

YREKA CITY COUNCIL  
**SPECIAL CITY COUNCIL MEETING**  
**Thursday April 19, 2018 @ 5:30 P.M.**  
Yreka City Hall 701 Fourth Street, Yreka, CA

PLEDGE OF ALLEGIANCE

PLEASE SILENCE YOUR CELL PHONES. THANK YOU.

**PUBLIC COMMENTS:** This is the time for public comments. Council may ask questions but may take no action during the public comment section of the meeting, except to direct staff to prepare a report or place an item on a future agenda. If you are here to make comments on a specific agenda item, you may speak at that time. If not, this is the time. Please limit your remarks to 5 minutes.

**SPEAKERS:** Please speak from the podium. State your name and mailing address so that City Staff can respond to you in regard to your comments, or provide you with information, if appropriate. You are not required to state your name and address if you do not desire to do so.

Workshop – Draft Utility Rate Study.

Adjournment

In compliance with the requirements of the Brown Act, notice of this meeting has been posted in a public accessible place, 24 hours in advance of the meeting.

**DRAFT**

**2018 WATER AND WASTEWATER  
UTILITY RATE STUDY**

**FOR**

**CITY OF YREKA**



**APRIL 2018**

**Job No. 69.46**



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UTILITY RATE STUDY**

**FOR**

**CITY OF YREKA  
701 4<sup>TH</sup> STREET  
YREKA, CA 96097**

**JOB No. 69.46**

**APRIL 2018**

**PREPARED BY:**



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## ABBREVIATIONS

AWWA	American Water Works Association
CF	Cubic Feet
CIP	Capital Improvement Plan
City	City of Yreka
CWSRF	Clean Water State Revolving Fund
DIF	Development Impact Fee
DWSRF	Drinking Water State Revolving Fund
ENR	Engineering News Record
FY	Fiscal Year
GASB 34	Government Accounting Standards Board Statement 34
GPR	Green Projects Reserve
HE	Household Equivalent
MG	Million gallons
O&M	Operations and Maintenance
PACE	PACE Engineering, Inc.
SRF	State Revolving Fund
SWRCB	State Water Resource Control Board
USDA	United States Department of Agriculture



# DRAFT

## 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 are 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, Inc. (PACE) 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, which was not approved by the City Council. Therefore, water and wastewater rates have remained unchanged since Fiscal Year (FY) 12-13. In 2017, the City retained PACE to prepare an update to the water and wastewater rates. Analysis of the Development Impact Fees needed to fund the system improvements related to growth is 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 (O&M), 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 (CIP), 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 and City Council members as part of two noticed workshops (February 21, 2018 and March 7, 2018). Work at the workshops included review of available information and the methodology to be used in the development of the recommended rate structures for water and wastewater services.
- Review of historical account information and anticipated future costs for the 5-year study period (FY 18-19 through FY 22-23).
- Prioritization of capital improvement funding needs from the City's 2004 Master Sewer Plan, 2005 Master Water Plan, 2007 Wastewater Treatment and Effluent Disposal Expansion Plan, current planning activities as part of the water and sewer Proposition 1 planning grants, the City's CIP, and supplemental improvements based on City staff O&M experience.
- 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 O&M, 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.
- Since the late 1970s, the City has charged higher rates to provide water services outside the City limits. The City has invested considerable time, money, and resources in providing its proprietary and constitutionally protected water system infrastructure. It is the accepted standard throughout the state that municipal utilities are a service provided to residents of the incorporated area and act as an inducement for annexation of developing areas. Thus, providing regional infrastructure to the County is contrary to the best interests of the City and its residents. Providing extraterritorial water service has caused the City in staff time expenditures and increased utility rates to the City residents to assist the County to continue its expansion. Transmission of water outside the City requires the City to provide pumps, transmission facilities, and storage facilities to provide the necessary additional capacity. These expenses are passed on to customers residing outside the City limits through a 50% increase of the rates payable by City residents.

# **WATER AND WASTEWATER RATE AND FINANCIAL RECOMMENDATIONS**

## **Utility Rate Implementation**

It has been the City's practice to "reset" household equivalent (HE) information in the fall of each year. This effort involves setting the HE amounts for non-residential wastewater charges based on wintertime water use (January, February, and March).

It is recommended the City perform the HE resetting in May of each year, shortly after the wintertime water use data becomes available. In the first year (August 2018) of implementation, HEs will be reset based on 2018 wintertime water use. Then, the HEs will be reset in May for every year thereafter.

Also, it is the desire and recommendation of the Rate Committee that rate modifications become effective on January 1 of the year, rather than the beginning of the fiscal year (July 1). This will minimize the impact to rate payers given the lower water consumption during the winter months.

**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 apply 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 \$2.00 subsidy for low-income accounts is reimbursed to the Water Fund from the General Fund.
- The current water rate structure is fairly easy to understand and administer.
- Currently, approximately 61% of water rate revenues are generated from the fixed monthly service charges. The remaining 39% are generated 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 40% of total budget expenses, less on-going capital projects, should allow the rates to be adjusted gradually without impacting needed reserves.
- Water rates need to continue providing sufficient revenue 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 HEs are typically calculated for each non-residential account based on their winter water use. Consideration was made for using monthly water consumption for determining wastewater rates. The committee felt resumption of rates based on winter water use was best for the following reason:
  - Rates based on monthly water use would require consideration of “outside” water use, such as irrigation. The best way to separate “outside” water use from that which leads to wastewater discharge is to install landscape water meters on all non-residential accounts. The costs and logistics of performing this work is not feasible at this time.

In special situations, the calculated number of HEs may be adjusted to account for unusual water use conditions. All non-residential 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 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 improvement 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 18-19 through FY 22-23 are summarized in Table ES-1. These water rates should be adopted as soon as possible. The analyses contained in this report assume that the proposed FY 18-19 rates will go into effect on January 1, 2019.

**TABLE ES-1  
City of Yreka – Water Utility  
Recommended Monthly Water Rates**

	Existing FY 17-18	Proposed FY 18-19	Proposed FY 19-20	Proposed FY 20-21	Proposed FY 21-22	Proposed FY 22-23	
<b><u>CONSUMPTION CHARGES (\$/1000 GALLONS)</u></b>							
<b>Single-Family Consumption Rates</b>							
101-10,000 Gallons	\$1.86	\$1.93	\$2.01	\$2.09	\$2.18	\$2.26	
10,001 to 35,000 Gallons	\$2.05	\$1.93	\$2.01	\$2.09	\$2.18	\$2.26	
Excess over 35,000 Gallons	\$2.23	\$1.93	\$2.01	\$2.09	\$2.18	\$2.26	
<b>Non-Single-Family Consumption Rate</b>							
Excess over 101 Gallons	\$1.86	\$1.93	\$2.01	\$2.09	\$2.18	\$2.26	
<b><u>MONTHLY SERVICE CHARGES (\$/MONTH)</u></b>							<b>METER FACTOR</b>
5/8" Meter	\$31.60	\$32.86	\$34.18	\$35.55	\$36.97	\$38.45	1.0
3/4" Meter	\$41.08	\$42.72	\$44.43	\$46.22	\$48.06	\$49.99	1.3
1" Meter	\$47.40	\$49.29	\$51.27	\$53.33	\$55.46	\$57.68	1.5
1 1/2" Meter	\$88.48	\$92.01	\$95.70	\$99.54	\$103.52	\$107.66	2.8
2" Meter	\$126.40	\$131.44	\$136.72	\$142.20	\$147.88	\$153.80	4.0
3" Meter	\$379.20	\$394.32	\$410.16	\$426.60	\$443.64	\$461.40	12.0
4" Meter	\$568.80	\$591.48	\$615.24	\$639.90	\$665.46	\$692.10	18.0
6" Meter	\$790.00	\$821.50	\$854.50	\$888.75	\$924.25	\$961.25	25.0
8" Meter	\$1,106.00	\$1,150.10	\$1,196.30	\$1,244.25	\$1,293.95	\$1,345.75	35.0
<b>Note: Low income monthly service charges are \$2.00 less than shown above but require a 5/8" meter.</b>							

While water rates are established to generate sufficient revenue to offset normal O&M expenditures, there are philosophical and policy-driven factors that influence rate making, such as the following:

- Funding depreciation.
- Capital project funding. This rate study assumes the City will be successful in obtaining Proposition 1 grant funding to pay for some water capital projects. If the City is unsuccessful and the City decided to fund these improvements with long-term financing, water rates would have to be higher.
- Reserve funding. Reserve fund allocations should be made each year to maintain a healthy enterprise. The Water Improvement Fund affords considerable flexibility in terms of the balance to carry from year to year. For communities with relatively high capital replacement needs, such as Yreka, carrying a sizable balance is considered good financial strategy.

Depending on the City's philosophy for addressing the above considerations, recommended water rates can vary considerably. For example, if the City chose to not fund depreciation; is able to obtain Proposition 1 grant funding; and is willing to spend a substantial portion (about \$920,000) of its Water Improvement Fund balance on scheduled capital replacement projects, water rates could be as low as 2.5% per year over the next five years. However, if it is desirable to fund depreciation; the City has to fund Proposition 1 projects with long-term debt; and it is desirable to maintain current balances in the Water Improvement Fund, water rates would need to increase up to 15% per year over the next five years.

The financial plans, presented herein, are based on the following assumptions:

- Depreciation is unfunded.
- It is assumed Proposition 1 grants will be obtained.
- About \$553,000 of the current Water Improvement Fund will be utilized for funding capital replacement projects.

With these assumptions, the water rates would need to increase at 4% per year over the next five years.

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 should be converted to a "uniform" consumption rate where the unit cost for water use beyond 100 gallons per month is the same no matter how much water is consumed.

The wastewater rates recommended for adoption for FY 18-19 through FY 22-23 are summarized in Table ES-2. These wastewater rates should be implemented as soon as possible. The analyses contained in this report assume that the proposed FY 18-19 rates will be effective July 1, 2018.



**TABLE ES-2**  
**City of Yreka – Wastewater Utility**  
**Recommended Monthly Wastewater Rates**

	Existing FY 17-18	Proposed FY 18-19	Proposed FY 19-20	Proposed FY 20-21	Proposed FY 21-22	Proposed FY 22-23
Single-Family Flat Rate per Unit	\$42.00	\$43.68	\$45.43	\$47.24	\$49.13	\$51.10
Low Income Single-Family Rate per Unit	\$40.00	\$41.68	\$43.43	\$45.24	\$47.13	\$49.10
Multi-Family Flat Rate per Unit	\$42.00	\$43.68	\$45.43	\$47.24	\$49.13	\$51.10
Non-Residential Flat Rate per HE (see Notes)	\$42.00	\$43.68	\$45.43	\$47.24	\$49.13	\$51.10
<b>Notes:</b> 1. One 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.						

Similar to water rates, wastewater rates need to, generally, be adequate to offset normal operating expenditures. Also, there are philosophical and policy-driven factors that play into it, such as 1) the decision to fund depreciation, 2) philosophies for funding capital replacement projects, and 3) the decision to spend accumulated Wastewater Improvement Funds.

If the City continued to not fund depreciation; is able to obtain Proposition 1 grant dollars for identified capital projects; and is willing to spend a substantial portion (about \$1.59M) of its Wastewater Improvement Fund balance on scheduled capital replacement projects, wastewater rates could be as low as 2.5% per year over the next five years.

However, if funding depreciation is desirable; long-term financing is necessary to fund Proposition 1 capital projects; and it is desirable to maintain current balances in the Wastewater Improvement Fund, wastewater rates would need to increase up to 16% per year over the next five years.

The financial plans, presented herein, are based on the following assumptions:

- Depreciation is funded.
- It is assumed Proposition 1 grants will be obtained.
- About \$1.06M of the current Wastewater Improvement Fund will be utilized for funding capital replacement projects.

With these assumptions, the wastewater rates would need to increase at 4% per year over the next five years.

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 maintain the financial condition of each utility and minimize the potential for future rate volatility.

- Each utility should maintain a minimum operating reserve of 40% of the budgeted total expenses less debt payments and 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. Both are required to remain in good financial status with loans secured from USDA Rural Development. They are also considered good financial practice for the City to maintain.
- The following utility capital reserve funds should also be maintained:

Water Utility

- Fall Creek Emergency Repair/Replacement Fund – This fund is for emergency repairs, replacement, and/or modification 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 a political decision was made to enact 50% of the recommended Development Impact Fee amounts, 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. This effectively shifts the cost of new development to the rate payers rather than being paid by those who are causing the costs. While the existing rate payers may cover a portion of the cost in the interim, the future receipt of Development Impact Fees will help offset 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% of their recommended values. 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 (ENR), San Francisco Construction Cost Index.

# CHAPTER I

## WATER UTILITY STUDY

### CURRENT WATER USE RATES

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

The FY 12-13 through FY 17-18 water rates included a fixed monthly service charge and consumption charges as summarized in Table 1. 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 March 2018, there were 19 services that qualified for this discount.

It is estimated that the fixed monthly service charges will generate about 61% of the water rate revenues for FY 17-18. The remaining 39% is generated through consumption charges based on the actual water used.

**TABLE 1**  
**City of Yreka – Water Utility**  
**Historical and Current Water Use Rates**

	FY 12-13	FY 13-14	FY 14-15	FY 15-16	FY 16-17	FY 17-18	
<b><u>CONSUMPTION CHARGES (\$/1000 GALLONS)</u></b>							
<b>Single-Family Consumption Rates</b>							
101 to 10,000 Gallons	\$1.86	\$1.86	\$1.86	\$1.86	\$1.86	\$1.86	
10,001 to 35,000 Gallons	\$2.05	\$2.05	\$2.05	\$2.05	\$2.05	\$2.05	
Excess over 35,000 Gallons	\$2.23	\$2.23	\$2.23	\$2.23	\$2.23	\$2.23	
<b>Non-Single-Family Consumption Rates</b>							
Excess over 101 Gallons	\$1.86	\$1.86	\$1.86	\$1.86	\$1.86	\$1.86	
<b><u>MONTHLY SERVICE CHARGES (\$/MONTH)</u></b>							<b>METER FACTOR</b>
5/8" Meter	\$31.60	\$31.60	\$31.60	\$31.60	\$31.60	\$31.60	1.0
3/4" Meter	\$41.08	\$41.08	\$41.08	\$41.08	\$41.08	\$41.08	1.3
1" Meter	\$47.40	\$47.40	\$47.40	\$47.40	\$47.40	\$47.40	1.5
1 1/2" Meter	\$88.48	\$88.48	\$88.48	\$88.48	\$88.48	\$88.48	2.8
2" Meter	\$126.40	\$126.40	\$126.40	\$126.40	\$126.40	\$126.40	4.0
3" Meter	\$379.20	\$379.20	\$379.20	\$379.20	\$379.20	\$379.20	12.0
4" Meter	\$568.80	\$568.80	\$568.80	\$568.80	\$568.80	\$568.80	18.0
6" Meter	\$790.00	\$790.00	\$790.00	\$790.00	\$790.00	\$790.00	25.0
8" Meter	\$1,106.00	\$1,106.00	\$1,106.00	\$1,106.00	\$1,106.00	\$1,106.00	35.0
<b>Note: Low-income monthly service charges are \$2.00 less than shown above but require a 5/8" meter.</b>							

## **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-calendar-year water connection data is shown in Table 2. The values shown are for the number of active water service accounts in all use classifications.

