

CITY OF THOUSAND OAKS

2018 Water Enterprise Financial Plan Update

Final Report / June 23, 2017





445 S. Figueroa Street
Suite #2270
Los Angeles, CA 90071

Phone 213.262.9300
Fax 213.262.9303

www.raftelis.com

June 23, 2017

Mr. Clifford G. Finley
Deputy Director of Public Works
City of Thousand Oaks
2100 Thousand Oaks Blvd
Thousand Oaks, CA 91362

Subject: 2018 Water Enterprise Financial Plan Update

Dear Mr. Finley:

Raftelis Financial Consultants, Inc. (RFC) is pleased to present this report on the water financial plan and rate adjustment study (Study) to the City of Thousand Oaks (City). We are confident that the update to the financial plan and revenue adjustments will result in fair and equitable rates to the City's customers and comply with the requirements of Proposition 218.

The Study involved a comprehensive review of the City's financial plan, capital needs, and reserve funds.

It was a pleasure working with you and we wish to express our thanks to you, Mr. Jay Spurgin, Ms. Nancy Arrieta, and participating staff members of the City for the support and cooperation extended throughout the Study. If you have any questions, please call me at (213) 262-9304.

Sincerely,

RAFTELIS FINANCIAL CONSULTANTS, INC.

A handwritten signature in black ink, appearing to read 'Sanjay Gaur'.

Sanjay Gaur
Vice President

A handwritten signature in black ink, appearing to read 'Akbar Alikhan'.

Akbar Alikhan
Senior Consultant

TABLE OF CONTENTS

- 1. EXECUTIVE SUMMARY 8**
 - 1.1 STUDY BACKGROUND..... 8
 - 1.2 OBJECTIVES OF THE STUDY 8
 - 1.3 RESULTS AND RECOMMENDATIONS 9
 - 1.3.1 Proposed Financial Plan 9
 - 1.3.2 Factors Affecting Revenue Adjustments..... 9
 - 1.3.3 Proposed Fixed and Variable Rates 11
- 2. INTRODUCTION..... 13**
 - 2.1 STUDY BACKGROUND..... 13
 - 2.2 OBJECTIVES OF THE STUDY 14
 - 2.3 LEGAL REQUIREMENTS AND RATE SETTING METHODOLOGY..... 14
 - 2.3.1 California Constitution - Article XIII D, Section 6 (Proposition 218) 14
- 3. GENERAL ASSUMPTIONS..... 15**
 - 3.1 INFLATION..... 15
 - 3.2 PROJECTED DEMAND AND GROWTH..... 15
 - 3.3 RESERVE POLICY 16
 - 3.3.1 O&M Cash Flow (Fund 611)..... 16
 - 3.3.2 Capital Emergency (Fund 613)..... 17
 - 3.3.3 Capital Improvement Plan (Fund 613)..... 17
 - 3.3.4 Proposed Water Reserves..... 18
- 4. FINANCIAL PLAN 19**
 - 4.1 REVENUES FROM CURRENT RATES 19
 - 4.1.1 Miscellaneous Revenue..... 21
 - 4.2 O&M EXPENSES 22
 - 4.2.1 Water Supply Costs 22
 - 4.2.2 Water Operating Expenses 24
 - 4.3 PROGRAMMED CAPITAL IMPROVEMENT PROJECTS (CIP) 24
 - 4.4 STATUS QUO FINANCIAL PLAN..... 25
 - 4.5 RECOMMENDATIONS AND PROPOSED REVENUE ADJUSTMENTS 26
 - 4.5.1 Proposed Financial Plan 27
- 5. PROPOSED RATES..... 30**
 - 5.1 PROPOSED MONTHLY FIXED CHARGES FOR STUDY PERIOD 30
 - 5.2 COMMODITY TIER STRUCTURE..... 30

| | |
|--|----|
| 5.3 PROPOSED COMMODITY CHARGES FOR STUDY PERIOD..... | 30 |
| 6. APPENDIX A – DETAILED 5-YEAR CIP..... | 33 |

LIST OF TABLES

| | |
|---|----|
| Table 1-1: Revenue Adjustments for Water Enterprise | 9 |
| Table 1-2: Proposed Monthly Fixed Charges for FY 2018 and FY 2019 | 11 |
| Table 1-3: Proposed Commodity Rates for FY 2018 and FY 2019 | 12 |
| Table 3-1: Inflation Factor Assumptions | 15 |
| Table 3-2: Calleguas Rate Increases | 15 |
| Table 3-3: Account Growth Rates by Customer Class | 15 |
| Table 3-4: Projected Annual Water Demand | 16 |
| Table 3-5: Replacement Cost of Critical Water Assets | 17 |
| Table 3-6: Recommended Water Reserves | 18 |
| Table 3-7: Reserve Targets for Study Period | 18 |
| Table 4-1: Current Monthly Fixed Charges | 19 |
| Table 4-2: Current Commodity Rates | 19 |
| Table 4-3: Projected Account Totals by Meter Size | 20 |
| Table 4-4: Projected Water Usage by Tier and Customer Class | 20 |
| Table 4-5: Revenues from Current Rates | 21 |
| Table 4-6: Projected Miscellaneous Revenue | 22 |
| Table 4-7: Projected Water Supply Costs | 23 |
| Table 4-8: Projected O&M Costs | 24 |
| Table 4-9: Status Quo Financial Plan Pro-Forma | 26 |
| Table 4-10: Proposed Revenue Adjustments | 27 |
| Table 4-11: Proposed Financial Plan Pro-Forma | 28 |
| Table 5-1: Proposed Monthly Fixed Charges for Study Period | 30 |
| Table 5-2: Commodity Tier Structure | 30 |
| Table 5-3: Proposed Commodity Rates for FY 2018 and FY 2019 | 31 |

LIST OF FIGURES

| | |
|--|----|
| Figure 1-1: Operating Financial Plan | 10 |
| Figure 1-2: Capital Improvement Program Funding | 10 |
| Figure 1-3: Ending Fund Balance | 11 |
| Figure 4-1: Programmed 5-Year Water Capital Expenditures | 25 |
| Figure 4-2: Proposed Operating Financial Plan | 29 |
| Figure 4-3: Ending Balance for Water Fund | 29 |

GLOSSARY

| Terms | Descriptions |
|------------------|---|
| AF | Acre foot / Acre feet, 1 AF = 435.6 HCF |
| AWWA | American Water Works Association |
| CIP | Capital Improvement Projects |
| Calleguas | Calleguas Municipal Water District |
| COS | Cost of Service |
| CPI | Consumer Price Index/Indices |
| CY | Calendar Year |
| EMU | Equivalent Meter Unit |
| ENR CCI | Engineering News Records Construction Cost Indices |
| FY | Fiscal Year (July 1 – June 30) |
| GPCD | Gallons per capita per day |
| HCF | Hundred cubic feet or 100 cubic feet, 1 HCF = 748 gallons |
| M1 Manual | "Principles of Water Rates, Fees, and Charges: Manual of Water Supply Practices M1" published by AWWA |
| MD | Max Day Peaking Factor |
| MFR | Multi-Family Residential |
| MH | Max Hour Peaking Factor |
| O&M | Operations and Maintenance |
| PAYGO | Pay-As-You-Go |
| RFC | Raftelis Financial Consultants, Inc. |
| SFR | Single Family Residential |

This page intentionally left blank to facilitate two-sided printing.

1. EXECUTIVE SUMMARY

1.1 STUDY BACKGROUND

In 2012, the City of Thousand Oaks engaged Raftelis Financial Consultants (RFC) to conduct a Water Financial Plan to develop a sustainable reserve policy and financial plan for the Water Enterprise and to establish rates that generate sufficient revenue to meet operational and capital needs. RFC completed the initial Financial Plan in 2013. In 2015, the City retained RFC to update the Financial Plan, perform a cost of service study, and develop equitable rates which comply with the requirements of Proposition 218. The City has now engaged RFC to update the financial plan and any necessary revenue adjustments for FY 2018.

The City's Water Enterprise is operating in an environment where revenues from rates are outpaced by operating expenses, costs to maintain existing infrastructure, and water supply costs. While State-mandated restrictions have been lifted, the City must still be sensitive to factors affecting future supply, such as droughts, as well as possible permanent reductions in demand.

For the Water Enterprise, the increase in imported water supply costs as supplied by Calleguas Municipal Water District (Calleguas) represents the most significant pressure on net revenues. Additionally, there are several significant capital improvement plan (CIP) projects coming due, particularly the storage and reservoir improvements that are currently programmed. The City has instructed RFC to propose any necessary rate increases for financial sufficiency. In addition, RFC incorporated into the financial plan model the ability to pass through the increased costs of imported water supply to the City's customers, in accordance with AB 3030 and other regulations. RFC recommends that the City continue to make use of the pass-through provision for the Study period (FY¹ 2018 to FY 2022) as a means of mitigating the financial risk associated with the uncertainty in water supply costs.

This report presents the financial plan and rates over a five year period – however rates are reviewed and adopted in two year cycles by the City.

1.2 OBJECTIVES OF THE STUDY

The major objectives of the Study include the following:

1. Update the financial plan and propose revenue adjustments for the Water Enterprise to ensure financial sufficiency by meeting operation and maintenance (O&M) costs, ensuring sufficient funding of City financial reserves, and funding capital improvements. In addition, the analysis contained in this Report make assumptions regarding future water usage and ensures that the City is financially prepared for a period of reduced sales;
2. Review reserve fund targets;
3. Develop fair and equitable rates based on the necessary revenue adjustment percentage

¹ Fiscal Year (July 1 – June 30)

1.3 RESULTS AND RECOMMENDATIONS

1.3.1 Proposed Financial Plan

Table 1-1 shows the proposed revenue adjustments for the Water Enterprise for the next five fiscal years, from FY 2018 through FY 2022. The revenue adjustments for water include needed revenue to fund approximately \$23 million of annual operational costs and an estimated \$31 million of programmed capital improvements over the five-year Study period. In addition, there is approximately \$6.9 million² in carryover from FY 2017 and RFC’s estimation includes wastewater fleet replacement from Fund 619. It is important to note that the revenue adjustments shown below do not include any pass-through costs resulting from increased water supply costs from Calleguas.

Table 1-1: Revenue Adjustments for Water Enterprise

| Enterprise | Revenue Adjustments | | | | | 5-Year CIP + FY 2017 Carryover |
|------------|---------------------|---------|---------|---------|---------|--------------------------------------|
| | FY 2018 | FY 2019 | FY 2020 | FY 2021 | FY 2022 | |
| Water | 1% | 1% | 1% | 1% | 1% | \$37M |

1.3.2 Factors Affecting Revenue Adjustments

The following items affect the Water Enterprise’s revenue requirement (i.e. costs) and thus its water rates. The City’s costs include Operation and Maintenance (O&M) expenses and capital expenses.

