

CITY of EUREKA

DRAFT Report for:

Water and Sewer Rate and Connection Fee Study

November 2022

OFFICE LOCATIONS:

Temecula – Corporate Headquarters
32605 Temecula Parkway, Suite 100
Temecula, CA 92592

San Francisco – Regional Office
870 Market Street, Suite 1223
San Francisco, CA 94102

www.nbsgov.com

Prepared by:

This page left blank intentionally.



TABLE OF CONTENTS

Section 1. Executive Summary	1
Background and Purpose	1
Key Findings.....	2
Study Recommendations	4
Section 2. Overview of the Rate Study Methodology	5
Rate Design Criteria.....	5
Rate Structure Terminology	6
Section 3. Water Rate Study	9
Developing Recommended Water Rates	9
Water Utility Revenue Requirements	10
Characteristics of Water Customers by Class.....	11
Cost of Service Analysis – Water	12
Current vs. Proposed Water Rate Structures.....	13
Comparison of Current and Proposed Monthly Bills	15
Section 4. Sewer Rate Study	17
Developing Recommended Sewer Rates	17
Sewer Utility Revenue Requirements	17
Cost of Service Analysis – Sewer	18
Current vs. Proposed Sewer Rates	22
Section 5. Connection Fee Background, Purpose and Methodology	24
Background and Purpose	24
Connection Fee Methodology.....	24
Facility Standards, Level of Service, and Deficiencies	24
Mitigation Fee Act and Required Findings	25
Section 6. Water Connection Fee Study	26
Introduction.....	26
Existing Connections and Projected Future Growth	26
Existing and Planned Future Assets	27
Adjustments to the Cost Basis.....	29
Calculated Water Connection Fees	30
Water Connection Fee Findings Statements.....	31

Section 7. Sewer Connection Fee Study	33
Introduction.....	33
Existing Connections and Projected Future Growth.....	33
Existing and Planned Future Assets	34
Adjustments to the Cost Basis.....	35
Calculated Sewer Connection Fees	36
Sewer Connection Fee Findings Statements.....	37
Section 8. Recommendations and Next Steps	38
Consultant Recommendations.....	38
Next Steps.....	38
Section 9. Appendix A – Abbreviations & Acronyms.....	40
Section 10. Appendix B – Water Rate Summary Tables	42
Section 11. Appendix C – Sewer Rate Summary Tables	43
Section 12. Appendix D – Water Connection Fee Summary Tables	44
Section 13. Appendix E – Sewer Connection Fee Summary Tables	45

TABLE OF FIGURES

Figure 1. Changes in 2016 vs. 2022 Consumption Levels.....	1
Figure 2. Comparison of Regional Water and Sewer Bills.....	3
Figure 3. Primary Components of a Rate Study	11
Figure 4. Summary of Water Revenue Requirements	10
Figure 5. Summary of Water Reserve Funds.....	11
Figure 6. Water Consumption by Customer Class.....	11
Figure 7. Peaking Factors by Customer Class	12
Figure 8. Number of Accounts by Customer Class	12
Figure 9. Number of Meters by Customer Class – 2016 vs. 2022	13
Figure 10. Summary of Fixed and Variable Rate Revenue Requirements	13
Figure 11. Summary of Adjusted Rate Revenue Requirements by Customer Class	13
Figure 12. Current and Proposed Water Rates Fiscal Years 2022/23 – 2026/27.....	14
Figure 13. Monthly Water Bill Comparison for Single-Family Customers.....	15
Figure 14. Monthly Water Bill Comparison for Commercial Users.....	16
Figure 15. Summary of Sewer Revenue Requirements	18
Figure 16. Summary of Sewer Reserve Funds.....	18
Figure 17. Summary of Estimated Flow to Treatment Plant.....	19
Figure 18. Summary of Annual Flow and Strength (BOD) Characteristics by Customer Class:.....	20
Figure 19. Summary of Annual Flow and Strength (TSS) Characteristics by Customer Class:	20
Figure 20. Summary of Sewer customer Accounts and Housing Equivalent units (HEU’s)	20
Figure 21. Summary of Adjusted Rate Revenue Requirements by Customer Class	21
Figure 22. Current and Proposed Sewer Rates Fiscal Years 2022/23 – 2026/27	22
Figure 23. Monthly Single-Family Sewer Bill Comparison.....	23
Figure 24. Monthly Light-Strength Commercial Sewer Bill Comparison.....	23
Figure 25. Meter Equivalents – Water	27
Figure 26. Projected Customer Growth – Water	27
Figure 27. Summary of Existing Water Asset Values	28
Figure 28. Existing Water Asset Values Allocated to Future Customers.....	28
Figure 29. Planned Water Asset Values Allocated to Future Customers.....	29
Figure 30. Cash Reserves Allocated to Future Water Customers	29
Figure 31. Outstanding Debt Allocated to Future Water Customers.....	30
Figure 32. Summary of Cost Basis for Future Water Customers	30
Figure 33. Summary of Costs Allocated to Future Water Customers & New Connection fees	30
Figure 34. Updated Water Connection Fees	31
Figure 35. Housing Equivalent Units – Sewer	33
Figure 36. Projected Customer Growth – Sewer	34
Figure 37. Summary of Existing Sewer Asset Values.....	34
Figure 38. Existing Sewer Asset Values Allocated to Future Customers.....	35
Figure 39. Planned Asset Values Allocated to Future Sewer Customers.....	35
Figure 40. Cash Reserves Allocated to Future Sewer Customers	36
Figure 41. Outstanding Debt Allocated to Future Sewer Customers.....	36
Figure 42. Summary of Cost Basis for Future Sewer Customers.....	36
Figure 43. Calculation of New Sewer Connecton Fees	37

This page left blank intentionally.

Section 1. EXECUTIVE SUMMARY

Background and Purpose

BACKGROUND

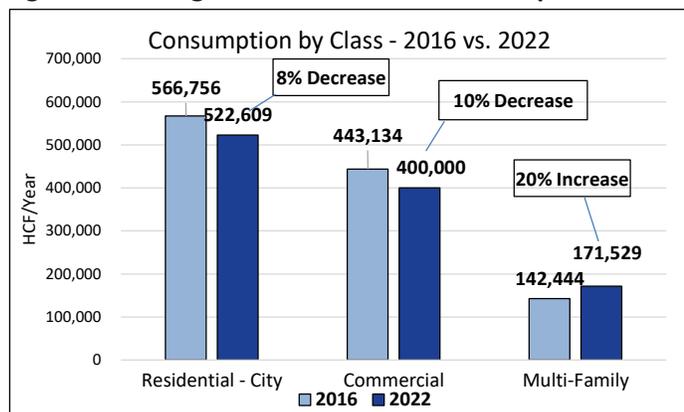
The City of Eureka (City) provides water and sewer service within the City limits and a limited number of outside customers. The City and Humboldt Community Services District (District or HCS D) have interconnected water and sewer systems – the City sells water to the District and provides treatment for the District’s sanitary sewer effluent, which is sent to the City’s wastewater treatment plant.

The City last performed a rate study for the water and sewer utilities in 2016, including water and sewer connection fees, and retained NBS in January 2022 to update this rate study. As in 2016, the City and the District decided it would be beneficial to have their rate and connection fee studies performed concurrently, although these studies were prepared independently.

Basic rate study tasks included updating the cost of service analyses and evaluating key assumptions such as changes in water sales and consumption patterns within customer class. Because of the significant impact that capital improvement program (CIP) costs have on rates, NBS also evaluated alternative levels of CIP funding.

Covid-19 restrictions the last few years have impacted the water and sewer utilities through changes in water consumption patterns. As seen in **Figure 1**, these reductions have been most significant in commercial businesses. As a result of these commercial decreases, costs have shifted toward residential customers. Whether these changes will linger or return to pre-Covid-19 conditions in the next few years is yet to be seen.

Figure 1 – Changes in 2016 vs. 2022 Consumption Levels



PURPOSE

The overall purpose of this study is to develop proposed rates and connection fees for the City’s water and sewer utilities that comply with State law, particularly Proposition 218 (or Prop 218)¹, which mandates that rates be fair and equitable. Cost-of-service tasks included reviewing and confirming the City’s customer accounts, water consumption, and the projected revenues and expenses within the context of the City’s broader rate-related goals and objectives. This process is intended to ensure the new rates adequately fund operations, maintenance, and capital improvement project costs, provide long-term revenue stability, and maintain the financial health of the utilities. This report is provided in part to assist the City in its effort to communicate transparently with the residents and businesses it serves and document this study.

1. California Constitutional Provision, Article XIII D, Section 6. Prop 218 is commonly called the “right to vote on new taxes” act.

In developing proposed utility rates and connection fees, NBS worked with City staff on rate alternatives and study recommendations.

Key Findings

REVENUE REQUIREMENTS AND PROJECTED RATES

The City's water and sewer utilities both have ongoing rehabilitation and replacement projects and need to maintain healthy reserve funds. This will require annual rate increases over the next five years for both utilities², as follows:

- Water – 10 percent increases in the first four years (from FY 2022/23 through FY 2025/26), and an 8 percent increase in Year 5 (FY 2026/27). These adjustments assume outside funding of \$6 million from a State Revolving Fund Loan in FY 2023/24 for capital improvements.
- Sewer – of 10 percent rate increases in the first year (FY 2022/23), an 8 percent increase in the second year (FY 2023/24), and 4 percent increases in the last three years (FY 2024/25 and FY 2026/27). These increases assume no new loans or revenue bonds for capital improvement funding.

WATER RATES

The current water rates include a monthly fixed charge plus a uniform volumetric rate. Due to the City's single and abundant source of supply, a more conservation-oriented multi-tiered rate design is not justified on either a needs basis or a cost-basis. The current fixed monthly charges, which increase as meter sizes increase, will be retained, as well as the Inside- and Outside-City classifications for fixed and volumetric rates. It is a common water industry practice to recover fixed monthly charges based on customer class and meter size. Fixed charges are also intended to recover fixed costs in the system, such as infrastructure, debt service, personnel costs, and administrative and overhead costs. These types of costs, and the share that each customer class uses of each, is the basis for differences in cost-of-service revenue requirements and fixed charges.

The water utility's rate revenue currently covers operating expenses and existing debt service but is not sufficient to cover the planned capital improvements. Hence, additional funding from rate increases and a \$6 million State Revolving Fund Loan were needed to adequately cover capital project expenditures. Maintaining the financial integrity of the water utility by funding planned CIP projects and maintaining reserve fund levels, were key considerations in developing the proposed water rates.

SEWER RATES

The current sewer rate design includes a monthly fixed charge by account (or by dwelling unit for multi-family residential), a smaller monthly customer service charge, and a volumetric rate that is applied only to average winter water consumption beyond the first two units. At the request of City staff, the proposed sewer rates now combine the monthly fixed charge and the customer service charge and retain the volumetric rate that is now applied to the average winter consumption for individual sewer customers.

2. More specifically, these are increases in the total rate revenue; in the first year the rate increases for each customer class reflect cost allocation factors that result in some rates being more or less than the annual increases noted here. After the first year, rate increases are applied "across the board" to rates.

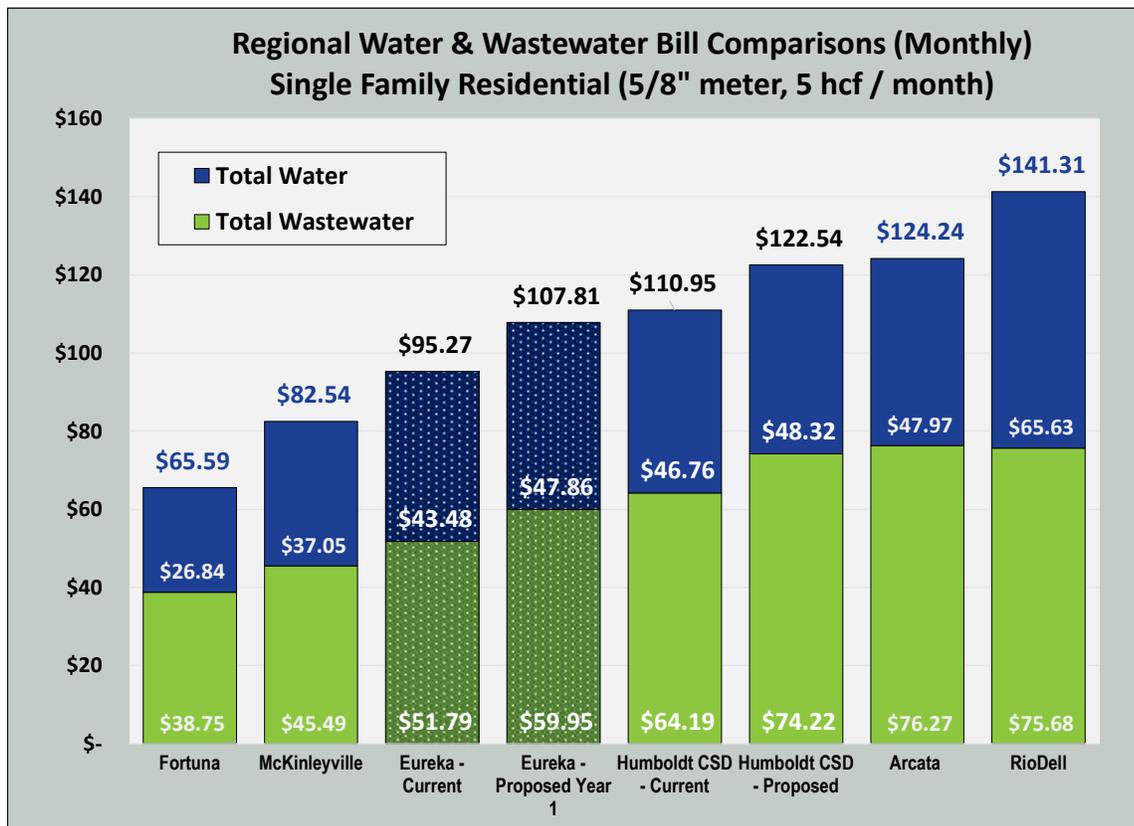
Additionally, the first two units of consumption are no longer included in the fixed charge (i.e., they are now charged the volumetric rate).

The sewer utility’s financial revenue currently covers operating expenses, existing debt service and most of the capital improvements planned. The City is currently planning for an upgrade to the wastewater treatment plant and will be using rate revenue and reserve funds to pay for these capital improvements. Humboldt Community Services District will be responsible for 32.1% of this WWTP capital improvement project. Maintaining the financial integrity of the sewer utility were key considerations in developing the proposed water rates.

REGIONAL BILL COMPARISON

Figure 2 shows the water and sewer bills for the City’s current and proposed rates compared to other local agencies.

Figure 2 – Comparison of Regional Water and Sewer Bills



CONNECTION FEES

Connection fees were calculated for both the water and sewer utilities. These fees are charged to new customers connecting to the City’s water or sewer system and are designed to place new customers on equal financial footing with current utility customers. Calculated connection fees for both water and sewer represent the maximum connection fee that the City could adopt. Primarily due to projected capital improvement expenditures, the connection fees for both utilities have increased significantly; water

connection fees increased from \$3,208 per equivalent meter³ (EM) to \$6,689 per EM. Sewer connection fees increased from the current \$3,423 per Household Equivalent Unit⁴ (HEU) to \$7,123 per HEU. Both water and sewer connection fees were based on a methodology that considers both the buy-in costs for capacity in the existing system and the incremental costs of planned capital improvements that will provide future capacity to new connections.⁵

Study Recommendations

NBS recommends the City take the following actions:

- Adopt the water and sewer long-range financial plans presented below.
- Adopt the recommended water and sewer reserve fund target balances.
- Adopt the recommended water rates.
- Adopt the recommended sewer rates.
- Adopt the recommended water and sewer connection fees.
- Have the City's legal counsel review the proposed rates and connection charges.
- Approve and adopt this study report to document the rate study results for Prop 218 compliance purposes.
- Proceed with Prop 218 noticing requirements and 45-day protest period.
- Assuming a successful Prop 218 process (that is, there is no majority protest of the rates), adopt the rates summarized in this report.
- Connection fees are not subject to the Prop 218 process but can be adopted administratively at a public hearing of the City Council.

The next section discusses rate study methodology, followed by sections for the water rate study (Section 3), the sewer rate study (Section 4), and connection fees (Sections 5 and 6).

³ An Equivalent Meter is the City's most common meter size, which is a 5/8-inch meter. Larger meters are charged a multiple of a 5/8-inch meter based on the meter's hydraulic capacity factor as defined by AWWA standards.

⁴ A Household Equivalent Unit is the effluent generated by a typical single-family sewer customer.

⁵ 10-Year projections of capital improvement costs were used in these calculations.

Section 2. OVERVIEW OF THE RATE STUDY METHODOLOGY

A comprehensive rate study such as this one typically includes three components: (1) preparation of a financial plan, which identifies the net revenue requirements for the utility; (2) analysis of the cost-of-service each customer class; and (3) the rate structure design. These steps are shown in **Figure** and are intended to follow industry standards and reflect the fundamental principles of cost-of-service ratemaking embodied in the American Water Works Association (AWWA) Principles of Water Rates, Fees, and Charges⁶, also referred to as Manual M1.

FIGURE 3. PRIMARY COMPONENTS OF A RATE STUDY



This methodology also addresses requirements under Proposition 218 that rates not exceed the cost of providing the service and be proportionate to the cost of providing service for all customers. In terms of the chronology of the study, these three steps represent the order they were performed in this study for both utilities.

As a result of this study, rate increases – or more accurately, increases in the total revenue collected from rates – are recommended for each utility. Due to the cost-of-service analysis, individual rates for each customer class do not all increase by the same annual rate increase in the first year, although the remaining four years in the five-year period (i.e., FY 2023/24 through FY 2026/27) are adjusted in an across-the-board manner so that all rates increase by the same percentage.

The necessary data the City provided NBS included historical, current, and projected revenues, operational and capital cost expenditures, customer accounts, water consumption, and other operational metrics.

Rate Design Criteria

In addition to complying with the legal requirements of Prop 218, it is important for utilities to send proper price signals to its customers about the actual cost of providing service. This is done not only through the magnitude of the rates, but also the rate design. In other words, both the amount of revenue collected from each customer class and the way in which it is collected are important.

⁶ *Principles of Water Rates, Fees, and Charges, Manual of Water Supply Practices, M1, AWWA, seventh edition, 2017.*

Several criteria are typically considered in setting rates and developing sound rate structures. The fundamentals of this process have been documented in several rate-setting manuals. For example, the foundation for evaluating rate structures is generally credited to James C. Bonbright in the *Principles of Public Utility Rates*⁷, which outlines pricing policies, theories, and economic concepts along with various rate designs. The other common industry standard is the American Water Works Association’s (AWWA) Manual M1⁸.

The following is a list of the rate structure objectives common to water and sewer utilities. While not all these apply equally to the City’s utilities, they provide a good checklist for evaluating the City’s rate designs:

- Rates should yield the necessary revenue in a stable and predictable manner.
- Rates should minimize unexpected changes to customer bills.
- Rates should discourage wasteful use and promote efficient uses.
- Rates should promote fairness and equity (i.e., they should be cost based).
- Rates should not subsidize any customer class at the expense of other customer classes.
- Rates should maintain simplicity, certainty, convenience, feasibility, and freedom from controversy.
- Rates should comply with all applicable laws.

Rate Structure Terminology

One of the most fundamental considerations in rate structures is the relationship of fixed and variable costs. Most water and sewer rate structures contain both a fixed and a volumetric charge.

The City’s rate designs should reflect the characteristics of the City’s water and sewer utilities. Capital and operational reserve funding targets incorporated input from City staff and are intended to meet the utilities specific financial objectives (both operational and capital). The following discussion describes industry rate-study practices in California and the principals reflected in the recommended rates.

FIXED CHARGES

Fixed charges can be called base charges, minimum monthly charges, fixed monthly meter charges, etc. Although fixed charges are typically a significant percentage of a utility’s overall costs, utilities rarely collect 100 percent of their fixed costs through fixed charges. Customers generally prefer that charges include a volumetric component because of the inherent and widely recognized equity in a “pay-for-what-you-use” philosophy.

For a water utility, fixed charges increase by meter size. This is because a larger portion of water utilities’ costs are related to meeting capacity requirements of larger meters and, therefore, reflecting the capacity demands of each meter size is important in establishing equitable fixed charges. For example, a customer with a 2-inch meter would have a fixed meter charge that is approximately eight times greater than the 5/8-inch meter charge because a 2-inch meter’s maximum flow rate (or potential demand on the capacity of the water system) is approximately eight times greater than that of a 5/8-inch meter.⁹

⁷ James C. Bonbright; Albert L. Danielsen and David R. Kamerschen, *Principles of Public Utility Rates*, (Arlington, VA: Public Utilities Report, Inc., Second Edition, 1988), p. 383-384.

⁸ M1 Manual, AWWA, seventh edition, 2017, p. 105.

⁹ These are typically referred to as “hydraulic capacity factors” that represent the relative capacity required in the water system. See American Water Works Association, *Water Meters – Selection, Installation, Testing and Maintenance*, M6 Manual, Table 5-3.

VOLUMETRIC CHARGES

In contrast, variable costs such as the cost of purchased water, electricity used in pumping water, and chemicals used in the water and sewer treatment facilities tend to change with the quantity of water produced (or sewer effluent treated). Water utility volumetric charges are based on metered consumption and billed on a dollar-per-unit cost (i.e., per 100 cubic feet, or hcf, in the City's case).

There are significant variations in the basic philosophy of water volumetric charges. Under a uniform (single tier) water rate structure, the cost per unit does not change with consumption, and provides a simple and straightforward approach from the perspective of customer understanding and rate administration/billing.

Volumetric sewer rates for residential customers are typically based on average winter water use and either average winter or actual monthly water consumption for non-residential customers. Water consumption is a proxy for the flow-related costs of sanitary sewer effluent. The cost of treating the level of sewer effluent "strength" (i.e., the amount of biochemical oxygen demand (BOD) and total suspended solids (TSS)) is also incorporated into non-residential sewer customer volumetric rates.

KEY FINANCIAL ASSUMPTIONS

The following are the key assumptions used in the water and sewer rate analyses:

- **Funding Capital Projects** – The analysis for both utilities assumes:
 - Capital costs attributable to existing customers are funded with rate revenue.
 - Capital costs attributable to growth, or expansion-related costs, will ultimately be funded through connection fee revenue, although due to cashflow limitations, rate revenue may need to be used to fund upfront costs with repayment later by connection fee revenues.
 - All capital projects listed in the financial plans are City projections.
 - The City is also working on a re-funding of the existing debt for the utilities to lower the total annual debt service payments. This transaction has not been completed yet, but City staff estimate that the reductions will not significantly impact the proposed rates at this time.
- **Reserve Targets for Water and Sewer** – Reserves for operations and capital needs are set at levels recommended by NBS and City staff and should be adopted by the City Council. Reserve targets used in the analysis are as follows:
 - Operating & Maintenance Reserve – 180 days (typical industry standard target is 90 days).
 - Capital Rehabilitation and Replacement Reserve – 6 percent of net asset values for water and 5 percent of net asset values for sewer. Although these are slightly higher than typical industry standards, we believe the age and condition of the water and sewer systems warrant it.
 - Sinking Fund – a new unrestricted reserve fund for the sewer utility, with a long-term target balance of \$15 million based on the need to fund major wastewater treatment plant replacement costs in the future.
- **Pass Through Charges** – Purchased water costs above those in the FY 2021/22 budget will be a "pass-through" charge, with the intent of keeping rates lower until it is necessary to recover additional costs charged by the Humboldt Bay Municipal Water District, the City's wholesale water provider. In the past, the City has incurred various cost increases, such as purchased water, and the

pass-through mechanism¹⁰ enables the City to respond as needed rather than adopting higher upfront rates, or undergoing a new Prop 218 approval process, to address higher purchased water costs. Pass through charges will recover the additional costs by an adopted formula and charged as a \$/hcf surcharge for water consumption.

- **Inflation and Growth Projections** – City provided Inflation and growth projections were applied equally to the water and sewer utilities:
 - General inflation is 3 percent annually.
 - Customer growth is 0 percent annually.
 - Labor cost inflation is 3 percent annually.
 - Energy cost inflation is 3 percent annually.
 - Chemical cost inflation is 3 percent annually.

While the growth rate for the water and sewer rate studies is 0 percent, for the purposes of projecting rate increases, this is a conservative assumption intended to provide a financial cushion should the assumption of a 0.8 percent growth rate in the City's General Plan not materialize. In contrast, the water and sewer connection fee studies assume a growth rate of 0.8 percent, which allows the City to adequately plan for, and fund, capital improvements related to providing new capacity for future customers. Should those future customers not materialize, there would be no connection fee revenue but the City would likely delay at least some of the CIP projects related to additional capacity needs.

The next two sections discuss the water and sewer rate studies in further detail.

10 Pass through charge structure is designed to adhere to California Government Code 53756. District is required to provide at least a 30-day notice to customers for implementation or adjustments to the pass through charges.

Section 3. WATER RATE STUDY

Developing Recommended Water Rates

The water rate analysis was undertaken with a few specific objectives in mind, including:

- Generating sufficient additional revenue needed to meet projected operating and capital improvement funding requirements,
- Providing revenue stability,
- Ensuring equity among customer classes as required by Prop 218 mandates,
- Incorporating projected water consumption levels.

NBS developed several water rate alternatives as requested by City staff over the course of this study. All rate structure alternatives were developed using general industry standards and cost-of-service principles. City staff selected the rate alternative recommended in this report because it is the most favorable mix of cost-of-service results and the current rate structure. The following are the basic components included in this analysis:

- **Developing Revenue Requirements:** The water revenue requirements were projected based on the current annual budget and input from City staff.
- **Developing Cost Allocations:** The water revenue requirements were then “functionalized” into three categories: (1) fixed capacity costs; (2) commodity (or volume-based) costs; and (3) customer service costs. Each of these functional costs are used to segregate revenue requirements by customer class.
- **Determining Revenue Requirements by Customer Class¹¹:** Revenue requirements for each customer class were determined based on percentage allocation factors such as water consumption, capacity peaking factors, and number of accounts by meter size. For example, volume-related costs are allocated based on the percentage of water consumption for each class, while customer costs are allocated based on number of accounts in each class. How these revenue requirements are collected from each customer class is then addressed in the rate design task.
- **Rate Design: Calculating Fixed vs. Volumetric Costs:** Fixed costs, such as capacity-related costs, billing, and general administrative costs, are collected through the fixed monthly charge, while variable costs such as pumping and purchased water costs are collected through volumetric charges. This study determined that the City’s fixed and variable costs are approximately 69 percent fixed and 31 percent variable. However, industry practices provide flexibility regarding the actual percentages collected from fixed charges vs. volumetric rates. After evaluating rate alternatives that included fixed/variable combinations of 44 percent fixed/56 percent volumetric, 55 percent fixed/45 percent volumetric and 69 percent fixed/31 percent volumetric, City staff and the City Council chose 69 percent/31 percent rate structure.

¹¹ In the District’s case, meter sizes serve as customer classes for the water utility while more traditional customer classes, such as single-family, multi-family, and commercial classes were used for the sewer utility.

Water Utility Revenue Requirements

It is important for municipal utilities to maintain reasonable reserves to handle emergencies, fund working capital, maintain a good credit rating, and generally follow sound financial management practices. **Figure** summarizes the sources and uses of funds and net revenue requirements for the next five years, including the recommended annual rate increases.

FIGURE 4. SUMMARY OF WATER REVENUE REQUIREMENTS

Summary of Sources and Uses of Funds and Net Revenue Requirements	Projected				
	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27
Sources of Water Funds					
Rate Revenue Under Prevailing Rates	\$ 9,463,700	\$ 9,463,700	\$ 9,463,700	\$ 9,463,700	\$ 9,463,700
Non-Rate Revenues	201,338	205,548	209,884	214,351	218,951
Interest Earnings	85,763	75,096	103,256	85,410	80,162
Total Sources of Funds	\$ 9,750,801	\$ 9,744,343	\$ 9,776,840	\$ 9,763,461	\$ 9,762,813
Uses of Water Funds					
Water Supply & Distribution Expenses	\$ 7,677,052	\$ 7,805,363	\$ 7,937,524	\$ 8,073,650	\$ 8,213,859
Debt Service	1,402,288	1,402,294	1,727,485	1,722,948	1,111,885
Rate-Funded Capital Expenses	665,040	350,000	3,308,676	4,480,000	4,610,000
Total Use of Funds	\$ 9,744,379	\$ 9,557,657	\$ 12,973,685	\$ 14,276,598	\$ 13,935,745
Surplus (Deficiency) before Rate Increase	\$ 6,421	\$ 186,687	\$ (3,196,845)	\$ (4,513,137)	\$ (4,172,932)
Additional Revenue from Rate Increases ¹	444,950	1,868,790	2,945,569	4,130,026	5,172,348
Surplus (Deficiency) after Rate Increase	\$ 451,371	\$ 2,055,477	\$ (251,276)	\$ (383,111)	\$ 999,416
Projected Annual Rate Increase	10.00%	10.00%	10.00%	10.00%	8.00%
<i>Cumulative Rate Increases</i>	10.00%	21.00%	33.10%	46.41%	58.12%
Net Revenue Requirement²	\$ 9,457,279	\$ 9,277,013	\$ 12,660,545	\$ 13,976,837	\$ 13,636,632

1. Assumes new rates are implemented January 1, 2023.

2. Total Use of Funds less non-rate revenues and interest earnings. This is the annual amount needed from water rates.

Rate increases are governed by the need to meet these objectives as follows:

- **Meeting Operating Costs:** For Fiscal Years 2022/23 through 2026/27, the net revenue requirement (i.e., total annual O&M expenses, debt service, and rate-funded capital costs less non-rate revenues) is estimated to be an average of \$11.8 million. If no rate increases are implemented, budget deficits would grow to more than \$4 million/year unless offset by significant cost reductions.
- **Adequately Funding Capital Improvement Costs:** The sewer utility plans to fund necessary capital improvements, which includes \$19 million¹² in planned capital improvements for the current fiscal year through the end of FY 2026/27, and a \$6 million automated meter reading (AMR) project that will be funded by a State Revolving Loan (SRF).
- **Maintaining Adequate Bond Coverage:** The City is required by its bond covenants¹³ for its 2002, 2005, 2006 and 2012 water bonds to maintain debt-service coverage ratios of at least 1.20. The benefit of maintaining a higher coverage ratio is that it strengthens the City's credit rating, which can help lower the interest rates for debt-funded capital projects and may reduce debt service payments for future debt issuances. It is projected that, with the recommended rate increases, the City will meet or exceed the 1.20 debt coverage ratio through FY 26/27.
- **Maintaining Reserve Funds:** Current reserves are close to the minimum target range, which would be sufficient to fund water utility operations for a short time, but not pay for capital improvement costs. Overall, the water utility is running a deficit and annual rate increases are necessary to meet

¹² These costs are stated in 2022 dollars; in future year dollars they total about \$23 million.

¹³ As mentioned above, the City is planning a re-funding of existing debt, which may change the coverage requirements.

future reserve fund target levels. Based on the need to be responsive to unforeseen emergencies, City staff chose the following reserve targets:

- **Operating Reserves** equal to a six-month (or 180-day) cash cushion for normal operations in the event of short-term fluctuations in revenues and/or expenditures such as those due to natural disasters, weather patterns affecting the variability in volume-based rates, and unforeseen capital costs or repairs. For Fiscal Year 2022/23, this is estimated to be \$3.8 million.
- **Capital Reserves** of 6 percent of net assets serves as a starting point for addressing longer-term capital needs. For Fiscal Year 2022/23, this is estimated to be \$2.1 million.

Figure summarizes the projected reserve fund balances and reserve targets. A summary of the water utility’s proposed 10-year financial plan, which is included in Appendix B – Water Rate Study Summary Tables, includes revenue requirements, reserve funds, revenue sources, proposed rate increases, and the City’s capital improvement program.

FIGURE 5. SUMMARY OF WATER RESERVE FUNDS

Beginning Reserve Fund Balances and Recommended Reserve Targets	Prop 218 Rate Period				
	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27
Operating Reserve					
Ending Balance	\$ 3,839,000	\$ 3,903,000	\$ 3,651,724	\$ 3,268,612	\$ 4,107,000
<i>Recommended Minimum Target</i>	<i>3,839,000</i>	<i>3,903,000</i>	<i>3,969,000</i>	<i>4,037,000</i>	<i>4,107,000</i>
Capital Rehabilitation & Replacement Reserve					
Ending Balance	\$ 1,642,448	\$ 3,633,924	\$ 2,582,600	\$ 2,582,600	\$ 2,743,628
<i>Recommended Minimum Target</i>	<i>2,090,200</i>	<i>2,398,900</i>	<i>2,582,600</i>	<i>2,767,800</i>	<i>2,954,900</i>
Total Ending Balance	\$ 5,481,448	\$ 7,536,924	\$ 6,234,324	\$ 5,851,212	\$ 6,850,628
<i>Total Recommended Minimum Target</i>	<i>\$ 5,929,200</i>	<i>\$ 6,301,900</i>	<i>\$ 6,551,600</i>	<i>\$ 6,804,800</i>	<i>\$ 7,061,900</i>

Characteristics of Water Customers by Class

Water customer characteristics are used in allocating costs in the cost-of-service analysis. The City’s most recent data by customer class includes the consumption data in **Figure** , peaking factors in **Figure** , and the total number of accounts in **Figure** . The number of meters in 2016 vs. 2022 is shown in **Figure 9** along with the percentage changes. As this figure shows, there has been a significant increase in multi-family meters compared to residential and commercial customers.

FIGURE 6. WATER CONSUMPTION BY CUSTOMER CLASS

Customer Class	FY 2020/21 Volume (hcf) ¹	Percent of Total Volume
Residential - City	522,609	47.4%
Residential - Outside	7,469	0.7%
Multi-Family	171,529	15.6%
Commercial	400,000	36.3%
Total	1,101,607	100%

1. Consumption data is based on the City of Eureka's billing data.

FIGURE 7. PEAKING FACTORS BY CUSTOMER CLASS

Customer Class	Average Monthly Use (hcf)	Peak Monthly Use (hcf) ¹	Peak Monthly Factor	Max Month Capacity Factor
Residential - City	43,551	59,982	1.38	46.7%
Residential - Outside	622	876	1.41	0.7%
Multi-Family	14,294	17,321	1.21	13.5%
Commercial (2016 Peaking Data)	36,928	50,205	1.36	39.1%
Total	95,395	128,384	1.35	100%

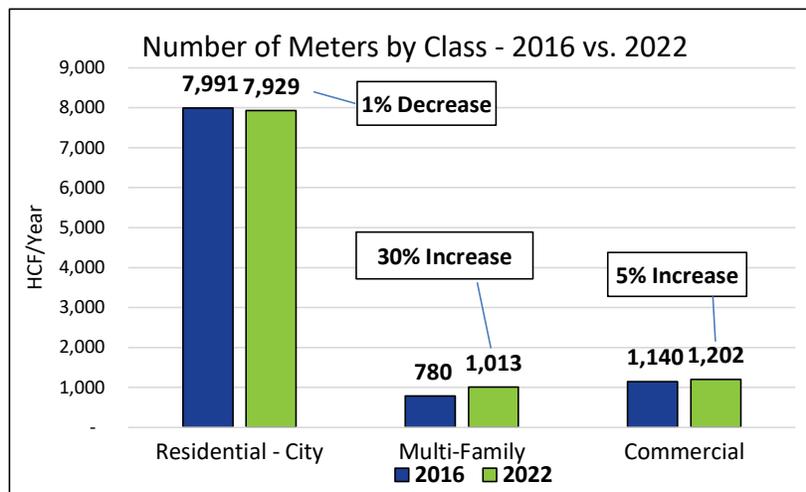
1. Based on peak monthly data (peak day data not available).

FIGURE 8. NUMBER OF ACCOUNTS BY CUSTOMER CLASS

Customer Class	Number of Meters ¹	Percent of Total
Residential - City	7,929	77.9%
Residential - Outside	30	0.3%
Multi-Family	1,013	10.0%
Commercial	1,202	11.8%
Total	10,174	100.0%

1. Meter Count data is based on the City of Eureka's billing data for June 2021.

FIGURE 9. NUMBER OF METERS BY CUSTOMER CLASS – 2016 VS. 2022



Cost of Service Analysis – Water

The purpose of the cost-of-service analysis is to fairly and equitably allocate annual water utility revenue requirements to *customer classes*, while the rate design determines the actual rates *within each customer class*. The first step is allocating a percent of costs into commodity-, capacity-, and customer-related costs based on their functional purpose in the water utility; these results are summarized in **Figure** , while more detailed fixed and variable allocations are shown in Appendix B.

FIGURE 10. SUMMARY OF FIXED AND VARIABLE RATE REVENUE REQUIREMENTS

Classification Components	Adjusted Net Revenue Requirements	
	<i>(69% Fixed / 31% Variable)</i>	
Commodity-Related Costs	\$ 3,034,559	31.0%
Capacity-Related Costs	6,460,674	66.0%
Customer-Related Costs	293,667	3.0%
Net Revenue Requirement	\$ 9,788,900	100%

The next step is to allocate these commodity-, capacity-, and customer-related costs to each customer class based on the allocation factors previously shown in Figure through Figure , as follows:

- Water consumption (Figure) is used to allocate the commodity-related costs to customer classes.
- Peaking factors (Figure) are used to allocate the capacity-related costs to customer classes.
- Number of meters (Figure) are used to allocate the customer-related costs to customer classes.

The results of this cost allocation process are summarized in **Figure** . For single-family customers, these allocations are as follows:

- Commodity-related costs are 47.4 percent of \$3.0 million, or \$1.4 million.¹⁴
- Capacity-related costs are 46.7 percent of \$6.46 million, or \$3.0 million.
- Customer-related costs are 77.9 percent of \$293,667, or \$228,866.

As previously shown in Figure , the projected rate revenue collected in FY 2022/23 from new rates would be \$444,950 assuming rates are effective in January 2023. When added to the rate revenue from current rates (i.e., \$9.46 million), the projected rate revenue in FY 2022/23 is \$9.9 million. Figure 10 shows the COSA revenue requirements are \$9.788 million.

FIGURE 11. SUMMARY OF ADJUSTED RATE REVENUE REQUIREMENTS BY CUSTOMER CLASS

<i>Proposed Rates (69% Fixed / 31% Variable)</i>					
Customer Classes	Classification Components			Cost of Service Net Rev. Req'ts	% of COS Net Revenue Req'ts
	Commodity-Related Costs	Capacity-Related Costs	Customer-Related Costs		
Residential - City	\$ 1,439,613	\$ 3,018,477	\$ 228,866	\$ 4,686,956	47.9%
Residential - Outside	20,575	44,083	866	65,524	0.7%
Multi-Family	472,505	871,645	29,240	1,373,390	14.0%
Commercial	1,101,866	2,526,469	34,695	3,663,030	37.4%
Total Net Revenue Requirement	\$ 3,034,559	\$ 6,460,674	\$ 293,667	\$ 9,788,900	100%
<i>Total Net Revenue Requirement by Classification Component</i>	<i>VARIABLE</i> \$3,034,559	<i>FIXED</i> \$6,754,341		\$9,788,900	

Current vs. Proposed Water Rate Structures

Besides merely providing the mechanism for collecting rate revenue from individual customers, water rate design presents an opportunity to consider broader rate-design objectives and policies, including revenue stability, equity among customer classes, and water conservation.

During the rate-design analysis, City staff and NBS developed several water rate structure alternatives. As previously noted, based on Proposition 218 requirements and recent court cases, maintaining a uniform

¹⁴ There are more decimal places in the calculations than shown here. Therefore, results may not duplicate actual calculations.

volumetric rate was, in the opinion of NBS, City staff, and the City’s legal counsel the most defensible rate structure. The proposed fixed monthly service charges will continue to be by meter size and customer classes (Residential, Multi-family, etc.).

Figure compares the current and recommended rates for FY 2022/23 through 2026/27. Cost-of-service adjustments are reflected in the FY 2022/23 rates; thereafter rate increases annually are applied on an across-the-board basis. Appendix B provides more detail on the development of the proposed water rates.

FIGURE 12. CURRENT AND PROPOSED WATER RATES FISCAL YEARS 2022/23 – 2026/27

Water Rate Schedule	Current Rates	Proposed Rates				
		FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27
Fixed Service Charge¹						
Monthly Fixed Service Charges:						
<i>Single Family Residential:</i>						
5/8 inch & 3/4 inch	\$30.28	\$34.11	\$37.52	\$41.28	\$45.40	\$49.04
1 inch	\$72.26	\$81.59	\$89.75	\$98.72	\$108.59	\$117.28
1 1/2 inch	\$226.16	\$160.71	\$176.78	\$194.46	\$213.91	\$231.02
2 inch	\$450.03	\$255.66	\$281.23	\$309.35	\$340.29	\$367.51
<i>Single Family Residential - Outside:</i>						
5/8 inch & 3/4 inch	\$45.42	\$51.17	\$56.28	\$61.91	\$68.10	\$73.55
1 inch	\$108.39	\$122.38	\$134.62	\$148.08	\$162.89	\$175.92
<i>Multi Family Residential:</i>						
5/8 inch & 3/4 inch	\$39.85	\$44.40	\$48.84	\$53.73	\$59.10	\$63.83
1 inch	\$96.17	\$107.40	\$118.14	\$129.96	\$142.95	\$154.39
1 1/2 inch	\$190.05	\$212.40	\$233.64	\$257.00	\$282.70	\$305.32
2 inch	\$302.70	\$338.40	\$372.24	\$409.46	\$450.41	\$486.44
3 inch	\$603.09	\$674.39	\$741.83	\$816.01	\$897.61	\$969.42
4 inch	\$941.04	\$1,052.38	\$1,157.62	\$1,273.38	\$1,400.72	\$1,512.77
<i>Commercial</i>						
5/8 inch & 3/4 inch	\$57.05	\$59.40	\$65.34	\$71.87	\$79.06	\$85.39
1 inch	\$139.18	\$144.89	\$159.38	\$175.32	\$192.85	\$208.28
1 1/2 inch	\$276.05	\$287.38	\$316.12	\$347.73	\$382.50	\$413.10
2 inch	\$440.31	\$458.36	\$504.20	\$554.62	\$610.08	\$658.89
3 inch	\$878.31	\$914.32	\$1,005.76	\$1,106.33	\$1,216.96	\$1,314.32
4 inch	\$1,371.07	\$1,427.28	\$1,570.00	\$1,727.01	\$1,899.71	\$2,051.68
6 inch	\$2,739.84	\$2,852.15	\$3,137.36	\$3,451.10	\$3,796.21	\$4,099.91
8 inch	\$4,382.36	\$4,561.99	\$5,018.19	\$5,520.01	\$6,072.02	\$6,557.78
Volumetric Charges for All Water Consumed¹						
Uniform Rate (per hcf) - Inside	\$2.64	\$2.75	\$3.03	\$3.33	\$3.66	\$3.95
Uniform Rate (per hcf) - Outside	\$3.88	\$4.13	\$4.54	\$4.99	\$5.49	\$5.93

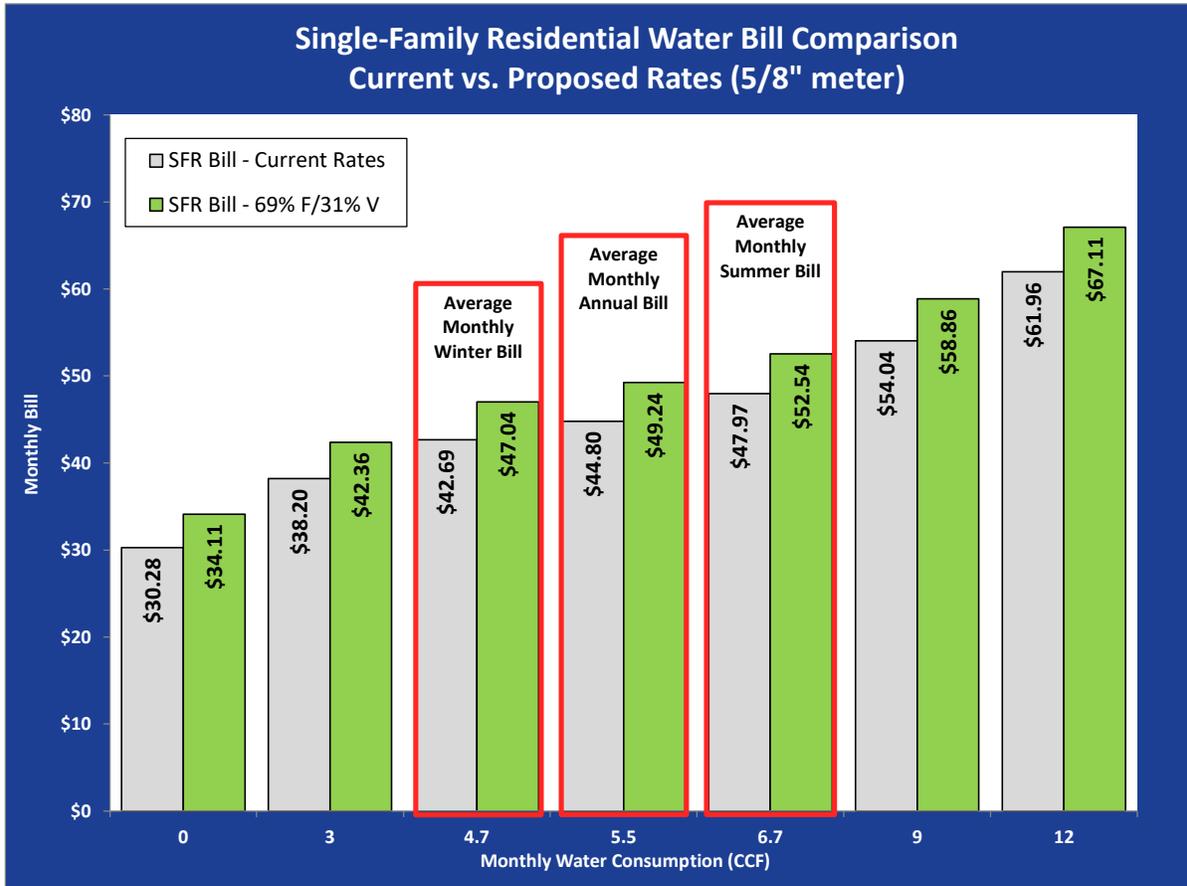
1. "Outside" refers to outside of the City Limits. Outside customer rates are 1.5 times the corresponding inside rates.

