



Aerial view of Valley Sanitary District
via Google Earth

VALLEY SANITARY DISTRICT

Draft Report for:

Sewer Rate Study Update

March 2023

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TABLE OF CONTENTS

| | |
|--|-----------|
| Section 1. Purpose and Overview of the Study | 1 |
| A. Overview of the Study..... | 1 |
| B. Rate Study Methodology..... | 2 |
| Section 2. Sewer Rate Study..... | 5 |
| A. Financial Plan | 5 |
| B. Cost-of-Service Analysis | 8 |
| C. Rate Design Analysis..... | 11 |
| D. Current and Proposed Rates..... | 13 |
| E. Comparison of Current and Proposed Customer Bills | 14 |
| Section 3. Recommendations and Next Steps | 19 |
| A. Consultant Recommendations..... | 19 |
| B. Next Steps | 19 |
| C. NBS’ Principal Assumptions and Considerations | 19 |
| Abbreviations & Acronyms | 20 |
| Appendix: Detailed Sewer Study Tables and Figures | 22 |

TABLE OF FIGURES

| | |
|---|----|
| Figure 1. Primary Components of a Rate Study | 2 |
| Figure 2. Capital Improvement Costs for FY 2023/24 through FY 2042/43 | 5 |
| Figure 3. 20-Year Debt Issues | 6 |
| Figure 4. Summary of Revenue Requirements | 7 |
| Figure 5. Summary of Capital Improvement Plan | 8 |
| Figure 6. Summary of Reserve Funds | 8 |
| Figure 7. Allocation of Revenue Requirements by Customer Class | 9 |
| Figure 8. Annual Flow and Strength Characteristics by Customer Class | 10 |
| Figure 9. Number of Accounts and EDUs by Customer Class | 11 |
| Figure 10. Development of Fixed and Variable Charges | 12 |
| Figure 11. Summary of Annual Sewer Bill Projections | 13 |
| Figure 12. Current vs. Proposed Rates | 14 |
| Figure 13. Annual Bill Comparison for Single Family Customers..... | 15 |
| Figure 14. Annual Bill Comparison for Multi-Family Customers | 15 |
| Figure 15. Annual Bill Comparison for Mobile Home Customers..... | 16 |
| Figure 16. Annual Bill Comparison for RV Park Customers | 17 |
| Figure 17. Annual Bill Comparison for Commercial Low/Medium Strength Customers..... | 17 |
| Figure 18. Annual Bill Comparison for Commercial High Strength Customers | 18 |
| Figure 19. Monthly Regional Bill Comparisons..... | 18 |

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SECTION 1. PURPOSE AND OVERVIEW OF THE STUDY

Valley Sanitary District (District) retained NBS to conduct a sewer rate study update for a number of reasons, including meeting revenue requirements, providing greater financial stability for the sewer enterprise, addressing the ongoing need for capital improvements, and complying with certain legal requirements (e.g., California Constitution Article XIII D, Section 6, which is commonly referred to as Proposition 218 [Prop 218]). The proposed rates in this study were developed in a manner that is consistent with industry standards and cost-of-service principles. In addition to providing an administrative record of the rate study methodology, this report is also intended to assist the District maintain transparent communications with the residents and community it serves.

In developing new sewer rates, NBS worked cooperatively with District staff and the Board of Directors (Board) in selecting appropriate rate alternatives. This report summarizes the input and direction received from these stakeholders.

A. Overview of the Study

Key Issues Addressed - In addition to ensuring that sewer rates collect sufficient revenue to meet the annual operating costs and fund planned capital projects, other key issues include:

- **Financial Plans** – The long-term financial plan developed for the District incorporates all revenue sources, expenditures, reserves, capital improvement costs, and repair and replacement costs in determining the net revenue requirements that must be funded from rates. This financial plan fully funds operations and maintenance (O&M) and capital improvement costs in an effort to develop annual rate increases necessary to meet the District’s financial obligations.
- **Capital Improvement Funding** – The District’s 20-year capital improvement program was incorporated into the financial plan with the objective of funding all planned capital projects. Balancing these needs against the financial impact on customers was a critical aspect of this Study. Over the next twenty years, capital improvement costs are significant and approximately half of those projects are planned for the next five years. As a result, a significant percentage of these projects are being funded with debt financing. However, to minimize rate increases, the funding alternatives used the funds available from reserves and cash-funding from rates in addition to debt financing.
- **Review of Equivalent Dwelling Units** – NBS performed a thorough review and assessment of the District’s record of equivalent dwelling units (EDUs) as part of the last rate study performed in 2020. At that time, NBS updated and verified the accuracy of the existing EDU calculations by working closely with District staff and the Budget and Finance Committee to improve the accuracy and the equity of this data. As a result, the current assignment of EDUs was used in this rate study update. NBS believes that additional verification is still needed and will continue to work with District staff on making further improvements in the future.

- **Rate Design** – The alternative rate structures evaluated included several with a volumetric component based on the estimated volume and strength of wastewater discharged by each customer class, in addition to the improvements in the fairness and equity of the EDU assignments for each user classification. As a part of the volumetric rates, the amount of rate revenue collected from monthly fixed vs. variable charges was also closely examined. After carefully considering the customer bill impacts and the overall fairness and equity of each rate alternative, the Board decided to maintain the current rate structure that collects 70% of the rate revenue from fixed charges and 30% from the volumetric charges.

B. Rate Study Methodology

Comprehensive rate studies, such as this one, typically include the three components outlined in **Figure 1**:

Figure 1. Primary Components of a Rate Study



These steps are intended to follow industry standards and reflect the fundamental principles of cost-of-service rate making embodied in Water Environment Federation’s *Financing and Charges for Wastewater Systems*.¹ The rate study also addresses requirements under Proposition 218 that rates must not exceed the cost of providing the service and that rates 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 in which they were performed.

The District provided NBS with the data necessary to conduct the study, including historical, current, and projected revenues and expenditures, number of customer accounts, and water consumption data along with other operational and capital cost information. Detailed tables and figures documenting the development of the proposed rates are provided in the *Appendix*.

The next sections provide more details on each of these three rate study components.

¹ *Financing and Charges for Wastewater Systems*, WEF Manual of Practice No. 27, Water Environment Federation (WEF), Fourth Edition, 2018.

Financial Plan

As part of the rate study, NBS projected revenues and expenditures on a cash-flow basis for the next twenty years, although the proposed rates are for a 5-year period (FY 2023/24 through FY 2027/28). The amount of rate revenue that will also maintain adequate reserves is known as the *net revenue requirement*.

Recommended reserve levels are based on a combination of industry standards and the Utility's unique financial needs. More detail on recommended reserve levels is included in Section 2. When current rate revenue falls short of the net revenue requirement, rate adjustments - or more accurately, adjustments in the total revenue collected from rates - are recommended. This report presents an overview of the methodology, assumptions, and data used along with the financial plan and proposed rates developed in this Study.

Cost-of-Service Analysis

The basic purpose of the cost-of-service analysis (COSA) is to fairly and equitably allocate costs to customer classes. A key task in this effort is "classification" of the sewer revenue requirements into three basic categories:

- Flow (volume) related costs
- Strength costs related to Biochemical Oxygen Demand (BOD) and Total Suspended Solids (TSS)
- Customer service-related costs

These cost allocation factors represent the three primary types of cost allocations in the cost of service. For example, effluent with higher levels of BOD and TSS is more costly to treat and, therefore, should be allocated a greater proportion of the treatment costs. Likewise, customer classes that generate significantly more flow to the wastewater treatment plant should also be charged accordingly. Further details are discussed below and documented in the *Appendix*.

Rate Design Analysis

Rate Design is typically the stage in the study where NBS, District staff, and Committees work closely together to develop rate alternatives that will meet the District's objectives. It is important for the wastewater utility to send proper price signals to its customers about the actual cost of providing service. This objective is typically addressed through both the magnitude of the rate adjustments and the rate structure design. In other words, both the amount of revenue collected and the way in which the revenue is collected from customers are important.

Several criteria are typically considered in setting rates and developing sound rate structures. The fundamentals of this process have been well documented in various rate-setting manuals, such as WEF's Manual of Practice No. 27. The foundation for evaluating rate structures is generally credited to James C. Bonbright in *Principles of Public Utility Rates*² which outlines pricing policies, theories, and economic

² James C. Bonbright, Albert L. Danielsen, and David R. Kamerschen, *Principles of Public Utility Rates*, Arlington, VA: Public Utilities Report, Inc., Second Edition, 1988, pp. 383-384.

concepts along with various rate designs. The following is a simplified list of the attributes of a sound rate structure:

- Rates should be easy to understand from the customer’s perspective.
- Rates should be easy to administer from the utility’s perspective.
- Rates should promote the efficient allocation of the resource.
- Rates should be equitable and non-discriminating (that is, cost based).
- There should be continuity in the rate making philosophy over time.
- Rates should provide month-to-month and year-to-year revenue stability.

Rate Structure Terminology

The relationship between fixed and variable costs can have a significant impact on customer bills. Fixed costs, such as debt service and personnel costs, typically do not vary with the amount of wastewater effluent, whereas variable costs, such as the cost of chemicals and electricity used in pumping effluent flows, tend to change with the quantity of wastewater effluent generated. Volumetric sewer charges are generally based on metered water use, with average winter water use being used for residential customers and monthly or annual water use often being used for non-residential customers.

Key Financial Assumptions

Following are the key assumptions used in the rate analysis:

- **Funding of Capital Projects** – Without rate increases and additional long-term debt, the District would find it difficult to pay for the planned capital improvements. Therefore, both rate increases and new long-term debt are used to fund most of the planned capital improvements.
- **Reserve Fund Targets** – Reserves for operations and capital needs are set based on NBS input, recommendations from District staff, and the District’s Reserve Policy,³ which are generally consistent with industry standards for utility fund management:
 - Operating Reserve – Equal to 50%, or 6 months, of operating and maintenance expenses.
 - Capital Replacement Reserve – Equal to 50%, or 6 months, of operating and maintenance expenses.
 - Emergency Reserve – Equal to 5% of operating and maintenance expenses.
- **Inflation and Growth Projections:**
 - General cost inflation is approximately 5% annually.
 - Labor cost inflation is 5% annually.
 - Customer growth is 1% annually.

The next section presents the sewer rate study.

³ Valley Sanitary District, Resolution No. 2013-1040. Source file: https://www.valley-sanitary.org/sites/g/files/vyhlif721/f/uploads/2013-1040_district_reserve_policy.pdf.

SECTION 2. SEWER RATE STUDY

This section presents further details on the primary rate study components previously outlined in Figure 1.

A. Financial Plan

It is important for municipal utilities to maintain reasonable reserves in order to handle emergencies, fund working capital, maintain a good credit rating, and generally follow sound financial management practices. Rate increases are governed by the need to meet operating and capital costs, maintain adequate debt coverage, and build reasonable reserve funds. The current state of the District’s wastewater utility regarding these objectives, is as follows:

- Meeting Net Revenue Requirements:** For Fiscal Year 2023/24 through FY 2027/28, the projected net revenue requirement (that is, total annual expenses plus debt service and rate-funded capital costs less non-rate revenues) for the District averages \$41 million annually. Without rate increases, the District is projected to run an annual deficit of approximately \$23.1 million, thus requiring more significant increases in the future.
- Funding Capital Improvement Projects:** The District must also be able to fund necessary capital improvements in order to maintain current service levels for its customers. As **Figure 2** below shows, District staff has identified roughly \$542.1 million in expected capital expenditures for FY 2023/24 through FY 2042/43 with approximately 38%, or \$205.6 million, of the total costs planned in the next five years.

