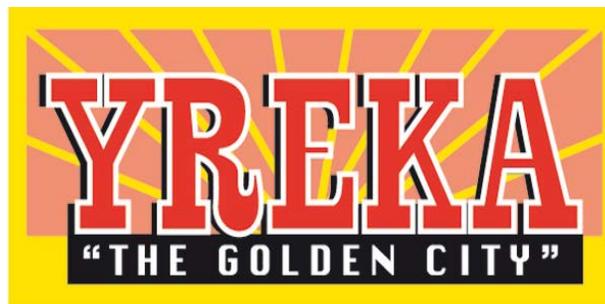


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**WATER AND WASTEWATER
UTILITY RATE STUDY**

CITY OF



MAY 2013



DRAFT

**WATER AND WASTEWATER
UTILITY RATE STUDY**

FOR

**CITY OF YREKA
701 4TH STREET
YREKA, CA 96097**

JOB No. 69.39

MAY 2013

PREPARED BY:

PACE
ENGINEERING
REDDING, CALIFORNIA



DRAFT

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ABBREVIATIONS

AWWA	American Water Works Association
CF	Cubic Feet (Note 100 CF = 748 gallons)
DIF	Development Impact Fee
FEMA	Federal Emergency Management Agency
FY	Fiscal Year
GASB 34	Government Accounting Standards Board Statement 34
HE	Household Equivalent (i.e., typical single-family home)
I&I	Infiltration and Inflow
MG	Million gallons
PTA	Planning and Technical Assistance Grant from the Community Development Block-Grant Agency
SWRCB	State Water Resource Control Board
SRF	State Revolving Fund

CHAPTER I EXECUTIVE SUMMARY

INTRODUCTION

The City of Yreka (City) owns and operates a water system consisting of a supply system, treatment plant, storage reservoirs, pump stations, and distribution piping. It also owns and operates a wastewater system consisting of a collection system, treatment plant, and effluent disposal facilities. The water and wastewater systems are operated by the City as independent enterprises through the Water Enterprise Fund and the Wastewater Enterprise Fund. Expansion and upgrading of the water and wastewater systems is funded through the Enterprise Funds and a Development Impact Fee that has both a water and wastewater component. The Development Impact Fee provides funds for growth related improvements to the utilities.

PURPOSE AND SCOPE

PACE Engineering prepared the City's 2008 Water and Wastewater Utility Rate Study that recommended changes to the water and wastewater rate structures and rate adjustments to cover the costs of operating, maintaining, and upgrading the water and wastewater systems. In October 2012, the City retained PACE to prepare an update to the 2008 rate study. Analysis of the Development Impact Fees needed to fund the system improvements related to growth was not included in the Scope of Work.

This report presents the results of the review and analysis of the City's current Water and Wastewater Enterprise rates. This review was conducted to determine if the current rate structures can provide the revenues needed to allow the City to recover the total costs of the Water and Wastewater Enterprises from existing and future customers. Costs that were reviewed included the costs of operation and maintenance, debt service, normal additions and replacements to the systems, administrative costs, and capital improvement programs.

The purpose of the study was also to identify possible changes to the City's current rate structures, which may be required to provide the future revenues needed to meet projected costs. In addition, the City requested that the rate structures be equitable such that, as nearly as practical, each customer would pay their fair share of the costs of providing the services received.

The scope of this study includes a review and analysis of the operation of the City's Water and Wastewater Enterprises based upon historic expenditures and revenues, the proposed system's Capital Improvement Plans, and projected future revenue requirements. Since past improvements at the wastewater treatment plant were funded in part by a State Revolving Fund loan, the final wastewater rate structure will also need to meet the Revenue Program Guidelines as administered by the State Water Resources Control Board (SWRCB).

The work performed included:

- Meeting with City staff members to collect and review available information and review the methodology to be used in the development of the recommended rate structures for water and wastewater services.
- Reviewing historical account information and anticipated future costs for the 5-year study period (FY 2013-14 through FY 2017-18).
- Prioritize Capital Improvement funding needs from the City's 2004 Master Sewer Plan, 2005 Master Water Plan, 2007 Wastewater Treatment and Effluent Disposal Expansion Plan, and supplemental improvements that the City may deem warranted.
- Developing a forecast of the annual revenue requirements.
- Recommending rate structures that will generate the level of revenue needed, with a distribution of those costs on an equitable basis between current and new customers, as well as by class of customer.

STUDY ASSUMPTIONS

The following assumptions were used to analyze and project future costs, revenues, and rates for this study:

- Proposed Enterprise Fund Rates must generate sufficient revenues to cover the costs of system operation and maintenance, replacement capital improvements, and debt service allocated to system users.
- Revenues generated from the Development Impact Fees will be directed to the funding of future capital expansion improvements and debt service payments for growth related improvements. These revenues will not be used for operating expenses.
- The Enterprise Funds will operate with a balanced budget, maintaining adequate reserve and replacement funds.

WATER AND WASTEWATER RATE AND FINANCIAL RECOMMENDATIONS

SUMMARY OF WATER FINDINGS: Findings related to the City's water rates are summarized below:

- The current water rate structure consists of a fixed monthly service charge and consumption rates that applies to all water use in excess of 100 gallons per month. The fixed monthly service charge for each account is based on the size of meter that serves the account. Monthly water use is billed on a tiered consumption rate schedule for single family accounts and a uniform consumption rate for all non-single family accounts. A \$2.00 per month low income discount is available to single family residences with household incomes below the City's target income level and having the smallest allowable meter size installed.
- The current water rate structure is fairly easy to understand and administer.

- Currently, approximately 57 percent of water rate revenues are generated from the fixed monthly service charges. The remaining 43 percent are derived from consumption charges, and are subject to changes in overall water consumption.
- Reduced consumption during years with higher than normal rainfall, such as what happened in 2005, can result in less revenue than anticipated based on historical consumption records. However, the City's policy of maintaining a minimum operating reserve of 25 percent of total budget expenses less on-going capital projects, should allow the rates to be adjusted gradually so that a higher portion of the annual revenue is from consumption charges.
- Water rates need to continue providing sufficient revenues to sustain the capital replacement program at levels desired for long-term system reliability.
- Water utility growth-related fees are insufficient to fund growth-related capital improvement costs on a pay-as-you-grow basis. Thus, a portion of the Development Impact Fees should be allocated to debt service for the more immediate growth related improvements.

SUMMARY OF WASTEWATER FINDINGS: Findings related to the City's Wastewater Utility are summarized below:

- The current wastewater rate structure consists of a fixed monthly service charge with all single-family and multi-family accounts being charged one base rate per family unit, except that a \$2.00 per month low income discount is available for single-family residences with household incomes below the City's target income level. Single-family household equivalents (HEs) are typically calculated for each non-residential account based on their winter water use. In special situations the calculated number of HEs may be adjusted to account for unusual water use conditions. All accounts with flows greater than one HE are charged based on the calculated number of HEs times the base rate. All remaining accounts are charged the base amount.

- The loan conditions associated with the City’s 2002 State Revolving Fund Loan requires the wastewater charges to each system user be in proportion to the actual cost to handle the wastewater discharged by that user. Given the City’s current population, the existing flow-based rate structure appears to meet the State Water Resources Control Board (SWRCB) guidelines. However, in the future, the SWRCB may require that the City also take waste strength into account for certain customers, such as restaurants.

- Wastewater rates need to continue providing sufficient revenues to sustain the capital replacement program at levels desired for long-term system reliability.

- The wastewater component of the Development Impact Fees is not sufficient to fund growth-related capital improvements costs on a pay-as-you-grow basis. Thus, a portion of these future fees should be allocated to debt service for the more immediate growth related improvements.

WATER AND WASTEWATER RATE RECOMMENDATIONS: The water rates recommended for adoption for FY 2013-14 through FY 2017-18 are summarized in Table 1. These water rates should be adopted as soon as possible. The analyses contained in this report assume that the proposed FY 2013-14 rates will be effective January 1, 2014.

TABLE 1
City of Yreka - Water Utility
Recommended Water Rates

	Existing FY 12-13	Proposed FY 13-14	Proposed FY 14-15	Proposed FY 15-16	Proposed FY 16-17	Proposed FY 17-18	
<u>CONSUMPTION CHARGES (\$/1000 GALLONS)</u>							
Single Family Consumption Rates							
101-10,000 Gallons	\$1.86	\$1.93	\$1.99	\$2.06	\$2.13	\$2.21	
10,001 to 35,000 Gallons	\$2.05	\$2.12	\$2.19	\$2.27	\$2.34	\$2.43	
Excess over 35,000 Gallons	\$2.23	\$2.32	\$2.39	\$2.47	\$2.56	\$2.65	
Non-Single Family Consumption Rate							
Excess over 101 Gallons	\$1.86	\$1.93	\$1.99	\$2.06	\$2.13	\$2.21	
							METER FACTOR
<u>MONTHLY SERVICE CHARGES (\$/MONTH)</u>							
5/8" Meter	\$31.60	\$32.07	\$32.56	\$33.04	\$33.54	\$34.04	1.0
3/4" Meter	\$41.08	\$41.69	\$42.33	\$42.95	\$43.60	\$44.25	1.3
1" Meter	\$47.40	\$48.11	\$48.84	\$49.56	\$50.31	\$51.06	1.5
1 1/2" Meter	\$88.48	\$89.80	\$91.17	\$92.51	\$93.91	\$95.31	2.8
2" Meter	\$126.40	\$128.28	\$130.24	\$132.16	\$134.16	\$136.16	4.0
3" Meter	\$379.20	\$384.84	\$390.72	\$396.48	\$402.48	\$408.48	12.0
4" Meter	\$568.80	\$577.26	\$586.08	\$594.72	\$603.72	\$612.72	18.0
6" Meter	\$790.00	\$801.75	\$814.00	\$826.00	\$838.50	\$851.00	25.0
8" Meter	\$1,106.00	\$1,122.45	\$1,139.60	\$1,156.40	\$1,173.90	\$1,191.40	35.0
Note: Low income monthly service charges are \$2.00 less than shown above, but require a 5/8" meter.							

Based on an annual water use of about 165,000 gallons per year the typical residential bill will increase by approximately 2.5 percent per year. The proposed rate increases are also structured such that the percentage of water rate revenue generated from the consumption charges will increase from about 43 percent in FY 12-13 to approximately 46 percent in FY 17-18.

The recommendations for the water rate structure include:

- The City should continue to determine each account’s fixed monthly service charge based on a meter cost structure, wherein the fixed monthly service charge is proportional to the meter installation cost.
- The tiered rate structure for the single-family accounts should also be continued to encourage water efficiency.

The wastewater rates recommended for adoption for FY 2013-14 through FY 2017-18 are summarized in Table 2. These wastewater rates should be implemented as soon as possible. The analyses contained in this report assume that the proposed FY 2013-14 rates will be effective January 1, 2014.

TABLE 2
City of Yreka -- Wastewater Utility
Recommended Monthly Wastewater Rates

	Existing FY 12-13	Proposed FY 13-14	Proposed FY 14-15	Proposed FY 15-16	Proposed FY 16-17	Proposed FY 17-18
Single Family Flat Rate per Unit	\$42.00	\$43.05	\$44.13	\$45.23	\$46.36	\$47.52
Low Income Single-Family Rate per Unit	\$40.00	\$41.05	\$42.13	\$43.23	\$44.36	\$45.52
Multi - Family Flat Rate per Unit	\$42.00	\$43.05	\$44.13	\$45.23	\$46.36	\$47.52
Non-Residential Flat Rate per HE (see Notes)	\$42.00	\$43.05	\$44.13	\$45.23	\$46.36	\$47.52
Notes: 1. One household equivalent (HE) equals 200 gallons per day of wastewater flow, which is the estimated flow from a typical single family household. 2. Non-residential HEs based on 90% of winter water consumption or available flow factors for similar type of discharges.						

The typical residential sewer bill will increase by approximately 2.5 percent per year.

It is recommended that the City continue to use its current flow based rate structure.

WATER AND WASTEWATER FINANCIAL PLAN RECOMMENDATIONS: The following recommendations are made with respect to the fund structure and reserve policies of the water and wastewater utilities. These recommendations are intended to improve the financial condition of each utility and minimize the potential for future rate volatility.

- Each utility should maintain a minimum operating reserve of \$500,000 or 25 percent of the budgeted total expenses less on-going capital projects, whichever is greater. The designated operating reserves would provide funds available for emergencies, unanticipated fluctuations in revenues relative to costs and other unforeseeable events.
- Each utility should maintain a Debt Reserve Fund and a Short Term Assets Replacement Reserve Fund in accordance with the Letter of Conditions associated with city's loans from USDA Rural Development.
- The following utility capital reserve funds should also be maintained:

Water Utility

- Fall Creek Emergency Repair/Replacement Fund – This fund is for emergency repairs and replacement of the 23-mile long pipeline and other extremely critical supply facilities. The goal is to increase the balance of this fund from \$3,000,000 to \$3,500,000 over the next five years.
- Water Improvements Fund – The need for water system improvements can vary from year to year, thus unspent funds budgeted for capital improvements would be transferred to this fund at the end of each fiscal year so that they can be used for future needs.

Wastewater Utility

- Wastewater Improvements Fund – Similar to Water Improvements Fund.
- Since the Development Impact Fees were enacted, it will not be possible to construct the needed growth-related improvements on a pay-as-you-grow basis. Therefore, the collected fees will need to be allocated to the Enterprise Fund for debt service and/or cost reimbursement of the capital improvement fund for the growth-related improvements. While the existing rate payers may cover a portion of the cost in the interim, the future

receipt of Development Impact Fees will help off-set the need for future rate increases associated with debt service and/or future capital projects.

- Review and update other fee related services within each enterprise fund, such as call-outs, contractor hookups and usage, etc.
- Review inflationary trends annually using the American Cities Municipal Index, and confirm that inflation is still within the inflation factors used in the five year financial plan. Higher than projected inflation may require adjustments to the proposed rate schedule.
- Update this Utility Rate Study within five years.
- In order to assure that future growth is paying its fair share of the capital improvements, the City should charge its Development Impact Fees for both the water and wastewater utility at 100 percent of their recommended values. It is also recommended that a Wastewater Treatment Development Impact Fee be adopted to help fund the debt service associated with the growth related treatment plant improvements outlined for the 2013 Treatment and Sewer Improvements Project. In addition, the Development Impact Fees should be adjusted for inflation on an annual basis in accordance with the change in the Engineering News Record, San Francisco Construction Cost Index.

CHAPTER II WATER UTILITY

CURRENT WATER USE RATES

The latest water rate ordinance was adopted by the City Council in 2008.