Comparison of Current and Proposed Monthly Bills

SINGLE-FAMILY WATER CUSTOMERS

Figure compares monthly water bills under the current and proposed rates for single-family customers.

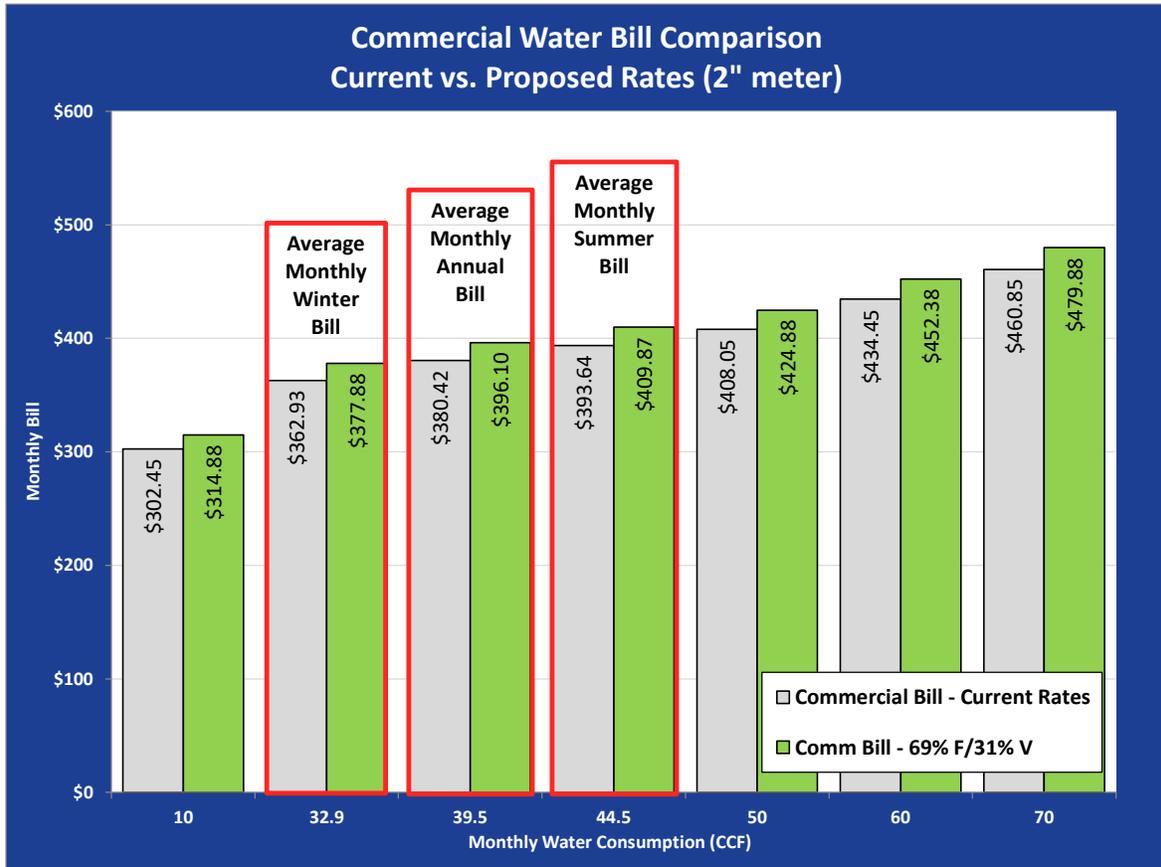
FIGURE 13. MONTHLY WATER BILL COMPARISON FOR SINGLE-FAMILY CUSTOMERS



COMMERCIAL WATER CUSTOMERS

Commercial customers also use fixed monthly charges by meter size and the same uniform volumetric rate as single-family customers. Proposed rates include rates specific to the commercial, or non-residential, customer class. **Figure** compares current and proposed monthly bills for commercial customers with a 2-inch meter at various levels of consumption, in the first year of the rate adjustment plan.

FIGURE 1. MONTHLY WATER BILL COMPARISON FOR COMMERCIAL USERS



Section 4. SEWER RATE STUDY

Developing Recommended Sewer Rates

Although the sewer rate study included similar objectives as those in the water rate study, the overriding concern was maintaining the financial health of the sewer utility considering the significant planned treatment plant improvements. These include updating and altering the plant to meet new regulatory requirements as well as replacing aging infrastructure nearing the end of its useful life; these improvements are critical for the utility to continue providing safe and reliable service to customers. Treatment plant capital costs also reflect the contributions that the Humboldt Community Service District would make based on their agreement with the City.

Similar sewer rate tasks were performed, including developing (1) functional cost allocations, (2) revenue requirements by customer class, and (3) rates within customer classes. Detailed tables showing the systematic development of the analysis are presented in Appendix C – Sewer Rate Summary Tables.

Sewer Utility Revenue Requirements

To identify the sewer utility's long-term financial needs, including funding for capital improvement projects, NBS developed a 10-year financial plan that forecasts sewer revenues, expenditures, and projected reserves. This plan is based on the City's current operating budget for the utility, discussions with City staff, and related information such as debt service schedules and capital improvement plans. This financial plan addresses four primary objectives:

- **Meeting Operating Costs:** The sewer utility must generate enough revenue to cover the expenses of sewer operations, including administration, maintenance, and the collection system. A portion of wastewater treatment plant services are allocated to effluent received from Humboldt Community Services District; the District is billed directly for this service.
- **Adequately Funding Capital Improvement Costs:** The sewer utility plans to fund necessary capital improvements, which includes \$29 million in planned capital improvements for the current fiscal year through the end of FY 2026/27. HCSO contributions are expected to be about \$6.7 million over this period.
- **Maintaining Adequate Bond Coverage:** The City is required by its bond covenant to maintain a debt service coverage ratio of at least 1.20 for several outstanding Sewer Revenue Bonds (2003 and 2011). The Utility is projected to exceed this coverage requirement through FY 2026/27, assuming proposed rates are adopted.
- **Maintaining Reserve Funds:** The sewer utility's reserves are slightly below target levels. The proposed rate increases will help re-build healthy unrestricted reserve fund balances over the next five to ten years. The following target reserve levels were established for this analysis:
 - **Operating Reserves** equal to a six-month (or 180-day) cash cushion for normal operations. In FY 2022/23, the operating reserve target is \$3.3 million. This reserve is intended to promote financial viability in the event of any emergency funding needs.
 - **Capital Reserves** of 5 percent of net assets serves as a starting point for addressing longer-term capital needs. For FY 2022/23, this is estimated to be \$3.5 million. Meeting this target

means the City will have accumulated necessary to fund future capital replacement and rehabilitation needs.

- **Connection Fee Reserve** accumulates funds that should be applied to expansion-related capital projects and/or upgrade projects that will serve future customers.
- **Debt Reserves** for the sewer utility’s existing debt obligations has a target level of \$1.6 million.

Figure summarizes the sources and uses of funds and net revenue requirements for the next five years and indicate that annual net revenue requirements cannot be fully funded by current rate revenues. Therefore, rate increases are recommended over the next five years. **Figure** summarizes the utility’s projected reserve funds and target balances.

FIGURE 15. SUMMARY OF SEWER REVENUE REQUIREMENTS

Summary of Sources and Uses of Funds and Net Revenue Requirements	Budget	5-Year Prop 218 Period				
	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27
Sources of Wastewater Funds						
Rate Revenue Under Prevailing Rates	\$ 10,895,820	\$ 10,895,800	\$ 10,895,800	\$ 10,895,800	\$ 10,895,800	\$ 10,895,800
Non-Rate Revenues	243,066	249,411	259,615	251,926	271,728	286,343
Total Sources of Funds	\$ 11,138,886	\$ 11,145,211	\$ 11,155,415	\$ 11,147,726	\$ 11,167,528	\$ 11,182,143
Uses of Wastewater Funds						
Operating Expenses	\$ 6,378,180	\$ 6,530,743	\$ 6,726,665	\$ 6,928,465	\$ 7,136,319	\$ 7,350,408
Debt Service	1,296,806	1,297,594	1,291,856	1,295,119	1,297,281	1,292,844
Rate-Funded Capital Expenses	3,000,000	3,055,760	5,517,000	3,757,320	4,423,920	4,697,929
Total Use of Funds	\$ 10,674,986	\$ 10,884,096	\$ 13,535,521	\$ 11,980,904	\$ 12,857,520	\$ 13,341,181
Surplus (Deficiency) before Rate Increase	\$ 463,900	\$ 261,114	\$ (2,380,106)	\$ (833,178)	\$ (1,689,992)	\$ (2,159,039)
Additional Revenue from Rate Increases ¹	-	483,740	1,818,862	2,278,609	2,756,745	3,254,007
Surplus (Deficiency) after Rate Increase	\$ 463,900	\$ 744,854	\$ (561,244)	\$ 1,445,431	\$ 1,066,754	\$ 1,094,969
Net Revenue Requirement²	\$ 10,431,920	\$ 10,634,686	\$ 13,275,906	\$ 11,728,978	\$ 12,585,792	\$ 13,054,839

1. Assumes new rates are implemented January 1, 2023.

2. Total Use of Funds less non-rate revenues. This is the annual amount needed from wastewater rates.

FIGURE 16. SUMMARY OF SEWER RESERVE FUNDS

Beginning Reserve Fund Balances and Recommended Reserve Targets	Budget	5-Year Prop 218 Period				
	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27
Un-Restricted Reserves						
Operating Reserve						
Ending Balance	\$ 3,189,100	\$ 3,265,400	\$ 2,704,156	\$ 3,464,200	\$ 3,568,200	\$ 3,675,200
Recommended Minimum Target	\$ 3,189,100	\$ 3,265,400	\$ 3,363,300	\$ 3,464,200	\$ 3,568,200	\$ 3,675,200
Capital Rehabilitation & Replacement Reserve						
Ending Balance	\$ 1,731,375	\$ 2,399,929	\$ 2,399,929	\$ 3,085,317	\$ 4,048,071	\$ 4,145,969
Recommended Minimum Target	\$ 2,011,000	\$ 3,483,800	\$ 3,460,200	\$ 3,356,400	\$ 3,255,700	\$ 3,158,000
Sinking Fund Reserve						
Ending Balance	\$ 1,725,707	\$ 1,725,707	\$ 1,725,707	\$ 1,725,707	\$ 1,725,707	\$ 1,725,707
Recommended Minimum Target	\$ 1,725,707	\$ 1,725,707	\$ 1,725,707	\$ 1,725,707	\$ 1,725,707	\$ 1,725,707
Total Ending Balance	\$ 6,646,182	\$ 7,391,036	\$ 6,829,793	\$ 8,275,224	\$ 9,341,978	\$ 9,546,875
Recommended Minimum Target	\$ 6,925,807	\$ 8,474,907	\$ 8,549,207	\$ 8,546,307	\$ 8,549,607	\$ 8,558,907

A summary of the entire 10-year financial plan, showing revenue requirements, revenues, and recommended rate increases is presented in Appendix C, along with a summary of the City’s detailed capital improvement program.

Cost of Service Analysis – Sewer

The sewer cost-of-service analysis fairly and equitably allocates annual revenue requirements to customer classes. Like the City’s water customer classes and proposed rates, the City’s sewer customer classes are

represented by type of customer: residential, multi-family, and commercial (light, medium, and heavy strength).

The key factors in the sewer cost-of-service analysis include the estimated amount of effluent (flow), effluent strengths (BOD and TSS), and customer-related costs (e.g., billing and administrative costs). Actual sewer flow data from 2021 was used. **Figure** shows how the volume allocation factors were developed, which are the percentages of the annual estimated winter-average flow by customer class. Figure also lists annual volume for HCSD; the remainder of annual volume received at the wastewater treatment plan is assumed to be infiltration and inflow (I&I) into the sewer system. I&I is due to leaks in the collection system, particularly during storm events, and increases the total hydraulic flows at the plant, requires additional hydraulic capacity, and increases costs. Because it is difficult to attribute the specific sources and/or customer classes responsible for generating I&I, these costs are typically spread over all customers.

FIGURE 17. SUMMARY OF ESTIMATED FLOW TO TREATMENT PLANT

Customer Class	Number of Accounts ¹	Annual Volume Total (HCF) ¹	Total Annual Volume Based on Winter Avg. (HCF) ²	Percentage of Winter Average Volume
Single Family Residential	7,688	516,372	436,652	52.0%
Multi-Family Residential	1,017	177,819	162,740	19.4%
Commercial Light	1,009	203,530	176,464	21.0%
Commercial Medium	29	33,033	26,740	3.2%
Commercial Heavy	114	30,884	26,720	3.2%
Industrial/Extra Heavy ³	1	16,548	10,824	1.3%
Total:	9,858	978,186	840,140	100.0%
<i>HCSD Direct Sales</i>	-	494,271	-	0.0%
<i>Implied I&I</i>	-	537,972	-	0.0%
Grand Total:	9,858	2,010,428	840,140	
		<i>2,010,428</i>		
		<i>1.00</i>		

1. Source: Accounts and consumption data from City's FY 2020/21 customer data. HCF = hundred cubic feet.

2. These volumes exclude the 2 hcf/mo. previously included in the fixed charges (i.e., and are therefore higher).

NBS is recommending removing the 2 units of included water consumption from base rates.

3. Data directly from brewery records.

Customer Class Effluent Strengths – Figure and Figure summarize the strength characteristics and allocation percentages of the utility’s sewer customer classes. Effluent strength factors were estimated using general industry guidelines¹⁵:

- Residential customers (single- and multi-family): Biochemical Oxygen Demand (BOD) and Total Suspended Solids (TSS) strength factors of 200 mg/l.
- Commercial customers (low-, medium-, and high-strength users): range from lower to higher than residential users.

¹⁵ The State Water Resources Control Council (SWRCB) Revenue Program Guidelines, Appendix G, page G-21 “Commercial User Strength Characteristics,” were used for this purpose.

FIGURE 18. SUMMARY OF ANNUAL FLOW AND STRENGTH (BOD) CHARACTERISTICS BY CUSTOMER CLASS:

Customer Class	Billable Annual Volume Total (HCF)	Annual Flow (gallons)	Biochemical Oxygen Demand (BOD)			
			Average Strength Factor (mg/l) ¹	Calculated BOD (lbs./yr.)	Adjusted BOD (lbs./yr.)	Percent of Total
Single Family Residential	436,652	326,637,529	200	544,831	366,204	45.07%
Multi-Family Residential	162,740	121,737,657	200	203,058	136,484	16.80%
Commercial Light	176,464	132,003,895	150	165,137	110,995	13.66%
Commercial Medium	26,740	20,002,857	370	61,725	41,488	5.11%
Commercial Heavy	26,720	19,987,896	1,000	166,699	112,045	13.79%
Industrial/Extra Heavy ²	10,824	8,096,893	1,000	67,528	45,388	5.59%
Total:	840,140	628,466,727		1,208,979	812,605	100.0%
<i>HCSD Direct Sales</i>	<i>494,271</i>	<i>369,739,200</i>	<i>218</i>	<i>671,538</i>	<i>451,368</i>	<i>55.55%</i>
Grand Total:		998,205,927		1,880,516	1,263,973	

1. Average strength factors for BOD and TSS are derived from the State Water Resources Control Board Revenue Program Guidelines, Appendix G. Source files from Eureka staff: 'https://www.bendoregon.gov/home/showpublisheddocument/9801/636077448417870000'
2. Assumes brewery will implement pre-treatment of effluent and that actual bills will be based on verified strength factors and unit costs for BOD and TSS..
3. Adjustment to true up estimated lbs./year to actual treatment plant records.

FIGURE 19. SUMMARY OF ANNUAL FLOW AND STRENGTH (TSS) CHARACTERISTICS BY CUSTOMER CLASS:

Customer Class	Billable Annual Volume Total (HCF)	Total Suspended Solids (TSS)			
		Average Strength Factor (mg/l) ¹	Calculated TSS (lbs./yr.)	Adjusted TSS (lbs./yr.)	Percent of Total
Single Family Residential	436,652	200	544,831	313,169	48.85%
Multi-Family Residential	162,740	200	203,058	116,718	18.21%
Commercial Light	176,464	150	165,137	94,921	14.81%
Commercial Medium	26,740	370	61,725	35,479	5.53%
Commercial Heavy	26,720	600	100,019	57,491	8.97%
Industrial/Extra Heavy ²	10,824	600	40,517	23,289	3.63%
Total:	840,140		1,115,288	641,068	100.0%
<i>HCSD Direct Sales</i>	<i>494,271</i>	<i>205</i>	<i>632,309</i>	<i>363,451</i>	<i>56.69%</i>
Grand Total:			1,747,596	1,004,519	

1. Average strength factors for BOD and TSS are derived from the State Water Resources Control Board Revenue Program Guidelines, Appendix G. Source files from Eureka staff: 'https://www.bendoregon.gov/home/showpublisheddocument/9801/636077448417870000'
2. Assumes brewery will implement pre-treatment of effluent and that actual bills will be based on verified strength factors and unit costs for BOD and TSS.

Figure compares the total number of accounts and housing equivalent units or HEUs (depending on how customers are billed) by customer class. HEUs are assigned to customers based on flow characteristics. Typically, a single-family residential customer is equivalent to one HEU. Multi-family residential customers are assigned one HEU per unit (i.e., a triplex would be equal to three HEUs). Commercial customer HEUs are assigned by City staff.

FIGURE 20. SUMMARY OF SEWER CUSTOMER ACCOUNTS AND HOUSING EQUIVALENT UNITS (HEU'S)

Customer Class	Number of Accounts ¹	Percent of Total	Number of Housing Equiv. Units (HEUs) ¹	Percent of Total
Single Family Residential	7,688	77.99%	7,695	57.72%
Multi-Family Residential	1,017	10.32%	3,992	29.94%
Commercial Light	1,009	10.24%	1,055	7.91%
Commercial Medium	29	0.29%	29	0.22%
Commercial Heavy	114	1.16%	114	0.86%
Industrial/Extra Heavy	1	0.01%	447	3.35%
Grand Total:	9,858	100.00%	13,332	100.00%

1. Customer Accounts are June 2021 billing data. HEUs are based on SFR consumption.

Figure summarizes the total rate revenue requirements, in dollars and as a percentage, by customer class resulting from the cost-of-service analysis.

FIGURE 21. SUMMARY OF ADJUSTED RATE REVENUE REQUIREMENTS BY CUSTOMER CLASS

Customer Class	Cost Classification Components				Cost-of-Service Net Revenue Reqs.	% of COS Net Revenue Reqs.
	Volume	Treatment		Customer Related		
		BOD	TSS			
Net Revenue Requirements¹	\$5,436,604	\$2,439,180	\$2,439,180	\$327,317	\$10,642,280	--
	51.1%	22.9%	22.9%	3.1%	100.0%	
Single Family Residential	\$2,825,605	\$1,099,227	\$1,191,568	\$255,266	\$5,371,666	50.5%
Multi-Family Residential	1,053,102	409,681	444,097	33,768	1,940,648	18.2%
Commercial Light	1,141,911	333,173	361,161	33,502	1,869,746	17.6%
Commercial Medium	173,036	124,533	134,995	963	433,527	4.1%
Commercial Heavy	172,907	336,324	218,747	3,785	731,763	6.9%
Industrial/Extra Heavy ²	70,043	136,242	88,612	33	294,930	2.8%
	\$5,436,604	\$2,439,180	\$2,439,180	\$327,317	\$10,642,280	100%
Units³	840,140	812,605	641,068	118,296		
Unit Costs	\$6.471/hcf	\$3.002/lb.	\$3.805/lb.	\$2.77/Acct.		

1. Revenue requirement for each customer class is determined by multiplying the revenue requirement from each cost classification by the allocation factors for each customer class.

2. Revenue requirements for commercial Heavy (Brewery) were reduced to account for likely pre-treatment in the future.

3. Units are hcf/yr. and lbs./yr. BOD and TSS.

The cost allocation factors represented by the *Percent of Total* columns shown in Figure 7 through Figure 9 are used to calculate the \$10.6 million collected from sewer rates in FY 2022/23 shown in **Figure 21**, as follows:

- Annual sewer flows (Figure 7) are used to allocate volume-related costs shown in Figure 21. For example, single-family customers account for \$2.8 million of \$5.4 million, which is about 52 percent of the volumetric revenue requirements.¹⁶
- Biochemical Oxygen Demand loadings (lbs./year, as shown in Figure 8) are used to allocate the BOD strength-related costs shown in Figure 21; single-family customers account for \$1.10 million, or about 45 percent, of the total \$2.44 million BOD-related costs.
- Total Suspended Solids loadings (lbs./year, as shown in Figure 9) are used to allocate the TSS strength-related costs shown in Figure 21; single-family customers account for \$1.19 million, or about 49 percent, of \$2.44 million of the total TSS-related costs.
- The number of accounts (as shown in Figure 10) are used to allocate the customer-related costs shown in Figure 21; single-family customers account for \$255,266 or about 78 percent, of the \$327,317 in total customer-related costs.
- The unit costs shown at the bottom of Figure 21 are the treatment costs that should be used in calculating non-typical and/or larger non-residential customers. For example, the sewer bills for the large brewery in the Industrial/Extra Heavy customer class should be calculated using the actual flow in hcf and pounds of BOD and TSS and these unit costs. If the brewery chooses to use pre-treatment to reduce their loadings, their bill calculation will reflect these reductions.

The costs summarized in Table 21 are used to identify the total revenue requirements for each customer class. The actual revenue collected from fixed and volumetric charges within each customer class is the result of the rate design analysis, as discussed below.

¹⁶ There are more decimal places in the calculations than shown here. Therefore, results may not duplicate actual calculations.

Current vs. Proposed Sewer Rates

Currently, the City’s sewer rates consist of a fixed monthly base charge as a per-HEU charge for multi-family customers, as a per-account charges for all other customers, plus a volumetric rate. The fixed monthly base charge currently includes the first two units of water consumed.

Figure 2 shows the current and proposed sewer rates through FY 2026/27. The separate per-account charge in current rates was rolled into the monthly fixed service charge at the request of City staff to simplify the billing process. Also, the volumetric rates no longer include the first two units of water consumption, but now apply to all water consumption based on the average winter water use. Customer bills will be adjusted annually (i.e., once the updated average winter water uses are available) and the fixed and volumetric charges for each fiscal year. Lastly, “Industrial/Extra Heavy” customers are charged based on their unit costs for flow, BOD and TSS and their verified flow and loadings. These unit costs are the same costs that are used to determine revenue requirements for all other customer classes.

FIGURE 22. CURRENT AND PROPOSED SEWER RATES FISCAL YEARS 2022/23 – 2026/27

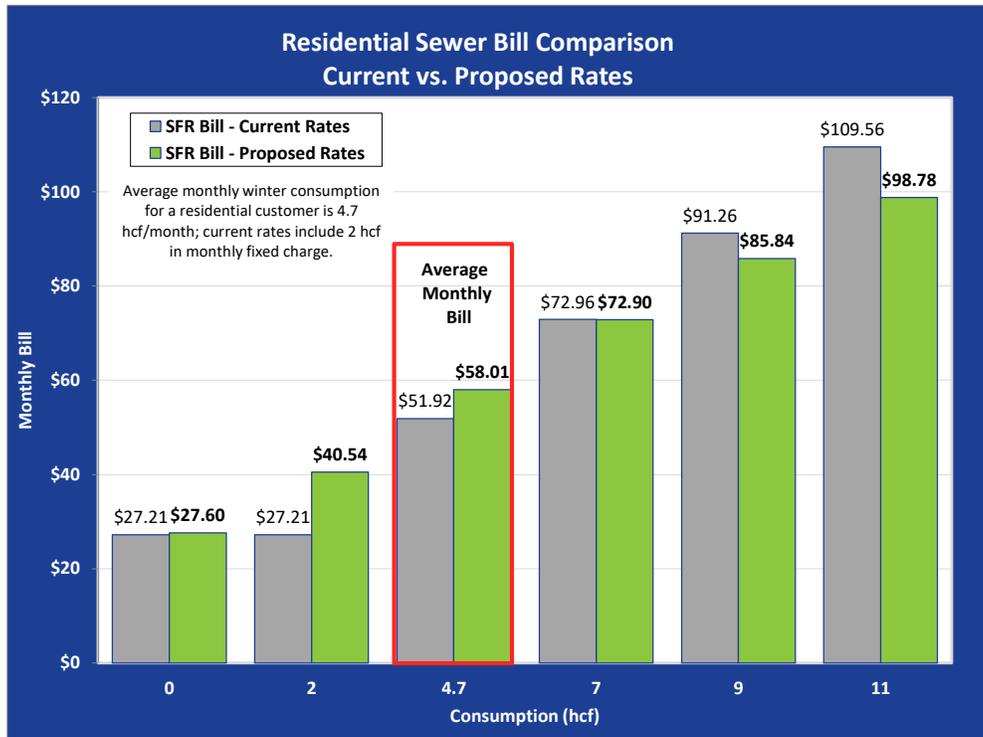
Sewer Rate Schedule	Current Rates	Proposed Monthly Sewer Rates				
		FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27
Monthly Fixed Service Charges¹						
Mo. Account Charge <i>(applies to all classes)</i>	\$2.87	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Single Family Residential	\$24.34	\$27.60	\$29.81	\$31.00	\$32.24	\$33.53
Multi-Family Residential (per dwelling unit)	\$19.46	\$18.53	\$20.01	\$20.81	\$21.64	\$22.51
Commercial Light	\$24.33	\$27.60	\$29.81	\$31.00	\$32.24	\$33.53
Commercial Medium	\$24.33	\$27.60	\$29.81	\$31.00	\$32.24	\$33.53
Commercial Heavy	\$24.33	\$27.60	\$29.81	\$31.00	\$32.24	\$33.53
Industrial/Extra Heavy ³	--	<i>(Billed at actual flow & loadings shown below)</i>				
Volumetric Rate (\$/hcf)²						
Single Family Residential	\$9.15	\$6.47	\$6.99	\$7.27	\$7.56	\$7.86
Multi-Family Residential	\$9.15	\$6.47	\$6.99	\$7.27	\$7.56	\$7.86
Commercial Light	\$9.47	\$8.70	\$9.40	\$9.77	\$10.17	\$10.57
Commercial Medium	\$13.72	\$15.85	\$17.12	\$17.81	\$18.52	\$19.26
Commercial Heavy	\$20.18	\$25.97	\$28.05	\$29.17	\$30.34	\$31.55
Industrial/Extra Heavy ³ <i>(Unit Costs as shown below)</i>						
Flow (\$/hcf/month)	--	\$6.471/hcf	\$6.989/hcf	\$7.268/hcf	\$7.559/hcf	\$7.861/hcf
BOD Strength Charge (\$/lb.)	--	\$3.002/lb.	\$3.242/lb.	\$3.371/lb.	\$3.506/lb.	\$3.647/lb.
TSS sTrength Charge (\$/lb.)	--	\$3.805/lb.	\$4.109/lb.	\$4.274/lb.	\$4.445/lb.	\$4.622/lb.

1. Current Rates are charged per dwelling unit for Multi-Family only. Proposed fixed charges are per Housing Equivalent Unit (HEU) for Multi-Family and Industrial/Extra Heavy.
2. One Unit is equal to one HCF (Hundred Cubic Feet) or 748 gallons.
3. Charges based on estimated flow and periodic testing for BOD and TSS strength. May include additional charges for City testing and/or administrative/billing costs.

SINGLE-FAMILY SEWER CUSTOMERS

Figure compares typical single-family monthly sewer bills in FY 2022/23 under the current and proposed rates.

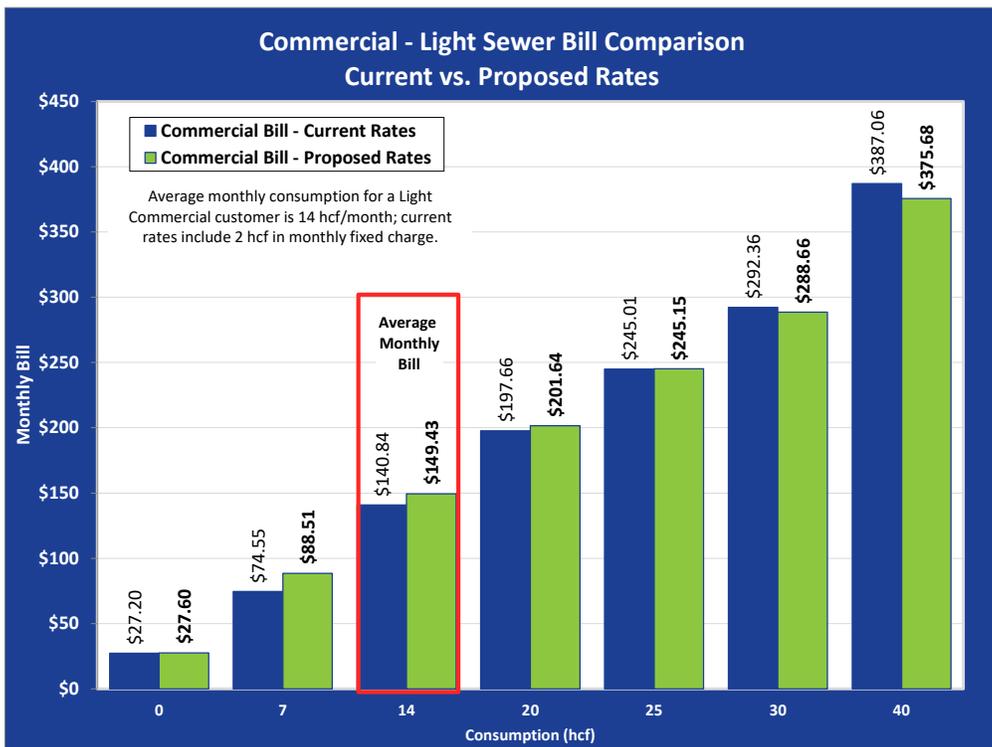
FIGURE 23. MONTHLY SINGLE-FAMILY SEWER BILL COMPARISON



COMMERCIAL SEWER CUSTOMERS

Figure compares typical light-strength commercial monthly sewer bills in FY 2022/23 under the current and proposed rates.

FIGURE 24. MONTHLY LIGHT-STRENGTH COMMERCIAL SEWER BILL COMPARISON



Section 5. CONNECTION FEE BACKGROUND, PURPOSE AND METHODOLOGY

Background and Purpose

Connection fees are one-time fees intended to reflect the cost of existing infrastructure and planned improvements available to new services, and place new utility customers on equal basis from a financial perspective with existing customers. Once new customers are added to the system, they then incur the obligation to pay the same service charges or water and sewer rates that existing customers pay. The next few sections summarize the results of the analysis and present the updated maximum connection fees that could be imposed on new or upsized connections.

Connection Fee Methodology

Connection fees imposed by the City are subject to California’s Mitigation Fee Act (“Act”), embodied in Government Code 66000 et seq., which the State Legislature passed, starting with Assembly Bill 1600 in 1989. The Act prescribes how public agencies may impose development impact fees, including water and sewer connection fees. The connection fees presented herein are calculated with the intent of complying with the Act and are based on typical industry methodologies.

In its simplest form, connection fees (for utilities they are often also referred to as developer fees, capacity fees, or system development charges) are calculated by dividing the costs allocated to future development by the number of units of new development:

- Costs of planned future facilities and improvements required to serve new development are those that can be allocated to future development.
- The number of new units (i.e., growth) are those units projected to occur within the timeframe covered by the connection fee analysis.

Connection fee revenues may not be used for annual operations or maintenance of existing or new facilities. The cost of the public facilities analyzed do not include the operational costs of these facilities, which, over their useful life, may be quite substantial, and will be borne by customers connected to the system at the time of operation.

Another fundamental premise of connection fees is that the burden of the fees cannot exceed the actual cost of the public facilities needed to serve the development paying the fee, including costs associated with administering the fee program. In addition, fee revenues can only be used for their intended purposes and the Act has specific accounting and reporting requirements both annually and after every five-year period for the use of fee revenues.

Facility Standards, Level of Service, and Deficiencies

The words “standard” and “level of service” are used (at times interchangeably) to describe the level of investment in capital facilities that are needed to serve water and sewer customers reliably. A standard is defined as the adopted policy, or benchmark, that the City currently provides or intends to achieve for any particular facility. On the other hand, level of service (LOS) refers to the actual level of benefit that the

current population experiences. Level of service may be different from the standard for a given facility. If the existing LOS is less than the standard, a deficiency exists for that facility.

New development alone cannot be required to improve the LOS provided by those facilities that serve both new and existing development¹⁷. State law limits connection fees to the cost of maintaining services for new development at the same LOS as existing development.

Mitigation Fee Act and Required Findings

The Mitigation Fee Act establishes requirements for imposing connection fees, including necessary funding for the ongoing administration of connection fee programs. It also requires local governments to document the following when adopting a connection fee:

- Identify the purpose of the fee.
- Identify the use of fee revenues.
- Determine a reasonable relationship exists between the fee's use and the type of development paying the fee.
- Determine a reasonable relationship exists between the need for the fee and the type of development paying the fee.
- Determine a reasonable relationship exists between the amount of the fee and the cost of the facility attributable to development paying the fee.

Together, these items constitute a “nexus study” when documented and presented in a report. This report provides the required documentation for the above findings and the determinations that establish the basis for the recommended fees.

Fee Updates

This connection fee study and the recommended fees assume a given level of development activity over the study period based on the best available data. The development that actually occurs may result in both different impacts and fee revenues than those that are calculated in this study. For that reason, regular updates are recommended to adjust the connection fees to match the needs created by the rate of actual development.

The following sections discuss the development of the water and sewer connection fees.

17 New development can, and often does fund facilities beyond those covered by connection fees through “developer agreements,” which are voluntarily and mutually agreed upon by new development and an individual utility. Developer agreements are outside the scope of this report, and not considered a part of the connection fee programs addressed herein.

Section 6. WATER CONNECTION FEE STUDY

Introduction

Various methodologies have been and are currently used to calculate water connection fees. The most common are:

- The value of existing (historical) system assets, often called a “buy-in” methodology.
- The value of planned future improvements, also called the “incremental” or “system development” methodology.
- A combination of these two approaches.

This analysis uses the combination approach, which requires new customers to pay both their fair share of existing system assets as well as their share of the planned future capital improvements needed to provide them with capacity in the City’s water system. As a result, new customers connecting to the City’s water system would enter as equal participants with current users regarding their financial commitment and obligations to the utility.

In calculating the water connection fees, the replacement-cost-new-less-depreciation (RCNLD) value of existing system assets was used to calculate the buy-in component of the connection fee. The Handy Whitman Index of Public Utility Construction Costs¹⁸, which is a regionally specific construction cost index that tracks water utility construction costs, was used to estimate the replacement value of the existing system assets. We believe this is an accurate inflation index and appropriate for both water and sewer utilities.

A detailed summary of the water utility’s connection fee calculations is included in Appendix D – Water Connection Fee Study Summary Tables.

Existing Connections and Projected Future Growth

Larger meters have the potential to use more of the water system’s capacity, compared to smaller meters. The potential capacity used is proportional to the maximum hydraulic flow through each meter size as established by the American Water Works Association (AWWA) hydraulic capacity ratios. The AWWA capacity ratios (also known as Flow Factors) used in this study are shown in the fourth column of **Figure 25**.

Since meters larger than the typical residential meter (in this case a 5/8-inches), they have a greater potential peak demand than a 5/8-inch meter. Therefore, a “hydraulic capacity factor” is calculated by dividing the maximum capacity or flow of large meters by the capacity of the base meter size, which is typically the most common residential meter size (5/8-inches).

The flow factors shown in **Figure** are the ratio of potential flow through each meter size compared to the flow through a 5/8-inch meter and is used to compare the capacities of the larger meters. For example, column 4 in Figure shows the hydraulic capacity of a two-inch meter is 8 times that of a 5/8-inch meter. As a result, while there are currently 9,993 connections, there are 13,487 equivalent meter units.

¹⁸ *The Handy-Whitman index of public utility construction costs*. Baltimore, MD: Whitman, Requardt and Associates, 2017. Print.

FIGURE 25. METER EQUIVALENTS – WATER

Meter Size	Existing Water Meters ¹	Equivalent Water Meters		Water Meter Equivalent Units
		Maximum Flow (gpm) ²	Hydraulic Capacity Factor ³	
5/8 Inch	9,151	20	1.00	9,151
1 Inch	474	50	2.50	1,185
1 1/2 Inch	141	100	5.00	705
2 Inch	189	160	8.00	1,512
3 Inch	19	320	16.00	304
4 Inch	14	500	25.00	350
6 Inch	4	1,000	50.00	200
8 Inch	1	1,600	80.00	80
Total	9,993			13,487

1. From City of Eureka's billing data for June 2021.
2. Source: *AWWAMA1, Table B-2*. Assumes displacement meters for 5/8" through 2" and Compound Class I for 3" through 8".
3. Hydraulic capacity factors are comparisons to a 5/8-inch meter.

The actual number of meters by size is multiplied by the corresponding flow factor to calculate the total number of equivalent meters, which is used as a proxy for the potential demand that each customer can place on the water system. A significant portion of a water system’s peak capacity, and in turn, the utility’s fixed capital costs, are related to meeting system capacity requirements. Therefore, the connection fee for a new service will be proportional to the service’s meter equivalent units.

The state now requires fire suppression systems in all new single-family home construction with a minimum meter size of 1-inch. However, although the expected use within single-family homes does not change because of this requirement, the City has a policy of charging all new connection fees based on actual meter size.

The City’s capital improvement plans, which provide the basis for defining the costs of planned future capital assets, extends through Fiscal Year 2030/31, which is a 10-year planning period. Based on the City’s customer growth projections, there will be approximately 0.80 percent annual growth in the water system. The result, as shown in **Figure** , is that the City expects 1,003 new 5/8-inch equivalent meters by 2031.

FIGURE 26. PROJECTED CUSTOMER GROWTH – WATER

Demographic Statistics	Existing Total Equiv. Meters ¹	Projected Equiv. Meters (thru 2031) ²	Number of Additional Units	% Allocation Factors	
				Existing Services	Future Services
SFR Equivalent Meters	13,487	14,490	1,003	93.1%	6.9%

1. Meters by sizes are from June 2021 billing data; meter equivalents compared to 5/8-inch meter.
2. Customer growth is estimated at 0.8% per year based on the City's Urban Water Management Plan (UWMP). Total reflects a 10-year planning period.

Existing and Planned Future Assets

The water utility’s capital assets include existing assets and planned capital improvements (i.e., the buy-in and incremental assets). Existing assets are often valued using “book value” (i.e., original cost less depreciation). However, replacement costs provide a more accurate estimate of these asset values. Ideally,

replacement values would reflect the actual field condition of the assets (i.e., whether they are behind or ahead of the depreciation curve based on actual condition rather than just the remaining years of expected life¹⁹). Since this information was not available for this study, the estimated replacement-cost-new-less-depreciation value (or RCNLD) was developed as the cost basis for the new connection fees.

In this analysis, assets that have exceeded their useful life (as defined in the City’s asset records) were considered to have no remaining value. The resulting RCNLD value of existing assets are summarized in **Figure** as the System Buy-In Cost Basis.

FIGURE 27. SUMMARY OF EXISTING WATER ASSET VALUES

Asset Category	Original Values ¹		Remaining Cost (Book Value)	System Replacement Value ²
	Original Asset Cost	Depreciation to Date		
Water Fund				
Capital Projects	\$ 16,803,107	\$ 6,397,395	\$10,405,711	\$ 19,258,140
Water Distribution	25,270,855	11,203,587	14,067,268	22,375,054
Water Treatment	5,089,831	2,936,006	2,153,825	5,161,561
Total Capital Facilities & Equipm	\$ 47,163,793	\$ 20,536,988	\$26,626,804	\$ 46,794,755

1. Source: Asset Data and Acquired Date provided by the City in source file: 6. Fixed Assets.xlsx
2. Replacement values calculated by escalating the remaining (book) values to 2022 using historical cost inflation factors from the Handy-Whitman Index of Public Utility Construction Costs, Water Utility - Pacific Region.

Most of the RCNLD costs were allocated to existing users based on the 93.1 percent allocation factor shown in Figure (and 6.9 percent allocation factor for future users – with some assets excluded). The resulting allocation of exiting system assets to existing and future users is shown in **Figure** . Future customers are allocated approximately \$3.2 million of existing water assets.

FIGURE 28. EXISTING WATER ASSET VALUES ALLOCATED TO FUTURE CUSTOMERS

Asset Category	System Buy-In Cost Basis ¹	Allocation Basis (%) ²		Distribution of Cost Basis (\$)		
		Existing Services	Future Services	Existing Services	Future Services	Total
Water Fund						
Capital Projects	\$ 19,258,140	93.1%	6.9%	\$ 17,925,429	\$ 1,332,711	\$ 19,258,140
Water Distribution	22,375,054	93.1%	6.9%	20,826,644	1,548,410	22,375,054
Water Treatment	5,161,561	93.1%	6.9%	4,804,368	357,193	5,161,561
Total Capital Facilities & Equipm	\$ 46,794,755	93.1%	6.9%	\$ 43,556,442	\$ 3,238,314	\$ 46,794,755

1. Cost basis for consideration is calculated as replacement value less accumulated depreciation. From report Table 27.
2. Refer to Exhibit 1: proportionate allocation between existing and future users.
3. Vehicles are excluded from the capacity charge calculation because they are not capacity related assets.

As noted earlier, the capital improvement costs extend through a 10-year period ending in 2031. The estimated cost of planned future improvements (in 2022 dollars) used to calculate the system development component of the connection fee are summarized in **Figure** ; based on the 6.9 percent allocation factor, future customers were allocated approximately \$2.5 million of these future capital project costs.