Figure 2. Capital Improvement Costs for FY 2023/24 through FY 2042/43

| Capital Project Costs 2022-2041 ¹ | 2024-2028 | 2029-2033 | 2034-2043 | Total |
|--|-----------------------|----------------------|-----------------------|-----------------------|
| Fund 12 - Capital Replacement Projects | \$ 129,292,705 | \$ 45,976,858 | \$ 126,159,979 | \$ 301,429,542 |
| Fund 13 - Capital Improvement Projects | 75,784,656 | 31,613,223 | 130,844,647 | 238,242,527 |
| Contingency | 530,812 | 586,055 | 1,352,819 | 2,469,686 |
| Total Costs | \$ 205,608,173 | \$ 78,176,136 | \$ 258,357,446 | \$ 542,141,755 |
| <i>Average Annual Expenditure</i> | <i>38%</i> | <i>14%</i> | <i>48%</i> | <i>\$ 27,107,088</i> |

1. Capital project costs include estimated cost inflation.

The recommended rate increases will allow the District to complete planned capital projects while building reserve levels to meet the minimum recommended targets.

To minimize the impacts on ratepayers, the District is also planning to issue new debt in the form of 20-year loans (e.g., State Revolving Fund, WIFIA, etc.) beginning in FY 2023/24 and then in the next two years totaling \$114 million, as shown in **Figure 3** below.

Figure 3. 20-Year Debt Issues

| Estimated Debt Financing | Loan Issues | Annual Debt Service Payment ¹ |
|--|-----------------------|--|
| Issue #1, FY 2023/24 | \$ 15,000,000 | \$ 1,307,768 |
| Issue #2, FY 2024/25 | 44,062,000 | 4,795,151 |
| Issue #3, FY 2027/28 | 55,000,000 | 3,242,159 |
| Total Debt Service in FY 2023/24 and Beyond | \$ 114,062,000 | \$ 9,345,078 |

1. Assumes 20-year repayment for each issue and 4-6% interest rate.

- Building and Maintaining Reserve Funds:** Reserve funds provide a basis for a utility to cope with fiscal emergencies, such as revenue shortfalls, asset failure, and natural disasters, among other events. Reserve policies provide guidelines for sound financial management, with an overall long-range perspective to maintain financial solvency and mitigate financial risks associated with revenue instability, volatile capital costs, and unexpected emergencies.

NBS along with District staff have chosen to set the following reserve targets:

- Operating Reserves** equal 6 months of operating and maintenance expenses, which will be approximately \$6.7 million in FY 2023/24 and increase to \$9.7 million by FY 2027/28. An operating reserve is intended to promote financial viability in the event of any short-term fluctuation in revenues and/or expenditures. Fluctuations in revenue can be caused by weather patterns, the natural inflow and outflow of cash during billing cycles, natural variability in demand-based revenue streams (such as, volumetric charges), and, particularly in periods of economic distress, changes or trends in the age of receivables.
 - Capital Replacement Reserves** equal to 50% of operating and maintenance expenses, which will be approximately \$6.7 million in FY 2023/24 and increase to \$9.7 million by FY 2027/28. This reserve is set aside to address long-term and routine capital system replacement and rehabilitation needs.
 - Emergency Reserves** equal to 5% of the operating and maintenance budget, which will be approximately \$665,000 in FY 2023/24 and increase to \$970,000 by FY 2027/28. This reserve is intended to provide additional financial security should any unforeseen revenue shortages or capital emergency occur.
- Maintaining Adequate Bond Coverage:** The District is required by the rate covenants of the 2015 Wastewater Revenue Refunding Bonds to maintain a debt service coverage ratio of at least 1.25. The benefit of maintaining a higher coverage ratio is that it strengthens the District’s credit rating which can help lower interest rates for debt-funded capital projects and, in turn, reduce annual debt service payments. It is projected that, without the recommended rate increases, the District will not be able to meet the debt coverage requirement beginning in FY 2023/24.
- Inflation and Growth Projections:** Assumptions regarding cost inflation were made in order to project future revenues and expenses for the rate adoption period. According to District staff, customer growth is expected to be about 1% percent annually. This factor was used in the analysis

for certain revenues and expenses, while all other factors were based on averages made available by the U.S. Bureau of Labor Statistics for Riverside County.⁴

Rate revenue increases of 35% in the first three years of the rate adoption period from FY 2023/24 through 2025/26, a 20% increase in FY 2026/27, and 15% increase in FY 2027/28 will be needed in order to fully fund all operating and maintenance expenses, as well as planned capital projects, while still maintaining reserves at the recommended target levels. **Figure 4** summarizes the sources and uses of funds, net revenue requirements, and the recommended annual percent increases in total rate revenue recommended for the next five (5) years. These rates take into consideration the input and direction provided by District staff, the Budget and Finance Committee, and the Board.

Figure 4. Summary of Revenue Requirements

| Summary of Sources and Uses of Funds and Net Revenue Requirements | Budget | Projected Rates for Adoption Period | | | | |
|---|-----------------------|-------------------------------------|----------------------|-----------------------|----------------------|----------------------|
| | FY 2022/23 | FY 2023/24 | FY 2024/25 | FY 2025/26 | FY 2026/27 | FY 2027/28 |
| Sources of Sewer Funds | | | | | | |
| Rate Revenue Under Prevailing Rates | \$15,376,980 | \$ 15,530,749 | \$ 15,686,057 | \$ 15,842,918 | \$ 16,001,347 | \$ 16,161,360 |
| Additional Revenue from Rate Increases ¹ | 1,922,122 | 8,056,576 | 16,475,262 | 28,009,040 | 37,147,226 | 45,570,707 |
| Non-Rate Revenues | 1,209,423 | 1,507,364 | 1,322,100 | 1,335,586 | 1,349,210 | 1,362,974 |
| Total Sources of Funds | \$18,508,525 | \$ 25,094,689 | \$ 33,483,418 | \$ 45,187,544 | \$ 54,497,783 | \$ 63,095,042 |
| Uses of Sewer Funds | | | | | | |
| Operating Expenses | \$11,918,113 | \$ 13,304,141 | \$ 15,448,150 | \$ 15,892,274 | \$ 16,475,999 | \$ 19,405,386 |
| Debt Service | 4,410,469 | 6,575,627 | 9,138,077 | 14,992,569 | 14,249,904 | 15,289,309 |
| Rate-Funded Capital Expenses | 4,152,881 | 26,737,181 | - | 18,783,612 | 8,618,538 | 16,839,708 |
| Total Use of Funds | \$20,481,463 | \$ 46,616,949 | \$ 24,586,227 | \$ 49,668,455 | \$ 39,344,441 | \$ 51,534,404 |
| Surplus (Deficiency) before Rate Increase | \$ (1,972,938) | \$(21,522,259) | \$ 8,897,191 | \$ (4,480,911) | \$ 15,153,342 | \$ 11,560,638 |
| Surplus (Deficiency) after Rate Increase | \$ (50,816) | \$(13,465,683) | \$ 25,372,453 | \$ 23,528,129 | \$ 52,300,568 | \$ 57,131,345 |
| Projected Annual Rate Increase | 12.50% | 35.00% | 35.00% | 35.00% | 20.00% | 15.00% |
| <i>Cumulative Rate Increases</i> | 12.50% | 51.88% | 105.03% | 176.79% | 232.15% | 281.97% |
| Net Revenue Requirement² | \$19,272,041 | \$ 45,109,585 | \$ 23,264,127 | \$ 48,332,869 | \$ 37,995,231 | \$ 50,171,430 |
| Debt Coverage After Rate Increase | 1.49 | 1.79 | 1.97 | 1.95 | 2.67 | 2.86 |

1. Assumes new rates are implemented July 1, 2023 and on July 1st each year thereafter.

2. Total Use of Funds less Non-Rate Revenues. This is the annual amount needed from wastewater rates.

Figure 5 summarizes the District’s full Capital Improvement Program, providing the expected cost and timing of capital projects during the 5-year rate adoption period and beyond. It is notable to mention that \$114 million in new debt will be issued to help fund the District’s planned capital projects to be paid back over the next 20 years.

⁴ Bureau of Labor Statistics. Website: <https://data.bls.gov/cgi-bin/dsrv>.

Figure 5. Summary of Capital Improvement Plan

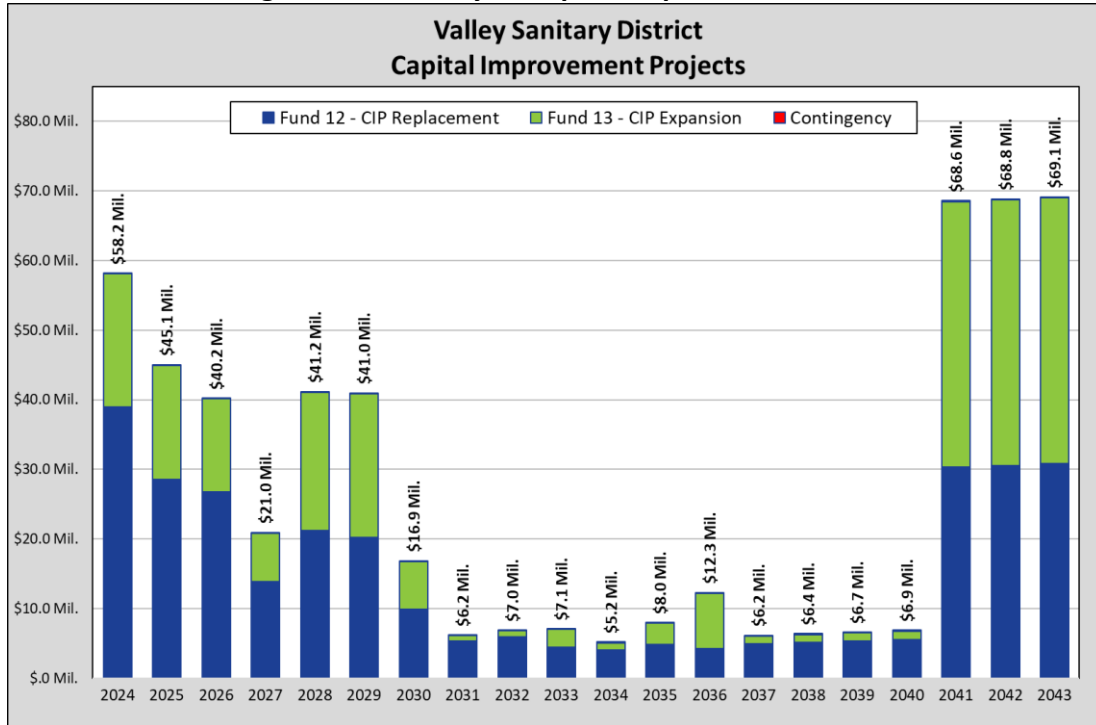


Figure 6 summarizes the projected reserve fund balances and reserve targets for the District’s unrestricted funds. A more detailed version of the District’s proposed 5-year financial plan is included in the Appendix. The appendix tables include revenue requirements, reserve funds, revenue sources, proposed rate increases, and the capital improvement program.