- » **Capital Funding of System Improvements:** The City’s water distribution infrastructure is aging and major repairs to its capital infrastructure are required.
- » **Reserve Funding:** The Water Enterprise has operating, emergency, and capital reserves – collectively amounting to an average \$16.7M funds that must be set aside at all times.

Figure 1-1 illustrates the operating position of the Water Enterprise, where the expenses and reserve funding are shown by stacked bars and total revenues at current rates and proposed rates are shown by red and green lines, respectively. Under the proposed rate adjustments shown in Table 1-1, the Water Enterprise will be able to contribute more to reserves, which are required to fund capital needs and to maintain healthy reserve levels.

² \$500,000 of carryover funds is provided by Streets Fund 183 for the Los Robles Greens Golf Course Groundwater Utilization Project (CI 5395) and is not factored into the Water Enterprise’s Financial Plan.

Figure 1-1: Operating Financial Plan

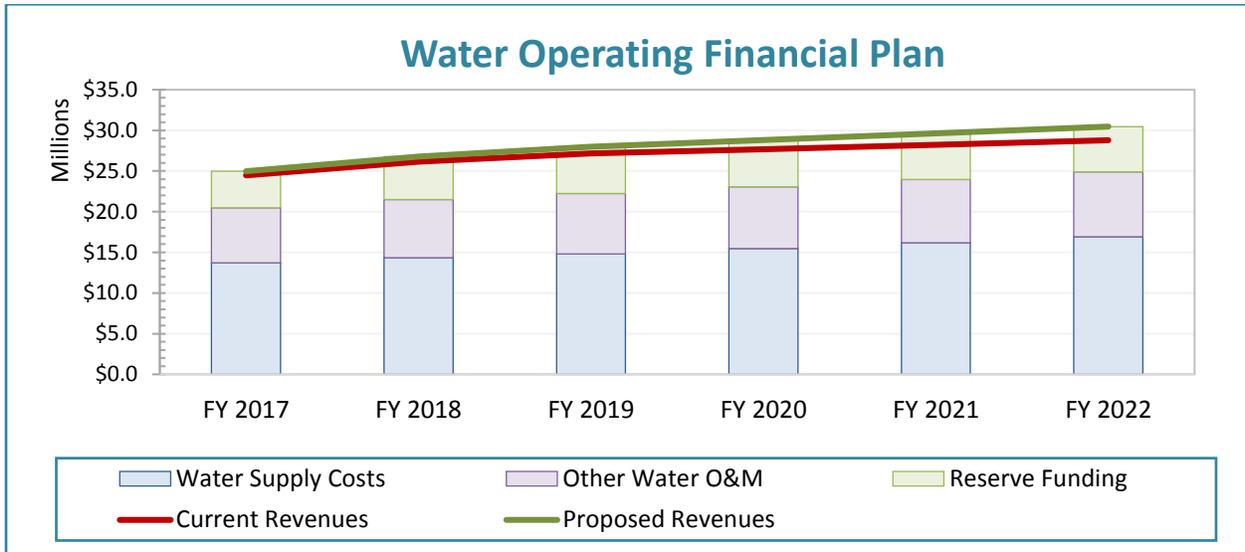
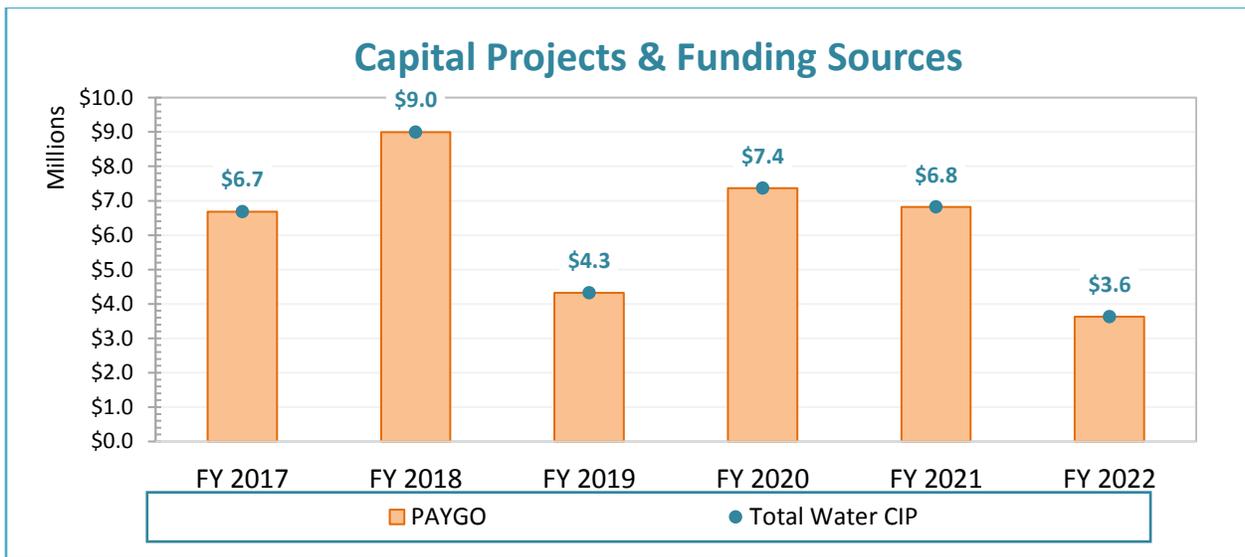


Figure 1-2 summarizes the projected CIP expenses, which have an average CIP expenditure of \$6.2M for the 5-year planning horizon of FYs 2018-2022. The proposed capital improvement plan will be funded entirely through rate revenues (Pay As You Go or PAYGO) and reserves.

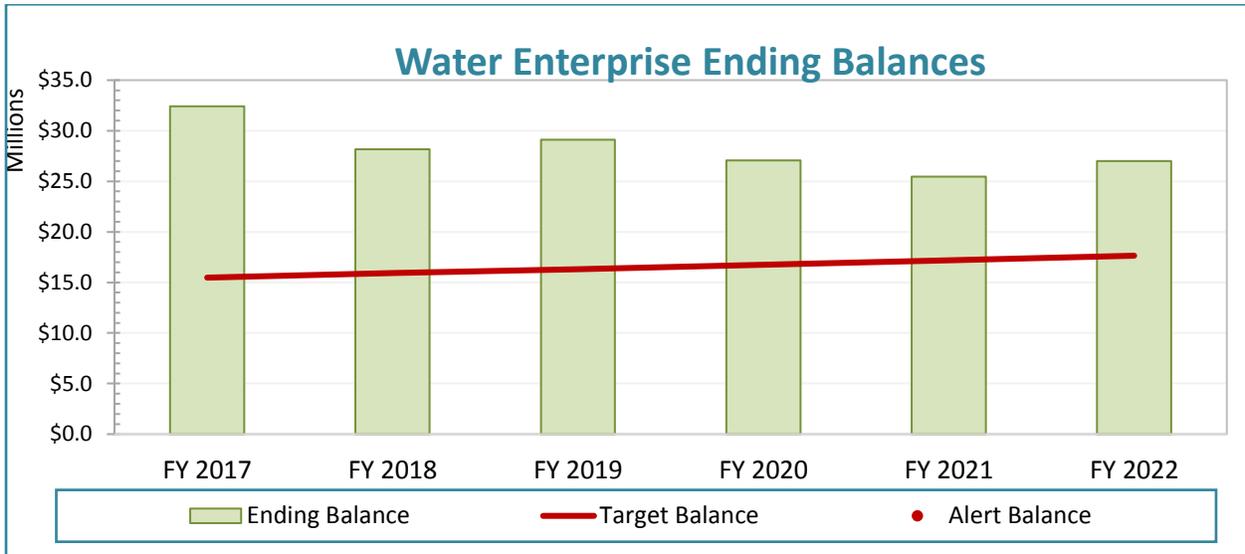
Figure 1-2: Capital Improvement Program Funding³



The ending fund balance for the Water Enterprise includes the beginning balances plus net cash changes for the year. The ending fund balance for the Water Enterprise is projected and shown in Figure 1-3, where the red line indicates the target reserve balance.

³ RFC's projected capital expenses include a capital escalation factor of 2% and therefore may not align with the City's adopted budget. In addition, Figure 1-2 includes asset replacement costs from Fund 619.

Figure 1-3: Ending Fund Balance



1.3.3 Proposed Fixed and Variable Rates

The City wishes to maintain the rate structure defined in the previous study and to adjust these rates to meet the City’s revenue needs. RFC proposes a 1% annual revenue adjustment for each of the five years in the Study period. Note that while the study period encompasses FYs 2018-2022, the City adopts only two years’ rates, therefore the below tables only show the rates for FYs 2018-2019, resulting from this revenue adjustment.

Table 1-2: Proposed Monthly Fixed Charges for FY 2018 and FY 2019

| | FY 2017 Current | FY 2018 Proposed | FY 2019 Proposed |
|-------|--------------------|---------------------|---------------------|
| 5/8 | \$25.05 | \$25.31 | \$25.57 |
| 1 | \$39.56 | \$39.96 | \$40.36 |
| 1 1/2 | \$75.79 | \$76.55 | \$77.32 |
| 2 | \$119.28 | \$120.48 | \$121.69 |
| 3 | \$256.99 | \$259.56 | \$262.16 |
| 4 | \$459.92 | \$464.52 | \$469.17 |
| 6 | \$945.51 | \$954.97 | \$964.52 |

Table 1-3: Proposed Commodity Rates for FY 2018 and FY 2019

| Single Family Residential Commodity Rates | Tier Widths | FY 2018 Rate Adjustment | | FY 2019 Rate Adjustment | |
|--|----------------------|--------------------------------|-------------|--------------------------------|-------------|
| Tier 1 | (0 - 12 hcf) | (\$) | (%) | (\$) | (%) |
| Existing Rate | | \$4.51 | | \$4.56 | |
| City Adjustment | | \$0.05 | 1.0% | \$0.05 | 1.0% |
| | | \$4.56 | | \$4.61 | |
| Pass-through Adjustment | | \$0.18 | 4.0% | \$0.35 | 3.7% |
| Total Tier 1 Rate | | \$4.74 | 5.0% | \$4.96 | 4.7% |
| Tier 2 | (13 - 30 hcf) | (\$) | (%) | (\$) | (%) |
| Existing Rate | | \$4.83 | | \$4.88 | |
| City Adjustment | | \$0.05 | 1.0% | \$0.05 | 1.0% |
| | | \$4.88 | | \$4.93 | |
| Pass-through Adjustment | | \$0.18 | 3.7% | \$0.35 | 3.5% |
| Total Tier 2 Rate | | \$5.06 | 4.7% | \$5.28 | 4.5% |
| Tier 3 | (31 + hcf) | (\$) | (%) | (\$) | (%) |
| Existing Rate | | \$5.23 | | \$5.29 | |
| City Adjustment | | \$0.05 | 1.0% | \$0.05 | 1.0% |
| | | \$5.29 | | \$5.35 | |
| Pass-through Adjustment | | \$0.18 | 3.4% | \$0.35 | 3.4% |
| Total Tier 3 Rate | | \$5.47 | 4.4% | \$5.70 | 4.2% |
| Non-Residential & MFR Commodity Rates | | FY 2018 Rate Adjustment | | FY 2019 Rate Adjustment | |
| | | (\$) | (%) | (\$) | (%) |
| Existing Rate | | \$4.85 | | \$4.90 | |
| City Adjustment | | \$0.05 | 1.0% | \$0.05 | 1.0% |
| | | \$4.90 | | \$4.95 | |
| Pass-through Adjustment | | \$0.18 | 3.7% | \$0.35 | 3.5% |
| Total Non-Residential & MFR Rate | | \$5.08 | 4.7% | \$5.30 | 4.5% |
| Pumping Charge | | FY 2018 Rate Adjustment | | FY 2019 Rate Adjustment | |
| | | (\$) | (%) | (\$) | (%) |
| Existing Rate | | \$0.18 | | \$0.19 | |
| City Adjustment (Uniform) | | \$0.01 | | \$0.01 | |
| | | \$0.19 | 3% | \$0.20 | 3% |