¹⁹ Some fully depreciated assets may have remaining useful life. However, it would require field inspection of these assets to determine what the remaining life is. This level of analysis is beyond most utility’s capabilities and/or is cost prohibitive.

FIGURE 29. PLANNED WATER ASSET VALUES ALLOCATED TO FUTURE CUSTOMERS

Facility / Equipment ¹	Current Cost Estimate (\$2022) ¹	Year to be Completed	System Development Cost Basis for Consideration ²	% Allocation			Existing Services	Future Services
				Excluded	Existing Services	Future Services		
Water Treatment Plan Settling Basins	\$ 780,000	2023	\$ 780,000	0%	93.1%	6.9%	\$ 726,022	\$ 53,978
Henderson Street Improvements	\$ 1,395,570	2022	\$ 1,395,570	0%	93.1%	6.9%	\$ 1,298,993	\$ 96,577
High Tank Pump St Replacement	\$ 1,100,000	2023	\$ 1,100,000	0%	93.1%	6.9%	\$ 1,023,877	\$ 76,123
Fueling Station PJ# 703	\$ 420,000	2022	\$ 420,000	0%	93.1%	6.9%	\$ 390,935	\$ 29,065
Fiber Optic Network Upgrade	\$ 156,121	2022	\$ 156,121	0%	93.1%	6.9%	\$ 145,317	\$ 10,804
Water Dist. System Maint. 2021	\$ 1,200,000	2022	\$ 1,200,000	0%	93.1%	6.9%	\$ 1,116,957	\$ 83,043
Water Treatment Plan Settling Basins	\$ 12,295	2022	\$ 12,295	0%	93.1%	6.9%	\$ 11,444	\$ 851
Water Distribution System Maint 2022	\$ 2,000,000	2023	\$ 2,000,000	0%	93.1%	6.9%	\$ 1,861,595	\$ 138,405
Water Treatment Solar Renewable Energy	\$ 50,000	2023	\$ 50,000	0%	93.1%	6.9%	\$ 46,540	\$ 3,460
Tank Recoating 2022	\$ 1,000,000	2023	\$ 1,000,000	0%	93.1%	6.9%	\$ 930,798	\$ 69,202
Water Meter AMR	\$ 6,000,000	2024	\$ 6,000,000	100%	0.0%	0.0%	\$ -	\$ -
Total	\$ 14,113,986		\$ 14,113,986		53.5%	4.0%	\$ 7,552,478	\$ 561,508
Additional Future CIP (10-Year Planning Period) ³	\$ 24,000,000	2032	\$ 24,000,000		93.1%	6.9%	\$ 22,339,140	\$ 1,660,860

1. Capital project costs were provided by City Staff in source file: *Capital Project Activity Forecast 22-23-JJW.xlsx*

2. Project costs are allocated to existing and future services based on projected growth in the system. See Demographics tab for detail.

3. The City is planning on additional CIP expenditures, primarily for distribution-related projects, estimated at about \$4.0 million/year maximum. 10 Year planning period is through 2032.

Adjustments to the Cost Basis

Before the connection fees are developed, two adjustments were applied to the cost basis to account for existing cash reserves and outstanding debt. Existing cash reserves are treated as an asset since existing customers contributed them and they are available to pay for capital and/or operating costs of the water utility. The cash reserves are, in a sense, no different from any other system asset. Using the 6.9 percent allocation factor from Figure , the allocation of cash reserves to future users is approximately \$0.69 million as shown in **Figure 30**.

FIGURE 30. CASH RESERVES ALLOCATED TO FUTURE WATER CUSTOMERS

Water Cash Reserves	Beginning Cash ¹	% Allocation		\$ - Allocation	
		Existing Users	Future Users	Existing Users	Future Users
Cash in Banks (Operating Reserve)	\$ 8,715,138	93.1%	6.9%	\$ 8,112,029	\$ 603,109
Cash in Banks (Capital Rehab./Replac. Reserve)	\$ 378,870	93.1%	6.9%	\$ 352,651	\$ 26,219
Cash with Fiscal Agent (Restricted Bond Funds)	\$ 893,533	93.1%	6.9%	\$ 831,698	\$ 61,835
Capacity Fees Held in Reserve	\$ -	93.1%	6.9%	\$ -	\$ -
Total Beginning Cash	\$ 9,987,541	93.1%	6.9%	\$ 9,296,378	\$ 691,163
Cash Net of Unspent Capacity Fees	\$ 9,987,541	93.1%	6.9%	\$ 9,296,378	\$ 691,163

1. The beginning Cash balance is the amount in Funds 500 and 501 as of July 1, 2021. Source: 7. *Cash Balances.xlsx*

There was also a credit to the cost basis related to outstanding bonds. This credit was included because some existing assets were at least partially funded with revenue bonds that will be paid in future years by the “existing customers” at that time. Since new connections pay their share of existing asset values, including the remaining outstanding debt on those same assets would be double counting the asset values in the connection fees. Therefore, a credit is given in the connection fee calculation for the value of future principal, to avoid double-charging new customers for bond-funded assets. **Figure** shows that the credit provided to future users in the connection fee development is approximately \$0.64 million.

FIGURE 31. OUTSTANDING DEBT ALLOCATED TO FUTURE WATER CUSTOMERS

Bond Issue	Outstanding Principal	% Allocation		\$ - Allocation	
		Existing Users	Future Users	Existing Users	Future Users
Water Bonds, 2002 CSCDA	\$ 1,465,000	93.1%	6.9%	\$ 1,363,618	\$ 101,382
Water Bonds, 2005 CSCDA	2,695,000	93.1%	6.9%	2,508,499	186,501
Water Bonds, 2006 CSCDA	1,090,000	93.1%	6.9%	1,014,569	75,431
Water Revenue Bonds, Series 2012	3,990,000	93.1%	6.9%	3,713,882	276,118
Grand Total	\$ 9,240,000	93.1%	6.9%	\$ 8,600,569	\$ 639,431

1. Outstanding principal is allocated to existing and future services based on projected growth in the system. See Demographics tab for detail.

Calculated Water Connection Fees

The sum of the existing and planned asset values (that is, the system buy-in and system development costs), along with the adjustments for existing cash reserves and outstanding principal payments, defines the total cost basis allocated to future customers, as shown in **Figure** .

FIGURE 32. SUMMARY OF COST BASIS FOR FUTURE WATER CUSTOMERS

System Asset Values Allocated to Future Development	10-Yr. Period
System Asset Values Allocated to Future Development	
<i>System Asset Values Allocated to New Development</i>	
Existing System Buy-In ¹	\$ 3,238,314
Future System Expansion ²	2,222,368
Total: Existing & Future System Costs	\$ 5,460,682
<i>Adjustments to Cost Basis:</i>	
Cash Reserves	\$ 691,163
Outstanding Long-Term Debt (Principal) Allocated to Future Users ³	(639,431)
Total: Adjustments to Cost Basis	\$ 51,732
Total Adjusted Cost Basis for New Development	\$ 5,512,413

1. Refer to Exhibits 2 and 3 for detail of existing assets.
2. Refer to Exhibit 5 for detail related to planned assets.
3. Outstanding principal is excluded because future connections are expected to pay debt service once they are sewer customers, the same as existing customers. Therefore, this share of principal must be excluded from capacity fees to avoid double-charging new customers.

The total adjusted cost basis is then divided by the number of future customers (in meter equivalents) expected to connect to the system (previously in Figure 24) to calculate the fee shown in **Figure** .

FIGURE 33. SUMMARY OF COSTS ALLOCATED TO FUTURE WATER CUSTOMERS & NEW CONNECTION FEES

Summary of Costs Allocated to Connection Fees	Adjusted System Cost Basis	Planned Additional 5/8-inch meters (thru 2031)	Maximum Connection Fee (5/8-inch meter)
Current Water Connection Fee Per Equivalent Meter			\$3,208
Maximum Water Connection Per Equivalent Meter	\$ 5,512,413	1,003	\$5,497

Based on this methodology and the assumptions used in this analysis, the new connection fees for each meter size are shown in **Figure** . These updated connection fees represent the maximum fees that the City could charge for new connections by meter size.

FIGURE 34. UPDATED WATER CONNECTION FEES

Meter Size	Current Connection Fees	Updated Maximum Connection Fee Per Meter Size ^a
5/8 Inch	\$3,208	\$5,497
3/4 Inch	\$3,208	\$5,497
1 Inch	\$8,021	\$13,744
1 1/2 Inch	\$16,041	\$27,487
2 Inch	\$25,666	\$43,979
3 Inch	\$51,322	\$87,959
4 Inch	\$80,206	\$137,436
6 Inch	\$160,412	\$274,872
8 Inch	\$256,659	\$439,795

a. Reflect the hydraulic capacity factors from Figure 25.

Water Connection Fee Findings Statements

The new water connection fees calculated in this report are based on regulatory requirements and generally accepted industry standards, and are further documented in Appendix D. This study makes the following findings:

- The purpose of the City’s water connection fee is to ensure that new and upsized connections reimburse and/or mitigate a reasonable portion of the City’s planned capital investments. These investments benefit and/or are necessary to accommodate increased demand for water service.
- The City uses connection fee proceeds to fund capital investments in the water system, which include the future design and construction of planned facilities.
- All parcels seeking permission to connect to the City’s water system are subject to the water connection fee, payment of which is a condition of connection approval. Figure identifies the total number of projected future water customers.
- Connection fees for new water customers vary depending on the size of the water meter serving the connection. Meter size is generally proportionate to the demands a parcel places on the water utility system, specifically the peaking requirements related to the meter size.
- Figure illustrates the equivalency factors (or hydraulic capacity factors) differentiating meter sizes, based on their maximum continuous flow. Of the meters currently connected to the system, over 90 percent are 5/8-inch meters, representing an equivalency factor of 1.0, from which the equivalent meters for larger meters are calculated.
- The City has made investments in water infrastructure and plans to invest further in expanded and upgraded facilities. These investments make possible the availability and continued reliable provision of utility service of high-quality water sufficient to meet demands of growth within the City’s service area.
- Without capital investment in existing facilities, the water system capacity available to serve the needs of future connections would be uncertain. Without planned investments in future facilities, water service would not be sustainable at the level of service enjoyed by current users. The total value of planned water system assets that are attributable to serving future connections is identified in Figure .

- Connection fees are derived directly from the value of capital investments in existing and planned water facilities.
- Figure identifies the water infrastructure cost per 5/8-inch meter for a new connection, resulting in connection fee unit cost of **\$5,497** per 5/8-inch meter. Figure 34 shows the new connection fees for larger meters.
- Upon payment of a connection fee, a new customer incurs the obligation to pay the same ongoing service rates as existing customers, regardless of the date of connection to the systems or the actual start of service. Connection fees ensures that, over time, ongoing service rates are not disproportionately burdened by the costs to provide service to future customers and accommodate system growth.

Section 7. SEWER CONNECTION FEE STUDY

Introduction

The same methodology used to calculate the City’s water connection fees was used for the sewer connection fees (i.e., a combination of the buy-in and incremental cost methods). This combination approach requires new customers to pay their fair share of both existing system assets and planned future capital improvements needed to provide them with capacity in the City’s sewer system. As a result, new customers connecting to the City’s sewer system would enter as equal participants regarding their financial commitment and obligations to the utility.

The sewer connection fees used the replacement-cost-new-less-depreciation (RCNLD) value of existing system assets to calculate the buy-in component of the connection fee. The Handy Whitman Index of Public Utility Construction Costs¹⁸, which is a regionally specific construction index that tracks water utility construction costs, was used to estimate the replacement value of the existing system assets. We believe this is an accurate inflation index and can be used for sewer utilities.

A detailed summary of the sewer utility’s connection fee calculations is included in Appendix E – Sewer Connection Fee Study Summary Tables.

Existing Connections and Projected Future Growth

Different types of customers have the potential to use more of the system’s capacity depending on the flow and the strength of effluent. The potential capacity demanded is therefore proportional to the type of customer (i.e., residential, low-, medium-, or high-strength commercial). The third column in **Figure** represents the number of Housing Equivalent Units (HEUs) that are in the City’s sewer system. One HEU is equivalent to the sanitary sewer flows of a single-family residential home.

FIGURE 35. HOUSING EQUIVALENT UNITS – SEWER

Customer Class	Existing Sewer Accounts ¹	Housing Equivalents Units (HEUs)
Single Family Residential	7,688	7,695
Multi-Family Residential	1,017	3,992
Commercial Light	1,009	1,055
Commercial Medium	29	29
Commercial Heavy	114	114
Industrial/Extra Heavy	1	447
Total	9,858	13,332

1. Customer Accounts and HEUs based on June 2021 billing data.

The number of HEUs is used as a proxy for the potential demand that each customer can place on the sewer system. A significant portion of a sewer system’s capacity, and in turn, the utility’s fixed capital costs are related to meeting system capacity requirements. Therefore, the connection fee for a new service will be proportional to the number of HEUs.

The result of this analysis, summarized in Figure , is that while there are currently 9,858 connections to the City’s sewer system, there are 13,322 HEUs.

The City’s sewer capital improvement plans over a 10-year planning period, which is the basis for defining the costs of planned future capital assets, extends through Fiscal Year 2030/31. Like the water connection fee analysis, the sewer connection fee analysis assumes there will also be approximately 0.80 percent annual growth in the sewer system. The result, as shown in **Figure** , are the expected 1,106 new 5/8-inch equivalent housing units (HEUs) over the next 10 years.

FIGURE 36. PROJECTED CUSTOMER GROWTH – SEWER

Demographic Statistics	Existing Total ¹	Projected HEUs (thru 2031/32) ²	Allocation Factors		Number of New Units
			Existing Services	Future Services	
Equivalent Dwelling Units	13,332	14,438	92.3%	7.7%	1,106

1. Customer Accounts and HEUs based on June 2021 billing data.

2. Customer growth is estimated at 0.8% per year based on the City's Urban Water Management Plan (UWMP).

Total reflects a 10-year planning period.

Existing and Planned Future Assets

The sewer utility’s capital assets include existing assets and planned capital improvements (i.e., the buy-in and incremental assets). As with the water connection fee, the estimated replacement costs (RCNLD value) were developed as the cost basis for the new sewer connection fees.

After adjustments to account for assets that were considered to have no remaining value, the resulting RCNLD value of existing assets are summarized in **Figure** as the System Replacement Values.

FIGURE 37. SUMMARY OF EXISTING SEWER ASSET VALUES

Asset Category ¹	Original Values ¹		Asset Cost Less Depreciation	System Replacement Values ²
	Asset Cost	Depreciation to Date		
Capital Projects	\$ 23,713,606	\$18,570,719	\$ 5,142,887	\$ 18,411,563
Sewer Collection	53,654,551	14,605,405	39,049,146	57,421,326
Sewer Treatment	25,091,784	17,407,671	7,684,113	11,836,430
Total Capital Facilities & Equipment	\$102,459,941	\$50,583,795	\$51,876,146	\$ 87,669,319

1. Source: Asset Data and Acquired Date provided by the City in source file: 6. Fixed Assets.xlsx

2. Replacement values are calculated by escalating the remaining (book) values to 2022 using historical cost inflation factors from the Handy-Whitman Index of Public Utility Construction Costs, Water Utility - Pacific Region.

Most of the RCNLD costs were allocated to existing users based on the 92.3 percent allocation factor shown in Figure (and 7.7 percent allocation factor for future users). Some assets are excluded from this analysis because HCSD essentially “owns” 32.1 percent of the wastewater treatment plant capacity through a contract with the City. The resulting allocation of existing system assets to existing and future users is shown in **Figure** . Future users are allocated approximately \$5.3 million of existing sewer assets.

FIGURE 38. EXISTING SEWER ASSET VALUES ALLOCATED TO FUTURE CUSTOMERS

Asset Category	System Buy-In Cost Basis ¹	Allocation Basis (%) ²		Distribution of Cost Basis (\$)		
		Existing Services	Future Services	Excluded ³	Existing Services	Future Services
Capital Projects	\$ 18,411,563	92.3%	7.7%	\$ 3,302,501	\$ 13,951,863	\$ 1,157,200
Sewer Collection	57,421,326	92.3%	7.7%	12,337,481	41,630,884	3,452,962
Sewer Treatment	11,836,430	92.3%	7.7%	2,727,749	8,411,049	697,632
Total Capital Facilities & Equipment	\$ 87,669,319	92.3%	7.7%	\$ 18,367,730	\$ 63,993,795	\$ 5,307,793

1. From previous table.
2. Refer to Exhibit 1: proportionate allocation between existing and future users.
3. Amount Excluded from Analysis includes 32.1% of Treatment Capacity that Humboldt Community Services District is entitled to.

As noted earlier, this analysis includes the costs of capital improvements through 2031. The estimated cost of planned future improvements (in 2022 dollars) used to calculate the system development component of the connection fee are summarized in **Figure 39**; based on the 7.7 percent allocation factor, future customers were allocated approximately \$3.1 million of these future capital project costs. As with existing assets, portions of planned assets are excluded since they should be allocated to HCSD. For projects with partial ownership by HCSD, the same allocation factors (i.e., 92.3 and 7.7 percent) were adjusted to account for HCSD’s 32.1 percent share.

FIGURE 39. PLANNED ASSET VALUES ALLOCATED TO FUTURE SEWER CUSTOMERS

Facility / Equipment ¹	Current Cost Estimate (\$2022) ¹	Year to be Completed	System Development Cost Basis for Consideration ²	% Allocation			Distribution of Cost Basis (\$)		
				Exclude from Analysis ³	Existing Services	Future Services	Exclude from Analysis ³	Existing Services	Future Services
Crosstown Intercep PJ 433	\$ 378	2022	\$ 378	0%	100.0%	0.0%	\$ -	\$ 378	\$ -
Cogeneration Upgrade PJ 462	\$ 187,845	2022	\$ 187,845	0%	92.3%	7.7%	-	173,458	14,387
Henderson Street Improvements	\$ 1,220,000	2022	\$ 1,220,000	0%	92.3%	7.7%	-	1,126,560	93,440
WW Pump Station Upgrades	\$ 545,196	2023	\$ 545,196	32.1%	62.7%	5.2%	175,008	341,835	28,353
Enclosed Bays & Estuaries	\$ 2,827,463	2023	\$ 2,827,463	32.1%	62.7%	5.2%	907,616	1,772,807	147,041
Fueling Station PJ# 703	\$ 420,000	2023	\$ 420,000	0%	92.3%	7.7%	-	387,832	32,168
Elk River Estuary & Interpretive Center	\$ 700,000	2022	\$ 700,000	32.1%	62.7%	5.2%	224,700	438,897	36,403
Fiber Optic Network Upgrade	\$ 56,000	2022	\$ 56,000	0%	92.3%	7.7%	-	51,711	4,289
Wastewater Pump Station Upgrade Program	\$ 1,953,954	2023	\$ 1,953,954	32.1%	62.7%	5.2%	627,219	1,225,120	101,614
WWTP Motor Control Center Replacement Pro	\$ 50,000	2024	\$ 50,000	32.1%	62.7%	5.2%	16,050	31,350	2,600
Future Projects ²	\$ 51,267,000	Future	\$ 51,267,000	32.1%	62.7%	5.2%	16,456,707	32,144,180	2,666,113
Total	\$ 59,227,836		\$ 59,227,836	--	--	--	\$18,407,300	\$37,694,129	\$ 3,126,407

1. Capital project costs were provided by CityStaff in source file: *Capital Project Activity Forecast 22-23-JJW.xlsx*
2. Adopted CIP per City staff for FY23-FY27 and projected future CIP of \$5.3M/year for FY28-FY31. From Sewer Rate Model.
3. Amount Excluded from Analysis includes 32.1% of Treatment Capacity that Humboldt Community Services District is entitled to.
4. Assumes a 10-year planning period.

Adjustments to the Cost Basis

Two adjustments were made to the cost basis to account for existing cash reserves and outstanding debt. Existing cash reserves are treated as an asset since they are no different than other system assets. As summarized in **Figure** , approximately \$0.6 million of the existing cash reserves of \$8 million were allocated to future customers, based on the 7.7 percent allocation factor previously shown in **Figure** .

FIGURE 40. CASH RESERVES ALLOCATED TO FUTURE SEWER CUSTOMERS

Sewer Cash Reserves	System Buy-In Cost Basis ¹	Allocation Basis (%) ²		Distribution of Cost Basis (\$)		
		Existing Services	Future Services	Existing Services	Future Services	Total
Cash in Banks (Operating Reserve)	\$ 6,182,282	92.3%	7.7%	\$ 5,708,782	\$ 473,500	\$ 6,182,282
Cash in Banks (Capital Rehabil./Repl. Reserve)	\$ 758,869	92.3%	7.7%	\$ 700,747	\$ 58,122	\$ 758,869
Cash with Fiscal Agent (Debt Reserve Funds)	\$ 1,037,990	92.3%	7.7%	\$ 958,491	\$ 79,499	\$ 1,037,990
Capacity Fees Held in Reserve	\$ 75,000	92.3%	7.7%	\$ 69,256	\$ 5,744	\$ 75,000
Total Beginning Cash	\$ 8,054,141	92.3%	7.7%	\$ 7,437,276	\$ 616,865	\$ 8,054,141
Cash Net of Unspent Capacity Fees	\$ 7,979,141	92.3%	7.7%	\$ 7,368,020	\$ 611,121	\$ 7,979,141

1. The beginning Cash balance is the amount in Funds 510 and 512 as of July 1, 2021. Source: 7. Cash Balances.xlsx

Some existing assets were at least partially funded with revenue bonds that will be paid in future years by ratepayers.²⁰ Therefore, to avoid double charging new connections, this outstanding bond principal is excluded from the cost basis so that new customers don't pay it in both the connection fee and then again in rates they will be charged once they become existing ratepayers. **Figure** shows this credit is approximately \$1.17 million.

FIGURE 41. OUTSTANDING DEBT ALLOCATED TO FUTURE SEWER CUSTOMERS

Bond Issues	Outstanding Principal	% Allocation ¹		\$ Allocation	
		Existing Users	Future Users	Existing Users	Future Users
2003 CSCDA Wastewater Bonds	\$ 1,715,000	92.3%	7.7%	\$ 1,583,649	\$ 131,351
2011 Wastewater Bonds	13,540,000	92.3%	7.7%	12,502,974	1,037,026
Grand Total	\$15,255,000	92.3%	7.7%	\$ 14,086,623	\$ 1,168,377

1. Outstanding bond principal is allocated based on projected growth in the system. See Demographics tab for detail.

Calculated Sewer Connection Fees

Figure shows the cost basis allocated to future customers (existing and planned asset values, along with the adjustments for existing cash reserves and outstanding principal payments) is about \$7.9 million.

FIGURE 42. SUMMARY OF COST BASIS FOR FUTURE SEWER CUSTOMERS

System Asset Values Allocated to Future Development	
System Asset Values Allocated to Future Development	
<i>System Asset Values Allocated to New Development</i>	
Existing System Buy-In ¹	\$ 5,307,793
Future System Expansion ²	<u>3,126,407</u>
Total: Existing & Future System Costs	\$ 8,434,200
<i>Adjustments to Cost Basis:</i>	
Cash Reserves	\$ 611,121
Outstanding Long-Term Debt (Principal) Allocated to Future Users ³	<u>(1,168,377)</u>
Total: Adjustments to Cost Basis	\$ (557,256)
Total Adjusted Cost Basis for New Development	\$ 7,876,943

1. Refer to Exhibits 2 and 3 for detail of existing assets.

2. Refer to Exhibit 5 for detail related to planned assets.

3. Outstanding principal is excluded because future connections are expected to pay debt service once they are sewer customers, the same as existing customers. Therefore, this share of principal must be excluded from capacity fees to avoid double-charging new customers.

²⁰ That is, future bond repayment is assumed to be made by ratepayers, not connection fee reserves.

This cost basis is then divided by the number of future customers (in HEUs) to calculate the maximum fee per HEU that the City could charge for new sewer connections, as shown in **Figure** . This maximum fee also serves as the basis for determining the connection fees paid by non-standards customers (i.e., by determining the number of HEUs using the single-family HEU as a baseline).

FIGURE 43. CALCULATION OF NEW SEWER CONNECTION FEES

Summary of Costs Allocated to Connection Fees	Adjusted System Cost Basis	Planned Additional HEU's (thru 2031)	Maximum Connection Fee (\$/HEU)
Current Sewer Connection Fee Per HEU			\$3,423
Maximum Sewer Connection Fee Per HEU	\$ 7,876,943	1,106	\$7,123

Sewer Connection Fee Findings Statements

The new sewer connection fees calculated in this report are based on regulatory requirements and generally accepted industry standards, and are further documented in Appendix E. This study makes the following findings:

- The purpose of the City’s sewer connection fee is to ensure that new connections reimburse and/or mitigate a reasonable portion of the City’s planned capital investments. These investments benefit and/or are necessary to accommodate increased demand for sewer service.
- The City uses connection fee proceeds to fund capital investments in the sewer system, which include the future design and construction of planned facilities.
- All parcels seeking permission to connect to the City’s sewer system are subject to the sewer connection fee, payment of which is a condition of connection approval.
- Connection fees for new sewer customers vary depending on the estimated number of HEU’s the connection will serve, which is generally proportionate to the demands a parcel places on the sewer utility system. Figure illustrates the future number of HEU’s, along with the number currently connected to the system.
- The City has made investments in sewer infrastructure and plans to invest further in expanded and upgraded facilities. These investments make possible the availability and continued reliable provision of utility service sufficient to meet demands of growth within the City’s service area.
- Without capital investment in existing and future facilities, the sewer system capacity available to serve future connections would be uncertain and continued sewer service at the level enjoyed by current users would not be sustainable. Figure identify the total value of existing and planned sewer system assets attributable to future connections. Connection fees are derived from the value of these existing and planned sewer system investments.
- Figure identifies the calculated unit cost of **\$7,123** for the sewer infrastructure cost per single-family housing equivalent unit (HEU) for a new connection.
- Upon payment of a connection fee, a new customer incurs the obligation to pay the same ongoing service rates as existing customers, regardless of the date of connection to the systems or the actual start of service. Connection fees ensure that, over time, ongoing service rates are not disproportionately burdened by the costs to provide service to future customers and accommodate system growth.

Section 8. RECOMMENDATIONS AND NEXT STEPS

Consultant Recommendations

This rate and connection fee study reflects input from City staff and the City Council and is intended to comply with general industry standards and State law, and specifically the requirements of Proposition 218 and the Mitigation Fee Act. Public hearings and protest balloting requirements are the next steps required to complete the adoption and implementation requirements for water and sewer rates. The City Council can directly adopt new connection fees, which are not subject to Proposition 218 requirements. As a part of this process, NBS recommends the City take the following actions:

- **Approve and Accept This Study Report:** NBS recommends the City Council formally approve and adopt this report and its recommendations. This will provide the documentation and administrative record necessary to adopt and implement these rates and connection fees.
- **Implement Recommended Levels of Rate Increases and Proposed Rates:** Based on successfully meeting the Proposition 218 balloting requirements, the City Council should proceed with implementing the rate increases and rate structures recommended in this report for both utilities for the next five years (see Figure and Figure). These rate increases are necessary to ensure the continued financial health of the City's water and sewer utilities.
- **Adopt Reserve Fund Targets:** NBS recommends the City Council adopt and strive to meet the recommended water and sewer reserve fund targets described in this report.
- **Implement New Connection Fees:** Based on the analysis presented in this report, the City Council should implement the new connection fees recommended in this report.

Next Steps

ANNUALLY REVIEW RATES AND REVENUE

Any time an agency adopts new utility rates, particularly when facing significant future capital costs, those new rates should be closely monitored over the next several years to ensure the revenue generated is sufficient to meet the annual revenue requirements. Changing economic and water consumption patterns underscore the need for this review, as well as potential and unseen changing revenue requirements, particularly those related to capital improvement and repair and replacement costs that can significantly affect annual cash flows.

PRINCIPAL ASSUMPTIONS AND CONSIDERATIONS

In preparing this report and the recommendations included herein, NBS has relied on a number of principal assumptions and considerations regarding financial matters, including the City's utility budgets, capital improvement plans, the number of customer accounts, water consumption records, and other conditions and events projected to occur in the future. This information and these assumptions were provided by sources we believe to be reliable, although NBS has not independently verified this data.

While we believe NBS' use of such information and assumptions is reasonable for the purpose of this report and its recommendations, some assumptions will invariably not materialize as stated herein or may vary significantly due to unanticipated events and circumstances. Therefore, the actual results can be

expected to vary from those projected to the extent that actual future conditions differ from those assumed by us or provided to us by others.

Section 9. APPENDIX A – ABBREVIATIONS & ACRONYMS²¹

AAF	Average Annual Flow
AF	Acre Foot, equal to 435.6 HCF/CCF or 325,851 gallons
Alt.	Alternative
Avg.	Average
AWWA	American Water Works Association
BMP	Best Management Practice
BOD	Biochemical Oxygen Demand
CA	Customer
CAP	Capacity
CCF	Hundred Cubic Feet (same as HCF); equal to 748 gallons
CCI	Construction Cost Index
COD	Chemical Oxygen Demand
COM	Commodity
Comm.	Commercial
COS	Cost of Service
COSA	Cost of Service Analysis
CPI	Consumer Price Index
CIP	Capital Improvement Program
DU	Dwelling Unit
Excl.	Exclude
ENR	Engineering News Record
EDU	Equivalent Dwelling Unit
Exp.	Expense
FP	Fire Protection
FY	Fiscal Year (e.g., July 1st to June 30th)
FY 2022/23	July 1, 2022 through June 30, 2023
GPD	Gallons per Day
GPM	Gallons per Minute
HCF	Hundred Cubic Feet; equal to 748 gallons or 1 CCF
Ind.	Industrial
Irr.	Irrigation
LAIF	Local Agency Investment Fund
Lbs.	Pounds
MFR	Multi-Family Residential
MGD	Million Gallons per Day
MG/L	Milligrams per Liter
Mo.	Month
Muni.	Municipal
NH ₃	Ammonia
NPV	Net Present Value
N/A	Not Available or Not Applicable
O&M	Operational & Maintenance Expenses
Prop 13	Proposition 13 (1978) – Article XIII A of the California Constitution which limits taxes on real property to 1 percent of the full cash value of such property.
Prop 218	Proposition 218 (1996) – State Constitutional amendment expanded restrictions of local government revenue collections.
Req't	Requirement

21 This appendix identifies abbreviations and acronyms that may be used in this report. This appendix has not been viewed, arranged, or edited by an attorney, nor should it be relied on as legal advice. The intent of this appendix is to support the recognition and analysis of this report. Any questions regarding clarification of this document should be directed to staff or an attorney specializing in this subject matter.

Appendix A, continued

Res.	Residential
Rev.	Revenue
RTS	Readiness-to-Serve
R&R	Rehabilitation & Replacement
SFR	Single Family Residential
SRF Loan	State Revolving Fund Loan
SWRCB	State Water Resources Control Council
TSS / SS	Total Suspended Solids
V. / Vs. /vs.	Versus
WWTP	Wastewater Treatment Plant

Section 10. APPENDIX B – WATER RATE SUMMARY TABLES

Section 11. APPENDIX C – SEWER RATE SUMMARY TABLES

Section 12. APPENDIX D – WATER CONNECTION FEE SUMMARY TABLES

Section 13. APPENDIX E – SEWER CONNECTION FEE SUMMARY TABLES

TABLE 1 : FINANCIAL PLAN AND SUMMARY OF REVENUE REQUIREMENTS

RATE REVENUE REQUIREMENTS SUMMARY	Budget	5-Year Prop 218 Period					Projected				
	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31	FY 2031/32
Sources of Water Funds											
Rate Revenue ¹											
Water Sales - Regular Sales	\$ 8,899,000	\$ 8,899,000	\$ 8,899,000	\$ 8,899,000	\$ 8,899,000	\$ 8,899,000	\$ 8,899,000	\$ 8,899,000	\$ 8,899,000	\$ 8,899,000	\$ 8,899,000
Non-Rate Revenue:											
Miscellaneous Revenues	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500
Water Sales - Sales to HCSD	550,000	550,000	550,000	550,000	550,000	550,000	550,000	550,000	550,000	550,000	550,000
Hidden Valley	14,700	14,700	14,700	14,700	14,700	14,700	14,700	14,700	14,700	14,700	14,700
Fees & Late Penalties	142,250	146,338	150,548	154,884	159,351	163,951	168,690	173,570	178,597	183,775	189,109
Service Revenue	52,500	52,500	52,500	52,500	52,500	52,500	52,500	52,500	52,500	52,500	52,500
Interest Income ²	124,588	85,763	75,096	103,256	85,410	80,162	93,854	135,739	179,499	226,893	277,900
Total Sources of Funds	\$ 9,785,538	\$ 9,750,801	\$ 9,744,343	\$ 9,776,840	\$ 9,763,461	\$ 9,762,813	\$ 9,781,243	\$ 9,828,009	\$ 9,876,797	\$ 9,929,368	\$ 9,985,708
Uses of Water Funds											
Operating Expenses³											
Finance	\$ 355,410	\$ 366,073	\$ 377,055	\$ 388,367	\$ 400,018	\$ 412,018	\$ 424,379	\$ 437,110	\$ 450,223	\$ 463,730	\$ 477,642
Public Works	197,993	203,932	210,050	216,352	222,842	229,528	236,414	243,506	250,811	258,335	266,086
Engineering	518,966	534,535	550,571	567,088	584,100	601,623	619,672	638,262	657,410	677,132	697,446
Water Distribution Maintenance	2,016,478	2,076,973	2,139,282	2,203,460	2,269,564	2,337,651	2,407,780	2,480,014	2,554,414	2,631,047	2,709,978
Source of Water Supply ⁴	3,400,000	3,400,000	3,400,000	3,400,000	3,400,000	3,400,000	3,400,000	3,400,000	3,400,000	3,400,000	3,400,000
Water Treatment	1,063,630	1,095,539	1,128,406	1,162,258	1,197,125	1,233,039	1,270,030	1,308,131	1,347,375	1,387,797	1,429,430
Capital Projects	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Water Supply & Distribution: Expenses	\$ 7,552,477	\$ 7,677,052	\$ 7,805,363	\$ 7,937,524	\$ 8,073,650	\$ 8,213,859	\$ 8,358,275	\$ 8,507,023	\$ 8,660,234	\$ 8,818,041	\$ 8,980,582
Other Expenditures:											
Existing Debt Service	\$ 1,410,006	\$ 1,402,288	\$ 1,402,294	\$ 1,404,913	\$ 1,400,375	\$ 789,313	\$ 787,588	\$ 903,500	\$ 901,763	\$ 904,025	\$ 905,163
New Debt Service	-	-	-	322,573	322,573	322,573	322,573	322,573	322,573	322,573	322,573
Rate-Funded Capital Expenses	2,656,986	665,040	350,000	3,308,676	4,480,000	4,610,000	2,850,000	316,476	-	-	-
Subtotal: Other Expenditures	\$ 4,066,992	\$ 2,067,328	\$ 1,752,294	\$ 5,036,161	\$ 6,202,948	\$ 5,721,885	\$ 3,960,160	\$ 1,542,549	\$ 1,224,335	\$ 1,226,598	\$ 1,227,735
Total Uses of Water Funds	\$ 11,619,470	\$ 9,744,379	\$ 9,557,657	\$ 12,973,685	\$ 14,276,598	\$ 13,935,745	\$ 12,318,436	\$ 10,049,572	\$ 9,884,570	\$ 10,044,639	\$ 10,208,318
plus: Revenue from Rate Increases ⁵	-	444,950	1,868,790	2,945,569	4,130,026	5,172,348	5,594,488	6,029,293	6,477,142	6,938,426	7,413,549
Annual Contribution To or Use of Reserves	\$ (1,833,932)	\$ 451,371	\$ 2,055,477	\$ (251,276)	\$ (383,111)	\$ 999,416	\$ 3,057,296	\$ 5,807,730	\$ 6,469,369	\$ 6,823,155	\$ 7,190,939
Net Revenue Reqtd. (Total Uses less Non-Rate Revenue)	\$ 11,297,632	\$ 9,457,279	\$ 9,277,013	\$ 12,660,545	\$ 13,976,837	\$ 13,636,632	\$ 12,000,892	\$ 9,685,263	\$ 9,471,473	\$ 9,578,971	\$ 9,686,309
Total Rate Revenue After Rate Increases	\$ 8,899,000	\$ 9,343,950	\$ 10,767,790	\$ 11,844,569	\$ 13,029,026	\$ 14,071,348	\$ 14,493,488	\$ 14,928,293	\$ 15,376,142	\$ 15,837,426	\$ 16,312,549
Projected Annual Rate Revenue Increase	0.00%	10.00%	10.00%	10.00%	10.00%	8.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Cumulative Increase from Annual Revenue Increases	0.00%	10.00%	21.00%	33.10%	46.41%	58.12%	62.87%	67.75%	72.79%	77.97%	83.31%
Debt Coverage After Rate Increase	1.58	1.80	2.72	2.77	3.38	6.04	6.32	5.99	6.28	6.56	6.86

1. Revenue are budgeted for FY 2021/22.
2. Interest earning are calculated based on historical LAIF returns. 59,008,307 44,495,000 -2,902,661
3. Operating Expenses for FY 2021/22 are budgeted operating expenses.
4. The City intends on using a pass-through surcharge to recover additional costs in purchased water expenses in the future.
5. Revenue from rate increases assumes an implementation date of October 1, 2022 for new rates. For each year thereafter, the assumption is that new rates will be implemented on July 1st of each year.

TABLE 2 : RESERVE FUND SUMMARY

SUMMARY OF CASH ACTIVITY UN-RESTRICTED RESERVES	Budget	5-Year Prop 218 Period					Projected				
	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31	FY 2031/32
Total Beginning Cash¹	\$ 9,094,008										
Unrestricted Reserves											
Operating Reserve											
Beginning Reserve Balance ²	\$ 8,715,138	\$ 3,776,000	\$ 3,839,000	\$ 3,903,000	\$ 3,651,724	\$ 3,268,612	\$ 4,107,000	\$ 4,179,000	\$ 4,254,000	\$ 4,330,000	\$ 4,409,000
Plus: Net Cash Flow (After Rate Increases)	(1,833,932)	451,371	2,055,477	(251,276)	(383,111)	999,416	3,057,296	5,807,730	6,469,369	6,823,155	7,190,939
Plus: Transfer of Debt Reserve Surplus	-	-	-	-	-	-	-	-	-	-	-
Plus: Transfer in from Capital R&R Reserve	-	-	-	-	-	-	-	-	-	-	-
Less: Transfer Out to Capital Replacement Reserve	(3,105,206)	(388,371)	(1,991,477)	-	-	(161,028)	(2,985,296)	(5,732,730)	(6,393,369)	(6,744,155)	(7,109,939)
Ending Operating Reserve Balance	\$ 3,776,000	\$ 3,839,000	\$ 3,903,000	\$ 3,651,724	\$ 3,268,612	\$ 4,107,000	\$ 4,179,000	\$ 4,254,000	\$ 4,330,000	\$ 4,409,000	\$ 4,490,000
Target Ending Balance (6 months of O&M)	\$ 3,776,000	\$ 3,839,000	\$ 3,903,000	\$ 3,969,000	\$ 4,037,000	\$ 4,107,000	\$ 4,179,000	\$ 4,254,000	\$ 4,330,000	\$ 4,409,000	\$ 4,490,000
Capital Rehabilitation & Replacement Reserve											
Beginning Reserve Balance ²	\$ 378,870	\$ 2,484,076	\$ 1,642,448	\$ 3,633,924	\$ 2,582,600	\$ 2,582,600	\$ 2,743,628	\$ 5,728,924	\$ 8,848,130	\$ 12,231,499	\$ 15,875,654
Plus: Transfer of Operating Reserve Surplus	3,105,206	388,371	1,991,477	-	-	161,028	2,985,296	5,732,730	6,393,369	6,744,155	7,109,939
Less: Use of Reserves for Operating Reserve	-	-	-	-	-	-	-	-	-	-	-
Less: Use of Reserves for Capital Projects	(1,000,000)	(1,230,000)	-	(1,051,324)	-	-	-	(2,613,524)	(3,010,000)	(3,100,000)	(3,190,000)
Ending Capital Rehab & Replacement Reserve Balance	\$ 2,484,076	\$ 1,642,448	\$ 3,633,924	\$ 2,582,600	\$ 2,582,600	\$ 2,743,628	\$ 5,728,924	\$ 8,848,130	\$ 12,231,499	\$ 15,875,654	\$ 19,795,593
Capital R&R Reserve (6% of Net Assets)	\$ 1,880,500	\$ 2,090,200	\$ 2,398,900	\$ 2,582,600	\$ 2,767,800	\$ 2,954,900	\$ 3,034,100	\$ 3,115,400	\$ 3,199,100	\$ 3,285,400	\$ 3,374,400
Ending Balance - Excl. Restricted Reserves	\$ 6,260,076	\$ 5,481,448	\$ 7,536,924	\$ 6,234,324	\$ 5,851,212	\$ 6,850,628	\$ 9,907,924	\$ 13,102,130	\$ 16,561,499	\$ 20,284,654	\$ 24,285,593
Min. Target Ending Balance - Excl. Restricted Reserves	\$ 5,656,500	\$ 5,929,200	\$ 6,301,900	\$ 6,551,600	\$ 6,804,800	\$ 7,061,900	\$ 7,213,100	\$ 7,369,400	\$ 7,529,100	\$ 7,694,400	\$ 7,864,400
Ending Surplus/(Deficit) Compared to Reserve Targets	\$ 603,576	\$ (447,752)	\$ 1,235,024	\$ (317,276)	\$ (953,588)	\$ (211,272)	\$ 2,694,824	\$ 5,732,730	\$ 9,032,399	\$ 12,590,254	\$ 16,421,193
Restricted Reserves											
Connection Fee Reserve											
Beginning Reserve Balance	\$ -	\$ 743,574	\$ 1,303,761	\$ 1,871,622	\$ 2,447,264	\$ 3,030,791	\$ 3,622,313	\$ 4,221,939	\$ 4,829,779	\$ 5,445,947	\$ 6,070,557
Plus: Interest Earnings	-	10,187	17,862	25,641	33,528	41,522	49,626	57,841	66,168	74,609	83,167
Plus: Capacity Fee Revenue	743,574	550,000	550,000	550,000	550,000	550,000	550,000	550,000	550,000	550,000	550,000
Less: Use of Reserves for Capital Projects	-	-	-	-	-	-	-	-	-	-	-
Ending Connection Fee Fund Balance	\$ 743,574	\$ 1,303,761	\$ 1,871,622	\$ 2,447,264	\$ 3,030,791	\$ 3,622,313	\$ 4,221,939	\$ 4,829,779	\$ 5,445,947	\$ 6,070,557	\$ 6,703,723
Bond Project Fund											
Beginning Reserve Balance ³	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Plus: SRF Loan Funding Proceeds	-	-	6,000,000	-	-	-	-	-	-	-	-
Plus: Revenue Bond Proceeds	-	-	-	-	-	-	-	-	-	-	-
Less: Use of Bond & Loan Funds for Capital Projects	-	-	(6,000,000)	-	-	-	-	-	-	-	-
Ending Bond Project Fund Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Target Ending Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Debt Reserve											
Beginning Reserve Balance ⁴	\$ 893,533	\$ 905,774	\$ 918,184	\$ 930,763	\$ 1,266,087	\$ 1,283,432	\$ 1,301,015	\$ 1,318,839	\$ 1,336,907	\$ 1,355,223	\$ 1,373,790
Plus: Reserve Funding from New Debt Obligations	-	-	-	322,573	-	-	-	-	-	-	-
Plus: Interest Earnings	12,241	12,409	12,579	12,751	17,345	17,583	17,824	18,068	18,316	18,567	18,821
Less: Transfer of Surplus to Operating Reserve	-	-	-	-	-	-	-	-	-	-	-
Ending Debt Reserve Balance	\$ 905,774	\$ 918,184	\$ 930,763	\$ 1,266,087	\$ 1,283,432	\$ 1,301,015	\$ 1,318,839	\$ 1,336,907	\$ 1,355,223	\$ 1,373,790	\$ 1,392,611
Target Ending Balance	\$ 2,268,158	\$ 2,265,645	\$ 2,265,045	\$ 2,584,468	\$ 2,578,273	\$ 1,847,128	\$ 1,844,323	\$ 1,548,763	\$ 1,548,763	\$ 1,548,763	\$ 1,548,688
Annual Interest Earnings Rate⁵	1.37%	1.37%	1.37%	1.37%	1.37%	1.37%	1.37%	1.37%	1.37%	1.37%	1.37%

1. The beginning Cash balance is equal to the amount in the Fund 500, per source file: 7. Cash Balances.xlsx
2. Operating Reserve Fund target balance is set to 6 months; Capital R&R Reserve Fund target balance is set to 6 percent.
3. The beginning Bond Project Reserve balance is assumed to be zero.
4. The beginning Debt Reserve balance from City staff on June 21, 2022.
5. Historical interest earning rates were referenced on the California Treasurer's Office website for funds invested in LAIF. Future years earnings were estimated from the historical 5 year average interest earnings rate.