Figure 6. Summary of Reserve Funds

| Beginning Reserve Fund Balances and Recommended Reserve Targets | Budget | Projected Rates for Adoption Period | | | | |
|---|----------------------|-------------------------------------|----------------------|-----------------------|----------------------|----------------------|
| | FY 2022/23 | FY 2023/24 | FY 2024/25 | FY 2025/26 | FY 2026/27 | FY 2027/28 |
| Unrestricted Reserves | | | | | | |
| Operating Reserve | | | | | | |
| Ending Balance | \$ 5,959,100 | \$(15,563,159) | \$ (6,665,968) | \$(11,146,879) | \$ 4,006,463 | \$ 9,702,700 |
| Recommended Minimum Target | \$ 5,959,100 | \$ 6,652,100 | \$ 7,724,100 | \$ 7,946,100 | \$ 8,238,000 | \$ 9,702,700 |
| Capital Rehabilitation & Replacement Reserve | | | | | | |
| Ending Balance | \$ 16,517,145 | \$ 6,797,492 | \$ 6,885,859 | \$ 6,975,376 | \$ 7,066,055 | \$ 12,717,252 |
| Recommended Minimum Target | \$ 5,959,057 | \$ 6,652,071 | \$ 7,724,075 | \$ 7,946,137 | \$ 8,238,000 | \$ 9,702,693 |
| Emergency Fund Balance | | | | | | |
| Ending Balance | \$ 595,906 | \$ 665,207 | \$ 665,207 | \$ 665,207 | \$ 665,207 | \$ 970,269 |
| Recommended Minimum Target | \$ 595,906 | \$ 665,207 | \$ 772,408 | \$ 794,614 | \$ 823,800 | \$ 970,269 |
| Total Ending Balance | \$ 23,072,151 | \$ (8,100,460) | \$ 885,099 | \$ (3,506,296) | \$ 11,737,725 | \$ 23,390,222 |
| Recommended Minimum Target | \$ 12,514,062 | \$ 13,969,378 | \$ 16,220,583 | \$ 16,686,851 | \$ 17,299,800 | \$ 20,375,662 |

B. Cost-of-Service Analysis

Once the net revenue requirements are determined, the cost-of-service analysis (COSA) proportionately distributes the revenue requirements to each of the customer classes. The COSA consists of the classification of expenses and then the allocation of those expenses to customer classes based on allocation factors, such as water consumption and number of equivalent dwelling units (EDUs), or accounts.

Ultimately, a COSA is intended to result in rates that are proportional to the cost of providing service to each customer class.

Classification of Costs

As previously noted, costs are classified into three basic categories: (1) flow-related costs; (2) strength-related costs; and (3) customer-related costs. Most costs are typically allocated to more than one of these categories. The District’s budgeted costs were reviewed and allocated to these basic categories which serve as the basis for calculating fixed and variable charges. Tables in the *Appendix* show how the District’s expenses were classified and allocated to these cost-causation components.

Based on the District’s projected costs, the COSA resulted in a distribution that is approximately 42% fixed and 58% variable. However, the Board, in considering revenue stability and customer bill impacts as important factors in this rate setting process, decided to maintain the current rate structure that collects 70% of revenue from fixed charges and 30% from variable charges.

Figure 7 summarizes the allocation of the net revenue requirements to each cost-causation component for the proposed rate structure. The rate design of 70% fixed and 30% volumetric was part of the rate design analysis performed after the COSA. More details on the development of the allocation factors are discussed in the following section.

Figure 7. Allocation of Revenue Requirements by Customer Class

| Allocation of FY 2023/24 Revenue Requirements by Customer Class | | | | | | |
|---|--------------------------------|---------------------|---------------------|-------------------------------|-------------------------------------|------------------------------|
| Customer Class | Cost Classification Components | | | | Cost-of-Service Net Revenue Req'ts. | % of COS Net Revenue Req'ts. |
| | Volume | Treatment | | Customer Related ³ | | |
| | | BOD | TSS | | | |
| Net Revenue Requirements¹ | \$ 13,645,159 | \$ 4,693,927 | \$ 4,693,927 | \$ 554,312 | \$ 23,587,326 | -- |
| | 57.8% | 19.9% | 19.9% | 2.4% | 100.0% | |
| Residential | | | | | | |
| Single-Family Residential | \$ 9,881,076 | \$ 3,289,140 | \$ 3,286,075 | \$ 436,061 | \$ 16,892,352 | 71.6% |
| Multi-Family Residential | 1,281,639 | 426,623 | 426,225 | 6,506 | 2,140,994 | 9.1% |
| Mobile Home | 373,813 | 124,432 | 124,316 | 33,362 | 655,922 | 2.8% |
| RV Park | 514,422 | 171,237 | 171,078 | 61,483 | 918,221 | 3.9% |
| Residential Totals | \$ 12,050,951 | \$ 4,011,431 | \$ 4,007,694 | \$ 537,413 | \$ 20,607,488 | 87.4% |
| Non-Residential | | | | | | |
| Commercial - Low/Med. Strength | \$ 1,364,064 | \$ 389,194 | \$ 388,831 | \$ 15,349 | \$ 2,157,439 | 9.1% |
| Commercial - High Strength | 230,144 | 293,302 | 297,402 | 1,550 | 822,399 | 3.5% |
| Non-Residential Totals | \$ 1,594,209 | \$ 682,496 | \$ 686,234 | \$ 16,899 | \$ 2,979,837 | 12.6% |
| Total | \$ 13,645,159 | \$ 4,693,927 | \$ 4,693,927 | \$ 554,312 | \$ 23,587,326 | 100% |

1. The 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.

Characteristics of Customers by Class

Customer classes are determined by combining customers with similar flow and strength characteristics into customer classes. The most recent water consumption data was used to estimate the amount of flow that goes to the treatment plant. Residential volumetric charges for Single Family, Multi-Family and Mobile Home customers were based on the average winter water consumption for the three lowest months of water use,⁵ while annual water consumption was used for non-residential and RV Park customers. For non-residential customers that do not have typical (i.e., residential) effluent strengths, volumetric rates also reflect their estimated effluent strength.

Determining Customer Class Effluent Strengths – Effluent strength factors for each customer class were determined by using the State Water Resources Control Board’s (SWRCB) *Revenue Program Guidelines*⁶ as described below:

- Residential customers, including single family, multi-family, and mobile homes, were assigned BOD and TSS strength factors of 175 mg/l which is within the normal range for residential users.
- Commercial low/medium strength customers (e.g., offices, shopping centers, churches, etc.) were assumed to have a strength that is consistent with normal sewage; therefore, a strength factor of 150 mg/L was used.
- Commercial high strength customers (e.g., restaurants, groceries, hotels with dining, etc.) were assumed to have excessive strength; therefore, strength factors on the high-end of the range for commercial users were applied at 670 mg/L for BOD and 680 mg/L for TSS.

Figure 8 summarizes the development of the strength allocation factors by customer class, with the percentage allocations by customer class highlighted in the blue columns.

Figure 8. Annual Flow and Strength Characteristics by Customer Class

| Customer Class | Adjusted Total Annual Volume (HCF) ¹ | Biochemical Oxygen Demand (BOD) | | | | Total Suspended Solids (TSS) | | | |
|--------------------------------|---|--|--|---------------------------------|------------------|--|--|---------------------------------|------------------|
| | | Avg. Strength Factor (mg/l) ² | Calculated BOD (lbs./yr.) ³ | Adjusted BOD (lbs./yr.) | Percent of Total | Avg. Strength Factor (mg/l) ² | Calculated TSS (lbs./yr.) ³ | Adjusted TSS (lbs./yr.) | Percent of Total |
| Residential | | | | | | | | | |
| Single-Family Residential | 2,986,744 | 175 | 3,260,646 | 1,501,866 | 70.1% | 175 | 3,260,646 | 2,477,906 | 70.0% |
| Multi-Family Residential | 387,400 | 175 | 422,927 | 194,802 | 9.1% | 175 | 422,927 | 321,400 | 9.1% |
| Mobile Home | 112,992 | 175 | 123,354 | 56,817 | 2.7% | 175 | 123,354 | 93,742 | 2.6% |
| RV Park | 155,494 | 175 | 169,754 | 78,189 | 3.6% | 175 | 169,754 | 129,003 | 3.6% |
| Non-Residential Totals | | | | | | | | | |
| Commercial - Low/Med. Strength | 412,315 | 150 | 385,822 | 177,711 | 8.3% | 150 | 385,822 | 293,203 | 8.3% |
| Commercial - High Strength | 69,566 | 670 | 290,761 | 133,926 | 6.2% | 680 | 295,101 | 224,260 | 6.3% |
| Total: | 4,124,510 | | 4,653,265 | 2,143,311 | 100.0% | | 4,657,604 | 3,539,514 | 100.0% |
| | | <i>Target, from WWTP Data</i> | | <i>2,143,311 BOD (lbs./yr.)</i> | | | | <i>3,539,514 TSS (lbs./yr.)</i> | |
| | | | | <i>0.461 BOD Adj. Factor</i> | | | | <i>0.760 TSS Adj. Factor</i> | |

1. RV Parks and Commercial customers are based on annual water consumption. The remaining residential accounts are based on annual average winter water use.

2. Source: CA State Water Resources Control Board, *Revenue Program Guidelines (Appendix G)*, G-21.

3. Calculated BOD and TSS are from source file: 16.ASP & Pond Effluent Data + loading (01.2017 - 08.2020).xlsx.

⁵ Lowest consecutive winter months – January, February, and December.

⁶ State Water Resources Control Board (SWRCB). *Revenue Program Guidelines, Appendix G*, page G-21 “Commercial User Strength Characteristics.” Site: https://www.waterboards.ca.gov/publications_forms/publications/general/docs/srf_wastewater_facilities_b.pdf.

Figure 9 summarizes the development of the customer allocation factors. The percentages of accounts were used to allocate customer-related costs while EDUs were used in calculating the annual fixed charges, except for Mobile Homes and RV Parks, which were calculated using the number of accounts.

Figure 9. Number or Accounts and EDUs by Customer Class

| Sewer Customer Classes | Number of Accounts ¹ | Percent of Total | Number of EDUs | Percent of Total |
|--------------------------------|---------------------------------|------------------|----------------|------------------|
| Residential | | | | |
| Single-Family Residential | 19,972 | 78.67% | 19,980 | 57.62% |
| Multi-Family Residential | 298 | 1.17% | 5,566 | 16.05% |
| Mobile Home | 1,528 | 6.02% | 1,528 | 4.41% |
| RV Park | 2,816 | 11.09% | 2,816 | 8.12% |
| Non-Residential | | | | |
| Commercial - Low/Med. Strength | 703 | 2.77% | 4,250 | 12.26% |
| Commercial - High Strength | 71 | 0.28% | 535 | 1.54% |
| Total: | 25,388 | 100.00% | 34,675 | 100.00% |

1. Number of accounts for Mobile Homes and RV Parks are based on the number of lots.

C. Rate Design Analysis

The process of evaluating the sewer rate structure provides the opportunity to incorporate and balance rate design objectives and policies, such as revenue stability, equity among customer classes, and customer bill impacts. NBS discussed several rate alternatives with District staff over the course of this Study, in addition to the percentage of revenue collected from fixed versus variable charges and how rates should be differentiated by customer class.

Fixed & Variable Charges

Three factors were used to develop the fixed charges: (1) the annual net revenue requirement; (2) the number of dwelling units for Single Family, Multi-Family, and non-residential customers; and (3) the number of accounts, or lots, for Mobile Home and RV Park customers. The proposed annual fixed charges are calculated by multiplying the annual revenue requirement by 70%, then dividing by the number of EDUs or accounts. On the other hand, variable charges, are calculated by taking the remaining 30% of the revenue requirement for each customer class and dividing it by the estimated effluent volume produced. The fixed and volumetric charges for each customer class are summarized in **Figure 10** below.