The FY 2007-08 through FY 2012-13 water rates included a fixed monthly service charge and consumption charges as summarized in Table 3. The low income discount of \$2.00 per month is available to single-family residences with household incomes below the City’s target income level and having the smallest allowable meter size installed. In December 2012, there were 20 services that qualified for this discount.

It is estimated that the fixed monthly service charges will generate about 57 percent of the water rate revenues for FY 12-13. The remaining 43 percent is generated through consumption charges based on the actual water used.

TABLE 3
City of Yreka - Water Utility
Historical and Current Water Use Rates

	FY 07-08	FY 08-09	FY 09-10	FY 10-11	FY 11-12	FY 12-13	
CONSUMPTION CHARGES (\$/1000 GALLONS)							
Single Family Consumption Rates							
101-10,000 Gallons	\$0.96	\$1.17	\$1.38	\$1.59	\$1.75	\$1.86	
10,001 to 35,000 Gallons	\$0.96	\$1.29	\$1.52	\$1.75	\$1.93	\$2.05	
Excess over 35,000 Gallons	\$0.96	\$1.40	\$1.66	\$1.91	\$2.10	\$2.23	
Non-Single Family Consumption Rates							
Excess over 101 Gallons	\$0.96	\$1.17	\$1.38	\$1.59	\$1.75	\$1.86	
MONTHLY SERVICE CHARGES (\$/MONTH)							METER FACTOR
5/8" Meter	\$16.02	\$19.80	\$23.40	\$26.90	\$29.80	\$31.60	1.0
3/4" Meter	\$16.02	\$21.76	\$28.03	\$34.97	\$38.74	\$41.08	1.3
1" Meter	\$16.02	\$23.07	\$31.12	\$40.35	\$44.70	\$47.40	1.5
1 1/2" Meter	\$16.02	\$31.56	\$51.20	\$75.32	\$83.44	\$88.48	2.8
2" Meter	\$16.02	\$39.40	\$69.73	\$107.60	\$119.20	\$126.40	4.0
3" Meter	\$16.02	\$91.67	\$193.28	\$322.80	\$357.60	\$379.20	12.0
4" Meter	\$16.02	\$130.88	\$285.95	\$484.20	\$536.40	\$568.80	18.0
6" Meter	\$16.02	\$176.62	\$394.06	\$672.50	\$745.00	\$790.00	25.0
8" Meter	\$16.02	\$241.96	\$548.50	\$941.50	\$1,043.00	\$1,106.00	35.0
Note: Low income monthly service charges are \$2.00 less than shown above, but require a 5/8" meter.							

HISTORICAL GROWTH AND EXPENDITURES

WATER UTILITY CUSTOMERS AND WATER USE – HISTORY: Currently, there is a considerable amount of land area within the City limits that is vacant and is not connected to or served by the City’s water system. The City anticipates that as this land is developed it will connect to the water system. This growth will continue to add customers and increase revenue for water operations.

Historical end of year water connection data is shown in Table 4. The values shown are for the number of active water service accounts in all use classifications. Due to the current state of the local economy, City staff has suggested that a one-half percent growth rate would be reasonable for projecting the number of future water services.

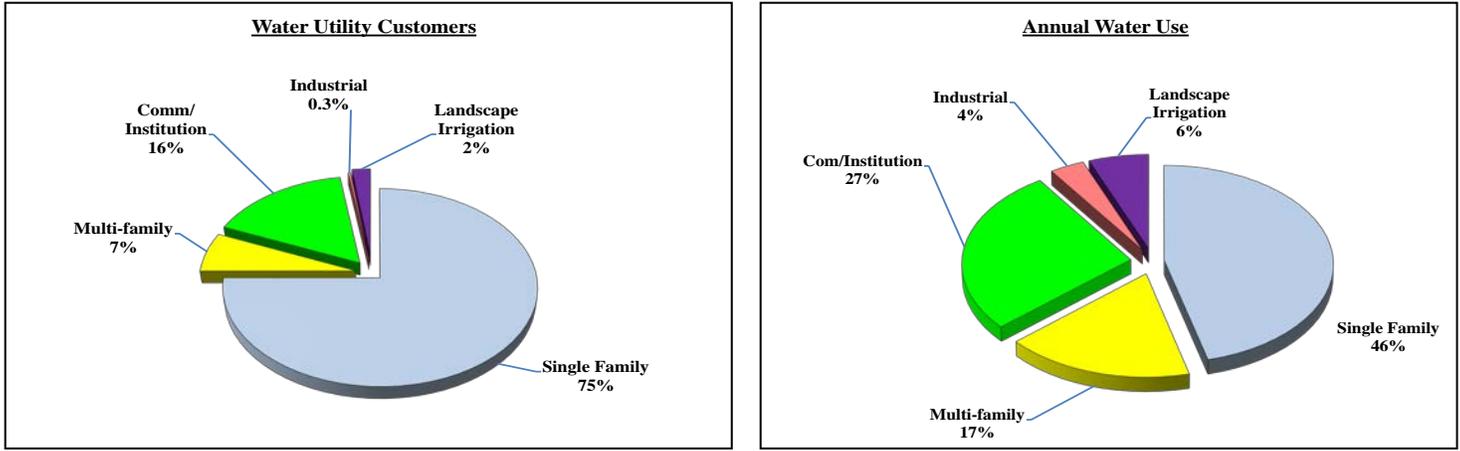
**TABLE 4
City Of Yreka – Water Utility
Historic Number Of Accounts**

Year	2006	2007	2008	2009	2010	2011
Number of Active Water Accounts	2,883	2,923	2,948	2,958	3,007	3,001
% Change		+1.4	+0.8	+0.3	+1.7	-0.2

In December 2011, the City of Yreka had a total of 3,001 active water accounts. The accounts are segregated into 2,246 single-family residential connections, 193 multi-family connections, 486 commercial/institutional connections, 8 industrial connections, and 68 landscape irrigation and outside city limits connections.

Figure 1 summarizes the current number of active customer accounts, as well as the current amount of annual water consumption by each customer class. As expected, water use by nonresidential customers represents a much higher proportion of water use than is reflected by the percentage of customers.

FIGURE 1
CITY OF YREKA – WATER UTILITY
SUMMARY OF CUSTOMERS AND ANNUAL WATER USE



The total annual water consumption values for the previous five calendar years and the projected total use for 2012 are shown in Table 5. Although the actual water use has fluctuated significantly from year to year, the average annual change from 2007 through 2012 was about negative 1.0 percent. Part of the increase in metered use for 2012 is due to the addition of water meters on some of the City parks which had not been metered in the past.

TABLE 5
City Of Yreka – Water Utility
Historical Annual Metered Consumption

Year	Million Gallons	% Change
2007	683.0	-0.9%
2008	680.4	-0.4%
2009	681.5	+0.2%
2010	621.7	-8.8%
2011	571.1	-8.1%
2012	646.1	+13.1%

Actual weather conditions and the amount of water available during a given year can significantly impact the amount of water use. For example, the wetter than normal spring and early summer months can result in lower than anticipated water consumption. Rate increases in the last few years have probably also tended to reduce water consumption.

Significant fluctuations in water demand due to weather variations impact the stability of the water utility revenue. To a lesser degree, local economic conditions can also impact water consumption and water utility revenue. Thus, it will be important to maintain adequate operating reserves to handle the loss in expected revenue during low water use years.

WATER UTILITY EXPENDITURES: Water utility expenditures for operation and maintenance and for replacement capital projects are normally made from the Water Enterprise Fund. Table 6 is a summary of the Water Enterprise Expenditures for fiscal years 2008-09 through 2011-12. During this time period, the collection costs increased substantially after 2008-09 due to implementation of the new rate schedule and the engineering costs increased as anticipated due to implementation of various water improvement projects. The annual water treatment and conservation expenditures varied significantly from year to year due to legal expenses. Debt service payments reduced when the Davis-Grunsky Loan for the initial Fall Creek Project was paid off in 2009-10. However, debt service on the new \$6,810,000 USDA Rural Development loan for the recently completed Fall Creek Water System Improvements Project began in 2011-12 with interest during construction and continued with annual principal and interest payments of \$264,225 beginning in 2012-13.

TABLE 6
City Of Yreka -- Water Utility
Historical Water Enterprise Expenditures

	Expended (FY 08-09)	Expended (FY 09-10)	Expended (FY 10-11)	Expended (FY 11-12)
Collection	\$58,667	\$110,233	\$106,422	\$102,535
Engineering	\$136	\$49,911	\$49,923	\$53,676
Water Distribution	\$261,295	\$228,996	\$295,660	\$319,071
Water Treatment & Conservation	\$665,215	\$617,934	\$721,177	\$644,237
On-going Capital Projects	\$1,049,185	\$675,519	\$103,454	\$108,868
Water Debt Service Payments	\$204,065	\$204,026	\$3,326	\$90,797
Operating Transfer Out	\$0	\$10,052	\$7,218	\$0
Internal Services	<u>\$167,233</u>	<u>\$163,192</u>	<u>\$175,906</u>	<u>\$155,426</u>
Total Expenditures	\$2,405,796	\$2,059,863	\$1,463,086	\$1,474,610

Historically, the City has not funded depreciation. Currently, the water utility annual depreciation is only about \$260,000 per year, which equates to about \$5.40 per month, per 5/8-inch meter equivalent. In 2013, with the completion of over \$10 million in capital improvements on the Fall Creek Water System Improvement Project, the depreciation expense is expected to double.

Beginning with adoption of the rate structure outlined in the 2008 Water and Wastewater Utility Rate Study, the City has been scheduling to fund periodic capital replacement projects that are aimed at correcting existing deficiencies and replacing worn out infrastructure.

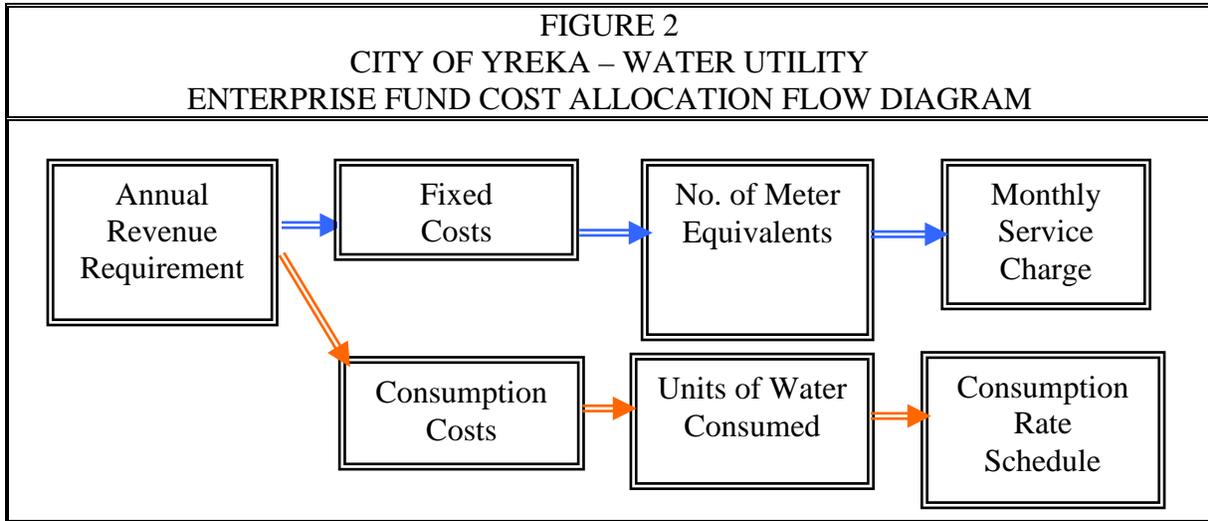
WATER RATE DEVELOPMENT

CURRENT WATER RATE REVENUE REQUIREMENT: Analysis of the FY 2012-13 water rate revenue requirement is based on the City's FY 2012-13 adopted budget. The annual water enterprise rate revenue requirement is based on water system operation and maintenance cost plus debt service obligations and replacement capital improvement needs, less other water system revenues such as interest earnings, and other income.

Based upon our review of the City's adjusted FY 2012-13 Water Enterprise Budget, it appears that the annual water rate revenue requirement for 2012-13 was about \$2,194,300. The expected FY 2012-13 water enterprise revenues are \$2,683,000. While the City has incurred significant cost in the last few years due to implementation of the Fall Creek Water System Improvements, it is also important to note that the City faces a number of capital improvements in the near future that will increase the annual revenue requirements (see Table 9 on page 21).

COST OF SERVICE ANALYSIS: Development of water rate recommendations normally involves two primary steps. First the Enterprise Fund costs are allocated to functional cost components and then a rate structure is designed to incorporate these cost components. The goal is to allocate the costs and design a rate structure that results in the costs being proportionately distributed among customer classes.

There are a number of ways to allocate costs for rate setting purposes. Some are rather complex, requiring a significant effort to develop and to administer. Others are somewhat simpler to develop, understand, and administer. The City's current rate structure allocates the water system costs into two specific categories. These include Fixed Costs and Consumptive Costs as shown on Figure 2.



Fixed Costs: Fixed costs tend to vary in relation to the number and size of the meters and services, and in relation to the magnitude of the service demand. These costs may be properly distributed among customer classes by recognizing factors that are generally responsible for those costs being incurred. An example presented in the American Water Works Association (AWWA) Manual M1, is to distribute meter-and-service costs to customer classes in proportion to the investment in meters and services installed for each size of meter. Potential service demand can also be distributed in proportion to the rated hydraulic capacity of each meter.

Table 7 summarizes, by account classes, all of the 3,001 water meters in the City system as of November 2012. Below the meter account tabulation is a comparison of the “**VARIOUS METER CLASS EQUIVALENT FACTORS**” based on the City’s current meter cost equivalent basis and the meter hydraulic capacity basis. In addition, “**ESTIMATED SERVICE CHARGES AND ANNUAL REVENUE BASED ON THE NUMBER OF SERVICES IN NOVEMBER 2012**” is shown for monthly service charges for the current meter cost basis and the meter hydraulic capacity basis utilizing the current base rate of \$31.60 per month for a 5/8-inch meter. As indicated, the total annual income for the current meter cost basis system would generate about \$1,534,000 per year and the meter capacity basis would yield approximately \$1,887,000 per year.

