End of Year Balance	\$ 374,155	\$ 372,236	\$ 564,000	\$ 533,000	\$ 512,000	\$ 506,000	\$ 512,000
Operating Rsrv. (25% O&M, incl. DS)	\$ 369,000	\$ 385,000	\$ 425,000	\$ 477,000	\$ 490,000	\$ 503,000	\$ 516,000
Uncommitted Balance	\$ 5,155	\$ (12,764)	\$ 139,000	\$ 56,000	\$ 22,000	\$ 3,000	\$ (4,000)
DS Coverage (1.20 min.)-->	1.63	1.30	2.21	1.27	1.30	1.34	1.39
WASTEWATER DEBT SERVICE RESERVE							
Beginning of Year Balance	\$ 142,938	\$ 142,938	\$ 283,000	\$ 283,000	\$ 283,000	\$ 283,000	\$ 283,000
Revenues							
Addition from 2011 Debt Proceeds	\$ -	\$ 140,000	\$ -	\$ -	\$ -	\$ -	\$ -
Addition from 2013 Debt Proceeds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Revenue	\$ -	\$ 140,000	\$ -	\$ -	\$ -	\$ -	\$ -
Expenses							
Debt Service Payments	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
End of Year Balance	\$ 142,938	\$ 282,938	\$ 283,000				

FINANCIAL PLAN FINDINGS AND CONCLUSIONS

The preceding portion of this section described the basic framework and assumptions underlying the financial analyses. Specific findings and conclusions pertaining to the wastewater utility are presented below, beginning with a description of the current situation.

At present, the City's wastewater utility has:

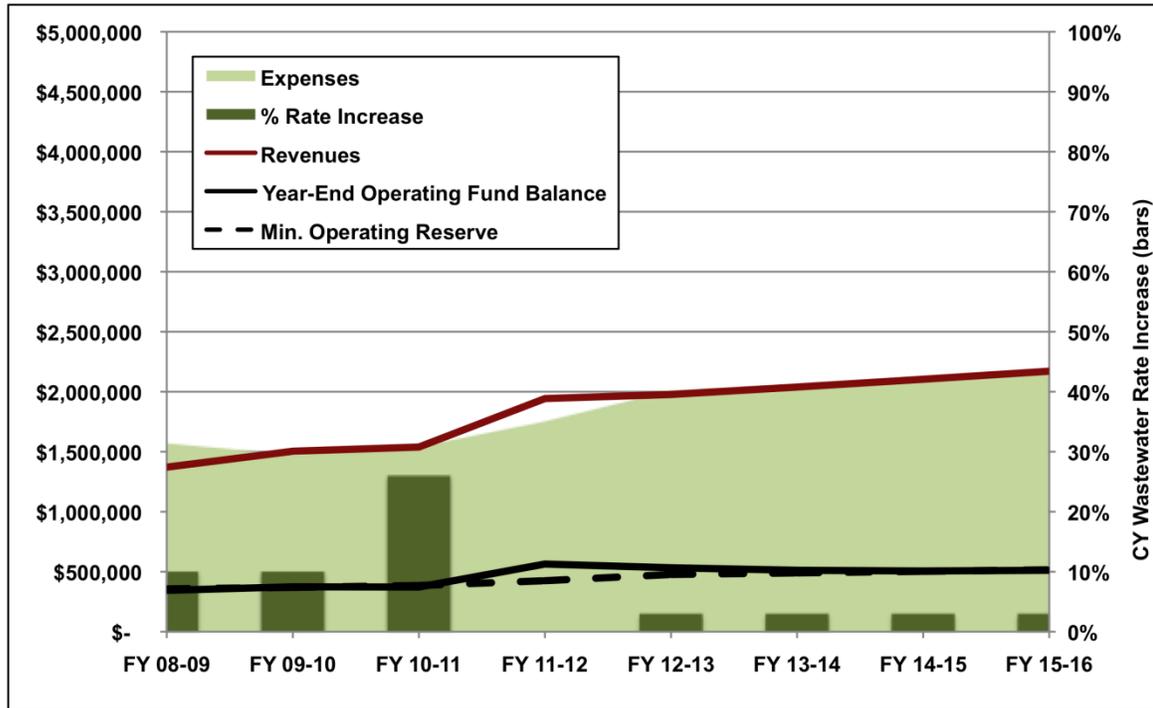
- Marginal cash reserves in either the Operating Fund or the Capital Fund,
- Annual operating and maintenance costs, including debt service obligations totaling about \$1.55 million,
- FY 11-12 wastewater system capital improvement program with projects totaling about \$1.5 million, and
- Current annual wastewater revenues totaling about \$1.5 million.