2. INTRODUCTION

2.1 STUDY BACKGROUND

In 2012, the City of Thousand Oaks engaged Raftelis Financial Consultants (RFC) to conduct a Water Financial Plan to develop a sustainable reserve policy and financial plan for the Water Enterprise and to establish rates that generate sufficient revenue to meet operational and capital needs. RFC completed the initial Financial Plan in 2013. In 2015, the City retained RFC to update the Financial Plan, perform a cost of service study, and develop equitable rates which comply with the requirements of Proposition 218. The City has now engaged RFC to update the financial plan and any necessary revenue adjustments for FY 2018.

The City's Water Enterprise is operating in an environment where revenues from rates are outpaced by operating expenses, costs to maintain existing infrastructure, and water supply costs. While State-mandated restrictions have been lifted, the City must still be sensitive to factors affecting future supply, such as future droughts, as well as possible permanent reductions in demand.

For the Water Enterprise, the increase in imported water supply costs as supplied by Calleguas represents the most significant pressure on net revenues. Additionally, there are several significant CIP projects coming due, particularly the storage and reservoir improvements that are currently programmed. The City has instructed RFC to propose any necessary rate increases for financial sufficiency. In addition, RFC incorporated into the financial plan model the ability to pass through the increased costs of imported water supply to the City's customers, in accordance with AB 3030 and other regulations. RFC recommends that the City continue to make use of the pass-through provision for the Study period (FY⁴ 2018 to FY 2022) as a means of mitigating the financial risk associated with the uncertainty in water supply costs.

This report presents the financial plan and rates over a five-year period – however rates are reviewed and adopted in two year cycles by the City.

⁴ Fiscal Year (July 1 – June 30)

2.2 OBJECTIVES OF THE STUDY

The major objectives of the Study include the following:

1. Update the financial plan and propose revenue adjustments for the Water Enterprise to ensure financial sufficiency by meeting operation and maintenance (O&M) costs, ensuring sufficient funding of City financial reserves, and funding CIP projects. In addition, the analysis contained in this Report make assumptions regarding future water usage and ensures that the City is financially prepared for a period of reduced sales;
2. Review reserve fund targets;
3. Develop fair and equitable rates based on the necessary revenue adjustment percentage

2.3 LEGAL REQUIREMENTS AND RATE SETTING METHODOLOGY

2.3.1 California Constitution - Article XIII D, Section 6 (Proposition 218)

Proposition 218, reflected in the California Constitution as Article XIII D, was enacted in 1996 to ensure that rates and fees are reasonable and proportional to the cost of providing service. The principal requirements for fairness of the fees, as they relate to public water service are as follows:

1. A property-related charge (such as water and wastewater rates) imposed by a public agency on a parcel shall not exceed the costs required to provide the property related service.
2. Revenues derived by the charge shall not be used for any purpose other than that for which the charge was imposed.
3. The amount of the charge imposed upon any parcel shall not exceed the proportional cost of service attributable to the parcel.
4. No charge may be imposed for a service unless that service is actually used or immediately available to the owner of property.
5. A written notice of the proposed charge shall be mailed to the record owner of each parcel at least 45 days prior to the public hearing, when the agency considers all written protests against the charge.

As stated in AWWA's *M1 Manual*, "water rates and charges should be recovered from classes of customers in proportion to the cost of serving those customers." Prop 218 requires that water rates cannot be "arbitrary and capricious," meaning that the rate-setting methodology must be sound and that there must be a nexus between the costs and the rates charged. RFC follows industry standard rate setting methodologies set forth by the AWWA *M1 Manual* to ensure this study meets Proposition 218 requirements and develops rates that do not exceed the proportionate cost of providing water services. In 2015, RFC performed the COS Study for the Wastewater Enterprise. This Study continues with the same rate structure and increases all rates by a uniform percentage factor based on the City's updated revenue requirements.

3. GENERAL ASSUMPTIONS

3.1 INFLATION

The Study period is for Fiscal Years (FY) 2018⁵ to FY 2022. Various types of assumptions and inputs were incorporated into the Study based on discussions with and/or direction from City staff. These include the projected number of accounts and annual growth rates in consumption for different customer classes, inflation factors, and other assumptions.

Table 3-1: Inflation Factor Assumptions

| INFLATION FACTORS | FY 2018 | FY 2019 | FY 2020 | FY 2021 | FY 2022 |
|-------------------|---------|---------|---------|---------|---------|
| General | 2% | 2% | 2% | 2% | 2% |
| Salary | 2% | 2% | 2% | 2% | 2% |
| Benefits | 4% | 4% | 4% | 4% | 4% |
| Electricity | 3% | 3% | 3% | 3% | 3% |
| Fuel | 2% | 2% | 2% | 2% | 2% |
| Capital | 2% | 2% | 2% | 2% | 2% |

In addition, Calleguas has adopted new rate increases on the following rates relevant to the City: Tier 1 usage rate, Capacity Reservation Charge (CRC), and the Readiness-to-Serve (RTS) rate:

Table 3-2: Calleguas Rate Increases

| | FY 2018 | FY 2019 | FY 2020 | FY 2021 | FY 2022 |
|---------------------|---------|---------|---------|---------|---------|
| Calleguas CRC | 4.9% | 4.8% | 4.9% | 4.6% | 4.8% |
| Calleguas RTS | 4.9% | 4.8% | 4.9% | 4.6% | 4.8% |
| Calleguas Commodity | 4.9% | 4.8% | 4.9% | 4.6% | 4.8% |

3.2 PROJECTED DEMAND AND GROWTH

Projecting water demand relies on two key variables — the number of accounts and demand per account. Since the City is built out, it is anticipated that there will be minimal account growth over the Study period. The growth rate is based on staff estimates using historic trends. The projected account growth shown in Table 3-3 applies to all meter sizes.

Table 3-3: Account Growth Rate for All Customer Classes

| GROWTH RATE | | | | |
|-------------|---------|---------|---------|---------|
| FY 2018 | FY 2019 | FY 2020 | FY 2021 | FY 2022 |
| 0.10% | 0.10% | 0.10% | 0.10% | 0.10% |

⁵ FY 2018: Fiscal Year 2017/2018 (From July 1, 2017 to June 30, 2018)

Sales are expected to grow by 5% annually for the next two fiscal years, which is primarily due to the account growth above as well as anticipated increase in demand due to the State lifting its mandated reductions. The estimated water sales for each year of the Study period, shown below in Table 3-4, is based on projections made by RFC with input from City staff.

Table 3-4: Projected Annual Water Sales

| | FY 2017 | FY 2018 | FY 2019 | FY 2020 | FY 2021 | FY 2022 |
|-------------------|----------|----------|----------|----------|-----------|-----------|
| % Increase | | 5% | 5% | 3% | 3% | 3% |
| AF Demand | 8,802 AF | 9,242 AF | 9,704 AF | 9,947 AF | 10,196 AF | 10,451 AF |

3.3 RESERVE POLICY

RFC recommends that the City maintain the reserve policies established in the previous study.

A reserve policy is a written document that provides a basis for the City to cope with unanticipated reductions in revenues, offset fluctuations in costs of providing services, and fiscal emergencies such as revenue shortfalls, asset failure, and natural disaster. It also provides guidelines for sound financial management with an overall long-range perspective to maintain financial solvency and mitigate financial risks associated with revenue instability, volatile capital costs, and emergencies. It also sets funds aside for replacement of capital assets as they age and for new capital projects. Additionally, adopting and adhering to a sustainable reserve policy enhances financial management transparency and helps achieve or maintain a certain credit rating for future debt issues.

The appropriate amount of reserves and reserve types are determined by a variety of factors, such as the size of the operating budget, the amount of debt, the type of rate structure, frequency of customer billing, and risk of natural disaster. Thus, most reserves tend to fall into the following categories: operations & maintenance (O&M) cash flow, rate stabilization, CIP, and emergency. RFC recommends that the City maintain the reserve policies established in the previous study, as detailed below.

3.3.1 O&M Cash Flow (Fund 611)

The purpose of an O&M reserve is to provide working capital to support the operation, maintenance and administration of the utility. From a risk management perspective, the O&M reserve supports the Water Enterprise’s cash flow needs during normal operations and ensures that operations can continue should there be significant events that impact cash flows.

RFC recommends that the City maintain 90 days cash (25 percent of annual operating budget) for the Water Operating Fund to ensure adequate working capital for operating expenses. With the exception of select commercial accounts, the City bills bi-monthly. The time gap between accounts receivables and actual cash expenses ranges from 60 to 120 days, warranting higher operational reserves than an agency that bills monthly. The budgeted O&M expenses for FY 2018 are \$21M, which translates into \$5.3M for 90 days of cash reserves for the Water Operating Fund.

3.3.2 Capital Emergency (Fund 613)

The purpose of an emergency reserve is to allow the utility to provide uninterrupted service in a fiscal emergency, natural disaster or facility failure. An emergency reserve decreases risk by recognizing the high capital costs of the facilities and setting aside adequate funds to restart the system after an unanticipated event or replace an essential facility.

Per a critical-asset analysis provided by GHD in its 2013 Asset Management Plan Study, the Wilder Reservoir is the most critical asset in the system. Typical asset failure scenarios were evaluated and it was determined that \$4.1M would be needed to replace the Wilder Reservoir. RFC recommends that \$4.2M be set aside for emergency use. Although this level of emergency reserve is sufficient for now, the reserve should be re-evaluated periodically as the system ages. A summary of the City's most critical water assets is shown below in Table 3-5.