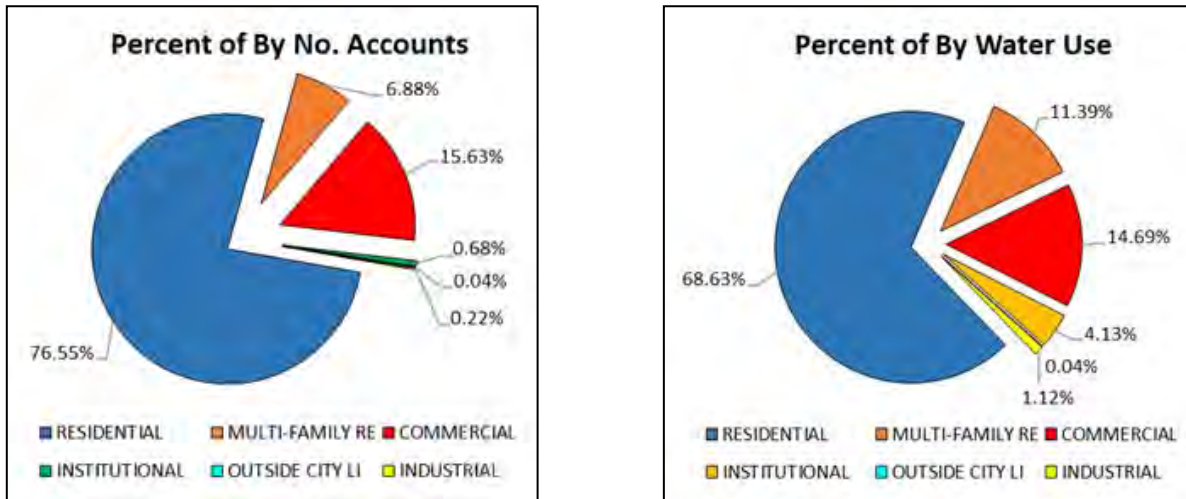
**TABLE 2**  
**City of Yreka – Water Utility**  
**Historic Number of Accounts**

<b>Year</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
<b>Number of Active Water Accounts</b>	<b>3,008</b>	<b>3,022</b>	<b>3,026</b>	<b>3,022</b>	<b>3,026</b>
<b>% Change</b>		<b>+0.5</b>	<b>+0.1</b>	<b>-0.1</b>	<b>+0.1</b>

Figure 1 depicts 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 six fiscal years are shown in Table 3. Although the actual water use has fluctuated significantly from year to year, the average annual change from 2012 through 2017 was about negative 6.0%. The large reduction shown in FY 14-15 was likely the result of state-mandated water conservation restrictions imposed during the last drought.

**TABLE 3  
City of Yreka – Water Utility  
Historical Annual Metered Consumption**

Fiscal Year	Million Gallons	% Change
2012	586.9	-2.0%
2013	655.5	+11.7%
2014	648.2	-1.1%
2015	568.9	-12.2%
2016	589.8	+3.7%
2017	552.6	-6.3%

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. In addition, the recent drought and subsequent state-mandated water conservation measures have resulted in a decrease in water consumption. Rate increases can also 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 years of low water use.

**Water Utility Expenditures:** Water utility expenditures for O&M and for replacement capital projects are normally made from the Water Enterprise Fund. Table 4 is a summary of the Water Enterprise Expenditures for FY 11-12 through FY 14-15.

**TABLE 4**  
**City of Yreka -- Water Utility**  
**Historical Water Enterprise Expenditures**

	Expended (FY 11-12)	Expended (FY 12-13)	Expended (FY 13-14)	Expended (FY 14-15)
Finance	\$102,535	\$129,012	\$124,371	\$121,493
Public Works Administration	\$53,676	\$73,445	\$38,681	\$19,280
Water Distribution	\$319,071	\$341,373	\$285,359	\$328,462
Water Supply & Treatment	\$644,237	\$463,322	\$465,334	\$498,364
Water Conservation		\$207,918	\$271,124	\$262,211
Capital Projects - Water Distribution	\$108,868			
Capital Projects - Water Supply & Treatment	\$90,797			
Water Debt Services	\$0	\$151,346	\$148,821	\$146,228
Internal Services	\$155,426	\$161,331	\$143,755	\$151,460
<b>Total Expenditures:</b>	<b>\$1,474,610</b>	<b>\$1,527,747</b>	<b>\$1,477,445</b>	<b>\$1,527,498</b>

Historically, the City has not funded depreciation. However, if an amount equal to the annual depreciation had been put back into replacing worn-out infrastructure, such as the old steel water mains, it would have gone a long way toward maintaining a viable system. Currently, the water utility annual depreciation is about \$518,000 per year, which equates to about \$13.90 per month per service.

The City's current water rate structure is based on the "Cash-Needs Approach" as defined in American Water Works Association (AWWA) Manual M1 – Principles of Water Rates, Fees, and Changes, Sixth Edition. The Cash-Needs Approach is recommended for government-owned utilities where revenue requirement determination is more

straightforward and similar to how public agencies perform budgeting. Depreciation expense is not included in the Cash-Needs Approach.

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. This approach is recommended over just funding depreciation because it presents a more transparent approach that water customers can better relate to.

## **WATER RATE DEVELOPMENT**

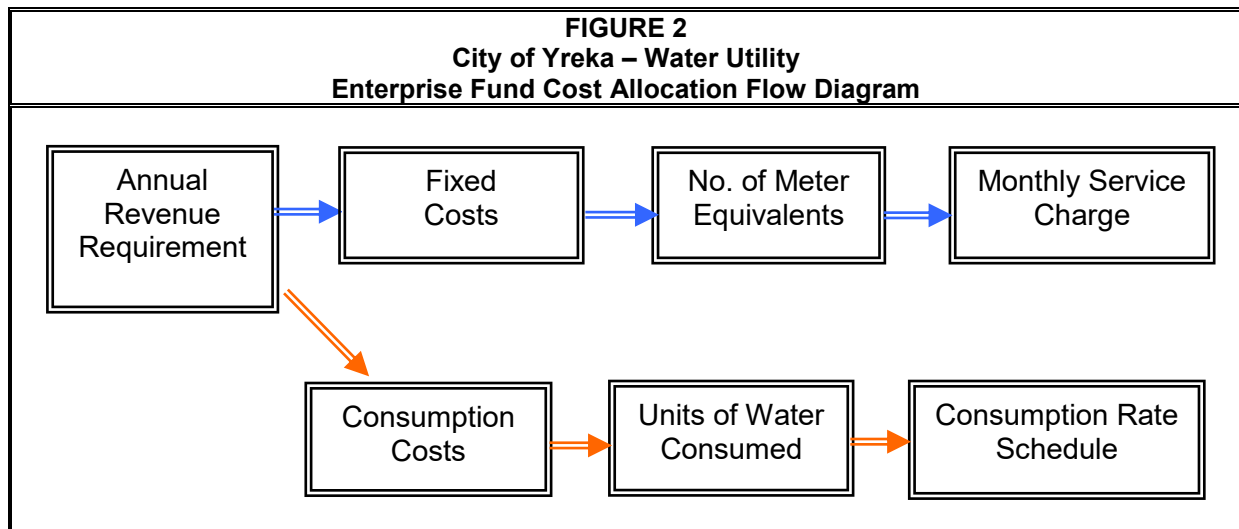
**Current Water Rate Revenue Requirement:** Analysis of the FY 17-18 water rate revenue requirement is based on the City's FY 17-18 adopted budget. The annual water enterprise rate revenue requirement is based on water system O&M cost plus debt service obligations and replacement capital improvement needs, less other water system revenues such as interest earnings and other income.

Based upon our review of the City's adjusted FY 17-18 Water Enterprise Budget, it appears that the annual water rate revenue projection is about \$2,773,500. The City has been working diligently over the last couple years performing planning activities and preparing construction funding applications for securing Proposition 1 grant funding to perform two major capital replacement projects worth approximately \$6.86M. With the potential influx of funding resulting from the (expected passage) of Proposition 68 in the June 2018 election, it is expected these projects will be funded by 100% grant dollars. However, it is also important to note that the City faces other capital expenditures in the near future that will increase the annual revenue requirements, see Table 5.

**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 Consumption 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 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.

The 2008 Utility Rate Study described two approaches for establishing “Meter Class Equivalent Factors.” The factors are applied to the 5/8-inch meter base rate to determine an equivalent base rate for a larger meter size. It was decided in 2008 that meter factors based on meter replacement cost would be the best fit for the City. The meter factors shown in the rate tables contained herein are based on this approach. It is recommended the City continue to use this practice.

**Consumption Costs:** Due to the source and cost of the City’s water supply, which make it difficult to establish a defensible cost basis for multiple volumetric tiers, this study recommends a uniform (single-tier) rate design rather than the existing conservation-promoting, multi-tiered rate design. Thus, no matter how much water is consumed beyond that which is included in the base rate, the customer will pay one price per unit of water. 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.

As part of the 2008 Utility Rate Study, analyses were performed to determine the proportion of the City’s costs to be allocated to “fixed” and “variable” costs. This exercise is important to establish the basis for the “base” meter rate and the “consumption” rate. The results indicated the split between base and consumption rates should be in the 43% to 53% and 57% to 47%, respectively.

Based on actual water billing records for FY 16-17, the split was about 61% (base) and 39% (consumption). This is largely due to water conservation efforts imposed by the state resulting from the recent drought. Moving forward, it is recommended the City maintain its current split between base and consumption charges. The previous split seemed to maintain a healthy Water Enterprise Fund, even during drought conditions.

Therefore, proposed rate adjustments will simply be recommended percentage increases of the base and consumption rates, as they exist.

The Utility Rate Committee expressed concern that the small amount of water (100 gallons) included in the base rate may be causing volatility in the water bill that affects lower income and/or fixed income customers. It was decided that increasing this

amount would not be fair to very low water users within the City. Therefore, maintaining the current practice is recommended.

**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 5 with the estimated project costs updated to March 2018 dollars.

Table 5 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, shown in Table 5, would be funded over the next five years with Proposition 1 Drinking Water State Revolving Fund (DWSRF) grant dollars. If the Proposition 1 grants do not come through and the City has to fund these projects with long-term debt, the monthly rates would have to increase by about \$5.50 per HE. The City has

completed and submitted construction grant applications for Priority Item Nos. 2-6. It is expected an application for Priority Item No. 1 will be submitted before summer 2018. The current status of Proposition 1 DWSRF grant funds is that they have been spent. However, it is anticipated approximately \$19.0M will be back-fed into the program from the Green Projects Reserve (GPR) program. In addition, it is anticipated that upcoming Proposition 68 will be passed by California voters in June 2018, which will contribute an additional \$60M± into the program. While these additional funding sources are not guaranteed, the City feels the likelihood for funding is high. Therefore, the proposed rate increases and financial plan reflect acquisition of Proposition 1 grant funding.

It is anticipated Priority Item Nos. 7-14 will be funded by accumulated revenue from water rates. Priority Item No. 15 is anticipated to be funded by water rates through long-term loan(s); however, if Proposition 1 grant dollars are not secured for Priority Item Nos. 1-6, this item will likely be delayed until the next rate study cycle and financial plan update.

Priority Item Nos. 16-22 are longer-term improvements that are not accounted for in the proposed financial plan. However, it is recommended the City continue to explore funding opportunities for these improvements, especially Item No. 17 – Steel Water Main Replacements. The growth-related items (16, 20, 21, and a portion of 22) should be funded by development impact fees (DIF).

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.

**TABLE 5**  
**City of Yreka**  
**Water System Capital Needs Prioritization**  
**Estimated Costs & Replacement Capital Cost Basis**

PRIORITY	IMPROVEMENT	ESTIMATED PROJECT COST (2018 DOLLARS)	PERCENT ASSIGNED TO REPLACEMENT	PROJECT COST ASSIGNED TO REPLACEMENT	PROJECT COST ASSIGNED TO GROWTH
<b>HOPEFUL PROPOSITION 1 GRANT-FUNDED PROJECTS (2018)</b>					
1	SR3/Main St. Water Line Replacement	\$2,500,000	100%	\$2,500,000	\$0
2	Replacement 16" Main in Hwy 3 - Foothill Dr. to Yreka Creek Way	\$1,491,000	100%	\$1,491,000	\$0
3	Davis Well Development	\$580,000	100%	\$580,000	\$0
4	Replacement 1 MG Lower Humbug Reservoir	\$1,810,000	100%	\$1,810,000	\$0
5	New 0.2 MG Shasta Belle Tank and Pump Station Upgrade	\$1,980,000	100%	\$1,980,000	\$0
6	Rebuild/Replace Filter Media	\$1,058,000	100%	\$1,058,000	\$0
<b>Subtotal</b>		<b>\$9,419,000</b>		<b>\$9,419,000</b>	<b>\$0</b>
<b>NEAR-TERM IMPROVEMENTS (2018-2023) - FUNDED THROUGH RATES</b>					
7	Master Water Plan Update	\$50,000	50%	\$25,000	\$25,000
8	Urban Water Management Plan	\$30,000	100%	\$30,000	\$0
9	Fairgrounds Water Line	\$200,000	100%	\$200,000	\$0
10	Water Meter Replacement (@ \$30,000/yr every 2 years)	\$90,000	100%	\$90,000	\$0
11	Steel Water Main Replacement	\$150,000	100%	\$150,000	\$0
12	6" Water Line in Oak/Sherman/Fairchild	\$200,000	100%	\$200,000	\$0
13	Cathodic Protection Survey/Improvements	\$155,000	100%	\$155,000	\$0
14	Fall Creek Meter and SCADA Improvements	\$30,000	100%	\$30,000	\$0
<b>Subtotal</b>		<b>\$905,000</b>		<b>\$880,000</b>	<b>\$25,000</b>
<b>NEAR-TERM IMPROVEMENTS (2018-2023) - FUNDED THROUGH LONG-TERM LOANS</b>					
15	Fall Creek Pipeline Assessment	\$5,000,000	100%	\$5,000,000	\$0
<b>LONG-TERM IMPROVEMENTS (BEYOND 2023) – NOT ACCOUNTED FOR IN PROPOSED RATES</b>					
16	Alternative Water Source Study (additional supply)	\$250,000	0%	\$0	\$250,000
17	Steel Water Main Replacement	\$8,000,000 - \$10,000,000	100%	\$8,000,000 - \$10,000,000	\$0
18	Water Meter Replacement	Unknown	100%	Unknown	Unknown
19	Develop Backup Water Supply	\$2,800,000	100%	\$2,800,000	\$0
20	Add Third Variable-Speed Pump to State Street PS	\$250,000	0%	\$0	\$250,000
21	12" Parallel Main in Foothill Dr.	\$750,000	0%	\$0	\$750,000
22	12" Replacement Main in Payne Lane	\$550,000	50%	\$275,000	\$275,000
Note: Project Costs need to be inflated by the ENR Construction Cost Index every year.					