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**TABLE 7
City of Yreka - Water Utility
November 2012 Water Service Breakdown**

Acct. Type	User Class	5/8" Meters	3/4" Meters	1" Meters	1 1/2" Meters	2" Meters	3" Meters	4" Meters	6" Meters	8" Meters	TOTAL METERS
0	Single Family Base	1896	258	78	13	1	0	0	0	0	2246
1	Commercial*	263	75	55	30	33	8	3	1	0	468
2	Institutional	2	1	2	1	5	4	1	2	0	18
3	Industrial*	0	1	0	2	2	2	0	0	1	8
4	Multi-Family Base	112	23	12	25	9	6	4	2	0	193
5	Outside City Limits	16	11	3	2	2	0	0	0	0	34
9	Landscape Irrigation	8	6	6	7	5	1	1	0	0	34
	Total Meters	2297	375	156	80	57	21	9	5	1	3001
(*Compound meters count as two meters.)											
VARIOUS METER CLASS EQUIVALENT FACTORS											
Meter Cost Equivalent		1.0	1.3	1.5	2.8	4.0	12.0	18.0	25.0	35.0	
Meter Hydraulic Capacity		1.0	1.5	2.5	5.0	8.0	15.0	25.0	50.0	80.0	
ESTIMATED ANNUAL REVENUE BASED ON THE NUMBER OF SERVICES IN NOVEMBER 2012											Estimated Total Annual Revenue
Meter Cost Equivalent Based Charges											
Service Charge		\$31.60	\$41.08	\$47.40	\$88.48	\$126.40	\$379.20	\$568.80	\$790.00	\$1,106.00	
ANNUAL REVENUE		\$871,022	\$184,860	\$88,733	\$84,941	\$86,458	\$95,558	\$61,430	\$47,400	\$13,272	\$1,533,674
Meter Hydraulic Capacity Based Charges											
Service Charge		\$31.60	\$47.40	\$79.00	\$158.00	\$252.80	\$474.00	\$790.00	\$1,580.00	\$2,528.00	
ANNUAL REVENUE		\$871,022	\$213,300	\$147,888	\$151,680	\$172,915	\$119,448	\$85,320	\$94,800	\$30,336	\$1,886,710

Consumption Costs: A number of costs such as treatment and pumping costs vary with the amount of actual water consumption. In addition, other operation, maintenance, and replacement activities are treated as variable costs, even though they may not all vary directly with the quantity of water used. Including these semi-variable costs in the consumption cost category of the rate structure improves the water conservation incentive embodied in the rates. Consumption costs are recovered from customers based on actual water usage.

WATER RATE DESIGN: There are many ways to structure water rates. During the course of the 2008 study, we discussed various rate structure options with City staff and it was decided to update and simplify the method for determining the fixed monthly service charge amount for each service. In 2008, it was also decided that the City should initiate an inclining rate structure in order to continue to encourage water conservation.

The amount of fixed costs and consumptive costs associated with the water system was determined based on a line item-by-line item review of the FY 2012-13 Water Enterprise Fund Budget. All or part of each line item was allocated to one category or the other as shown in Table 8. Under Option A, all of the labor costs were allocated to the variable costs although it could be argued that a certain portion of the labor costs would be incurred no matter how much water is actually sold. Under Option B, only Treatment Plant Maintenance and Operations, costs were considered 100 percent variable costs. Also, 60 percent of Utilities and Chemical costs were allocated to variable costs. All other costs were split equally between the Fixed and Variable cost categories. Based upon this analysis, it is estimated that from 48 to 52 percent of the water system's 2012-13 revenue should be from the fixed monthly service charges. A similar analysis in the 2008 study yielded values of from 43 to 53 percent.

TABLE 8
City of Yreka -- Water Enterprise Fund
Fixed and Variable Cost Analysis of FY 2012-13 Budget

Code	Account Description	Budgeted (FY 2012-13)	Cost Allocation			
			Option A		Option B	
			Variable	Fixed	Variable	Fixed
100 thru 526	Accounts, Billing & Collection	\$141,298	\$0	\$141,298	\$70,649	\$70,649
100 thru 525	City Engineering Services	\$77,638	\$0	\$77,638	\$38,819	\$38,819
WATER DISTRIBUTION O&M						
100 thru 104	Wages	\$171,569	\$171,569	\$0	\$85,785	\$85,785
320 thru 390	Employee Benefits	\$112,661	\$112,661	\$0	\$56,331	\$56,331
416	Special Department Supplies	\$21,000	\$21,000	\$0	\$10,500	\$10,500
420	Maintenance and Operations	\$39,300	\$39,300	\$0	\$19,650	\$19,650
422 & 450	Small Tools & Equipment	\$12,800	\$0	\$12,800	\$6,400	\$6,400
510 thru 513	Training	\$1,500	\$0	\$1,500	\$750	\$750
515 thru 517	Office Supplies & Communications	\$1,725	\$0	\$1,725	\$863	\$863
520	Chargeback Amounts	\$22,275	\$0	\$22,275	\$11,138	\$11,138
525	Professional & Backflow Services	\$9,000	\$0	\$9,000	\$4,500	\$4,500
526	Contract Services	\$500	\$0	\$500	\$250	\$250
530	OPEB Insurance & claims	\$9,000	\$0	\$9,000	\$4,500	\$4,500
WATER TREATMENT AND CONSERVATION						
100 thru 104	Wages	\$194,733	\$194,733	\$0	\$97,367	\$97,367
320 thru 390	Employee Benefits	\$108,636	\$108,636	\$0	\$54,318	\$54,318
416	Special Department Supplies	\$2,500	\$2,500	\$0	\$1,250	\$1,250
416	Outside Lab Testing	\$4,000	\$0	\$4,000	\$2,000	\$2,000
420	Maintenance and Operations	\$20,000	\$20,000	\$0	\$20,000	\$0
420	Telemetry Maintenance	\$10,000	\$0	\$10,000	\$5,000	\$5,000
420	Chemicals	\$50,000	\$50,000	\$0	\$30,000	\$20,000
420	Fall Creek Pipeline & PS Maintenance	\$27,000	\$27,000	\$0	\$13,500	\$13,500
422	Small Tools	\$500	\$0	\$500	\$250	\$250
425	Well Evaluation	\$5,500	\$0	\$5,500	\$2,750	\$2,750
450	Equipment & Barham Seals Replacement	\$42,500	\$42,500	\$0	\$21,250	\$21,250
510 thru 513	Training	\$3,200	\$0	\$3,200	\$1,600	\$1,600
515 thru 517	Office Supplies & Communications	\$6,800	\$6,800	\$0	\$4,080	\$2,720
518	Power & Propane	\$234,000	\$234,000	\$0	\$140,400	\$93,600
520	Chargeback Amounts	\$14,000	\$0	\$14,000	\$7,000	\$7,000
521	Building Maintenance	\$2,000	\$2,000	\$0	\$1,000	\$1,000
525	Professional & Legal Services	\$35,000	\$0	\$35,000	\$17,500	\$17,500
525	FERC & EIS/EIR Prof Services	\$35,000	\$0	\$35,000	\$17,500	\$17,500
535	Fees - State/County/Agencies	\$15,600	\$0	\$15,600	\$7,800	\$7,800
	Water Conservation	\$24,350	\$24,350	\$0	\$12,175	\$12,175
ONGOING CAPITAL PROJECT						
	Fairgrounds Water Line Relocation					
	Vehicles	\$20,000	\$0	\$20,000	\$10,000	\$10,000
	Wages	\$2,214	\$2,214	\$0	\$1,107	\$1,107
	Water Meter Replacement	\$265,000	\$0	\$265,000	\$132,500	\$132,500
740 & 745	USDA COP2010 Loan Payment	\$264,000	\$0	\$264,000	\$132,000	\$132,000
INTERNAL SERVICES						
	ICA Expenses	\$187,000	\$0	\$187,000	\$93,500	\$93,500
Total Expenditures and Transfers		\$2,194,299	\$1,059,263	\$1,135,036	\$1,136,229	\$1,058,069
Percentage of Revenue			48.3%	51.7%	51.8%	48.2%

Fixed Monthly Service Charges: An over emphasis on the consumptive charges can create revenue volatility even during rainy spring and fall conditions, years like 2005 when lower than expected water sales significantly reduced revenues. Thus, it is recommended that the City strive to set its fixed monthly service charges to collect at least 50 percent of the total annual revenue.

As indicated previously, it is recommended that the City adopt either the meter-and-service cost basis or the meter hydraulic capacity basis for determining the fixed monthly service charges for meters larger than 5/8-inch in size. For example, under the hydraulic capacity system a customer with a 2-inch meter that has a rated capacity of 160 GPM, would be charged a fixed monthly service charge of 8 times that of a 5/8-inch meter, which has a rated capacity of 20 GPM. Under the meter cost basis the 2-inch meter would be about 4.0 times the 5/8-meter.

While the current trend among other water utilities appears to be to use the meter hydraulic capacity basis for their rate structure, this would result in very significant increases for the City's larger meter customers. Therefore, it is recommended that the City continue with the meter cost basis for determining the fixed monthly service changes for meters larger than 5/8-inch in size.

Consumptive Rates: The consumptive rates are formulated to generate the remaining revenue required. In order to encourage water use efficiency, it is recommended that the City continue to use two additional tiers in its water rates for the residential meters. The first tier would be from 101 gallons to 10,000 gallons. The consumptive rate for use between 10,001 gallons and 35,000 gallons would be about 110 percent of the normal 101 to 10,000 gallon rate and the consumptive rate for use of greater than 35,001 gallons would be about 120 percent of the normal 101 to 10,000 gallon rate.

City staff expressed concern that the low consumption residential water users may be subsidizing the high consumption users. Increasing the amount of water allocated with the fixed service charge from 101 gallons to 1,000 gallons would save the typical residential user about \$1.70 per month and decrease the water system's consumptive revenue by about \$60,000 per year. Rather than making significant changes to the rate structure at this time, it was decided to structure any future rate increases in such a way that the percentage of revenue generated by the fixed rate component begins transitioning from the current 56 percent of revenue toward 50 percent of

revenue. In this way the relative cost to the low consumption residential water users will be gradually decreased.

As indicated in Table 5, the total annual water consumption for 2011 was about 8.1 percent less than 2010. However, it was about 16 percent less than 2009. The 2012 total annual water consumption is estimated at 630 MG, which is 10.3 percent greater than 2011. Because of historical consumption variability, the revenue projections developed in this study were based on the 2010 consumption plus a 0.5 percent annual increase to allow for future growth.

MULTI-YEAR FINANCIAL PLAN GUIDELINES: In order to develop a recommendation regarding future rates, we developed a multi-year financial plan for the water enterprise. This financial plan considers both capital and operating programs.

Capital Projects: The City's 2005 Master Water Plan recommended a number of improvements needed to correct existing deficiencies and to meet future increasing water demands. In addition, City staff has developed a list of improvements needed to upgrade and repair various water facilities. A prioritized list of the specific improvements that remain to be completed is shown in Table 9 with the estimated project costs updated to January 2013 dollars.

Table 9 also indicates the approximate allocation of the project costs to the replacement and growth categories. Replacement category improvements include replacement of existing infrastructure and upgrading existing infrastructure to improve its effectiveness. Typically, replacement related improvements are funded by monthly service charges and growth related improvements are funded by new development. However, lenders must be assured that they will be repaid and they are reluctant to accept a financial plan that is dependent upon projected fees from future growth. Therefore, it is normally necessary to cover the debt service for improvements with the monthly service charges and use future development fees to supplement the monthly service charges and dampen future rate increases. A similar approach can be utilized when growth related improvements are funded with City funds, wherein future development fees can be used to reimburse the enterprise fund over time.

The multi-year financial plan has been developed assuming that the first six priority projects would be funded over the next five years with existing Water Improvement Reserve Funds and revenue over the next five years. Priority Item Nos. 1, 2, and 3 are well defined and could proceed in the next couple of years. However, the other projects are scheduled after completion of the proposed Master Water Plan Update, because further planning and more refined costs estimates are needed before proceeding to Priority Item Nos. 4, 5, and 6. For example, further study is needed in order to finalize the decision on whether to recoat the Humbug Tank per Priority Item No. 4 or replace it with a larger tank per Priority Item No. 4A. Also, it is recommended that further planning be done to secure a new location for the replacement North Street Pump Station.

In addition to the Short Term Improvements scheduled for 2013 through 2018, Table 10 also indicates the need for about \$10,800,000 in Near Term Improvements over the following 10 years and more than \$5,000,000 in Long Term Improvements beyond 2028. Water meter replacement line items are based on maintaining a 15-year replacement cycle for all meters. In addition, the steel water main replacement items include the ultimate replacement of up to 36,000 feet of old steel water mains and their associated water services and fire hydrants. It is very likely that other miscellaneous capital improvements will be needed after FY 17-18.

**TABLE 9
CITY OF YREKA
WATER SYSTEM CAPITAL NEEDS PRIORITIZATION
ESTIMATED COSTS & REPLACEMENT CAPITAL COST BASIS**

PRIORITY	IMPROVEMENT	ESTIMATED PROJECT COST (2013 DOLLARS)	PERCENT ASSIGNED TO REPLACEMENT	PROJECT COST ASSIGNED TO REPLACEMENT	PROJECT COST ASSIGNED TO GROWTH
SHORT TERM IMPROVEMENTS (2013-2018)					
1	Fairgrounds Water Line Relocation	\$300,000	100%	\$300,000	\$0
2	Master Water Plan Update	\$50,000	50%	\$25,000	\$25,000
3	Replacement 16" Main in Hwy 3 - Foothill Dr. to Yreka Creek Way	\$806,000	50%	\$403,000	\$403,000
4 or	Humbug Tank – Recoat Interior & Exterior	\$300,000	100%	\$300,000	\$0
4A	Replacement 1 MG Lower Humbug Reservoir	\$1,430,000	50%	\$715,000	\$715,000
5	New 0.2 MG Shasta Belle Tank and Pump Station Upgrade	\$560,000	75%	\$420,000	\$140,000
6	Replacement North Street Pump Station	\$450,000	100%	\$450,000	\$0
Subtotal		\$2,811,000 to \$3,941,000		\$2,243,000 to \$2,658,000	\$568,000 to \$1,283,000
NEAR TERM IMPROVEMENTS (2018-2028)					
7	Develop Backup Water Supply	\$2,336,000	100%	\$2,336,000	\$0
8	Replacement 14" Main - Yreka Creek Way to Main St.	\$208,000	50%	\$104,000	\$104,000
Five years of 15 year Cycle	Water Meter Replacement	\$500,000	100%	\$500,000	\$0
9	Steel Water Main Replacement	\$5,000,000	100%	\$5,000,000	\$0
10	Add Third Variable Speed Pump to State Street Pump Station	\$218,000	0%	\$0	\$218,000
11	16" Replacement Main in Foothill Drive and E. Lennox	\$1,404,000	50%	\$702,000	\$702,000
12	12" Parallel Main in Foothill Drive	\$650,000	0%	\$0	\$650,000
13	12" Replacement Main in Payne Lane	\$450,000	50%	\$225,000	\$225,000
Subtotal		\$10,766,000		\$8,867,000	\$1,899,000
LONG TERM IMPROVEMENTS (BEYOND 2028)					
14	Alternative Water Source Study (additional supply)	\$200,000	0%	\$0	\$200,000
15	Steel Water Main Replacement	\$5,000,000	100%	\$5,000,000	\$0
16	Water Meter Replacement	\$100,000/year			
Note: Project Costs need to be inflated by the ENR Construction Cost Index every year.					