**Exhibit III-2 -- Continued
City of St. Helena
Wastewater Utility Financial Plan**

	FY 09-10	FY 10-11	FY 11-12	FY 12-13	FY 13-14	FY 14-15	FY 15-16
WASTEWATER CAPITAL PROJECTS FUND							
<i>Beginning of Year Balance</i>	\$ 429,600	\$ 192,830	\$ 166,000	\$ 537,700	\$ 305,800	\$ 113,900	\$ 110,700
Revenues and Transfers In							
Transfer from Operating Fund	\$ -	\$ -	\$ 50,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000
Transfer from WW Impact Fund	\$ 79,642	\$ 45,300	\$ -	\$ -	\$ -	\$ -	\$ -
Loan from General Fund		\$ 178,040					
Debt Proceeds			\$ 1,802,000	\$ -			
Interest Earnings	\$ 4,000	\$ 1,000	\$ 1,700	\$ 8,100	\$ 6,100	\$ 2,800	\$ 3,300
Total Revenues	\$ 83,642	\$ 224,340	\$ 1,853,700	\$ 108,100	\$ 106,100	\$ 102,800	\$ 103,300
Capital Program Expenses							
Previous Capital Proj. Expend.	\$ 320,412						
WWTP							
Cover Pond 3 for algae reduction	\$ -	\$ 624,000	\$ -	\$ -	\$ -	\$ -	\$ -
Rehabilitate Pond 1A	\$ 50,000	\$ 208,000	\$ -	\$ -	\$ -	\$ -	\$ -
Convert to Type 2; Upgrade Pond 2	\$ -	\$ 156,000	\$ 189,000	\$ 197,000	\$ -	\$ -	\$ -
Re-Plumb Pond 2 to Pond 1 connection	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Permit Renewal	\$ 70,000	\$ 73,000	\$ -	\$ -	\$ -	\$ -	\$ -
Reclamation Field Improvements	\$ -	\$ 52,000	\$ 54,000	\$ -	\$ -	\$ -	\$ -
Recycled Water Project	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Brush Aerators	\$ -	\$ 26,000	\$ -	\$ -	\$ -	\$ -	\$ -
Pond System Levee Repair	\$ 70,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Misc Maintenance Projects	\$ 25,000	\$ 26,000	\$ 27,000	\$ 28,000	\$ 29,000	\$ 30,000	\$ 30,000
WWTP & Crinella Surge Protection	\$ 10,600	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Portable Chlorine Tank	\$ -	\$ 6,000	\$ -	\$ -	\$ -	\$ -	\$ -
Security Gate	\$ -	\$ 6,000	\$ -	\$ -	\$ -	\$ -	\$ -
Shop HVAC	\$ -	\$ 5,000	\$ -	\$ -	\$ -	\$ -	\$ -
Radio Repeater/Infrastructure	\$ -	\$ 2,000	\$ -	\$ -	\$ -	\$ -	\$ -
Front End Loader	\$ -	\$ 31,000	\$ 32,000	\$ 34,000	\$ 35,000	\$ 36,000	\$ 36,000
Vehicle Replacement Program	\$ -	\$ 10,000	\$ 11,000	\$ 11,000	\$ 12,000	\$ 12,000	\$ 12,000
COLLECTION SYSTEM/SEWER							
Sulphur Springs Sewer Extension	\$ -	\$ -	\$ 11,000	\$ 11,000	\$ 12,000	\$ 12,000	\$ 12,000
Charter Oak (SS & FM Construction)	\$ 24,000	\$ 100,000	\$ -	\$ -	\$ -	\$ -	\$ -
Main St. SS Rehab (I&I Mitigation)	\$ -	\$ 121,000	\$ -	\$ -	\$ -	\$ -	\$ -
Radio Repeater/Infrastructure	\$ 2,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Vehicle Replacement Program	\$ -	\$ 36,000	\$ 16,000	\$ 17,000	\$ 18,000	\$ 18,000	\$ 18,000
Hudson Ave SS Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Main St. @ Crinella and Pratt	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Main Extension to Deer Park	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Oak Ave Infrastructure	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Capital Program	\$ 320,412	\$ 251,600	\$ 1,482,000	\$ 340,000	\$ 298,000	\$ 106,000	\$ 108,000
End of Year Balance	\$ 192,830	\$ 165,570	\$ 537,700	\$ 305,800	\$ 113,900	\$ 110,700	\$ 106,000
Remaining Bond Proceeds	\$ -	\$ -	\$ 320,000	\$ -	\$ -	\$ -	\$ -
Other Capital Reserves	\$ 192,830	\$ 165,570	\$ 217,700	\$ 305,800	\$ 113,900	\$ 110,700	\$ 106,000
WASTEWATER IMPACT FEE FUND							
<i>Beginning of Year Balance</i>	\$ 37,212	\$ 15,570	\$ 15,700	\$ 15,900	\$ 16,100	\$ 16,400	\$ 16,800
Impact Fee Revenues							
Impact Fee Earnings	\$ 48,000	\$ 45,300	\$ -	\$ -	\$ -	\$ -	\$ -
Interest Earnings	\$ 10,000	\$ 100	\$ 200	\$ 200	\$ 300	\$ 400	\$ 500
Total Revenue	\$ 58,000	\$ 45,400	\$ 200	\$ 200	\$ 300	\$ 400	\$ 500
Capital Program Transfer							
Transfer to Cap. Projects Fund	\$ 79,642	\$ 45,300	\$ -	\$ -	\$ -	\$ -	\$ -
End of Year Balance	\$ 15,570	\$ 15,670	\$ 15,900	\$ 16,100	\$ 16,400	\$ 16,800	\$ 17,300