Figure 10. Development of Fixed and Variable Charges

| Customer Class | Number of Accounts | No. of EDUs ¹ | Estimated Sewer Flow ² | Total Revenue Requirement | Fixed & Volumetric Charges | |
|--------------------------------|--------------------|--------------------------|-----------------------------------|---------------------------|------------------------------------|------------------|
| | | | | | Annual Fixed Charge | Vol. Rate \$/hcf |
| Residential | | | | | <u>\$ Per EDU/Acct³</u> | |
| Single-Family Residential | 19,972 | 19,980 | 2,986,744 | \$ 16,892,352 | \$591.82 | \$1.69 |
| Multi-Family Residential | 298 | 5,566 | 387,400 | 2,140,994 | \$269.26 | \$1.69 |
| Mobile Home | 1,528 | 1,518 | 112,992 | 655,922 | \$300.49 | \$1.69 |
| RV Park | 2,816 | 1,576 | 155,494 | 918,221 | \$228.25 | \$1.77 |
| Residential Totals | 24,614 | 28,640 | 3,642,630 | \$ 20,607,488 | | |
| Non-Residential | | | | | <u>\$ Per EDU</u> | |
| Commercial - Low/Med. Strength | 703 | 4,250 | 412,315 | \$ 2,157,439 | \$355.34 | \$1.57 |
| Commercial - High Strength | 71 | 535 | 69,566 | 822,399 | \$1,076.04 | \$3.55 |
| Non-Residential Totals | 774 | 4,785 | 481,880 | \$ 2,979,837 | | |
| Total | 25,388 | 33,425 | 4,124,510 | \$ 23,587,326 | | |

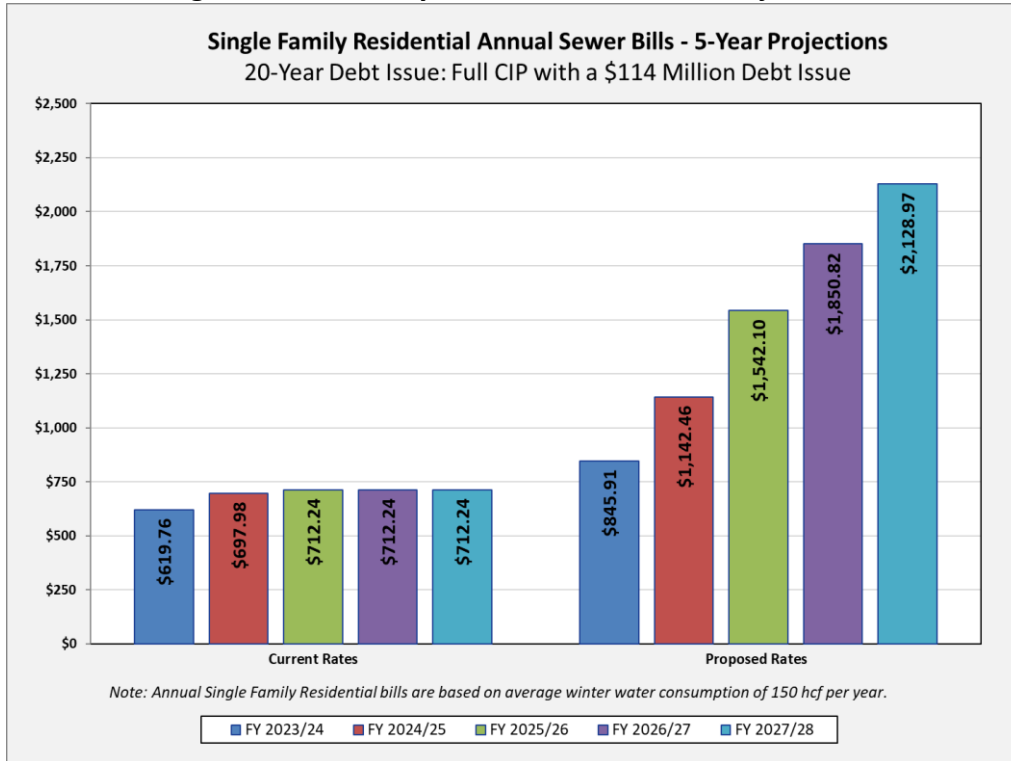
1. EDUs are from the tax roll. Source file: 4. FY 21 Tax Roll for Rate Study.xlsx .
2. Estimated sewer flow based on average winter consumption for SFR, MFR and MH customers. RV Parks and Commercial customers are based on annual consumption. Source file: 14. IWA Net Billed Water Consumption by Location (RAC) Jan 2019 - Sept 2020.xlsx.
3. Fixed charges for SFR and MFR customers are calculated based on EDU, while rates for MH and RV Park customers are based on the number of accounts, or lots.

Rate Structure Alternative

District staff directed NBS to maintain the current rate structure that collect rate revenue from a combination of volumetric and fixed charges. By collecting a portion of the revenue from volumetric charges, rates are better aligned with the true cost of service and rate equity is improved among customer classes.

Figure 11 shows the projected customer bills for the average single-family residential customer under the current and proposed rates for the 5-year rate period based on average winter water use of 150 HCF per year.

Figure 11. Summary of Annual Sewer Bill Projections



D. Current and Proposed Rates

The proposed sewer rates in this study were developed based on input provided by District staff, the Budget and Finance Committee, and the Board.

Figure 12 compares the current and proposed rates for FY 2023/24 through FY 2027/28 by customer class. Projected rates for each fiscal year⁷ reflect adjustments based on the cost-of-service analysis, the 70% fixed and 30% variable rate design structure, and the recommended annual percent increases in rate revenue. More detailed tables on the development of the proposed rates are documented in the *Appendix*.

⁷ The initial rate adjustment and all future rate adjustments are scheduled to be effective on July 1st of each year.

Figure 12. Current vs. Proposed Rates

| Sewer Rate Schedule | Current Rates (\$/EDU) | Proposed Annual Sewer Rates | | | | |
|--|------------------------|----------------------------------|------------|------------|------------|------------|
| | | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| | | FY 2023/24 | FY 2024/25 | FY 2025/26 | FY 2026/27 | FY 2027/28 |
| <i>Projected Increase in Rate Revenue:</i> ¹ | | 35.00% | 35.00% | 35.00% | 20.00% | 15.00% |
| Fixed Service Charges (Per EDU or Accounts)² | | | | | | |
| Residential | | Rates Per EDU or Account | | | | |
| Single-Family Residential | \$385.56 | \$591.82 | \$798.96 | \$1,078.60 | \$1,294.32 | \$1,488.47 |
| Multi-Family Residential | \$168.75 | \$269.26 | \$363.50 | \$490.73 | \$588.88 | \$677.21 |
| Mobile Home | \$203.94 | \$300.49 | \$405.66 | \$547.64 | \$657.17 | \$755.75 |
| RV Park | \$158.91 | \$228.25 | \$308.14 | \$415.99 | \$499.19 | \$574.07 |
| Non-Residential | | Rates Per EDU | | | | |
| Commercial - Low Strength | \$223.91 | \$355.34 | \$479.71 | \$647.61 | \$777.13 | \$893.70 |
| Commercial - High Strength | \$682.88 | \$1,076.04 | \$1,452.65 | \$1,961.08 | \$2,353.30 | \$2,706.30 |
| Volumetric Rate (\$/hcf)³ | | | | | | |
| Residential | | Rates Per HCF⁴ | | | | |
| Single-Family Residential | \$1.10 | \$1.69 | \$2.29 | \$3.09 | \$3.71 | \$4.27 |
| Multi-Family Residential | \$1.10 | \$1.69 | \$2.29 | \$3.09 | \$3.71 | \$4.27 |
| Mobile Home | \$1.10 | \$1.69 | \$2.29 | \$3.09 | \$3.71 | \$4.27 |
| RV Park | \$1.23 | \$1.77 | \$2.39 | \$3.23 | \$3.88 | \$4.46 |
| Non-Residential | | | | | | |
| Commercial - Low Strength | \$0.99 | \$1.57 | \$2.12 | \$2.86 | \$3.43 | \$3.94 |
| Commercial - High Strength | \$2.25 | \$3.55 | \$4.79 | \$6.47 | \$7.76 | \$8.92 |

1. This is the increase in annual rate revenue as shown in the Financial Plan, not an across-the-board adjustment to individual rate. Based on the cost-of-service adjustments, individual rates may be more or less than this amount in FY 2021/22.
2. Rates for SFR and MFR customers are calculated based on EDU, while rates for MH and RV Park customers are based on the number of accounts, or lots. Commercial rates are based on estimated EDUs.
3. One Unit is equal to one HCF (Hundred Cubic Feet) or 748 gallons.
4. HCF based on *average winter consumption* for SFR, MFR and MH customers and *annual consumption* for RV Parks and Commercial customers.

E. Comparison of Current and Proposed Customer Bills

Residential Customers

The following figures compare annual sewer bills under current and proposed rates for residential customers in the first year of the new rate period. These annual bill comparisons are calculated at various levels of average winter water consumption and reflect adjustments to how EDUs are calculated. Here are the results:

- Single family customers are expected to see an increase in their annual bill. Customers will see an increase of \$206.26 in the fixed charge and an increase of \$0.59 per HCF in the volumetric rate. **Figure 13** shows customer bills under various consumption levels, including the average winter, annual, and summer consumptions.
- Multi-family residential customers will see their annual bill increase due to an increase of \$100.51 in the fixed charge and an increase of \$0.59 per HCF in the volumetric rate. **Figure 14** shows the customer bill impacts under various consumption levels, including the average winter, annual, and summer consumptions.
- Mobile home customers will also see their annual bill increase due to an increase of \$96.55 in the fixed charge and an increase of \$0.59 per HCF in the volumetric rates. **Figure 15** shows the customer bill impacts under various consumption levels.