Table 3-5: Replacement Cost of Critical Water Assets⁶

| Location | Install Year | Size (MGD) | Replacement Cost | Criticality Score |
|---------------------------|--------------|------------|---------------------|-------------------|
| Wilder Reservoir | 1964 | 1 | \$4,161,600 | 7 |
| Rolling Oaks Reservoir | 2002 | 0.35 | \$1,250,000 | 6 |
| Grissom Reservoir #1 | 1987 | 0.2 | \$1,000,000 | 4.5 |
| Grissom Reservoir #2 | 1981 | 0.22 | \$1,000,000 | 4.5 |
| Willow Lane Reservoir | 1983 | 5 | \$15,000,000 | 4.2 |
| Recommended Target | | | \$ 4,161,600 | |

3.3.3 Capital Improvement Plan (Fund 613)

CIP reserves are used to fund future obligations that are necessary for maintaining a reliable infrastructure. Because water utilities are highly capital-intensive enterprises, it is important to accurately estimate long-term CIP costs and develop a reserve to fund the eventual replacement of the system and new capital projects.

The total asset value for the Water Enterprise was estimated at \$128M at the beginning of FY 2018. Based on discussions with Staff, the CIP reserve was set at 5% of the replacement value of water-related assets. For FY 2018, the CIP reserve requirement is \$6.4M.

⁶ Provided by GHD based on Asset Management Plan Study which was conducted concurrently with the previous Financial Plan Study in 2013

3.3.4 Proposed Water Reserves

Table 3-6 summarizes the recommended reserve policy for Water Funds for adequate operating working capital, emergency use, and working capital for future CIP projects.

Table 3-6: Recommended Water Reserves

| Reserve | Recommended Policy | 2018 Target Level |
|--|--|-------------------|
| Fund 611 – Water Operating Fund | | |
| Operating | 25% of Operating Budget | \$5.3M |
| Fund 613 – Water Capital Fund | | |
| Emergency | Replacement cost of Wilder Reservoir (most critical asset) | \$4.2M |
| CIP | 5% of Asset Value | \$6.4M |
| Total Water Fund | 328 days of cash⁷ | \$15.9M |

Applying the same methodology for determining the reserve target levels to all years of the Study period yield the following targets, found in Table 3-7 below.

Table 3-7: Reserve Targets for Study Period

| Reserve | FY 2018 | FY 2019 | FY 2020 | FY 2021 | FY 2022 |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Operating | \$5,282,011 | \$5,457,982 | \$5,666,264 | \$5,883,288 | \$6,109,439 |
| Emergency | \$4,161,600 | \$4,244,832 | \$4,329,729 | \$4,416,323 | \$4,504,650 |
| CIP | \$6,391,333 | \$6,519,160 | \$6,649,543 | \$6,782,534 | \$6,918,184 |
| Total Target | \$15,834,944 | \$16,221,974 | \$16,645,536 | \$17,082,145 | \$17,532,273 |

⁷ Days of cash defined as annual total reserve amount divided by annual O&M costs, multiplied by 365 days.

4. FINANCIAL PLAN

A review of a utility’s revenue requirements is a key first step in the rate design process. The review involves an analysis of annual operating revenues under the current rates, operation and maintenance (O&M) expenses, capital expenses, transfers between funds, and reserve requirements. This section of the report provides a discussion of the projected revenues, O&M and capital expenses, capital improvement financing plan, and revenue adjustments required to ensure the fiscal sustainability of the Water Enterprise.

4.1 REVENUES FROM CURRENT RATES

The current rates and rate structure were developed in FY 2016. The City’s water service charges have two components – a monthly fixed charge and a commodity usage charge. In addition, most customers are subject to a volumetric pumping charge. Table 4-1 summarizes the current monthly fixed charges by meter size.

Table 4-1: Current Monthly Fixed Charges

| Meter Size | Rate |
|------------|----------|
| 5/8 | \$25.05 |
| 1 | \$39.56 |
| 1 1/2 | \$75.79 |
| 2 | \$119.28 |
| 3 | \$256.99 |
| 4 | \$459.92 |
| 6 | \$945.51 |

In addition to the fixed monthly charge, customers also pay volumetric use charges. Single family residential (SFR) customers are charged on an inclining three-tier rate structure. All other users are charged on a simple uniform commodity rate. Customers subject to pumping charges pay a uniform rate of \$0.18 per hcf. The commodity charges for all customer classes is shown below in Table 4-2.

Table 4-2: Current Commodity Rates

| Single Family Residential (SFR) | | | Pumping |
|---------------------------------|----------------|--------|---------|
| Tier 1 | 0 - 12 | \$4.51 | \$0.18 |
| Tier 2 | 13 - 30 | \$4.83 | \$0.18 |
| Tier 3 | 31+ | \$5.23 | \$0.18 |
| Non-SFR | | | Pumping |
| MFR | <i>uniform</i> | \$4.85 | \$0.18 |
| Commercial | <i>uniform</i> | \$4.85 | \$0.18 |
| Irrigation | <i>uniform</i> | \$4.85 | \$0.18 |

Using the account growth percentages in Table 3-3, the number of accounts in each customer class was projected for the Study period.

Table 4-3: Projected Account Totals by Meter Size

| Meter Size | FY 2018 | FY 2019 | FY 2020 | FY 2021 | FY 2022 |
|-----------------------|---------------|---------------|---------------|---------------|---------------|
| 5/8 | 15,290 | 15,306 | 15,321 | 15,336 | 15,352 |
| 1 | 1,021 | 1,022 | 1,023 | 1,024 | 1,025 |
| 1 1/2 | 345 | 346 | 346 | 346 | 347 |
| 2 | 303 | 304 | 304 | 304 | 305 |
| 3 | 48 | 48 | 48 | 48 | 48 |
| 4 | 23 | 23 | 23 | 23 | 23 |
| 6 | 8 | 8 | 8 | 8 | 8 |
| Total Accounts | 17,039 | 17,056 | 17,073 | 17,090 | 17,107 |

The projected potable water sales developed by RFC and City staff from Table 3-4 were used to project potable water usage in each tier and customer class. The projected water sales by customer class and tier for every year of the Study period is shown in Table 4-4 below. In addition, the number of hcf subject to lift charges (an additional charge to deliver water in elevated areas) are shown in the final line of Table 4-4.

Table 4-4: Projected Water Usage by Tier and Customer Class

| Water Usage (hcf) | FY 2018 | FY 2019 | FY 2020 | FY 2021 | FY 2022 |
|--------------------------------------|------------------|------------------|------------------|------------------|------------------|
| Single Family Residential | | | | | |
| Tier 1 | 1,763,902 | 1,852,097 | 1,898,400 | 1,945,860 | 1,994,506 |
| Tier 2 | 698,367 | 733,286 | 751,618 | 770,408 | 789,668 |
| Tier 3 | 210,630 | 221,162 | 226,691 | 232,358 | 238,167 |
| Non-SFR | | | | | |
| MFR | 318,645 | 334,577 | 342,941 | 351,515 | 360,303 |
| Commercial | 521,439 | 547,511 | 561,199 | 575,229 | 589,610 |
| Irrigation | 511,284 | 536,849 | 550,270 | 564,027 | 578,127 |
| Construction | 1,668 | 1,752 | 1,795 | 1,840 | 1,886 |
| Total Water Usage (hcf) | 4,025,936 | 4,227,233 | 4,332,914 | 4,441,237 | 4,552,268 |
| Total Water Usage (AF) | 9,242 | 9,704 | 9,947 | 10,196 | 10,451 |
| Subject to Lift Charges (hcf) | 2,684,897 | 2,819,142 | 2,889,620 | 2,961,861 | 3,035,907 |

Table 4-5 shows the projected revenues for the Study period under the existing rates. The commodity revenues shown for FY 2018 through FY 2022 are calculated by multiplying the projected usage by the FY 2017 rate. For example, the commodity charge revenue from Tier 1 usage for FY 2018 can be calculated as follows:

$$\begin{aligned}
 & \text{Projected Tier 1 Usage for FY 2018} \times \text{Tier 1 Rate} \\
 & 1,743,259 \times \$4.51 = \$7.87M
 \end{aligned}$$

The same calculation is repeated for all tiers and the other customer classes to determine the total commodity revenue for each year of the Study period. For FY 2018, the projected commodity rate revenue is \$18.42, exclusive of pumping charge revenue.

The monthly fixed charge revenue is the fixed portion of the water service charge that increases with meter size. Referring to the monthly fixed rates and account totals in Table 4-1 and Table 4-3 respectively, the monthly fixed charge revenue from all single family homes with a 5/8" meter for FY 2018 is calculated as follows:

$$\text{fixed charge rate} \times \text{number of accounts} \times 12 \text{ months}$$

$$\$25.05 \times 15,290 \times 12 = \$4.60M$$

The same calculation is repeated for all meter sizes and then added together to determine the total monthly fixed charge revenue for all customers. For FY 2018, the projected monthly fixed charge revenue is \$6.20M.

Adding together the commodity revenue, monthly fixed charge revenue, commodity revenue and the pumping charge revenue yields the total revenue from current rates.

Table 4-5: Revenues from Current Rates

| | FY 2018 | FY 2019 | FY 2020 | FY 2021 | FY 2022 |
|-----------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Monthly Fixed Charge | \$6,195,274 | \$6,201,470 | \$6,207,671 | \$6,213,879 | \$6,220,093 |
| Commodity Revenue | \$18,992,136 | \$19,941,743 | \$20,440,287 | \$20,951,294 | \$21,475,076 |
| Pumping Revenue | \$483,281 | \$507,446 | \$520,132 | \$533,135 | \$546,463 |
| Revenue from Current Rates | \$25,670,692 | \$26,650,658 | \$27,168,090 | \$27,698,308 | \$28,241,632 |

4.1.1 Miscellaneous Revenue

In addition to revenue from rates, the Water Enterprise also receives miscellaneous revenues from different sources such as interest earnings, antennae siting rental revenue, plan check fees, and other operating/non-operating sources. Total miscellaneous revenues for the Study period are shown in Table 4-6. Interest incomes are calculated based on actual reserves balances for the water fund. Note that penalty revenue, such as delinquent payment and service shut-off fees, are not included in the miscellaneous revenue as this income is planned to be set aside for a low-income program. All other miscellaneous revenue sources are projected to stay stable for the Study period.