Reserves Accounts: Currently all of the City's water is provided via the Fall Creek Water Supply System, which includes 23 miles of 24-inch transmission main running cross country from Fall Creek to the City's Butcher Hill Reservoir. Due to the potential for very costly emergency repairs to the Fall Creek Water Supply Main, the City has established a Fall Creek Reserve Account to provide funding for immediate action in the event of a failure.

In order to assure that adequate reserves are available to handle a major failure in the Fall Creek Transmission Main, it is recommended that the City increase the Fall Creek Reserve from \$3,000,000 to \$3,500,000 over the next five years and continue to maintain a separate Operating Reserve Account to handle normal fluctuations in the Enterprise Fund Budget.

Operation reserves ranging from 10 percent to 40 percent of annual operating costs are common for public water utilities. Given the potential for significant fluctuations in annual water sales, which can result in variable water rate revenues, we initially recommended during our 2008 study that the City establish and maintain an operating reserve equal to at least 25 percent of its annual operation maintenance and debt service expenses. **After reviewing our draft 2008 report, the City's Ad Hoc Committee decided to set a goal of achieving a minimum operating reserve of 25 percent or \$500,000, whichever is the highest. We recommend that the City continue with this policy.**

It is also recommended that the City maintain a Debt Reserve Fund and a Short Term Assets Replacement Reserve Fund in accordance with the Letter of Conditions associated with its loan from USDA Rural Development.

Financial Plan Assumptions: The following is a list of the primary assumptions used in developing the multi-year financial plans:

- Operation and Maintenance costs will increase at 3 percent per year, except for labor related costs which will increase at 4 percent per year. These are the same inflation values that were used in the 2008 study.
- Project construction costs will increase at 3 percent per year, which is equal to the average annual increase in the ENR construction cost index over the last 5 years.

- An additional fifteen 5/8-inch meter equivalents will be added each year.
- No grant funding is anticipated for the capital improvements outlined in the Capital Needs Prioritization, Table 9.
- The Short Term Improvements listed in Table 9 will be constructed within the next 5 years.
- Accounting, billing, and collection costs will increase \$39,000 beginning in FY 13-14 to cover implementation of enhanced billing and collection features planned by the City's Finance Department.
- Interest income will be estimated based on 90 percent of the Total Reserve Fund Balance at the beginning of the years times 0.25 percent interest.
- Future water setup fees will be decreased from \$100 to \$50, which will increase the typical single family residential water bill by about \$0.13 per month.
- Maintain a separate Operating Reserve Fund of \$500,000 or 25% of the annual operating and debt service expenditures, whichever is greater.
- Maintain a separate Debt Service Reserve Fund of \$100,000 through FY 14-15, but then begin increasing it pursuant to the USDA Rural Development loan requirements.
- Allocate \$36,000 per year for Short Term Assets Replacement as required by the USDA Rural Development loan. These Funds are to be utilized on an as needed basis to repair and replace existing equipment when it reaches the end of its useful life. Any unused funds at the end of a given fiscal year are to be added to the Short Term Assets Replacement Reserve Fund.
- Depreciation will remain unfunded.
- Structure any needed rate increase in such a way that the percentage of revenue generated by the fixed rate component begins transitioning from the current 56 percent of revenue toward 50 percent of revenue.

Financial Plan Results: A 5-year projection of the Water Enterprise budget and revenue requirements is shown in Table 10. As shown under the debt service payment line item, the debt service on the existing USDA Rural Development Loan is \$264,225 per year.

As shown under the new heading of Ongoing Capital Projects, the water meter program will be completed in FY 13-14 and further meter replacement should not be needed until the ones replaced during the first year of the replacement program reach the end of their 15-year useful lives. While the two tank replacement projects are shown to occur as separate projects, it may be more economical to combine into one project.

Table 11 presents a summary of the 5-year financial plan values with the fixed monthly service charges representing about 56.6 percent of the annual rate revenue in FY 12-13 and 54.2 percent in FY 17-18. Table 11 includes the beginning reserve fund balances, revenues, expenditures, and year end recommended operating reserve for the Enterprise Fund. As can be seen, the Fall Creek Emergency Repair/Replacement Reserve Fund increases from \$3,000,000 to \$3,500,000 and the USDA Rural Development Debt Reserve Fund remains constant at \$100,000 until FY 15-16 when it begins increasing pursuant to the USDA Rural Development loan requirements. Short Term Assets Replacement Reserve Fund will only accumulate funds if the annual Short Term Assets repair and replacement work is less than \$36,000 in a given year. The Water Improvements Reserve Fund fluctuates due to project implementation and should begin FY 18-19 with about \$660,000 after the FY17-18 capital improvements have been completed. The estimated year end recommended operations reserve shown at the bottom of the table increases from \$500,000 at the end of FY 12-13 to \$565,000 at the end of FY 17-18.

The financial plan projected revenues are based on estimated normal water consumption each year during the planning period. However, annual revenues will still be subject to fluctuation with varying water consumption. During above normal rainfall years, the reduction in revenue has been known to decrease more dramatically than expenses.

A summary of the water utility revenue and expenditures associated with the proposed 5-year financial plan and the proposed rate structure is also shown on Figure 3. As indicated by this bar

graph the new rate structure will increase revenue such that the projected expenditures can be met and the reserves can be maintained at recommended levels.

PROPOSED RATES: A summary of the proposed water rates for all meter sizes used in the 5-year financial plan are shown in Table 12. Based on an annual water use of about 165,000 gallons per year, the proposed water rates will increase the typical residential bill by about 2.5 percent per year over the next five years. It is interesting to note that the average annual increase in the Municipal Cost Index over the last five years was about 2.5 percent.

By increasing the consumptive charges at a higher annual percentage than the fixed charges as proposed, a residential user consuming 90,000 gallons per year will pay an average of about \$0.70 per month less in FY 2017-18 than he would if the fixed and consumptive charges were both increased at 2.5 percent per year.

Similarly, a residential user consuming 60,000 gallons per year will pay an average of about \$1.00 per month less in FY 2017-18 than he would if the fixed and consumptive charges were both increased at 2.5 percent per year.

If the rates were only increased at 1.0 percent per year, then the Water Improvement Reserve Fund balance at the beginning of FY 18-19 would decrease from about \$660,000 to approximately \$70,000.

A tabulation of water rates for neighboring water purveyors is shown in Table 13. As one can see, the fixed service charges vary from \$10.99 to \$39.39 per month, and the consumption rates are also quite variable. Figure 4 indicates estimated average monthly water bills for each agency based on 165,000 gallons of annual consumption. **It should be remembered that some of these agencies have relatively new systems and are not subject to the relatively high repair and rehabilitation costs associated with the City of Yreka Water System. Also, some of these agencies do not have extensive water supply facilities to operate and maintain (like the City's 23 mile long Fall Creek Transmission).**

TABLE 10
City of Yreka -- Water Utility
Budgeted and Projected Expenditures

Fund	Depart	Code	Account Description	Inflation Factor	Budgeted (FY 12-13)	Projected (FY 13-14)	Projected (FY 14-15)	Projected (FY 15-16)	Projected (FY 16-17)	Projected (FY 17-18)
COLLECTION										
70	110	100 thru 526	Accounts, Billing & Collection	4%	\$141,298	\$185,950	\$193,388	\$201,123	\$209,168	\$217,535
			Subtotal		\$141,298	\$185,950	\$193,388	\$201,123	\$209,168	\$217,535
ENGINEERING										
70	300	100 thru 525	City Engineering Services	4%	\$77,638	\$80,744	\$83,973	\$87,332	\$90,825	\$94,458
			Subtotal		\$77,638	\$80,744	\$83,973	\$87,332	\$90,825	\$94,458
WATER DISTRIBUTION										
70	500	100 thru 104	Wages	4%	\$171,569	\$178,432	\$185,569	\$192,992	\$200,711	\$208,740
70	500	320 thru 390	Employee Benefits	3%	\$112,661	\$116,041	\$119,522	\$123,108	\$126,801	\$130,605
70	500	416	Special Department Supplies	3%	\$21,000	\$21,630	\$22,279	\$22,947	\$23,636	\$24,345
70	500	420	Maintenance and Operations	3%	\$39,300	\$40,479	\$41,693	\$42,944	\$44,232	\$45,559
70	500	422 & 450	Small Tools & Equipment	5%	\$12,800	\$13,440	\$14,112	\$14,818	\$15,558	\$16,336
70	500	510 thru 513	Training	3%	\$1,500	\$1,545	\$1,591	\$1,639	\$1,688	\$1,739
70	500	515 thru 517	Office Supplies & Communications	3%	\$1,725	\$1,777	\$1,830	\$1,885	\$1,942	\$2,000
70	500	518	Power	3%	-	-	-	-	-	-
70	500	520	Chargeback Amounts	3%	\$22,275	\$22,943	\$23,632	\$24,340	\$25,071	\$25,823
70	500	525	Professional & Backflow Services	3%	\$9,000	\$9,270	\$9,548	\$9,835	\$10,130	\$10,433
70	500	526	Contract Services	3%	\$500	\$515	\$530	\$546	\$563	\$580
70	500	530	OPEB Insurance & claims	3%	\$9,000	\$9,270	\$9,548	\$9,835	\$10,130	\$10,433
			Subtotal		\$401,330	\$415,342	\$429,855	\$444,889	\$460,461	\$476,594
WATER TREATMENT AND CONSERVATION										
70	510	100 thru 104	Wages	4%	\$194,733	\$202,522	\$210,623	\$219,048	\$227,810	\$236,922
70	510	320 thru 390	Employee Benefits	3%	\$108,636	\$111,895	\$115,252	\$118,709	\$122,271	\$125,939
70	510	416	Special Department Supplies	3%	\$2,500	\$2,575	\$2,652	\$2,732	\$2,814	\$2,898
70	510	416	Outside Lab Testing	3%	\$4,000	\$4,120	\$4,244	\$4,371	\$4,502	\$4,637
70	510	420	Maintenance and Operations	5%	\$20,000	\$21,000	\$22,050	\$23,153	\$24,310	\$25,526
70	510	420	Telemetry Maintenance	3%	\$10,000	\$10,300	\$10,609	\$10,927	\$11,255	\$11,593
70	510	420	Chemicals	3%	\$50,000	\$51,500	\$53,045	\$54,636	\$56,275	\$57,964
70	510	420	Fall Creek Pipeline & PS Maintenance	3%	\$27,000	\$27,810	\$28,644	\$29,504	\$30,389	\$31,300
70	510	422	Small Tools	3%	\$500	\$515	\$530	\$546	\$563	\$580
70	510	425	Ground Water Source Evaluations	3%	\$5,500	\$5,665	\$5,835	\$6,010	\$6,190	\$6,376
70	510	450	Equip. & Barham Seals Replacement		\$42,500	\$0	\$0	\$0	\$0	\$0
70	510	450	Short Term Asset Repair & Replacements		\$0	\$30,000	\$35,000	\$40,000	\$50,000	\$45,000
70	510	510 thru 513	Training	3%	\$3,200	\$3,296	\$3,395	\$3,497	\$3,602	\$3,710
70	510	515 thru 517	Office Supplies & Communications	3%	\$6,800	\$7,004	\$7,214	\$7,431	\$7,653	\$7,883
70	510	518	Power & Propane	3%	\$234,000	\$241,020	\$248,251	\$255,698	\$263,369	\$271,270
70	510	520	Chargeback Amounts	3%	\$14,000	\$14,420	\$14,853	\$15,298	\$15,757	\$16,230
70	510	521	Building Maintenance	3%	\$2,000	\$2,060	\$2,122	\$2,185	\$2,251	\$2,319
70	510	525	Professional & Legal Services	3%	\$35,000	\$36,050	\$37,132	\$38,245	\$39,393	\$40,575
70	510	525	FERC & EIS/EIR Prof Services	3%	\$35,000	\$36,050	\$37,132	\$38,245	\$39,393	\$40,575
70	510	526	Contractual Services	3%	\$500	\$515	\$530	\$546	\$563	\$580
70	510	535	Fees - State/County/Agencies	3%	\$15,600	\$16,068	\$16,550	\$17,047	\$17,558	\$18,085
70	520		Water Conservation	3%	\$24,350	\$25,081	\$25,833	\$26,608	\$27,406	\$28,228
			Subtotal		\$835,819	\$849,466	\$881,495	\$914,437	\$953,324	\$978,188

TABLE 10 (continued)
City of Yreka -- Water Utility
Budgeted and Projected Expenditures

Fund	Depart	Code	Account Description	Inflation Factor	Budgeted (FY 12-13)	Projected (FY 13-14)	Projected (FY 14-15)	Projected (FY 15-16)	Projected (FY 16-17)	Projected (FY 17-18)
ONGOING CAPITAL PROJECTS										
			Fairgrounds Water Line Relocation		\$20,000	\$288,000	\$0	\$0	\$0	\$0
			Pickup Truck		\$20,000	\$0	\$0	\$0	\$25,000	\$0
			Portion of 10 Yard Dump Truck		\$0	\$0	\$80,000	\$0	\$0	\$0
			Wages		\$2,214	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
			Water Meter Replacement		\$265,000	\$100,000	\$0	\$0	\$0	\$0
			Master Water Plan Update		\$0	\$50,000	\$0	\$0	\$0	\$0
			Replace 16" Main		\$0	\$0	\$854,000	\$0	\$0	\$0
			Replace Lower Humbug Tank		\$0	\$0	\$0	\$229,000	\$1,366,000	\$0
			Replace Shasta Belle Tank		\$0	\$0	\$0	\$0	\$0	\$644,000
			Replace North Street Pump Station		\$0	\$0	\$0	\$0	\$0	\$518,000
			Subtotal		\$307,214	\$443,000	\$939,000	\$234,000	\$1,396,000	\$1,167,000
WATER DEBT SERVICE PAYMENTS										
	72	510 740 & 745	USDA Rural Development Loan Payment		\$264,225	\$264,225	\$264,225	\$264,225	\$264,225	\$264,225
			Subtotal		\$264,225	\$264,225	\$264,225	\$264,225	\$264,225	\$264,225
INTERNAL SERVICES										
			ICA Expense	4%	\$187,000	\$194,480	\$202,259	\$210,350	\$218,764	\$227,514
			Subtotal		\$187,000	\$194,480	\$202,259	\$210,350	\$218,764	\$227,514
Total Expenditures and Transfers					\$2,214,524	\$2,433,206	\$2,994,195	\$2,356,356	\$3,592,768	\$3,425,514