While the wastewater utility is in a reasonable financial position for ongoing operations (including current debt service), wastewater rate increases are necessary maintain adequate operating reserves, increase contributions to the Capital Projects Fund, and support new debt obligations (as described below).

Exhibit III-3
 City of St. Helena
 Summary of Wastewater System Financial Plan



Historically, the City sought to transfer money from the Operating Fund to the Capital Projects Fund equal to annual accounting depreciation. The FY 08-09 financial statements indicate annual depreciation of about \$272,000. For FY 10-11 the Operating Fund is estimated to end slightly below the target minimum operating reserve, even without a transfer to the Capital Projects Fund. In FY 11-12 the financial plan model provides for a transfer of \$50,000 and increases the annual transfer to \$100,000 per year for the remainder of the planning period. This level of transfer will help the City fund capital improvement projects, but it does not meet the City’s policy objectives.

In the next two years the capital improvement plan includes about \$1.8 million in capital projects. In order to fund these projects the City will need to issue additional long-term debt. Because the City plans to issue debt in support of water system improvements, it would be economical to also include wastewater projects in the issuance. To provide adequate funding for planned projects, it is estimated that the City will need to issue about \$2.0 million in new debt for the wastewater system in 2011. For purposes of analyses presented herein water and wastewater debt obligations are shown separately. Terms for wastewater system debt financing in 2011 include:

Par Amount	\$2.00 million
Interest Rate	5.50%
Term	30 years
Issuance Costs	3.0% of Par
DS Reserve (funded)	\$140,000
Net Proceeds for Projects	\$1.8 million

Annual debt service on the 2011 wastewater system financing is estimated to be about \$140,000 annually.

As a condition of issuing long-term debt in 2005, the City agreed to maintain wastewater rates and other utility revenues such that net revenues (net of operating costs) are at least 1.20 times annual debt service. This requirement will likely be extended to any new debt issuance. In order to meet the current and expected future financial obligations of the wastewater utility an estimated overall 26 percent increase in wastewater rates is needed. This increase would likely need to be implemented before the City issues new debt to fund capital projects.

Beyond this initial large wastewater rate increase, it appears that future wastewater rate increases can be limited to the rate of general inflation, at least until such point as the City makes decisions regarding the proposed recycled water project. It is therefore recommended that in addition to the initial 26 percent wastewater rate increase that the City adopt a mechanism for annually adjusting wastewater rates, in January of each year beginning in 2013, based on changes in the San Francisco Bay Area CPI. It is important to consider, however, that indexing wastewater rates to general inflation will only be effective if wastewater rates are first brought to a level that is fully supportive of the financial needs of the utility, including all necessary ongoing operation and maintenance costs, debt service obligations, and capital program needs, including an annual transfer to the Capital Fund sufficient to support the long-term needs of infrastructure replacement and rehabilitation.