**Reserve Accounts:** Currently most 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 Clear Well 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 continue to maintain a minimum of a \$3,500,000 Fall Creek Reserve and continue to maintain a separate Operating Reserve Account to handle normal fluctuations in the Enterprise Fund budget.

Operation reserves ranging from 10% to 40% 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% of its annual operation maintenance and debt service expenses. **After considerable discussion, the City's Ad Hoc Committee decided to set a goal of achieving a minimum operating reserve of 40% of annual operating cost, less debt service. We recommend that the City continue with this policy.**

It is also recommended that the City continue to 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. Short-term asset reserves, identifying specific equipment replacement costs and useful lives in the Water Distribution and Water Supply and Treatment Funds, are shown in Tables 6 and 7, respectively.

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

- O&M costs will increase at 3% per year except for labor-related costs, which will increase at 4% per year. These are similar inflation values used in the 2008 study.
- Project construction costs will increase at 3% per year, which is equal to the average annual increase in the ENR construction cost index over the last five years.
- While the City is expected to experience some “in-fill” growth in the next five years, including new development from the Karuk facilities, it also recently lost Fruit Growers (November 2017) to closure. Fruit Growers was a major water consumer in the City. As such, in order to project conservative revenue projections, no new growth is anticipated over the next five years.
- The Near-Term Improvements listed in Table 5 will be constructed within the next five years.
- Interest income will be estimated based on 90% of the Total Reserve Fund Balance at the beginning of the years times 1.0% interest.
- Maintain a separate Operating Reserve Fund of 40% of the annual operating, less debt service, expenditures.
- Maintain a separate Debt Service Reserve Fund of \$263,000 in FY 18-19, then increasing to \$460,000 if the Fall Creek Pipeline Assessment work is funded using long-term loans.
- Allocate annual funding for Short-Term Assets Replacement. For Water Distribution, the amount shall be \$92,933 per year. For Water Supply and Treatment, the amount shall be \$72,500 per year. 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.

**Financial Plan Results:** A five-year projection of the Water Enterprise budget and revenue requirements is shown in Table 8. As indicated, additional staffing needs are shown under the “Finance,” “Public Works Administration,” and “Water Distribution.” These costs will be funded, in part, by other enterprise funds. Also shown is a budget item for “Contractor Equipment & Vehicle Replacement.” This budget item is structured similar to the “Short-Term Asset Replacement” reserve where equipment replacement costs are collected, incrementally, over the life of the equipment. This approach softens year-to-year budgetary impacts to the Water Enterprise Fund when equipment and vehicles need replaced.

Also note that some planned expenditures under “Water Supply and Treatment” and the “Capital Projects” funds were eliminated and added to the “Short-Term Asset Replacement” reserve.

Table 9 presents a summary of the five-year financial plan values with the fixed monthly service charges representing about 61% of the annual rate revenue in FY 17-18. Table 9 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 is maintained at \$3,500,000 and the USDA Rural Development Debt Reserve Fund is projected to be \$263,000 at the beginning of FY 18-19. Short-Term Assets Replacement Reserve Fund will only accumulate funds if the annual Short-Term Assets repair and replacement work is less than \$165,433 in a given year. The Water Improvements Reserve Fund fluctuates due to project implementation and should begin FY 18-19 with about \$3,221,723 after the FY 17-18 capital improvements have been completed. Note at the end of the five-year planning period, the “Total Cash Available for Capital Improvements” is projected to decrease by about \$395,000, leaving about \$2,827,000 available in reserve. Given the uncertainty of securing Proposition 1 grants, this is considered sound financial practice.



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.

**Proposed Rates:** A summary of the proposed water rates for all meter sizes used in the five-year financial plan are shown in Table 10. Based on an annual water use of about 142,000 gallons per year, the proposed water rates will increase the typical residential bill by about 4.0% per year over the next five years.

A tabulation of water rates for neighboring water purveyors is shown in Table 11. As one can see, the fixed service charges (for 5/8" meter) vary from \$8.38 to \$53.25 per month, and the consumption rates are also quite variable. Figure 3 indicates estimated average monthly water bills for each agency based on 142,000 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's 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 pipeline).**

**TABLE 6**  
**City of Yreka – Water Utility**  
**Short-Term Asset Replacement Schedule – Water Distribution**

Short-Term Asset	Replacement Period	Estimated Cost	Annual Reserve
Computer Server	5	\$5,000	\$1,000
Computer Work Stations	5	\$5,000	\$1,000
Lab Equipment	5	\$10,000	\$2,000
Replace Trash Pumps and Generators	5	\$3,000	\$600
Utility Locate Equipment Replacement	5	\$10,000	\$2,000
Trench Compaction Equipment	5	\$5,000	\$1,000
Meter Reading Equipment	5	\$30,000	\$6,000
Storage Tank Dive Inspections (6 tanks @ \$2,500 ea)	5	\$15,000	\$3,000
Storage Tank Maintenance	5	\$250,000	\$50,000
Groundwater Source Evaluation	5	\$60,000	\$12,000
Replace Telemetry/SCADA Equipment	10	\$30,000	\$3,000
Replace North Street PS Pumps & Motors	15	\$30,000	\$2,000
Maintenance on Well Pump Sta. Buildings	15	\$50,000	\$3,333
Rebuild PRV Station Valves (6 @ \$5,000 ea)	15	\$30,000	\$2,000
North Well Pump and Motor Replacement	20	\$80,000	\$4,000
<b>Subtotal Annual Cost:</b>			<b>\$92,933</b>

**TABLE 7**  
**City of Yreka – Water Utility**  
**Short-Term Asset Replacement Schedule – Water Supply Treatment**

Short-Term Asset	Replacement Period	Estimated Cost	Annual Reserve
Computer Server	5	\$5,000	\$1,000
Computer Work Stations	5	\$5,000	\$1,000
Lab Equipment	5	\$10,000	\$2,000
Replace Fall Creek Master Meter	10	\$25,000	\$2,500
Chlorination Equipment Replacement	10	\$60,000	\$6,000
Coagulant Feed Equipment Replacement	10	\$50,000	\$5,000
Replace Telemetry & SCADA Equipment	10	\$30,000	\$3,000
Filter Rebuild/Replacement	15	\$600,000	\$40,000
Emergency Chlorination Equipment Replacement	15	\$50,000	\$3,333
Replace Davis Well Pump & Motor	15	\$50,000	\$3,333
Maintenance on Buildings	15	\$50,000	\$3,333
Rebuild PRV Station Valves (6 @ \$5,000 ea)	15	\$30,000	\$2,000
<b>Subtotal Annual Cost:</b>			<b>\$72,500</b>

**TABLE 8**  
**City of Yreka – Water Utility**  
**Budgeted and Projected Expenditures**

Fund	Depart	Code	Account Description	Inflation Factor	Actual (FY 15-16)	Actual (FY 16-17)	Budgeted (FY 17-18)	Projected (FY 18-19)	Projected (FY 19-20)	Projected (FY 20-21)	Projected (FY 21-22)	Projected (FY 22-23)
<b>FINANCE</b>												
70	30	100 thru 104	Wages	3%	\$55,279	\$47,124	\$50,028	\$51,529	\$53,075	\$54,667	\$56,307	\$57,996
70	30	320 thru 390	Employee Benefits	4%	\$34,817	\$33,022	\$32,540	\$33,842	\$35,195	\$36,603	\$38,067	\$39,590
70	30	100 thru 390	Finance Tech (split 50/50 Water/Waste)	3.5%	\$0	\$0	\$0	\$37,904	\$39,231	\$40,604	\$42,025	\$43,496
70	30	511 thru 513	Dues, Training and Travel	3%	\$602	\$771	\$2,600	\$2,678	\$2,758	\$2,841	\$2,926	\$3,014
70	30	515 thru 517	Supplies	3%	\$28,156	\$23,524	\$35,500	\$36,565	\$37,662	\$38,792	\$39,956	\$41,154
70	30	525 & 526	Professional & Contract Services	3%	\$27,262	\$37,146	\$22,000	\$22,660	\$23,340	\$24,040	\$24,761	\$25,504
			<b>Subtotal</b>		<b>\$146,116</b>	<b>\$141,587</b>	<b>\$142,668</b>	<b>\$185,177</b>	<b>\$191,261</b>	<b>\$197,547</b>	<b>\$204,042</b>	<b>\$210,754</b>
<b>PUBLIC WORKS ADMINISTRATION</b>												
70	300	100 thru 104	Wages	3%	\$21,756	\$23,541	\$31,471	\$32,415	\$33,388	\$34,389	\$35,421	\$36,484
70	300	320 thru 390	Employee Benefits	4%	\$10,135	\$14,776	\$17,601	\$18,305	\$19,037	\$19,799	\$20,591	\$21,414
70	300	100 thru 390	PW Foreman (30% of cost)	3.5%	\$0	\$0	\$0	\$31,944	\$33,062	\$34,219	\$35,417	\$36,656
70	300	100 thru 390	GIS Technician (30% of cost)	3.5%	\$0	\$0	\$0	\$22,742	\$23,538	\$24,362	\$25,214	\$26,097
70	300	512	Travel, Conference & Meetings	3%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
70	300	515 thru 517	Supplies	3%	\$487	\$429	\$1,000	\$1,061	\$1,093	\$1,126	\$1,159	\$1,192
70	300	519	Advertising	3%	\$43	\$0	\$0	\$0	\$0	\$0	\$0	\$0
70	300	525	Professional Services & Ord. Update	3%	\$11,412	\$27,375	\$29,500	\$30,385	\$31,297	\$32,235	\$33,203	\$34,199
			<b>Subtotal</b>		<b>\$43,833</b>	<b>\$66,121</b>	<b>\$79,572</b>	<b>\$136,821</b>	<b>\$141,382</b>	<b>\$146,097</b>	<b>\$150,971</b>	<b>\$156,009</b>
<b>WATER DISTRIBUTION</b>												
70	500	100 thru 104	Wages	3%	\$117,214	\$152,065	\$181,558	\$187,005	\$192,615	\$198,393	\$204,345	\$210,475
70	500	320 thru 390	Employee Benefits	4%	\$71,328	\$89,318	\$106,629	\$110,894	\$115,330	\$119,943	\$124,741	\$129,730
70	500	100 thru 390	Maint. Worker (split 50/50 Water/Waste)	3.5%	\$0	\$0	\$0	\$37,904	\$39,231	\$40,604	\$42,025	\$43,496
70	500	416	Special Department Supplies	3%	\$12,717	\$16,807	\$22,000	\$22,660	\$23,340	\$24,040	\$24,761	\$25,504
70	500	420	Maintenance and Operations	3%	\$23,897	\$43,712	\$42,500	FALSE	\$0	\$0	\$0	\$0
70	500	422 & 450	Small Tools & Equipment	3%	\$7,825	\$5,100	\$15,800	\$16,274	\$16,762	\$17,265	\$17,783	\$18,317
70	500	4	Short-Lived Asset Replacement	3%	\$0	\$0	\$92,933	\$95,721	\$98,593	\$101,551	\$104,597	\$107,735
70	500	4	Contractor Equip. & Vehicle Replace.	3%	\$0	\$0	\$65,000	\$66,950	\$68,959	\$71,027	\$73,158	\$75,353
70	500	510 thru 513	Training	3%	\$1,330	\$6,568	\$4,800	\$4,944	\$5,092	\$5,245	\$5,402	\$5,565
70	500	515 thru 517	Office Supplies & Communications	3%	\$1,512	\$1,200	\$2,300	\$2,369	\$2,440	\$2,513	\$2,589	\$2,666
70	500	519	Advertising	3%	\$48	\$324	\$0	\$0	\$0	\$0	\$0	\$0
70	500	520	Chargeback Amounts	3%	\$30,718	\$39,783	\$35,132	\$36,186	\$37,272	\$38,390	\$39,541	\$40,728
70	500	525	Professional & Backflow Services	3%	\$18,411	\$16,580	\$9,000	\$9,270	\$9,548	\$9,835	\$10,130	\$10,433
70	500	526	Contract Services	3%	\$840	\$0	\$500	\$515	\$530	\$546	\$563	\$580
70	500	530	Insurance & claims	3%	\$29,242	\$2,034	\$28,000	\$28,840	\$29,705	\$30,596	\$31,514	\$32,460
70	500	535	Fees - Distribution Cert	3%	\$295	\$1,710	\$1,000	\$1,030	\$1,061	\$1,093	\$1,126	\$1,159
			<b>Subtotal</b>		<b>\$315,377</b>	<b>\$375,201</b>	<b>\$607,152</b>	<b>\$620,562</b>	<b>\$640,478</b>	<b>\$661,041</b>	<b>\$682,275</b>	<b>\$704,201</b>
<b>WATER SUPPLY AND TREATMENT</b>												
70	510	100 thru 104	Wages	3%	\$239,949	\$230,398	\$240,466	\$247,680	\$255,110	\$262,764	\$270,647	\$278,766
70	510	320 thru 390	Employee Benefits	4%	\$137,908	\$142,888	\$131,530	\$136,791	\$142,263	\$147,953	\$153,871	\$160,026
70	510	416	Special Department Supplies	3%	\$3,747	\$2,545	\$3,000	\$3,090	\$3,183	\$3,278	\$3,377	\$3,478
70	510	416	Outside Lab Testing	3%	\$3,028	\$3,317	\$4,000	\$4,120	\$4,244	\$4,371	\$4,502	\$4,637
70	510	420	Maintenance and Operations	3%	\$33,480	\$29,665	\$25,000	\$25,750	\$26,523	\$27,318	\$28,138	\$28,982
70	510	420	Telemetry Maintenance	3%	\$8,650	\$19,761	\$10,000	\$10,300	\$10,609	\$10,927	\$11,255	\$11,593
70	510	420	Chemicals	3%	\$22,324	\$27,774	\$50,000	\$51,500	\$53,045	\$54,636	\$56,275	\$57,964
70	510	420	Fall Creek Pipeline & PS Maintenance	3%	\$29,291	\$8,448	\$16,000	\$16,480	\$16,974	\$17,484	\$18,008	\$18,548
70	510	420	Filter Rebuild & Replacement	3%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
70	510	422	Small Tools	3%	\$845	\$780	\$500	\$515	\$530	\$546	\$563	\$580
70	510	425	Ground Water Source Evaluations	3%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
70	510	450	Equip. & Meter Calibration	3%	\$3,924	\$16,145	\$7,500	\$7,725	\$7,957	\$8,195	\$8,441	\$8,695
70	510	4	Short-Lived Asset Replacement	3%	\$0	\$0	\$72,500	\$74,675	\$76,915	\$79,223	\$81,599	\$84,047
70	510	4	Contractor Equip. & Vehicle Replace.	3%	\$0	\$0	\$25,000	\$25,750	\$26,523	\$27,318	\$28,138	\$28,982
70	510	510 thru 513	Training	3%	\$1,661	\$2,667	\$4,500	\$4,635	\$4,774	\$4,917	\$5,065	\$5,217
70	510	515 thru 517	Office Supplies & Communications	3%	\$7,503	\$8,298	\$7,700	\$7,931	\$8,169	\$8,414	\$8,666	\$8,926
70	510	518	Electric & Propane	3%	\$263,792	\$272,349	\$268,000	\$276,040	\$284,321	\$292,851	\$301,636	\$310,685
70	510	520	Chargeback Amounts	3%	\$19,416	\$13,031	\$8,307	\$8,556	\$8,813	\$9,077	\$9,350	\$9,630
70	510	521	Building Maintenance	3%	\$3,394	\$3,075	\$2,500	\$2,575	\$2,652	\$2,732	\$2,814	\$2,898
70	510	525	Professional & Legal Services	3%	\$21,243	\$4,652	\$40,000	\$41,200	\$42,436	\$43,709	\$45,020	\$46,371
70	510	525	FERC & EIS/EIR Prof Services	3%	\$426	\$116	\$5,000	\$5,150	\$5,305	\$5,464	\$5,628	\$5,796
70	510	526	Contractual Services	3%	\$160	\$160	\$500	\$515	\$530	\$546	\$563	\$580
70	510	530	Property Insurance	3%	\$22,856	\$22,548	\$18,500	\$19,055	\$19,627	\$20,215	\$20,822	\$21,447
70	510	534	County Prop Taxes - Water	3%	\$114	\$116	\$200	\$206	\$212	\$219	\$225	\$232
70	510	535	Fees - State/County/Agencies	3%	\$11,668	\$13,122	\$20,400	\$21,012	\$21,642	\$22,292	\$22,960	\$23,649
			<b>Subtotal</b>		<b>\$835,379</b>	<b>\$821,855</b>	<b>\$961,103</b>	<b>\$991,251</b>	<b>\$1,022,357</b>	<b>\$1,054,450</b>	<b>\$1,087,563</b>	<b>\$1,121,729</b>