Table 4-6: Projected Miscellaneous Revenue

| Fund 611 | FY 2018 | FY 2019 | FY 2020 | FY 2021 | FY 2022 |
|------------------------------------|------------------|------------------|------------------|------------------|------------------|
| Backflow Prevention | \$30,000 | \$30,000 | \$30,900 | \$31,827 | \$32,782 |
| Plan Checking/Filing Fee | \$3,000 | \$3,000 | \$3,090 | \$3,183 | \$3,278 |
| Inspection Fees | \$1,500 | \$1,500 | \$1,545 | \$1,591 | \$1,639 |
| Rental of City Facilities | \$30,100 | \$30,100 | \$31,003 | \$31,933 | \$32,891 |
| Misc (property damage) | \$40,000 | \$40,000 | \$41,200 | \$42,436 | \$43,709 |
| Misc (property damage) | \$5,000 | \$5,000 | \$5,150 | \$5,305 | \$5,464 |
| Fund 612 | | | | | |
| Plant Investment Fees | \$350,000 | \$350,000 | \$360,500 | \$371,315 | \$382,454 |
| Metered Water Sales | \$15,000 | \$15,000 | \$15,450 | \$15,914 | \$16,391 |
| Fire Flow Surcharge | \$25,000 | \$25,000 | \$25,750 | \$26,523 | \$27,318 |
| Total Miscellaneous Revenue | \$499,600 | \$499,600 | \$514,588 | \$530,026 | \$545,926 |

4.2 O&M EXPENSES

4.2.1 Water Supply Costs

The cost of imported water is the Water Enterprise’s largest O&M expense. One of the advantages of relying primarily on an imported water source is that O&M costs are significantly reduced during periods of lower sales, because less water is being purchased from the wholesaler (Calleguas). Table 4-7 summarizes the City’s water supply costs during the Study period. Note, the rates remain consistent across the Study period as the City has chosen to authorize automatic pass-through adjustments to the water purchase costs.

As Calleguas approves increases to its charges, the City will pass-through these costs to customers and adjust the proposed rates accordingly to recover the incremental cost incurred. This mitigates the risk of unknown rate increases by Calleguas as the City’s sole water supplier. Automatic Pass-Through adjustments in the rates are allowed through the provisions of Government Code Section 53756. While the rates remained fixed below, the total water supply cost increases each fiscal year as usage grows. The imported water supply costs account for a water loss factor of 3.8%. While 12,000 AF of Calleguas Tier 1 water is available before incurring the Tier 2 rate, the City’s purchases of 9,607 AF in FY 2018 (I Line 3) is well below that threshold. Therefore, Tier 2 is omitted from this table.

Table 4-7: Projected Fiscal Year Water Supply Costs⁸

| Line | Fiscal Year Costs | FY 2018 | FY 2019 | FY 2020 | FY 2021 | FY 2022 |
|------|--|---------------------|---------------------|---------------------|---------------------|---------------------|
| 1 | Total AF Sold | 9,242 | 9,704 | 9,947 | 10,196 | 10,451 |
| 2 | Water Loss Percentage | 3.8% | 3.8% | 3.8% | 3.8% | 3.8% |
| 3 | Total AF Purchased from Calleguas | 9,607 | 10,088 | 10,340 | 10,598 | 10,863 |
| 4 | | | | | | |
| 5 | Fixed Charges | | | | | |
| 6 | Calleguas CRC Charge | 749,682 | 749,682 | 749,682 | 749,682 | 749,682 |
| 7 | Calleguas RTS Charge | 785,584 | 785,584 | 785,584 | 785,584 | 785,584 |
| 8 | Total Fixed Charges | \$1,535,266 | \$1,535,266 | \$1,535,266 | \$1,535,266 | \$1,535,266 |
| 9 | | | | | | |
| 10 | Variable Charges | | | | | |
| 11 | Tier 1 Calleguas per AF (Jul to Dec) | \$1,300 | \$1,300 | \$1,300 | \$1,300 | \$1,300 |
| 12 | AF Purchased (Jul to Dec) | 4,804 | 5,044 | 5,170 | 5,299 | 5,432 |
| 13 | Variable Charges (Jul to Dec) | \$6,244,782 | \$6,557,022 | \$6,720,947 | \$6,888,971 | \$7,061,195 |
| 14 | | | | | | |
| 15 | Tier 1 Calleguas per AF (Jan to Jun) | \$1,300 | \$1,300 | \$1,300 | \$1,300 | \$1,300 |
| 16 | AF Purchased (Jan to June) | 4,804 | 5,044 | 5,170 | 5,299 | 5,432 |
| 17 | Variable Charges (Jan to Jun) | \$6,244,782 | \$6,557,022 | \$6,720,947 | \$6,888,971 | \$7,061,195 |
| 18 | | | | | | |
| 19 | Total AF Purchased (from Calleguas) | 9,607 | 10,088 | 10,340 | 10,598 | 10,863 |
| 20 | | | | | | |
| 21 | Variable Water Costs | \$12,489,565 | \$13,114,043 | \$13,441,894 | \$13,777,942 | \$14,122,390 |
| 22 | | | | | | |
| 23 | Total Water Supply Costs | \$14,024,831 | \$14,649,309 | \$14,977,160 | \$15,313,208 | \$15,657,656 |

The above rates charges and water purchases are shown on a fiscal year of July 1 – June 30, while Calleguas operates on a calendar year. Thus, it is estimated that the City will purchase 50% of its fiscal year water demand in one calendar year (for July through December), and the remaining demand in in the following calendar year (January through June). For example, fifty percent of FY 2019 water is projected to be charged the CY 2018 rates, with the second half charged the CY 2019 rates. First, RFC converted the fixed costs to fiscal year per the equation below. Note that, due to the pass-through provision, these costs will be the same across the Study period, while the City will pass any fixed charge increases from Calleguas directly to the City’s customers. The calculation is shown below using FY 2019.

$$(CY\ 2018\ Fixed\ Charges * 50\%) + (CY\ 2019\ Fixed\ Charges * 50\%) = FY\ 2019\ Fixed\ Charges$$

$$\$1,535,266 * 50\% + \$1,535,266 * 50\% = \$1,535,266$$

⁸ Calleguas Fixed and Variable charges (Lines 6, 7, 11, and 15) are shown without increases because the City anticipates using the AB 3030 pass-through provision.

Next, RFC calculated the fiscal year variable charges. Note that, while the rate remains the same during the study period due to pass-through, the total variable water costs increase as the City projects some recovery in demand. The calculation for FY 2019 is shown below:

$$CY\ 2018\ Tier\ 1\ Rate * (50\% * 9,913\ AF) + CY\ 2019\ Tier\ 1\ Rate * (50\% * 9,913\ AF) = \$12,887,497$$

Combining the fixed and variable costs calculated above results in FY 2019 water supply costs totaling \$14,422,763.

4.2.2 Water Operating Expenses

Table 4-8 summarizes budgeted and projected O&M expenses for the Water Enterprise during the Study period. The Water Supply Costs for FYs 2018 and 2019 are taken from the calculated values in Table 4-7 above, while the subsequent years are based on budget projections.

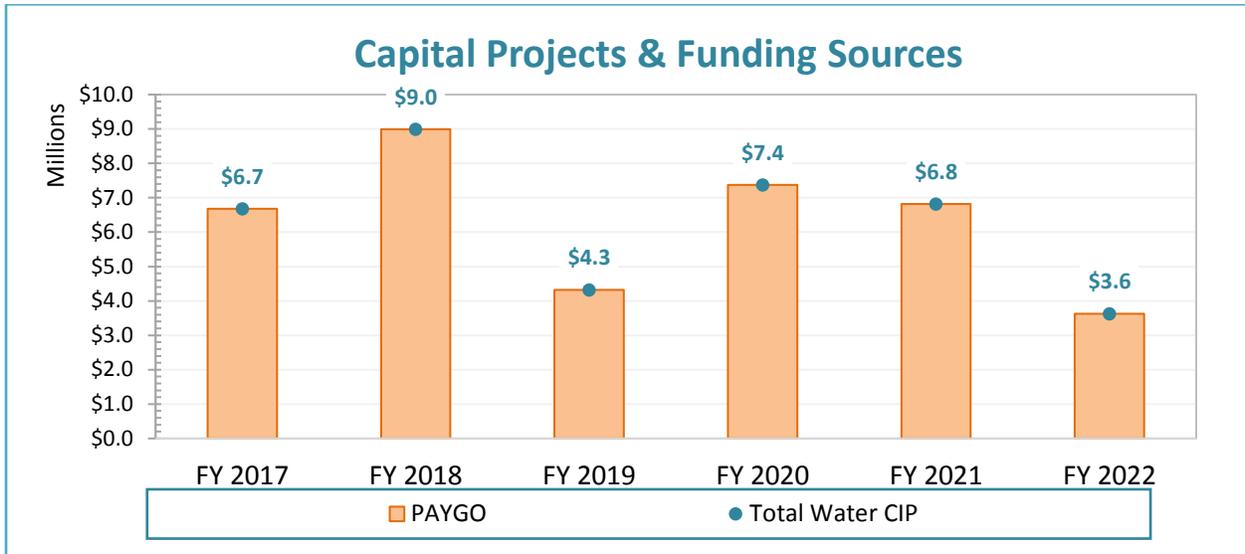
Table 4-8: Projected O&M Costs

| | FY 2018 | FY 2019 | FY 2020 | FY 2021 | FY 2022 |
|-------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Salaries | \$2,636,842 | \$2,678,780 | \$2,718,962 | \$2,759,746 | \$2,801,142 |
| Fringe Benefits | \$1,258,744 | \$1,363,311 | \$1,417,843 | \$1,474,557 | \$1,533,539 |
| Water Supply Costs | \$14,024,831 | \$14,649,309 | \$14,977,160 | \$15,313,208 | \$15,657,656 |
| Other M&O | \$3,271,857 | \$3,367,074 | \$3,449,252 | \$3,533,757 | \$3,620,667 |
| Total O&M Expenses | \$21,192,274 | \$22,058,474 | \$22,563,217 | \$23,081,268 | \$23,613,005 |

4.3 PROGRAMMED CAPITAL IMPROVEMENT PROJECTS (CIP)

The City has adopted a 5-year capital improvement program through FY 2022 to address future Water Enterprise needs (Figure 4-1). Based on the Asset Management Plan Study performed by GHD, a 100-year asset replacement and refurbishment (R&R) plan through FY 2113 was included to address the CIP needs of existing infrastructure as they come due. Average CIP revenue needs are approximately \$6.1M per year during the Study period of FYs 2018-2022. RFC’s projected capital expenses include a capital escalation factor of 2% and therefore may not align with the City’s adopted budget. In addition, Figure 4-1 includes asset replacement costs from Fund 619. The proposed capital improvement plan will be funded entirely through rate revenues (Pay As You Go or PAYGO) and reserves. The Water Enterprise currently has no outstanding debt and the City does not plan to issue any new debt in the next five years.

Figure 4-1: Capital Improvement Program Funding



4.4 STATUS QUO FINANCIAL PLAN

Table 4-9 displays the pro forma of the City’s Water Enterprise under current rates over the Study period. All projections shown in the table are based upon the City’s current rate structure, developed in the previous study, and do not yet include any rate adjustments or pass-through increases on wholesale water costs. The pro-forma incorporates the data shown in Table 4-5 for revenues from current rates, Table 4-6 for miscellaneous revenues, Table 4-7 for water supply costs, Table 4-8 for O&M expenses, and Figure 4-1 for CIP.