The current capital improvement program includes about \$17.4 million in costs related to the proposed recycled water project from FY 12-13 through FY 15-16. In order to fund these improvements, it is estimated that the City would need to issue about \$19 million in additional long-term debt in FY 12-13. Annual debt service on this issuance is estimated to be about \$1.3 million, and would require an additional wastewater rate increase of about 70 percent. Because decisions related to this project are still pending, and because of the scale and scope of the project, the financial plan and rate analysis in this report exclude this potential project.

Driven primarily by (1) supporting ongoing operations and maintenance, (2) gradually increasing transfers in support of the planned capital improvement program, and (3) anticipated future debt obligations, the following wastewater rate increases may be needed to support the wastewater utility:

July 2011	26%
January 2012	0%
January 2013	3%
January 2014	3%
January 2015	3%
January 2016	3%

It is recommended that the City begin the process necessary to (1) implement new wastewater rates by July 2011 with an overall 26 percent increase in the level of the rates, and (2) adopt a mechanism for automatically adjusting water rates in January of each year beginning in 2013 based on the change in the San Francisco Bay Area CPI.

The financial plan model reflects assumptions and estimates that are believed reasonable at the present time. However, conditions change. It is recommended that the City review the financial condition of the wastewater utility annually as part of the budget process, and perform a more comprehensive financial plan and wastewater rate update study every 3 to 5 years, unless otherwise needed sooner.

Specific recommendations related to the wastewater rate structure and schedule for 2011, as well as the automatic adjustment mechanism, are described below.

WASTEWATER RATES

The City of St. Helena provides wastewater service to about 1,700 active accounts, including about 1,400 single family homes.

The City's current wastewater rates were last adjusted in January 2010 and are summarized in **Exhibit III-4**. Current wastewater rates include a fixed bi-monthly service charge for all single family residential customers. For other customer classes (multi-family and non-residential), the rates include a service charge based on the size of the water meter and a usage rate applied to metered water usage. Usage rates for multi-family and non-residential customers are based on consideration of wastewater strength factors for biochemical oxygen demand (BOD) and total suspended solids (TSS).

In recent months, the City has identified additional ways to encourage water conservation. One of the recommendations recently made to the City was to develop a single family residential wastewater rate structure that is tied to each customer's water usage. The current flat rate is based on the average winter water use (estimated to reflect residential wastewater flows) for all single family residential customers. This one size fits all approach provides no economic incentive for residential customers to curtail water use to reduce wastewater bills. It also results in large and small households paying the same wastewater bill amount.

An approach that provides for a better distribution of costs to each customer is to establish residential wastewater rates based on each customer's individual winter water usage (winter water use is frequently used as an estimate of residential sewer flow, since water used in the winter generally excludes irrigation and all water used is considered to enter the wastewater system).

The proposed wastewater rates include this change to the rates for single family residential customers. The rates include a fixed service charge, plus a usage charge that would be applied to each unit of average winter water use for each single family residential customer. For purposes of determining the winter monthly usage, usage for billing periods with meter read dates in January, February, and March is recommended. These are the months that historically have included the lowest usage months.

Exhibit III-4
City of St. Helena
Current (2010) Wastewater Rates

Single Family Residential		
Monthly Service Charge	\$	48.12
Multi-Family and Non-Residential		
<i>Monthly Service Charge</i>		
5/8" meter	\$	30.14
1" meter	\$	73.28
1 1/2" meter	\$	145.20
2" meter	\$	231.49
3" meter	\$	432.84
4" meter	\$	720.49
6" meter	\$	1,439.62
<i>Usage Rate (\$/HCF of water usage)</i>		
Multi-Family Residential	\$	2.82
Car Wash	\$	2.04
Schools	\$	2.27
Laundry/Laundromat	\$	2.40
Churches	\$	2.61
City Buildings	\$	2.61
Commercial - General	\$	2.61
Winery - Sutter Home	\$	3.05
Motels w/o Food	\$	3.11
Service Sta./Auto Repair	\$	3.36
Mixed Retail w/ Food	\$	4.86
Motels w/ Food	\$	6.26
Restaurant	\$	8.36
Grocery	\$	8.49
Mortuary	\$	8.49
Winery - Merryvale	\$	14.98
Winery - Spottswoode	\$	14.98

Exhibit III-5 provides information on the average monthly winter water use of the City's single family residential customers. The average, median, and modal average winter water use is 5 HCF. While there is a wide variation of water use, even in winter months, about 75 percent of all single family customers have between 1 HCF and 7 HCF as their winter average monthly usage.