TABLE 8 Continued

Fund	Dept	Code	Account Description	Inflation Factor	Actual (FY 15-16)	Actual (FY 16-17)	Budgeted (FY 17-18)	Projected (FY 18-19)	Projected (FY 19-20)	Projected (FY 20-21)	Projected (FY 21-22)	Projected (FY 22-23)
<b>WATER CONSERVATION (BMP)</b>												
70	520	100 thru 104	Wages	3%	\$8,720	\$4,428	\$27,577	\$28,404	\$29,256	\$30,134	\$31,038	\$31,969
70	520	320 thru 390	Employee Benefits	4%	\$3,021	\$2,506	\$6,957	\$7,235	\$7,525	\$7,826	\$8,139	\$8,464
70	520	511 thru 513	Clothing, Training and Travel	3%	\$16	\$0	\$3,600	\$3,708	\$3,819	\$3,934	\$4,052	\$4,173
70	520	515 thru 517	Supplies and Communications	3%	\$780	\$769	\$850	\$876	\$902	\$929	\$957	\$985
70	520	518	Electric	3%	-\$703	\$0	\$500	\$515	\$530	\$546	\$563	\$580
70	520	519	Advertising Community Outreach	3%	\$3,177	\$1,639	\$2,500	\$2,575	\$2,652	\$2,732	\$2,814	\$2,898
70	520	520	Fuel Chargeback	3%	\$0	\$0	\$100	\$103	\$106	\$109	\$113	\$116
70	520	525 & 526	Professional & Contract Services	3%	\$10,314	\$18,266	\$17,000	\$17,510	\$18,035	\$18,576	\$19,134	\$19,708
70	520	535	Fees - Water Conservation Dues	3%	\$2,525	\$2,525	\$3,000	\$3,090	\$3,183	\$3,278	\$3,377	\$3,478
Subtotal					\$27,850	\$30,133	\$62,084	\$64,016	\$66,009	\$68,064	\$70,185	\$72,372
<b>CAPITAL PROJECTS-WATER DISTRIBUTION</b>												
71	300	650	Capitalized Equipment		\$0	\$3,319	\$0	\$0	\$0	\$0	\$0	\$0
71	500	100 thru 390	Wages and Benefits		\$1,871	\$60	\$0	\$0	\$0	\$0	\$0	\$0
71	500	450	Water Meter Replacement		\$13,264	\$62,665	\$0	\$30,000	\$0	\$30,000	\$0	\$30,000
71	500	525	Professional Services		\$18,900	\$14,681	\$0	\$0	\$0	\$0	\$0	\$0
71	500	625	Water Main Replacement		\$0	\$0	\$150,000	\$0	\$0	\$150,000	\$0	\$0
71	500	625	Fairgrounds Water Line		\$0	\$5,428	\$0	\$200,000	\$0	\$0	\$0	\$0
71	500	625	North Street Pump Improvement		\$26,384	\$578,792	\$0	\$0	\$0	\$0	\$0	\$0
71	500	625	6" WL upsize in Oak/Sherman/Fairchild		\$0	\$0	\$0	\$0	\$200,000	\$0	\$0	\$0
71	500	625	STIP - Foothill Water Main/Lennox		\$286,626	\$0	\$0	\$0	\$0	\$1,491,000	\$0	\$0
71	500	625	Zone 3/Barnham PS Improvements		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
71	500	650 thru 690	Capitalized Equip & Expenses		\$25,608	\$33,201	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal					\$372,653	\$698,146	\$150,000	\$230,000	\$200,000	\$1,671,000	\$0	\$30,000
<b>CAPITAL PROJECTS-WATER SUPPLY &amp; TREATMENT</b>												
71	510	100 thru 390	Wages and Benefits		\$0	\$526	\$0	\$0	\$0	\$0	\$0	\$0
71	510	450	Master Water Plan Update		\$0	\$0	\$0	\$0	\$0	\$0	\$50,000	\$0
71	510	450	Urban Water Management Plan		\$0	\$0	\$0	\$0	\$0	\$30,000	\$0	\$0
71	510	450	Sodium Hypochlorite Cover		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
71	510	525	Professional Services		\$0	\$4,116	\$0	\$0	\$0	\$0	\$0	\$0
71	510	625	Tank Maintenance		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
71	510	625	North Well Improvements		\$63,635	\$715,111	\$0	\$0	\$0	\$0	\$0	\$0
71	510	625	Cathodic Protection Survey		\$0	\$0	\$0	\$30,000	\$0	\$0	\$0	\$0
71	510	625	Cathodic Protection Anode Bed Repl.		\$0	\$0	\$0	\$0	\$0	\$0	\$125,000	\$0
71	510	625	Rebuild/Replace Filters		\$0	\$0	\$0	\$0	\$0	\$1,058,000	\$0	\$0
71	510	625	Upgrade Chlorination Equip		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
71	510	625	Davis Well Development		\$11,242	\$0	\$0	\$0	\$0	\$580,000	\$0	\$0
71	510	625	Supplemental Water Supply Feasibility		\$0	\$0	\$0	\$0	\$0	\$0	\$150,000	\$0
71	510	625	Shasta Belle Tanks		\$0	\$0	\$0	\$0	\$0	\$1,980,000	\$0	\$0
71	510	625	Fall Creek Master Meter replacement		\$0	\$0	\$0	\$0	\$30,000	\$0	\$0	\$0
71	510	625	Replace Lower Humbug Tank		\$0	\$0	\$0	\$0	\$0	\$1,810,000	\$0	\$0
71	510	625	Fall Creek Pipeline Assessment		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
71	510	625	Upgrade SCADA Services		\$0	\$0	\$0	\$30,000	\$0	\$0	\$0	\$0
71	510	625	SR3/Main St WL Replacement		\$0	\$0	\$0	\$0	\$2,500,000	\$0	\$0	\$0
71	510	650 thru 690	Capitalized Equip (Trucks) & Expenses		\$0	\$33,887	\$25,000	\$0	\$0	\$0	\$0	\$0
Subtotal					\$74,877	\$753,640	\$25,000	\$60,000	\$2,530,000	\$5,458,000	\$325,000	\$0
<b>WATER DEBT SERVICING</b>												
72	510	740 & 745	USDA Rural Development Loan Payment		\$143,567	\$262,536	\$262,780	\$262,780	\$262,780	\$262,780	\$262,780	\$262,780
			Fall Creek Pipeline Assessment		\$0	\$0	\$0	\$0	\$0	\$197,189	\$197,189	\$197,189
Subtotal					\$143,567	\$262,536	\$262,780	\$262,780	\$262,780	\$459,969	\$459,969	\$459,969
<b>INTERNAL SERVICES</b>												
			ICA Expense	4%	\$146,701	\$138,580	\$165,000	\$171,600	\$178,464	\$185,603	\$193,027	\$200,748
Subtotal					\$146,701	\$138,580	\$165,000	\$171,600	\$178,464	\$185,603	\$193,027	\$200,748
<b>Total Expenditures, Capital and Transfers</b>					<b>\$2,106,353</b>	<b>\$3,287,799</b>	<b>\$2,455,359</b>	<b>\$2,722,208</b>	<b>\$5,232,730</b>	<b>\$9,901,772</b>	<b>\$3,173,032</b>	<b>\$2,955,781</b>
<div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 15px; height: 15px; background-color: #90EE90; border: 1px solid black; margin-right: 5px;"></div> <div style="width: 15px; height: 15px; background-color: #FFD700; border: 1px solid black; margin-right: 5px;"></div> <div style="width: 15px; height: 15px; background-color: #FFA500; border: 1px solid black; margin-right: 5px;"></div> </div> <ul style="list-style-type: none"> <li>Potential Prop 1 Grant-Funded Projects. Added equivalent income to revenue side to offset financial impact.</li> <li>Capital Improvement funded through yet-to-be-determined grants and long-term debt.</li> <li>Planned capital improvements added to Short-Lived Asset Replacement Schedule.</li> </ul>												