Table 4-9: Status Quo Financial Plan Pro-Forma

| Line No. | | FY 2018 | FY 2019 | FY 2020 | FY 2021 | FY 2022 |
|----------|-------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| 1 | REVENUES | | | | | |
| 2 | Revenues from Rates | \$25,670,692 | \$26,650,658 | \$27,168,090 | \$27,698,308 | \$28,241,632 |
| 3 | Revenue Adjustments | \$0 | \$0 | \$0 | \$0 | \$0 |
| 4 | Interest Income | \$487,307 | \$426,938 | \$437,997 | \$404,327 | \$379,001 |
| 5 | Other Revenues | \$499,600 | \$499,600 | \$514,588 | \$530,026 | \$545,926 |
| 6 | TOTAL REVENUES | \$26,657,600 | \$27,577,197 | \$28,120,674 | \$28,632,660 | \$29,166,560 |
| 7 | | | | | | |
| 8 | O&M EXPENSES | | | | | |
| 9 | Water Supply Costs | \$14,024,831 | \$14,649,309 | \$14,977,160 | \$15,313,208 | \$15,657,656 |
| 10 | Other O&M | \$7,167,443 | \$7,409,165 | \$7,586,057 | \$7,768,061 | \$7,955,349 |
| 11 | TOTAL O&M EXPENSES | \$21,192,274 | \$22,058,474 | \$22,563,217 | \$23,081,268 | \$23,613,005 |
| 12 | | | | | | |
| 13 | NET REVENUES | \$5,465,326 | \$5,518,722 | \$5,557,457 | \$5,551,392 | \$5,553,554 |
| 14 | | | | | | |
| 15 | CIP EXPENSES | \$8,905,000 | \$4,324,352 | \$7,158,500 | \$6,818,625 | \$3,498,000 |
| 16 | | | | | | |
| 17 | <i>CIP Projects Funded by</i> | \$8,905,000 | \$4,324,352 | \$7,158,500 | \$6,818,625 | \$3,498,000 |
| 18 | PAYGO | \$8,905,000 | \$4,324,352 | \$7,158,500 | \$6,818,625 | \$3,498,000 |
| 19 | Debt | \$0 | \$0 | \$0 | \$0 | \$0 |
| 20 | | | | | | |
| 21 | NET CASH BALANCES | -\$3,527,174 | \$1,194,371 | -\$1,812,193 | -\$1,267,233 | \$1,923,054 |
| 22 | | | | | | |
| 23 | BEGINNING BALANCES | \$32,233,375 | \$28,218,894 | \$28,986,326 | \$26,736,136 | \$25,064,577 |
| 24 | ENDING BALANCES | \$28,706,201 | \$29,413,265 | \$27,174,133 | \$25,468,904 | \$26,987,631 |
| 25 | TARGET BALANCES | \$15,851,001 | \$16,278,610 | \$16,620,076 | \$16,969,174 | \$17,326,085 |

Under the ‘status-quo’ scenario, revenues generated from rates and other miscellaneous revenues are adequate to sufficiently recover the operating expenses while also exceeding target reserve levels (line 28) for the duration of the Study period, as indicated on line 27 in Table 4-9 above. While ending balances do exceed the target balances, they do begin to decrease, resulting in the ending balance falling below the total target in FY 2024 due to an increase in capital improvement expenses starting in FY 2023.

4.5 RECOMMENDATIONS AND PROPOSED REVENUE ADJUSTMENTS

To ensure that the Water Enterprise will have adequate revenues to fund operating expense and capital expenses, RFC recommends the City adjust revenues by 1% in order to continue meeting its reserve targets while funding O&M and capital costs. This increase assumes future water supply cost increases will automatically be passed through under AB 3030 as described above. The revenue adjustments are scheduled to be implemented in January of each year and shown in Table 4-10. Concurrently, Calleguas also projects annual increases in its revenue requirements, also shown below. These adjustments will result in incremental rate adjustments by Calleguas that, as described above, the City will pass through

directly to customers. Actual wholesale water supply pass-through costs will be determined annually to align with actual water cost increases imposed on the City, and will be collected exclusively on the volumetric sales.

Table 4-10: Proposed Revenue Adjustments⁹

| Effective Date | City of Thousand Oaks Proposed Water Revenue Adjustments | Calleguas MWD Proposed Water Revenue Adjustments |
|----------------|---|---|
| January 2018 | 1 percent | 4.9 percent |
| January 2019 | 1 percent | 4.8 percent |
| January 2020 | 1 percent | 4.9 percent |
| January 2021 | 1 percent | 4.6 percent |
| January 2022 | 1 percent | 4.8 percent |

4.5.1 Proposed Financial Plan

A pro forma of the proposed financial plan is shown in Table 4-11 below. The proposed financial plan successfully meets the City’s financial needs, exceeding target reserve balances throughout the study period and into the long-term through FY 2027. Note also that, while there is a negative cash flow in some years, this is due to high CIP expenses in those years.

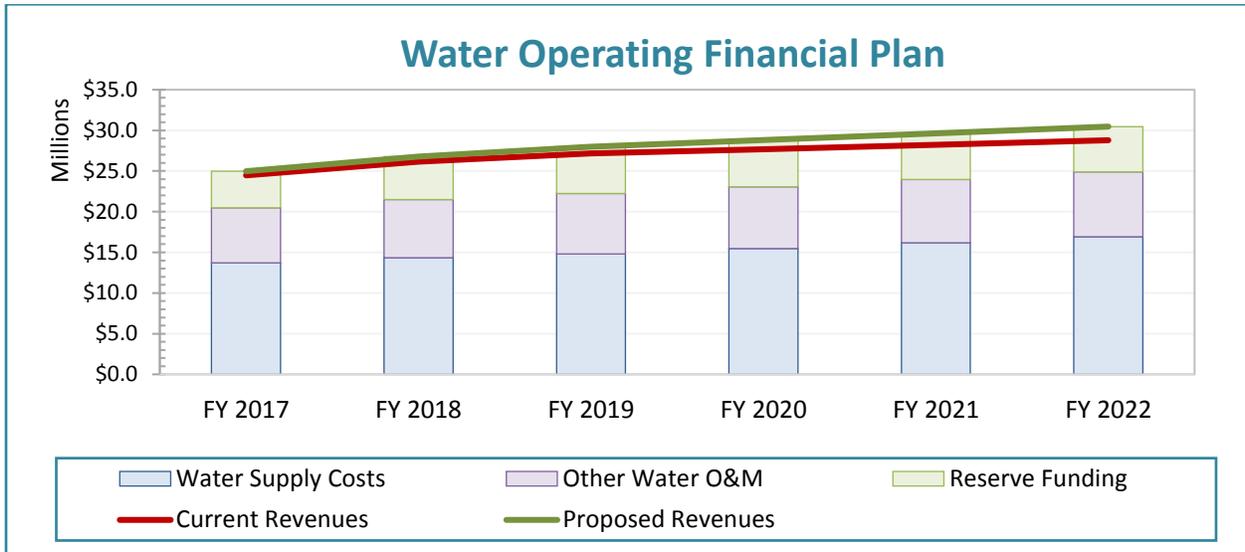
⁹ Note that actual impacts to ratepayers is not equal to the summation of the City’s and Calleguas’ adjustments. Calleguas represents approximately 2/3 of the Water Enterprise’s annual budget. Actual customer impacts are detailed in the following section.

Table 4-11: Proposed Financial Plan Pro-Forma

| Line No. | | FY 2018 | FY 2019 | FY 2020 | FY 2021 | FY 2022 |
|-----------|-------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| 1 | REVENUES | | | | | |
| 2 | Revenues from Rates | \$25,670,692 | \$26,650,658 | \$27,168,090 | \$27,698,308 | \$28,241,632 |
| 3 | Revenue Adjustments | \$128,353 | \$401,092 | \$684,649 | \$981,974 | \$1,293,665 |
| 4 | Interest Income | \$487,307 | \$428,864 | \$445,953 | \$422,598 | \$412,079 |
| 5 | Other Revenues | \$499,600 | \$499,600 | \$514,588 | \$530,026 | \$545,926 |
| 6 | TOTAL REVENUES | \$26,785,953 | \$27,980,214 | \$28,813,280 | \$29,632,906 | \$30,493,303 |
| 7 | | | | | | |
| 8 | O&M EXPENSES | | | | | |
| 9 | Water Supply Costs | \$14,024,831 | \$14,649,309 | \$14,977,160 | \$15,313,208 | \$15,657,656 |
| 10 | Other O&M | \$7,167,443 | \$7,409,165 | \$7,586,057 | \$7,768,061 | \$7,955,349 |
| 11 | TOTAL O&M EXPENSES | \$21,192,274 | \$22,058,474 | \$22,563,217 | \$23,081,268 | \$23,613,005 |
| 12 | | | | | | |
| 13 | NET REVENUES | \$5,593,679 | \$5,921,740 | \$6,250,063 | \$6,551,638 | \$6,880,298 |
| 14 | | | | | | |
| 15 | CIP EXPENSES | \$8,992,500 | \$4,324,352 | \$7,369,650 | \$6,818,625 | \$3,630,500 |
| 16 | | | | | | |
| 17 | <i>CIP Projects Funded by</i> | \$8,992,500 | \$4,324,352 | \$7,369,650 | \$6,818,625 | \$3,630,500 |
| 18 | PAYGO | \$8,992,500 | \$4,324,352 | \$7,369,650 | \$6,818,625 | \$3,630,500 |
| 19 | Debt | \$0 | \$0 | \$0 | \$0 | \$0 |
| 20 | | | | | | |
| 21 | NET CASH BALANCES | -\$3,398,821 | \$1,597,388 | -\$1,119,587 | -\$266,987 | \$3,249,798 |
| 22 | | | | | | |
| 23 | BEGINNING BALANCES | \$32,233,375 | \$28,347,247 | \$29,515,772 | \$27,950,232 | \$27,260,646 |
| 24 | ENDING BALANCES | \$28,834,555 | \$29,944,636 | \$28,396,185 | \$27,683,244 | \$30,510,444 |
| 25 | TARGET BALANCES | \$15,851,001 | \$16,278,610 | \$16,620,076 | \$16,969,174 | \$17,326,085 |

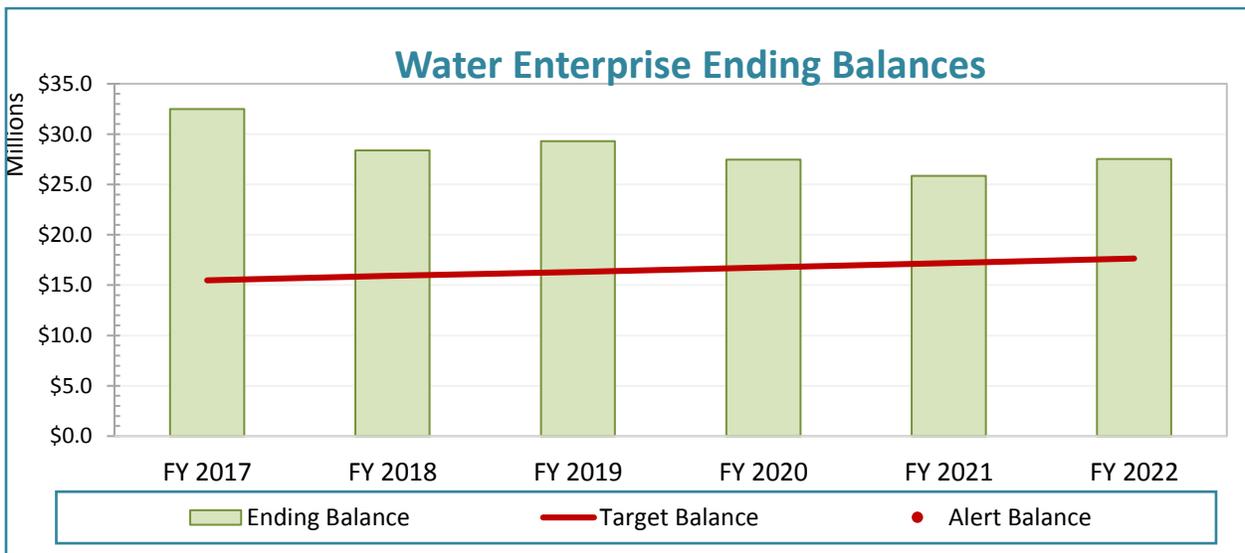
Figure 4-2 illustrates the operating position of the Water Enterprise, where the expenses and reserve funding are shown by stacked bars and total revenues at current rates and proposed rates are shown by red and green lines, respectively.