TABLE 11
City of Yreka -- Water Utility
Summary of Enterprise Fund Financial Plan

	Budgeted (FY 12-13)	Projected (FY 13-14)	Projected (FY 14-15)	Projected (FY 15-16)	Projected (FY 16-17)	Projected (FY 17-18)
STANDARD WATER RATES USED						
5/8" Meter Fixed Monthly Service Charge (See Table 12 for Larger Meters Charges)	\$31.60	\$32.07	\$32.56	\$33.04	\$33.54	\$34.04
Single Family Consumption Rates (\$/1000 gallons)						
101-10,000 Gallons	\$1.86	\$1.93	\$1.99	\$2.06	\$2.13	\$2.21
10,001 to 35,000 Gallons	\$2.05	\$2.12	\$2.19	\$2.27	\$2.35	\$2.43
Excess over 35,000 Gallons	\$2.23	\$2.31	\$2.39	\$2.47	\$2.56	\$2.65
Non-Single Family Consumption Rate (\$/1000 gallons)						
Excess over 101 Gallons	\$1.86	\$1.93	\$1.99	\$2.06	\$2.13	\$2.21
LOW INCOME WATER RATES						
5/8" Meter Fixed Monthly Service Charge Consumption Rates same as Single Family	\$29.60	\$30.07	\$30.56	\$31.04	\$31.54	\$32.04
RESERVE FUND BEGINNING BALANCES						
Operating Fund	\$500,000	\$500,000	\$500,000	\$516,000	\$532,000	\$549,000
USDA Rural Development Debt Fund	\$100,000	\$100,000	\$100,000	\$106,000	\$132,000	\$159,000
Short Term Assets Replacement Reserve Fund (See Note 1)	\$36,000	\$29,500	\$35,500	\$36,500	\$32,500	\$18,500
Fall Creek Emergency Repair/Replacement Fund	\$3,000,000	\$3,100,000	\$3,200,000	\$3,300,000	\$3,400,000	\$3,500,000
Water Improvements Fund	\$1,073,952	\$1,493,928	\$1,749,722	\$1,493,527	\$1,925,171	\$1,199,403
Total Reserves	\$4,709,952	\$5,223,428	\$5,585,222	\$5,452,027	\$6,021,671	\$5,425,903
REVENUES						
Fixed Service Charges	\$1,500,000	\$1,523,000	\$1,546,000	\$1,569,000	\$1,593,000	\$1,617,000
Consumption Charges	\$1,140,000	\$1,190,000	\$1,232,000	\$1,275,000	\$1,320,000	\$1,366,000
Interest Earnings	\$12,000	\$12,000	\$13,000	\$12,000	\$14,000	\$12,000
Transfer of Development Impact Fee Funds for Debt Service	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000
Other Operation Income	\$51,000	\$45,000	\$45,000	\$45,000	\$45,000	\$45,000
Total Revenue	\$2,728,000	\$2,795,000	\$2,861,000	\$2,926,000	\$2,997,000	\$3,065,000
EXDENDITURES						
Collection	\$141,298	\$185,950	\$193,388	\$201,123	\$209,168	\$217,535
Engineering	\$77,638	\$80,744	\$83,973	\$87,332	\$90,825	\$94,458
Water Distribution	\$401,330	\$415,342	\$429,855	\$444,889	\$460,461	\$476,594
Water Treatment & Conservation	\$835,819	\$849,466	\$881,495	\$914,437	\$953,324	\$978,188
On-going Capital Projects	\$307,214	\$443,000	\$939,000	\$234,000	\$1,396,000	\$1,167,000
Water Debt Service Payments	\$264,225	\$264,225	\$264,225	\$264,225	\$264,225	\$264,225
Internal Services	\$187,000	\$194,480	\$202,259	\$210,350	\$218,764	\$227,514
Total Expenditures	\$2,214,524	\$2,433,206	\$2,994,195	\$2,356,356	\$3,592,768	\$3,425,514
YEAR END VALUES						
Recommended Operating Reserve	\$500,000	\$500,000	\$516,000	\$532,000	\$549,000	\$565,000
YEAR END OPERATING RESERVE (See Note 2)	26.2%	25.1%	25.1%	25.1%	25.0%	25.0%
Notes: 1. Funds in this reserve account will fluctuate depending on the amount of short term asset repair and replacement work done each year.						
2. Percentage operating reserve is based on the year end Operating Reserve Fund Balance divided by Total Expenditures less On-going Capital Projects.						

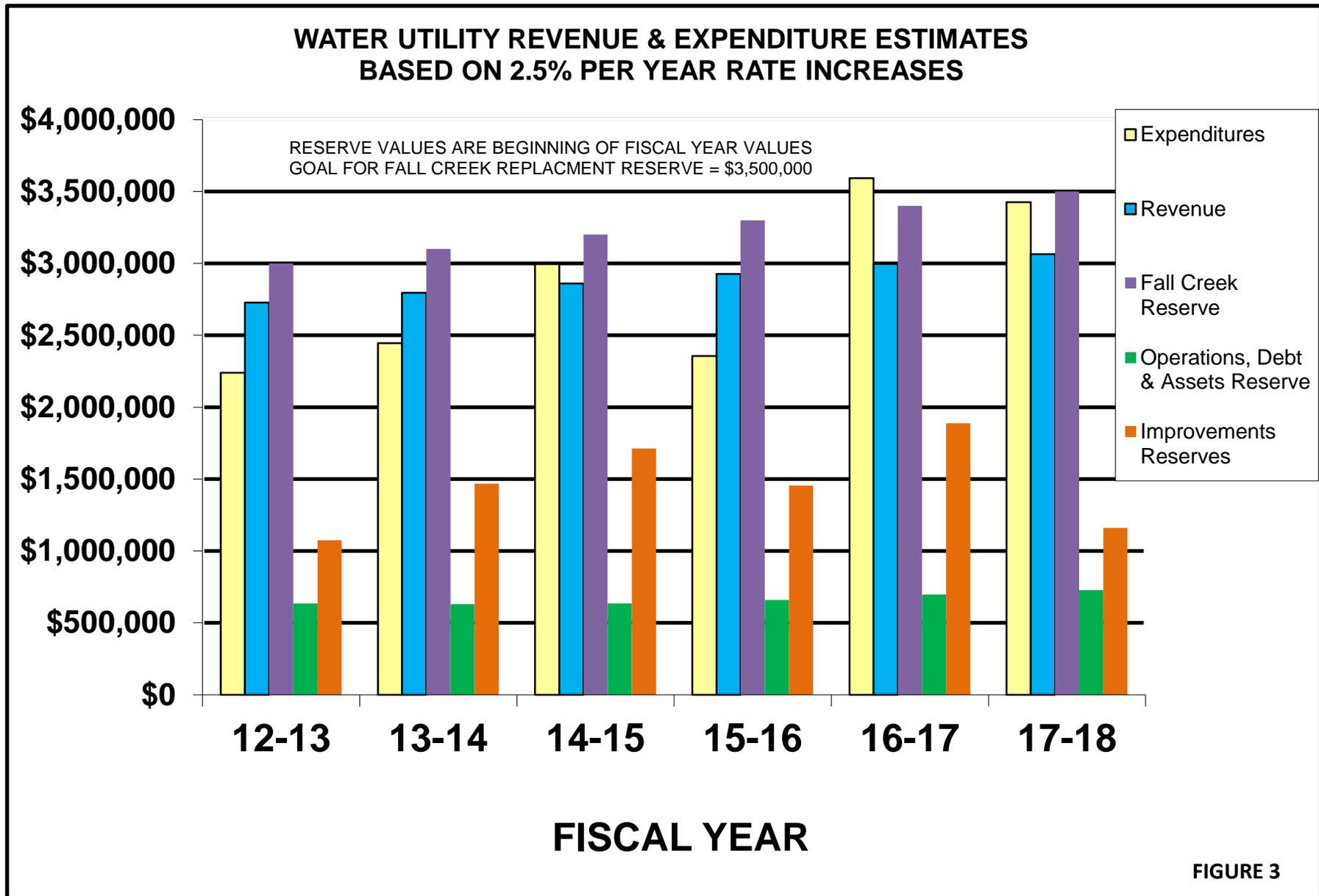


TABLE 12
City of Yreka - Water Utility
Proposed Rate Schedule

	Existing FY 12-13	Proposed FY 13-14	Proposed FY 14-15	Proposed FY 15-16	Proposed FY 16-17	Proposed FY 17-18	
<u>CONSUMPTION CHARGES (\$/1000 GALLONS)</u>							
Single Family Consumption Rates							
101-10,000 Gallons	\$1.86	\$1.93	\$1.99	\$2.06	\$2.13	\$2.21	
10,001 to 35,000 Gallons	\$2.05	\$2.12	\$2.19	\$2.27	\$2.35	\$2.43	
Excess over 35,000 Gallons	\$2.23	\$2.31	\$2.39	\$2.47	\$2.56	\$2.65	
Non-Single Family Consumption Rates							
Excess over 101 Gallons	\$1.86	\$1.93	\$1.99	\$2.06	\$2.13	\$2.21	
<u>MONTHLY SERVICE CHARGES (\$/MONTH)</u>							METER FACTOR
5/8" Meter	\$31.60	\$32.07	\$32.56	\$33.04	\$33.54	\$34.04	1.0
3/4" Meter	\$41.08	\$41.70	\$42.32	\$42.96	\$43.60	\$44.25	1.3
1" Meter	\$47.40	\$48.11	\$48.83	\$49.57	\$50.31	\$51.06	1.5
1 1/2" Meter	\$88.48	\$89.81	\$91.15	\$92.52	\$93.91	\$95.32	2.8
2" Meter	\$126.40	\$128.30	\$130.22	\$132.17	\$134.16	\$136.17	4.0
3" Meter	\$379.20	\$384.89	\$390.66	\$396.52	\$402.47	\$408.51	12.0
4" Meter	\$568.80	\$577.33	\$585.99	\$594.78	\$603.70	\$612.76	18.0
6" Meter	\$790.00	\$801.85	\$813.88	\$826.09	\$838.48	\$851.05	25.0
8" Meter	\$1,106.00	\$1,122.59	\$1,139.43	\$1,156.52	\$1,173.87	\$1,191.48	35.0
Note: Low income monthly service charges are \$2.00 less than shown above, but require a 5/8" meter.							

TABLE 13
USER FEES FOR OTHER WATER PURVEYORS

PURVEYOR	EFFECTIVE Date	BASE RATE (for smallest meter size)	VOLUME OF WATER INCLUDED IN BASE RATE	RESIDENTAL CONSUMPTION RATE
City of Ashland	2012	\$17.66 (Increases with meter size)	0	0 to 300 @ \$1.83 per 100CF
				301 to 1000 @ \$2.26 per 100CF
				1001 to 2500 @ \$3.01 per 100CF
				2501+ @ \$3.89 per 100CF
Bella Vista WD (M&I)	2012	\$33.79 (Increases with meter size)	0	0 to 17,500 @ \$0.465 per 100 CF
				17,501, to 24,500 @ \$0.558 per 100 CF
				excess @ \$0.651 per 100 CF
Mountain Gate CSD	2012	\$31.21 (Increases with meter size)	800CF	801 to 2000 @ \$0.88 per 100 CF
				2001 to 10,000 @ \$1.43 per 100 CF
				over 10,000 @ \$1.60 per 100 CF
Nevada City	2012	\$22.00 (Increases with meter size)	0	0 to 8,000 gallons @ \$2.05 per 1000 gal
				over 8,001 gallons @ \$2.70 per 1000 gal
City of Oroville	2013	\$31.48 (Increases with meter size)	0	0 to 800 @ \$1.68 per 100 CF
				801 to 2200 @ \$1.81 per 100CF
				over 2201 @ \$2.12 per 100 CF
City of Redding	2012	\$10.99 (Increases with meter size)	0	1.01 per 100 CF
Shasta CSD	2012	\$34.34	1000CF	1001 to 2000 @ \$8.20 fixed
				over 2001 @ \$0.82 per 100 CF
City of Shasta Lake	2012	\$18.30 (Increases with meter size)	0	0 to 1000 @ \$1.24 per 100 CF
				1001 to 5000 @ \$1.43 per 100 CF
				All over 5000 @ \$1.78 per 100 CF
City of Williams	2012	\$16.67 (Increases with meter size)	0	1.46 per 100 CF
City of Willows	2013	\$39.39 (Increases with meter size)	0	0 to 800 @ \$1.05 per 100 CF
				801 to 2500 @ \$1.12 per 100 CF
				All over 2501 @ \$1.27 per 100 CF
City of Yreka	2012	\$31.60 (Increases with meter size)	100 gallons (or 13.3CF)	101 to 10,000 @ \$1.86 per 1000 gallons
				10,001 to 35,000 @ \$2.05 per 1000 gallons
				over 35,001 @ \$2.23 per 1000 gallons

NOTE: 100 CF = 748 GALLONS

MONTHLY WATER BILL COMPARISON (Based on 165,000 gallons per year usage)