**TABLE 9**  
**City of Yreka – Water Utility**  
**Financial Plan and Summary of Enterprise Fund**

	Actual (FY 15-16)	Actual (FY 16-17)	Budgeted (FY 17-18)	Projected (FY 18-19)	Projected (FY 19-20)	Projected (FY 20-21)	Projected (FY 21-22)	Projected (FY 22-23)
<b>STANDARD WATER RATES USED</b>								
5/8" Meter Fixed Monthly Service Charge (See Table 12 for Larger Meters Charges)	\$31.60	\$31.60	\$31.60	\$32.86	\$34.18	\$35.55	\$36.97	\$38.45
Percent annual increase on fixed rate				4.0%	4.0%	4.0%	4.0%	4.0%
Percent annual increase on consumption				4.0%	4.0%	4.0%	4.0%	4.0%
Single Family Consumption Rates (\$/1000 gallons)								
Excess over 101 Gallons	\$1.86	\$1.86	\$1.86	\$1.93	\$2.01	\$2.09	\$2.18	\$2.26
Non-Single-Family Consumption Rate (\$/1000 gallons)								
Excess over 101 Gallons	\$1.86	\$1.86	\$1.86	\$1.93	\$2.01	\$2.09	\$2.18	\$2.26
<b>LOW INCOME WATER RATES</b>								
5/8" Meter Fixed Monthly Service Charge	\$29.60	\$29.60	\$29.60	\$30.86	\$32.18	\$33.55	\$34.97	\$36.45
Consumption Rates same as Single Family								
<b>BEGINNING RESERVES AVAILABLE BALANCE</b>								
Operation and Maintenance (40% of Expenditures)	\$530,000	\$547,422	\$573,959	\$741,032	\$799,131	\$824,595	\$850,880	\$878,014
USDA Rural Development Debt Service	\$200,000	\$200,000	\$237,000	\$263,000	\$263,000	\$263,000	\$460,000	\$460,000
Short-Lived Asset Replacement Reserve	\$180,000	\$180,000	\$180,000	\$165,433	\$170,396	\$175,508	\$180,773	\$186,197
Fall Creek Emergency Repair/Replacement	\$3,500,000	\$3,500,000	\$3,500,000	\$3,500,000	\$3,500,000	\$3,500,000	\$3,500,000	\$3,500,000
Development Impact Fee Reserve	\$0	\$329,646	\$340,660	\$348,160	\$355,660	\$363,160	\$370,660	\$378,160
Water Improvements Fund	\$3,057,582	\$3,677,740	\$3,025,588	\$3,221,723	\$3,275,889	\$3,379,355	\$3,110,166	\$2,940,636
<b>Total Reserves</b>	<b>\$7,467,582</b>	<b>\$8,434,808</b>	<b>\$7,857,207</b>	<b>\$8,239,348</b>	<b>\$8,364,076</b>	<b>\$8,505,618</b>	<b>\$8,472,480</b>	<b>\$8,343,007</b>
<b>REVENUES</b>								
Fixed Service Charges	\$1,519,424	\$1,523,410	\$1,500,000	\$1,530,000	\$1,575,500	\$1,623,000	\$1,688,000	\$1,755,500
Consumption Charges	\$1,124,412	\$1,042,053	\$1,200,000	\$1,167,437	\$1,147,272	\$1,174,133	\$1,203,059	\$1,234,052
Water Set-up Fees	\$12,900	\$13,392	\$12,000	\$13,500	\$13,500	\$13,500	\$13,500	\$13,500
Backflow Inspection & Repair	\$10,047	\$12,740	\$7,500	\$12,000	\$12,000	\$12,000	\$12,000	\$12,000
Fire Suppression	\$2,520	\$2,520	\$2,000	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500
Hydrant Rental	\$1,320	\$1,558	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000
Fines and Penalties	\$29,146	\$29,388	\$20,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000
Development Impact Fees (DIF)	\$329,646	\$11,014	\$7,500	\$7,500	\$7,500	\$7,500	\$7,500	\$7,500
Gain on Sale of Equipmt.	\$10,856	\$9,958	\$7,500	\$0	\$0	\$0	\$0	\$0
Other-Misc Income	\$0	\$750	\$0	\$0	\$0	\$0	\$0	\$0
Prop 1 Grant Income	\$0	\$0	\$0	\$0	\$2,500,000	\$6,919,000	\$0	\$0
Investment Earnings	\$33,308	\$63,415	\$79,000	\$82,000	\$84,000	\$85,000	\$85,000	\$83,000
<b>Total Revenue</b>	<b>\$3,073,579</b>	<b>\$2,710,198</b>	<b>\$2,837,500</b>	<b>\$2,846,937</b>	<b>\$5,374,272</b>	<b>\$9,868,633</b>	<b>\$3,043,559</b>	<b>\$3,140,052</b>
<b>EXPENDITURES</b>								
Finance	\$146,116	\$141,587	\$142,668	\$185,177	\$191,261	\$197,547	\$204,042	\$210,754
Public Works Administration	\$43,833	\$66,121	\$79,572	\$136,821	\$141,382	\$146,097	\$150,971	\$156,009
Water Distribution	\$315,377	\$375,201	\$607,152	\$620,562	\$640,478	\$661,041	\$682,275	\$704,201
Water Supply & Treatment	\$835,379	\$821,855	\$961,103	\$991,251	\$1,022,357	\$1,054,450	\$1,087,563	\$1,121,729
Water Conservation (BMP)	\$27,850	\$30,133	\$62,084	\$64,016	\$66,009	\$68,064	\$70,185	\$72,372
Capital Project-Water Distribution	\$372,653	\$698,146	\$150,000	\$230,000	\$200,000	\$1,671,000	\$0	\$30,000
Capital Project-Water Supply and Treatment	\$74,877	\$753,640	\$25,000	\$60,000	\$2,530,000	\$5,458,000	\$325,000	\$0
Water Debt Servicing	\$143,567	\$262,536	\$262,780	\$262,780	\$262,780	\$459,969	\$459,969	\$459,969
Internal Services	\$146,701	\$138,580	\$165,000	\$171,600	\$178,464	\$185,603	\$193,027	\$200,748
<b>Total Expenditures</b>	<b>\$2,106,353</b>	<b>\$3,287,799</b>	<b>\$2,455,359</b>	<b>\$2,722,208</b>	<b>\$5,232,730</b>	<b>\$9,901,772</b>	<b>\$3,173,032</b>	<b>\$2,955,781</b>
<b>YEAR END VALUES</b>								
Total Restricted and Unrestricted Cash	\$8,434,808	\$7,857,207	\$8,239,348	\$8,364,076	\$8,505,618	\$8,472,480	\$8,343,007	\$8,527,277
Total Cash Available for Capital Improvements	\$4,007,386	\$3,025,588	\$3,221,723	\$3,275,889	\$3,379,355	\$3,110,166	\$2,940,636	\$3,083,809

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.  
Revenue projections modified to reflect new rates going into effect January 1 of each year rather than July 1 of the Fiscal Year.

**TABLE 10**  
**City of Yreka – Water Utility**  
**Proposed Rate Schedule**

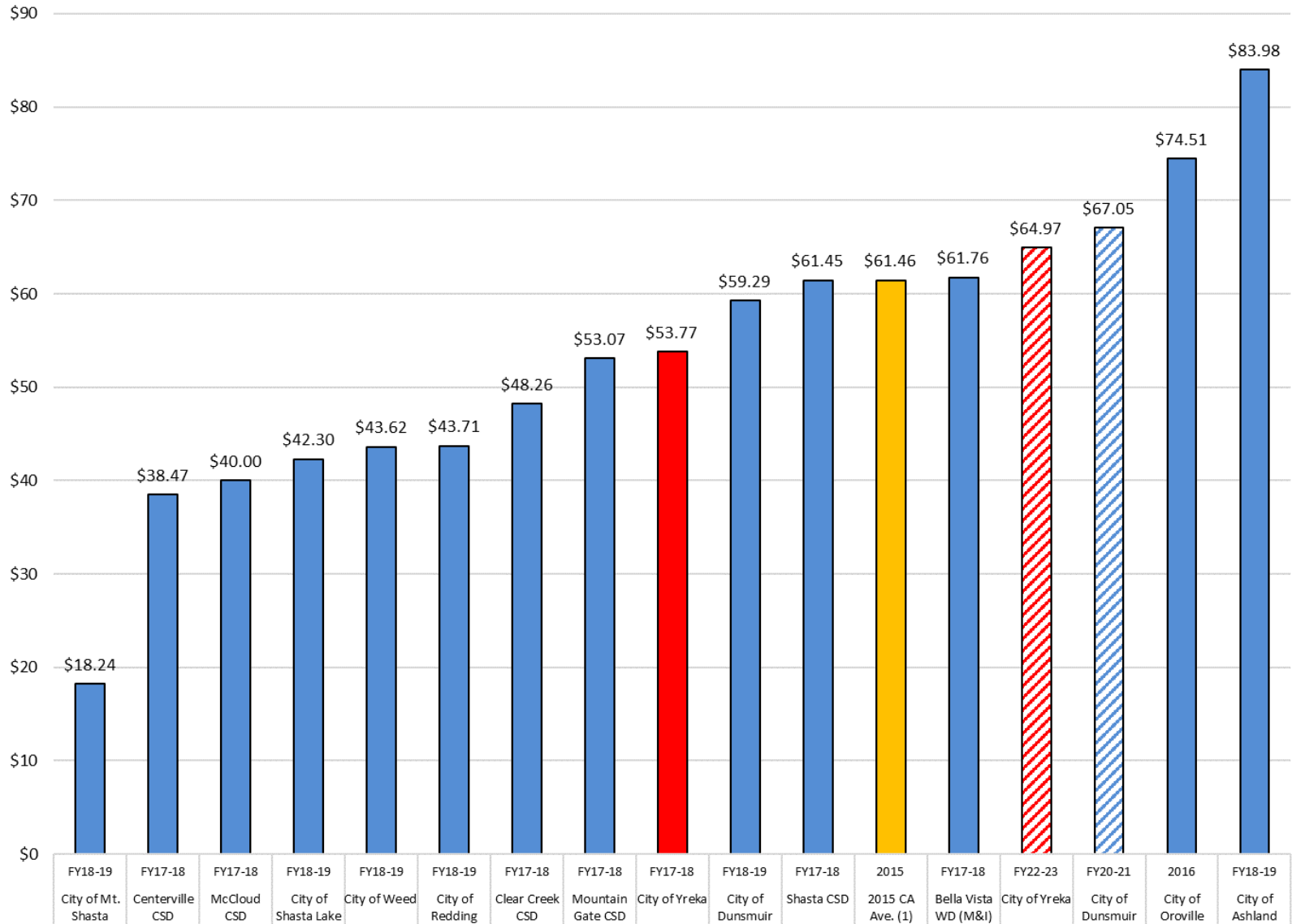
	Existing FY 17-18	Proposed FY 18-19	Proposed FY 19-20	Proposed FY 20-21	Proposed FY 21-22	Proposed FY 22-23	
<b><u>CONSUMPTION CHARGES (\$/1,000 GALLONS)</u></b>							
<b>Single-Family Consumption Rates</b>							
101 to 10,000 Gallons	\$1.86	\$1.93	\$2.01	\$2.09	\$2.18	\$2.26	
10,001 to 35,000 Gallons	\$2.05	\$1.93	\$2.01	\$2.09	\$2.18	\$2.26	
Excess over 35,000 Gallons	\$2.23	\$1.93	\$2.01	\$2.09	\$2.18	\$2.26	
<b>Non-Single-Family Consumption Rates</b>							
Excess over 101 Gallons	\$1.86	\$1.93	\$2.01	\$2.09	\$2.18	\$2.26	
<b><u>MONTHLY SERVICE CHARGES (\$/MONTH)</u></b>							<b>METER FACTOR</b>
5/8" Meter	\$31.60	\$32.86	\$34.18	\$35.55	\$36.97	\$38.45	1.0
3/4" Meter	\$41.08	\$42.72	\$44.43	\$46.22	\$48.06	\$49.99	1.3
1" Meter	\$47.40	\$49.29	\$51.27	\$53.33	\$55.46	\$57.68	1.5
1 1/2" Meter	\$88.48	\$92.01	\$95.70	\$99.54	\$103.52	\$107.66	2.8
2" Meter	\$126.40	\$131.44	\$136.72	\$142.20	\$147.88	\$153.80	4.0
3" Meter	\$379.20	\$394.32	\$410.16	\$426.60	\$443.64	\$461.40	12.0
4" Meter	\$568.80	\$591.48	\$615.24	\$639.90	\$665.46	\$692.10	18.0
6" Meter	\$790.00	\$821.50	\$854.50	\$888.75	\$924.25	\$961.25	25.0
8" Meter	\$1,106.00	\$1,150.10	\$1,196.30	\$1,244.25	\$1,293.95	\$1,345.75	35.0
<b>Note: Low-income monthly service charges are \$2.00 less than shown above but require a 5/8" meter.</b>							

**TABLE 11**  
**City of Yreka – Water Utility**  
**User Fees for Other Water Purveyors**

PURVEYOR	EFFECTIVE DATE	BASE RATE (for smallest service)	VOLUME OF WATER INCLUDED IN BASE RATE	LOWER LIMIT	UPPER LIMIT	VOLUME UNITS	COST PER UNIT VOLUME	FEE TYPE
City of Mt. Shasta	FY18-19	\$8.38	0	0	and above	1000 gal	\$0.8333	Per Unit
City of Ashland	FY18-19	\$27.22 (Increases with meter size)	0	0	300	100 CF	\$2.63	Per Unit
				301	1000	100 CF	\$3.29	Per Unit
				1001	2500	100 CF	\$4.44	Per Unit
				2501	and above	100 CF	\$5.75	Per Unit
Bella Vista WD (M&I)	FY17-18	\$53.06 (Increases with meter size)	0	0	2000	100 CF	\$0.55	Per Unit
				2001	2400	100 CF	\$0.55	Per Unit
				2401	and above	100 CF	\$0.55	Per Unit
Mountain Gate CSD	FY17-18	\$42.36 (Increases with meter size)	500	501	2000	100 CF	\$0.99	Per Unit
				2001	10000	100 CF	\$1.66	Per Unit
				10001	and above	100 CF	\$1.97	Per Unit
City of Oroville	2016	\$31.26 (Increases with meter size)	0	0	800	100 CF	\$2.64	Per Unit
				801	2200	100 CF	\$2.83	Per Unit
				2201	and above	100 CF	\$3.33	Per Unit
City of Redding	FY18-19	\$21.17 (Increases with meter size)	0	0	1100	100 CF	\$1.425	Per Unit
				1101	3600	100 CF	\$1.425	Per Unit
				3601	and above	100 CF	\$1.425	Per Unit
Shasta CSD	FY17-18	\$53.25	1,000	1001	2000	100 CF	\$8.20	Flat
				2001	and above	100 CF	\$0.82	Per Unit
City of Shasta Lake	FY18-19	\$21.73 (Increases with meter size)	0	0	1000	100 CF	\$1.12	Per Unit
				1001	5000	100 CF	\$1.61	Per Unit
				5001	and above	100 CF	\$1.96	Per Unit
City of Yreka	FY17-18	\$31.60 (Increases with meter size)	100	101	10000	1000 gal	\$1.86	Per Unit
				10001	35000	1000 gal	\$2.05	Per Unit
				35001	and above	1000 gal	\$2.23	Per Unit
City of Yreka	FY22-23	\$38.45 (Increases with meter size)	100 (or 13.3 CF)	101	10000	1000 gal	\$2.26	Per Unit
				10001	35000	1000 gal	\$2.26	Per Unit
				35001	and above	1000 gal	\$2.26	Per Unit
Centerville CSD	FY17-18	\$25.50 (Increases with meter size)	0	0	7000	100 CF	\$0.82	Per Unit
				7001	12000	100 CF	\$0.84	Per Unit
				12001	17000	100 CF	\$0.86	Per Unit
				17001	22000	100 CF	\$0.88	Per Unit
				22001	26000	100 CF	\$0.90	Per Unit
				26001	30000	100 CF	\$0.92	Per Unit
City of Dunsmuir	FY18-19	\$34.40	500	501	4000	100 CF	\$2.30	Per Unit
				4001	16000	100 CF	\$2.30	Per Unit
				16001	and above	100 CF	\$2.30	Per Unit
City of Dunsmuir	FY20-21	\$40.00	500	501	4000	100 CF	\$2.50	Per Unit
				4001	16000	100 CF	\$2.50	Per Unit
				16001	and above	100 CF	\$2.50	Per Unit
City of Weed	FY18-19	\$37.00 (Increases with meter size)	1000	1001	and above	1000 CF	\$11.37	Per Unit
Clear Creek CSD	FY17-18	\$39.00 (Increases with meter size)	200	201	9000	100 CF	\$0.67	Per Unit
				9001	15000	100 CF	\$0.69	Per Unit
				15001	and above	100 CF	\$0.73	Per Unit
McCloud CSD	FY17-18	\$40.00	0	0	and above	100 CF	\$0.00	Flat

NOTE: 100 CF = 748 GALLONS

**FIGURE 3  
MONTHLY WATER BILL COMPARISON  
(Based on 11,833 Gallons per Month Average Water Use)**



(1) Based on the 2015 California-Nevada Water and Wastewater Rate Survey for Northern California by Raftelis Financial Consultants, Inc. and American Water Works Association (AWWA).