In determining wastewater rates, single family and multi-family usage rates are the same, as strength characteristics of wastewater are generally the same for all residential customers. Service charges for single family customers were then calculated to maintain the existing proportionate distribution of costs to each customer class. That is, under the proposed rates all customer classes will continue to pay the proportionate share of wastewater costs.

Exhibit III-5
City of St. Helena
Single Family Average Monthly Winter Water Usage
(Average of Jan-Feb-Mar Meter Reads in 2010)

Winter Usage (HCF)	No. of Bills	Water Use (HCF)	% Single Family Bills
1	104	104	7%
2	145	290	10%
3	185	555	13%
4	205	820	14%
5	197	985	14%
6	141	846	10%
7	100	700	7%
8	90	720	6%
9	61	549	4%
10	39	390	3%
11	30	330	2%
12	26	312	2%
13	11	143	1%
14	11	154	1%
15	10	150	1%
16	5	80	0%
17	4	68	0%
18	4	72	0%
19	5	95	0%
20	2	40	0%
	1,428	7,403	

Exhibit III-6 presents current and proposed July 2011 rate schedules for the City's wastewater utility. **Exhibit III-7** presents current and proposed special factors for determining wastewater rates for special industrial users in accordance with Municipal Code Section 13.20.020 (D). The proposed wastewater rates reflect a proportionate distribution of wastewater costs to each customer based on a combination of factors, including meter size, water usage, and wastewater strength characteristics. The rates are intended to provide the revenues needed for system operation and maintenance, debt service, capital program needs, and the maintenance of reserves.

Exhibit III-6
City of St. Helena
Current and Proposed Wastewater Rates

	Current	July 2011
Single Family Residential		
Monthly Service Charge	\$ 48.12	\$ 42.68
Usage Rate (\$/HCF of winter water use) (1)		\$ 3.55
Multi-Family and Non-Residential		
<i>Monthly Service Charge</i>		
5/8" meter	\$ 30.14	\$ 37.97
1" meter	\$ 73.28	\$ 92.33
1 1/2" meter	\$ 145.20	\$ 182.95
2" meter	\$ 231.49	\$ 291.67
3" meter	\$ 432.84	\$ 545.38
4" meter	\$ 720.49	\$ 907.82
6" meter	\$ 1,439.62	\$ 1,813.91
<i>Usage Rate (\$/HCF of water usage)</i>		
Multi-Family Residential	\$ 2.82	\$ 3.55
Car Wash	\$ 2.04	\$ 2.57
Schools	\$ 2.27	\$ 2.86
Laundry/Laundromat	\$ 2.40	\$ 3.02
Churches	\$ 2.61	\$ 3.29
City Buildings	\$ 2.61	\$ 3.29
Commercial - General	\$ 2.61	\$ 3.29
Winery - Sutter Home	\$ 3.05	\$ 3.84
Motels w/o Food	\$ 3.11	\$ 3.92
Service Sta./Auto Repair	\$ 3.36	\$ 4.23
Mixed Retail w/ Food	\$ 4.86	\$ 6.12
Motels w/ Food	\$ 6.26	\$ 7.89
Restaurant	\$ 8.36	\$ 10.53
Grocery	\$ 8.49	\$ 10.70
Mortuary	\$ 8.49	\$ 10.70
Winery - Merryvale	\$ 14.98	\$ 18.87
Winery - Spottswode	\$ 14.98	\$ 18.87

Notes:

- (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.

Exhibit III-7
City of St. Helena
Current and Proposed Wastewater Special User Rate Factors

	Current	July 2011
Special Users (factors for formula in Muni. Code Sec. 13.20.020 (D))		
A (per million gallons of flow)	\$ 1,672.39	\$ 2,107.21
B (per pound of BOD)	\$ 0.81	\$ 1.02
C (per pound of SS)	\$ 0.93	\$ 1.17

As with the water utility, it is recommended that the City adopt provisions for annually adjusting wastewater rates each January, beginning in 2013, based on changes in the San Francisco Bay Area CPI. Once approved, this automatic adjustment mechanism can be used for up to five years, and would then need to be re-adopted.

As described earlier in this section, if the City proceeds with the recycled water project, as it is currently included in the 5-year capital improvement plan, the City will need to issue additional long-term debt to finance the project. It is currently estimated that the City would need to issue an additional \$19 million in debt in FY 12-13, and would also need to increase wastewater rates an estimated additional 70 percent to support associated debt service obligations. A separate rate approval process would be required at that time to adopt required wastewater rates.