CHART 1

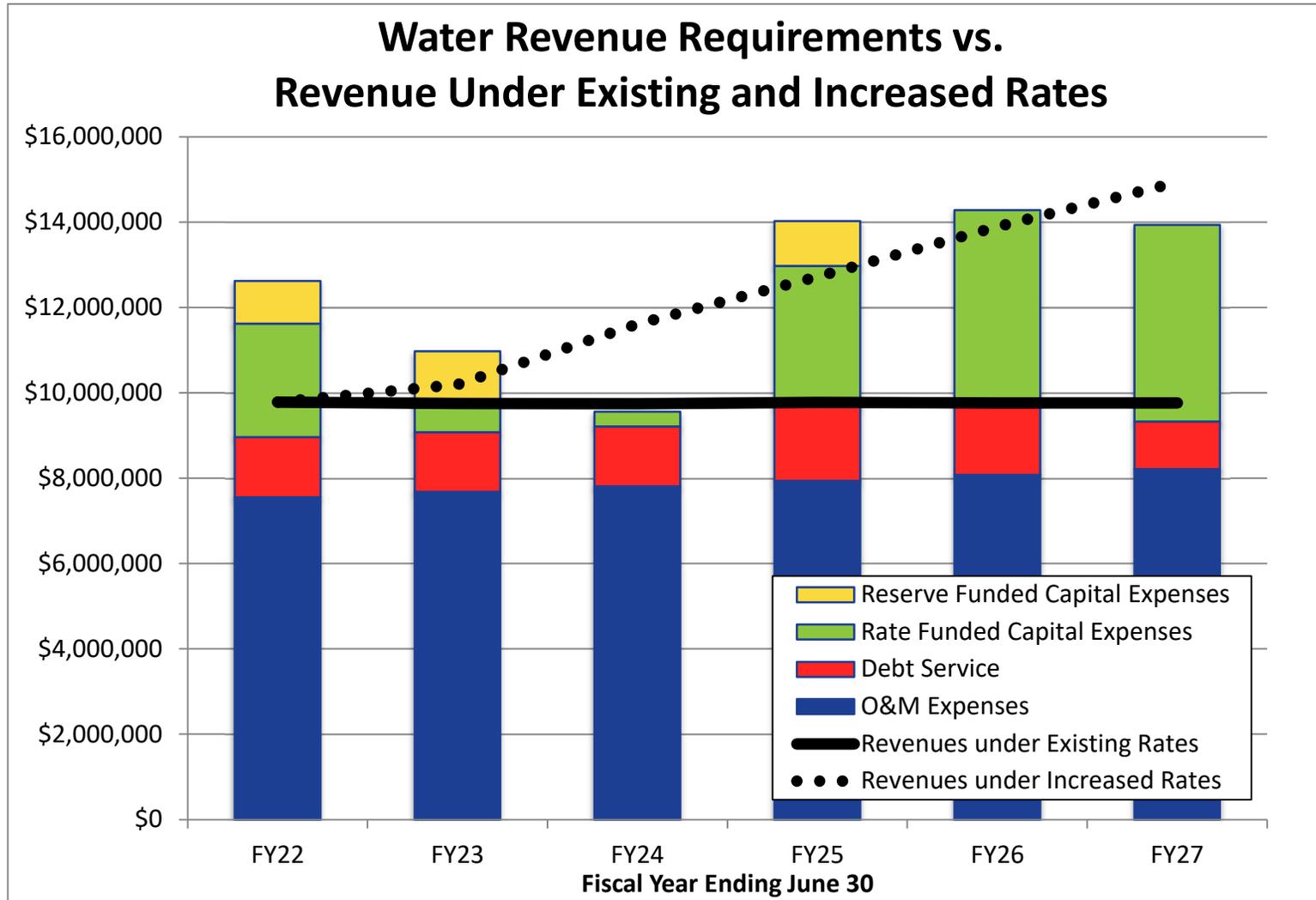


CHART 2

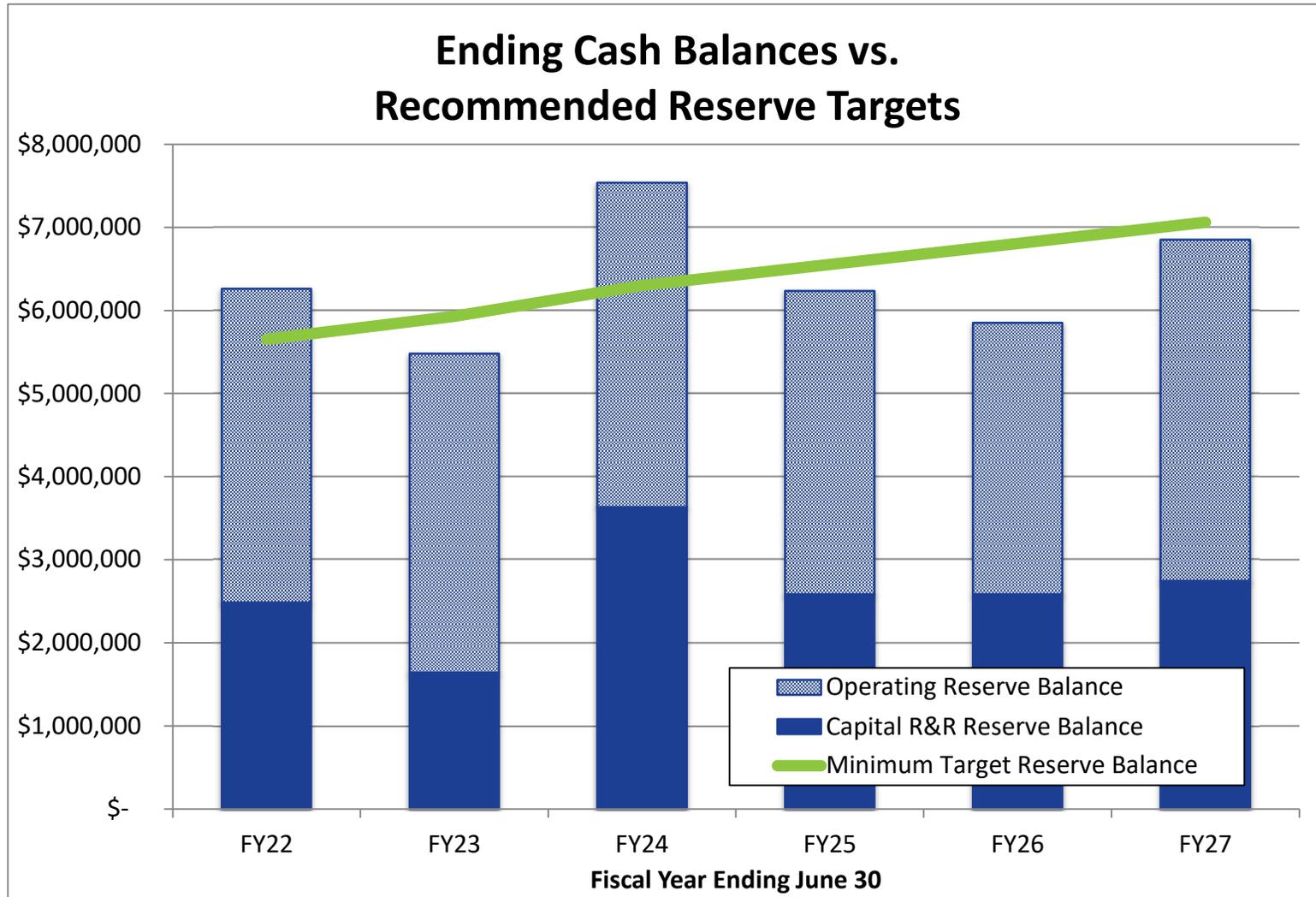


CHART 3

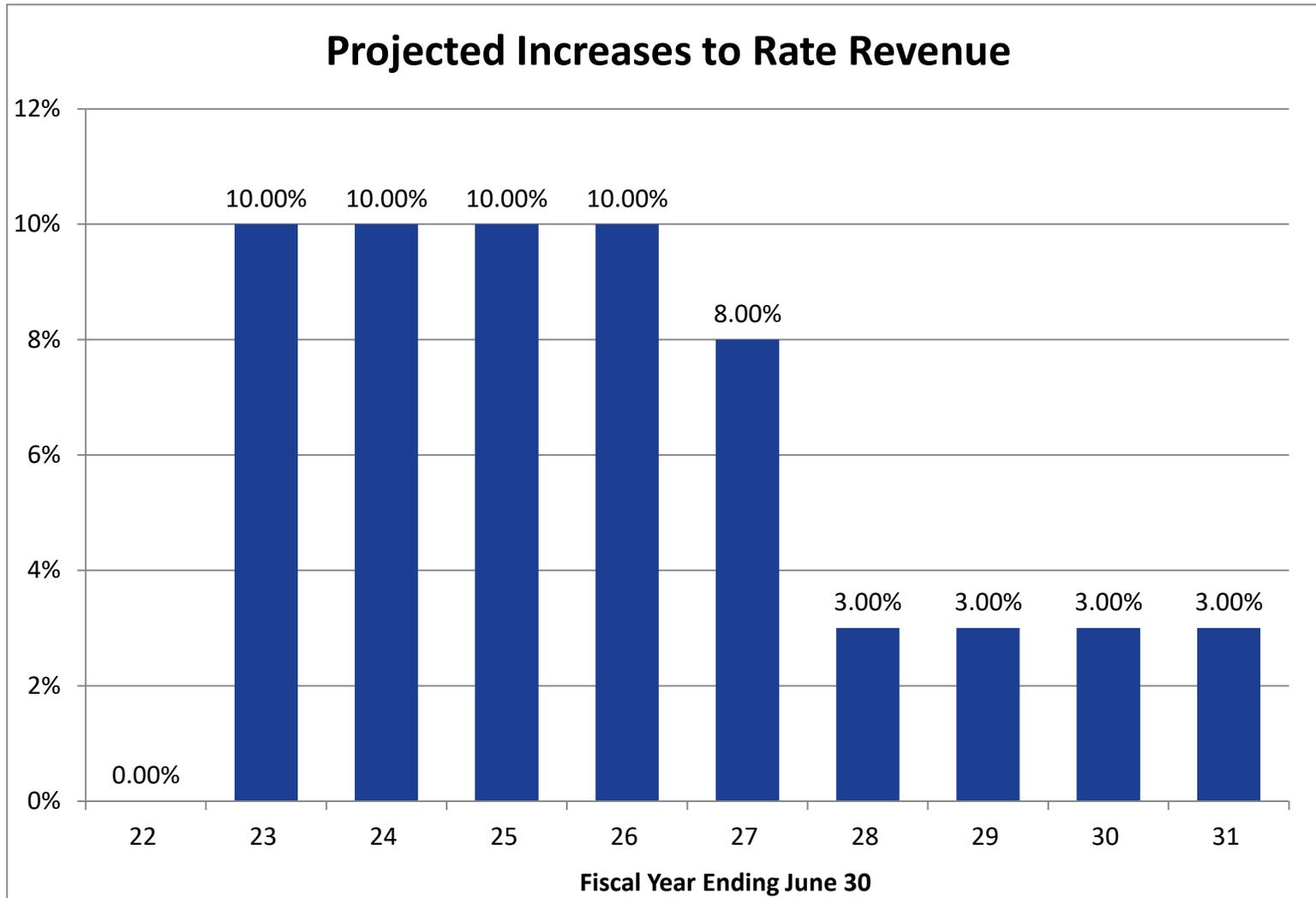


TABLE 3 : WATER FUND (500) REVENUE FORECAST

DESCRIPTION ¹	Basis	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Revenues												
Regular charges	1	\$ 8,899,000	\$ 8,899,000	\$ 8,899,000	\$ 8,899,000	\$ 8,899,000	\$ 8,899,000	\$ 8,899,000	\$ 8,899,000	\$ 8,899,000	\$ 8,899,000	\$ 8,899,000
Hidden Valley	1	14,700	14,700	14,700	14,700	14,700	14,700	14,700	14,700	14,700	14,700	14,700
Sales to H.C.S.D.	4	550,000	550,000	550,000	550,000	550,000	550,000	550,000	550,000	550,000	550,000	550,000
Late penalties	2	30,000	30,900	31,827	32,782	33,765	34,778	35,822	36,896	38,003	39,143	40,317
Hydrant fees	2	1,000	1,030	1,061	1,093	1,126	1,159	1,194	1,230	1,267	1,305	1,344
Meter test fees	2	500	515	530	546	563	580	597	615	633	652	672
Water turn-on fees	2	50,000	51,500	53,045	54,636	56,275	57,964	59,703	61,494	63,339	65,239	67,196
Re-connect fees	2	50,000	51,500	53,045	54,636	56,275	57,964	59,703	61,494	63,339	65,239	67,196
Lab test fees	2	4,750	4,893	5,039	5,190	5,346	5,507	5,672	5,842	6,017	6,198	6,384
Permit reviews	1	500	500	500	500	500	500	500	500	500	500	500
Convenience Fee	1	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Bulk Water Sales	1	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500
Residential service	1	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000
Commercial service	1	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000
Fire service	1	22,500	22,500	22,500	22,500	22,500	22,500	22,500	22,500	22,500	22,500	22,500
Misc. enterprise chgs	1	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500
Return check chgs	1	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
TOTAL: REVENUE		\$ 9,660,950	\$ 9,665,038	\$ 9,669,248	\$ 9,673,584	\$ 9,678,051	\$ 9,682,651	\$ 9,687,390	\$ 9,692,270	\$ 9,697,297	\$ 9,702,475	\$ 9,707,809

TABLE 4 : REVENUE SUMMARY

RATE REVENUE												
Regular charges	\$ 8,899,000	\$ 8,899,000	\$ 8,899,000	\$ 8,899,000	\$ 8,899,000	\$ 8,899,000	\$ 8,899,000	\$ 8,899,000	\$ 8,899,000	\$ 8,899,000	\$ 8,899,000	\$ 8,899,000
Hidden Valley	\$ 14,700	\$ 14,700	\$ 14,700	\$ 14,700	\$ 14,700	\$ 14,700	\$ 14,700	\$ 14,700	\$ 14,700	\$ 14,700	\$ 14,700	\$ 14,700
Sales to H.C.S.D.	\$ 550,000	\$ 550,000	\$ 550,000	\$ 550,000	\$ 550,000	\$ 550,000	\$ 550,000	\$ 550,000	\$ 550,000	\$ 550,000	\$ 550,000	\$ 550,000
OTHER REVENUE:												
Late penalties	\$ 30,000	\$ 30,900	\$ 31,827	\$ 32,782	\$ 33,765	\$ 34,778	\$ 35,822	\$ 36,896	\$ 38,003	\$ 39,143	\$ 40,317	\$ 40,317
Fees	\$ 112,250	\$ 115,438	\$ 118,721	\$ 122,102	\$ 125,585	\$ 129,173	\$ 132,868	\$ 136,674	\$ 140,594	\$ 144,632	\$ 148,791	\$ 148,791
Service Revenue	\$ 52,500	\$ 52,500	\$ 52,500	\$ 52,500	\$ 52,500	\$ 52,500	\$ 52,500	\$ 52,500	\$ 52,500	\$ 52,500	\$ 52,500	\$ 52,500
Miscellaneous Revenues	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500
Interest Revenues	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL REVENUE	\$ 9,660,950	\$ 9,665,038	\$ 9,669,248	\$ 9,673,584	\$ 9,678,051	\$ 9,682,651	\$ 9,687,390	\$ 9,692,270	\$ 9,697,297	\$ 9,702,475	\$ 9,707,809	\$ 9,707,809

CITY OF EUREKA
WATER RATE STUDY
Operating Revenue and Expenses

EXHIBIT 1

TABLE 5 : WATER FUND (500) OPERATING EXPENSE FORECAST

DESCRIPTION ¹	Basis	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
FINANCE												
Regular salaries	3	\$ 140,877	\$ 145,104	\$ 149,457	\$ 153,940	\$ 158,559	\$ 163,315	\$ 168,215	\$ 173,261	\$ 178,459	\$ 183,813	\$ 189,327
Life insurance	3	77	79	82	84	87	89	92	95	97	100	103
PERS-employer contribution	3	12,424	12,797	13,181	13,576	13,983	14,403	14,835	15,280	15,738	16,210	16,697
Health insurance	3	28,337	29,187	30,063	30,965	31,894	32,851	33,836	34,851	35,897	36,974	38,083
Medicare	3	2,043	2,104	2,167	2,232	2,299	2,368	2,439	2,512	2,588	2,665	2,745
Car Allowance	3	840	865	891	918	945	974	1,003	1,033	1,064	1,096	1,129
Workers Comp	3	988	1,017	1,048	1,079	1,112	1,145	1,179	1,215	1,251	1,289	1,327
Dental & Vision	3	1,037	1,068	1,100	1,133	1,167	1,202	1,238	1,275	1,313	1,353	1,393
PERS Unfunded Liability	3	49,565	51,052	52,584	54,161	55,786	57,460	59,184	60,959	62,788	64,672	66,612
Office supplies	2	1,500	1,545	1,591	1,639	1,688	1,739	1,791	1,845	1,900	1,957	2,016
Postage - utility bills	2	20,000	20,600	21,218	21,855	22,510	23,185	23,881	24,597	25,335	26,095	26,878
Miscellaneous forms	2	2,500	2,575	2,652	2,732	2,814	2,898	2,985	3,075	3,167	3,262	3,360
Prof/tech-miscell.	2	15,000	15,450	15,914	16,391	16,883	17,389	17,911	18,448	19,002	19,572	20,159
Software Maint	2	20,000	20,600	21,218	21,855	22,510	23,185	23,881	24,597	25,335	26,095	26,878
Inf Tech Repl Costs	2	18,754	19,316	19,896	20,493	21,107	21,741	22,393	23,065	23,757	24,469	25,203
Liability Insurance	2	6,145	6,329	6,519	6,715	6,916	7,123	7,337	7,557	7,784	8,018	8,258
General Administration	2	14,531	14,967	15,416	15,878	16,354	16,845	17,350	17,871	18,407	18,959	19,528
General Government	2	20,793	21,417	22,060	22,721	23,403	24,105	24,828	25,573	26,340	27,131	27,944
TOTAL: FINANCE EXPENSES		\$ 355,410	\$ 366,073	\$ 377,055	\$ 388,367	\$ 400,018	\$ 412,018	\$ 424,379	\$ 437,110	\$ 450,223	\$ 463,730	\$ 477,642

TABLE 6 : WATER FUND (500) OPERATING EXPENSE FORECAST

DESCRIPTION ¹	Basis	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
PUBLIC WORKS												
Regular salaries	3	\$ 107,019	\$ 110,230	\$ 113,537	\$ 116,943	\$ 120,451	\$ 124,065	\$ 127,787	\$ 131,620	\$ 135,569	\$ 139,636	\$ 143,825
Life insurance	3	51	52	54	55	57	59	60	62	64	66	68
PERS-employer contribution	3	10,330	10,640	10,960	11,288	11,627	11,976	12,335	12,705	13,086	13,479	13,883
Health Insurance	3	10,821	11,145	11,480	11,824	12,179	12,544	12,921	13,308	13,707	14,119	14,542
Medicare	3	1,552	1,598	1,646	1,696	1,747	1,799	1,853	1,908	1,966	2,025	2,085
Workers Comp	3	3,250	3,348	3,448	3,551	3,658	3,768	3,881	3,997	4,117	4,241	4,368
Dental & Vision	3	691	712	733	755	778	801	825	850	876	902	929
PERS Unfunded Liability	3	37,653	38,783	39,946	41,144	42,379	43,650	44,960	46,308	47,698	49,129	50,603
Oper suppl-miscell.	2	1,700	1,751	1,804	1,858	1,913	1,971	2,030	2,091	2,154	2,218	2,285
Prof/tech-miscell.	2	3,000	3,090	3,183	3,278	3,377	3,478	3,582	3,690	3,800	3,914	4,032
Liability insurance	2	3,728	3,840	3,955	4,074	4,196	4,322	4,451	4,585	4,722	4,864	5,010
General Administration	2	7,486	7,710	7,941	8,180	8,425	8,678	8,938	9,206	9,482	9,767	10,060
General Government	2	10,712	11,033	11,364	11,705	12,056	12,418	12,790	13,174	13,569	13,976	14,396
Public Works Admin Subtotal		\$ 197,993	\$ 203,932	\$ 210,050	\$ 216,352	\$ 222,842	\$ 229,528	\$ 236,414	\$ 243,506	\$ 250,811	\$ 258,335	\$ 266,086
ENGINEERING												
Regular salaries	3	\$ 230,691	\$ 237,611	\$ 244,740	\$ 252,082	\$ 259,644	\$ 267,434	\$ 275,457	\$ 283,720	\$ 292,232	\$ 300,999	\$ 310,029
Temp salaries-gen	3	21,500	22,145	22,809	23,494	24,198	24,924	25,672	26,442	27,236	28,053	28,894
Life insurance	3	105	109	112	115	119	122	126	130	134	138	142
PERS-employer contribution	3	22,004	22,665	23,345	24,045	24,766	25,509	26,274	27,063	27,875	28,711	29,572
Health insurance	3	40,311	41,520	42,766	44,049	45,370	46,731	48,133	49,577	51,065	52,597	54,174
Medicare	3	3,345	3,445	3,549	3,655	3,765	3,878	3,994	4,114	4,237	4,364	4,495
Workers Comp	3	6,461	6,655	6,854	7,060	7,272	7,490	7,715	7,946	8,185	8,430	8,683
Dental & Vision	3	1,944	2,002	2,062	2,124	2,188	2,254	2,321	2,391	2,463	2,536	2,613
PERS Unfunded Liability	3	81,165	83,600	86,108	88,691	91,352	94,092	96,915	99,822	102,817	105,902	109,079
Oper suppl-miscell.	2	3,800	3,914	4,031	4,152	4,277	4,405	4,537	4,674	4,814	4,958	5,107
Dues/memberships	2	700	721	743	765	788	811	836	861	887	913	941
Prof/tech-miscell.	2	16,250	16,738	17,240	17,757	18,290	18,838	19,403	19,985	20,585	21,203	21,839
Merchant Bank Card Charges	2	1,500	1,545	1,591	1,639	1,688	1,739	1,791	1,845	1,900	1,957	2,016
Training-general	2	7,150	7,365	7,585	7,813	8,047	8,289	8,537	8,794	9,057	9,329	9,609
Fleet lease	2	11,300	11,639	11,988	12,347	12,718	13,099	13,492	13,897	14,314	14,743	15,186
Liability Insurance	3	9,969	10,268	10,576	10,894	11,220	11,557	11,904	12,261	12,629	13,008	13,398
General Administration	2	22,324	22,994	23,684	24,394	25,126	25,880	26,657	27,456	28,280	29,128	30,002
General Government	2	31,946	32,904	33,892	34,908	35,956	37,034	38,145	39,290	40,468	41,682	42,933
Cap Out under Thresh	2	1,000	1,030	1,061	1,093	1,126	1,159	1,194	1,230	1,267	1,305	1,344
Software	2	5,500	5,665	5,835	6,010	6,190	6,376	6,567	6,764	6,967	7,176	7,392
Engineering Subtotal		\$ 518,966	\$ 534,535	\$ 550,571	\$ 567,088	\$ 584,100	\$ 601,623	\$ 619,672	\$ 638,262	\$ 657,410	\$ 677,132	\$ 697,446
TOTAL: ENGINEERING & PUBLIC WORKS EXPENSES		\$ 716,958	\$ 738,467	\$ 760,621	\$ 783,440	\$ 806,943	\$ 831,151	\$ 856,086	\$ 881,768	\$ 908,221	\$ 935,468	\$ 963,532

TABLE 7 : WATER FUND (500) OPERATING EXPENSE FORECAST

DESCRIPTION ¹	Basis	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
WATER DISTRIBUTION MAINTENANCE												
Regular salaries	3	\$ 487,974	\$ 502,613	\$ 517,692	\$ 533,222	\$ 549,219	\$ 565,696	\$ 582,667	\$ 600,147	\$ 618,151	\$ 636,695	\$ 655,796
Temp salaries-gen	3	20,000	20,600	21,218	21,855	22,510	23,185	23,881	24,597	25,335	26,095	26,878
Life insurance	3	229	236	243	250	258	265	273	281	290	299	308
PERS-employer contribution	3	35,993	37,072	38,185	39,330	40,510	41,725	42,977	44,266	45,594	46,962	48,371
Health insurance	3	126,583	130,381	134,292	138,321	142,471	146,745	151,147	155,681	160,352	165,162	170,117
Medicare	3	7,076	7,288	7,507	7,732	7,964	8,203	8,449	8,702	8,963	9,232	9,509
Uniform allowance	3	-	-	-	-	-	-	-	-	-	-	-
Workers Comp	3	49,145	50,620	52,138	53,702	55,313	56,973	58,682	60,442	62,256	64,123	66,047
Dental & Vision	3	432	445	458	472	486	501	516	531	547	564	581
PERS Unfunded Liability	3	171,686	176,836	182,141	187,606	193,234	199,031	205,002	211,152	217,486	224,011	230,731
Oper suppl-miscell.	2	40,000	41,200	42,436	43,709	45,020	46,371	47,762	49,195	50,671	52,191	53,757
Office supplies	2	1,000	1,030	1,061	1,093	1,126	1,159	1,194	1,230	1,267	1,305	1,344
Subscriptions/books	2	300	309	318	328	338	348	358	369	380	391	403
Dues/memberships	2	1,000	1,030	1,061	1,093	1,126	1,159	1,194	1,230	1,267	1,305	1,344
Postage/freight	2	250	258	265	273	281	290	299	307	317	326	336
Rock/sand/cement/grv	2	3,500	3,605	3,713	3,825	3,939	4,057	4,179	4,305	4,434	4,567	4,704
Asphalt/paving materials	2	30,000	30,900	31,827	32,782	33,765	34,778	35,822	36,899	38,003	39,143	40,317
Pipes/pipe fittings	2	90,000	92,700	95,481	98,345	101,296	104,335	107,465	110,689	114,009	117,430	120,952
Water meters/parts	2	20,000	20,600	21,218	21,855	22,510	23,185	23,881	24,597	25,335	26,095	26,878
Janitorial/cleaning	2	1,000	1,030	1,061	1,093	1,126	1,159	1,194	1,230	1,267	1,305	1,344
Sm tools/equipment	2	5,000	5,150	5,305	5,464	5,628	5,796	5,970	6,149	6,334	6,524	6,720
Shop supplies	2	200	206	212	219	225	232	239	246	253	261	269
Uniforms/protective	2	3,500	3,605	3,713	3,825	3,939	4,057	4,179	4,305	4,434	4,567	4,704
Prof/tech-miscell.	2	25,000	25,750	26,523	27,318	28,138	28,982	29,851	30,747	31,669	32,619	33,598
All funds audit	2	999	1,029	1,060	1,092	1,124	1,158	1,193	1,229	1,266	1,303	1,343
Fiscal agent fees	2	13,500	13,905	14,322	14,752	15,194	15,650	16,120	16,603	17,101	17,614	18,143
Merchant Bank Card Charges	2	65,000	66,950	68,959	71,027	73,158	75,353	77,613	79,942	82,340	84,810	87,355
Printing - in house	2	250	258	265	273	281	290	299	307	317	326	336
Collection Fees	2	500	515	530	546	563	580	597	615	633	652	672
Laundry services	2	3,500	3,605	3,713	3,825	3,939	4,057	4,179	4,305	4,434	4,567	4,704
Maint/rep-miscell.	2	10,000	10,300	10,609	10,927	11,255	11,593	11,941	12,299	12,668	13,048	13,439
Hardware maint	2	2,000	2,060	2,122	2,185	2,251	2,319	2,388	2,460	2,534	2,610	2,688
Misc. equip maint	2	3,650	3,760	3,872	3,988	4,108	4,231	4,358	4,489	4,624	4,762	4,905
Travel-general	2	1,000	1,030	1,061	1,093	1,126	1,159	1,194	1,230	1,267	1,305	1,344
Training-general	2	6,000	6,180	6,365	6,556	6,753	6,956	7,164	7,379	7,601	7,829	8,063
Electricity	5	12,000	12,360	12,731	13,113	13,506	13,911	14,329	14,758	15,201	15,657	16,127
Refuse collection	2	9,500	9,785	10,079	10,381	10,692	11,013	11,343	11,684	12,034	12,395	12,767
Communications-gen	2	2,000	2,060	2,122	2,185	2,251	2,319	2,388	2,460	2,534	2,610	2,688
Fleet lease	2	205,474	211,638	217,988	224,527	231,263	238,201	245,347	252,707	260,289	268,097	276,140
Inf Tech Repl Costs	2	27,804	28,639	29,498	30,383	31,294	32,233	33,200	34,196	35,222	36,279	37,367
Liability Insurance	2	38,654	39,814	41,008	42,239	43,506	44,811	46,155	47,540	48,966	50,435	51,948
General Administration	2	72,653	74,833	77,078	79,390	81,772	84,225	86,752	89,355	92,035	94,796	97,640
General Government	2	103,967	107,086	110,298	113,607	117,015	120,526	124,141	127,866	131,702	135,653	139,722
Fac maint costs	2	25,126	25,880	26,657	27,456	28,280	29,128	30,002	30,902	31,829	32,784	33,768
Communications	2	3,033	3,124	3,217	3,314	3,413	3,516	3,621	3,730	3,842	3,957	4,076
Cap Out under Thresh	2	5,000	5,150	5,305	5,464	5,628	5,796	5,970	6,149	6,334	6,524	6,720
Water systems	2	160,000	164,800	169,744	174,836	180,081	185,484	191,048	196,780	202,683	208,764	215,027
Misc. tools/mach/eqp	2	125,000	128,750	132,613	136,591	140,689	144,909	149,257	153,734	158,346	163,097	167,990
TOTAL: WATER DISTRIBUTION MAINTENANCE EXPENSE		\$ 2,016,478	\$ 2,076,973	\$ 2,139,282	\$ 2,203,460	\$ 2,269,564	\$ 2,337,651	\$ 2,407,780	\$ 2,480,014	\$ 2,554,414	\$ 2,631,047	\$ 2,709,978

TABLE 8 : WATER FUND (500) OPERATING EXPENSE FORECAST

DESCRIPTION ¹	Basis	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
WATER TREATMENT												
Regular salaries	3	\$ 263,254	\$ 271,151	\$ 279,286	\$ 287,665	\$ 296,295	\$ 305,183	\$ 314,339	\$ 323,769	\$ 333,482	\$ 343,487	\$ 353,791
Temp salaries-gen	3	5,680	5,850	6,026	6,207	6,393	6,585	6,782	6,986	7,195	7,411	7,633
Life insurance	3	114	118	121	125	129	133	137	141	145	149	154
PERS-employer contribution	3	19,462	20,046	20,647	21,267	21,905	22,562	23,239	23,936	24,654	25,394	26,156
Health insurance	3	78,274	80,623	83,041	85,533	88,099	90,741	93,464	96,268	99,156	102,130	105,194
Medicare	3	3,817	3,932	4,050	4,171	4,296	4,425	4,558	4,695	4,835	4,981	5,130
Workers Comp	3	27,488	28,313	29,162	30,037	30,938	31,866	32,822	33,807	34,821	35,866	36,942
Dental & Vision	3	216	222	229	236	243	250	258	266	274	282	290
PERS Unfunded Liability	3	92,622	95,400	98,262	101,210	104,246	107,374	110,595	113,913	117,330	120,850	124,476
Oper suppl-miscell.	2	8,745	9,007	9,278	9,556	9,843	10,138	10,442	10,755	11,078	11,410	11,753
Chemicals	6	25,000	25,750	26,523	27,318	28,138	28,982	29,851	30,747	31,669	32,619	33,598
Laboratory supplies	6	10,928	11,256	11,594	11,941	12,300	12,669	13,049	13,440	13,843	14,259	14,686
Office supplies	2	3,825	3,940	4,058	4,180	4,305	4,434	4,567	4,704	4,845	4,991	5,140
Subscriptions/books	2	875	901	928	956	985	1,014	1,045	1,076	1,108	1,142	1,176
Dues/memberships	2	1,643	1,692	1,743	1,795	1,849	1,905	1,962	2,021	2,081	2,144	2,208
Postage/freight	2	2,735	2,817	2,902	2,989	3,078	3,171	3,266	3,364	3,465	3,569	3,676
Repair parts	2	6,555	6,752	6,954	7,163	7,378	7,599	7,827	8,062	8,304	8,553	8,809
Janitorial/cleaning	2	340	350	361	372	383	394	406	418	431	444	457
Uniforms/protective	2	560	577	594	612	630	649	669	689	709	731	753
Bldg/grounds suppl	2	560	577	594	612	630	649	669	689	709	731	753
Source/supply-water	4	3,400,000	3,400,000	3,400,000	3,400,000	3,400,000	3,400,000	3,400,000	3,400,000	3,400,000	3,400,000	3,400,000
Lubricants	2	545	561	578	596	613	632	651	670	690	711	732
Misc. fuel	5	4,370	4,501	4,636	4,775	4,918	5,066	5,218	5,375	5,536	5,702	5,873
Prof/tech-miscell.	2	18,500	19,055	19,627	20,215	20,822	21,447	22,090	22,753	23,435	24,138	24,862
All funds audit	2	1,313	1,352	1,393	1,435	1,478	1,522	1,568	1,615	1,663	1,713	1,765
Misc. financial svcs	2	2,190	2,256	2,323	2,393	2,465	2,539	2,615	2,693	2,774	2,857	2,943
Printing - in house	2	1,640	1,689	1,740	1,792	1,846	1,901	1,958	2,017	2,078	2,140	2,204
Laundry services	2	2,735	2,817	2,902	2,989	3,078	3,171	3,266	3,364	3,465	3,569	3,676
Miscell. consultants	2	2,190	2,256	2,323	2,393	2,465	2,539	2,615	2,693	2,774	2,857	2,943
Maint/rep-miscell.	2	13,180	13,575	13,983	14,402	14,834	15,279	15,738	16,210	16,696	17,197	17,713
Building repairs	2	2,975	3,064	3,156	3,251	3,348	3,449	3,552	3,659	3,769	3,882	3,998
Travel-general	2	2,190	2,256	2,323	2,393	2,465	2,539	2,615	2,693	2,774	2,857	2,943
Training-general	2	3,825	3,940	4,058	4,180	4,305	4,434	4,567	4,704	4,845	4,991	5,140
Electricity	5	112,000	115,360	118,821	122,385	126,057	129,839	133,734	137,746	141,878	146,135	150,519
Alarm line charges	2	1,690	1,741	1,793	1,847	1,902	1,959	2,018	2,078	2,141	2,205	2,271
Public notice-general	2	330	340	350	361	371	383	394	406	418	431	443
Pub. Not.-Recruit.	2	440	453	467	481	495	510	525	541	557	574	591
Rebate Program	2	10,300	10,609	10,927	11,255	11,593	11,941	12,299	12,668	13,048	13,439	13,842
To State-Regul. fees	2	42,000	43,260	44,558	45,895	47,271	48,690	50,150	51,655	53,204	54,800	56,444
Fleet lease	2	5,877	6,054	6,235	6,422	6,615	6,814	7,018	7,228	7,445	7,669	7,899
Inf Tech Repl Costs	2	26,255	27,043	27,854	28,690	29,551	30,437	31,350	32,291	33,259	34,257	35,285
Liability Insurance	2	85,423	87,986	90,625	93,344	96,144	99,029	102,000	105,060	108,211	111,458	114,802
General Administration	2	35,336	36,396	37,488	38,613	39,771	40,964	42,193	43,459	44,763	46,105	47,489
General Government	2	50,566	52,082	53,645	55,254	56,912	58,619	60,378	62,189	64,055	65,977	67,956
Fac maint costs	2	65,921	67,899	69,936	72,034	74,195	76,421	78,713	81,075	83,507	86,012	88,593
Communications	2	5,765	5,938	6,116	6,300	6,489	6,683	6,884	7,090	7,303	7,522	7,748
Equipment components	2	6,480	6,674	6,875	7,081	7,293	7,512	7,737	7,970	8,209	8,455	8,709
Misc. tools/mach/eqp	2	6,900	7,107	7,320	7,540	7,766	7,999	8,239	8,486	8,741	9,003	9,273
TOTAL: WATER TREATMENT EXPENSES		\$ 4,463,630	\$ 4,495,539	\$ 4,528,406	\$ 4,562,258	\$ 4,597,125	\$ 4,633,039	\$ 4,670,030	\$ 4,708,131	\$ 4,747,375	\$ 4,787,797	\$ 4,829,430
GRAND TOTAL: WATER EXPENSES		\$ 7,552,477	\$ 7,677,052	\$ 7,805,363	\$ 7,937,524	\$ 8,073,650	\$ 8,213,859	\$ 8,358,275	\$ 8,507,023	\$ 8,660,234	\$ 8,818,041	\$ 8,980,582

TABLE 9 : FORECASTING ASSUMPTIONS

INFLATION FACTORS ²	Basis	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Customer Growth ³	1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
General Cost Inflation	2	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Labor Cost Inflation ⁴	3	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Water Purchases ⁵	4	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Energy	5	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Chemicals	6	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Fuel	7	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
No Escalation	8	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

1. Revenue are actual revenues for FY 2020/21 and budgeted revenues for FY 2021/22, from Water Fund #500; Source file: 1 & 2 Budget vs Actual.xlsx
 Expenses for FY 2020/21 - FY 2021/22 are from Fund #500; Source file: 1 & 2 Budget vs Actual.xlsx

2. Expenses are inflated each year by the following annual inflation factor categories.

3. Customer growth is projected to be zero.

4. Labor cost inflation set to 3% per City staff.

5. Water Purchases and Source of Supply expenses average between 12-14 percent annual inflation. However, the City intends on using a pass-through provision to recover additional costs in purchased water expenses in the future.

TABLE 10 : CAPITAL FUNDING SUMMARY

CAPITAL FUNDING FORECAST	Budget		5-Year Prop 218 Period					Projected				
	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31	FY 2031/32	
Funding Sources:												
Grants (ARPA Funding)	\$ -	\$ 1,500,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Use of Capacity Fee Reserves	-	-	-	-	-	-	-	-	-	-	-	
Use of SRF Loan Funding	-	-	6,000,000	-	-	-	-	-	-	-	-	
Use of New Revenue Bond Proceeds	-	-	-	-	-	-	-	-	-	-	-	
Use of Capital Rehabilitation and Replacement Reserve	1,000,000	1,230,000	-	1,051,324	-	-	-	2,613,524	3,010,000	3,100,000	3,190,000	
Rate Revenue	2,656,986	665,040	350,000	3,308,676	4,480,000	4,610,000	2,850,000	316,476	-	-	-	
Total Sources of Capital Funds	\$ 3,656,986	\$ 3,395,040	\$ 6,350,000	\$ 4,360,000	\$ 4,480,000	\$ 4,610,000	\$ 2,850,000	\$ 2,930,000	\$ 3,010,000	\$ 3,100,000	\$ 3,190,000	
Uses of Capital Funds:												
Total Project Costs	\$ 3,656,986	\$ 3,395,040	\$ 6,350,000	\$ 4,360,000	\$ 4,480,000	\$ 4,610,000	\$ 2,850,000	\$ 2,930,000	\$ 3,010,000	\$ 3,100,000	\$ 3,190,000	
Capital Funding Surplus (Deficiency)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
SRF Loan Funding	\$ -	\$ -	\$ 6,000,000	\$ -								
New Revenue Bond Proceeds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	

TABLE 11 : CAPITAL IMPROVEMENT PROGRAM COSTS (in Current-Year Dollars)

Project Description & ID ¹	Funding Source	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31	FY 2031/32
Capital Projects												
Water Treatment Plan Settling Basins	Water Reserves	\$ 240,000	\$ 540,000									
Henderson Street Improvements	Water Reserves	\$ 1,395,570										
High Tank Pump St Replacement	Water Reserves	\$ 233,000	\$ 867,000									
Fueling Station PJ# 703	Water Reserves	\$ 420,000										
Fiber Optic Network Upgrade	Water Reserves	\$ 156,121										
Water Dist. System Maint. 2021	Water Reserves	\$ 1,200,000										
Water Treatment Plan Settling Basins	Water Reserves	\$ 12,295										
Water Distribution System Maint 2022	Water Reserves		\$ 2,000,000									
Water Treatment Solar Renewable Energy	Water Reserves		\$ 50,000									
Tank Recoating 2022	Water Reserves		\$ 1,000,000									
Water Meter AMR	SRF Loan			\$ 6,000,000								
Estimated Future Projects												
Future Projects ³								\$ 2,400,000	\$ 2,400,000	\$ 2,400,000	\$ 2,400,000	\$ 2,400,000
Total: CIP Program Costs (Future-Year Dollars)		\$ 3,656,986	\$ 3,300,000	\$ 6,960,000	\$ 2,400,000	\$ 2,050,000	\$ 2,826,000	\$ 2,400,000				
Treatment-Related CIP	\$ 842,295	12%	\$ 4,457,000	\$ 6,000,000	\$ 4,000,000	\$ 4,000,000	\$ 4,000,000	\$ 2,400,000	\$ 2,400,000	\$ 2,400,000	\$ 2,400,000	\$ 2,400,000
Distribution-Related CIP	\$ 6,114,691	88%										
	\$ 6,956,986	100%										

TABLE 12 : CAPITAL IMPROVEMENT PROGRAM COSTS (in Future-Year Dollars)

Project Description ²		FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31	FY 2031/32
Capital Projects												
Water Treatment Plan Settling Basins	Water Reserves	\$ 240,000	\$ 560,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Henderson Street Improvements	Water Reserves	\$ 1,395,570	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
High Tank Pump St Replacement	Water Reserves	\$ 233,000	\$ 890,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Fueling Station PJ# 703	Water Reserves	\$ 420,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Fiber Optic Network Upgrade	Water Reserves	\$ 156,121	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Water Dist. System Maint. 2021	Water Reserves	\$ 1,200,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Water Treatment Plan Settling Basins	Water Reserves	\$ 12,295	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Water Distribution System Maint 2022	Water Reserves	\$ -	\$ 2,060,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Water Treatment Solar Renewable Energy	Water Reserves	\$ -	\$ 50,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Tank Recoating 2022	Water Reserves	\$ -	\$ 1,030,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Water Meter AMR	Capacity Fees	\$ -	\$ -	\$ 6,350,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Estimated Future Projects												
Future Projects ³		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,850,000	\$ 2,930,000	\$ 3,010,000	\$ 3,100,000	\$ 3,190,000
Total: CIP Program Costs (Future-Year Dollars)		\$ 3,656,986	\$3,395,040	\$7,366,669	\$2,613,389	\$2,296,559	\$3,257,069	\$ 2,850,000	\$ 2,930,000	\$ 3,010,000	\$ 3,100,000	\$ 3,190,000
		\$ 4,590,000	\$ 6,350,000	\$ 4,360,000	\$ 4,480,000	\$ 4,610,000	\$ 2,850,000	\$ 2,930,000	\$ 3,010,000	\$ 3,100,000	\$ 3,190,000	\$ 3,190,000

TABLE 13 : FORECASTING ASSUMPTIONS

Economic Variables	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Annual Construction Cost Inflation, Per Engineering News Record ⁴	0.00%	2.88%	2.88%	2.88%	2.88%	2.88%	2.88%	2.88%	2.88%	2.88%	2.88%
Cumulative Construction Cost Multiplier from 2022	1.00	1.03	1.06	1.09	1.12	1.15	1.19	1.22	1.26	1.29	1.33

- Capital project costs were provided by City Staff in source file: *Capital Project Activity Forecast 22-23-IJW.xlsx*
- Project costs are inflated by 2.88% per year. This practice is consistent with all City capital project cost inflation.
- Future Projects are included at \$4.1 million per year based on 2-year average annual expenditures.
- For reference purposes, the annual Construction Cost Inflation percentage is the 10 year average change in the Construction Cost Index for 2013-2022.
Source: *Engineering News Record website (http://enr.construction.com)*.