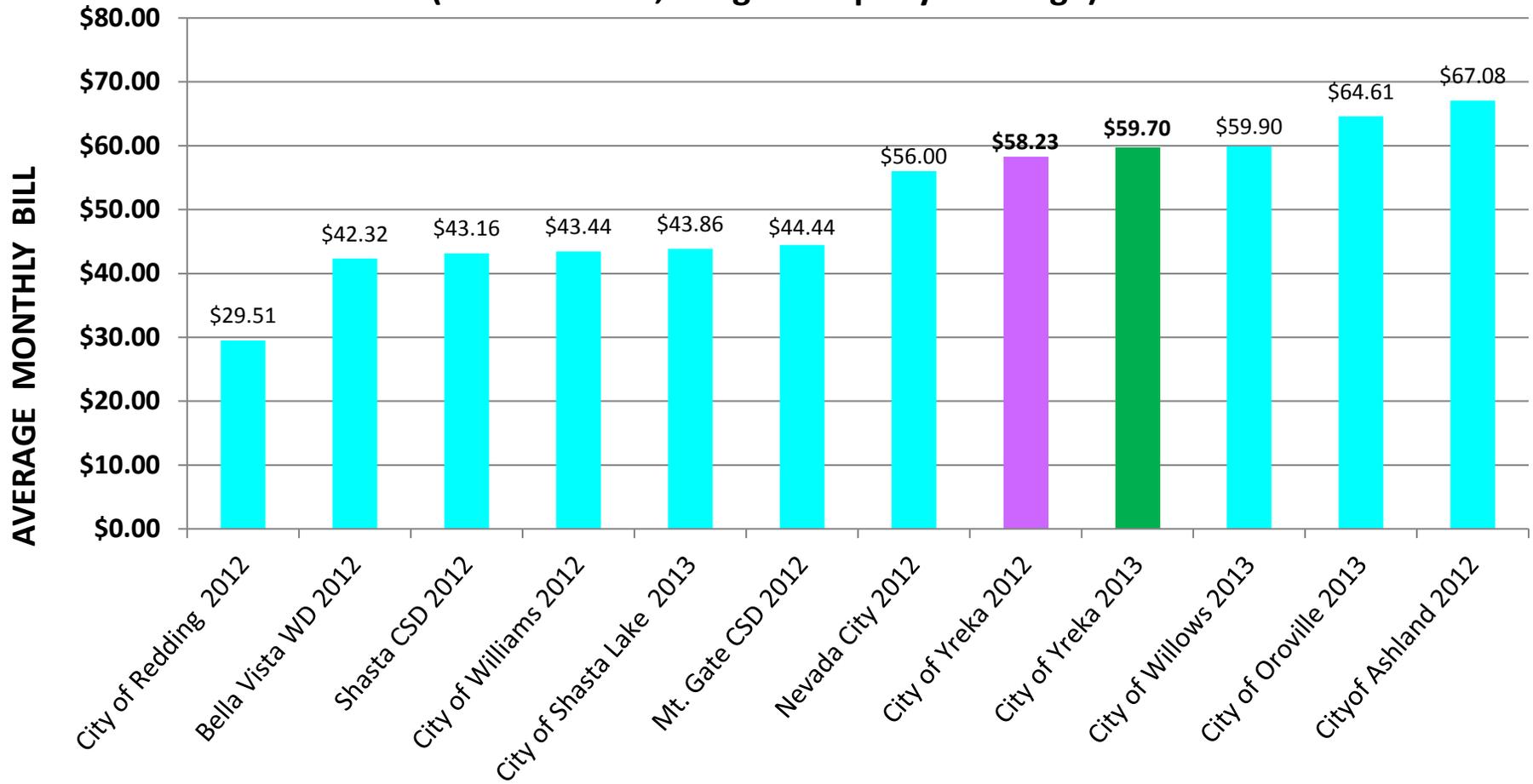


FIGURE 4

CHAPTER III WASTEWATER UTILITY STUDY

CURRENT WASTEWATER RATES

The current wastewater rate structure is a flow-based system which is in line with the SWRCB guidelines for wastewater revenue programs. Single-family and multi-family units are charged at the one base rate per family unit. Single-family household equivalents (HEs) are calculated for each non-residential account based on the water use for the month of January, February, and March. The average daily water use for each account during these three winter months is multiplied by 90 percent to determine their estimated average daily wastewater discharge. This average daily wastewater discharge is then divided by 200 gallons per day for a typical household equivalent to arrive at the number of HEs per account, with a minimum of one HE being assigned to each account. In special situations, the calculated number of HEs may be adjusted to account for unusual water use. The account's monthly sewer bill for the following year is then computed by multiplying the number of HEs times the monthly base rate. Historical wastewater rates are summarized in Table 14.

TABLE 14
City Of Yreka
Historical Wastewater Rates

YEAR	MONTHLY BASE RATE
2003	\$17.86
2004	\$18.65
2005	\$18.93
2006	\$19.37
2007	\$20.59
2008	\$29.00
2009	\$34.50
2010	\$38.00
2011	\$40.00
2012	\$42.00

A low income discount of \$2.00 per month is currently available to single-family residences with household incomes below the City's target income level. In December 2012, there were 20 services that qualified for this discount.

HISTORICAL GROWTH AND EXPENDITURES

WASTEWATER UTILITY CUSTOMER AND WASTEWATER FLOW – HISTORY:

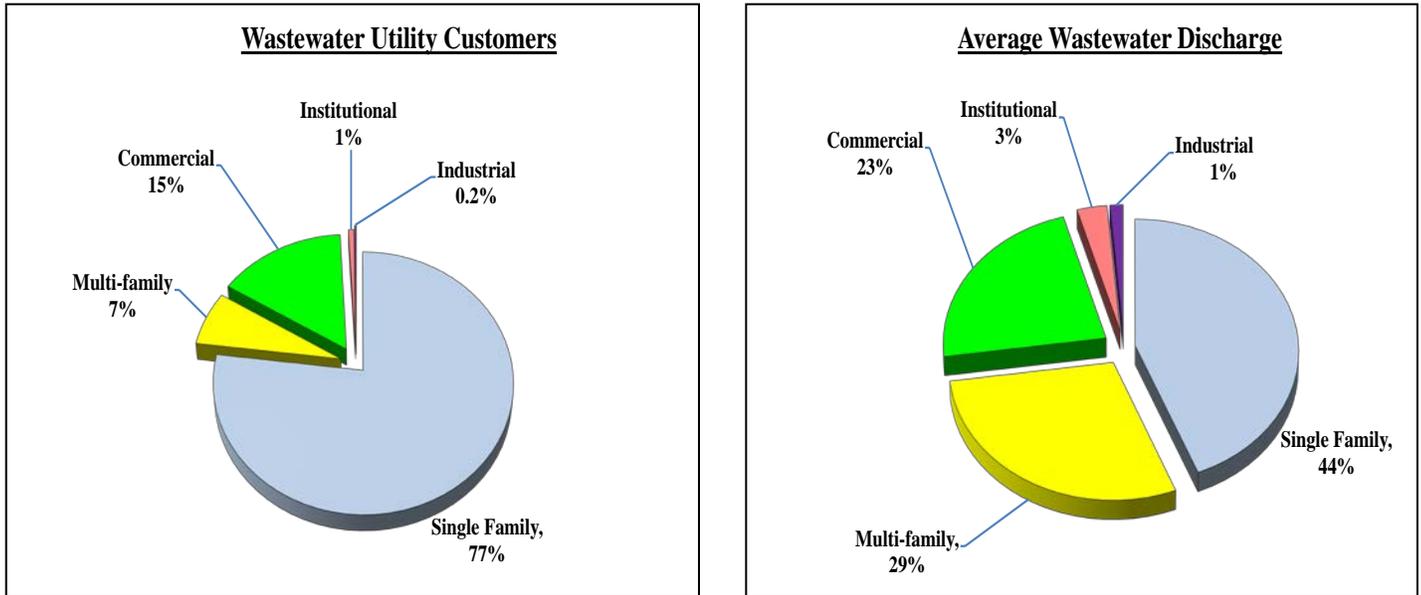
There is a considerable amount of land area within the City limits that is currently vacant and is not connected to or served by the City's wastewater system. The City anticipates that as this land is developed it will connect to the wastewater system, which will continue to add customers and increase revenue for wastewater operations.

The number of wastewater system connections increased from 2,611 at the end of 2007 to 2,769 at the end of 2012. City staff has suggested that a 0.5 percent annual growth rate would be reasonable for projecting future wastewater flows over the next five years.

In December 2012, there were 2,131 single-family residential connections, 189 multi-family connections, 425 commercial connections, 19 institutional connections, and 5 industrial connections.

Figure 5 summarizes the current number of active customer accounts, as well as the current estimated amount of annual wastewater discharged by each class of customer. As expected, wastewater discharged by all user classes, except for the single-family residential class, represents a much higher proportion of wastewater discharge than is reflected by the percentage of customer accounts in each class.

FIGURE 5
CITY OF YREKA – WASTEWATER UTILITY
SUMMARY OF CUSTOMERS AND ANNUAL WASTEWATER DISCHARGES



WASTEWATER UTILITY EXPENDITURES: Wastewater utility expenditures for operation and maintenance and for replacement capital projects are normally made from the Wastewater Enterprise Fund. Table 15 is a summary of the Wastewater Enterprise expenditures for fiscal years 2008-09 through 2011-12.

Historically, the City has not funded depreciation. However, if an amount equal to the annual depreciation per the GASB 34 guidelines had been put back into rehabilitation and replacing the existing collection and treatment systems, it would have gone a long way toward maintaining a viable system. Currently, the wastewater utility annual depreciation is about \$379,000 per year, which equates to about \$6.50 per month, per household equivalent.

Beginning with adoption of the rate structure outlined in the 2008 Water and Wastewater Utility Rate Study the City has been scheduling to fund periodic capital replacement projects that are aimed at correcting existing deficiencies and replacing worn out infrastructure.

TABLE 15
City Of Yreka – Wastewater Utility
Historical Wastewater Enterprise Expenditures

	Expended (FY 08-09)	Expended (FY 09-10)	Expended (FY 10-11)	Expended (FY 11-12)
Collection	\$36,612	\$49,459	\$59,539	\$63,243
Engineering	\$136	\$48,137	\$50,614	\$53,322
Wastewater Collection	\$105,977	\$126,622	\$184,522	\$196,886
Wastewater Treatment	\$761,809	\$770,799	\$791,869	\$826,934
On-going Capital Projects	\$0	\$569,013	\$0	\$115,487
Wastewater Debt Service Payments	\$125,439	\$126,029	\$125,465	\$125,863
Operating Transfer Out	\$1,348	\$0	\$0	\$0
Internal Services	\$143,949	\$155,639	\$159,170	\$160,987
Total Expenditures	\$1,175,270	\$1,845,698	\$1,371,179	\$1,542,722

WASTEWATER RATE DEVELOPMENT

CURRENT WASTEWATER RATE REVENUE REQUIREMENT: Analysis of the FY 2012-13 wastewater rate revenue requirement is based on the City’s FY 2012-13 adopted budget. The annual wastewater enterprise rate revenue requirement is based on wastewater system operation and maintenance cost plus debt service obligations and replacement capital improvement needs, less other wastewater system revenues such as interest earnings, and other income.

The City’s FY 2012-13 Wastewater Enterprise Budget indicates annual wastewater expenditures of \$2,113,900. The expected FY 2012-13 wastewater enterprise revenues total \$2,432,500. Thus, it appears that the current rate structure will meet the FY 2012-13 revenue needs and provide about \$318,600 toward future capital projects. It is also important to note that the City is currently proceeding with a \$5,762,000 sewage collection system and treatment plant improvement project. The City also faces a number of additional sewer rehabilitation and replacement capital improvements in the near future.

COST OF SERVICE ANALYSIS: One of the conditions associated with obtaining the State Revolving Fund Loan (SRF) in 2002 was that the City develop a revenue program that conformed to SRF requirements. The goal of the State Water Resources Control Board (SWRCB) Revenue Program Guidelines is to allocate the Enterprise Fund costs to various functional cost components and then design a rate structure that results in the costs being proportionately distributed among the various customer classes.

Revenue programs for communities that are similar in size to Yreka typically use a flow based rate schedule. However, in the future, the SWRCB might also require that the City to adopt a rate structure that will allocate the cost associated with high organic strength wastes to the dischargers of those high strength wastes, such as restaurants. This could substantially increase, by a factor of 1.5 to 2.0, the rates of restaurants and other high strength waste dischargers.

It is recommended that the City continue to utilize its existing flow based rate structure.

MULTI-YEAR FINANCIAL PLAN GUIDELINES: In order to develop recommendations regarding future rates, we developed a multi-year financial plan for the wastewater enterprise. This financial plan considers both capital and operating programs.

Capital Projects: In addition to a number of growth related sewer system improvements, the City's 2004 Master Sewer Plan recommended implementation of an I&I Reduction Program to correct some of the worst I&I problems and replacement of the old sewers in the Target Area, where the sewers are in very poor condition. To date the City has completed about two thirds of the I&I Reduction Program and about 10 percent of the Target Area sewer replacements.

The 2007 Wastewater Treatment and Effluent Disposal Expansion Plan also recommended a number of Remedial Improvements to the various treatment plant processes.

A prioritized list of the specific improvements, including the current 2013 Wastewater Treatment and Collection System Improvements, is shown in Table 16, with the estimated costs updated to January 2013 dollars. Table 16 also indicates the approximate allocation of the project costs to the replacement and growth categories. Replacement category improvements include

replacement of existing infrastructure and upgrading existing infrastructure to improve its effectiveness. Typically, replacement related improvements are funded by monthly service charges and growth related improvements are funded by new development. Unfortunately, lenders must be assured that they will be repaid, so it is normally necessary to cover the debt service for improvements with the monthly service charges and use future development fees to supplement the monthly service charges and dampen future rate increases.

The multi-year financial plan has been developed assuming that the current 2013 Wastewater Treatment and Collection System Improvements will be funded utilizing a \$5,000,000 US Rural Development Loan and \$762,000 City contribution. The annual debt service on the US Rural Development 40 year, 2.75 percent interest loan will be about \$208,000 per year.

Funding for a \$50,000 I&I Reduction Program Update and a \$2,600,000 Target Area I&I and General Sewer Improvement Project was also included in the five year financial plan utilizing existing reserves and annual revenue. Because of the magnitude of the listed Near Term Improvements (2018 to 2028), capital improvement funding will need to be included in the City's financial plan for the foreseeable future.

Funding for updating the City's Sanitary Sewer Overflow (SSO) Backup and Response Plan, development of a Pump Station Emergency Response Plan, purchase of sewer televising equipment, and four years of collection system condition assessment was also included in the five year plan. It is estimated that this total effort will cost about \$555,000 over the next five years.