## CHAPTER II

### 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 HEs are calculated for each non-residential account based on the water use for the months of January, February, and March. The average daily water use for each account during these three winter months is multiplied by 90% to determine their estimated average daily wastewater discharge. This average daily wastewater discharge is then divided by 200 gallons per day for a typical HE to arrive at the number of HEs per account, with a minimum of one HE 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 12.

**TABLE 12  
HISTORICAL WASTEWATER RATES**

<b>FISCAL YEAR ENDING</b>	<b>MONTHLY BASE RATE</b>
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
2013	\$42.00
2014	\$42.00
2015	\$42.00
2016	\$42.00
2017	\$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 March 2018, there were 19 services that qualified for this discount. The \$2.00 subsidy for low-income accounts is reimbursed to the Water Fund from the General Fund.

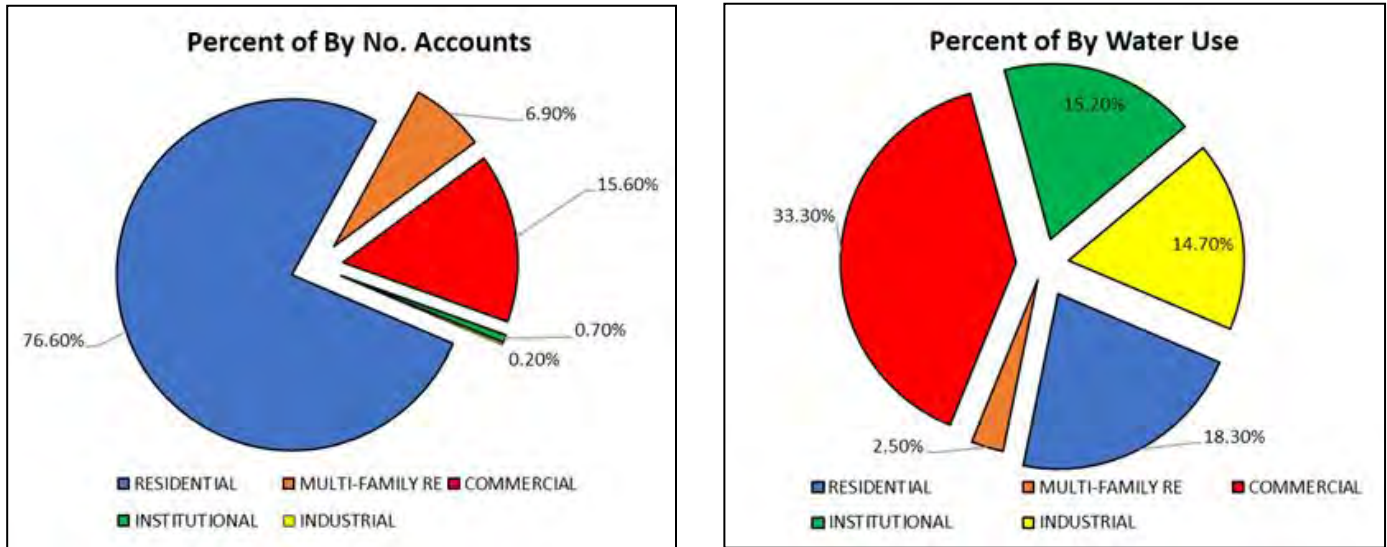
## **HISTORICAL GROWTH AND EXPENDITURES**

**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 2,789 at the end of 2017, representing an annual increase of approximately 0.66% per year. In December 2017, there were 2,135 single-family residential connections, 192 multi-family connections, 436 commercial connections, 19 institutional connections, and 6 industrial connections.

Figure 4 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 4**  
**City of Yreka – Wastewater Utility**  
**Summary Of Customers And Annual Wastewater Discharge**



**Wastewater Utility Expenditures:** Wastewater utility expenditures for O&M and for replacement capital projects are normally made from the Wastewater Enterprise Fund. Table 13 is a summary of the Wastewater Enterprise expenditures for FY 11-12 through FY 14-15.

Historically, the City has not funded depreciation. However, if an amount equal to the annual depreciation 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 \$395,000 per year, which equates to about \$11.80 per month, per HE.

Similar to the water rate structure, the City’s wastewater rate structure is based on the “Cash-Needs Approach” as defined in AWWA Manual M1. This approach is recommended for government-owned utilities where revenue requirement determination is more straightforward and similar to how public agencies perform budgeting. Depreciation expense is not included in the Cash-Needs Approach.

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 13**  
**City of Yreka – Wastewater Utility**  
**Historical Wastewater Enterprise Expenditures**

	Expended (FY 11-12)	Expended (FY 12-13)	Expended (FY 13-14)	Expended (FY 14-15)
Finance	\$63,243	\$91,085	\$86,163	\$90,459
Public Works Administration	\$53,322	\$74,300	\$54,913	\$19,985
Wastewater Collection	\$196,886	\$212,388	\$206,786	\$156,475
Wastewater Treatment	\$826,934	\$652,863	\$664,941	\$846,873
Wastewater Capital Projects	\$115,487	\$401,356	\$1,756,694	\$3,946,401
Wastewater Debt Service	\$125,863	\$54,310	\$31,511	\$90,673
Operating Transfer Out	\$0	\$0	\$0	\$0
Internal Services	\$160,987	\$156,022	\$147,439	\$136,735
<b>Total Expenditures</b>	<b>\$1,542,722</b>	<b>\$1,642,324</b>	<b>\$2,948,447</b>	<b>\$5,287,601</b>

## **WASTEWATER RATE DEVELOPMENT**

**Current Wastewater Rate Revenue Requirement:** Analysis of the FY 17-18 wastewater rate revenue requirement is based on the City’s FY 17-18 adopted budget. The annual Wastewater Enterprise rate revenue requirement is based on wastewater system operating 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 17-18 Wastewater Enterprise budget indicates annual wastewater expenditures of \$2,433,677. The expected FY 17-18 Wastewater Enterprise revenues total \$2,496,617. Thus, it appears that the current rate structure will meet the FY 17-18 revenue needs and provide about \$63,000 in surplus to be used to fund planned capital projects. However, the City is facing considerable wastewater collection system replacement needs in the near future. Thus, it will be necessary to increase rates in order to 1) accumulate funds to replace infrastructure with reserve funds and/or 2) make payments on long-term loans to fund needed improvements.

**Cost of Service Analysis:** One of the conditions associated with obtaining the State Revolving Fund (SRF) Loan in 2002 was that the City develop a revenue program that conformed to SRF requirements. The goal of the 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 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. The City has made good progress since 2004 in replacing sewers in the worst I&I areas, including completion of the Phase 4 – I&I Reduction Project in 2015. However, there are still a considerable number of old sewers residing in the Target Area that have exceeded their useful lives. In addition, as a result of the City's consent judgement resulting from the lawsuit with Riverwatch, the City is obligated to replace old, deteriorated sewers within 200 feet of Yreka Creek and Greenhorn Creek.

Similar to the City's efforts on water infrastructure, the City successfully obtained a \$500,000 planning grant through the Proposition 1 CWSRF program. The scope of this planning effort includes updating the City's Master Sewer Plan, completion of a CIP, performance of CCTV inspections and condition assessment on old sewers, and selection of an improvement project for which the City can apply for construction grant funds to construct.

In addition, the planning scope includes completion of environmental documentation, Engineering Project Report, and funding application. It is anticipated a final funding application will be submitted to CWSRF by the end of spring 2018, for a \$5.5M project. The proposed project will replace about 14,000 feet of old collection sewers.

The proposed financial plan assumes the City will be successful in securing Proposition 1 CWSRF grant dollars to complete this work. If the City is unsuccessful obtaining the Proposition 1 grants, it may need to take out long-term financing to complete the improvements, which would require increasing rates. Or, the City could decide to delay Priority Item Nos. 2a-2d until the next rate cycle.

A prioritized list of the specific improvements, including the anticipated Proposition 1 CWSRF Sewer Improvements, is shown in Table 14, with the estimated costs updated to March 2018 dollars. Table 14 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. 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.

It is anticipated Priority Item Nos. 2a, 2b, 2c, and 2d will be funded through long-term loans, as long as Proposition 1 grants are obtained for Item Nos. 1a through 1f. If Proposition 1 grants are not obtained for Item No. 1, City staff will re-prioritize Item Nos. 1 and 2 and determine the highest priority projects to pursue a collection system replacement project using conventional long-term financing.

Priority Item Nos. 3, 4, 5, and 16 will be funded by accumulated revenue from wastewater rates. Funding for Priority Item Nos. 6 through 12 has not yet been determined. The City should continue to explore grant and other funding options for this work. It is likely a financial plan for funding these projects will be established as part of the next rate study efforts.

Priority Item Nos. 13, 14, and 15 are improvements necessary to accommodate growth and will not be funded through wastewater rate revenue. These improvements will be funded through DIF.

**TABLE 14  
WASTEWATER 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
<b>HOPEFUL PROPOSITION 1 GRANT-FUNDED PROJECTS (2018)</b>					
1a	Burgess St. Sewer Improvements	\$1,772,000	100%	\$1,772,000	\$0
1b	E. Minor St. Reroute	\$355,000	100%	\$355,000	\$0
1c	Howard St. Area Sewer Improvements	\$1,392,000	100%	\$1,392,000	\$0
1d	North St. Area Sewer Improvements	\$875,000	100%	\$875,000	\$0
1e	Oak St. Alley/Knapp/Gold/Summit	\$1,021,000	100%	\$1,021,000	\$0
1f	Siphon Access Vault	\$85,000	100%	\$85,000	\$0
	<b>SUBTOTAL</b>	<b>\$5,500,000</b>		<b>\$5,500,000</b>	<b>\$0</b>
<b>IMMEDIATE IMPROVEMENTS (2018-2023) - FUNDED THROUGH LONG-TERM DEBT, IF PROPOSITION 1 GRANT OBTAINED FOR PRIORITY NO. 1 PROJECTS</b>					
2a	Main St. Sewer Interceptor Project	\$2,245,000	100%	\$2,245,000	\$0
2b	Main St. Sewer Interceptor Project - Phase I	\$1,460,000	100%	\$1,460,000	\$0
2c	Main St. Sewer Interceptor Project - Phase II	\$1,620,000	100%	\$1,620,000	\$0
2d	E. Oberlin Rd. Sewer Reroute Project	\$245,000	100%	\$245,000	\$0
	<b>SUBTOTAL</b>	<b>\$5,570,000</b>		<b>\$5,570,000</b>	<b>\$0</b>
<b>NEAR-TERM IMPROVEMENTS (2018-2023) - FUNDED THROUGH RATES</b>					
3	Collection System Assessment	\$175,000	100%	\$175,000	\$0
4	WWTP Evaluation/Feasibility Study	\$120,000	100%	\$120,000	\$0
5	AC Pavement Rehab @ WWTP	\$50,000	100%	\$50,000	\$0
	<b>SUBTOTAL</b>	<b>\$345,000</b>		<b>\$345,000</b>	<b>\$0</b>
<b>INTERMEDIATE IMPROVEMENTS (2018 TO 2023) - NOT ACCOUNTED FOR IN PROPOSED RATES</b>					
6	General Sewer Improvements	\$885,000	100%	\$885,000	\$0
7	Center St. Area - Phase I	\$1,450,000	100%	\$1,450,000	\$0
8	Center St. Area - Phase II	\$1,115,000	100%	\$1,115,000	\$0
9	Jackson St. Area	\$1,250,000	100%	\$1,250,000	\$0
10	S. West St. Area	\$1,190,000	100%	\$1,190,000	\$0
11	Herzog Blvd. Area	\$865,000	100%	\$865,000	\$0
12	E. Oberlin Rd.	\$925,000	100%	\$925,000	\$0
	<b>SUBTOTAL</b>	<b>\$7,680,000</b>		<b>\$7,680,000</b>	<b>\$0</b>
<b>LONG-TERM IMPROVEMENTS (BEYOND 2023) - NOT ACCOUNTED FOR IN PROPOSED RATES</b>					
13	Eastside Sewer System - Phase I	\$405,000	0%	\$0	\$405,000
14	Eastside Sewer System - Phase II	\$2,005,000	0%	\$0	\$2,005,000
15	WWTP Expansion to 1.4 MGD	\$12,246,000 to \$22,626,500	0%	\$0	\$12,246,000 to \$22,626,500
	<b>SUBTOTAL</b>	<b>\$14,656,000 to \$25,036,500</b>		<b>\$0</b>	<b>\$14,656,000 to \$25,036,500</b>
<b>ONGOING ANNUAL COLLECTION SYSTEM IMPROVEMENTS</b>					
16	Sewer Main Replacement	\$150,000 PER YEAR	100%		

Note: Project Costs need to be inflated per the ENR Construction Cost Index every year.



**Operating Reserve:** Operation reserves ranging from 10% to 40% of annual operating costs are common for public wastewater utilities. Similar to the Water Fund, it is recommended the City establish a minimum operating reserve of 40% of annual operating cost, less debt service.

**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 USDA Rural Development loan for the 2013 Treatment and Sewer Improvements Project. The current debt service reserve requirement is \$100,000.

**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 Asset Reserve. This reserve is intended to fund significant maintenance or replacement of critical process equipment over the next 5 to 20 years. The City has accumulated \$175,000 in short-term asset reserve funds. Tables 15 and 16 show a schedule of short-term asset replacement requirements for Wastewater Collection and Wastewater Disposal, respectively.