TABLE 14 : EXISTING DEBT OBLIGATIONS

Annual Repayment Schedules ¹	Budget	5-Year Prop 218 Period					Projected				
	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31	FY 2031/32
Water Bonds, 2002 CSCDA											
Principal Payment	\$ 180,000	\$ 190,000	\$ 195,000	\$ 210,000	\$ 220,000	\$ 230,000	\$ 240,000	\$ -	\$ -	\$ -	\$ -
Interest Payment	71,488	62,238	52,369	41,738	30,450	18,638	6,300	-	-	-	-
Subtotal: Annual Debt Service	\$ 251,488	\$ 252,238	\$ 247,369	\$ 251,738	\$ 250,450	\$ 248,638	\$ 246,300	\$ -	\$ -	\$ -	\$ -
Coverage Requirement (\$-Amnt above annual payment) ²	\$ 314,359	\$ 315,297	\$ 309,211	\$ 314,672	\$ 313,063	\$ 310,797	\$ 307,875	\$ -	\$ -	\$ -	\$ -
Reserve Requirement (total fund balance) ²	\$ 302,685	\$ 302,685	\$ 302,085	\$ 302,085	\$ 300,540	\$ 298,365	\$ 295,560	\$ -	\$ -	\$ -	\$ -
Water Bonds, 2005 CSCDA											
Principal Payment	\$ 490,000	\$ 510,000	\$ 540,000	\$ 565,000	\$ 590,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Interest Payment	122,500	97,500	71,250	43,625	14,750	-	-	-	-	-	-
Subtotal: Annual Debt Service	\$ 612,500	\$ 607,500	\$ 611,250	\$ 608,625	\$ 604,750	\$ -					
Coverage Requirement (\$-Amnt above annual payment) ²	\$ 765,625	\$ 759,375	\$ 764,063	\$ 760,781	\$ 755,938	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Reserve Requirement (total fund balance) ²	\$ 735,000	\$ 733,500	\$ 733,500	\$ 730,350	\$ 725,700	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Water Bonds, 2006 CSCDA											
Principal Payment	\$ 75,000	\$ 75,000	\$ 80,000	\$ 85,000	\$ 90,000	\$ 90,000	\$ 95,000	\$ 100,000	\$ 105,000	\$ 110,000	\$ 115,000
Interest Payment	46,219	42,750	38,875	34,750	30,375	25,875	21,488	17,100	12,488	7,650	2,588
Subtotal: Annual Debt Service	\$ 121,219	\$ 117,750	\$ 118,875	\$ 119,750	\$ 120,375	\$ 115,875	\$ 116,488	\$ 117,100	\$ 117,488	\$ 117,650	\$ 117,588
Coverage Requirement (\$-Amnt above annual payment) ²	\$ 151,523	\$ 147,188	\$ 148,594	\$ 149,688	\$ 150,469	\$ 144,844	\$ 145,609	\$ 146,375	\$ 146,859	\$ 147,063	\$ 146,984
Reserve Requirement (total fund balance) ²	\$ 145,463	\$ 144,450	\$ 144,450	\$ 144,450	\$ 144,450	\$ 141,180	\$ 141,180	\$ 141,180	\$ 141,180	\$ 141,180	\$ 141,105
Water Revenue Bonds, Series 2012											
Principal Payment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 370,000	\$ 385,000	\$ 405,000	\$ 425,000
Interest Payment	424,800	424,800	424,800	424,800	424,800	424,800	424,800	416,400	399,275	381,375	362,575
Subtotal: Annual Debt Service	\$ 424,800	\$ 424,800	\$ 424,800	\$ 424,800	\$ 424,800	\$ 424,800	\$ 424,800	\$ 786,400	\$ 784,275	\$ 786,375	\$ 787,575
Coverage Requirement (\$-Amnt above annual payment) ²	\$ 531,000	\$ 531,000	\$ 531,000	\$ 531,000	\$ 531,000	\$ 531,000	\$ 531,000	\$ 983,000	\$ 980,344	\$ 982,969	\$ 984,469
Reserve Requirement (total fund balance) ²	\$ 1,085,010	\$ 1,085,010	\$ 1,085,010	\$ 1,085,010	\$ 1,085,010	\$ 1,085,010	\$ 1,085,010	\$ 1,085,010	\$ 1,085,010	\$ 1,085,010	\$ 1,085,010

1. File provided by City staff: Debt Srvc Sched - Bonds - CSCDA 2002B Water Bonds.pdf, Debt Srvc Sched - Bonds - CSCDA 2005C Water Bonds.pdf, Debt Srvc Sched - Bonds - CSCDA 2006A Water Bonds.pdf, Debt Srvc Sched - Bonds - 2012 Water Bonds.pdf.

2. Bond coverage requirement assumed to be 125% of annual payment. Reserve Requirement assumed to be 120% of maximum annual payment.

TABLE 15 : EXISTING ANNUAL DEBT OBLIGATIONS TO BE SATISFIED BY WATER RATES

Existing Annual Debt Service	\$ 1,410,006	\$ 1,402,288	\$ 1,402,294	\$ 1,404,913	\$ 1,400,375	\$ 789,313	\$ 787,588	\$ 903,500	\$ 901,763	\$ 904,025	\$ 905,163
Existing Annual Coverage Requirement	\$ 1,762,508	\$ 1,752,859	\$ 1,752,867	\$ 1,756,141	\$ 1,750,469	\$ 986,641	\$ 984,484	\$ 1,129,375	\$ 1,127,203	\$ 1,130,031	\$ 1,131,453
Existing Debt Reserve Target	\$ 2,268,158	\$ 2,265,645	\$ 2,265,045	\$ 2,261,895	\$ 2,255,700	\$ 1,524,555	\$ 1,521,750	\$ 1,226,190	\$ 1,226,190	\$ 1,226,190	\$ 1,226,115

CITY OF EUREKA
WATER RATE STUDY
Existing Rate Schedule

EXHIBIT 4

TABLE 16 : CURRENT WATER RATE SCHEDULE

Fixed Charges	Current Rates - July 1, 2021	
	Inside	Outside ¹
<i>Single Family Residential</i>		
5/8 inch	\$30.28	\$45.42
3/4 inch	\$30.28	\$45.42
1 inch	\$72.26	\$108.39
1 1/2 inch	\$226.16	\$339.24
2 inch	\$450.03	\$675.04
<i>Multi Family Residential</i>		
5/8 inch	\$39.85	\$59.77
3/4 inch	\$39.85	\$59.77
1 inch	\$96.17	\$144.26
1 1/2 inch	\$190.05	\$285.07
2 inch	\$302.70	\$454.05
3 inch	\$603.09	\$904.64
4 inch	\$941.04	\$1,411.56
6 inch	\$1,879.78	\$2,819.68
8 inch	\$3,006.27	\$4,509.41
<i>Commercial</i>		
5/8 inch	\$57.05	\$85.58
3/4 inch	\$57.05	\$85.58
1 inch	\$139.18	\$208.76
1 1/2 inch	\$276.05	\$414.08
2 inch	\$440.31	\$660.46
3 inch	\$878.31	\$1,317.47
4 inch	\$1,371.07	\$2,056.60
6 inch	\$2,739.84	\$4,109.75
8 inch	\$4,382.36	\$6,573.54
Volumetric Charges	Current Rates	
	Per Unit ²	
<i>Residential & Commercial</i> Per Unit	\$2.64	\$3.88

1. Water Service outside of the City limits is provided at 1.5 times the Inside City rate (Resolution 2011-57).

2. One Unit is equal to one HCF (Hundred Cubic Feet) or 748 gallons.

Data Source: 14. *Current Water and Sewer.pdf*

CITY OF EUREKA
WATER RATE STUDY
Cost of Service Analysis

TABLE 17 : CLASSIFICATION OF EXPENSES

Budget Categories	Total Revenue Requirements	Commodity	Capacity	Customer	Basis of Classification		
	FY 2022/23	(COM)	(CAP)	(CA)	(COM)	(CAP)	(CA)
FINANCE							
Regular salaries	\$ 145,104	\$ -	\$ 72,552	\$ 72,552	0.0%	50.0%	50.0%
Life insurance	\$ 79	\$ -	\$ 40	\$ 40	0.0%	50.0%	50.0%
PERS-employer contribution	\$ 12,797	\$ -	\$ 6,398	\$ 6,398	0.0%	50.0%	50.0%
Health insurance	\$ 29,187	\$ -	\$ 14,594	\$ 14,594	0.0%	50.0%	50.0%
Medicare	\$ 2,104	\$ -	\$ 1,052	\$ 1,052	0.0%	50.0%	50.0%
Car Allowance	\$ 865	\$ -	\$ 433	\$ 433	0.0%	50.0%	50.0%
Workers Comp	\$ 1,017	\$ -	\$ 509	\$ 509	0.0%	50.0%	50.0%
Dental & Vision	\$ 1,068	\$ -	\$ 534	\$ 534	0.0%	50.0%	50.0%
PERS Unfunded Liability	\$ 51,052	\$ -	\$ 25,526	\$ 25,526	0.0%	50.0%	50.0%
Office supplies	\$ 1,545	\$ -	\$ 773	\$ 773	0.0%	50.0%	50.0%
Postage - utility bills	\$ 20,600	\$ -	\$ 10,300	\$ 10,300	0.0%	50.0%	50.0%
Miscellaneous forms	\$ 2,575	\$ -	\$ 1,288	\$ 1,288	0.0%	50.0%	50.0%
Prof/tech-miscell.	\$ 15,450	\$ -	\$ 7,725	\$ 7,725	0.0%	50.0%	50.0%
Software Maint	\$ 20,600	\$ -	\$ 10,300	\$ 10,300	0.0%	50.0%	50.0%
Inf Tech Repl Costs	\$ 19,316	\$ -	\$ 9,658	\$ 9,658	0.0%	50.0%	50.0%
Liability Insurance	\$ 6,329	\$ -	\$ 3,165	\$ 3,165	0.0%	50.0%	50.0%
General Administration	\$ 14,967	\$ -	\$ 7,483	\$ 7,483	0.0%	50.0%	50.0%
General Government	\$ 21,417	\$ -	\$ 10,709	\$ 10,709	0.0%	50.0%	50.0%
TOTAL: FINANCE EXPENSES	\$ 366,073	\$ -	\$ 183,036	\$ 183,036	0.0%	50.0%	50.0%

CITY OF EUREKA
WATER RATE STUDY
Cost of Service Analysis

TABLE 18 : CLASSIFICATION OF EXPENSES

Budget Categories	Total Revenue Requirements	Commodity	Capacity	Customer	Basis of Classification		
	FY 2022/23	(COM)	(CAP)	(CA)	(COM)	(CAP)	(CA)
PUBLIC WORKS							
PUBLIC WORKS							
Regular salaries	\$ 110,230	\$ 38,581	\$ 66,138	\$ 5,512	35.0%	60.0%	5.0%
Life insurance	\$ 52	\$ 18	\$ 31	\$ 3	35.0%	60.0%	5.0%
PERS-employer contribution	\$ 10,640	\$ 3,724	\$ 6,384	\$ 532	35.0%	60.0%	5.0%
Health Insurance	\$ 11,145	\$ 3,901	\$ 6,687	\$ 557	35.0%	60.0%	5.0%
Medicare	\$ 1,598	\$ 559	\$ 959	\$ 80	35.0%	60.0%	5.0%
Workers Comp	\$ 3,348	\$ 1,172	\$ 2,009	\$ 167	35.0%	60.0%	5.0%
Dental & Vision	\$ 712	\$ 249	\$ 427	\$ 36	35.0%	60.0%	5.0%
PERS Unfunded Liability	\$ 38,783	\$ 13,574	\$ 23,270	\$ 1,939	35.0%	60.0%	5.0%
Oper suppl-miscell.	\$ 1,751	\$ 613	\$ 1,051	\$ 88	35.0%	60.0%	5.0%
Prof/tech-miscell.	\$ 3,090	\$ 1,082	\$ 1,854	\$ 155	35.0%	60.0%	5.0%
Liability insurance	\$ 3,840	\$ 1,344	\$ 2,304	\$ 192	35.0%	60.0%	5.0%
General Administration	\$ 7,710	\$ 2,699	\$ 4,626	\$ 386	35.0%	60.0%	5.0%
General Government	\$ 11,033	\$ 3,862	\$ 6,620	\$ 552	35.0%	60.0%	5.0%
Public Works Admin Subtotal	\$ 203,932	\$ 71,376	\$ 122,359	\$ 10,197	35.0%	60.0%	5.0%

CITY OF EUREKA
WATER RATE STUDY
Cost of Service Analysis

TABLE 19 : CLASSIFICATION OF EXPENSES

Budget Categories	Total Revenue Requirements	Commodity	Capacity	Customer	Basis of Classification		
	FY 2022/23	(COM)	(CAP)	(CA)	(COM)	(CAP)	(CA)
ENGINEERING							
ENGINEERING							
Regular salaries	\$ 237,611	\$ 59,403	\$ 106,925	\$ 71,283	25.0%	45.0%	30.0%
Temp salaries-gen	\$ 22,145	\$ 7,751	\$ 13,287	\$ 1,107	35.0%	60.0%	5.0%
Life insurance	\$ 109	\$ 38	\$ 65	\$ 5	35.0%	60.0%	5.0%
PERS-employer contribution	\$ 22,665	\$ 7,933	\$ 13,599	\$ 1,133	35.0%	60.0%	5.0%
Health insurance	\$ 41,520	\$ 14,532	\$ 24,912	\$ 2,076	35.0%	60.0%	5.0%
Medicare	\$ 3,445	\$ 1,206	\$ 2,067	\$ 172	35.0%	60.0%	5.0%
Workers Comp	\$ 6,655	\$ 2,329	\$ 3,993	\$ 333	35.0%	60.0%	5.0%
Dental & Vision	\$ 2,002	\$ 701	\$ 1,201	\$ 100	35.0%	60.0%	5.0%
PERS Unfunded Liability	\$ 83,600	\$ 29,260	\$ 50,160	\$ 4,180	35.0%	60.0%	5.0%
Oper suppl-miscell.	\$ 3,914	\$ 1,370	\$ 2,348	\$ 196	35.0%	60.0%	5.0%
Dues/memberships	\$ 721	\$ 252	\$ 433	\$ 36	35.0%	60.0%	5.0%
Prof/tech-miscell.	\$ 16,738	\$ 5,858	\$ 10,043	\$ 837	35.0%	60.0%	5.0%
Merchant Bank Card Charges	\$ 1,545	\$ 541	\$ 927	\$ 77	35.0%	60.0%	5.0%
Training-general	\$ 7,365	\$ 2,578	\$ 4,419	\$ 368	35.0%	60.0%	5.0%
Fleet lease	\$ 11,639	\$ 4,074	\$ 6,983	\$ 582	35.0%	60.0%	5.0%
Liability Insurance	\$ 10,268	\$ 3,594	\$ 6,161	\$ 513	35.0%	60.0%	5.0%
General Administration	\$ 22,994	\$ 8,048	\$ 13,796	\$ 1,150	35.0%	60.0%	5.0%
General Government	\$ 32,904	\$ 11,517	\$ 19,743	\$ 1,645	35.0%	60.0%	5.0%
Cap Out under Thresh	\$ 1,030	\$ 361	\$ 618	\$ 52	35.0%	60.0%	5.0%
Software	\$ 5,665	\$ 1,983	\$ 3,399	\$ 283	35.0%	60.0%	5.0%
Engineering Subtotal	\$ 534,535	\$ 163,326	\$ 285,079	\$ 86,130	30.6%	53.3%	16.1%
TOTAL: ENGINEERING & PUBLIC WORKS EXPENSES	\$ 738,467	\$ 234,702	\$ 407,438	\$ 96,326	31.8%	55.2%	13.0%

CITY OF EUREKA
WATER RATE STUDY
Cost of Service Analysis

TABLE 20 : CLASSIFICATION OF EXPENSES

Budget Categories	Total Revenue Requirements	Commodity	Capacity	Customer	Basis of Classification		
	FY 2022/23	(COM)	(CAP)	(CA)	(COM)	(CAP)	(CA)
WATER DISTRIBUTION MAINTENANCE							
Regular salaries	\$ 502,613	\$ 100,523	\$ 402,091	\$ -	20.0%	80.0%	0.0%
Temp salaries-gen	\$ 20,600	\$ 4,120	\$ 16,480	\$ -	20.0%	80.0%	0.0%
Life insurance	\$ 236	\$ 47	\$ 189	\$ -	20.0%	80.0%	0.0%
PERS-employer contribution	\$ 37,072	\$ 7,414	\$ 29,658	\$ -	20.0%	80.0%	0.0%
Health insurance	\$ 130,381	\$ 26,076	\$ 104,305	\$ -	20.0%	80.0%	0.0%
Medicare	\$ 7,288	\$ 1,458	\$ 5,830	\$ -	20.0%	80.0%	0.0%
Workers Comp	\$ 50,620	\$ 10,124	\$ 40,496	\$ -	20.0%	80.0%	0.0%
Dental & Vision	\$ 445	\$ 89	\$ 356	\$ -	20.0%	80.0%	0.0%
PERS Unfunded Liability	\$ 176,836	\$ 35,367	\$ 141,469	\$ -	20.0%	80.0%	0.0%
Oper suppl-miscell.	\$ 41,200	\$ 8,240	\$ 32,960	\$ -	20.0%	80.0%	0.0%
Office supplies	\$ 1,030	\$ 206	\$ 824	\$ -	20.0%	80.0%	0.0%
Subscriptions/books	\$ 309	\$ 62	\$ 247	\$ -	20.0%	80.0%	0.0%
Dues/memberships	\$ 1,030	\$ 206	\$ 824	\$ -	20.0%	80.0%	0.0%
Postage/freight	\$ 258	\$ 52	\$ 206	\$ -	20.0%	80.0%	0.0%
Rock/sand/cement/grv	\$ 3,605	\$ 721	\$ 2,884	\$ -	20.0%	80.0%	0.0%
Asphalt/paving materials	\$ 30,900	\$ 6,180	\$ 24,720	\$ -	20.0%	80.0%	0.0%
Pipes/pipe fittings	\$ 92,700	\$ 18,540	\$ 74,160	\$ -	20.0%	80.0%	0.0%
Water meters/parts	\$ 20,600	\$ 4,120	\$ 16,480	\$ -	20.0%	80.0%	0.0%
Janitorial/cleaning	\$ 1,030	\$ 206	\$ 824	\$ -	20.0%	80.0%	0.0%
Sm tools/equipment	\$ 5,150	\$ 1,030	\$ 4,120	\$ -	20.0%	80.0%	0.0%
Shop supplies	\$ 206	\$ 41	\$ 165	\$ -	20.0%	80.0%	0.0%
Uniforms/protective	\$ 3,605	\$ 721	\$ 2,884	\$ -	20.0%	80.0%	0.0%
Prof/tech-miscell.	\$ 25,750	\$ 5,150	\$ 20,600	\$ -	20.0%	80.0%	0.0%
All funds audit	\$ 1,029	\$ 206	\$ 823	\$ -	20.0%	80.0%	0.0%
Fiscal agent fees	\$ 13,905	\$ 2,781	\$ 11,124	\$ -	20.0%	80.0%	0.0%
Merchant Bank Card Charges	\$ 66,950	\$ 13,390	\$ 53,560	\$ -	20.0%	80.0%	0.0%
Printing - in house	\$ 258	\$ 52	\$ 206	\$ -	20.0%	80.0%	0.0%
Collection Fees	\$ 515	\$ 103	\$ 412	\$ -	20.0%	80.0%	0.0%
Laundry services	\$ 3,605	\$ 721	\$ 2,884	\$ -	20.0%	80.0%	0.0%
Maint/rep-miscell.	\$ 10,300	\$ 2,060	\$ 8,240	\$ -	20.0%	80.0%	0.0%
Hardware maint	\$ 2,060	\$ 412	\$ 1,648	\$ -	20.0%	80.0%	0.0%
Misc. equip maint	\$ 3,760	\$ 752	\$ 3,008	\$ -	20.0%	80.0%	0.0%
Travel-general	\$ 1,030	\$ 206	\$ 824	\$ -	20.0%	80.0%	0.0%
Training-general	\$ 6,180	\$ 1,236	\$ 4,944	\$ -	20.0%	80.0%	0.0%
Electricity	\$ 12,360	\$ 12,360	\$ -	\$ -	100.0%	0.0%	0.0%
Refuse collection	\$ 9,785	\$ 1,957	\$ 7,828	\$ -	20.0%	80.0%	0.0%
Communications-gen	\$ 2,060	\$ 412	\$ 1,648	\$ -	20.0%	80.0%	0.0%
Fleet lease	\$ 211,638	\$ 42,328	\$ 169,311	\$ -	20.0%	80.0%	0.0%
Inf Tech Repl Costs	\$ 28,639	\$ 5,728	\$ 22,911	\$ -	20.0%	80.0%	0.0%
Liability Insurance	\$ 39,814	\$ 7,963	\$ 31,851	\$ -	20.0%	80.0%	0.0%
General Administration	\$ 74,833	\$ 14,967	\$ 59,866	\$ -	20.0%	80.0%	0.0%
General Government	\$ 107,086	\$ 21,417	\$ 85,668	\$ -	20.0%	80.0%	0.0%
Fac maint costs	\$ 25,880	\$ 5,176	\$ 20,704	\$ -	20.0%	80.0%	0.0%
Communications	\$ 3,124	\$ 625	\$ 2,499	\$ -	20.0%	80.0%	0.0%
Cap Out under Thresh	\$ 5,150	\$ 1,030	\$ 4,120	\$ -	20.0%	80.0%	0.0%
Water systems	\$ 164,800	\$ 32,960	\$ 131,840	\$ -	20.0%	80.0%	0.0%
Misc. tools/mach/eqp	\$ 128,750	\$ 25,750	\$ 103,000	\$ -	20.0%	80.0%	0.0%
TOTAL: WATER DISTRIBUTION MAINTENANCE EXPENSES	\$ 2,076,973	\$ 425,283	\$ 1,651,690	\$ -	20.5%	79.5%	0.0%

CITY OF EUREKA
WATER RATE STUDY
Cost of Service Analysis

TABLE 21 : CLASSIFICATION OF EXPENSES

Budget Categories	Total Revenue Requirements	Commodity	Capacity	Customer	Basis of Classification		
	FY 2022/23	(COM)	(CAP)	(CA)	(COM)	(CAP)	(CA)
WATER TREATMENT							
Regular salaries	\$ 271,151	\$ 149,133	\$ 122,018	\$ -	55.0%	45.0%	0.0%
Temp salaries-gen	\$ 5,850	\$ 3,218	\$ 2,633	\$ -	55.0%	45.0%	0.0%
Life insurance	\$ 118	\$ 65	\$ 53	\$ -	55.0%	45.0%	0.0%
PERS-employer contribution	\$ 20,046	\$ 11,025	\$ 9,021	\$ -	55.0%	45.0%	0.0%
Health insurance	\$ 80,623	\$ 44,342	\$ 36,280	\$ -	55.0%	45.0%	0.0%
Medicare	\$ 3,932	\$ 2,162	\$ 1,769	\$ -	55.0%	45.0%	0.0%
Workers Comp	\$ 28,313	\$ 15,572	\$ 12,741	\$ -	55.0%	45.0%	0.0%
Dental & Vision	\$ 222	\$ 122	\$ 100	\$ -	55.0%	45.0%	0.0%
PERS Unfunded Liability	\$ 95,400	\$ 52,470	\$ 42,930	\$ -	55.0%	45.0%	0.0%
Oper suppl-miscell.	\$ 9,007	\$ 4,954	\$ 4,053	\$ -	55.0%	45.0%	0.0%
Chemicals	\$ 25,750	\$ 25,750	\$ -	\$ -	100.0%	0.0%	0.0%
Laboratory supplies	\$ 11,256	\$ 6,191	\$ 5,065	\$ -	55.0%	45.0%	0.0%
Office supplies	\$ 3,940	\$ 2,167	\$ 1,773	\$ -	55.0%	45.0%	0.0%
Subscriptions/books	\$ 901	\$ 496	\$ 406	\$ -	55.0%	45.0%	0.0%
Dues/memberships	\$ 1,692	\$ 931	\$ 762	\$ -	55.0%	45.0%	0.0%
Postage/freight	\$ 2,817	\$ 1,549	\$ 1,268	\$ -	55.0%	45.0%	0.0%
Repair parts	\$ 6,752	\$ 3,713	\$ 3,038	\$ -	55.0%	45.0%	0.0%
Janitorial/cleaning	\$ 350	\$ 193	\$ 158	\$ -	55.0%	45.0%	0.0%
Uniforms/protective	\$ 577	\$ 317	\$ 260	\$ -	55.0%	45.0%	0.0%
Bldg/grounds suppl	\$ 577	\$ 317	\$ 260	\$ -	55.0%	45.0%	0.0%
Source/supply-water	\$ 3,400,000	\$ 3,060,000	\$ 340,000	\$ -	90.0%	10.0%	0.0%
Lubricants	\$ 561	\$ 309	\$ 253	\$ -	55.0%	45.0%	0.0%
Misc. fuel	\$ 4,501	\$ 2,476	\$ 2,025	\$ -	55.0%	45.0%	0.0%
Prof/tech-miscell.	\$ 19,055	\$ 10,480	\$ 8,575	\$ -	55.0%	45.0%	0.0%
All funds audit	\$ 1,352	\$ 744	\$ 609	\$ -	55.0%	45.0%	0.0%
Misc. financial svcs	\$ 2,256	\$ 1,241	\$ 1,015	\$ -	55.0%	45.0%	0.0%
Printing - in house	\$ 1,689	\$ 929	\$ 760	\$ -	55.0%	45.0%	0.0%
Laundry services	\$ 2,817	\$ 1,549	\$ 1,268	\$ -	55.0%	45.0%	0.0%
Miscell. consultants	\$ 2,256	\$ 1,241	\$ 1,015	\$ -	55.0%	45.0%	0.0%
Maint/rep-miscell.	\$ 13,575	\$ 7,466	\$ 6,109	\$ -	55.0%	45.0%	0.0%
Building repairs	\$ 3,064	\$ 1,685	\$ 1,379	\$ -	55.0%	45.0%	0.0%
Travel-general	\$ 2,256	\$ 1,241	\$ 1,015	\$ -	55.0%	45.0%	0.0%
Training-general	\$ 3,940	\$ 2,167	\$ 1,773	\$ -	55.0%	45.0%	0.0%
Electricity	\$ 115,360	\$ 103,824	\$ 11,536	\$ -	90.0%	10.0%	0.0%
Alarm line charges	\$ 1,741	\$ 957	\$ 783	\$ -	55.0%	45.0%	0.0%
Public notice-general	\$ 340	\$ 187	\$ 153	\$ -	55.0%	45.0%	0.0%
Pub. Not.-Recruit.	\$ 453	\$ 249	\$ 204	\$ -	55.0%	45.0%	0.0%
Rebate Program	\$ 10,609	\$ 5,835	\$ 4,774	\$ -	55.0%	45.0%	0.0%
To State-Regul. fees	\$ 43,260	\$ 23,793	\$ 19,467	\$ -	55.0%	45.0%	0.0%
Fleet lease	\$ 6,054	\$ 3,330	\$ 2,724	\$ -	55.0%	45.0%	0.0%
Inf Tech Repl Costs	\$ 27,043	\$ 14,874	\$ 12,169	\$ -	55.0%	45.0%	0.0%
Liability Insurance	\$ 87,986	\$ 48,392	\$ 39,594	\$ -	55.0%	45.0%	0.0%
General Administration	\$ 36,396	\$ 20,018	\$ 16,378	\$ -	55.0%	45.0%	0.0%
General Government	\$ 52,082	\$ 28,645	\$ 23,437	\$ -	55.0%	45.0%	0.0%
Fac maint costs	\$ 67,899	\$ 37,344	\$ 30,555	\$ -	55.0%	45.0%	0.0%
Communications	\$ 5,938	\$ 3,266	\$ 2,672	\$ -	55.0%	45.0%	0.0%
Equipment components	\$ 6,674	\$ 3,671	\$ 3,003	\$ -	55.0%	45.0%	0.0%
Misc. tools/mach/eqp	\$ 7,107	\$ 3,909	\$ 3,198	\$ -	55.0%	45.0%	0.0%
TOTAL: WATER TREATMENT EXPENSES	\$ 4,495,539	\$ 3,714,510	\$ 781,029	\$ -	82.6%	17.4%	0.0%
GRAND TOTAL: WATER EXPENSES	\$ 7,677,052	\$ 4,374,495	\$ 3,023,194	\$ 279,363	57.0%	39.4%	3.6%

CITY OF EUREKA
WATER RATE STUDY
Cost of Service Analysis

TABLE 22 : CLASSIFICATION OF EXPENSES

Budget Categories	Total Revenue Requirements	Commodity	Capacity	Customer	Basis of Classification		
	FY 2022/23	(COM)	(CAP)	(CA)	(COM)	(CAP)	(CA)
Debt Service Payments							
Water Bonds, 2002 CSCDA	\$ 252,238	\$ -	\$ 252,238	\$ -	0.0%	100.0%	0.0%
Water Bonds, 2005 CSCDA	\$ 607,500	\$ -	\$ 607,500	\$ -	0.0%	100.0%	0.0%
Water Bonds, 2006 CSCDA	\$ 117,750	\$ -	\$ 117,750	\$ -	0.0%	100.0%	0.0%
Water Revenue Bonds, Series 2012	\$ 424,800	\$ -	\$ 424,800	\$ -	0.0%	100.0%	0.0%
Total Debt Service Payments	\$ 1,402,288	\$ -	\$ 1,402,288	\$ -	0.0%	100.0%	0.0%
Capital Expenditures							
Rate Funded Capital Expenses	\$ 665,040	\$ 598,536	\$ 66,504	\$ -	90.0%	10.0%	0.0%
TOTAL REVENUE REQUIREMENTS	\$ 9,744,379	\$ 4,973,031	\$ 4,491,986	\$ 279,363	51.0%	46.1%	2.9%
Less: Non-Rate Revenues							
Hidden Valley	\$ (14,700)	\$ (7,502)	\$ (6,776)	\$ (421)	51.0%	46.1%	2.9%
Sales to H.C.S.D.	\$ (550,000)	\$ (280,692)	\$ (253,540)	\$ (15,768)	51.0%	46.1%	2.9%
Late penalties	\$ (30,900)	\$ (15,770)	\$ (14,244)	\$ (886)	51.0%	46.1%	2.9%
Hydrant fees	\$ (1,030)	\$ (526)	\$ (475)	\$ (30)	51.0%	46.1%	2.9%
Meter test fees	\$ (515)	\$ (263)	\$ (237)	\$ (15)	51.0%	46.1%	2.9%
Water turn-on fees	\$ (51,500)	\$ (26,283)	\$ (23,741)	\$ (1,476)	51.0%	46.1%	2.9%
Re-connect fees	\$ (51,500)	\$ (26,283)	\$ (23,741)	\$ (1,476)	51.0%	46.1%	2.9%
Lab test fees	\$ (4,893)	\$ (2,497)	\$ (2,255)	\$ (140)	51.0%	46.1%	2.9%
Permit reviews	\$ (500)	\$ (255)	\$ (230)	\$ (14)	51.0%	46.1%	2.9%
Convenience Fee	\$ (2,000)	\$ (1,021)	\$ (922)	\$ (57)	51.0%	46.1%	2.9%
Bulk Water Sales	\$ (3,500)	\$ (1,786)	\$ (1,613)	\$ (100)	51.0%	46.1%	2.9%
Residential service	\$ (15,000)	\$ (7,655)	\$ (6,915)	\$ (430)	51.0%	46.1%	2.9%
Commercial service	\$ (15,000)	\$ (7,655)	\$ (6,915)	\$ (430)	51.0%	46.1%	2.9%
Fire service	\$ (22,500)	\$ (11,483)	\$ (10,372)	\$ (645)	51.0%	46.1%	2.9%
Misc. enterprise chgs	\$ (1,500)	\$ (766)	\$ (691)	\$ (43)	51.0%	46.1%	2.9%
Return check chgs	\$ (1,000)	\$ (510)	\$ (461)	\$ (29)	51.0%	46.1%	2.9%
Interest Income2	\$ (85,763)	\$ (43,769)	\$ (39,535)	\$ (2,459)	51.0%	46.1%	2.9%
NET REVENUE REQUIREMENTS	\$ 8,892,579	\$ 4,538,316	\$ 4,099,321	\$ 254,942			
<i>Allocation of Revenue Requirements</i>	100.0%	51.0%	46.1%	2.9%			

CITY OF EUREKA
WATER RATE STUDY
Cost of Service Analysis

TABLE 23 : ADJUSTMENTS TO CLASSIFICATION OF EXPENSES

Adjustment for Current Rate Level:	Total	(COM)	(CAP)	(CA)
Test Year (FY 2022/23) Target Rate Rev. After Rate Increases	\$ 9,788,900			
Projected Rate Revenue at Current Rates	\$ 8,899,000			
Test Year (FY 2022/23) Projected Rate Adjustment	10%			
Adjusted Net Revenue Req'ts	\$ 9,788,900	\$ 4,995,752	\$ 4,512,509	\$ 280,639
<i>Percent of Revenue</i>	<i>100.0%</i>	<i>51.03%</i>	<i>46.10%</i>	<i>2.87%</i>

TABLE 24

<i>Rate Alternative #2 (Recommended) Net Revenue Requirements Current Allocation of 69% Fixed / 31% Variable</i>	Total Rate Revenue Requirements	Fixed Costs		
		Variable Costs Commodity Related Costs	Capacity Related Costs	Customer Related Costs
Rate-Design Adjustments to Fixed/Variable (%)	100.0%	31.0%	66.0%	3.0%
Rate-Design Adjustments to Fixed/Variable (\$)	\$9,788,900	\$3,034,559	\$6,460,674	\$293,667
Variable Charges (Volumetric Rates)	31.0%			
Fixed Charges	69.0%			

Existing Allocation of Fixed vs. Variable Charges		
Variable Charges	\$ 2,577,499	31%
Fixed Charges	\$ 5,735,307	69%
Total	\$ 8,312,806	100%

CITY OF EUREKA
 WATER RATE STUDY
 Water Cost of Service Analysis

TABLE 25 : DEVELOPMENT OF THE COMMODITY ALLOCATION FACTOR

Customer Class	FY 2020/21 Volume (hcf) ¹	% Adjustment for Conservation	Estimated FY 2020/21 Volume	Percent of Total Volume
Residential - City	522,609	0%	522,609	47.4%
Residential - Outside	7,469	0%	7,469	0.7%
Multi-Family	171,529	0%	171,529	15.6%
Commercial	400,000	0%	400,000	36.3%
Total	1,101,607	0%	1,101,607	100%

1. Consumption data is based on the City of Eureka's billing data.

Commodity (Base Capacity) Related Costs: These costs are associated with the total consumption (flow) of water over a specified period of time (e.g. annual).

TABLE 26 : DEVELOPMENT OF THE CAPACITY ALLOCATION FACTOR

Customer Class	Average Monthly Use (hcf)	Peak Monthly Use (hcf) ¹	Peak Monthly Factor	Max Month Capacity Factor
Residential - City	43,551	59,982	1.38	46.7%
Residential - Outside	622	876	1.41	0.7%
Multi-Family	14,294	17,321	1.21	13.5%
Commercial (2016 Peaking Data)	36,928	50,205	1.36	39.1%
Total	95,395	128,384	1.35	100%

1. Based on peak monthly data (peak day data not available).

Capacity Related Costs: Costs associated with the maximum demand required at one point in time or the maximum size of facilities required to meet this demand.

CITY OF EUREKA
WATER RATE STUDY
Water Cost of Service Analysis

TABLE 27 : DEVELOPMENT OF THE CUSTOMER SERVICE ALLOCATION FACTOR

Customer Class	Number of Meters ¹	Percent of Total
Residential - City	7,929	77.9%
Residential - Outside	30	0.3%
Multi-Family	1,013	10.0%
Commercial (2016 Peaking Data)	1,202	11.8%
Total	10,174	100.0%

1. Meter Count data is based on the City of Eureka's billing data for June 2021.

***Customer Related Costs** : Costs associated with having a customer on the water system. These costs vary with the addition or deletion of customers on the system. Examples: Meter-reading, Postage and billing.*

TABLE 28 : COMPARISON OF CURRENT VS. 2016 CONSUMPTION

Customer Class	2016 Rate Study Vol. (hcf)	FY 2020/21 Volume (hcf) ¹	% Change
Residential - City	566,756	522,609	-8%
Residential - Outside	12,427	7,469	-40%
Multi-Family	142,444	171,529	20%
Commercial	443,134	400,000	-10%
Total	1,164,761	1,101,607	-5%

1. Consumption data is based on the City of Eureka's billing data.

CITY OF EUREKA
WATER RATE STUDY
Water Cost of Service Analysis/Rate Design

TABLE 29: PROPOSED VOLUMETRIC CHARGES

Proposed Rates (69% Fixed / 31% Variable)						
Customer Classes	Number of Meters¹	Water Consumption (hcf/yr.)¹	Target Rev. Req't from Vol. Charges	% of Total Rate Revenue	Uniform Commodity Rates (\$/hcf)	Proposed Rate Structure
Residential - City	7,929	522,609	\$ 1,439,613	15%	\$2.75	<i>Uniform</i>
Residential - Outside	30	7,469	\$ 20,575	0%	\$2.75	<i>Uniform</i>
Multi-Family	1,013	171,529	\$ 472,505	5%	\$2.75	<i>Uniform</i>
Commercial	1,202	400,000	\$ 1,101,866	11%	\$2.75	<i>Uniform</i>
Total Potable Water	10,174	1,101,607	\$ 3,034,559	31%		

1. Consumption data is based on the City of Eureka's billing data.

CITY OF EUREKA
WATER RATE STUDY
Water Cost of Service Analysis/Rate Design

TABLE 30 : ALLOCATION OF WATER REVENUE REQUIREMENTS

Classification Components	Adjusted Net Revenue Requirements	
	<i>(69% Fixed / 31% Variable)</i>	
Commodity-Related Costs	\$ 3,034,559	31.0%
Capacity-Related Costs	6,460,674	66.0%
Customer-Related Costs	293,667	3.0%
Net Revenue Requirement	\$ 9,788,900	100%

Adjusted Net Rev. Req'ts.
31% total variable
69% total fixed
100%

TABLE 31 : ALLOCATION OF ADJUSTED NET REVENUE REQUIREMENTS

<i>Proposed Rates (69% Fixed / 31% Variable)</i>					
Customer Classes	Classification Components			Cost of Service Net Rev. Req'ts	% of COS Net Revenue Req'ts
	Commodity-Related Costs	Capacity-Related Costs	Customer-Related Costs		
Residential - City	\$ 1,439,613	\$ 3,018,477	\$ 228,866	\$ 4,686,956	47.9%
Residential - Outside	20,575	44,083	866	65,524	0.7%
Multi-Family	472,505	871,645	29,240	1,373,390	14.0%
Commercial	1,101,866	2,526,469	34,695	3,663,030	37.4%
Total Net Revenue Requirement	\$ 3,034,559	\$ 6,460,674	\$ 293,667	\$ 9,788,900	100%
<i>Total Net Revenue Requirement by Classification Component</i>	<i>VARIABLE</i> \$3,034,559	<i>FIXED</i> \$6,754,341		\$9,788,900	
	31.0%	66.0%	3.0%	100.0%	

\$9,432,940

TABLE 32 : COST OF SERVICE SUMMARY OF REVENUE REQUIREMENTS

Customer Class	Rate Revenue - FY 2020/21		<i>Proposed Rates (69% Fixed / 31% Variable)</i>		
	Rate Revenue	% of Revenue	COS Rev. Req't	% of COS Rev. Req't.	% of Revenue vs. COS
Residential - City	\$ 3,963,067	47.7%	\$ 4,686,956	47.9%	0.2%
Residential - Outside	\$ 933,169	11.2%	\$ 65,524	0.7%	-10.6%
Multi-Family	\$ 1,140,279	13.7%	\$ 1,373,390	14.0%	0.3%
Commercial	\$ 2,276,292	27.4%	\$ 3,663,030	37.4%	10.0%
Total	\$ 8,312,806	100.0%	\$ 9,788,900	100%	0.0%

CITY OF EUREKA
WATER RATE STUDY
Water Cost of Service Analysis/Rate Design

TABLE 33 : METER EQUIVALENCY FACTORS USED IN FIXED CHARGES CALCULATIONS

Meter Size	Standard Meters		Fire Meters	
	Meter Capacity (gpm) ¹	Equivalency to 5/8 inch	Meter Capacity (gpm) ²	Equivalency to 5/8 inch
	<u>Displacement Meters</u>		<u>Displacement Meters</u>	
5/8 inch	20	1.00	20	1.00
3/4 inch	20	1.00	20	1.00
1 inch	50	2.50	50	2.50
1.5 inch	100	5.00	100	5.00
2 inch	160	8.00	160	8.00
	<u>Compound Class II Meters</u>		<u>Fire Service Type I & II Meters</u>	
3 inch	320	16.00	350	17.50
4 inch	500	25.00	700	35.00
6 inch	1,000	50.00	1,600	80.00
8 inch	1,600	80.00	2,800	140.00
	<u>Turbine Class II Meters</u>			
10 inch	4,200	210.00	4,400	220.00
12 inch	5,300	265.00	N/A	--

1. Per AWWA M-1, Table B-1.

2. Per AWWA M-6, Table 5-3.

CITY OF EUREKA
WATER RATE STUDY
Water Cost of Service Analysis/Rate Design

TABLE 34 : CALCULATION OF MONTHLY FIXED METER SERVICE CHARGES

Proposed Rates (69% Fixed / 31% Variable)

Number of Meters by Class and Size ¹	FY 2022/23								Total
	5/8 inch	1 inch	1.5 inch	2 inch	3 inch	4 inch	6 inch	8 inch	
Residential - City	7,589	148	10	1	-	-	-	-	7,748
Residential - Outside	28	1	-	-	1	-	-	-	30
Total Meters/Accounts	7,617	149	10	1	1	-	-	-	7,778
<i>Hydraulic Capacity Factor²</i>	<i>1.00</i>	<i>2.50</i>	<i>5.00</i>	<i>8.00</i>	<i>16.00</i>	<i>25.00</i>	<i>50.00</i>	<i>80.00</i>	
Total Equivalent Meters	7,617	373	50	8	16	-	-	-	8,064
Monthly Fixed Service Charges									
Customer Costs (\$/Acct/month) ³	\$2.46	\$2.46	\$2.46	\$2.46	\$2.46	\$2.46	\$2.46	\$2.46	
Capacity Costs (\$/Acct/month) ⁴	\$31.65	\$79.13	\$158.25	\$253.20	\$506.41	\$791.26	\$1,582.52	\$2,532.04	
Total Monthly Meter Charge	\$34.11	\$81.59	\$160.71	\$255.66	\$508.87	\$793.72	\$1,584.98	\$2,534.50	
Annual Fixed Costs Allocated to Monthly Meter Charges									
Customer Costs	\$ 229,732								
Capacity Costs	3,062,560								
Total Fixed Meter Costs	\$ 3,292,292								
Annual Revenue from Monthly Meter Charges									
Customer Charges	\$ 224,977	\$ 4,401	\$ 295	\$ 30	\$ 30	\$ -	\$ -	\$ -	\$ 229,732
Capacity Charges	2,892,977	141,477	18,990	3,038	6,077	-	-	-	3,062,560
Total Revenue from Monthly Meter Charges	\$ 3,117,954	\$ 145,878	\$ 19,286	\$ 3,068	\$ 6,106	\$ -	\$ -	\$ -	\$ 3,292,292

1. Meter by Class and Size are based on June 2021 customer billing data.
2. Source: AWWA Manual M1, "Principles of Water Rates, Fees, and Charges", Table B-1.
3. Customer costs are allocated to each customer by dividing the total customer costs by the total number of customers.
4. Capacity costs are allocated by meter size and the hydraulic capacity of the meter.