TABLE 16

CITY OF YREKA WASTEWATER SYSTEM CAPITAL NEEDS PRIORITIZATION ESTIMATED COSTS & REPLACEMENT CAPITAL COST BASIS

PRIORITY	PROJECT NO.	IMPROVEMENT	ESTIMATED PROJECT COST (2013 DOLLARS)	PERCENT ASSIGNED TO REPLACEMENT	PROJECT COST ASSIGNED TO REPLACEMENT	PROJECT COST ASSIGNED TO GROWTH
SHORT TERM IMPROVEMENTS (2013-2018)						
1	2013 WASTEWATER TREATMENT AND COLLECTION SYSTEM IMPROVEMENTS					
Design Authorized by City Council		Aeration Basin Modifications	\$39,000	100%	\$39,000	\$0
		Aerobic Digester Improvements	\$754,000	100%	\$754,000	\$0
		Chlorine Contact Basin Outlet and Effluent Piping Modifications	\$102,000	75%	\$76,500	\$25,500
		Expand Sludge Dewatering Capacity	\$1,540,000	75%	\$1,155,000	\$385,000
		Add Larger Headworks Screen	\$445,000	75%	\$333,750	\$111,250
		PHASE 4 I&I Reduction	\$2,882,000	100%	\$2,882,000	\$0
2		I&I Reduction Program Update	\$50,000	100%	\$50,000	\$0
3		Sanitary Sewer Overflow Reduction Planning, Televising Equipment and Sewer Condition Assessments	\$555,500	100%	\$555,500	\$0
4		Target Area I&I and General Sewer Improvements	\$2,600,000	100%	\$2,600,000	\$0
SUBTOTAL			\$8,967,500		\$8,445,750	\$521,750

NEAR TERM IMPROVEMENTS (2018 TO 2028)

5	TP8	Effluent Disposal Long Term Planning	\$160,000	0%	\$0	\$160,000
6		I&I Reduction and General Sewer Improvements	\$3,700,000	100%	\$3,700,000	\$0
7	S3	E. Oberlin to S. Main Relief Sewer	\$961,200	0%	\$0	\$961,200
8	S4	Mill St. Sewer Improvement	\$68,400	0%	\$0	\$68,400
9	S5	Mill St. Sewer Improvement	\$88,800	0%	\$0	\$88,800
10	S6	E. Oberlin to Campbell Relief Sewer	\$502,800	0%	\$0	\$502,800
11	S7	Arlene Ct., Lane St, W. Center Relief Sewer	\$386,400	0%	\$0	\$386,400
SUBTOTAL			\$5,867,600		\$3,700,000	\$2,167,600

LONG TERM IMPROVEMENTS (BEYOND 2028)

12	S8	S. Main Relief Sewer	\$364,800	0%	\$0	\$364,800
13	S9	Westside WWTP Relief Siphon	\$76,800	0%	\$0	\$76,800
14	TP9	Expand Aeration Basin to 1.4MGD	\$228,000	0%	\$0	\$228,000
15	TP10	Expand Clarification to 1.4MGD	\$2,568,000	0%	\$0	\$2,568,000
16	TP11	Expand Contact Basin to 1.4MGD	\$222,000	0%	\$0	\$222,000
17	TP12	Effluent Disposal Expansion to 1.4MGD	\$5,226,000 to \$12,342,000	0%	\$0	\$4,355,000 to \$10,285,000
SUBTOTAL			\$8,685,600 to \$15,801,600		\$0	\$8,685,600 to \$15,801,600

ONGOING ANNUAL COLLECTION SYSTEM IMPROVEMENTS BEYOND 2028

	I&I Reduction	\$300,000 PER YEAR	100%		
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Note: Project Costs need to be inflated per the ENR Construction Cost Index every year.

Operating Reserve: Operation reserves ranging from 10 percent to 40 percent of annual operating costs are common for public wastewater utilities. We recommend that the City continue with its current policy of maintaining an operating reserve equal to \$500,000 or 25 percent of its total expenses less on-going capital projects, whichever is greater.

Debt Service Reserve: USDA Rural Development requires that the City maintain a specific reserve to assure that it can make the annual debt payments. This debt reserve requirement applies to both the existing Eastside Sewer loan and the proposed USDA Rural Development loan for the 2013 Treatment and Sewer Improvements Project. The City has decided to maintain a \$100,000 debt reserve for its USDA Rural Development loan obligations.

Short-Term Asset Reserve: As discussed in the Water Enterprise Section, one of the USDA Rural Development loan conditions is that the City commit funding to a Short Term Fixed Asset Reserve. This reserve is intended to fund significant maintenance or replacement of critical process equipment over the next 5 to 15 years. An annual contribution of \$78,000 will need to be allocated to these anticipated expenses beginning in FY 15-16, and the reserve balance will fluctuate depending on how much is spent to maintain and replace the fixed assets each year. For example, it would cost well over \$500,000 to replace one of the two 40-year-old clarifier mechanisms at the wastewater treatment plant.

Financial Plan Assumptions: The following is a list of the primary assumptions used in developing the multi-year financial plans:

- Operation and Maintenance costs will increase at 3 percent per year, except for labor-related costs which will increase at 4 percent. These are the same inflation rates that were used in the 2008 study.
- Funding has been included to cover the potential cost of adding another Wastewater Treatment Plant Operator beginning in FY 14-15.
- The number of wastewater HEs will increase at 15 per year.
- No grant funding is anticipated for the capital improvements outlined in the Capital Needs Prioritization Table 17.

- The \$5,000,000 US Rural Development loan for the 2013 Treatment and Sewer Improvements Project will result in interest during construction payments of about \$55,000 and \$70,000 in FY 13-14 and FY 14-15, respectively. The debt service will be about \$104,000 in FY 14-15 and \$208,000 per year after that.
- Future project costs will be inflated at 3 percent per year, which is equal to the average annual increase in the ENR Construction Cost Index over the last 5 years.
- Accounting, billing, and collection costs will increase \$39,000 beginning in FY 13-14 to cover implementation of enhanced billing and collection features planned by the City's Finance Department.
- Interest income will be estimated at 0.25 percent of the operating reserve amount and one-half of the wastewater improvement fund amount at the beginning of the year.
- Future sewer setup fee will be decreased from \$100 to \$50, which will increase the typical single family residential sewer bill by about \$0.09 per month.
- Maintain an Operating Reserve Fund of at least \$500,000 or 25 percent of the annual expenses less on-going capital improvements, whichever is greater.
- Maintain a Debt Service Reserve Fund of \$100,000 through FY 17-18, but recognize that this reserve will eventually need to be increased pursuant to the USDA Rural Development Loan requirements.
- Beginning in FY15-16, allocate \$78,000 per year for Short Term Assets Replacement as required by the USDA Rural Development Loan. Any unused funds at the end of a given fiscal year are to be added to the Short Term Assets Replacement Reserve Fund.
- Depreciation will remain unfunded.

Financial Plan Results: A 5-year projection of the Wastewater Enterprise budgeted and projected expenses is shown in Table 17. As shown under the Treatment Plant section of the projected budget, the sludge disposal budgets were reduced in FY 14-15 and FY 15-16 due to the drier sludge generated by the 2013 improvements project. Also, the power and propane budget for the treatment plant was

increased by more than the 3 percent inflation in FY 14-15 and FY 15-16 to account for the impact of the 2013 improvement project.

The City's contributions to the 2013 improvement project are shown in FY 12-13 and FY 13-14. These amounts take into account the \$79,000 that the City has already contributed to its \$762,000 share of the project.

A \$50,000 Infiltration and Inflow (I&I) Reduction Program Update, which will include additional collection system flow monitoring and an update to the I&I reduction priority list is scheduled for FY 13-14. In addition, a Target Area I&I and General Improvements Project is scheduled for design in FY 14-15 and construction in FY 15-16 and FY 16-17.

As discussed herein before, the estimated interest during construction and debt service is shown for the 2013 improvements project.

Table 18 presents a summary of the 5-year financial plan values based on the proposed rate increases for each year and includes the year beginning fund balances, revenues, expenditures, and year end recommended operating reserve for the Wastewater Enterprise Fund. As can be seen, the estimated fund balance at the end of FY 12-13 is about \$2,626,000, with \$500,000 in operating reserves and \$100,000 in debt reserve. The Short Term Assets Replacement Reserve Fund will only accumulate funds if the annual Short Term Assets repair and replacement work is less than \$78,000 in a given year beginning in FY 15-16. The Sewer Improvements Reserve Fund fluctuates due to project implementation and should begin FY 18-19 with about \$900,000 after the FY 17-18 capital improvements have been completed. The estimated year end recommended operations reserve shown at the bottom of the table increases from \$500,000 at the end of FY 12-13 to \$585,000 at the end of FY 17-18.

A summary of the wastewater utility revenue and expenditures associated with the proposed rate structure is also shown on Figure 6. As indicated by this bar graph the new rate structure will increase revenues such that the projected expenditures can be met while maintaining the recommended level of operations, debt, and fixed assets reserves, and a positive improvements reserve balance.

PROPOSED RATES: The proposed wastewater rates shown in Table 18 will increase the typical residential bill by about 2.5 percent per the year over the next five years.

If the rates were increased at only 1.0 percent per year, then the Sewer Improvements Reserve Fund balance at the Beginning of FY 18-19 would decrease from about \$900,000 to approximately \$360,000.

A comparison of wastewater rates for neighboring wastewater systems is shown on Figure 7. As one can see, the 2012 single-family monthly service charges for the eleven other communities varies from about \$23.95 for the City of Mt. Shasta to \$74.27 for the City of Williams.

All of these communities have gravity collection systems similar to the City of Yreka, but the age and condition of the sewer system varies. Their wastewater treatment plants also provide either secondary or advanced secondary treatment similar to the City of Yreka. Yreka cannot discharge to surface waters, but many of these communities can discharge to surface waters for all or part of the year, which can result in lower treatment and disposal costs

TABLE 17
City of Yreka -- Wastewater Utility
Budgeted and Projected Expenditures

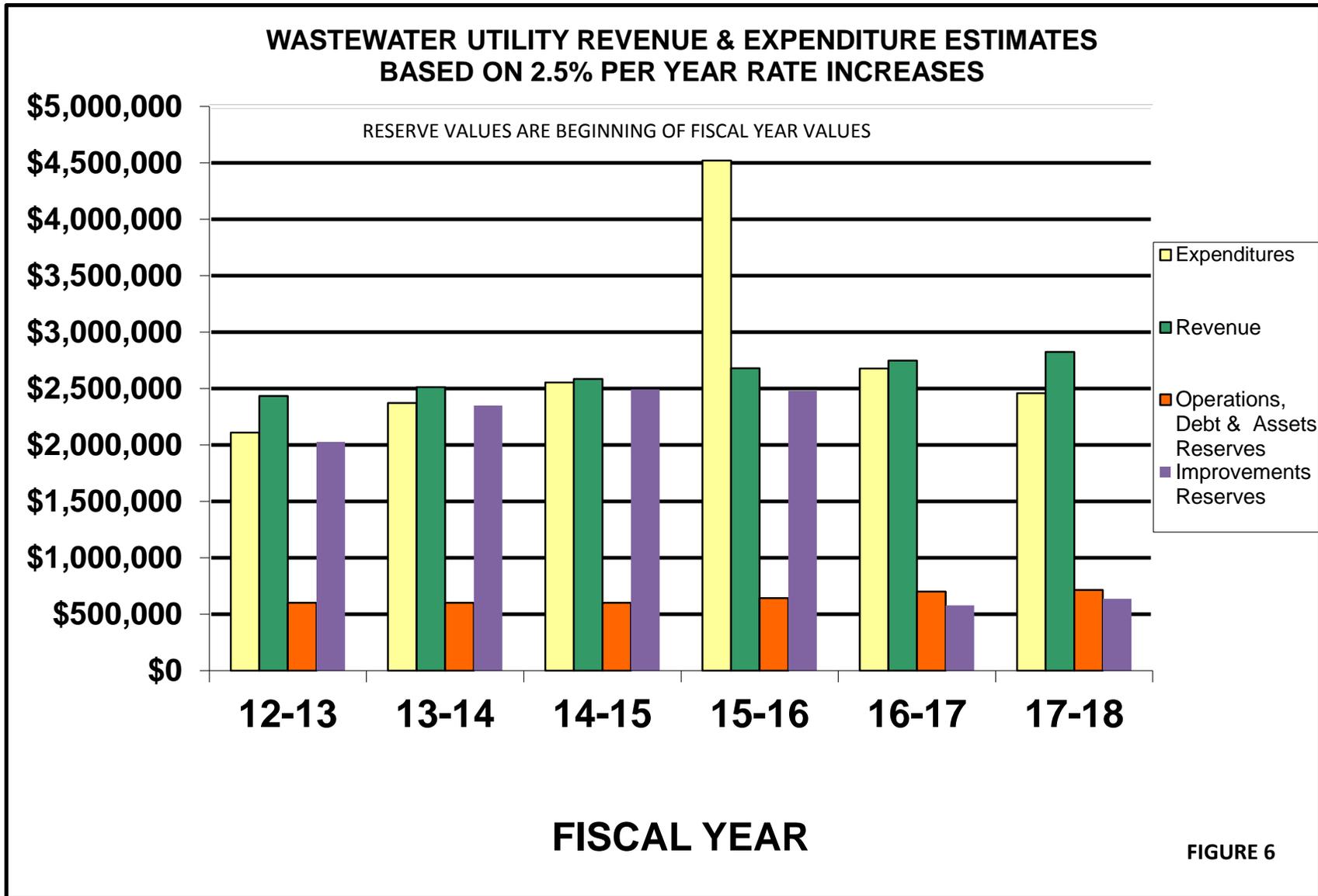
Fund	Depart	Code	Account Description	Inflation Factor	Budgeted (FY 12-13)	Projected (FY 13-14)	Projected (FY 14-15)	Projected (FY 15-16)	Projected (FY 16-17)	Projected (FY 17-18)
COLLECTION										
70	110	100 thru 526	Accounts Billing & Collection	4%	\$94,453	\$137,231	\$142,720	\$148,429	\$154,366	\$160,541
Subtotal					\$94,453	\$137,231	\$142,720	\$148,429	\$154,366	\$160,541
ENGINEERING										
70	300	100 thru 525	City Engineering Services	4%	\$77,638	\$80,744	\$83,973	\$87,332	\$90,825	\$94,458
Subtotal					\$77,638	\$80,744	\$83,973	\$87,332	\$90,825	\$94,458
WASTEWATER COLLECTION										
Operation & Maintenance										
80	550	100 thru 104	Wages	4%	\$94,447	\$98,225	\$102,154	\$106,240	\$110,490	\$114,909
80	550	320 thru 390	Employee Benefits	3%	\$64,357	\$66,288	\$68,276	\$70,325	\$72,434	\$74,607
80	550	416	Special Department Supplies	3%	\$13,200	\$13,596	\$14,004	\$14,424	\$14,857	\$15,302
80	550	420 & 421	Maintenance and Operations	3%	\$26,000	\$26,780	\$27,583	\$28,411	\$29,263	\$30,141
80	550	422 & 450	Small Tools & Equipment	3%	\$2,500	\$2,575	\$2,652	\$2,732	\$2,814	\$2,898
80	550	510 thru 513	Training	3%	\$700	\$721	\$743	\$765	\$788	\$811
80	550	515 thru 517	Office Supplies & Communications	3%	\$25	\$26	\$27	\$27	\$28	\$29
80	550	518	Power	3%	\$3,000	\$3,090	\$3,183	\$3,278	\$3,377	\$3,479
80	550	520	Chargeback Amounts	3%	\$22,275	\$22,943	\$23,632	\$24,340	\$25,071	\$25,823
80	550	521 & 522	Building Maintenance	3%	\$400	\$412	\$424	\$437	\$450	\$464
80	550	525	Professional Services	3%	\$6,000	\$6,180	\$6,365	\$6,556	\$6,753	\$6,956
80	550	526	Contract Services	3%	\$500	\$515	\$530	\$546	\$563	\$580
80	550	530	OPEB Insurance & claims	3%	\$11,500	\$11,845	\$12,200	\$12,566	\$12,943	\$13,332
80	550	535	Fees - State/County/Agencies	3%	\$11,600	\$11,948	\$12,306	\$12,676	\$13,056	\$13,448
Subtotal					\$256,504	\$265,144	\$274,080	\$283,324	\$292,886	\$302,778
WASTEWATER TREATMENT PLANT										
Operation & Maintenance										
80	560	100 thru 104	Wages	4%	\$190,019	\$197,620	\$205,525	\$213,746	\$222,295	\$231,187
80	560	320 thru 390	Employee Benefits	3%	\$119,176	\$122,751	\$126,434	\$130,227	\$134,134	\$138,158
80	560	416	Potential WWTP Operator	3%	\$0	\$0	\$80,000	\$82,400	\$84,872	\$87,418
80	560	416	Special Department Supplies	3%	\$5,000	\$5,150	\$5,305	\$5,464	\$5,628	\$5,796
80	560	416	Outside Lab Testing	3%	\$31,000	\$31,930	\$32,888	\$33,875	\$34,891	\$35,937
80	560	416	Chemicals	3%	\$122,500	\$126,175	\$129,960	\$133,859	\$137,875	\$142,011
80	560	420	Maintenance and Operations	3%	\$46,000	\$47,380	\$48,801	\$50,265	\$51,773	\$53,327
80	560	420 & 421	Sludge Disposal	3%	\$122,200	\$125,866	\$104,000	\$80,000	\$82,400	\$84,872
80	560	421	Disposal Fields	3%	\$4,000	\$4,120	\$4,244	\$4,371	\$4,502	\$4,637
80	560	422	Small Tools	3%	\$200	\$206	\$212	\$219	\$225	\$232
80	560	450	Effluent Fields	3%	\$3,400	\$3,502	\$3,607	\$3,715	\$3,827	\$3,942
80	560	450	Replace Clarifier Motor Controllers	3%	\$0	\$23,000	\$0	\$0	\$0	\$0
80	560	450	Other Short Term Asset Repair & Replacement	3%	\$0	\$27,000	\$40,000	\$60,000	\$45,000	\$75,000
80	560	510 thru 513	Training	3%	\$2,300	\$2,369	\$2,440	\$2,513	\$2,589	\$2,666
80	560	515 thru 517	Office Supplies & Communication	3%	\$1,200	\$1,236	\$1,273	\$1,311	\$1,351	\$1,391
80	560	518	Power & Propane	3%	\$131,000	\$134,930	\$153,978	\$173,597	\$178,805	\$184,169
80	560	518	Water/Sewer/LFF	3%	\$85,000	\$87,550	\$90,177	\$92,882	\$95,668	\$98,538
80	560	520	Chargeback Amounts	3%	\$4,300	\$4,429	\$4,562	\$4,699	\$4,840	\$4,985
80	560	521	Building Maintenance	3%	\$1,500	\$1,545	\$1,591	\$1,639	\$1,688	\$1,739
80	560	525	Professional & Legal Services	3%	\$30,000	\$30,900	\$31,827	\$32,782	\$33,765	\$34,778
80	560	535	Fees - State/County/Agencies	3%	\$28,600	\$29,458	\$30,342	\$31,252	\$32,190	\$33,155
Subtotal					\$927,395	\$1,007,117	\$1,097,165	\$1,138,815	\$1,158,317	\$1,223,939