**TABLE 15**  
**City of Yreka – Wastewater Utility**  
**Short-Term Asset Replacement Schedule – Wastewater Collection**

Equipment	Replacement Period	Estimated Cost	Annual Reserve
<b>Collection System</b>			
Computer Server	5	\$5,000	\$1,000
Computer Work Stations	5	\$5,000	\$1,000
Copier	5	\$2,500	\$500
SCADA/Telemetry	10	\$30,000	\$3,000
Replace Inspection Camera	10	\$30,000	\$3,000
Replace Lift Station Pumps	15	\$50,000	\$3,333
Maintenance on Lift Station Buildings/Structures	15	\$15,000	\$1,000
<b>Total Annual Collection Short-Term Assets:</b>			<b>\$12,833</b>

**TABLE 16**  
**City of Yreka – Wastewater Utility**  
**Short-Term Asset Replacement Schedule – Wastewater Disposal**

Equipment	Replacement Period	Estimated Cost	Annual Reserve
<b>Proposed WWTP Equipment</b>			
Replace Polymer Equipment	5	\$20,000	\$4,000
Replace SCADA/Computer/Software	5	\$30,000	\$6,000
Replace Sludge Pumps	5	\$20,000	\$4,000
Replace Lift Station Pumps	10	\$50,000	\$5,000
Centrifuge Scroll Replacement	10	\$50,000	\$5,000
Replace DAF Feed Pumps & Air Compressor	10	\$30,000	\$3,000
Replace (3) Effluent Pumps	10	\$40,000	\$4,000
Replace (4) RAS Pumps	10	\$60,000	\$6,000
Replace (2) Clarifier Mechanisms & Drive Motors	10	\$200,000	\$20,000
Maintenance on Buildings/Structures	10	\$50,000	\$5,000
Replace Disc Filter Screens	10	\$30,000	\$3,000
Replace Aeration Basin Aerators	10	\$150,000	\$15,000
Replace Chlorination Equipment	10	\$65,000	\$6,500
Replace Headworks Screen	10	\$60,000	\$6,000
Replace Digester Diffusers & Blowers	15	\$200,000	\$13,333
<b>Subtotal Annual Cost:</b>			<b>\$105,833</b>

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

- O&M costs will increase at 3% per year, except for labor-related costs, which will increase at 4%. These are similar inflation rates used in the 2008 study.
- Future project costs will be inflated at 3% per year, which is similar to the average annual increase in the ENR Construction Cost Index over the last five years.
- Maintain an Operating Reserve Fund of 40% of the annual operating, less debt service, and capital improvements expenditures.
- Maintain a Debt Service Reserve Fund of \$100,000.
- Allocate \$118,666 per year for Short-Term Asset Replacement. For Wastewater Collection, the annual allocation shall be \$12,833. For Wastewater Disposal, the amount shall be \$105,833 per year. 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 for the reasons described hereinbefore.

**Financial Plan Results:** A five-year projection of the Wastewater Enterprise budgeted and projected expenses is shown in Table 17. As indicated, additional staffing needs are shown under “Finance,” “Public Works Administration,” and “Wastewater Collection.” These costs will be funded, in part, by other Enterprise Funds. Also shown is a budget item for “Contractor Equipment & Vehicle Replacement.” This budget item is structured similar to the “Short-Term Asset Replacement” reserve where equipment replacement costs are collected, incrementally, over the life of the equipment. This approach softens year-to-year budgetary impacts to the Wastewater Enterprise Fund when equipment and vehicles need replaced. As indicated by Table 17, 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.

Table 18 presents a summary of the five-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 17-18 is about \$4,682,792, including all required restricted reserve accounts. The Short-Term Asset Replacement Reserve Fund will only accumulate funds if the annual Short-Term Assets repair and replacement work is less than the annual allocation, which is \$118,667 in FY 18-19. The Wastewater Improvement Fund fluctuates due to project implementation and should begin FY 18-19 with about \$3,741,844 after the FY 17-18 capital improvements have been completed. Note at the end of the five-year planning period, the “Total Cash Available for Capital Improvements” is projected to decrease by about \$1.06M, leaving about \$2,686,000 available in reserve. Given the uncertainty of securing Proposition 1 grant funding, this approach is considered sound financial practice.

**Proposed Rates:** The proposed wastewater rates shown in Table 18 will increase the typical residential bill by about 4.0% per the year over the next five years.

A comparison of wastewater rates for neighboring wastewater systems is shown on Figure 5. As one can see, the single-family monthly service charges for the thirteen other communities varies from about \$27.00 for the City of Weed to \$92.40 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	Actual (FY 15-16)	Actual (FY 16-17)	Budgeted (FY 17-18)	Projected (FY 18-19)	Projected (FY 19-20)	Projected (FY 20-21)	Projected (FY 21-22)	Projected (FY 22-23)
<b>FINANCE</b>												
80	30	100 thru 104	Wages	3%	\$52,762	\$53,131	\$55,837	\$57,512	\$59,237	\$61,015	\$62,845	\$64,730
80	30	320 thru 390	Employee Benefits (Note 1)	4%	\$53,541	\$42,228	\$31,076	\$32,319	\$33,612	\$34,956	\$36,355	\$37,809
<b>80</b>	<b>30</b>	<b>100 thru 390</b>	<b>Finance Tech (split 50/50 Water/Waste)</b>	<b>3.5%</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$37,904</b>	<b>\$39,231</b>	<b>\$40,604</b>	<b>\$42,025</b>	<b>\$43,496</b>
80	30	511 thru 513	Dues, Training and Travel	3%	\$43	\$738	\$2,600	\$2,678	\$2,758	\$2,841	\$2,926	\$3,014
80	30	515 thru 517	Supplies	3%	\$7,053	\$4,423	\$13,000	\$13,390	\$13,792	\$14,205	\$14,632	\$15,071
80	30	526 & 526	Professional & Contract Services	3%	\$9,899	\$16,984	\$23,000	\$23,690	\$24,401	\$25,133	\$25,887	\$26,663
			<b>Subtotal</b>		<b>\$123,298</b>	<b>\$117,504</b>	<b>\$125,513</b>	<b>\$167,493</b>	<b>\$173,031</b>	<b>\$178,754</b>	<b>\$184,669</b>	<b>\$190,783</b>
<b>PUBLIC WORKS ADMINISTRATION</b>												
80	300	100 thru 104	Wages	3%	\$31,505	\$32,225	\$45,498	\$46,863	\$48,269	\$49,717	\$51,208	\$52,745
80	300	320 thru 390	Employee Benefits (Note 1)	4%	\$26,390	\$28,097	\$28,375	\$29,510	\$30,690	\$31,918	\$33,195	\$34,523
<b>80</b>	<b>300</b>	<b>100 thru 390</b>	<b>PW Foreman (30% of cost)</b>	<b>3.5%</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$31,944</b>	<b>\$33,062</b>	<b>\$34,219</b>	<b>\$35,417</b>	<b>\$36,656</b>
<b>80</b>	<b>300</b>	<b>100 thru 390</b>	<b>GIS Technician (30% of cost)</b>	<b>3.5%</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$22,742</b>	<b>\$23,538</b>	<b>\$24,362</b>	<b>\$25,214</b>	<b>\$26,097</b>
80	300	515 thru 519	Supplies and Advertising	3%	\$487	\$997	\$1,000	\$1,030	\$1,061	\$1,093	\$1,126	\$1,159
80	300	525	Professional Services & Ord. Updates	3%	\$2,964	\$4,623	\$9,500	\$30,385	\$31,297	\$32,236	\$33,203	\$34,199
			<b>Subtotal</b>		<b>\$55,418</b>	<b>\$65,942</b>	<b>\$104,373</b>	<b>\$162,474</b>	<b>\$167,917</b>	<b>\$173,544</b>	<b>\$179,363</b>	<b>\$185,378</b>
<b>WASTEWATER COLLECTION</b>												
80	550	100 thru 104	Wages	3%	\$70,498	\$82,145	\$119,330	\$122,910	\$126,597	\$130,395	\$134,307	\$138,336
80	550	320 thru 390	Employee Benefits (Note 1)	4%	\$83,489	\$78,184	\$76,527	\$79,588	\$82,772	\$86,082	\$89,526	\$93,107
<b>80</b>	<b>550</b>	<b>100 thru 390</b>	<b>Maint. Worker (split 50/50 Water/Waste)</b>	<b>3.5%</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$37,904</b>	<b>\$39,231</b>	<b>\$40,604</b>	<b>\$42,025</b>	<b>\$43,496</b>
80	550	416	Special Department Supplies	3%	\$14,404	\$17,909	\$23,000	\$23,690	\$24,401	\$25,133	\$25,887	\$26,663
80	550	420 & 421	Maintenance and Operations	3%	\$8,074	\$10,201	\$35,000	\$36,050	\$37,132	\$38,245	\$39,393	\$40,575
80	550	422 & 450	Small Tools & Equipment	3%	\$88	\$13,987	\$7,500	\$7,725	\$7,957	\$8,195	\$8,441	\$8,695
80	550	426	Contract Services	3%	\$0	\$6,950	\$43,500	\$44,805	\$46,149	\$47,534	\$48,960	\$50,428
<b>80</b>	<b>550</b>	<b>4</b>	<b>Short-Lived Asset Replacement</b>	<b>3%</b>	<b>\$0</b>	<b>\$0</b>	<b>\$12,833</b>	<b>\$13,218</b>	<b>\$13,615</b>	<b>\$14,023</b>	<b>\$14,444</b>	<b>\$14,877</b>
<b>80</b>	<b>550</b>	<b>4</b>	<b>Contractor Equip &amp; Vehicle Replace.</b>	<b>3%</b>	<b>\$0</b>	<b>\$0</b>	<b>\$95,000</b>	<b>\$97,850</b>	<b>\$100,786</b>	<b>\$103,809</b>	<b>\$106,923</b>	<b>\$110,131</b>
80	550	510 thru 513	Training, Clothing & Travel	3%	\$1,449	\$684	\$1,700	\$1,751	\$1,804	\$1,858	\$1,913	\$1,971
80	550	515 thru 517	Office Supplies & Communications	3%	\$985	\$740	\$1,120	\$1,154	\$1,188	\$1,224	\$1,261	\$1,298
80	550	518	Electric	3%	\$3,504	\$4,124	\$3,000	\$3,090	\$3,183	\$3,278	\$3,377	\$3,478
80	550	519	Advertising	3%	\$48	\$243	\$0	\$0	\$0	\$0	\$0	\$0
80	550	520	Chargeback Amounts	3%	\$25,457	\$33,782	\$37,559	\$38,686	\$39,846	\$41,042	\$42,273	\$43,541
80	550	521	Building Maintenance	3%	\$11	\$8	\$200	\$206	\$212	\$219	\$225	\$232
80	550	525	Professional Services	3%	\$1,359	\$3,211	\$15,000	\$15,450	\$15,914	\$16,391	\$16,883	\$17,389
80	550	526	Contract Services	3%	\$5,100	\$0	\$500	\$515	\$530	\$546	\$563	\$580
80	550	530	Insurance & claims	4%	\$22,740	\$4,627	\$16,000	\$16,640	\$17,306	\$17,998	\$18,718	\$19,466
80	550	535	Fees - State/County/Agencies	3%	\$2,088	\$2,088	\$3,000	\$3,090	\$3,183	\$3,278	\$3,377	\$3,478
			<b>Subtotal</b>		<b>\$239,294</b>	<b>\$258,883</b>	<b>\$490,769</b>	<b>\$544,322</b>	<b>\$561,803</b>	<b>\$579,854</b>	<b>\$598,494</b>	<b>\$617,741</b>
<b>WASTEWATER DISPOSAL</b>												
80	560	100 thru 104	Wages	3%	\$162,469	\$183,377	\$188,597	\$194,255	\$200,083	\$206,085	\$212,268	\$218,636
80	560	320 thru 390	Employee Benefits (Note 1)	4%	\$174,755	\$164,559	\$122,810	\$127,722	\$132,831	\$138,145	\$143,670	\$149,417
80	560	416	Special Department Supplies	3%	\$2,394	\$177	\$7,500	\$7,725	\$7,957	\$8,195	\$8,441	\$8,695
80	560	416	Outside Lab Testing	3%	\$25,473	\$20,636	\$34,000	\$35,020	\$36,071	\$37,153	\$38,267	\$39,415
80	560	416	Chemicals	3%	\$122,178	\$110,679	\$152,500	\$157,075	\$161,787	\$166,641	\$171,640	\$176,789
80	560	420	Maintenance and Operations	3%	\$31,225	\$43,993	\$57,000	\$58,710	\$60,471	\$62,285	\$64,154	\$66,079
80	560	420 & 421	Sludge Disposal	3%	\$59,520	\$48,101	\$102,300	\$80,000	\$82,400	\$84,872	\$87,418	\$90,041
80	560	422	Small Tools	3%	\$73	\$0	\$1,000	\$1,030	\$1,061	\$1,093	\$1,126	\$1,159
80	560	425	Professional Services	3%	\$488	\$0	\$0	\$0	\$0	\$0	\$0	\$0
80	560	450	Gas Detector	3%	\$0	\$0	\$300	\$309	\$318	\$328	\$338	\$348
<b>80</b>	<b>560</b>	<b>4</b>	<b>Short-Lived Asset Replacement</b>	<b>3%</b>	<b>\$0</b>	<b>\$0</b>	<b>\$105,833</b>	<b>\$109,008</b>	<b>\$112,279</b>	<b>\$115,647</b>	<b>\$119,116</b>	<b>\$122,690</b>
<b>80</b>	<b>560</b>	<b>4</b>	<b>Contractor Equip &amp; Vehicle Replace.</b>	<b>3%</b>	<b>\$0</b>	<b>\$0</b>	<b>\$25,000</b>	<b>\$25,523</b>	<b>\$26,050</b>	<b>\$26,581</b>	<b>\$27,118</b>	<b>\$27,661</b>
80	560	510 thru 513	Training	3%	\$1,747	\$4,429	\$4,300	\$4,429	\$4,562	\$4,699	\$4,840	\$4,985
80	560	515 thru 517	Office Supplies & Communication	3%	\$2,542	\$2,694	\$2,900	\$2,987	\$3,077	\$3,169	\$3,264	\$3,362
80	560	518	Electric & Propane	3%	\$119,277	\$139,029	\$133,000	\$136,990	\$141,100	\$145,333	\$149,693	\$154,183
80	560	518	Water/Sewer/LFF	3%	\$53,145	\$41,736	\$75,000	\$77,250	\$79,568	\$81,955	\$84,413	\$86,946
80	560	518	Garbage	3%	\$450	\$720	\$800	\$824	\$849	\$874	\$900	\$927
80	560	519	Advertising	3%	\$0	\$0	\$300	\$309	\$318	\$328	\$338	\$348
80	560	520	Chargeback Amounts	3%	\$7,598	\$8,446	\$20,381	\$20,992	\$21,622	\$22,271	\$22,939	\$23,627
80	560	521	Building Maintenance	3%	\$618	\$693	\$1,500	\$1,545	\$1,591	\$1,639	\$1,688	\$1,739
80	560	525	Professional & Legal Services	3%	\$1,467	\$4,069	\$10,000	\$10,300	\$10,609	\$10,927	\$11,255	\$11,593
80	560	530	Property Insurance	3%	\$14,855	\$13,422	\$12,026	\$12,387	\$12,758	\$13,141	\$13,535	\$13,941
80	560	535	Fees - State/County/Agencies	3%	\$17,866	\$17,970	\$28,000	\$28,840	\$29,705	\$30,596	\$31,514	\$32,460
			<b>Subtotal</b>		<b>\$798,140</b>	<b>\$804,730</b>	<b>\$1,085,047</b>	<b>\$1,093,458</b>	<b>\$1,127,539</b>	<b>\$1,162,693</b>	<b>\$1,198,956</b>	<b>\$1,236,361</b>