TABLE 35 : CALCULATION OF MONTHLY FIXED METER SERVICE CHARGES

Proposed Rates (69% Fixed / 31% Variable)

Number of Meters by Class and Size ¹	FY 2022/23								Total
	5/8 inch	1 inch	1.5 inch	2 inch	3 inch	4 inch	6 inch	8 inch	
Multi-Family	780	147	55	27	1	3	-	-	1,013
Total Meters/Accounts	780	147	55	27	1	3	-	-	1,013
<i>Hydraulic Capacity Factor²</i>	<i>1.00</i>	<i>2.50</i>	<i>5.00</i>	<i>8.00</i>	<i>16.00</i>	<i>25.00</i>	<i>50.00</i>	<i>80.00</i>	
Total Equivalent Meters	780	368	275	216	16	75	-	-	1,730
Monthly Fixed Service Charges									
Customer Costs (\$/Acct/month) ³	\$2.41	\$2.41	\$2.41	\$2.41	\$2.41	\$2.41	\$2.41	\$2.41	
Capacity Costs (\$/Acct/month) ⁴	\$42.00	\$105.00	\$209.99	\$335.99	\$671.98	\$1,049.97	\$2,099.95	\$3,359.91	
Total Monthly Meter Charge	\$44.40	\$107.40	\$212.40	\$338.40	\$674.39	\$1,052.38	\$2,102.35	\$3,362.32	
Annual Fixed Costs Allocated to Monthly Meter Charges									
Customer Costs	\$ 29,240								
Capacity Costs	871,645								
Total Fixed Meter Costs	\$ 900,885								
Annual Revenue from Monthly Meter Charges									
Customer Charges	\$ 22,514	\$ 4,243	\$ 1,588	\$ 779	\$ 29	\$ 87	\$ -	\$ -	\$ 29,240
Capacity Charges	393,110	185,215	138,596	108,861	8,064	37,799	-	-	871,645
Total Revenue from Monthly Meter Charges	\$ 415,624	\$ 189,458	\$ 140,184	\$ 109,641	\$ 8,093	\$ 37,886	\$ -	\$ -	\$ 900,885

1. Meter by Class and Size are based on June 2021 customer billing data.
2. Source: AWWA Manual M1, "Principles of Water Rates, Fees, and Charges", Table B-1.
3. Customer costs are allocated to each customer by dividing the total customer costs by the total number of customers.
4. Capacity costs are allocated by meter size and the hydraulic capacity of the meter.

CITY OF EUREKA
WATER RATE STUDY
Water Cost of Service Analysis/Rate Design

TABLE 36 : CALCULATION OF MONTHLY FIXED METER SERVICE CHARGES

Proposed Rates (69% Fixed / 31% Variable)

Number of Meters by Class and Size ¹	FY 2022/23								Total
	5/8 inch	1 inch	1.5 inch	2 inch	3 inch	4 inch	6 inch	8 inch	
Commercial	754	178	76	161	17	11	4	1	1,202
Total Meters/Accounts	754	178	76	161	17	11	4	1	1,202
<i>Hydraulic Capacity Factor²</i>	<i>1.00</i>	<i>2.50</i>	<i>5.00</i>	<i>8.00</i>	<i>16.00</i>	<i>25.00</i>	<i>50.00</i>	<i>80.00</i>	
Total Equivalent Meters	754	445	380	1,288	272	275	200	80	3,694
Monthly Fixed Service Charges									
Customer Costs (\$/Acct/month) ³	\$2.41	\$2.41	\$2.41	\$2.41	\$2.41	\$2.41	\$2.41	\$2.41	
Capacity Costs (\$/Acct/month) ⁴	\$56.99	\$142.49	\$284.97	\$455.96	\$911.92	\$1,424.87	\$2,849.74	\$4,559.59	
Total Monthly Meter Charge	\$59.40	\$144.89	\$287.38	\$458.36	\$914.32	\$1,427.28	\$2,852.15	\$4,561.99	
Annual Fixed Costs Allocated to Monthly Meter Charges									
Customer Costs	\$ 34,695								
Capacity Costs	2,526,469								
Total Fixed Meter Costs	\$ 2,561,164								
Annual Revenue from Monthly Meter Charges									
Customer Charges	\$ 21,764	\$ 5,138	\$ 2,194	\$ 4,647	\$ 491	\$ 318	\$ 115	\$ 29	\$ 34,695
Capacity Charges	515,690	304,353	259,897	880,913	186,031	188,083	136,788	54,715	2,526,469
Total Revenue from Monthly Meter Charges	\$ 537,453	\$ 309,490	\$ 262,090	\$ 885,560	\$ 186,522	\$ 188,401	\$ 136,903	\$ 54,744	\$ 2,561,164

- Meter by Class and Size are based on June 2021 customer billing data.
- Source: AWWA Manual M1, "Principles of Water Rates, Fees, and Charges", Table B-1.
- Customer costs are allocated to each customer by dividing the total customer costs by the total number of customers.
- Capacity costs are allocated by meter size and the hydraulic capacity of the meter.

CITY OF EUREKA
WATER RATE STUDY
Water Cost of Service Analysis/Rate Design

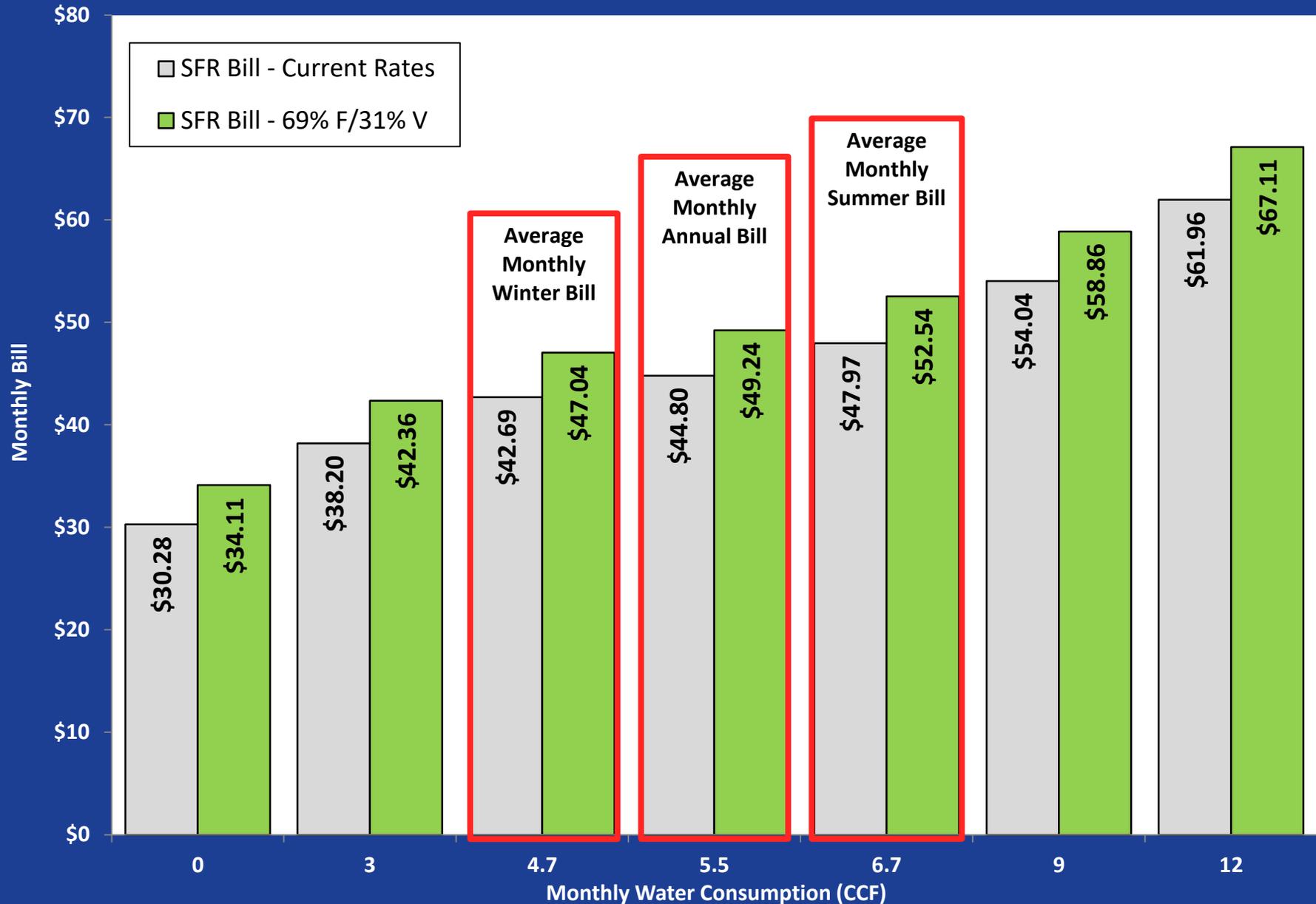
TABLE 37 : CURRENT VS. PROPOSED WATER RATES

Water Rate Schedule	Current Rates	Proposed Rates (69% Fixed / 31% Variable)				
		Proposed Rates				
		FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27
Fixed Service Charge¹						
Monthly Fixed Service Charges:						
<i>Single Family Residential:</i>						
5/8 inch & 3/4 inch	\$30.28	\$34.11	\$37.52	\$41.28	\$45.40	\$49.04
1 inch	\$72.26	\$81.59	\$89.75	\$98.72	\$108.59	\$117.28
1 1/2 inch	\$226.16	\$160.71	\$176.78	\$194.46	\$213.91	\$231.02
2 inch	\$450.03	\$255.66	\$281.23	\$309.35	\$340.29	\$367.51
<i>Single Family Residential - Outside:</i>						
5/8 inch & 3/4 inch	\$45.42	\$51.17	\$56.28	\$61.91	\$68.10	\$73.55
1 inch	\$108.39	\$122.38	\$134.62	\$148.08	\$162.89	\$175.92
<i>Multi Family Residential:</i>						
5/8 inch & 3/4 inch	\$39.85	\$44.40	\$48.84	\$53.73	\$59.10	\$63.83
1 inch	\$96.17	\$107.40	\$118.14	\$129.96	\$142.95	\$154.39
1 1/2 inch	\$190.05	\$212.40	\$233.64	\$257.00	\$282.70	\$305.32
2 inch	\$302.70	\$338.40	\$372.24	\$409.46	\$450.41	\$486.44
3 inch	\$603.09	\$674.39	\$741.83	\$816.01	\$897.61	\$969.42
4 inch	\$941.04	\$1,052.38	\$1,157.62	\$1,273.38	\$1,400.72	\$1,512.77
<i>Non-Residential Fixed Service Charges:</i>						
<i>Commercial</i>						
5/8 inch & 3/4 inch	\$57.05	\$59.40	\$65.34	\$71.87	\$79.06	\$85.39
1 inch	\$139.18	\$144.89	\$159.38	\$175.32	\$192.85	\$208.28
1 1/2 inch	\$276.05	\$287.38	\$316.12	\$347.73	\$382.50	\$413.10
2 inch	\$440.31	\$458.36	\$504.20	\$554.62	\$610.08	\$658.89
3 inch	\$878.31	\$914.32	\$1,005.76	\$1,106.33	\$1,216.96	\$1,314.32
4 inch	\$1,371.07	\$1,427.28	\$1,570.00	\$1,727.01	\$1,899.71	\$2,051.68
6 inch	\$2,739.84	\$2,852.15	\$3,137.36	\$3,451.10	\$3,796.21	\$4,099.91
8 inch	\$4,382.36	\$4,561.99	\$5,018.19	\$5,520.01	\$6,072.02	\$6,557.78
Volumetric Charges for All Water Consumed¹						
Uniform Rate (per hcf) - Inside	\$2.64	\$2.75	\$3.03	\$3.33	\$3.66	\$3.95
Uniform Rate (per hcf) - Outside	\$3.88	\$4.13	\$4.54	\$4.99	\$5.49	\$5.93

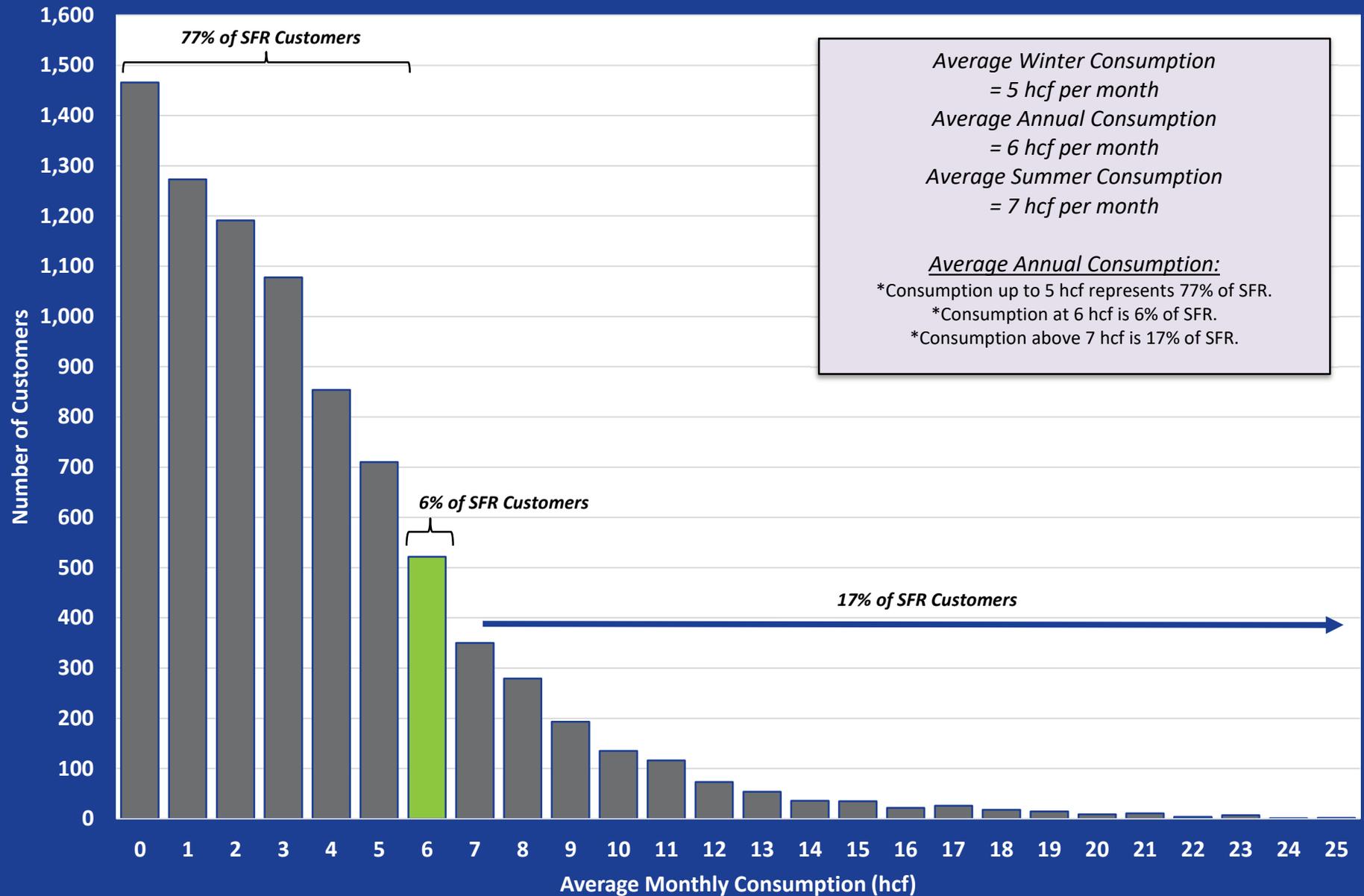
1. "Outside" refers to outside of the City Limits. Outside customer rates are 1.5 times the corresponding inside rates.

Single-Family Residential Water Bill Comparison

Current vs. Proposed Rates (5/8" meter)



Single-Family Residential Water Consumption Distribution Curve



Commercial Water Bill Comparison Current vs. Proposed Rates (2" meter)

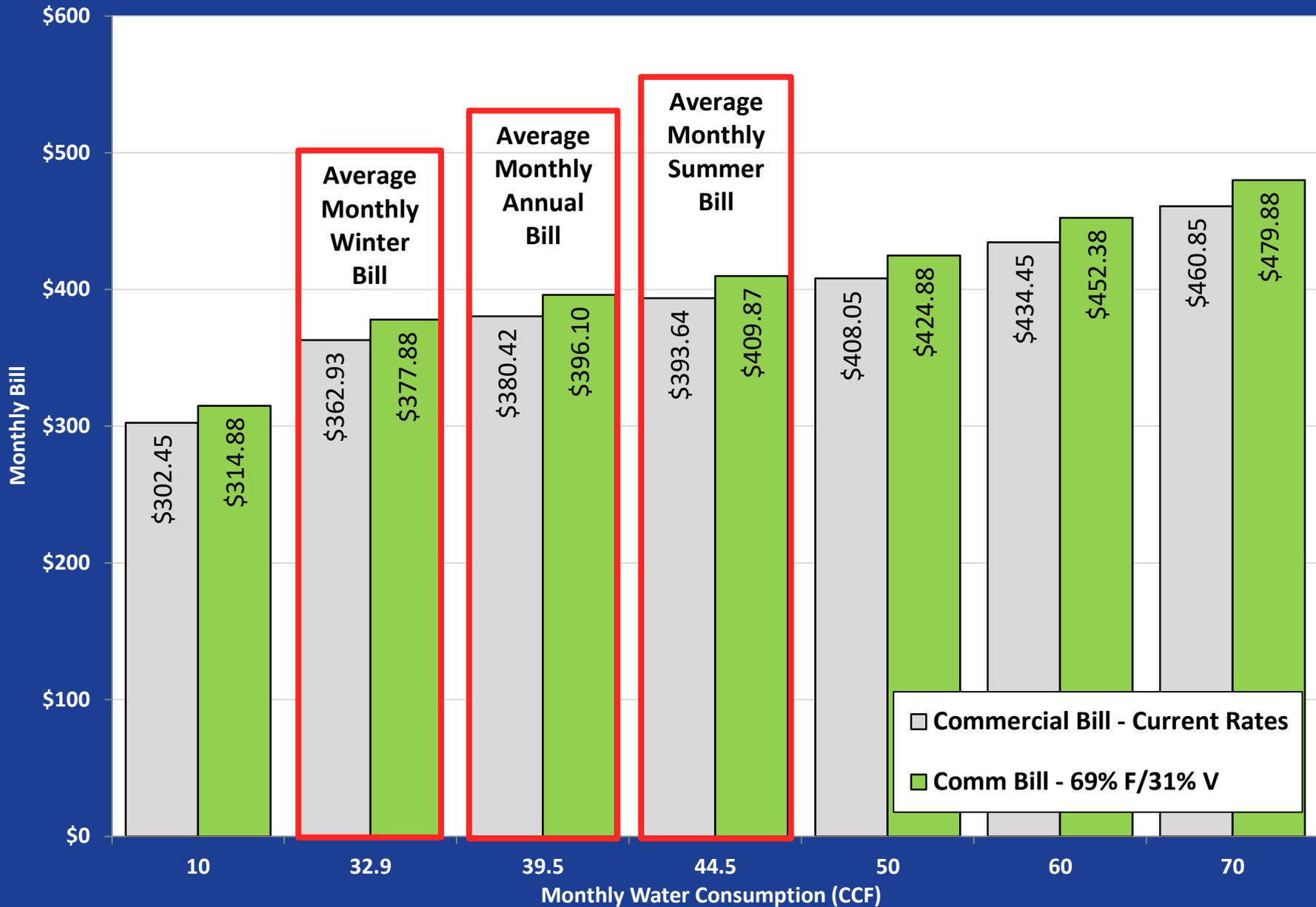


TABLE 1 : FINANCIAL PLAN AND SUMMARY OF REVENUE REQUIREMENTS

RATE REVENUE REQUIREMENTS SUMMARY ¹	Budget	5-Year Prop 218 Period					Projected				
	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31	FY 2031/32
Sources of Sewer Funds											
Sewer Service Charge - Eureka	9,674,780	9,674,800	9,674,800	9,674,800	9,674,800	9,674,800	9,674,800	9,674,800	9,674,800	9,674,800	9,674,800
Sewer Service Charge - HCSD ²	1,221,040	1,221,000	1,221,000	1,221,000	1,221,000	1,221,000	1,221,000	1,221,000	1,221,000	1,221,000	1,221,000
Other Revenues	182,011	182,000	182,000	182,000	182,000	182,000	182,000	182,000	182,000	182,000	182,000
Interest Income ³	61,055	67,411	77,615	69,926	89,728	104,343	107,150	148,499	190,183	235,916	282,197
Total Sources of Funds	\$ 11,138,886	\$ 11,145,211	\$ 11,155,415	\$ 11,147,726	\$ 11,167,528	\$ 11,182,143	\$ 11,184,950	\$ 11,226,299	\$ 11,267,983	\$ 11,313,716	\$ 11,359,997
Uses of Funds											
<i>Operating Expenses</i> ⁴											
Finance	\$ 272,111	\$ 280,274	\$ 288,683	\$ 297,343	\$ 306,263	\$ 315,451	\$ 324,915	\$ 334,662	\$ 344,702	\$ 355,043	\$ 365,695
Engineering Admin	500,635	515,654	531,123	547,057	563,469	580,373	597,784	615,718	634,189	653,215	672,811
PW Admin	195,169	162,241	167,108	172,122	177,285	182,604	188,082	193,724	199,536	205,522	211,688
Sewer Collection Maintenance	2,053,684	2,115,295	2,178,754	2,244,116	2,311,440	2,380,783	2,452,206	2,525,772	2,601,546	2,679,592	2,759,980
Wastewater Treatment	3,356,581	3,457,279	3,560,997	3,667,827	3,777,862	3,891,197	4,007,933	4,128,171	4,252,017	4,379,577	4,510,964
<i>Subtotal: Operating Expenses</i>	<i>\$ 6,378,180</i>	<i>\$ 6,530,743</i>	<i>\$ 6,726,665</i>	<i>\$ 6,928,465</i>	<i>\$ 7,136,319</i>	<i>\$ 7,350,408</i>	<i>\$ 7,570,921</i>	<i>\$ 7,798,048</i>	<i>\$ 8,031,990</i>	<i>\$ 8,272,949</i>	<i>\$ 8,521,138</i>
<i>Other Expenditures</i>											
Existing Debt Service	\$ 1,296,806	\$ 1,297,594	\$ 1,291,856	\$ 1,295,119	\$ 1,297,281	\$ 1,292,844	\$ 1,292,763	\$ 1,291,959	\$ 1,035,700	\$ 1,034,222	\$ 1,036,472
New Debt Service (\$6 M for Capital Projects)	-	-	-	-	-	-	-	-	-	-	-
Rate-Funded Capital Expenses	3,000,000	3,055,760	5,517,000	3,757,320	4,423,920	4,697,929	2,166,931	-	-	-	-
<i>Subtotal: Other Expenditures</i>	<i>\$ 4,296,806</i>	<i>\$ 4,353,354</i>	<i>\$ 6,808,856</i>	<i>\$ 5,052,439</i>	<i>\$ 5,721,201</i>	<i>\$ 5,990,773</i>	<i>\$ 3,459,694</i>	<i>\$ 1,291,959</i>	<i>\$ 1,035,700</i>	<i>\$ 1,034,222</i>	<i>\$ 1,036,472</i>
Total Uses of Water Funds	\$ 10,674,986	\$ 10,884,096	\$ 13,535,521	\$ 11,980,904	\$ 12,857,520	\$ 13,341,181	\$ 11,030,615	\$ 9,090,008	\$ 9,067,690	\$ 9,307,171	\$ 9,557,610
<i>Plus: Revenue from Rate Increases</i> ⁵	-	483,740	1,818,862	2,278,609	2,756,745	3,254,007	3,641,871	4,041,371	4,452,857	4,876,686	5,313,231
Contribution to Reserves	\$ 463,900	\$ 744,854	\$ (561,244)	\$ 1,445,431	\$ 1,066,754	\$ 1,094,969	\$ 3,796,207	\$ 6,177,662	\$ 6,653,150	\$ 6,883,231	\$ 7,115,619
Net Revenue Reqtd.	\$ 10,431,920	\$ 10,634,686	\$ 13,275,906	\$ 11,728,978	\$ 12,585,792	\$ 13,054,839	\$ 10,741,465	\$ 8,759,509	\$ 8,695,507	\$ 8,889,256	\$ 9,093,412
Total Rate Revenue After Rate Increases	\$ 9,674,780	\$ 10,158,540	\$ 11,493,662	\$ 11,953,409	\$ 12,431,545	\$ 12,928,807	\$ 13,316,671	\$ 13,716,171	\$ 14,127,657	\$ 14,551,486	\$ 14,988,031
Projected Annual Rate Revenue Increase	0.00%	10.00%	8.00%	4.00%	4.00%	4.00%	3.00%	3.00%	3.00%	3.00%	3.00%
<i>Cumulative Increase from Annual Revenue Increases</i>	<i>0.00%</i>	<i>10.00%</i>	<i>18.80%</i>	<i>23.55%</i>	<i>28.49%</i>	<i>33.63%</i>	<i>37.64%</i>	<i>41.77%</i>	<i>46.03%</i>	<i>50.41%</i>	<i>54.92%</i>
<i>Debt Coverage After Rate Increase</i>	<i>3.67</i>	<i>3.93</i>	<i>4.84</i>	<i>5.02</i>	<i>5.23</i>	<i>5.48</i>	<i>5.61</i>	<i>5.78</i>	<i>7.42</i>	<i>7.66</i>	<i>7.87</i>

1. Revenue is budgeted for FY 2021/22. 10,158,540
2. HCSD Service Charges include adjustments for the recommended annual rate increases.
3. Interest earning are calculated based on historical LAIF returns.
4. Operating Expenses for FY 2021/22 are budgeted operating expenses.
5. Revenue from rate increases assumes an implementation date of January 1, 2023 for new rates. For each year thereafter, the assumption is that new rates will be implemented on July 1st of each year.

TABLE 2 : RESERVE FUND SUMMARY

SUMMARY OF CASH ACTIVITY	Budget	5-Year Prop 218 Period					Projected				
	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31	FY 2031/32
Total Beginning Cash	\$ 6,182,282										
Un-Restricted Reserves:											
Operating and Capital Replacement Reserve											
Beginning Reserve Balance ¹	\$ 3,697,706	\$ 3,189,100	\$ 3,265,400	\$ 2,704,156	\$ 3,464,200	\$ 3,568,200	\$ 3,675,200	\$ 3,785,500	\$ 3,899,000	\$ 4,016,000	\$ 4,136,500
Plus: Net Cash Flow (After Rate Increases)	463,900	744,854	(561,244)	1,445,431	1,066,754	1,094,969	3,796,207	6,177,662	6,653,150	6,883,231	7,115,619
Plus: Transfer of Debt Reserve Surplus	-	-	-	-	-	-	-	-	-	-	-
Less: Transfer Out to Sinking Fund	-	-	-	-	-	-	-	-	-	-	-
Less: Transfer Out to Capital Replacement Reserve	(972,506)	(668,554)	-	(685,388)	(962,754)	(987,969)	(3,685,907)	(6,064,162)	(6,536,150)	(6,762,731)	(6,991,519)
Ending Operating Reserve Balance	\$ 3,189,100	\$ 3,265,400	\$ 2,704,156	\$ 3,464,200	\$ 3,568,200	\$ 3,675,200	\$ 3,785,500	\$ 3,899,000	\$ 4,016,000	\$ 4,136,500	\$ 4,260,600
Target Ending Balance (6 months of O&M)²	\$ 3,189,100	\$ 3,265,400	\$ 3,363,300	\$ 3,464,200	\$ 3,568,200	\$ 3,675,200	\$ 3,785,500	\$ 3,899,000	\$ 4,016,000	\$ 4,136,500	\$ 4,260,600
Capital Rehabilitation & Replacement Reserve											
Beginning Reserve Balance ¹	\$ 758,869	\$ 1,731,375	\$ 2,399,929	\$ 2,399,929	\$ 3,085,317	\$ 4,048,071	\$ 4,145,969	\$ 7,053,807	\$ 9,982,969	\$ 13,204,119	\$ 16,461,850
Plus: Grant Proceeds	-	-	-	-	-	-	-	-	-	-	-
Plus: Transfer of Operating Reserve Surplus	972,506	668,554	-	685,388	962,754	987,969	3,685,907	6,064,162	6,536,150	6,762,731	6,991,519
Less: Transfer Out for Capital Projects	-	-	-	-	-	(890,071)	(778,069)	(3,135,000)	(3,315,000)	(3,505,000)	(3,705,000)
Ending Capital Rehab & Replacement Reserve Balance	\$ 1,731,375	\$ 2,399,929	\$ 2,399,929	\$ 3,085,317	\$ 4,048,071	\$ 4,145,969	\$ 7,053,807	\$ 9,982,969	\$ 13,204,119	\$ 16,461,850	\$ 19,748,368
Capital R&R Reserve (5% of Net Assets)²	\$ 2,011,000	\$ 3,483,800	\$ 3,460,200	\$ 3,356,400	\$ 3,255,700	\$ 3,158,000	\$ 3,367,900	\$ 3,580,600	\$ 3,795,700	\$ 4,013,600	\$ 4,234,600
Sinking Fund Reserve											
Beginning Reserve Balance	\$ 1,725,707	\$ 1,725,707	\$ 1,725,707	\$ 1,725,707	\$ 1,725,707	\$ 1,725,707	\$ 1,725,707	\$ 1,725,707	\$ 1,725,707	\$ 1,725,707	\$ 1,725,707
Plus: Fund Contributions	-	-	-	-	-	-	-	-	-	-	-
Less: Use of Reserves for Capital Projects	-	-	-	-	-	-	-	-	-	-	-
Ending Operating Reserve Balance	\$ 1,725,707	\$ 1,725,707	\$ 1,725,707	\$ 1,725,707	\$ 1,725,707	\$ 1,725,707	\$ 1,725,707	\$ 1,725,707	\$ 1,725,707	\$ 1,725,707	\$ 1,725,707
Target Ending Balance	\$ 1,725,707	\$ 1,725,707	\$ 1,725,707	\$ 1,725,707	\$ 1,725,707	\$ 1,725,707	\$ 1,725,707	\$ 1,725,707	\$ 1,725,707	\$ 1,725,707	\$ 1,725,707
Ending Balance - Excl. Restricted Reserves	\$ 6,646,182	\$ 7,391,036	\$ 6,829,793	\$ 8,275,224	\$ 9,341,978	\$ 9,546,875	\$ 12,565,014	\$ 15,607,676	\$ 18,945,826	\$ 22,324,057	\$ 25,734,675
Min. Target Ending Balance -Excl. Restricted Reserves	\$ 6,925,807	\$ 8,474,907	\$ 8,549,207	\$ 8,546,307	\$ 8,549,607	\$ 8,558,907	\$ 8,879,107	\$ 9,205,307	\$ 9,537,407	\$ 9,875,807	\$ 10,220,907
Ending Surplus/(Deficit) Compared to Reserve Targets	\$ (279,625)	\$ (1,083,871)	\$ (1,719,414)	\$ (271,083)	\$ 792,371	\$ 987,969	\$ 3,685,907	\$ 6,402,369	\$ 9,408,419	\$ 12,448,250	\$ 15,513,768

CITY OF EUREKA
SEWER RATE ANALYSIS
Financial Plan and Reserve Projections

Financial Plan & Reserve Summary

Restricted Reserves:											
Connection Fee Reserve											
Beginning Reserve Balance	\$ -	\$ 75,000	\$ 151,028	\$ 228,097	\$ 306,221	\$ 385,417	\$ 465,697	\$ 547,077	\$ 629,572	\$ 713,197	\$ 797,968
Plus: Interest Earnings	-	1,028	2,069	3,125	4,195	5,280	6,380	7,495	8,625	9,771	10,932
Plus: Capacity Fee Revenue	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000
Less: Use of Reserves for Capital Projects	-	-	-	-	-	-	-	-	-	-	-
Ending Connection Fee Fund Balance	\$ 75,000	\$ 151,028	\$ 228,097	\$ 306,221	\$ 385,417	\$ 465,697	\$ 547,077	\$ 629,572	\$ 713,197	\$ 797,968	\$ 883,900
Target Ending Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Bond Project Fund											
Beginning Reserve Balance ³	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Plus: SRF Loan Funding Proceeds	-	-	-	-	-	-	-	-	-	-	-
Plus: Revenue Bond Proceeds	-	-	-	-	-	-	-	-	-	-	-
Less: Use of Bond & Loan Funds for Capital Projects	-	-	-	-	-	-	-	-	-	-	-
Ending Bond Project Fund Balance	\$ -										
Target Ending Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Debt Reserve											
Beginning Reserve Balance ⁴	\$ 1,037,990	\$ 1,052,210	\$ 1,066,626	\$ 1,081,239	\$ 1,096,051	\$ 1,111,067	\$ 1,126,289	\$ 1,141,719	\$ 1,157,361	\$ 1,173,217	\$ 1,189,290
Plus: Reserve Funding from Future Debt Obligations	-	-	-	-	-	-	-	-	-	-	-
Plus: Interest Earnings	14,220	14,415	14,613	14,813	15,016	15,222	15,430	15,642	15,856	16,073	16,293
Less: Transfer of Surplus to Operating Reserve	-	-	-	-	-	-	-	-	-	-	-
Ending Debt Reserve Balance	\$ 1,052,210	\$ 1,066,626	\$ 1,081,239	\$ 1,096,051	\$ 1,111,067	\$ 1,126,289	\$ 1,141,719	\$ 1,157,361	\$ 1,173,217	\$ 1,189,290	\$ 1,205,583
Target Ending Balance	\$ 1,557,563	\$ 1,557,563	\$ 1,556,993	\$ 1,556,993	\$ 1,556,738	\$ 1,554,885	\$ 1,553,490	\$ 1,551,525	\$ 1,244,400	\$ 1,244,400	\$ 1,244,400
Ending Balance - Restricted Reserves	\$ 1,127,210	\$ 1,217,653	\$ 1,309,335	\$ 1,402,273	\$ 1,496,484	\$ 1,591,986	\$ 1,688,796	\$ 1,786,933	\$ 1,886,414	\$ 1,987,258	\$ 2,089,483
Min. Target Ending Balance - Restricted Reserves	\$ 1,557,563	\$ 1,557,563	\$ 1,556,993	\$ 1,556,993	\$ 1,556,738	\$ 1,554,885	\$ 1,553,490	\$ 1,551,525	\$ 1,244,400	\$ 1,244,400	\$ 1,244,400
Ending Surplus/(Deficit) Compared to Reserve Targets	\$ (430,352)	\$ (339,909)	\$ (247,657)	\$ (154,720)	\$ (60,253)	\$ 37,101	\$ 135,306	\$ 235,408	\$ 642,014	\$ 742,858	\$ 845,083
Annual Interest Earnings Rate ⁵	1.37%	1.37%	1.37%	1.37%	1.37%	1.37%	1.37%	1.37%	1.37%	1.37%	1.37%

- The beginning Cash balance is equal to the amount in the Fund 510 and Fund 512 as of July 1, 2021, per source file: 7. Cash Balances.xlsx
- Operating Reserve Fund target balance is set to 3 months of O&M expenses; Capital R&R Reserve Fund target balance is set to 3 percent of current assets.
- The beginning Bond Project Reserve balance is assumed to be zero.
- The beginning Debt Reserve balance from City staff on June 21, 2022.
- Historical interest earning rates were referenced on the California Treasurer's Office website for funds invested in LAIF. Future years earnings were estimated from the historical 5 year average interest earnings rate.

CHART 1

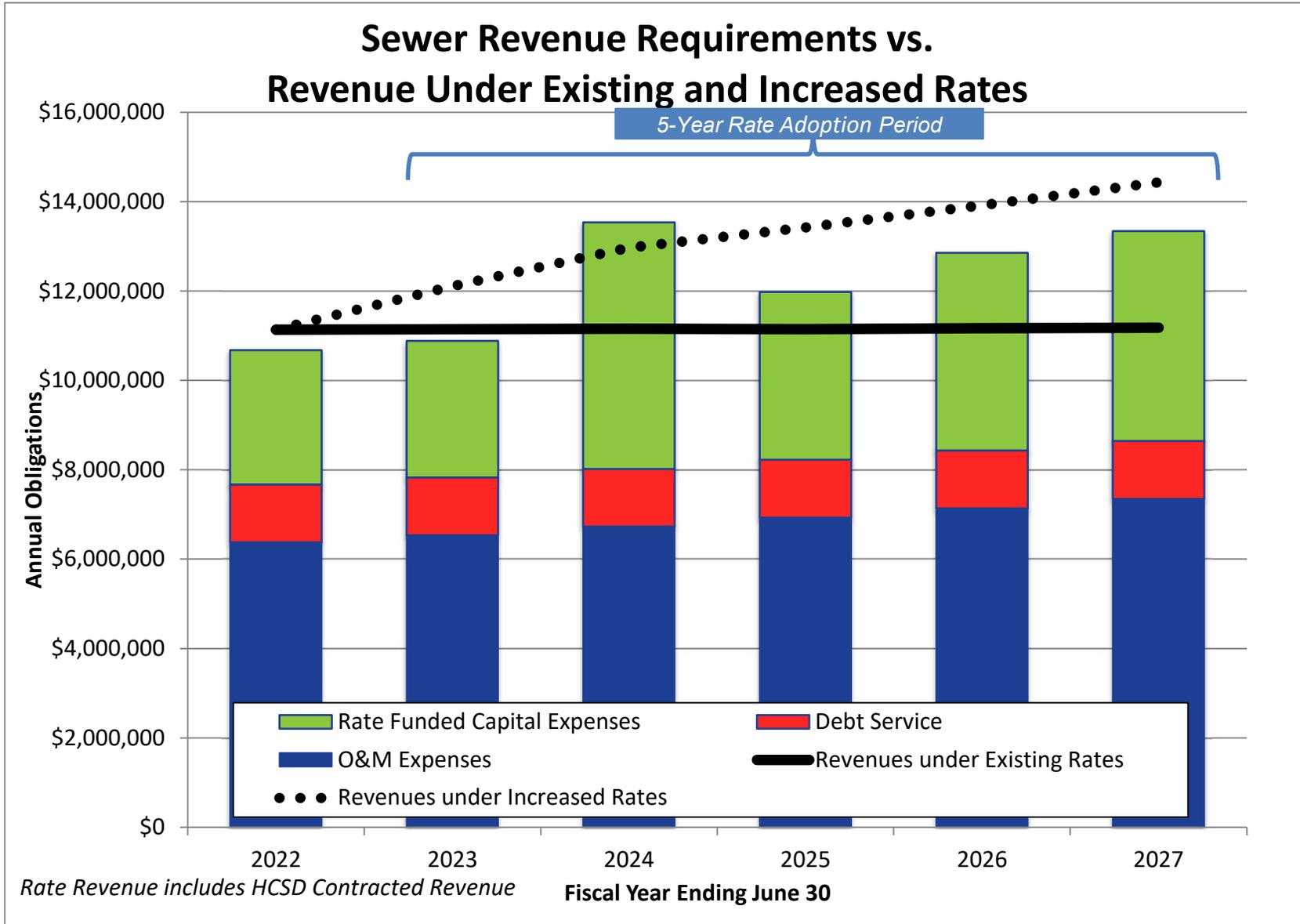


CHART 2

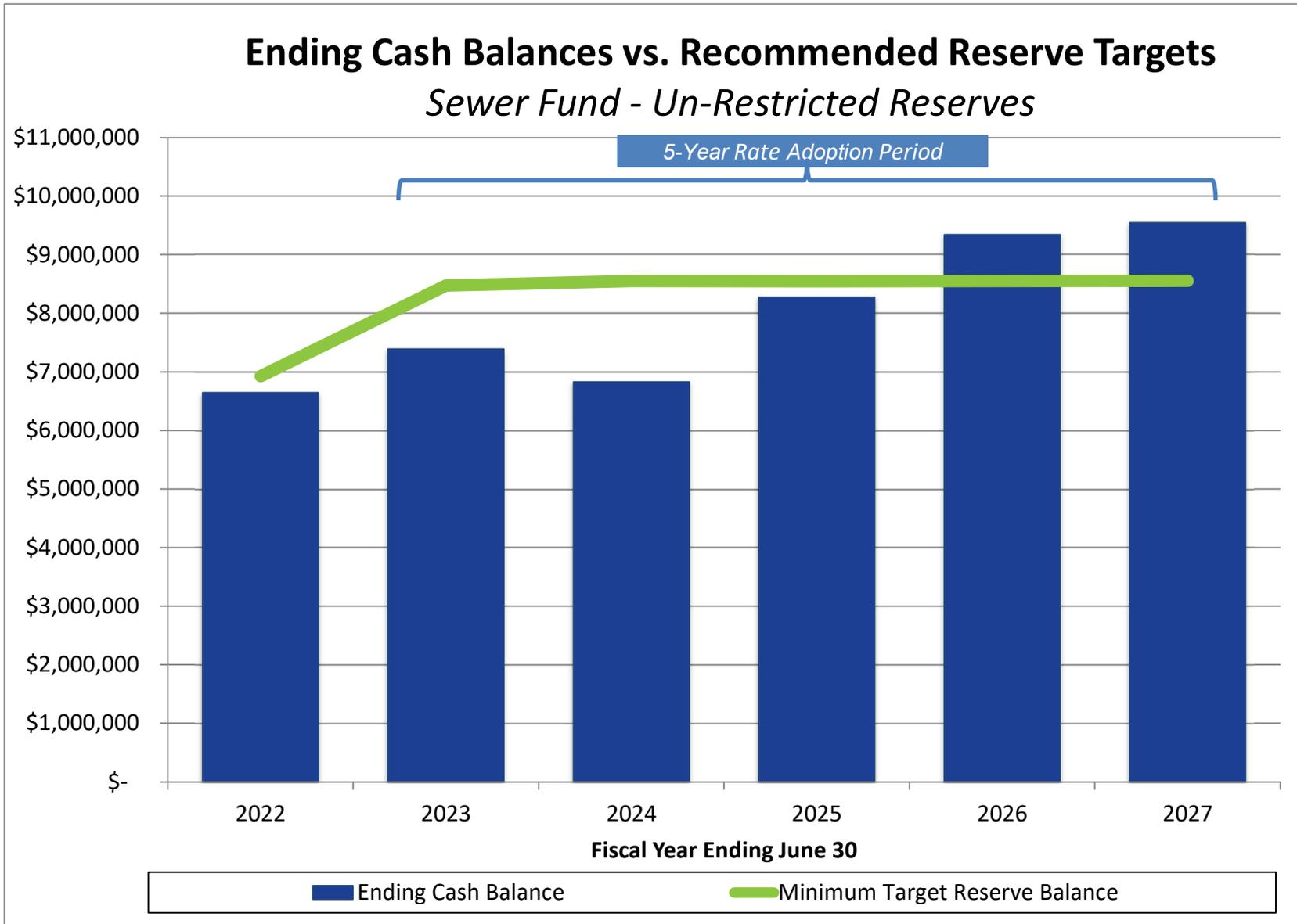
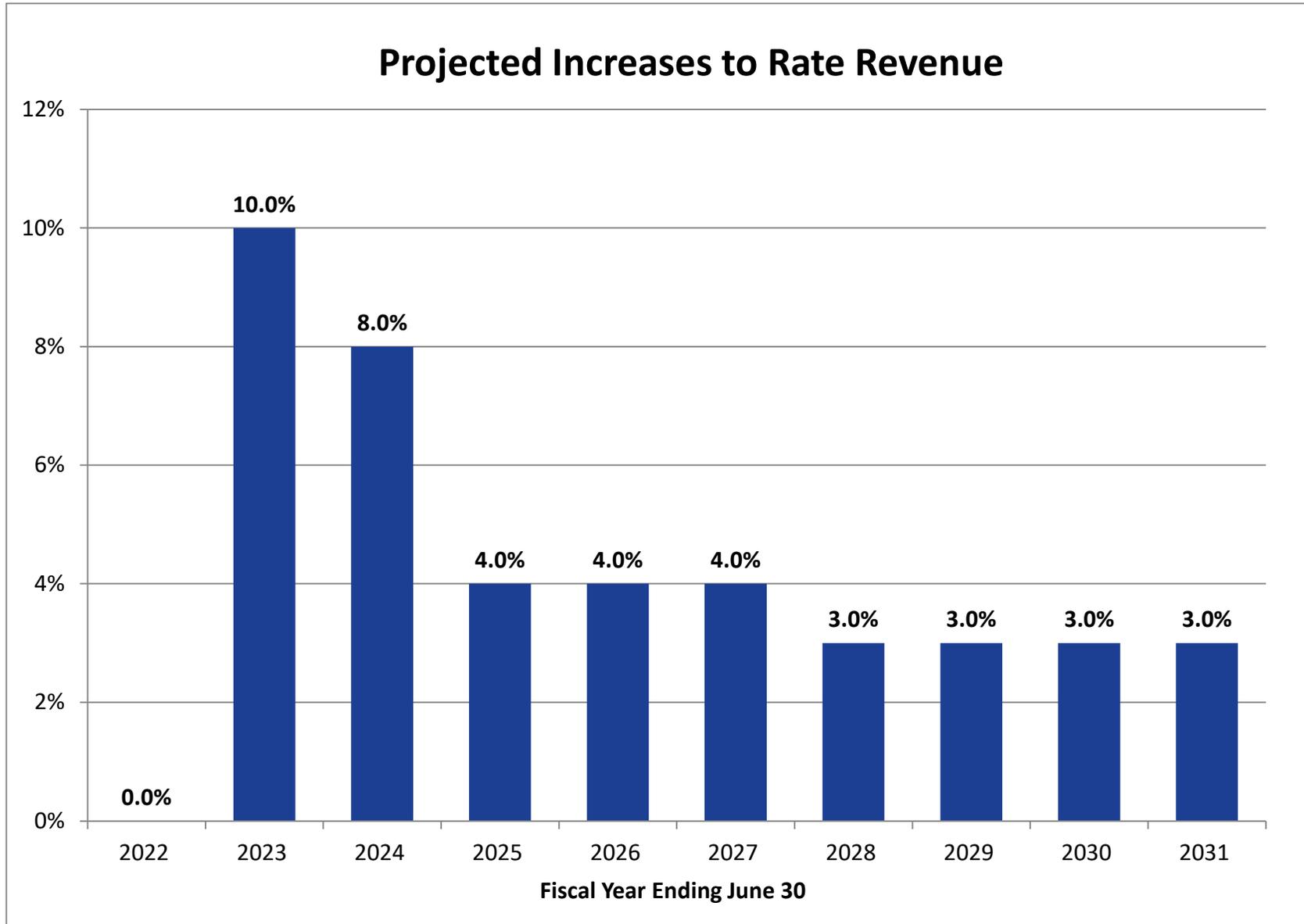