Figure 13. Annual Bill Comparison for Single Family Customers

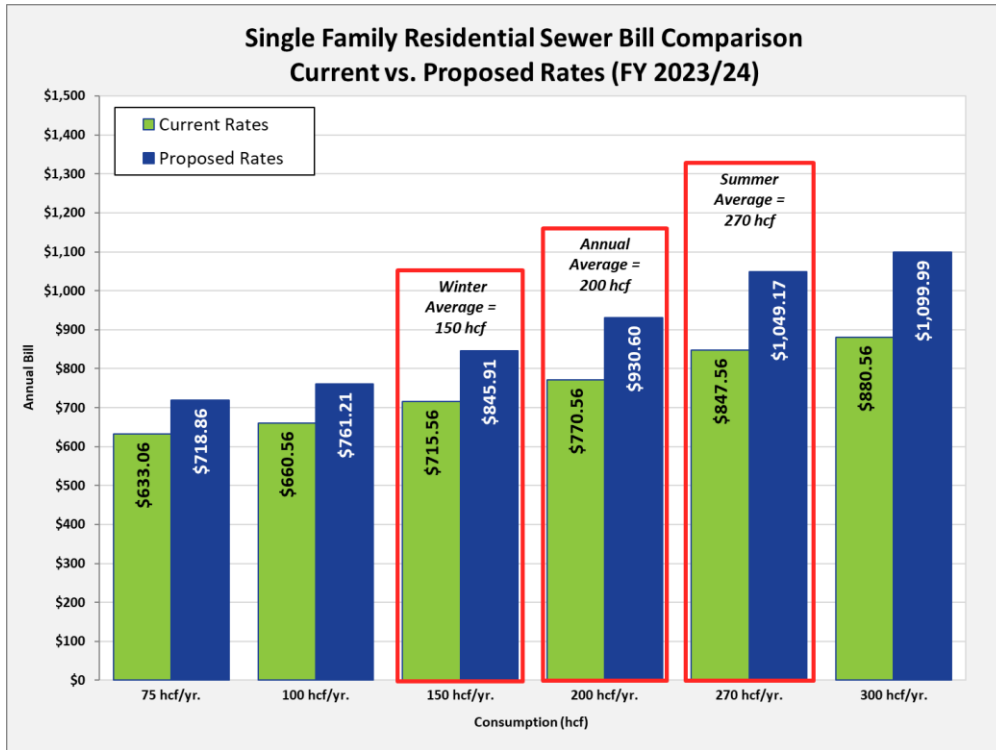


Figure 14. Annual Bill Comparison for Multi-Family Customers

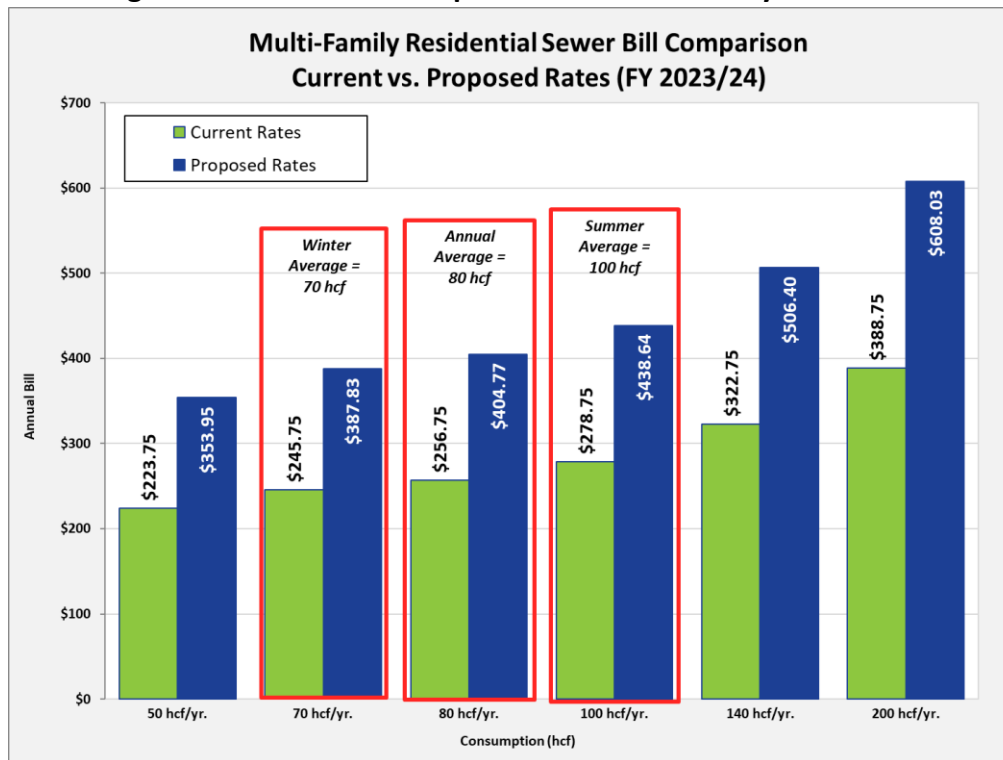
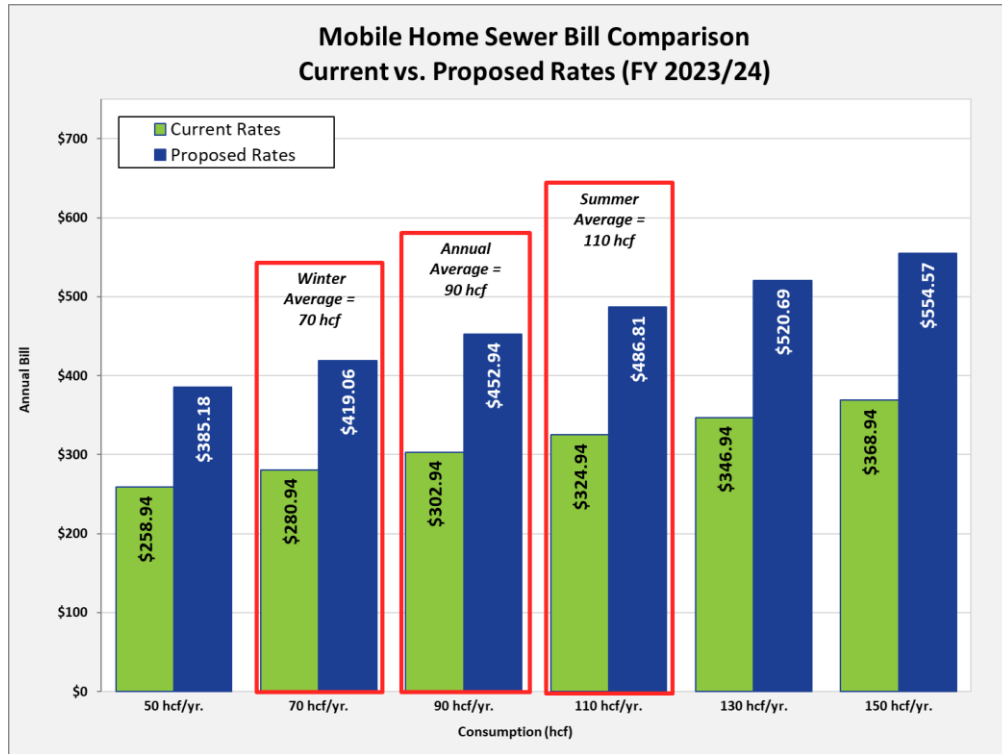


Figure 15. Annual Bill Comparison for Mobile Home Customers



RV Parks and Commercial Customers

RV Parks and Non-Residential customers will continue to be charged both a fixed rate as well as a volumetric charge. As a result, annual sewer bills for these customers will also vary based on their actual consumption. Here are the results:

- RV Park customers will see their annual bill increase due to an increase of \$69.34 in the fixed charge and an increase of \$0.54 per HCF in the volumetric rate. **Figure 16** shows the customer bill impacts.
- Commercial low/medium-strength customers will see an increase in their annual bill due to an increase of \$131.43 in the fixed charge and an increase of \$0.58 per HCF in the volumetric rate. **Figure 17** shows the customer bill impacts.
- Commercial high-strength customers will also see an increase in their annual bill due to an increase of \$393.16 in the fixed charge and an increase of \$1.30 per HCF in the volumetric rate. **Figure 18** shows the customer bill impacts.