Figure 4-2: Proposed Operating Financial Plan



The ending fund balance for the Water Enterprise is projected and shown in Figure 4-3, where the red line indicates the target reserve balance as recommended by the reserve policy discussed in Section 3. Under the proposed financial plan, the ending fund balance exceeds the target reserve for all years.

Figure 4-3: Ending Balance for Water Fund



5. PROPOSED RATES

5.1 PROPOSED MONTHLY FIXED CHARGES FOR STUDY PERIOD

Applying the proposed revenue adjustments from Table 4-10 to the current monthly fixed charges yields the proposed monthly fixed charges for the Study period in Table 5-1. Note that while the table includes proposed rates for FYs 2020-2022, the City will only be implementing rates for FYs 2018-2019.

Table 5-1: Proposed Monthly Fixed Charges for Study Period

| | FY 2017 Current | FY 2018 Proposed | FY 2019 Proposed | FY 2020 Proposed | FY 2021 Proposed | FY 2022 Proposed |
|-----------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Rev Adj. | | 1% | 1% | 1% | 1% | 1% |
| 5/8 | \$25.05 | \$25.31 | \$25.57 | \$25.83 | \$26.09 | \$26.36 |
| 1 | \$39.56 | \$39.96 | \$40.36 | \$40.77 | \$41.18 | \$41.60 |
| 1 1/2 | \$75.79 | \$76.55 | \$77.32 | \$78.10 | \$78.89 | \$79.68 |
| 2 | \$119.28 | \$120.48 | \$121.69 | \$122.91 | \$124.14 | \$125.39 |
| 3 | \$256.99 | \$259.56 | \$262.16 | \$264.79 | \$267.44 | \$270.12 |
| 4 | \$459.92 | \$464.52 | \$469.17 | \$473.87 | \$478.61 | \$483.40 |
| 6 | \$945.51 | \$954.97 | \$964.52 | \$974.17 | \$983.92 | \$993.76 |

5.1 COMMODITY TIER STRUCTURE

The City revised the tier structure in FY 2016 during the previous study, and will continue to use the resultant tier widths. Table 5-2 below summarizes the current tier widths, as well as the previous tier structure and widths, shown for reference.

Table 5-2: Commodity Tier Structure

| Customer Class | Former Tier Range (hcf) | Former Tier Width (hcf) | Current Tier Range (hcf) | Current Tier Width (hcf) |
|----------------------------------|----------------------------|----------------------------|-----------------------------|-----------------------------|
| Single Family Residential | | | | |
| Tier 1 | 0 - 15 | 15 | 0 - 12 | 12 |
| Tier 2 | 16 - 35 | 20 | 13 - 30 | 18 |
| Tier 3 | 36+ | ∞ | 31+ | ∞ |
| MFR | <i>uniform</i> | ∞ | <i>uniform</i> | ∞ |
| Commercial | <i>uniform</i> | ∞ | <i>uniform</i> | ∞ |
| Irrigation | <i>uniform</i> | ∞ | <i>uniform</i> | ∞ |

5.2 PROPOSED COMMODITY CHARGES FOR STUDY PERIOD

The proposed commodity rate increases, broken into the City adjustment and an estimated pass-through adjustment, are shown in Table 5-3 below. Much like the monthly fixed charges, the commodity charges are increased each year of the Study period, per the proposed revenue adjustments found in Table 4-10.

Note that pass-through revenues are only collected on the volumetric component. The pass-through amount is uniformly applied to each HCF sold. Since HCF's are sold at different prices depending on customer class and tier, the percentage adjustment due to pass-through varies.

Table 5-3: Proposed Commodity Rates for FY 2018 and FY 2019

| Single Family Residential Commodity Rates | Tier Widths | FY 2018 Rate Adjustment | | FY 2019 Rate Adjustment | |
|--|----------------------|--------------------------------|-------------|--------------------------------|-------------|
| Tier 1 | (0 - 12 hcf) | (\$) | (%) | (\$) | (%) |
| Existing Rate | | \$4.51 | | \$4.56 | |
| City Adjustment | | \$0.05 | 1.0% | \$0.05 | 1.0% |
| | | \$4.56 | | \$4.61 | |
| Pass-through Adjustment | | \$0.18 | 4.0% | \$0.35 | 3.7% |
| Total Tier 1 Rate | | \$4.74 | 5.0% | \$4.96 | 4.7% |
| Tier 2 | (13 - 30 hcf) | (\$) | (%) | (\$) | (%) |
| Existing Rate | | \$4.83 | | \$4.88 | |
| City Adjustment | | \$0.05 | 1.0% | \$0.05 | 1.0% |
| | | \$4.88 | | \$4.93 | |
| Pass-through Adjustment | | \$0.18 | 3.7% | \$0.35 | 3.5% |
| Total Tier 2 Rate | | \$5.06 | 4.7% | \$5.28 | 4.5% |
| Tier 3 | (31 + hcf) | (\$) | (%) | (\$) | (%) |
| Existing Rate | | \$5.23 | | \$5.29 | |
| City Adjustment | | \$0.05 | 1.0% | \$0.05 | 1.0% |
| | | \$5.29 | | \$5.35 | |
| Pass-through Adjustment | | \$0.18 | 3.4% | \$0.35 | 3.4% |
| Total Tier 3 Rate | | \$5.47 | 4.4% | \$5.70 | 4.2% |
| Non-Residential & MFR Commodity Rates | | FY 2018 Rate Adjustment | | FY 2019 Rate Adjustment | |
| | | (\$) | (%) | (\$) | (%) |
| Existing Rate | | \$4.85 | | \$4.90 | |
| City Adjustment | | \$0.05 | 1.0% | \$0.05 | 1.0% |
| | | \$4.90 | | \$4.95 | |
| Pass-through Adjustment | | \$0.18 | 3.7% | \$0.35 | 3.5% |
| Total Non-Residential & MFR Rate | | \$5.08 | 4.7% | \$5.30 | 4.5% |
| Pumping Charge | | FY 2018 Rate Adjustment | | FY 2019 Rate Adjustment | |
| | | (\$) | (%) | (\$) | (%) |
| Existing Rate | | \$0.18 | | \$0.19 | |
| City Adjustment (Uniform) | | \$0.01 | | \$0.01 | |
| | | \$0.19 | 3% | \$0.20 | 3% |

5.3 BILL IMPACTS

Estimated bill impacts for low (10 hcf), average (18 hcf) and high (50 hcf) Single Family Residential water customers are shown below both in Figure 5-1 and Table 5-4. Note that a single family residential home using 10 hcf per month will experience a 3.6% adjustment to their monthly water bill, inclusive of all City and pass-through adjustments.

Figure 5-1: Single Family Residential Customer Bill Impacts¹⁰

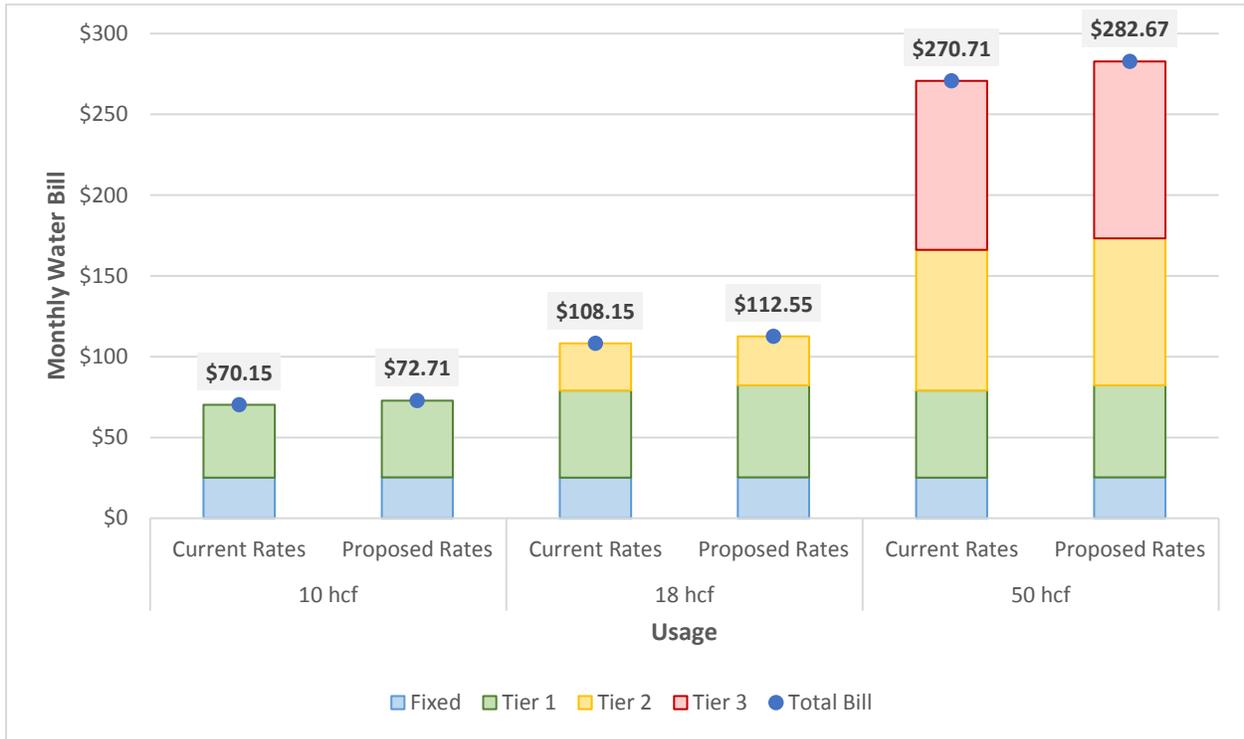


Table 5-4: Single Family Residential Customer Bill Impacts

| | | Fixed | Tier 1 | Tier 2 | Tier 3 | Total Bill | Percent Change |
|--------|-----------------------|----------------|----------------|----------------|-----------------|-----------------|----------------|
| 10 hcf | Current Rates | \$25.05 | \$45.10 | \$0.00 | \$0.00 | \$70.15 | |
| | Proposed Rates | \$25.31 | \$47.40 | \$0.00 | \$0.00 | \$72.71 | 3.6% |
| 18 hcf | Current Rates | \$25.05 | \$54.12 | \$28.98 | \$0.00 | \$108.15 | |
| | Proposed Rates | \$25.31 | \$56.88 | \$30.36 | \$0.00 | \$112.55 | 4.1% |
| 50 hcf | Current Rates | \$25.05 | \$54.12 | \$86.94 | \$104.60 | \$270.71 | |
| | Proposed Rates | \$25.31 | \$56.88 | \$91.08 | \$109.40 | \$282.67 | 4.4% |

¹⁰ Includes both City and pass-through adjustments.