TABLE 17 (continued)
 City of Yreka -- Wastewater Utility
 Budgeted and Projected Expenditures

Fund	Depart	Code	Account Description	Inflation Factor	Budgeted (FY 12-13)	Projected (FY 13-14)	Projected (FY 14-15)	Projected (FY 15-16)	Projected (FY 16-17)	Projected (FY 17-18)
WASTEWATER CAPITAL PROJECTS										
			Professional Services		\$30,000					
			2013 Wastewater Treatment and Collection System Improvements		\$404,000	\$279,000	\$0	\$0	\$0	\$0
			I&I Reduction Program Update		\$0	\$50,000	\$0	\$0	\$0	\$0
			Target Area I&I and General Sewer Improvements	3%	\$0	\$0	\$276,000	\$2,224,000	\$336,000	\$0
			Pickup Truck		\$5,000	\$0	\$0	\$0	\$0	\$25,000
			Portion of 10 Yard Dump Truck		\$0	\$0	\$80,000	\$0	\$0	\$0
			Tractor		\$0	\$23,000	\$0	\$0	\$0	\$0
			SSO Backup & Response Plan Update		\$0	\$10,000	\$0	\$0	\$0	\$0
			Pump Station Emergency Response Plan		\$0	\$10,500	\$0	\$0	\$0	\$0
			Sewer Camera		\$0	\$80,000	\$0	\$0	\$0	\$0
			Articulating Eye for Sewer Camera		\$0	\$50,000	\$0	\$0	\$0	\$0
			Push Sewer Camera		\$0	\$5,000	\$0	\$0	\$0	\$0
			Collection System Condition Assessment		\$0	\$0	\$100,000	\$100,000	\$100,000	\$100,000
			Subtotal		\$439,000	\$507,500	\$456,000	\$2,324,000	\$436,000	\$125,000
DEBT SERVICE										
82	550	740 & 745	Eastside Sewer Redev Loan		\$49,608	\$49,608	\$49,608	\$49,608	\$49,608	\$49,608
82	560	740 & 745	State Revolving Loan		\$76,843	\$76,843	\$76,843	\$76,843	\$76,843	\$76,843
			2013 Project Interest During Construction		\$0	\$55,000	\$70,000	\$0	\$0	\$0
			USDA Rural Development Loan		\$0	\$0	\$104,000	\$208,000	\$208,000	\$208,000
			Subtotal		\$126,451	\$181,451	\$300,451	\$334,451	\$334,451	\$334,451
INTERNAL SERVICES										
80	799		ICA Expense	3%	\$187,500	\$193,125	\$198,919	\$204,886	\$211,033	\$217,364
			Subtotal		\$187,500	\$193,125	\$198,919	\$204,886	\$211,033	\$217,364
Total Expenditures and Transfers					\$2,108,941	\$2,372,311	\$2,553,308	\$4,521,238	\$2,677,879	\$2,458,531

TABLE 18
City of Yreka -- Wastewater Utility
Summary of Enterprise Fund Financial Plan

	Budgeted (FY 12-13)	Projected (FY 13-14)	Projected (FY 14-15)	Projected (FY 15-16)	Projected (FY 16-17)	Projected (FY 17-18)
WASTEWATER RATES USED						
Single Family Monthly Service Charge	\$42.00	\$43.05	\$44.13	\$45.23	\$46.36	\$47.52
Low Income Single Family Monthly Service Charge	\$40.00	\$41.05	\$42.13	\$43.23	\$44.36	\$45.52
ESTIMATED NUMBER OF SINGLE FAMILY CONNECTION EQUIVALENTS						
Beginning of Year HEs		4,845	4,860	4,875	4,890	4,905
Estimated Additional HEs due to Growth		15	15	15	15	15
Estimated Year End HEs	4,845	4,860	4,875	4,890	4,905	4,920
Estimated Year End Lifeline	30	31	32	33	34	35
BEGINNING FUNDS AVAILABLE BALANCE						
Operating Fund	\$500,000	\$500,000	\$500,000	\$525,000	\$550,000	\$560,000
USDA Rural Development Debt Fund	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
Short Term Fixed Assets Reserve (See Note 1)	\$0	\$0	\$0	\$18,000	\$51,000	\$54,000
Wastewater Improvement Fund	<u>\$2,026,062</u>	<u>\$2,349,621</u>	<u>\$2,491,310</u>	<u>\$2,479,001</u>	<u>\$577,464</u>	<u>\$634,285</u>
Total Reserves	\$2,626,062	\$2,949,621	\$3,091,310	\$3,122,001	\$1,278,464	\$1,348,285
REVENUES						
Fixed Service Charges	\$2,412,000	\$2,495,000	\$2,565,000	\$2,637,000	\$2,711,000	\$2,788,000
Interest Earnings	\$3,500	\$7,000	\$7,000	\$7,000	\$3,000	\$3,000
Other Operation Income	\$17,000	\$12,000	\$12,000	\$12,000	\$12,000	\$12,000
Development Impact Funds for Debt (see Note 2)	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$21,700</u>	<u>\$21,700</u>	<u>\$21,700</u>
Total Revenue	\$2,432,500	\$2,514,000	\$2,584,000	\$2,677,700	\$2,747,700	\$2,824,700
EXDENDITURES						
Collections	\$94,453	\$137,231	\$142,720	\$148,429	\$154,366	\$160,541
Engineering	\$77,638	\$80,744	\$83,973	\$87,332	\$90,825	\$94,458
Wastewater Collection	\$256,504	\$265,144	\$274,080	\$283,324	\$292,886	\$302,778
Wastewater Treatment Plant	\$927,395	\$1,007,117	\$1,097,165	\$1,138,815	\$1,158,317	\$1,223,939
Wastewater Capital Projects	\$439,000	\$507,500	\$456,000	\$2,324,000	\$436,000	\$125,000
Wastewater Debt Service	\$126,451	\$181,451	\$300,451	\$334,451	\$334,451	\$334,451
Internal Services	<u>\$187,500</u>	<u>\$193,125</u>	<u>\$198,919</u>	<u>\$204,886</u>	<u>\$211,033</u>	<u>\$217,364</u>
Total Expenditures	\$2,108,941	\$2,372,311	\$2,553,308	\$4,521,238	\$2,677,879	\$2,458,531
YEAR END VALUES						
Recommended Operating Reserve Fund	\$500,000	\$500,000	\$525,000	\$550,000	\$560,000	\$585,000
YEAR END OPERATING RESERVE (see Note 3)	29.9%	26.8%	25.0%	25.0%	25.0%	25.1%
Notes: 1. Funds in this reserve account will fluctuate depending on the amount of short term asset repair and replacement work done each year. 2. To the extent that Development Impact Fees are available at that time, and assuming a Wastewater Treatment Development Impact Fee is adopted prior to FY 15-16. 3. Percentage operating reserve is based on the year end Operating Reserve Fund Balance divided by Total Expenditures less On-going Capital Projects.						



SINGLE - FAMILY MONTHLY SEWER BILL COMPARISON

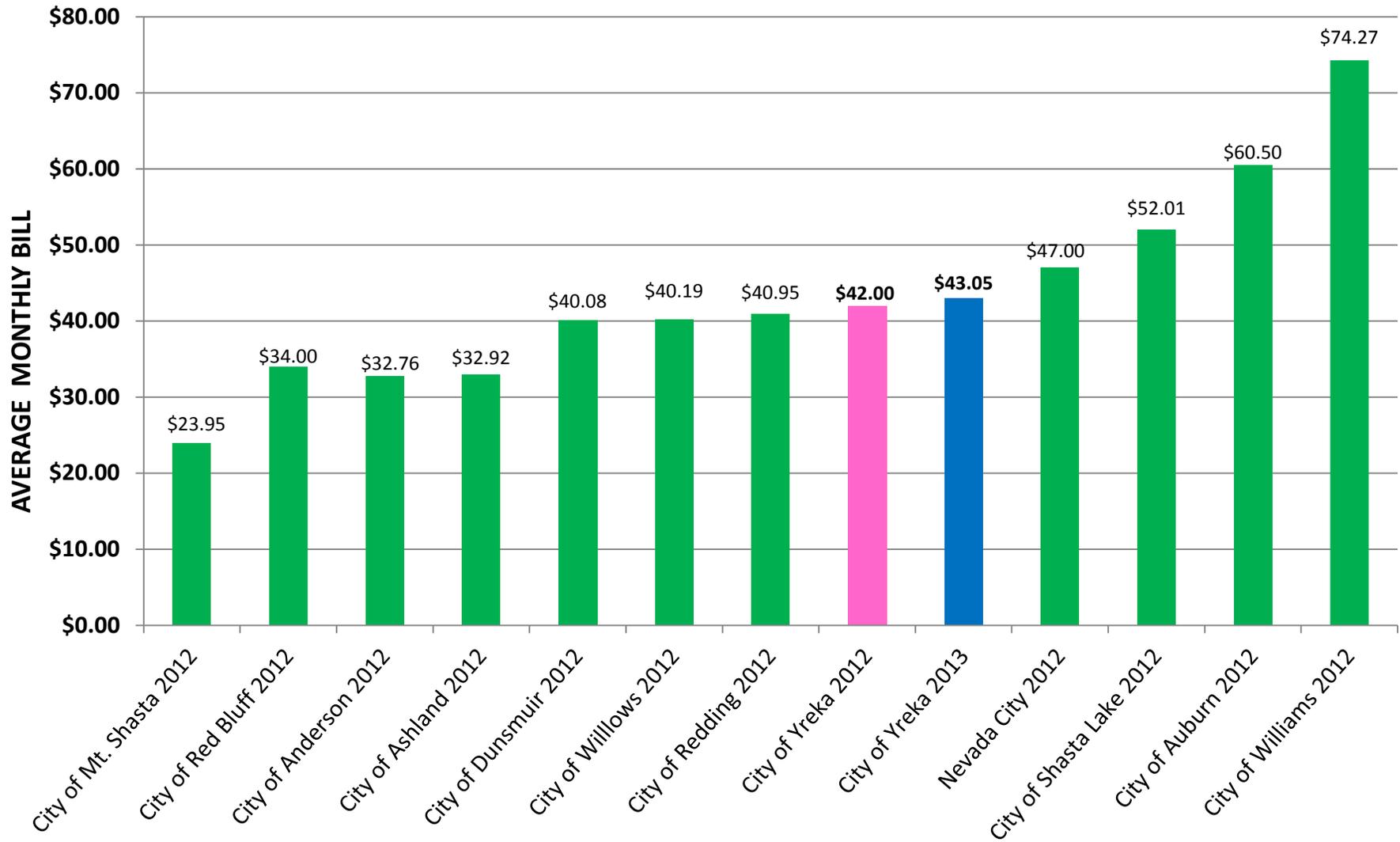


FIGURE 7