Figure 16. Annual Bill Comparison for RV Park Customers

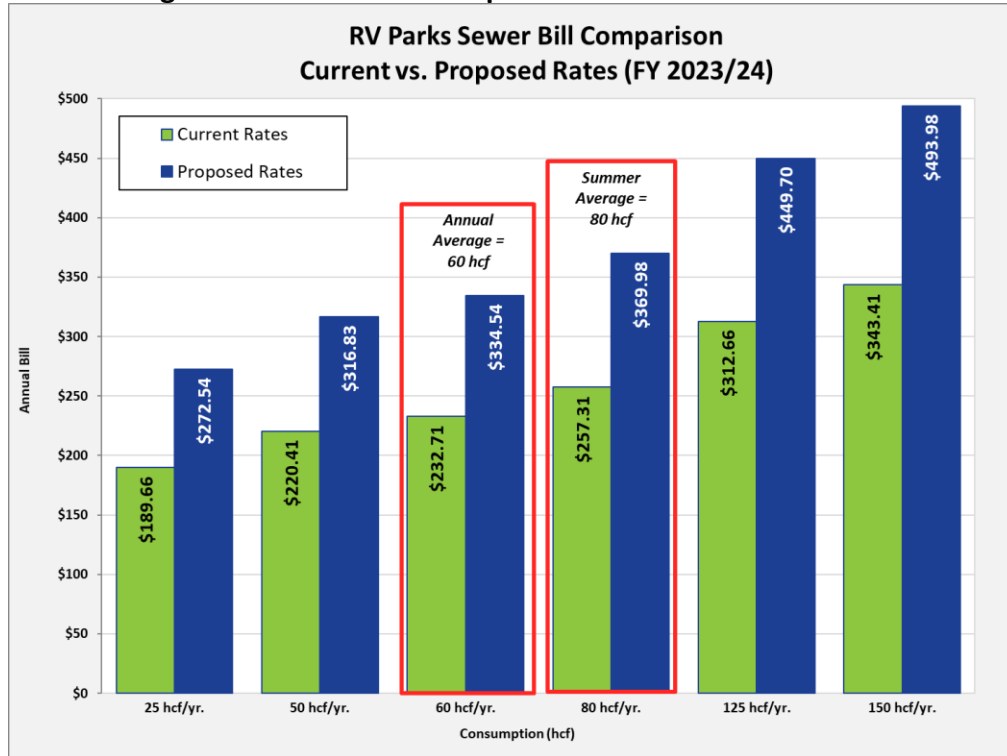


Figure 17. Annual Bill Comparison for Commercial Low/Medium Strength Customers

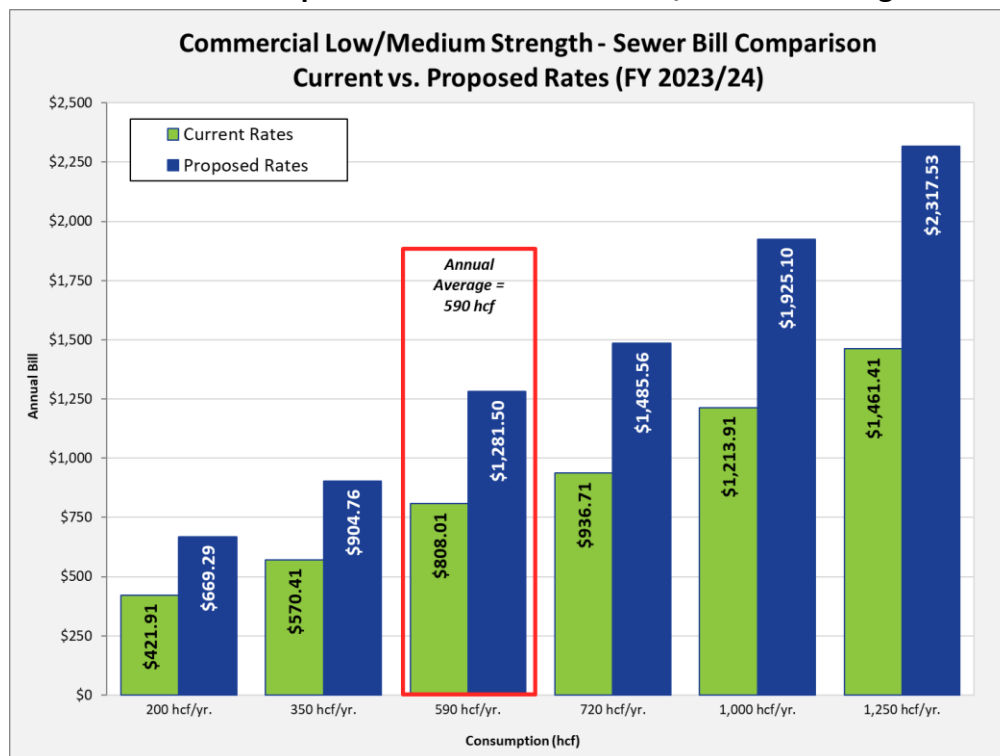


Figure 18. Annual Bill Comparison for Commercial High Strength Customers

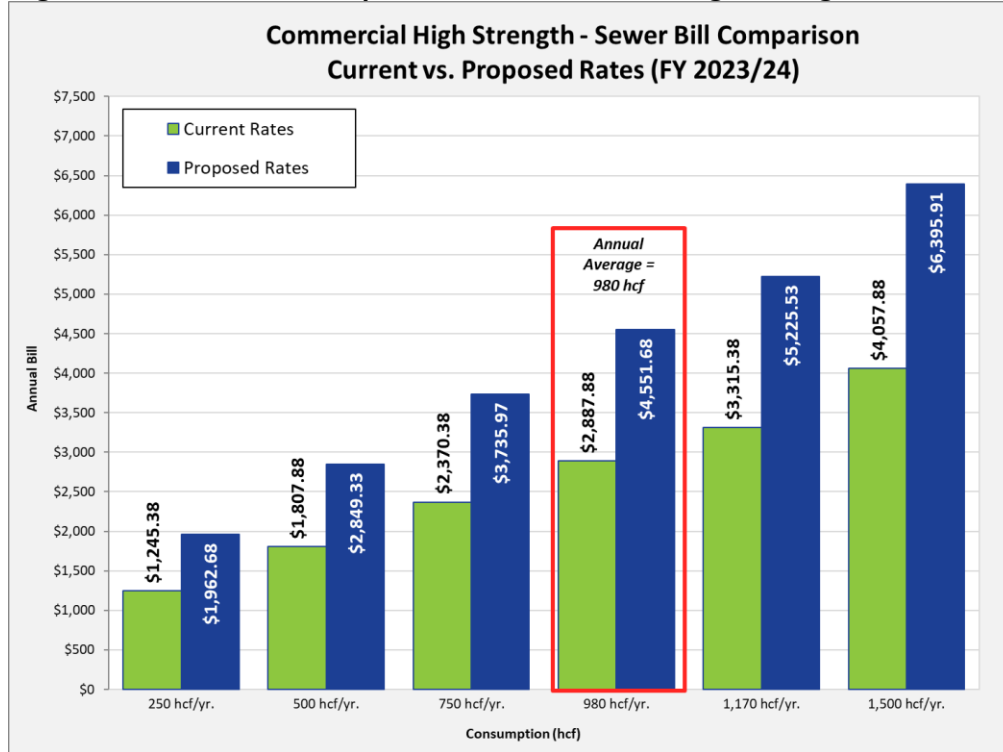
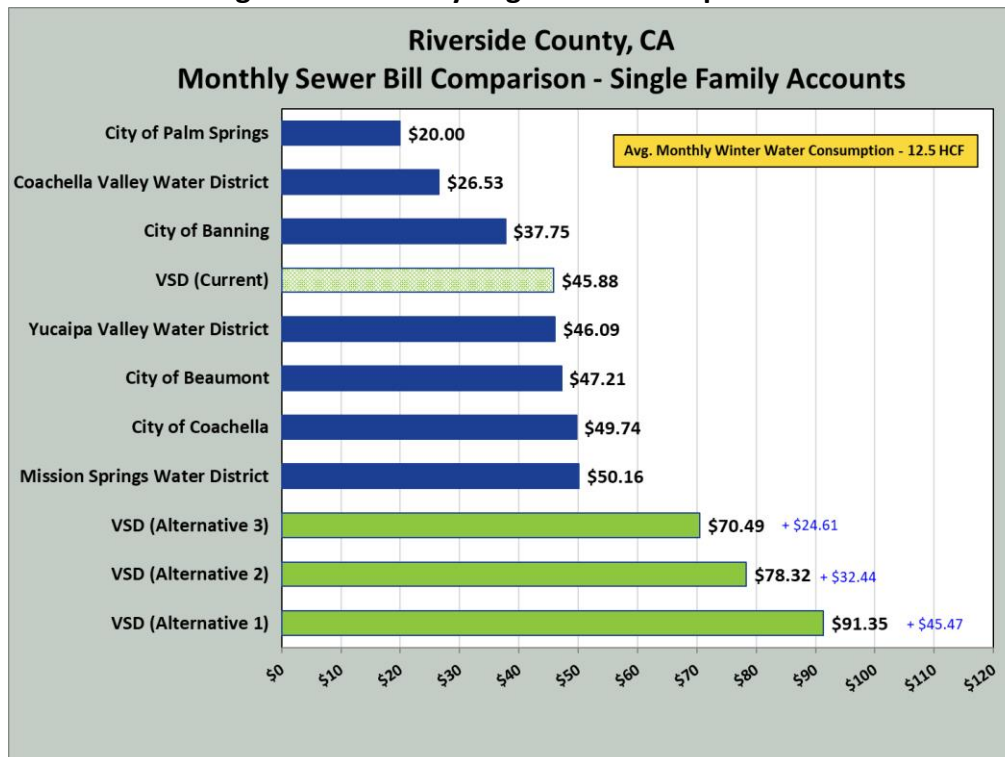


Figure 19 compares the current and proposed monthly sewer bills for the typical single-family residential customer to those of other surrounding communities.

Figure 19. Monthly Regional Bill Comparisons



SECTION 3. RECOMMENDATIONS AND NEXT STEPS

A. Consultant Recommendations

NBS recommends the District take the following actions:

Approve and Accept this Study: NBS recommends the Board formally approve and adopt this study report, including the *Appendix*, and its recommendations as a first step to implementing the proposed rates. This study provides documentation of the rate study and the basis for analyzing potential changes to future rates.

Implement Recommended Levels of Rate Adjustments and Proposed Rates: Based on successfully meeting the Proposition 218 procedural requirements, the Board should proceed with implementing the 5-year schedule of proposed rates previously shown in Figure 12. This will help ensure the continued financial health of District’s wastewater utility.

B. Next Steps

Annually Review Rates and Revenue: Any time an agency adopts new utility rates or rate structures, 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. Additionally, changing economic and water consumption patterns underscore the need for this ongoing review, as well as potential and unseen changing revenue requirements—particularly those related to environmental regulations that can significantly affect capital improvements and repair and replacement costs.

Note: The attached Appendix provides more detailed information on the analysis of the sewer revenue requirements, cost-of-service analysis and cost allocations, and the rate design analysis that have been summarized in this report.

C. NBS’ Principal Assumptions and Considerations

In preparing this report and the opinions and recommendations included herein, NBS has relied on a number of principal assumptions and considerations with regard to financial matters, conditions, data used in estimating EDUs, and events that may occur in the future. This information and these assumptions, including District’s budgets, capital improvement costs, and information from District staff 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 and 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.

ABBREVIATIONS & ACRONYMS

| | |
|------------|--|
| 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 |
| CIP | Capital Improvement Program/Plan |
| COD | Chemical Oxygen Demand |
| COM | Commodity |
| Comm. | Commercial |
| COS | Cost-of-Service |
| COSA | Cost-of-Service Analysis |
| CPI | Consumer Price Index |
| DU | Dwelling Unit |
| Excl. | Exclude |
| ENR | Engineering News Record |
| EDU | Equivalent Dwelling Unit |
| Exp. | Expense |
| FY | Fiscal Year |
| FY 2019/20 | July 1, 2019 through June 30, 2020 |
| 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 |

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 particular subject matter.

ABBREVIATIONS & ACRONYMS

| | |
|-----------------|--|
| Muni. | Municipal |
| NH ₃ | Ammonia |
| NPV | Net Present Value |
| N/A | Not Available or Not Applicable |
| O&M | Operating & Maintenance Expenses |
| Prop 13 | Proposition 13 (1978) – Article XIII A of the California Constitution which limits taxes on real property to 1% 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 |
| 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 Board |
| TSS / SS | Total Suspended Solids |
| V. / Vs. /vs. | Versus |
| WWTP | Wastewater Treatment Plant |

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 particular subject matter.

APPENDIX: DETAILED SEWER STUDY TABLES AND FIGURES

TABLE 1: FINANCIAL PLAN AND SUMMARY OF REVENUE REQUIREMENTS

| RATE REVENUE REQUIREMENTS SUMMARY ¹ | Budget | Projected Rates for Adoption Period | | | | | Projected | | | | |
|--|-----------------------|-------------------------------------|----------------------|-----------------------|----------------------|----------------------|-----------------------|----------------------|----------------------|----------------------|----------------------|
| | 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 | FY 2032/33 |
| Sources of Sewer Funds | | | | | | | | | | | |
| <i>Rate Revenue:</i> | | | | | | | | | | | |
| Sewer Service Charge | \$ 15,376,980 | \$ 15,530,749 | \$ 15,686,057 | \$ 15,842,918 | \$ 16,001,347 | \$ 16,161,360 | \$ 16,322,974 | \$ 16,486,203 | \$ 16,651,066 | \$ 16,817,576 | \$ 16,985,752 |
| Revenue from Rate Increases ² | 1,922,122 | 8,056,576 | 16,475,262 | 28,009,040 | 37,147,226 | 45,570,707 | 49,143,884 | 49,635,323 | 50,131,676 | 50,632,993 | 51,139,323 |
| Subtotal: Rate Revenue After Rate Increases | 17,299,102 | 23,587,326 | 32,161,319 | 43,851,958 | 53,148,573 | 61,732,068 | 65,466,858 | 66,121,526 | 66,782,741 | 67,450,569 | 68,125,075 |
| <i>Non-Rate Revenue:</i> | | | | | | | | | | | |
| Plan Check & Inspection Fees (incl. Permits) | 57,045 | 57,615 | 58,191 | 58,773 | 59,361 | 59,955 | 60,554 | 61,160 | 61,771 | 62,389 | 63,013 |
| Other Services | 22,277 | 22,500 | 22,725 | 22,952 | 23,182 | 23,414 | 23,648 | 23,884 | 24,123 | 24,364 | 24,608 |
| Interest Income ³ | - | 285,847 | 88,367 | 89,516 | 90,680 | 91,859 | 165,324 | 134,463 | 233,891 | 550,396 | 865,173 |
| Non-Operating Revenue | 1,130,101 | 1,141,402 | 1,152,816 | 1,164,344 | 1,175,988 | 1,187,747 | 1,199,625 | 1,211,621 | 1,223,737 | 1,235,975 | 1,248,334 |
| Subtotal: Non-Rate Revenue | 1,209,423 | 1,507,364 | 1,322,100 | 1,335,586 | 1,349,210 | 1,362,974 | 1,449,151 | 1,431,128 | 1,543,523 | 1,873,124 | 2,201,129 |
| Total Sources of Funds | \$ 18,508,525 | \$ 25,094,689 | \$ 33,483,418 | \$ 45,187,544 | \$ 54,497,783 | \$ 63,095,042 | \$ 66,916,009 | \$ 67,552,654 | \$ 68,326,264 | \$ 69,323,693 | \$ 70,326,203 |
| Uses of Funds | | | | | | | | | | | |
| <i>Operating Expenses:</i> | | | | | | | | | | | |
| Engineering | \$ 838,156 | \$ 919,917 | \$ 965,913 | \$ 1,014,208 | \$ 1,064,919 | \$ 1,118,165 | \$ 1,174,073 | \$ 1,232,777 | \$ 1,294,416 | \$ 1,359,136 | \$ 1,427,093 |
| Collections | 996,492 | 1,041,393 | 1,093,463 | 1,148,136 | 1,205,543 | 1,265,820 | 1,329,111 | 1,395,566 | 1,465,345 | 1,538,612 | 1,615,542 |
| Operations | 3,336,972 | 3,943,558 | 4,972,337 | 5,220,954 | 5,482,001 | 7,681,466 | 8,065,539 | 8,468,816 | 8,892,257 | 9,336,870 | 9,803,713 |
| Maintenance | 1,679,923 | 1,806,699 | 1,897,034 | 1,991,886 | 2,091,480 | 2,196,054 | 2,305,857 | 2,421,149 | 2,542,207 | 2,669,317 | 2,802,783 |
| Lab | 626,047 | 764,050 | 802,253 | 842,365 | 884,483 | 928,708 | 975,143 | 1,023,900 | 1,075,095 | 1,128,850 | 1,185,292 |
| Administration | 3,564,412 | 3,749,403 | 4,426,424 | 4,567,512 | 4,876,899 | 5,300,967 | 5,651,902 | 5,844,316 | 6,581,184 | 6,814,636 | 7,251,902 |
| Board | 139,505 | 327,000 | 501,000 | 278,000 | - | - | - | - | - | - | - |
| Additional Staffing | 736,606 | 752,121 | 789,727 | 829,213 | 870,674 | 914,208 | 959,918 | 1,007,914 | 1,058,310 | 1,111,225 | 1,166,787 |
| Subtotal: Operating Expenses | \$ 11,918,113 | \$ 13,304,141 | \$ 15,448,150 | \$ 15,892,274 | \$ 16,475,999 | \$ 19,405,386 | \$ 20,461,542 | \$ 21,394,438 | \$ 22,908,813 | \$ 23,958,646 | \$ 25,253,113 |
| <i>Other Expenditures:</i> | | | | | | | | | | | |
| Existing Debt Service | \$ 4,410,469 | \$ 5,267,858 | \$ 4,588,149 | \$ 5,647,491 | \$ 4,904,826 | \$ 5,944,231 | \$ 6,099,120 | \$ 6,038,173 | \$ 5,976,829 | \$ 5,921,958 | \$ 5,860,110 |
| Future Debt Service | - | 1,307,768 | 4,549,927 | 9,345,078 | 9,345,078 | 9,345,078 | 9,345,078 | 9,345,078 | 9,345,078 | 9,345,078 | 9,345,078 |
| Rate-Funded Capital Expenses | 4,152,881 | 26,737,181 | - | 18,783,612 | 8,618,538 | 16,839,708 | 37,412,868 | 15,817,354 | 5,520,971 | - | - |
| Subtotal: Other Expenditures | \$ 8,563,350 | \$ 33,312,808 | \$ 9,138,077 | \$ 33,776,181 | \$ 22,868,442 | \$ 32,129,018 | \$ 52,857,067 | \$ 31,200,605 | \$ 20,842,879 | \$ 15,267,036 | \$ 15,205,188 |
| Total Uses of Water Funds | \$ 20,481,463 | \$ 46,616,949 | \$ 24,586,227 | \$ 49,668,455 | \$ 39,344,441 | \$ 51,534,404 | \$ 73,318,609 | \$ 52,595,044 | \$ 43,751,692 | \$ 39,225,682 | \$ 40,458,301 |
| Annual Surplus/(Deficit) | \$ (1,972,938) | \$ (21,522,259) | \$ 8,897,191 | \$ (4,480,911) | \$ 15,153,342 | \$ 11,560,638 | \$ (6,402,601) | \$ 14,957,610 | \$ 24,574,572 | \$ 30,098,011 | \$ 29,867,902 |
| Net Revenue Req't. (Total Uses less Non-Rate Revenue) | \$ 19,272,041 | \$ 45,109,585 | \$ 23,264,127 | \$ 48,332,869 | \$ 37,995,231 | \$ 50,171,430 | \$ 71,869,458 | \$ 51,163,916 | \$ 42,208,169 | \$ 37,352,558 | \$ 38,257,172 |
| Total Rate Revenue After Rate Increases | \$ 17,299,102 | \$ 23,587,326 | \$ 32,161,319 | \$ 43,851,958 | \$ 53,148,573 | \$ 61,732,068 | \$ 65,466,858 | \$ 66,121,526 | \$ 66,782,741 | \$ 67,450,569 | \$ 68,125,075 |
| Projected Annual Rate Revenue Increase | 12.50% | 35.00% | 35.00% | 35.00% | 20.00% | 15.00% | 5.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| Cumulative Increase from Annual Revenue Increases | 12.50% | 51.88% | 105.03% | 176.79% | 232.15% | 281.97% | 301.07% | 301.07% | 301.07% | 301.07% | 301.07% |
| Debt Coverage After Rate Increase | 1.49 | 1.79 | 1.97 | 1.95 | 2.67 | 2.86 | 3.01 | 3.00 | 2.96 | 2.97 | 2.96 |