6. APPENDIX A – DETAILED 5-YEAR CIP

| Fund 612 – Water – Capital Programs | FY 2017 | FY 2018 | FY 2019 | FY 2020 | FY 2021 | FY 2022 |
|---|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| SCADA Master Plan and Programmable Logic Controllers | \$350,000 | \$1,050,000 | \$0 | \$0 | \$0 | \$0 |
| La Granada Reservoir Improvements | \$900,000 | \$150,000 | \$406,000 | \$0 | \$0 | \$0 |
| Wilder Reservoir Rehabilitation | \$0 | \$0 | \$177,625 | \$0 | \$0 | \$0 |
| Rolling Oaks and Meadows Reservoirs Retrofit Improvements | \$0 | \$650,000 | \$0 | \$0 | \$0 | \$0 |
| Reservoir Mixing Improvements | \$0 | \$200,000 | \$0 | \$0 | \$0 | \$0 |
| Meadows Reservoir Altitude Valve | \$200,000 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Freeway Reservoir Rehabilitation | \$0 | \$0 | \$0 | \$0 | \$104,500 | \$477,000 |
| Emergency Water Interconnects FY 2017-19 | \$0 | \$100,000 | \$101,500 | \$0 | \$0 | \$0 |
| Lone Oak Emergency Generator | \$0 | \$0 | \$203,000 | \$309,000 | \$0 | \$0 |
| Conejo Valley Groundwater Development Implementation | \$0 | \$0 | \$0 | \$77,250 | \$1,045,000 | \$79,500 |
| Pressure Reducing Stations | \$0 | \$0 | \$126,875 | \$154,500 | \$0 | \$0 |
| Water Master Plan Implementation Projects FY 2017-19 | \$0 | \$60,000 | \$60,900 | \$0 | \$0 | \$0 |
| Calleguas Turnouts Pipeline Upgrades I | \$0 | \$0 | \$0 | \$23,175 | \$104,500 | \$0 |
| Calleguas Turnouts Pipeline Upgrades II | \$0 | \$0 | \$0 | \$0 | \$23,513 | \$106,000 |
| Calleguas Turnouts Regulating Valve Upgrades | \$0 | \$15,000 | \$101,500 | \$0 | \$0 | \$0 |
| Oakbrook Reservoir Improvements | \$0 | \$0 | \$0 | \$0 | \$52,250 | \$212,000 |
| Willow Lane Reservoir Improvements | \$0 | \$0 | \$50,750 | \$169,950 | \$0 | \$0 |
| Kelley Reservoir Improvements | \$0 | \$0 | \$0 | \$30,900 | \$172,425 | \$0 |
| Water System Miscellaneous Improvements FY 2019-22 | \$0 | \$0 | \$0 | \$206,000 | \$209,000 | \$212,000 |
| Emergency Water Interconnects FY 2019-22 | \$0 | \$0 | \$0 | \$103,000 | \$104,500 | \$106,000 |
| Water Master Plan Implementation Projects FY 2019-22 | \$0 | \$0 | \$0 | \$61,800 | \$62,700 | \$63,600 |
| Water System Miscellaneous Improvements FY 2017-19 | \$0 | \$200,000 | \$203,000 | \$0 | \$0 | \$0 |
| Site Improvements at Reservoirs and Pump Stations | \$0 | \$0 | \$0 | \$103,000 | \$104,500 | \$106,000 |
| Conejo Valley Groundwater Management Plan | \$100,000 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Total Fund 612 CIP | \$1,550,000 | \$2,425,000 | \$1,431,150 | \$1,238,575 | \$1,982,888 | \$1,362,100 |

| Fund 613 - Water - Capital Facilities Replacement | FY 2017 | FY 2018 | FY 2019 | FY 2020 | FY 2021 | FY 2022 |
|---|----------------|----------------|----------------|----------------|----------------|----------------|
| Automated Meter Reading Program | \$0 | \$400,000 | \$406,000 | \$412,000 | \$418,000 | \$424,000 |
| Freeway Reservoir Access Road Improvements | \$0 | \$0 | \$121,800 | \$0 | \$0 | \$0 |
| SCADA Master Plan and Programmable Logic Controllers | \$200,000 | \$600,000 | \$0 | \$0 | \$0 | \$0 |
| Wilbur Court Waterline Relocation | \$0 | \$180,000 | \$0 | \$0 | \$0 | \$0 |
| Tara Reservoir Improvements | \$1,650,000 | \$500,000 | \$0 | \$0 | \$0 | \$0 |
| Lang Ranch Reservoir Improvements | \$0 | \$1,950,000 | \$0 | \$0 | \$0 | \$0 |
| Wilder Reservoir Rehabilitation | \$0 | \$0 | \$0 | \$1,776,750 | \$0 | \$0 |
| Sunset Number 2 and 3 Rehabilitation | \$0 | \$0 | \$0 | \$618,000 | \$888,250 | \$0 |
| Waterline Looping Program FY 2018-20 | \$0 | \$0 | \$152,250 | \$875,500 | \$0 | \$0 |
| Meadows Reservoir Altitude Valve | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Pump Replacement/Upgrade | \$0 | \$150,000 | \$152,250 | \$0 | \$0 | \$0 |
| Automated Chlorine Analyzer Installation | \$0 | \$600,000 | \$609,000 | \$0 | \$0 | \$0 |
| Los Robles Greens Golf Course Groundwater Utilization Project | \$700,000 | \$0 | \$0 | \$772,500 | \$0 | \$0 |
| Grissom 1 and 2 Reservoir | \$0 | \$0 | \$0 | \$0 | \$992,750 | \$0 |
| Valve Replacement FY 2017-19 | \$0 | \$100,000 | \$101,500 | \$0 | \$0 | \$0 |
| Interagency Water Connection | \$0 | \$150,000 | \$253,750 | \$0 | \$0 | \$0 |
| Hydrant Replacement FY 2017-19 | \$0 | \$50,000 | \$50,750 | \$0 | \$0 | \$0 |
| Emergency Water Interconnects FY 2017-19 | \$0 | \$100,000 | \$101,500 | \$0 | \$0 | \$0 |
| Conejo Valley Groundwater Development Implementation | \$0 | \$0 | \$0 | \$77,250 | \$1,045,000 | \$79,500 |
| Polybutylene Service Replacement FY 2017-18 | \$0 | \$200,000 | \$0 | \$0 | \$0 | \$0 |
| Water Security Cameras | \$0 | \$75,000 | \$76,125 | \$0 | \$0 | \$0 |
| Water Master Plan Implementation Projects FY 2017-19 | \$0 | \$140,000 | \$142,100 | \$0 | \$0 | \$0 |
| Calleguas Turnouts Pipeline Upgrades I | \$0 | \$0 | \$0 | \$54,075 | \$261,250 | \$0 |
| Calleguas Turnouts Pipeline Upgrades II | \$0 | \$0 | \$0 | \$0 | \$54,863 | \$265,000 |
| Calleguas Turnouts Regulating Valve Upgrades | \$0 | \$35,000 | \$253,750 | \$0 | \$0 | \$0 |
| Oakbrook Reservoir Improvements | \$0 | \$0 | \$0 | \$0 | \$104,500 | \$477,000 |
| Willow Lane Reservoir Improvements | \$0 | \$0 | \$101,500 | \$396,550 | \$0 | \$0 |
| Kelley Reservoir Improvements | \$0 | \$0 | \$0 | \$72,100 | \$402,325 | \$0 |
| Hydrant Replacement FY 2019-22 | \$0 | \$0 | \$0 | \$51,500 | \$52,250 | \$53,000 |

| | | | | | | |
|--|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Valve Replacement FY 2019-22 | \$0 | \$0 | \$0 | \$206,000 | \$209,000 | \$212,000 |
| Emergency Water Interconnects FY 2019-22 | \$0 | \$0 | \$0 | \$103,000 | \$104,500 | \$106,000 |
| Polybutylene Service Replacement FY 2019-22 | \$0 | \$0 | \$0 | \$206,000 | \$0 | \$212,000 |
| Water Master Plan Implementation Projects FY 2019-22 | \$0 | \$0 | \$0 | \$144,200 | \$146,300 | \$148,400 |
| Site Improvements at Reservoirs and Pump Stations | \$0 | \$0 | \$0 | \$154,500 | \$156,750 | \$159,000 |
| La Granada Pump Station | \$2,350,000 | \$1,250,000 | \$0 | \$0 | \$0 | \$0 |
| Municipal Service Center Fueling Station Upgrade | \$100,000 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Municipal Service Center Solar Covered Vehicle Canopies | \$0 | \$0 | \$0 | \$211,150 | \$0 | \$0 |
| Municipal Service Center Flat Roofs | \$0 | \$87,500 | \$0 | \$0 | \$0 | \$0 |
| Municipal Service Center Parking Lot Repaving | \$0 | \$0 | \$0 | \$0 | \$0 | \$132,500 |
| Total Fund 613 CIP | \$5,000,000 | \$6,567,500 | \$2,522,275 | \$6,131,075 | \$4,835,738 | \$2,268,400 |
| | | | | | | |
| Fund 619 - Water Fleet Replacement | FY 2017 | FY 2018 | FY 2019 | FY 2020 | FY 2021 | FY 2022 |
| Fleet Replacement | \$131,002 | \$0 | \$370,927 | \$0 | \$0 | \$0 |
| Total Fund 619 CIP | \$131,002 | \$0 | \$370,927 | \$0 | \$0 | \$0 |
| Total CIP | \$6,681,002 | \$8,992,500 | \$4,324,352 | \$7,369,650 | \$6,818,625 | \$3,630,500 |