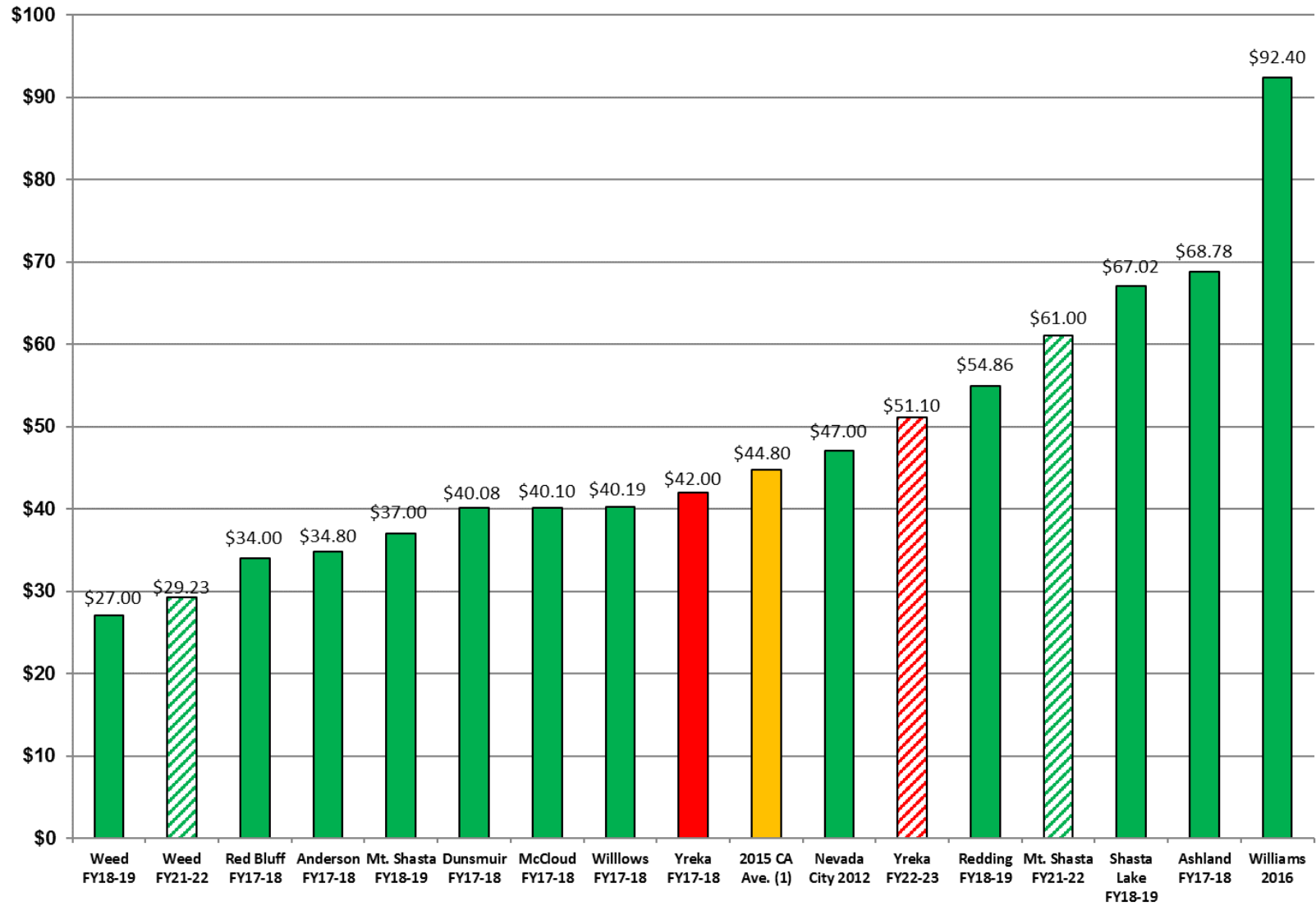
TABLE 17 Continued

Fund	Depart	Code	Account Description	Inflation Factor	Actual (FY 15-16)	Actual (FY 16-17)	Budgeted (FY 17-18)	Projected (FY 18-19)	Projected (FY 19-20)	Projected (FY 20-21)	Projected (FY 21-22)	Projected (FY 22-23)				
<b>WASTEWATER COLLECTION CAPITAL PROJECTS</b>																
81	550	6036	Non-Grant Reimbursable Expenses		\$0	\$230,404	\$0	\$0	\$0	\$0	\$0	\$0				
81	550		Sewer Main Replacement		\$220,092	\$0	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000				
81	550		Collection System Condition Assessment		\$0	\$0	\$35,000	\$35,000	\$35,000	\$35,000	\$35,000	\$35,000				
81	550		I&I Reduction/Replacement Project		\$0	\$0	\$0	\$0	\$5,500,000	\$0	\$0	\$0				
81	550		SR3/Main St. Sewer Upgrade		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0				
			<b>Subtotal</b>		<b>\$220,092</b>	<b>\$230,404</b>	<b>\$185,000</b>	<b>\$185,000</b>	<b>\$5,685,000</b>	<b>\$185,000</b>	<b>\$185,000</b>	<b>\$185,000</b>				
<b>WASTEWATER DISPOSAL CAPITAL PROJECTS</b>																
81	560	450 & 650	Capitalized & Non-Capitalized Equip		\$0	\$36,047	\$0	\$0	\$0	\$0	\$0	\$0				
81	560		2012 Sewer Improvements		\$179,566	\$0	\$0	\$0	\$0	\$0	\$0	\$0				
81	560		Stage 1 Expansion Feasibility Study		\$0	\$0	\$0	\$0	\$0	\$120,000	\$0	\$0				
81	560		Repave Asphalt Areas		\$0	\$0	\$0	\$0	\$0	\$0	\$50,000	\$0				
			<b>Subtotal</b>		<b>\$179,566</b>	<b>\$36,047</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$120,000</b>	<b>\$50,000</b>	<b>\$0</b>				
<b>WASTEWATER DEBT SERVICE (INCLUDING DEBT RESERVES)</b>																
82	550	740 & 745	2012 Sewer Improvements-USDA		\$127,575	\$132,193	\$206,130	\$206,130	\$206,130	\$206,130	\$206,130	\$206,130				
82	560	740 & 745	State Revolving Loan		\$13,180	\$11,525	\$76,844	\$76,844	\$76,844	\$76,844	\$76,844	\$76,844				
			SR3/Main St. Sewer Upgrade		\$0	\$0	\$0	\$0	\$0	\$219,099	\$219,099	\$219,099				
			<b>Subtotal</b>		<b>\$140,755</b>	<b>\$143,718</b>	<b>\$282,974</b>	<b>\$282,974</b>	<b>\$282,974</b>	<b>\$502,073</b>	<b>\$502,073</b>	<b>\$502,073</b>				
<b>INTERNAL SERVICES</b>																
80	000	760	Overhead Recovery Expenses	3%	\$118,236	\$112,454	\$160,000	\$164,800	\$169,744	\$174,836	\$180,081	\$185,484				
			<b>Subtotal</b>		<b>\$118,236</b>	<b>\$112,454</b>	<b>\$160,000</b>	<b>\$164,800</b>	<b>\$169,744</b>	<b>\$174,836</b>	<b>\$180,081</b>	<b>\$185,484</b>				
<b>Total Expenditures and Transfers</b>					<b>\$1,874,799</b>	<b>\$1,769,682</b>	<b>\$2,433,677</b>	<b>\$2,600,521</b>	<b>\$8,168,007</b>	<b>\$3,076,755</b>	<b>\$3,078,635</b>	<b>\$3,102,820</b>				
<b>NOTES:</b>																
1. Employee benefits appear high (in proportion to wages) in FY15-16 and FY16-17, due to the proportional difference in pension liability based on "GASB68" valuation.																
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20px; background-color: #92d050;"></td> <td>Project to be funded through CWSRF Proposition 1 grant program.</td> </tr> <tr> <td style="width: 20px; background-color: #ffff00;"></td> <td>Capital improvement funded through yet-to-be-determined grants and long-term debt.</td> </tr> </table>														Project to be funded through CWSRF Proposition 1 grant program.		Capital improvement funded through yet-to-be-determined grants and long-term debt.
	Project to be funded through CWSRF Proposition 1 grant program.															
	Capital improvement funded through yet-to-be-determined grants and long-term debt.															

**TABLE 18**  
**City of Yreka – Wastewater Utility**  
**Financial Plan and Enterprise Fund Summary**

	Actual (FY 15-16)	Actual (FY 16-17)	Budgeted (FY 17-18)	Projected (FY 18-19)	Projected (FY 19-20)	Projected (FY 20-21)	Projected (FY 21-22)	Projected (FY 22-23)
<b>WASTEWATER RATES USED</b>								
Single Family Monthly Service Charge	\$42.00	\$42.00	\$42.00	\$43.68	\$45.43	\$47.24	\$49.13	\$51.10
Proposed Single-Family Rate Increase:			Input:	4.0%	4.0%	4.0%	4.0%	4.0%
<b>ESTIMATED NUMBER OF SINGLE FAMILY CONNECTION EQUIVALENTS</b>								
Beginning of Year HES		4,845	4,845	4,845	4,845	4,845	4,845	4,845
Estimated Additional HES due to Growth		-	-	-	-	-	-	-
Estimated Year End HES	4,845	4,845	4,845	4,845	4,845	4,845	4,845	4,845
<b>BEGINNING RESERVES AVAILABLE BALANCE</b>								
Operation and Maintenance (40% of Expenditures)	\$480,000	\$486,460	\$498,824	\$722,281	\$787,099	\$812,116	\$837,938	\$864,592
USDA Rural Development Debt Service	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
Short-Term Asset Replacement Reserve	\$100,000	\$175,000	\$175,000	\$118,667	\$122,227	\$125,893	\$129,670	\$133,560
Development Impact Fee Reserve	\$1,822	\$1,822	\$2,734	\$4,734	\$6,734	\$8,734	\$10,734	\$12,734
Wastewater Improvement Fund	\$2,687,144	\$3,182,489	\$3,843,294	\$3,741,844	\$3,614,795	\$3,551,830	\$3,183,615	\$2,866,102
Total Reserves	\$3,368,966	\$3,945,771	\$4,619,852	\$4,687,526	\$4,630,854	\$4,598,573	\$4,261,957	\$3,976,989
<b>REVENUES</b>								
Fixed Service Charges	\$2,422,988	\$2,389,853	\$2,440,000	\$2,479,896	\$2,570,277	\$2,672,978	\$2,727,502	\$2,891,074
Sewer Set-up Fees	\$11,775	\$12,131	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000
Investment Earnings	\$9,140	\$35,483	\$41,117	\$41,719	\$41,215	\$40,927	\$37,931	\$35,395
Other Operation Income	\$5,879	\$5,384	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500
Proposition 1 Grant Reimbursement	\$0	\$0	\$0	\$0	\$5,500,000	\$0	\$0	\$0
Development Impact Funds for Debt (see Note 2)	\$1,822	\$912	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000
Total Revenue	\$2,451,604	\$2,443,763	\$2,496,617	\$2,537,115	\$8,126,992	\$2,729,405	\$2,780,933	\$2,941,969
<b>EXPENDITURES</b>								
Finance	\$123,298	\$117,504	\$125,513	\$167,493	\$173,031	\$178,754	\$184,669	\$190,783
Public Works Administration	\$55,418	\$65,942	\$104,373	\$162,474	\$167,917	\$173,544	\$179,363	\$185,378
Wastewater Collection	\$239,294	\$258,883	\$490,769	\$544,322	\$561,803	\$579,854	\$598,494	\$617,741
Wastewater Treatment & Disposal	\$798,140	\$804,730	\$1,085,047	\$1,093,458	\$1,127,539	\$1,162,693	\$1,198,956	\$1,236,361
Wastewater Collection Capital Projects	\$220,092	\$230,404	\$185,000	\$185,000	\$5,685,000	\$185,000	\$185,000	\$185,000
Wastewater Disposal Capital Projects	\$179,566	\$36,047	\$0	\$0	\$0	\$120,000	\$50,000	\$0
Wastewater Debt Service	\$140,755	\$143,718	\$282,974	\$282,974	\$282,974	\$502,073	\$502,073	\$502,073
Internal Services	\$118,236	\$112,454	\$160,000	\$164,800	\$169,744	\$174,836	\$180,081	\$185,484
Total Expenditures	\$1,874,799	\$1,769,682	\$2,433,677	\$2,600,521	\$8,168,007	\$3,076,755	\$3,078,635	\$3,102,820
<b>YEAR END VALUES</b>								
Total Restricted & Unrestricted Cash	\$3,945,771	\$4,619,852	\$4,682,792	\$4,624,120	\$4,589,839	\$4,251,223	\$3,964,255	\$3,816,138
Total Cash Available for Capital Improvements	\$3,182,489	\$3,843,294	\$3,741,844	\$3,614,795	\$3,551,830	\$3,183,615	\$2,866,102	\$2,686,466

**FIGURE 5  
MONTHLY WASTEWATER BILL COMPARISON  
(Based on 200 Gallons per Day Wastewater Contribution)**



(1) According to 2015 California-Nevada Water and Wastewater Rate Survey by Raftelis Financial Consultants, Inc. and AWWA.