1. Revenues and expenses for FY 2022/23 were provided by District staff. Source file: 1. O and M 02-15-23.
2. Revenue from rate increases assumes a July 1, 2023 implementation date. Each year thereafter, new rates will be implemented on July 1st.
3. Interest income beginning in FY 2023/24 is calculated based on historical LAIF returns.

| 3 <-- Select Financial Plan Scenario Here | | 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 | FY 2032/33 |
|---|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| 1 | Alternative 1 - Full CIP with No Debt Issue | 12.50% | 75.00% | 75.00% | 25.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| 2 | Alternative 2 - Full CIP with a \$70 Million Debt | 12.50% | 50.00% | 50.00% | 30.00% | 12.00% | 10.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| 3 | Alternative 3 - Full CIP with a \$114 Million Debt | 12.50% | 35.00% | 35.00% | 35.00% | 20.00% | 15.00% | 5.00% | 0.00% | 0.00% | 0.00% | 0.00% |

TABLE 2: RESERVE FUND SUMMARY

| SUMMARY OF CASH ACTIVITY | Budget | Projected Rates for Adoption Period | | | | | Projected | | | | |
|--|----------------------|-------------------------------------|------------------------|------------------------|-----------------------|----------------------|-----------------------|----------------------|----------------------|----------------------|-----------------------|
| | 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 | FY 2032/33 |
| Total Beginning Cash¹ | \$ 45,956,630 | | | | | | | | | | |
| Unrestricted Reserves: | | | | | | | | | | | |
| Operating Reserve | | | | | | | | | | | |
| Beginning Reserve Balance | \$ 18,490,254 | \$ 5,959,100 | \$ (15,563,159) | \$ (6,665,968) | \$ (11,146,879) | \$ 4,006,463 | \$ 9,702,700 | \$ 3,300,099 | \$ 10,697,200 | \$ 11,454,400 | \$ 11,979,300 |
| Plus: Net Cash Flow (After Rate Increases) | (1,972,938) | (21,522,259) | 8,897,191 | (4,480,911) | 15,153,342 | 11,560,638 | (6,402,601) | 14,957,610 | 24,574,572 | 30,098,011 | 29,867,902 |
| Plus: Transfer of Debt Reserve Surplus | - | - | - | - | - | - | - | - | - | - | - |
| Less: Transfer Out to Capital Replacement Reserve | (10,558,216) | - | - | - | - | (5,864,401) | - | (7,560,510) | (23,817,372) | (29,573,111) | (29,220,602) |
| Ending Operating Reserve Balance | \$ 5,959,100 | \$ (15,563,159) | \$ (6,665,968) | \$ (11,146,879) | \$ 4,006,463 | \$ 9,702,700 | \$ 3,300,099 | \$ 10,697,200 | \$ 11,454,400 | \$ 11,979,300 | \$ 12,626,600 |
| Target Ending Balance (6 mos. of O&M Expenses, or 50% of O&M) | \$ 5,959,100 | \$ 6,652,100 | \$ 7,724,100 | \$ 7,946,100 | \$ 8,238,000 | \$ 9,702,700 | \$ 10,230,800 | \$ 10,697,200 | \$ 11,454,400 | \$ 11,979,300 | \$ 12,626,600 |
| Capital Replacement Reserve | | | | | | | | | | | |
| Beginning Reserve Balance | \$ 27,466,376 | \$ 16,517,145 | \$ 6,797,492 | \$ 6,885,859 | \$ 6,975,376 | \$ 7,066,055 | \$ 12,717,252 | \$ 10,343,288 | \$ 17,991,615 | \$ 41,967,160 | \$ 66,008,440 |
| Plus: Grant Proceeds | - | - | - | - | - | - | - | - | - | - | - |
| Plus: Transfer of Operating Reserve Surplus | 10,558,216 | - | - | - | - | 5,864,401 | - | 7,560,510 | 23,817,372 | 29,573,111 | 29,220,602 |
| Plus: Interest Earnings | 348,000 | 214,723 | 88,367 | 89,516 | 90,680 | 91,859 | 165,324 | 134,463 | 233,891 | 545,573 | 858,110 |
| Less: Transfer Out to Emergency Fund | (348,127) | (69,301) | - | - | - | (305,062) | (52,808) | (46,645) | (75,719) | (52,492) | (64,723) |
| Less: Use of Reserves for Capital Projects | (21,507,320) | (9,865,075) | - | - | - | - | (2,486,481) | - | - | (6,024,911) | (5,478,580) |
| Ending Capital Rehab & Replacement Reserve Balance | \$ 16,517,145 | \$ 6,797,492 | \$ 6,885,859 | \$ 6,975,376 | \$ 7,066,055 | \$ 12,717,252 | \$ 10,343,288 | \$ 17,991,615 | \$ 41,967,160 | \$ 66,008,440 | \$ 90,543,849 |
| Capital R&R Reserve (50% of O&M Expenses) | \$ 5,959,057 | \$ 6,652,071 | \$ 7,724,075 | \$ 7,946,137 | \$ 8,238,000 | \$ 9,702,693 | \$ 10,230,771 | \$ 10,697,219 | \$ 11,454,407 | \$ 11,979,323 | \$ 12,626,557 |
| Emergency Reserve | | | | | | | | | | | |
| Beginning Reserve Balance | \$ 247,779 | \$ 595,906 | \$ 665,207 | \$ 665,207 | \$ 665,207 | \$ 665,207 | \$ 970,269 | \$ 1,023,077 | \$ 1,069,722 | \$ 1,145,441 | \$ 1,197,932 |
| Plus: Transfer of Capital Reserve Surplus | 348,127 | 69,301 | - | - | - | 305,062 | 52,808 | 46,645 | 75,719 | 52,492 | 64,723 |
| Less: Use of Reserves | - | - | - | - | - | - | - | - | - | - | - |
| Ending Operating Reserve Balance | \$ 595,906 | \$ 665,207 | \$ 665,207 | \$ 665,207 | \$ 665,207 | \$ 970,269 | \$ 1,023,077 | \$ 1,069,722 | \$ 1,145,441 | \$ 1,197,932 | \$ 1,262,656 |
| Target Ending Balance (5% of O&M) | \$ 595,906 | \$ 665,207 | \$ 772,408 | \$ 794,614 | \$ 823,800 | \$ 970,269 | \$ 1,023,077 | \$ 1,069,722 | \$ 1,145,441 | \$ 1,197,932 | \$ 1,262,656 |
| Ending Balance - Excl. Restricted Reserves | \$ 23,072,151 | \$ (8,100,460) | \$ 885,099 | \$ (3,506,296) | \$ 11,737,725 | \$ 23,390,222 | \$ 14,666,464 | \$ 29,758,537 | \$ 54,567,001 | \$ 79,185,673 | \$ 104,433,105 |
| Min. Target Ending Balance - Excl. Restricted Reserves | \$ 12,514,062 | \$ 13,969,378 | \$ 16,220,583 | \$ 16,686,851 | \$ 17,299,800 | \$ 20,375,662 | \$ 21,484,648 | \$ 22,464,141 | \$ 24,054,247 | \$ 25,156,555 | \$ 26,515,812 |
| Ending Surplus/(Deficit) Compared to Reserve Targets | \$ 10,558,089 | \$ (22,069,838) | \$ (15,335,484) | \$ (20,193,147) | \$ (5,562,074) | \$ 3,014,559 | \$ (6,818,184) | \$ 7,294,396 | \$ 30,512,753 | \$ 54,029,117 | \$ 77,917,292 |

1. The beginning cash balance is per source file: 5. Cash Balance as of 10.31.22.pdf.

TABLE 3: RESERVE FUND SUMMARY, cont.