CHART 3



CITY OF EUREKA
SEWER RATE ANALYSIS
Operating Revenue and Expenses

EXHIBIT 1

TABLE 3 : REVENUE FORECAST

DESCRIPTION ¹	Basis	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Operating Revenue												
Regular charges	1	\$ 9,674,780	\$ 9,674,800	\$ 9,674,800	\$ 9,674,800	\$ 9,674,800	\$ 9,674,800	\$ 9,674,800	\$ 9,674,800	\$ 9,674,800	\$ 9,674,800	\$ 9,674,800
Permit reviews	1	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Convenience Fee	1	345	300	300	300	300	300	300	300	300	300	300
WW Service to HCSD	4	1,221,040	1,221,000	1,221,000	1,221,000	1,221,000	1,221,000	1,221,000	1,221,000	1,221,000	1,221,000	1,221,000
Holding tank dumping	1	180,666	180,700	180,700	180,700	180,700	180,700	180,700	180,700	180,700	180,700	180,700
Pre-treatment analysis	1	-	-	-	-	-	-	-	-	-	-	-
Sewer connection	1	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000
Project Salaries	1	-	-	-	-	-	-	-	-	-	-	-
TOTAL: REVENUE		\$ 11,152,831	\$ 11,152,800									

TABLE 4 : REVENUE SUMMARY

Operating Revenue												
Sewer Service Charge - Eureka		\$ 9,674,780	\$ 9,674,800	\$ 9,674,800	\$ 9,674,800	\$ 9,674,800	\$ 9,674,800	\$ 9,674,800	\$ 9,674,800	\$ 9,674,800	\$ 9,674,800	\$ 9,674,800
Sewer Service Charge - HCSD		1,221,040	1,221,000	1,221,000	1,221,000	1,221,000	1,221,000	1,221,000	1,221,000	1,221,000	1,221,000	1,221,000
Other Revenues		182,011	182,000	182,000	182,000	182,000	182,000	182,000	182,000	182,000	182,000	182,000
Connection Fees		75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000
TOTAL: REVENUE		\$ 11,152,831	\$ 11,152,800									
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

TABLE 5 : WASTEWATER FUND (510) OPERATING EXPENSE FORECAST

DESCRIPTION ¹	Basis	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Finance												
Regular salaries	3	\$ 97,573	\$ 100,500	\$ 103,515	\$ 106,621	\$ 109,819	\$ 113,114	\$ 116,507	\$ 120,003	\$ 123,603	\$ 127,311	\$ 131,130
Overtime pay	3	27	28	29	29	30	31	32	33	34	35	36
Executive leave	3	597	615	633	652	672	692	713	734	756	779	802
Vacation buyback	3	878	905	932	960	989	1,018	1,049	1,080	1,113	1,146	1,181
Temp salaries-gen	3	577	594	612	630	649	669	689	709	731	752	775
Life insurance	3	52	53	55	57	58	60	62	64	66	68	70
PERS-employer contribution	3	7,254	7,472	7,696	7,927	8,165	8,410	8,662	8,922	9,189	9,465	9,749
Health insurance	3	23,377	24,078	24,800	25,544	26,311	27,100	27,913	28,750	29,613	30,501	31,416
Medicare	3	764	787	811	835	860	886	913	940	968	997	1,027
Car allowance	3	840	865	891	918	945	974	1,003	1,033	1,064	1,096	1,129
Workers Comp	3	1,284	1,323	1,362	1,403	1,445	1,489	1,533	1,579	1,627	1,675	1,726
Dental & Vision	3	544	561	578	595	613	631	650	670	690	710	732
PERS Unfunded Liability	3	49,565	51,052	52,584	54,161	55,786	57,460	59,184	60,959	62,788	64,672	66,612
Office supplies	2	119	123	126	130	134	138	142	146	151	155	160
Postage/frieght	2	19,619	20,208	20,814	21,438	22,081	22,744	23,426	24,129	24,853	25,598	26,366
Postage - utility bills	2	146	150	155	160	164	169	174	180	185	191	196
Miscellaneous forms	2	7,042	7,254	7,471	7,695	7,926	8,164	8,409	8,661	8,921	9,189	9,464
Prof/tech-miscell.	2	4,420	4,552	4,689	4,830	4,975	5,124	5,278	5,436	5,599	5,767	5,940
Software Maint	2	2,695	2,776	2,859	2,945	3,033	3,124	3,218	3,314	3,414	3,516	3,622
Training-general	2	-	-	-	-	-	-	-	-	-	-	-
Inf Tech Repl Costs	2	7,502	7,727	7,958	8,197	8,443	8,696	8,957	9,226	9,503	9,788	10,081
Liability Insurance	2	7,673	7,903	8,140	8,384	8,636	8,895	9,162	9,436	9,719	10,011	10,311
General Administration	2	16,274	16,763	17,265	17,783	18,317	18,866	19,432	20,015	20,616	21,234	21,871
General Government	2	23,289	23,987	24,707	25,448	26,211	26,998	27,808	28,642	29,501	30,386	31,298
TOTAL: FINANCE EXPENSES		\$ 272,111	\$ 280,274	\$ 288,683	\$ 297,343	\$ 306,263	\$ 315,451	\$ 324,915	\$ 334,662	\$ 344,702	\$ 355,043	\$ 365,695

TABLE 6 : WASTEWATER FUND (510) OPERATING EXPENSE FORECAST

DESCRIPTION ¹	Basis	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Engineering Admin												
Regular salaries	3	\$ 242,267	\$ 249,535	\$ 257,021	\$ 264,731	\$ 272,673	\$ 280,853	\$ 289,279	\$ 297,957	\$ 306,896	\$ 316,103	\$ 325,586
Overtime pay	3	98	101	104	108	111	114	118	121	125	128	132
Executive leave	3	104	108	111	114	117	121	125	128	132	136	140
Vacation buyback	3	809	833	858	884	910	938	966	995	1,025	1,055	1,087
Temp salaries-gen	3	8,197	8,443	8,696	8,957	9,225	9,502	9,787	10,081	10,383	10,695	11,016
Life insurance	3	103	106	109	113	116	119	123	127	130	134	138
PERS-employer contribution	3	19,208	19,785	20,378	20,989	21,619	22,268	22,936	23,624	24,333	25,063	25,814
Health insurance	3	43,894	45,211	46,567	47,964	49,403	50,885	52,412	53,984	55,603	57,271	58,990
Medicare	3	2,047	2,108	2,172	2,237	2,304	2,373	2,444	2,517	2,593	2,671	2,751
Workers Comp	3	8,399	8,651	8,911	9,178	9,453	9,737	10,029	10,330	10,640	10,959	11,288
Dental & Vision	3	1,197	1,233	1,270	1,308	1,347	1,388	1,429	1,472	1,516	1,562	1,609
PERS Unfunded Liability	3	81,165	83,600	86,108	88,691	91,352	94,092	96,915	99,822	102,817	105,902	109,079
Oper suppl-miscell.	2	-	-	-	-	-	-	-	-	-	-	-
Office supplies	2	744	767	790	813	838	863	889	915	943	971	1,000
Subscriptions/books	2	-	-	-	-	-	-	-	-	-	-	-
Dues/memberships	2	-	-	-	-	-	-	-	-	-	-	-
Postage/freight	2	-	-	-	-	-	-	-	-	-	-	-
Photocopy supplies	2	-	-	-	-	-	-	-	-	-	-	-
Photograph supplies	2	-	-	-	-	-	-	-	-	-	-	-
Survey supplies	2	-	-	-	-	-	-	-	-	-	-	-
Drafting supplies	2	-	-	-	-	-	-	-	-	-	-	-
Prof/tech-miscell.	2	2,403	2,475	2,550	2,626	2,705	2,786	2,870	2,956	3,045	3,136	3,230
Merchant Bank Card Charges	2	2,846	2,931	3,019	3,110	3,203	3,299	3,398	3,500	3,605	3,713	3,824
Printing - in house	2	-	-	-	-	-	-	-	-	-	-	-
Printing-outside	2	-	-	-	-	-	-	-	-	-	-	-
Title reports	2	-	-	-	-	-	-	-	-	-	-	-
Misc. property svcs	2	-	-	-	-	-	-	-	-	-	-	-
Veh/equip repairs	2	-	-	-	-	-	-	-	-	-	-	-
Travel-general	2	473	487	502	517	532	548	565	582	599	617	636
Training-general	2	-	-	-	-	-	-	-	-	-	-	-
Public notice-generl	2	157	162	167	172	177	182	188	193	199	205	211
Emp recogni/awards	2	-	-	-	-	-	-	-	-	-	-	-
Fleet lease	2	11,300	11,639	11,988	12,347	12,718	13,099	13,492	13,897	14,314	14,744	15,186
Liability Insurance	2	13,921	14,339	14,769	15,212	15,669	16,139	16,623	17,122	17,635	18,164	18,709
General Administration	2	25,003	25,753	26,526	27,322	28,142	28,986	29,855	30,751	31,674	32,624	33,602
General Government	2	35,780	36,853	37,959	39,097	40,270	41,478	42,723	44,004	45,324	46,684	48,085
Cap Out under Thresh	2	-	-	-	-	-	-	-	-	-	-	-
Software	2	519	535	551	567	584	602	620	639	658	677	698
<i>Subtotal: Engineering Admin</i>		\$ 500,635	\$ 515,654	\$ 531,123	\$ 547,057	\$ 563,469	\$ 580,373	\$ 597,784	\$ 615,718	\$ 634,189	\$ 653,215	\$ 672,811
Public Works Admin												
Regular Salaries	3	\$ 102,392	\$ 105,464	\$ 108,628	\$ 111,887	\$ 115,243	\$ 118,701	\$ 122,262	\$ 125,930	\$ 129,707	\$ 133,599	\$ 137,607
Vacation Buyback	3	2,537	2,613	2,692	2,773	2,856	2,941	3,030	3,121	3,214	3,311	3,410
Temp salaries-gen	3	2,923	3,011	3,101	3,194	3,290	3,389	3,490	3,595	3,703	3,814	3,929
Life Insurance	3	46	47	49	50	51	53	55	56	58	60	61
PERS-employer contribution	3	9,060	9,332	9,612	9,900	10,197	10,503	10,818	11,143	11,477	11,821	12,176
Health Insurance	3	9,200	9,476	9,761	10,053	10,355	10,666	10,986	11,315	11,655	12,004	12,364
Medicare	3	813	838	863	889	915	943	971	1,000	1,030	1,061	1,093
Car Allowance	2	-	-	-	-	-	-	-	-	-	-	-
Workers Comp	3	4,225	4,352	4,482	4,617	4,755	4,898	5,045	5,196	5,352	5,513	5,678
Dental & Vision	3	554	571	588	606	624	642	662	682	702	723	745
PERS Unfunded Liability	3	37,653	-	-	-	-	-	-	-	-	-	-
Oper suppl-miscell.	2	154	158	163	168	173	178	183	189	195	200	206
Office supplies	2	116	119	123	127	131	134	139	143	147	151	156
Subscriptions/books	2	160	165	170	175	180	186	191	197	203	209	215
Dues/memberships	2	-	-	-	-	-	-	-	-	-	-	-
Liability Insurance	2	4,954	5,102	5,255	5,413	5,575	5,743	5,915	6,092	6,275	6,463	6,657
General Administration	2	8,384	8,635	8,894	9,161	9,436	9,719	10,011	10,311	10,620	10,939	11,267
General Government	2	11,997	12,357	12,728	13,110	13,503	13,908	14,325	14,755	15,198	15,653	16,123
<i>Subtotal: Public Works Admin</i>		\$ 195,169	\$ 162,241	\$ 167,108	\$ 172,122	\$ 177,285	\$ 182,604	\$ 188,082	\$ 193,724	\$ 199,536	\$ 205,522	\$ 211,688
TOTAL: ENGINEERING & PUBLIC WORKS EXPENSES		\$ 695,803	\$ 677,895	\$ 698,232	\$ 719,179	\$ 740,754	\$ 762,977	\$ 785,866	\$ 809,442	\$ 833,725	\$ 858,737	\$ 884,499

CITY OF EUREKA
SEWER RATE ANALYSIS
Operating Revenue and Expenses

EXHIBIT 1

TABLE 7 : WASTEWATER FUND (510) OPERATING EXPENSE FORECAST

DESCRIPTION ¹	Basis	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Sewer Collection Maintenance												
Regular salaries	3	\$ 535,278	\$ 551,337	\$ 567,877	\$ 584,913	\$ 602,460	\$ 620,534	\$ 639,150	\$ 658,325	\$ 678,075	\$ 698,417	\$ 719,369
Overtime pay	3	27,906	28,743	29,606	30,494	31,409	32,351	33,321	34,321	35,351	36,411	37,503
Executive leave	3	-	-	-	-	-	-	-	-	-	-	-
Vacation buyback	3	1,958	2,016	2,077	2,139	2,203	2,269	2,337	2,408	2,480	2,554	2,631
Temp salaries-gen	3	24,386	25,118	25,871	26,647	27,447	28,270	29,118	29,992	30,892	31,818	32,773
Life insurance	3	211	218	224	231	238	245	252	260	268	276	284
PERS-employer contribution	3	34,319	35,349	36,409	37,501	38,626	39,785	40,979	42,208	43,474	44,779	46,122
Health insurance	3	114,573	118,011	121,551	125,198	128,953	132,822	136,807	140,911	145,138	149,492	153,977
Medicare	3	4,347	4,478	4,612	4,751	4,893	5,040	5,191	5,347	5,507	5,672	5,843
Disability insurance	3	-	-	-	-	-	-	-	-	-	-	-
Uniform allowance	3	1,187	1,223	1,260	1,297	1,336	1,376	1,418	1,460	1,504	1,549	1,596
Workers Comp	3	61,838	63,693	65,604	67,572	69,599	71,687	73,838	76,053	78,335	80,685	83,105
Dental & Vision	3	362	373	384	396	408	420	432	445	459	473	487
PERS Unfunded Liability	3	167,174	172,189	177,354	182,675	188,155	193,800	199,614	205,602	211,770	218,124	224,667
Unallocated Cal Card charges	2	-	-	-	-	-	-	-	-	-	-	-
Oper suppl-miscell.	2	67,164	69,179	71,255	73,392	75,594	77,862	80,198	82,604	85,082	87,634	90,263
Office supplies	2	2,169	2,234	2,301	2,370	2,441	2,515	2,590	2,668	2,748	2,830	2,915
Dues/memberships	2	2,353	2,424	2,496	2,571	2,648	2,728	2,810	2,894	2,981	3,070	3,162
Postage/freight	2	-	-	-	-	-	-	-	-	-	-	-
Rock/sand/cement/grv	2	1,484	1,528	1,574	1,622	1,670	1,720	1,772	1,825	1,880	1,936	1,994
Asphalt/paving materials	2	10,617	10,936	11,264	11,602	11,950	12,308	12,678	13,058	13,450	13,853	14,269
Lift Station components	2	2,005	2,065	2,127	2,191	2,256	2,324	2,394	2,466	2,539	2,616	2,694
Pipes/pipe fittings	2	49,590	51,078	52,610	54,189	55,814	57,489	59,213	60,990	62,819	64,704	66,645
Sm tools/equipment	2	136	140	144	149	153	158	162	167	172	177	183
Uniforms/protective	2	3,390	3,492	3,596	3,704	3,815	3,930	4,048	4,169	4,294	4,423	4,556
Food and supplies	2	-	-	-	-	-	-	-	-	-	-	-
Prof/tech-miscell.	2	69,792	71,886	74,043	76,264	78,552	80,908	83,336	85,836	88,411	91,063	93,795
All funds audit	2	-	-	-	-	-	-	-	-	-	-	-
Merchant Bank Card Charges	2	98,341	101,291	104,330	107,460	110,684	114,004	117,425	120,947	124,576	128,313	132,162
Printing - in house	2	-	-	-	-	-	-	-	-	-	-	-
Collection Fees	2	822	847	872	898	925	953	981	1,011	1,041	1,072	1,105
Laundry services	2	3,427	3,529	3,635	3,744	3,857	3,972	4,091	4,214	4,341	4,471	4,605
Maint/rep-miscell.	2	1,744	1,796	1,850	1,906	1,963	2,022	2,083	2,145	2,209	2,276	2,344
Veh/equip repairs	2	-	-	-	-	-	-	-	-	-	-	-
Software maint	2	2,200	2,266	2,334	2,404	2,476	2,550	2,627	2,706	2,787	2,871	2,957
Business entertainment	2	-	-	-	-	-	-	-	-	-	-	-
Training-general	2	4,259	4,387	4,519	4,654	4,794	4,937	5,086	5,238	5,395	5,557	5,724
Electricity	5	32,191	33,157	34,152	35,176	36,232	37,318	38,438	39,591	40,779	42,002	43,262
Refuse collection	2	809	833	858	884	910	937	966	995	1,024	1,055	1,087
Communications-gen	2	609	627	646	666	686	706	727	749	772	795	819
Alarm lines charges	5	-	-	-	-	-	-	-	-	-	-	-
To State-Regul. fees	2	3,326	3,426	3,529	3,634	3,743	3,856	3,971	4,091	4,213	4,340	4,470
Fleet lease	2	235,884	242,960	250,249	257,757	265,489	273,454	281,658	290,107	298,811	307,775	317,008
Inf Tech Repl Costs	2	27,504	28,330	29,180	30,055	30,957	31,885	32,842	33,827	34,842	35,887	36,964
Liability Insurance	2	52,205	53,771	55,384	57,046	58,757	60,520	62,335	64,205	66,131	68,115	70,159
General Administration	2	77,673	80,003	82,403	84,876	87,422	90,044	92,746	95,528	98,394	101,346	104,386
General Government	2	111,150	114,484	117,919	121,456	125,100	128,853	132,718	136,700	140,801	145,025	149,376
Fac maint costs	2	33,019	34,010	35,030	36,081	37,164	38,278	39,427	40,610	41,828	43,083	44,375
Communications	2	3,540	3,646	3,756	3,868	3,984	4,104	4,227	4,354	4,485	4,619	4,758
Cap Out under Thresh	2	2,767	2,850	2,935	3,023	3,114	3,208	3,304	3,403	3,505	3,610	3,718
Equipment components	2	3,109	3,203	3,299	3,398	3,500	3,605	3,713	3,824	3,939	4,057	4,179
Misc. tools/mach/eqp	2	176,863	182,169	187,634	193,263	199,061	205,033	211,184	217,519	224,045	230,766	237,689
TOTAL: SEWER COLLECTION MAINTENANCE EXPENSES		\$ 2,053,684	\$ 2,115,295	\$ 2,178,754	\$ 2,244,116	\$ 2,311,440	\$ 2,380,783	\$ 2,452,206	\$ 2,525,772	\$ 2,601,546	\$ 2,679,592	\$ 2,759,980

CITY OF EUREKA
SEWER RATE ANALYSIS
Operating Revenue and Expenses

EXHIBIT 1

TABLE 8 : WASTEWATER FUND (510) OPERATING EXPENSE FORECAST

DESCRIPTION ¹	Basis	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Wastewater Treatment												
Regular salaries	3	\$ 617,280	\$ 635,799	\$ 654,873	\$ 674,519	\$ 694,754	\$ 715,597	\$ 737,065	\$ 759,177	\$ 781,952	\$ 805,411	\$ 829,573
Overtime pay	3	25,732	26,504	27,300	28,119	28,962	29,831	30,726	31,648	32,597	33,575	34,582
Vacation buyback	3	1,225	1,262	1,300	1,339	1,379	1,420	1,463	1,507	1,552	1,598	1,646
Workers' comp	3	-	-	-	-	-	-	-	-	-	-	-
Temp salaries-gen	3	47,886	49,322	50,802	52,326	53,896	55,513	57,178	58,894	60,660	62,480	64,355
Life insurance	3	214	221	227	234	241	249	256	264	272	280	288
PERS-employer contribution	3	39,934	41,132	42,366	43,637	44,946	46,294	47,683	49,114	50,587	52,105	53,668
Health insurance	3	104,540	107,677	110,907	114,234	117,661	121,191	124,827	128,572	132,429	136,402	140,494
Medicare	3	5,303	5,462	5,626	5,794	5,968	6,147	6,332	6,522	6,717	6,919	7,126
Boot Allowance	3	1,276	1,314	1,354	1,394	1,436	1,479	1,524	1,569	1,616	1,665	1,715
Workers Comp	3	65,729	67,701	69,732	71,824	73,978	76,198	78,484	80,838	83,263	85,761	88,334
Dental & Vision	3	521	537	553	570	587	604	623	641	660	680	701
PERS Unfunded Liability	3	192,160	197,925	203,862	209,978	216,278	222,766	229,449	236,332	243,422	250,725	258,247
Unallocated Cal Card charges	2	-	-	-	-	-	-	-	-	-	-	-
Oper suppl-miscell.	2	28,769	29,632	30,521	31,436	32,379	33,351	34,351	35,382	36,443	37,536	38,662
Chemicals	6	136,584	140,681	144,902	149,249	153,726	158,338	163,088	167,981	173,020	178,211	183,557
Laboratory supplies	2	13,788	14,202	14,628	15,067	15,519	15,984	16,464	16,958	17,466	17,990	18,530
Office supplies	2	7,701	7,932	8,170	8,416	8,668	8,928	9,196	9,472	9,756	10,049	10,350
Subscriptions/books	2	192	197	203	209	216	222	229	236	243	250	258
Dues/memberships	2	2,322	2,392	2,463	2,537	2,613	2,692	2,773	2,856	2,941	3,030	3,121
Postage/freight	2	1,217	1,253	1,291	1,330	1,369	1,411	1,453	1,496	1,541	1,588	1,635
Repair parts	2	126,919	130,727	134,648	138,688	142,848	147,134	151,548	156,094	160,777	165,600	170,568
Janitorial/cleaning	2	1,546	1,593	1,640	1,689	1,740	1,792	1,846	1,902	1,959	2,017	2,078
Uniforms/protective	2	941	969	1,028	1,059	1,091	1,124	1,159	1,197	1,237	1,278	1,321
Bldg/grounds suppl	2	678	699	720	741	764	786	810	834	859	885	912
Lubricants	2	9,610	9,898	10,195	10,501	10,816	11,140	11,475	11,819	12,173	12,539	12,915
Misc. fuel	2	7,678	7,908	8,146	8,390	8,642	8,901	9,168	9,443	9,726	10,018	10,319
Prof/tech-miscell.	2	85,104	87,658	90,287	92,996	95,786	98,659	101,619	104,668	107,808	111,042	114,373
Outside legal	2	19,123	19,697	20,288	20,896	21,523	22,169	22,834	23,519	24,225	24,951	25,700
All funds audit	2	-	-	-	-	-	-	-	-	-	-	-
Arbitrag rebate calc	2	-	-	-	-	-	-	-	-	-	-	-
Fiscal agent fees	2	3,310	3,409	3,511	3,616	3,725	3,837	3,952	4,070	4,192	4,318	4,448
Misc. financial svcs	2	-	-	-	-	-	-	-	-	-	-	-
Printing-outside	2	-	-	-	-	-	-	-	-	-	-	-
Testing services	2	-	-	-	-	-	-	-	-	-	-	-
Laboratory Testing - Outside	2	28,789	29,653	30,543	31,459	32,403	33,375	34,376	35,407	36,470	37,564	38,691
Haz mat transp/clean	2	-	-	-	-	-	-	-	-	-	-	-
Laundry services	2	6,895	7,101	7,315	7,534	7,760	7,993	8,233	8,480	8,734	8,996	9,266
Miscell. consultants	2	4,652	4,791	4,935	5,083	5,235	5,393	5,554	5,721	5,893	6,069	6,251
Environmental svcs.	2	645	664	684	704	725	747	770	793	816	841	866
Biosolids Transportation	2	248,804	256,269	263,957	271,875	280,032	288,433	297,086	305,998	315,178	324,633	334,372
Maint/rep-miscell.	2	35,943	37,021	38,132	39,276	40,454	41,668	42,918	44,205	45,532	46,898	48,304
Grnds/Imprv-repairs	2	-	-	-	-	-	-	-	-	-	-	-
Misc eqpt rent/lease	2	3,239	3,336	3,436	3,539	3,645	3,755	3,867	3,983	4,103	4,226	4,353
Travel-general	2	-	-	-	-	-	-	-	-	-	-	-
Business entertainment	2	18	19	19	20	20	21	21	22	23	23	24
Training-general	2	3,286	3,385	3,486	3,591	3,698	3,809	3,924	4,041	4,163	4,288	4,416
Electricity	5	576,052	593,333	611,133	629,467	648,351	667,802	687,836	708,471	729,725	751,617	774,165
Alarm line charges	2	5,453	5,616	5,785	5,958	6,137	6,321	6,511	6,706	6,907	7,114	7,328
Public notice-general	2	-	-	-	-	-	-	-	-	-	-	-
Pub. Not.-Recruit.	2	-	-	-	-	-	-	-	-	-	-	-
To State-Regul. fees	2	59,852	61,647	63,497	65,402	67,364	69,385	71,466	73,610	75,818	78,093	80,436
Fines & Penalties	2	-	-	-	-	-	-	-	-	-	-	-
Fleet lease	2	129,469	133,353	137,353	141,474	145,718	150,090	154,592	159,230	164,007	168,927	173,995
Inf Tech Repl Costs	2	37,507	38,633	39,792	40,985	42,215	43,481	44,786	46,129	47,513	48,939	50,407
Liability Insurance	2	94,738	97,580	100,507	103,523	106,628	109,827	113,122	116,516	120,011	123,611	127,320
General Administration	2	78,783	81,146	83,581	86,088	88,671	91,331	94,071	96,893	99,800	102,794	105,877
General Government	2	112,738	116,120	119,603	123,191	126,887	130,694	134,615	138,653	142,813	147,097	151,510
Fac maint costs	2	149,127	158,208	168,955	178,843	188,843	198,879	209,065	219,497	230,176	241,107	252,299
Communications	2	4,906	5,053	5,205	5,361	5,522	5,688	5,858	6,034	6,215	6,401	6,594
Cap Out under Thresh	2	15,643	16,113	16,596	17,094	17,607	18,135	18,679	19,239	19,816	20,411	21,023
Equipment components	2	116,699	120,200	123,806	127,520	131,346	135,286	139,345	143,525	147,831	152,266	156,834
Misc. tools/mach/eqp	2	88,042	90,683	93,403	96,205	99,092	102,064	105,126	108,280	111,528	114,874	118,320
Software	2	8,021	8,262	8,509	8,765	9,028	9,299	9,577	9,865	10,161	10,466	10,780
TOTAL: WASTEWATER TREATMENT EXPENSES		\$ 3,356,581	\$ 3,457,279	\$ 3,560,997	\$ 3,667,827	\$ 3,777,862	\$ 3,891,197	\$ 4,007,933	\$ 4,128,171	\$ 4,252,017	\$ 4,379,577	\$ 4,510,964

TABLE 9 : WASTEWATER FUND (510) OPERATING EXPENSE FORECAST

DESCRIPTION ¹	Basis	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Development Services												
Regular salaries	3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Life insurance	3	-	-	-	-	-	-	-	-	-	-	-
PERS-employer contribution	3	-	-	-	-	-	-	-	-	-	-	-
Health insurance	3	-	-	-	-	-	-	-	-	-	-	-
Medicare	3	-	-	-	-	-	-	-	-	-	-	-
Workers Comp	3	-	-	-	-	-	-	-	-	-	-	-
Dental & Vision	3	-	-	-	-	-	-	-	-	-	-	-
PERS Unfunded Liability	3	-	-	-	-	-	-	-	-	-	-	-
Liability Insurance	3	-	-	-	-	-	-	-	-	-	-	-
General Administration	2	-	-	-	-	-	-	-	-	-	-	-
General Government	2	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Development Services</i>		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Projects												
WWTP Co-Gen & Biosolids	2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Water Treatment Plan Settling Basins	2	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Capital Projects</i>		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL: DEVELOPMENT SERVICES & CAPITAL PROJECT EXPENSES		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
GRAND TOTAL: WATER EXPENSES		\$ 6,378,180	\$ 6,530,743	\$ 6,726,665	\$ 6,928,465	\$ 7,136,319	\$ 7,350,408	\$ 7,570,921	\$ 7,798,048	\$ 8,031,990	\$ 8,272,949	\$ 8,521,138

TABLE 10 : FORECASTING ASSUMPTIONS

INFLATION FACTORS ²	Basis	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Customer Growth ³	1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
General Cost Inflation	2	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Labor Cost Inflation	3	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
HCSD Service Revenue ⁴	4	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Energy	5	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Chemicals	6	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Fuel	7	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
No Escalation	8	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

1. Revenue are actual revenues for FY 2020/21 and budgeted revenues for FY 2021/22, from Sewer Fund #510; Source file: 1 & 2 Budget vs Actual.xlsx
Expenses for FY 2020/21 - FY 2021/22 are from Fund #510; Source file: 1 & 2 Budget vs Actual.xlsx
Revenue and Expenditures updated by City staff on Sept. 12, 2022.

2. Expenses are inflated each year by the following annual inflation factor categories.
3. Customer growth is projected to be zero.
4. Inflation set to 0% as costs here will be actual to HCSD.

TABLE 11 : CAPITAL FUNDING SUMMARY

CAPITAL FUNDING FORECAST	Budget		5-Year Prop 218 Period									
	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31	FY 2031/32	
Funding Sources:												
Grants	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Humboldt Community Service District Contribution	1,609,371	1,194,240	735,000	1,203,680	1,572,080	1,970,000	3,335,000	3,335,000	3,335,000	3,335,000	3,335,000	
Use of Connection Fee Reserves	-	-	-	-	-	-	-	-	-	-	-	
Use of New Loan Funding	-	-	-	-	-	-	-	-	-	-	-	
Use of Future Revenue Bond Proceeds	-	-	-	-	-	-	-	-	-	-	-	
Use of Capital Rehabilitation and Replacement Reserve	-	-	-	-	-	890,071	778,069	3,135,000	3,315,000	3,505,000	3,705,000	
Rate Revenue	3,000,000	3,055,760	5,517,000	3,757,320	4,423,920	4,697,929	2,166,931	-	-	-	-	
Total Sources of Capital Funds	\$ 4,609,371	\$ 4,250,000	\$ 6,252,000	\$ 4,961,000	\$ 5,996,000	\$ 7,558,000	\$ 6,280,000	\$ 6,470,000	\$ 6,650,000	\$ 6,840,000	\$ 7,040,000	
Uses of Capital Funds:	Adopted CIP (\$29 M) - No Outside Funding											
Total Project Costs (with rollover from previous year funding deficiency)	\$ 11,387,839	\$ 4,250,000	\$ 6,252,000	\$ 4,961,000	\$ 5,996,000	\$ 7,558,000	\$ 6,280,000	\$ 6,470,000	\$ 6,650,000	\$ 6,840,000	\$ 7,040,000	
Capital Funding Surplus (Deficiency)	\$ (6,778,468)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	

CAPITAL IMPROVEMENT PROGRAM

TABLE 12 : CAPITAL IMPROVEMENT PROGRAM COSTS (in Current-Year dollars)

Project Description ^{1,2}	Funding Source	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Cogeneration Upgrade PJ 462	WW Reserves	\$ 187,845										
Henderson Street Improvements	WW Reserves	\$ 1,220,000										
WW Pump Station Upgrades	WW Res/HCS	\$ 545,196										
Enclosed Bays & Estuaries	WW Res/HCS	\$ 2,327,463	\$ 1,050,000									
Fueling Station PJ# 703	WW Reserves	\$ 420,000										
Elk River Estuary & Interpretive Center	WW Res/HCS	\$ 700,000										
Fiber Optic Network Upgrade	WW Reserves	\$ 56,000										
WW Collection System Maintenance 2021	WW Reserves	\$ 2,045,000										
Cross Town Interceptor Maintenance Phase II	WW Res/HCS	\$ 125,000										
Wastewater Pump Station Upgrade Program	WW Res/HCS	\$ 1,200,000	\$ 753,954									
Wastewater System Maint 2022	WW Reserves	\$ 400,000	\$ 1,200,000									
Waste Water Pump Station Maintenance 2022	WW Res/HCS	\$ -	\$ 550,000	\$ 1,450,000								
WWTP Motor Control Center Replacement Project	WW Res/HCS	\$ -	\$ 50,000									
WWTP Outfall Maintenance	WW Res/HCS	\$ -	\$ -	\$ 125,000								
Secondary Clarifier Maintenance Phase II	WW Res/HCS	\$ 66,000	\$ 934,000									
WW Collection System Maintenance 2021	WW Reserves	\$ 2,045,000	\$ -									
Crosstown Intercep PJ 433	WW Reserves	\$ 378	\$ -									
Cross Town Interceptor Maintenance Phase II	WW Res/HCS	\$ 49,957	\$ 125,043									
Future Projects ³	WW Res/HCS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,300,000	\$ 5,300,000	\$ 5,300,000	\$ 5,300,000	\$ 5,300,000
Total: CIP Program Costs⁴	Adopted CIP (\$29 M)	\$ 11,387,839	\$ 4,250,000	\$ 6,252,000	\$ 4,961,000	\$ 5,996,000	\$ 7,558,000	\$ 5,300,000				
	Revised CIP (\$22.8 M)	\$ 11,387,839	\$ 4,662,997	\$ 1,575,000	\$ 5,300,000							
HCS	Contribution to CIP⁴	\$ -	\$ 1,364,250	\$ 2,006,892	\$ 1,592,481	\$ 1,924,716	\$ 2,426,118	\$ 1,701,300				

TABLE 13 : CAPITAL IMPROVEMENT PROGRAM COSTS (in Future-Year dollars)

Project Description ^{1,2}	HCS D Share ⁴	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Cogeneration Upgrade PJ 462	0.0%	187,845	-	-	-	-	-	-	-	-	-	-
Henderson Street Improvements	0.0%	1,220,000	-	-	-	-	-	-	-	-	-	-
WW Pump Station Upgrades	32.1%	545,196	-	-	-	-	-	-	-	-	-	-
Enclosed Bays & Estuaries	32.1%	2,327,463	1,080,240	-	-	-	-	-	-	-	-	-
Fueling Station PJ# 703	0.0%	420,000	-	-	-	-	-	-	-	-	-	-
Elk River Estuary & Interpretive Center	32.1%	700,000	-	-	-	-	-	-	-	-	-	-
Fiber Optic Network Upgrade	0.0%	56,000	-	-	-	-	-	-	-	-	-	-
WW Collection System Maintenance 2021	0.0%	2,045,000	-	-	-	-	-	-	-	-	-	-
Cross Town Interceptor Maintenance Phase II	32.1%	125,000	-	-	-	-	-	-	-	-	-	-
Wastewater Pump Station Upgrade Program	32.1%	1,200,000	775,668	-	-	-	-	-	-	-	-	-
Wastewater System Maint 2022	0.0%	400,000	1,234,560	-	-	-	-	-	-	-	-	-
Waste Water Pump Station Maintenance 2022	32.1%	-	565,840	1,534,723	-	-	-	-	-	-	-	-
WWTP Motor Control Center Replacement Project	32.1%	-	51,440	-	-	-	-	-	-	-	-	-
WWTP Outfall Maintenance	32.1%	-	-	132,304	-	-	-	-	-	-	-	-
Secondary Clarifier Maintenance Phase II	32.1%	66,000	960,899	-	-	-	-	-	-	-	-	-
WW Collection System Maintenance 2021	0.0%	2,045,000	-	-	-	-	-	-	-	-	-	-
Crosstown Intercep PJ 433	0.0%	378	-	-	-	-	-	-	-	-	-	-
Cross Town Interceptor Maintenance Phase II	32.1%	49,957	128,644	-	-	-	-	-	-	-	-	-
Future Projects ³	32.1%	-	-	-	-	-	-	6,280,000	6,470,000	6,650,000	6,840,000	7,040,000
Total: Capital Improvement Program Costs⁴ (Future-Year Dollars)		\$ 11,387,839	\$ 4,250,000	\$ 6,252,000	\$ 4,961,000	\$ 5,996,000	\$ 7,558,000	\$ 6,280,000	\$ 6,470,000	\$ 6,650,000	\$ 6,840,000	\$ 7,040,000
		\$ 11,387,839	\$ 4,797,291	\$ 1,667,026	\$ -	\$ -	\$ -	\$ 6,280,000	\$ 6,470,000	\$ 6,650,000	\$ 6,840,000	\$ 7,040,000
HCS D Contribution to CIP⁵		\$ 848,000	\$ 1,194,240	\$ 735,000	\$ 1,203,680	\$ 1,572,080	\$ 1,970,000	\$ 3,335,000				

- Capital project costs were provided by City Staff in source file: *Capital Project Activity Forecast 22-23-JJW.xlsx*
- Project costs are inflated by 2.88% per year. This practice is consistent with all City capital project cost inflation.
- Future Projects are included at \$6.8 million per year based on 3-year average annual expenditures.
- Source: *Capital Improvement Program 2022, Five-Year Summary*.
- HCS D contribution as identified in the *Capital Improvement Program 2022, Five-Year Summary*.

26.07%
5-Year average HCS D Contribution: \$ 1,335,000

TABLE 14 : FORECASTING ASSUMPTIONS

Economic Variables	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Annual Construction Cost Inflation, Per Engineering News Record ⁵	0.00%	2.88%	2.88%	2.88%	2.88%	2.88%	2.88%	2.88%	2.88%	2.88%	2.88%
Cumulative Construction Cost Multiplier from 2022	1.00	1.03	1.06	1.09	1.12	1.15	1.19	1.22	1.26	1.29	1.33

- For reference purposes, the annual Construction Cost Inflation percentage is the 10 year average change in the Construction Cost Index for 2013-2022.

TABLE 15 : WASTEWATER UTILITY EXISTING DEBT OBLIGATIONS

Annual Repayment Schedules ¹	Budget	5-Year Prop 218 Period					Projected				
	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31	FY 2031/32
2003 CSCDA Wastewater Bonds											
Principal Payment	\$ 180,000	\$ 190,000	\$ 195,000	\$ 210,000	\$ 220,000	\$ 230,000	\$ 240,000	\$ 250,000	\$ -	\$ -	\$ -
Interest Payment	79,825	70,113	59,875	49,638	39,425	28,738	17,575	5,938	-	-	-
Subtotal: Annual Debt Service	\$ 259,825	\$ 260,113	\$ 254,875	\$ 259,638	\$ 259,425	\$ 258,738	\$ 257,575	\$ 255,938	\$ -	\$ -	\$ -
Coverage Requirement (\$-Amnt above annual payment) ²	\$ 325,141	\$ 325,141	\$ 324,547	\$ 324,547	\$ 324,281	\$ 323,422	\$ 321,969	\$ 319,922	\$ -	\$ -	\$ -
Reserve Requirement (total fund balance) ²	\$ 312,135	\$ 312,135	\$ 311,565	\$ 311,565	\$ 311,310	\$ 310,485	\$ 309,090	\$ 307,125	\$ -	\$ -	\$ -
2011 Wastewater Bonds											
Principal Payment	\$ 380,000	\$ 400,000	\$ 420,000	\$ 440,000	\$ 465,000	\$ 485,000	\$ 510,000	\$ 535,000	\$ 560,000	\$ 585,000	\$ 615,000
Interest Payment	656,981	637,481	616,981	595,481	572,856	549,106	525,188	501,022	475,700	449,222	421,472
Subtotal: Annual Debt Service	\$ 1,036,981	\$ 1,037,481	\$ 1,036,981	\$ 1,035,481	\$ 1,037,856	\$ 1,034,106	\$ 1,035,188	\$ 1,036,022	\$ 1,035,700	\$ 1,034,222	\$ 1,036,472
Coverage Requirement (\$-Amnt above annual payment) ²	\$ 1,297,320	\$ 1,297,320	\$ 1,297,320	\$ 1,297,320	\$ 1,297,320	\$ 1,296,250	\$ 1,296,250	\$ 1,296,250	\$ 1,296,250	\$ 1,296,250	\$ 1,296,250
Reserve Requirement (total fund balance) ²	\$ 1,245,428	\$ 1,245,428	\$ 1,245,428	\$ 1,245,428	\$ 1,245,428	\$ 1,244,400	\$ 1,244,400	\$ 1,244,400	\$ 1,244,400	\$ 1,244,400	\$ 1,244,400
Grand Total: Existing Annual Debt Service	\$ 1,296,806	\$ 1,297,594	\$ 1,291,856	\$ 1,295,119	\$ 1,297,281	\$ 1,292,844	\$ 1,292,763	\$ 1,291,959	\$ 1,035,700	\$ 1,034,222	\$ 1,036,472
Grand Total: Existing Annual Coverage Requirement	\$ 1,622,461	\$ 1,622,461	\$ 1,621,867	\$ 1,621,867	\$ 1,621,602	\$ 1,619,672	\$ 1,618,219	\$ 1,616,172	\$ 1,296,250	\$ 1,296,250	\$ 1,296,250
Grand Total: Existing Debt Reserve Target	\$ 1,557,563	\$ 1,557,563	\$ 1,556,993	\$ 1,556,993	\$ 1,556,738	\$ 1,554,885	\$ 1,553,490	\$ 1,551,525	\$ 1,244,400	\$ 1,244,400	\$ 1,244,400

1. File provided by City staff: Debt Srvc Sched - Bonds - CSCDA 2003A WW Bonds.pdf, Debt Srvc Sched - Bonds - 2011 Wastewater Bonds.pdf

2. Bond coverage requirement assumed to be 125% of annual payment. Reserve Requirement assumed to be 120% of maximum annual payment.

TABLE 16 : EXISTING ANNUAL DEBT OBLIGATIONS TO BE SATISFIED BY SEWER RATES

Existing Annual Debt Service	\$ 1,296,806	\$ 1,297,594	\$ 1,291,856	\$ 1,295,119	\$ 1,297,281	\$ 1,292,844	\$ 1,292,763	\$ 1,291,959	\$ 1,035,700	\$ 1,034,222	\$ 1,036,472
Existing Annual Coverage Requirement	\$ 1,622,461	\$ 1,622,461	\$ 1,621,867	\$ 1,621,867	\$ 1,621,602	\$ 1,619,672	\$ 1,618,219	\$ 1,616,172	\$ 1,296,250	\$ 1,296,250	\$ 1,296,250
Existing Debt Reserve Target	\$ 1,557,563	\$ 1,557,563	\$ 1,556,993	\$ 1,556,993	\$ 1,556,738	\$ 1,554,885	\$ 1,553,490	\$ 1,551,525	\$ 1,244,400	\$ 1,244,400	\$ 1,244,400

SEWER RATE ANALYSIS

Projected Wastewater Rates Under Existing Rate Schedule

Preliminary Draft Subject to Material Revision, Do Not Cite or Distribute

TABLE 17 : CURRENT WASTEWATER RATE SCHEDULE

Base Charges	Current Rates
Monthly Account Charge (all customers)	\$2.87
Single Family Residential	\$24.34
Multi-family Residential (per Dwelling Unit)	\$19.46
Commercial - Low Strength	\$24.33
Commercial - Medium Strength	\$24.33
Commercial - High Strength	\$24.33
Volumetric Charges (above 2 units)	Per Unit ¹
Single Family Residential	\$9.15
Multi-family Residential (per Dwelling Unit)	\$9.15
Commercial - Low Strength	\$9.47
Commercial - Medium Strength	\$13.72
Commercial - High Strength	\$20.18

1. One Unit is equal to one HCF (Hundred Cubic Feet) or 748 gallons. Two units are included in the Base Charge.

Data Source: 14. *Current Water and Sewer.pdf*

TABLE 18 : CLASSIFICATION OF EXPENSES

Budget Categories	Total Revenue Requirements	Flow	Strength		Customer	Basis of Classification			
	FY 2022/23	(VOL)	(BOD)	(TSS)	(CA)	(VOL)	(BOD)	(TSS)	(CA)
Finance									
Regular salaries	\$ 100,500	\$ 30,150	\$ 15,075	\$ 15,075	\$ 40,200	30%	15%	15%	40%
Overtime pay	\$ 28	\$ 8	\$ 4	\$ 4	\$ 11	30%	15%	15%	40%
Executive leave	\$ 615	\$ 184	\$ 92	\$ 92	\$ 246	30%	15%	15%	40%
Vacation buyback	\$ 905	\$ 271	\$ 136	\$ 136	\$ 362	30%	15%	15%	40%
Temp salaries-gen	\$ 594	\$ 178	\$ 89	\$ 89	\$ 238	30%	15%	15%	40%
Life insurance	\$ 53	\$ 16	\$ 8	\$ 8	\$ 21	30%	15%	15%	40%
PERS-employer contribution	\$ 7,472	\$ 2,242	\$ 1,121	\$ 1,121	\$ 2,989	30%	15%	15%	40%
Health insurance	\$ 24,078	\$ 7,223	\$ 3,612	\$ 3,612	\$ 9,631	30%	15%	15%	40%
Medicare	\$ 787	\$ 236	\$ 118	\$ 118	\$ 315	30%	15%	15%	40%
Car allowance	\$ 865	\$ 260	\$ 130	\$ 130	\$ 346	30%	15%	15%	40%
Workers Comp	\$ 1,323	\$ 397	\$ 198	\$ 198	\$ 529	30%	15%	15%	40%
Dental & Vision	\$ 561	\$ 168	\$ 84	\$ 84	\$ 224	30%	15%	15%	40%
PERS Unfunded Liability	\$ 51,052	\$ 15,316	\$ 7,658	\$ 7,658	\$ 20,421	30%	15%	15%	40%
Office supplies	\$ 123	\$ 37	\$ 18	\$ 18	\$ 49	30%	15%	15%	40%
Postage/frieght	\$ 20,208	\$ 6,062	\$ 3,031	\$ 3,031	\$ 8,083	30%	15%	15%	40%
Postage - utility bills	\$ 150	\$ 45	\$ 23	\$ 23	\$ 60	30%	15%	15%	40%
Miscellaneous forms	\$ 7,254	\$ 2,176	\$ 1,088	\$ 1,088	\$ 2,901	30%	15%	15%	40%
Prof/tech-miscell.	\$ 4,552	\$ 1,366	\$ 683	\$ 683	\$ 1,821	30%	15%	15%	40%
Software Maint	\$ 2,776	\$ 833	\$ 416	\$ 416	\$ 1,110	30%	15%	15%	40%
Training-general	\$ -	\$ -	\$ -	\$ -	\$ -	30%	15%	15%	40%
Inf Tech Repl Costs	\$ 7,727	\$ 2,318	\$ 1,159	\$ 1,159	\$ 3,091	30%	15%	15%	40%
Liability Insurance	\$ 7,903	\$ 2,371	\$ 1,185	\$ 1,185	\$ 3,161	30%	15%	15%	40%
General Administration	\$ 16,763	\$ 5,029	\$ 2,514	\$ 2,514	\$ 6,705	30%	15%	15%	40%
General Government	\$ 23,987	\$ 7,196	\$ 3,598	\$ 3,598	\$ 9,595	30%	15%	15%	40%
Engineering Admin									
Regular salaries	\$ 249,535	\$ 174,674	\$ 37,430	\$ 37,430	\$ -	70%	15%	15%	0%
Overtime pay	\$ 101	\$ 71	\$ 15	\$ 15	\$ -	70%	15%	15%	0%
Executive leave	\$ 108	\$ 75	\$ 16	\$ 16	\$ -	70%	15%	15%	0%
Vacation buyback	\$ 833	\$ 583	\$ 125	\$ 125	\$ -	70%	15%	15%	0%
Temp salaries-gen	\$ 8,443	\$ 5,910	\$ 1,266	\$ 1,266	\$ -	70%	15%	15%	0%
Life insurance	\$ 106	\$ 74	\$ 16	\$ 16	\$ -	70%	15%	15%	0%
PERS-employer contribution	\$ 19,785	\$ 13,849	\$ 2,968	\$ 2,968	\$ -	70%	15%	15%	0%
Health insurance	\$ 45,211	\$ 31,647	\$ 6,782	\$ 6,782	\$ -	70%	15%	15%	0%
Medicare	\$ 2,108	\$ 1,476	\$ 316	\$ 316	\$ -	70%	15%	15%	0%
Workers Comp	\$ 8,651	\$ 6,056	\$ 1,298	\$ 1,298	\$ -	70%	15%	15%	0%
Dental & Vision	\$ 1,233	\$ 863	\$ 185	\$ 185	\$ -	70%	15%	15%	0%
PERS Unfunded Liability	\$ 83,600	\$ 58,520	\$ 12,540	\$ 12,540	\$ -	70%	15%	15%	0%
Office supplies	\$ 767	\$ 537	\$ 115	\$ 115	\$ -	70%	15%	15%	0%
Prof/tech-miscell.	\$ 2,475	\$ 1,733	\$ 371	\$ 371	\$ -	70%	15%	15%	0%
Merchant Bank Card Charges	\$ 2,931	\$ 2,052	\$ 440	\$ 440	\$ -	70%	15%	15%	0%
Travel-general	\$ 487	\$ 341	\$ 73	\$ 73	\$ -	70%	15%	15%	0%
Public notice-generl	\$ 162	\$ -	\$ -	\$ -	\$ 162	0%	0%	0%	100%
Fleet lease	\$ 11,639	\$ 8,147	\$ 1,746	\$ 1,746	\$ -	70%	15%	15%	0%
Liability Insurance	\$ 14,339	\$ 10,037	\$ 2,151	\$ 2,151	\$ -	70%	15%	15%	0%
General Administration	\$ 25,753	\$ -	\$ -	\$ -	\$ 25,753	0%	0%	0%	100%
General Government	\$ 36,853	\$ -	\$ -	\$ -	\$ 36,853	0%	0%	0%	100%
Software	\$ 535	\$ 374	\$ 80	\$ 80	\$ -	70%	15%	15%	0%
TOTAL - FINANCE & ENGINEERING ADMIN	\$ 795,928	\$ 401,102	\$ 109,974	\$ 109,974	\$ 174,878	50%	14%	14%	22%

TABLE 19 : CLASSIFICATION OF EXPENSES

Budget Categories	Total Revenue Requirements	Flow	Strength		Customer	Basis of Classification			
	FY 2022/23	(VOL)	(BOD)	(TSS)	(CA)	(VOL)	(BOD)	(TSS)	(CA)
Public Works Admin									
Regular Salaries	\$ 105,464	\$ 52,732	\$ 15,820	\$ 15,820	\$ 21,093	50%	15%	15%	20%
Vacation Buyback	\$ 2,613	\$ 1,307	\$ 392	\$ 392	\$ 523	50%	15%	15%	20%
Temp salaries-gen	\$ 3,011	\$ 1,505	\$ 452	\$ 452	\$ 602	50%	15%	15%	20%
Life Insurance	\$ 47	\$ 24	\$ 7	\$ 7	\$ 9	50%	15%	15%	20%
PERS-employer contribution	\$ 9,332	\$ 4,666	\$ 1,400	\$ 1,400	\$ 1,866	50%	15%	15%	20%
Health Insurance	\$ 9,476	\$ 4,738	\$ 1,421	\$ 1,421	\$ 1,895	50%	15%	15%	20%
Medicare	\$ 838	\$ 419	\$ 126	\$ 126	\$ 168	50%	15%	15%	20%
Workers Comp	\$ 4,352	\$ 2,176	\$ 653	\$ 653	\$ 870	50%	15%	15%	20%
Dental & Vision	\$ 571	\$ 285	\$ 86	\$ 86	\$ 114	50%	15%	15%	20%
Oper suppl-miscell.	\$ 158	\$ 79	\$ 24	\$ 24	\$ 32	50%	15%	15%	20%
Office supplies	\$ 119	\$ 60	\$ 18	\$ 18	\$ 24	50%	15%	15%	20%
Subscriptions/books	\$ 165	\$ 82	\$ 25	\$ 25	\$ 33	50%	15%	15%	20%
Liability Insurance	\$ 5,102	\$ 2,551	\$ 765	\$ 765	\$ 1,020	50%	15%	15%	20%
General Administration	\$ 8,635	\$ -	\$ -	\$ -	\$ 8,635	0%	0%	0%	100%
General Government	\$ 12,357	\$ 6,178	\$ 1,854	\$ 1,854	\$ 2,471	50%	15%	15%	20%
Sewer Collection Maintenance									
Regular salaries	\$ 551,337	\$ 275,668	\$ 137,834	\$ 137,834	\$ -	50%	25%	25%	0%
Overtime pay	\$ 28,743	\$ 14,372	\$ 7,186	\$ 7,186	\$ -	50%	25%	25%	0%
Vacation buyback	\$ 2,016	\$ 1,008	\$ 504	\$ 504	\$ -	50%	25%	25%	0%
Temp salaries-gen	\$ 25,118	\$ 12,559	\$ 6,279	\$ 6,279	\$ -	50%	25%	25%	0%
Life insurance	\$ 218	\$ 109	\$ 54	\$ 54	\$ -	50%	25%	25%	0%
PERS-employer contribution	\$ 35,349	\$ 17,674	\$ 8,837	\$ 8,837	\$ -	50%	25%	25%	0%
Health insurance	\$ 118,011	\$ 59,005	\$ 29,503	\$ 29,503	\$ -	50%	25%	25%	0%
Medicare	\$ 4,478	\$ 2,239	\$ 1,119	\$ 1,119	\$ -	50%	25%	25%	0%
Uniform allowance	\$ 1,223	\$ 612	\$ 306	\$ 306	\$ -	50%	25%	25%	0%
Workers Comp	\$ 63,693	\$ 31,847	\$ 15,923	\$ 15,923	\$ -	50%	25%	25%	0%
Dental & Vision	\$ 373	\$ 187	\$ 93	\$ 93	\$ -	50%	25%	25%	0%
PERS Unfunded Liability	\$ 172,189	\$ 86,094	\$ 43,047	\$ 43,047	\$ -	50%	25%	25%	0%
Oper suppl-miscell.	\$ 69,179	\$ 34,590	\$ 17,295	\$ 17,295	\$ -	50%	25%	25%	0%
Office supplies	\$ 2,234	\$ 1,117	\$ 559	\$ 559	\$ -	50%	25%	25%	0%
Dues/memberships	\$ 2,424	\$ 1,212	\$ 606	\$ 606	\$ -	50%	25%	25%	0%
Rock/sand/cement/grv	\$ 1,528	\$ 764	\$ 382	\$ 382	\$ -	50%	25%	25%	0%
Asphalt/paving materials	\$ 10,936	\$ 5,468	\$ 2,734	\$ 2,734	\$ -	50%	25%	25%	0%
Lift Station components	\$ 2,065	\$ 1,032	\$ 516	\$ 516	\$ -	50%	25%	25%	0%
Pipes/pipe fittings	\$ 51,078	\$ 25,539	\$ 12,769	\$ 12,769	\$ -	50%	25%	25%	0%
Sm tools/equipment	\$ 140	\$ 70	\$ 35	\$ 35	\$ -	50%	25%	25%	0%
Uniforms/protective	\$ 3,492	\$ 1,746	\$ 873	\$ 873	\$ -	50%	25%	25%	0%
Prof/tech-miscell.	\$ 71,886	\$ 35,943	\$ 17,971	\$ 17,971	\$ -	50%	25%	25%	0%
Merchant Bank Card Charges	\$ 101,291	\$ 20,258	\$ 20,258	\$ 20,258	\$ 40,517	20%	20%	20%	40%
Collection Fees	\$ 847	\$ 423	\$ 212	\$ 212	\$ -	50%	25%	25%	0%
Laundry services	\$ 3,529	\$ 1,765	\$ 882	\$ 882	\$ -	50%	25%	25%	0%
Maint/rep-miscell.	\$ 1,796	\$ 898	\$ 449	\$ 449	\$ -	50%	25%	25%	0%
Software maint	\$ 2,266	\$ 1,133	\$ 567	\$ 567	\$ -	50%	25%	25%	0%
Training-general	\$ 4,387	\$ 2,193	\$ 1,097	\$ 1,097	\$ -	50%	25%	25%	0%
Electricity	\$ 33,157	\$ 16,578	\$ 8,289	\$ 8,289	\$ -	50%	25%	25%	0%
Refuse collection	\$ 833	\$ 416	\$ 208	\$ 208	\$ -	50%	25%	25%	0%
Communications-gen	\$ 627	\$ 314	\$ 157	\$ 157	\$ -	50%	25%	25%	0%
To State-Regul. fees	\$ 3,426	\$ 1,713	\$ 856	\$ 856	\$ -	50%	25%	25%	0%
Fleet lease	\$ 242,960	\$ 121,480	\$ 60,740	\$ 60,740	\$ -	50%	25%	25%	0%
Inf Tech Repl Costs	\$ 28,330	\$ 14,165	\$ 7,082	\$ 7,082	\$ -	50%	25%	25%	0%
Liability Insurance	\$ 53,771	\$ 26,885	\$ 13,443	\$ 13,443	\$ -	50%	25%	25%	0%
General Administration	\$ 80,003	\$ -	\$ -	\$ -	\$ 80,003	0%	0%	0%	100%
General Government	\$ 114,484	\$ 57,242	\$ 28,621	\$ 28,621	\$ -	50%	25%	25%	0%
Fac maint costs	\$ 34,010	\$ 17,005	\$ 8,502	\$ 8,502	\$ -	50%	25%	25%	0%
Communications	\$ 3,646	\$ 1,823	\$ 912	\$ 912	\$ -	50%	25%	25%	0%
Cap Out under Thresh	\$ 2,850	\$ 1,425	\$ 712	\$ 712	\$ -	50%	25%	25%	0%
Equipment components	\$ 3,203	\$ 1,601	\$ 801	\$ 801	\$ -	50%	25%	25%	0%
Misc. tools/mach/eqp	\$ 182,169	\$ 91,085	\$ 45,542	\$ 45,542	\$ -	50%	25%	25%	0%
TOTAL - GIS, PW ADMIN & COLL. MAINT.	\$ 2,277,536	\$ 1,064,061	\$ 526,799	\$ 526,799	\$ 159,876	47%	23%	23%	7%

TABLE 20 : CLASSIFICATION OF EXPENSES

Budget Categories	Total Revenue Requirements	Flow	Strength		Customer	Basis of Classification			
	FY 2022/23	(VOL)	(BOD)	(TSS)	(CA)	(VOL)	(BOD)	(TSS)	(CA)
Wastewater Treatment									
Regular salaries	\$ 635,799	\$ 381,479	\$ 127,160	\$ 127,160	\$ -	60%	20%	20%	0%
Overtime pay	\$ 26,504	\$ 15,903	\$ 5,301	\$ 5,301	\$ -	60%	20%	20%	0%
Vacation buyback	\$ 1,262	\$ 757	\$ 252	\$ 252	\$ -	60%	20%	20%	0%
Temp salaries-gen	\$ 49,322	\$ 29,593	\$ 9,864	\$ 9,864	\$ -	60%	20%	20%	0%
Life insurance	\$ 221	\$ 132	\$ 44	\$ 44	\$ -	60%	20%	20%	0%
PERS-employer contribution	\$ 41,132	\$ 24,679	\$ 8,226	\$ 8,226	\$ -	60%	20%	20%	0%
Health insurance	\$ 107,677	\$ 64,606	\$ 21,535	\$ 21,535	\$ -	60%	20%	20%	0%
Medicare	\$ 5,462	\$ 3,277	\$ 1,092	\$ 1,092	\$ -	60%	20%	20%	0%
Boot Allowance	\$ 1,314	\$ 789	\$ 263	\$ 263	\$ -	60%	20%	20%	0%
Workers Comp	\$ 67,701	\$ 40,620	\$ 13,540	\$ 13,540	\$ -	60%	20%	20%	0%
Dental & Vision	\$ 537	\$ 322	\$ 107	\$ 107	\$ -	60%	20%	20%	0%
PERS Unfunded Liability	\$ 197,925	\$ 118,755	\$ 39,585	\$ 39,585	\$ -	60%	20%	20%	0%
Oper suppl-miscell.	\$ 29,632	\$ 17,779	\$ 5,926	\$ 5,926	\$ -	60%	20%	20%	0%
Chemicals	\$ 140,681	\$ 84,409	\$ 28,136	\$ 28,136	\$ -	60%	20%	20%	0%
Laboratory supplies	\$ 14,202	\$ 8,521	\$ 2,840	\$ 2,840	\$ -	60%	20%	20%	0%
Office supplies	\$ 7,932	\$ 4,759	\$ 1,586	\$ 1,586	\$ -	60%	20%	20%	0%
Subscriptions/books	\$ 197	\$ 118	\$ 39	\$ 39	\$ -	60%	20%	20%	0%
Dues/memberships	\$ 2,392	\$ 1,435	\$ 478	\$ 478	\$ -	60%	20%	20%	0%
Postage/freight	\$ 1,253	\$ 752	\$ 251	\$ 251	\$ -	60%	20%	20%	0%
Repair parts	\$ 130,727	\$ 78,436	\$ 26,145	\$ 26,145	\$ -	60%	20%	20%	0%
Janitorial/cleaning	\$ 1,593	\$ 956	\$ 319	\$ 319	\$ -	60%	20%	20%	0%
Uniforms/protective	\$ 969	\$ 582	\$ 194	\$ 194	\$ -	60%	20%	20%	0%
Bldg/grounds suppl	\$ 699	\$ 419	\$ 140	\$ 140	\$ -	60%	20%	20%	0%
Lubricants	\$ 9,898	\$ 5,939	\$ 1,980	\$ 1,980	\$ -	60%	20%	20%	0%
Misc. fuel	\$ 7,908	\$ 4,745	\$ 1,582	\$ 1,582	\$ -	60%	20%	20%	0%
Prof/tech-miscell.	\$ 87,658	\$ 52,595	\$ 17,532	\$ 17,532	\$ -	60%	20%	20%	0%
Outside legal	\$ 19,697	\$ 9,848	\$ 4,924	\$ 4,924	\$ -	50%	25%	25%	0%
Fiscal agent fees	\$ 3,409	\$ 1,704	\$ 852	\$ 852	\$ -	50%	25%	25%	0%
Laboratory Testing - Outside	\$ 29,653	\$ 17,792	\$ 5,931	\$ 5,931	\$ -	60%	20%	20%	0%
Laundry services	\$ 7,101	\$ 4,261	\$ 1,420	\$ 1,420	\$ -	60%	20%	20%	0%
Miscell. consultants	\$ 4,791	\$ 2,875	\$ 958	\$ 958	\$ -	60%	20%	20%	0%
Environmental svcs.	\$ 664	\$ 398	\$ 133	\$ 133	\$ -	60%	20%	20%	0%
Biosolids Transportation	\$ 256,269	\$ -	\$ 128,134	\$ 128,134	\$ -	0%	50%	50%	0%
Maint/rep-miscell.	\$ 37,021	\$ 22,213	\$ 7,404	\$ 7,404	\$ -	60%	20%	20%	0%
Misc eqpt rent/lease	\$ 3,336	\$ 2,002	\$ 667	\$ 667	\$ -	60%	20%	20%	0%
Business entertainment	\$ 19	\$ 11	\$ 4	\$ 4	\$ -	60%	20%	20%	0%
Training-general	\$ 3,385	\$ 2,031	\$ 677	\$ 677	\$ -	60%	20%	20%	0%
Electricity	\$ 593,333	\$ 356,000	\$ 118,667	\$ 118,667	\$ -	60%	20%	20%	0%
Alarm line charges	\$ 5,616	\$ 3,370	\$ 1,123	\$ 1,123	\$ -	60%	20%	20%	0%
To State-Regul. fees	\$ 61,647	\$ 36,988	\$ 12,329	\$ 12,329	\$ -	60%	20%	20%	0%
Fleet lease	\$ 133,353	\$ 80,012	\$ 26,671	\$ 26,671	\$ -	60%	20%	20%	0%
Inf Tech Repl Costs	\$ 38,633	\$ 23,180	\$ 7,727	\$ 7,727	\$ -	60%	20%	20%	0%
Liability Insurance	\$ 97,580	\$ 58,548	\$ 19,516	\$ 19,516	\$ -	60%	20%	20%	0%
General Administration	\$ 81,146	\$ 48,688	\$ 16,229	\$ 16,229	\$ -	60%	20%	20%	0%
General Government	\$ 116,120	\$ 69,672	\$ 23,224	\$ 23,224	\$ -	60%	20%	20%	0%
Fac maint costs	\$ 153,600	\$ 92,160	\$ 30,720	\$ 30,720	\$ -	60%	20%	20%	0%
Communications	\$ 5,053	\$ 3,032	\$ 1,011	\$ 1,011	\$ -	60%	20%	20%	0%
Cap Out under Thresh	\$ 16,113	\$ 9,668	\$ 3,223	\$ 3,223	\$ -	60%	20%	20%	0%
Equipment components	\$ 120,200	\$ 72,120	\$ 24,040	\$ 24,040	\$ -	60%	20%	20%	0%
Misc. tools/mach/eqp	\$ 90,683	\$ 54,410	\$ 18,137	\$ 18,137	\$ -	60%	20%	20%	0%
Software	\$ 8,262	\$ 4,957	\$ 1,652	\$ 1,652	\$ -	60%	20%	20%	0%
TOTAL - WASTEWATER TREATMENT	\$ 3,457,279	\$ 1,918,295	\$ 769,492	\$ 769,492	\$ -	55%	22%	22%	0%

TABLE 21 : CLASSIFICATION OF EXPENSES

Budget Categories	Total Revenue Requirements	Flow	Strength		Customer	Basis of Classification			
	FY 2022/23	(VOL)	(BOD)	(TSS)	(CA)	(VOL)	(BOD)	(TSS)	(CA)
Debt Service Payments									
Existing Annual Debt Service	\$ 1,297,594	\$ 648,797	\$ 324,398	\$ 324,398	\$ -	50%	25%	25%	0%
Future Annual Debt Service	\$ -	\$ -	\$ -	\$ -	\$ -	50%	25%	25%	0%
Total Debt Service Payments	\$ 1,297,594	\$ 648,797	\$ 324,398	\$ 324,398	\$ -	50%	25%	25%	0%
Capital Expenditures									
Rate Funded Capital Expenses	\$ 3,055,760	\$ 1,527,880	\$ 763,940	\$ 763,940	\$ -	50%	25%	25%	0%
TOTAL REVENUE REQUIREMENTS	\$ 10,884,096	\$ 5,560,136	\$ 2,494,603	\$ 2,494,603	\$ 334,754	51%	23%	23%	3%
Less: Non-Rate Revenues									
Sewer Service Charge - Eureka									
Sewer Service Charge - HCSD	\$ (1,221,000)	\$ (623,747)	\$ (279,850)	\$ (279,850)	\$ (37,553)	51%	23%	23%	3%
Other Revenues	\$ (182,000)	\$ (92,975)	\$ (41,714)	\$ (41,714)	\$ (5,598)	51%	23%	23%	3%
Connection Fees									
Interest Income ³	\$ (67,411)	\$ (34,437)	\$ (15,450)	\$ (15,450)	\$ (2,073)	51%	23%	23%	3%
NET REVENUE REQUIREMENTS	\$ 9,413,686	\$ 4,808,977	\$ 2,157,589	\$ 2,157,589	\$ 289,530				
<i>Allocation of Revenue Requirements</i>	100.0%	51.1%	22.9%	22.9%	3.1%				

TABLE 22 : ADJUSTMENTS TO CLASSIFICATION OF EXPENSES

Adjustment to Current Rate Level:	Total	(VOL)	(BOD)	(TSS)	(CA)
Target Rate Rev. After Rate Increases	\$10,642,280				
Projected Rate Revenue at Current Rates	\$9,674,800				
Projected Rate Increase	10.0%				
Adjusted Net Revenue Req'ts	\$ 10,642,280	\$ 5,436,604	\$ 2,439,180	\$ 2,439,180	\$ 327,317
<i>Percent of Revenue</i>		51.1%	22.9%	22.9%	3.1%

TABLE 23 : DEVELOPMENT OF THE VOLUME ALLOCATION FACTOR

Customer Class	Number of Accounts ¹	Annual Volume Total (HCF) ¹	Percentage of Adjusted Volume	Total Annual Volume Based on Winter Avg. (HCF) ²	Percentage of Winter Average Volume	Billable Annual Volume Total (HCF) ⁴	Percentage of Billable Volume
Single Family Residential	7,688	516,372	52.8%	436,652	52.0%	255,237	43.2%
Multi-Family Residential	1,017	177,819	18.2%	162,740	19.4%	68,010	11.5%
Commercial Light	1,009	203,530	20.8%	176,464	21.0%	190,657	32.2%
Commercial Medium	29	33,033	3.4%	26,740	3.2%	32,409	5.5%
Commercial Heavy	114	30,884	3.2%	26,720	3.2%	28,564	4.8%
Industrial/Extra Heavy ³	1	16,548	1.7%	10,824	1.3%	16,524	2.8%
Total:	9,858	978,186	100.0%	840,140	100.0%	591,401	100.0%
<i>HCSD Direct Sales</i>	-	494,271	50.5%	-	0.0%	-	0.0%
<i>Implied I&I</i>	-	537,972	55.0%	-	0.0%	-	0.0%
Grand Total:	9,858	2,010,428		840,140		591,401	
		2,010,428 Flow (hcf/yr.)					
		1.00 Flow Adj. Factor					

1. Source: Accounts and consumption data from City's FY 2020/21 customer data. HCF = hundred cubic feet.
2. These volumes exclude the 2 hcf/mo. previously included in the fixed charges (i.e., and are therefore higher). NBS is recommending removing the 2 units of included water consumption from base rates.
3. Data directly from brewery records.
4. Two (2) units of water are included in the monthly fixed service charge. Data source: FY 2020-21 customer billing data.

TABLE 24 : DEVELOPMENT OF THE STRENGTH ALLOCATION FACTOR

Customer Class	Billable Annual Volume Total (HCF)	Annual Flow (gallons)	Biochemical Oxygen Demand (BOD)				Total Suspended Solids (TSS)			
			Average Strength Factor (mg/l) ¹	Calculated BOD (lbs./yr.)	Adjusted BOD (lbs./yr.)	Percent of Total	Average Strength Factor (mg/l) ¹	Calculated TSS (lbs./yr.)	Adjusted TSS (lbs./yr.)	Percent of Total
Single Family Residential	436,652	326,637,529	200	544,831	366,204	45.07%	200	544,831	313,169	48.85%
Multi-Family Residential	162,740	121,737,657	200	203,058	136,484	16.80%	200	203,058	116,718	18.21%
Commercial Light	176,464	132,003,895	150	165,137	110,995	13.66%	150	165,137	94,921	14.81%
Commercial Medium	26,740	20,002,857	370	61,725	41,488	5.11%	370	61,725	35,479	5.53%
Commercial Heavy	26,720	19,987,896	1,000	166,699	112,045	13.79%	600	100,019	57,491	8.97%
Industrial/Extra Heavy ²	10,824	8,096,893	1,000	67,528	45,388	5.59%	600	40,517	23,289	3.63%
Total:	840,140	628,466,727		1,208,979	812,605	100.0%		1,115,288	641,068	100.0%
<i>HCSD Direct Sales</i>	494,271	369,739,200	218	671,538	451,368	55.55%	205	632,309	363,451	56.69%
Grand Total:		998,205,927		1,880,516	1,263,973			1,747,596	1,004,519	

1. Average strength factors for BOD and TSS are derived from the State Water Resources Control Board Revenue Program Guidelines, Appendix G. Source files from Eureka staff: 'https://www.bendoregon.gov/home/showpublisheddocument/9801/636077448417870000
2. Assumes brewery will implement pre-treatment of effluent and that actual bills will be based on verified strength factors and unit costs for BOD and TSS..
3. Adjustment to true up estimated lbs./year to actual treatment plant records.

TABLE 25 : DEVELOPMENT OF THE CUSTOMER ALLOCATION FACTOR

Customer Class	Number of Accounts ¹	Percent of Total	Number of Housing Equiv. Units (HEUs) ¹	Percent of Total
Single Family Residential	7,688	77.99%	7,695	57.72%
Multi-Family Residential	1,017	10.32%	3,992	29.94%
Commercial Light	1,009	10.24%	1,055	7.91%
Commercial Medium	29	0.29%	29	0.22%
Commercial Heavy	114	1.16%	114	0.86%
Industrial/Extra Heavy	1	0.01%	447	3.35%
Grand Total:	9,858	100.00%	13,332	100.00%

1. Customer Accounts are June 2021 billing data. HEUs are based on SFR consumption.

<u>Customer Data:</u>	<u>2021</u>	<u>2016</u>
Single Family Residential	7,695	7,642
Multi-Family Residential	3,992	4,009
Commercial Light	1,055	1,066
Commercial Medium	29	32
Commercial Heavy	114	117
	<u>12,885</u>	<u>12,866</u>

TABLE 26 : DEVELOPMENT OF THE EXTRA STRENGTH EDU

Calculation of Extra Heavy Non-Residential EDUs					
Customer Class	Flow (Effluent)	Treatment Cost Classification Components ¹			
		BOD		TSS	
		(mg/l)	(lbs./mo.)	(mg/l)	(lbs./mo.)
<i>% Allocation Factor</i>	51.1%	22.9%		22.9%	
Single Family Residential (1 EDU)					
Avg. Winter Water Use (CCF/mo.)	56.80				
Avg. BOD Strength (mg/L & lbs./mo.) ³		200	850		
Avg. TSS Strength (mg/L & lbs./mo.) ³				200	850
Non-SFR Connection (w/o Irrigation)					
<u>Extra Heavy Industrial</u>					
Avg. Winter Water Use (CCF/mo.)	10,824				
Avg. BOD Strength (mg/L & lbs./mo.) ³		1,000	810,283		
Avg. TSS Strength (mg/L & lbs./mo.) ³				600	486,170
Un-Weighted EDU by Component	190.575		952.87		571.72
Weighted EDU by Component ⁴	97.36		218.40		131.04
Total EDU - Non-SFR Connection⁵	447				

(from Table 28)

- Consumption data and strength estimates is based on the City of Eureka's FY 2020/21 customer data. Strength factors based on data from 2014 study on Breweries. <https://www.bendoregon.gov/home/showpublisheddocument/9801/636077448417870000>
- Example data is based on Table 16 below from the City's sewer rate study.
- Formula for calculating lbs./mo. is: (Avg. Flow/month in hcf) x 12 x 748*(mg/L) x 8.34/10⁶.
- Weighted EDUs are the Un-Weighted EDUs by component times the % Allocation Factor shown above.
- Total EDU is the sum of the Weighted EDU by Component (Flow, BOD & TSS).

CITY OF EUREKA
SEWER RATE ANALYSIS
Sewer Cost of Service Analysis

TABLE 27 : ALLOCATION OF REVENUE REQUIREMENTS BY CUSTOMER CLASS

Customer Class	Cost Classification Components			Customer Related	Cost-of-Service Net Revenue Reqts.	% of COS Net Revenue Reqts.
	Volume	Treatment				
		BOD	TSS			
Net Revenue Requirements¹	\$5,436,604	\$2,439,180	\$2,439,180	\$327,317	\$10,642,280	--
	51.1%	22.9%	22.9%	3.1%	100.0%	
Single Family Residential	\$2,825,605	\$1,099,227	\$1,191,568	\$255,266	\$5,371,666	50.5%
Multi-Family Residential	1,053,102	409,681	444,097	33,768	1,940,648	18.2%
Commercial Light	1,141,911	333,173	361,161	33,502	1,869,746	17.6%
Commercial Medium	173,036	124,533	134,995	963	433,527	4.1%
Commercial Heavy	172,907	336,324	218,747	3,785	731,763	6.9%
Industrial/Extra Heavy ^c	70,043	136,242	88,612	33	294,930	2.8%
	\$5,436,604	\$2,439,180	\$2,439,180	\$327,317	\$10,642,280	100%
Units ³	840,140	812,605	641,068	118,296		
Unit Costs	\$6.471/hcf	\$3.002/lb.	\$3.805/lb.	\$2.77/Acct.		

1. Revenue requirement for each customer class is determined by multiplying the revenue requirement from each cost classification by the allocation factors for each customer class.
2. Revenue requirements for commercial Heavy (Brewery) were reduce to account for likely pre-treatment in the future.
3. Units are hcf/yr. and lbs./yr. BOD and TSS.

TABLE 28 : PROPOSED SEWER RATES

Customer Class	Number of Accounts	No. of Housing Equivalent Units ¹	Billable Annual Volume Total (HCF) ²	Annual Rev. Req't				Monthly Fixed Charge (\$ Per HEU) ¹	Monthly Fixed Charge Per Account	Volumetric Charge Per hcf ²
				Fixed (Treatment & Cust. Costs)	Fixed - Customer Service Costs	Volumetric (Flow-Based Costs)	Total			
Single Family Residential	7,688	7,695	436,652	\$ 2,546,061	\$ -	\$ 2,825,605	\$ 5,371,666	\$27.598	\$0.00	\$6.47
Multi-Family Residential	1,017	3,992	162,740	887,546	-	1,053,102	1,940,648	\$18.53	\$0.00	\$6.47
Commercial Light	1,009	1,055	176,464	334,157	-	1,535,590	1,869,746	\$27.60	\$0.00	\$8.70
Commercial Medium	29	29	26,740	9,604	-	423,923	433,527	\$27.60	\$0.00	\$15.85
Commercial Heavy	114	114	26,720	37,754	-	694,009	731,763	\$27.60	\$0.00	\$25.97
Industrial/Extra Heavy	1	447	10,824	147,969	-	146,960	294,930	\$27.60	\$0.00	\$13.58
Total	9,858	13,332	840,140	\$ 3,963,091	\$ -	\$ 6,679,189	\$ 10,642,280	--	--	--
<i>Percent of Revenue from Fixed vs. Volumetric Charges</i>				37.2%	0.0%	62.8%	100%			

1. Housing Equivalent Units used for Multi Family Residential. Fixed Charge intended to be applied to all HEUs.
2. Does not include the first 2 hcf of consumption in the Fixed Charge.

CITY OF EUREKA
 SEWER RATE ANALYSIS
 Sewer Cost of Service Analysis/Rate Design

TABLE 29 : CURRENT VS. PROPOSED SEWER RATES

Sewer Rate Schedule	Current Rates	Proposed Monthly Sewer Rates				
		FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27
Monthly Fixed Service Charges¹						
Mo. Account Charge <i>(applies to all classes)</i>	\$2.87	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Single Family Residential	\$24.34	\$27.60	\$29.81	\$31.00	\$32.24	\$33.53
Multi-Family Residential (per dwelling unit)	\$19.46	\$18.53	\$20.01	\$20.81	\$21.64	\$22.51
Commercial Light	\$24.33	\$27.60	\$29.81	\$31.00	\$32.24	\$33.53
Commercial Medium	\$24.33	\$27.60	\$29.81	\$31.00	\$32.24	\$33.53
Commercial Heavy	\$24.33	\$27.60	\$29.81	\$31.00	\$32.24	\$33.53
Industrial/Extra Heavy ³	--	<i>(Billed at actual flow & loadings shown below)</i>				
Volumetric Rate (\$/hcf)²						
Single Family Residential	\$9.15	\$6.47	\$6.99	\$7.27	\$7.56	\$7.86
Multi-Family Residential	\$9.15	\$6.47	\$6.99	\$7.27	\$7.56	\$7.86
Commercial Light	\$9.47	\$8.70	\$9.40	\$9.77	\$10.17	\$10.57
Commercial Medium	\$13.72	\$15.85	\$17.12	\$17.81	\$18.52	\$19.26
Commercial Heavy	\$20.18	\$25.97	\$28.05	\$29.17	\$30.34	\$31.55
Industrial/Extra Heavy ³ <i>(Unit Costs as shown below)</i>						
Flow (\$/hcf/month)	--	\$6.471/hcf	\$6.989/hcf	\$7.268/hcf	\$7.559/hcf	\$7.861/hcf
BOD Strength Charge (\$/lb.)	--	\$3.002/lb.	\$3.242/lb.	\$3.371/lb.	\$3.506/lb.	\$3.647/lb.
TSS sTrength Charge (\$/lb.)	--	\$3.805/lb.	\$4.109/lb.	\$4.274/lb.	\$4.445/lb.	\$4.622/lb.

1. Current Rates are charged per dwelling unit for Multi-Family only. Proposed fixed charges are per Housing Equivalent Unit (HEU) for Multi-Family and Industrial/Extra Heavy.

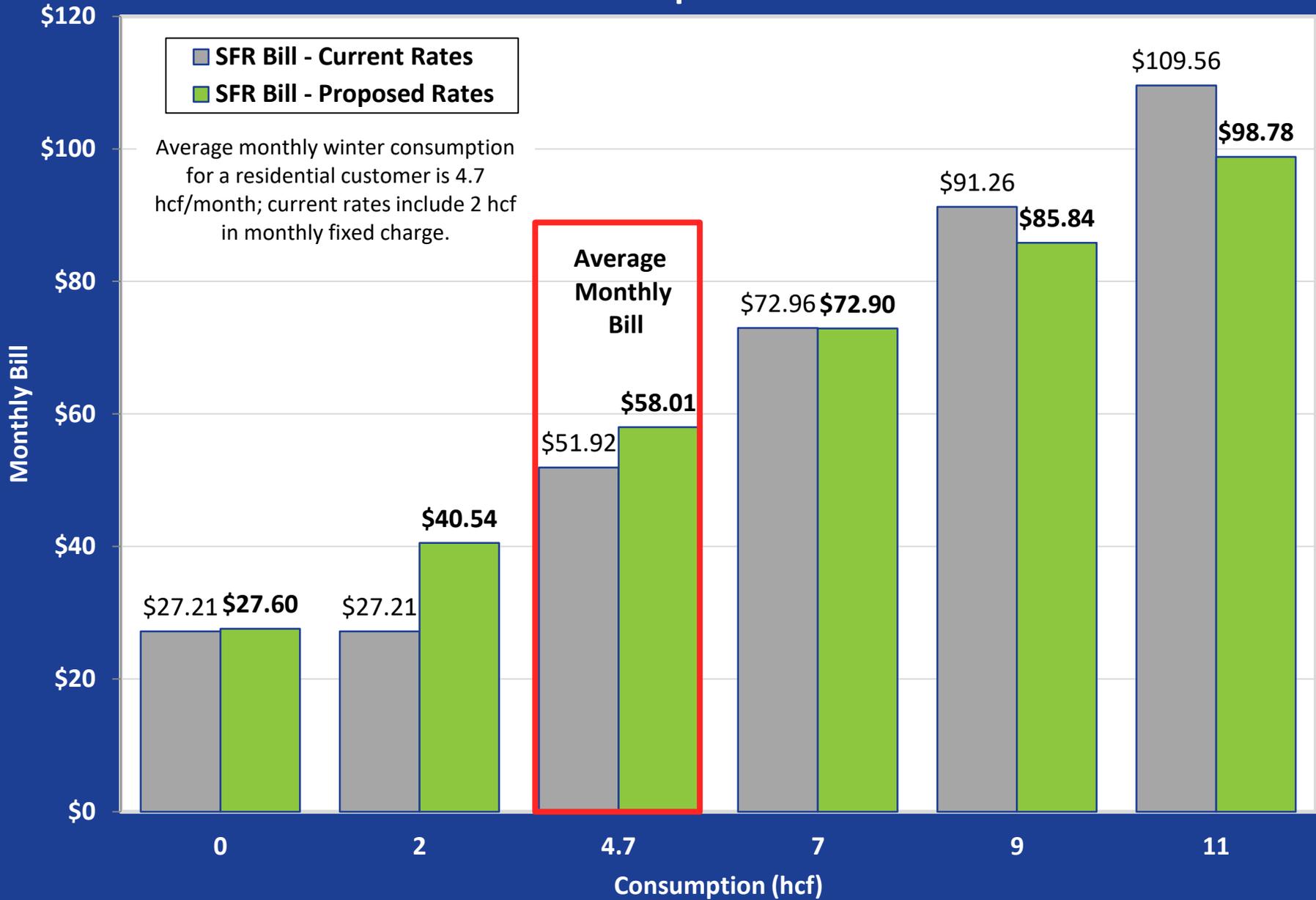
2. One Unit is equal to one HCF (Hundred Cubic Feet) or 748 gallons.

3. Charges based on estimated flow and periodic testing for BOD and TSS strength. May include additional charges for City testing and/or administrative/billing costs.

Residential Sewer Bill Comparison Current vs. Proposed Rates



Residential Sewer Bill Comparison Current vs. Proposed Rates



Multi Family Residential Sewer Bill Comparison Current vs. Proposed Rates (4-Unit Complex)