| SUMMARY OF CASH ACTIVITY | Budget | Projected Rates for Adoption Period | | | | | Projected | | | | |
|---|---------------------|-------------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| | 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 | FY 2032/33 |
| Restricted Reserves: | | | | | | | | | | | |
| Connection Fees Reserve Fund | | | | | | | | | | | |
| Beginning Reserve Balance ¹ | \$ 11,754,993 | \$ 5,471,057 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 370,970 | \$ 543,366 |
| Plus: Interest Earnings | - | 71,124 | - | - | - | - | - | - | - | 4,823 | 7,064 |
| Plus: Connection Fee Revenue | 1,001,526 | 1,011,541 | 1,021,657 | 1,031,873 | 1,042,192 | 1,052,614 | 1,063,140 | 1,073,772 | 1,084,509 | 1,095,354 | 1,106,308 |
| Less: Use of Reserves for Capital Projects | (7,285,462) | (6,553,722) | (1,021,657) | (1,031,873) | (1,042,192) | (1,052,614) | (1,063,140) | (1,073,772) | (713,540) | (927,780) | (1,656,738) |
| Ending Impact Fee Fund Balance | \$ 5,471,057 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 370,970 | \$ 543,366 | \$ - |
| Target Ending Balance | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| CSWRCB Reserve Fund | | | | | | | | | | | |
| Beginning Reserve Balance | \$ 1,052,894 | \$ 1,066,582 | \$ 1,080,447 | \$ 1,094,493 | \$ 1,108,721 | \$ 1,123,135 | \$ 1,137,736 | \$ 1,152,526 | \$ 1,167,509 | \$ 1,182,687 | \$ 1,198,061 |
| Plus: Interest Earnings | 13,688 | 13,866 | 14,046 | 14,228 | 14,413 | 14,601 | 14,791 | 14,983 | 15,178 | 15,375 | 15,575 |
| Less: Transfer of Surplus to Operating Reserve | - | - | - | - | - | - | - | - | - | - | - |
| Ending Debt Reserve Balance | \$ 1,066,582 | \$ 1,080,447 | \$ 1,094,493 | \$ 1,108,721 | \$ 1,123,135 | \$ 1,137,736 | \$ 1,152,526 | \$ 1,167,509 | \$ 1,182,687 | \$ 1,198,061 | \$ 1,213,636 |
| Target Ending Balance | \$ 1,494,074 | \$ 1,438,738 | \$ 1,383,402 | \$ 1,328,066 | \$ 1,272,730 | \$ 1,217,394 | \$ 1,162,057 | \$ 1,106,721 | \$ 1,051,385 | \$ 996,049 | \$ 940,713 |
| Ending Balance - Restricted Reserves | \$ 6,537,638 | \$ 1,080,447 | \$ 1,094,493 | \$ 1,108,721 | \$ 1,123,135 | \$ 1,137,736 | \$ 1,152,526 | \$ 1,167,509 | \$ 1,553,656 | \$ 1,741,428 | \$ 1,213,636 |
| Min. Target Ending Balance - Restricted Reserves | \$ 1,494,074 | \$ 1,438,738 | \$ 1,383,402 | \$ 1,328,066 | \$ 1,272,730 | \$ 1,217,394 | \$ 1,162,057 | \$ 1,106,721 | \$ 1,051,385 | \$ 996,049 | \$ 940,713 |
| Ending Surplus/(Deficit) Compared to Reserve Targets | \$ 5,043,564 | \$ (358,291) | \$ (288,909) | \$ (219,344) | \$ (149,595) | \$ (79,658) | \$ (9,531) | \$ 60,788 | \$ 502,271 | \$ 745,379 | \$ 272,923 |
| Annual Interest Earnings Rate² | 1.30% | 1.30% | 1.30% | 1.30% | 1.30% | 1.30% | 1.30% | 1.30% | 1.30% | 1.30% | 1.30% |

1. The beginning cash balance is equal to the amount in Fund 13. Source file: 5. Cash Balance as of 10.31.22.pdf.

2. Historical interest earning rates are per the average annual yields for funds invested in LAIF (2018-2022). The source is the California State Treasurer's website: <https://www.treasurer.ca.gov/pmia-laif/historical/annual.asp>.

CHART 1

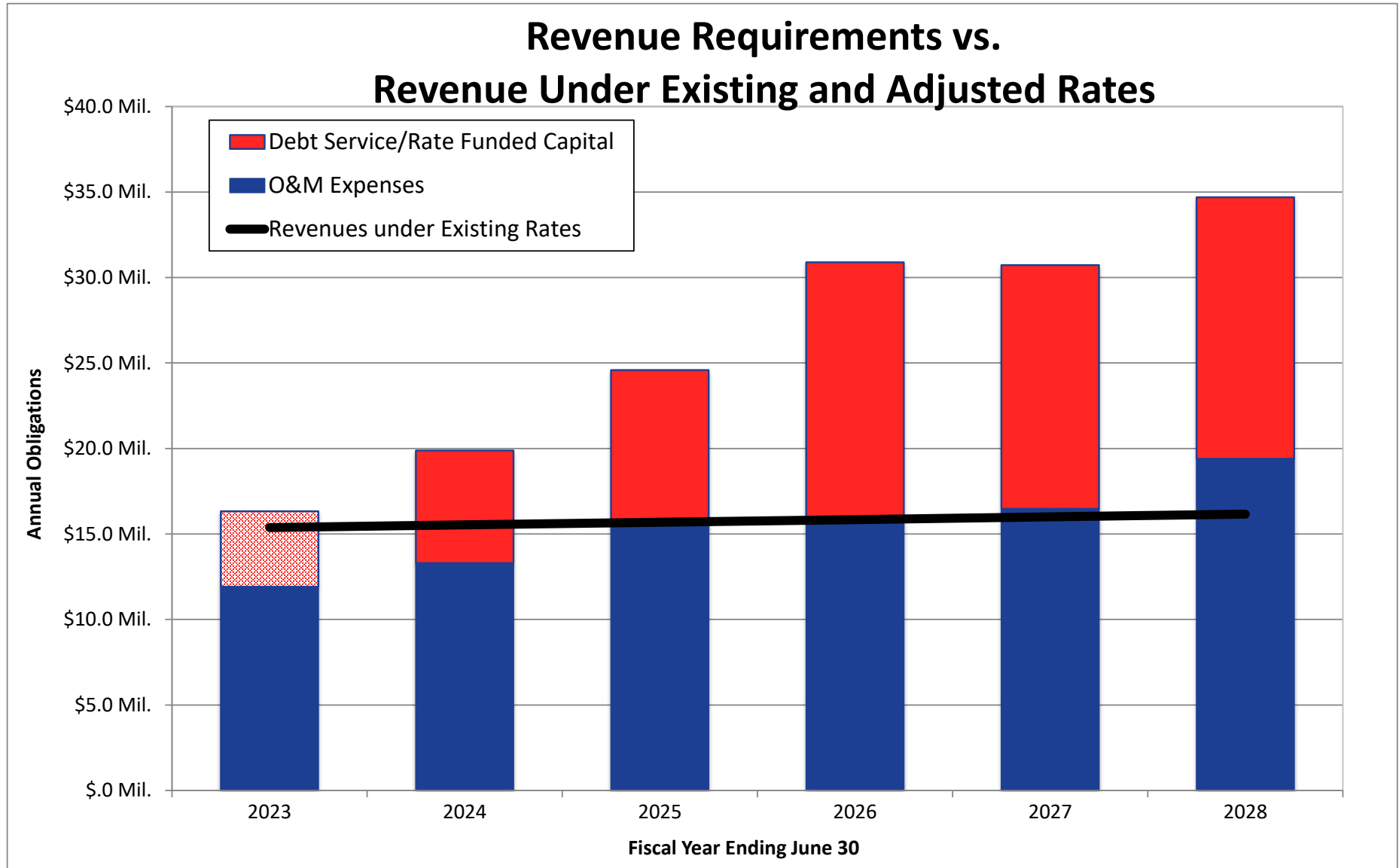


CHART 2

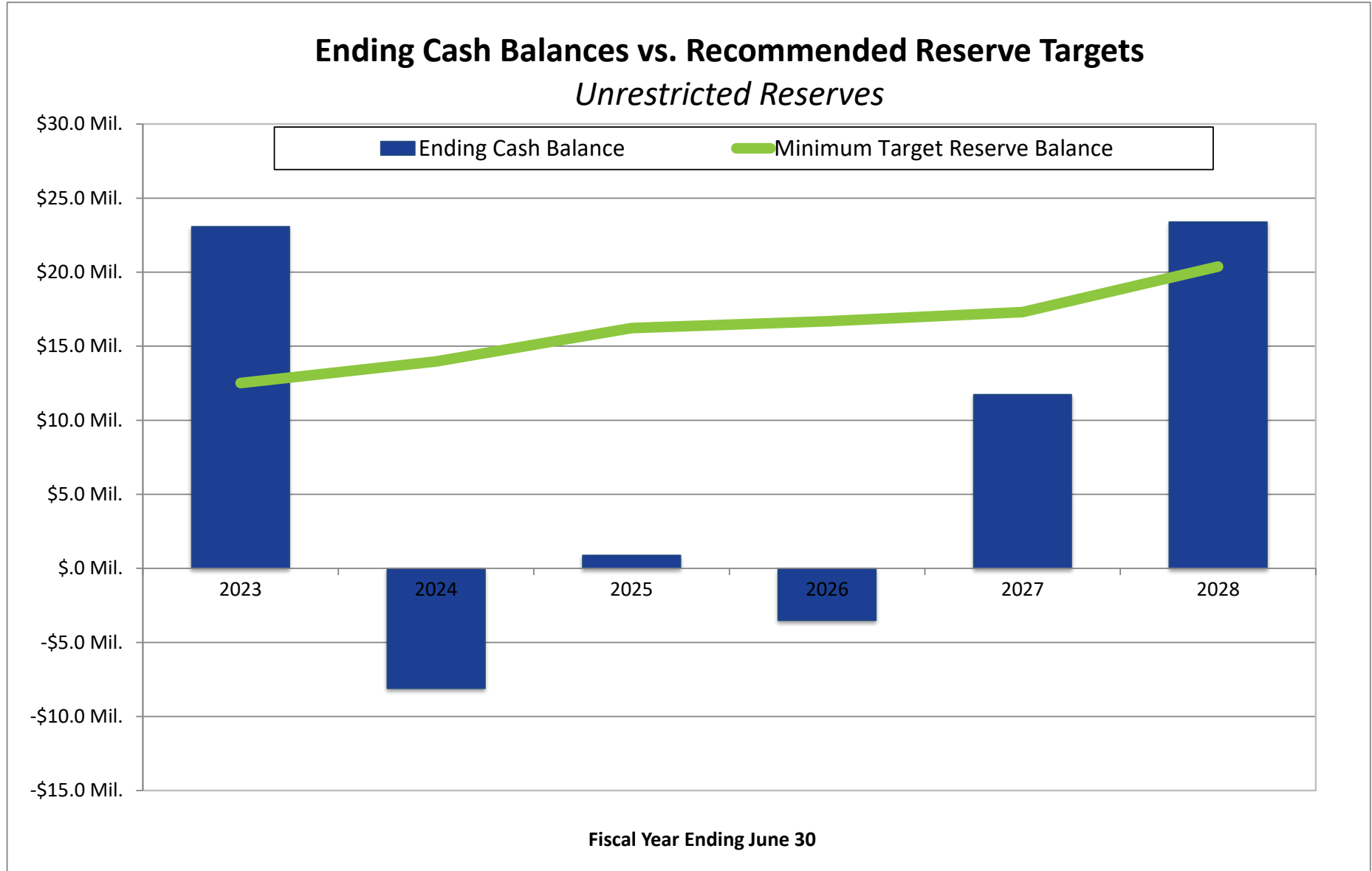
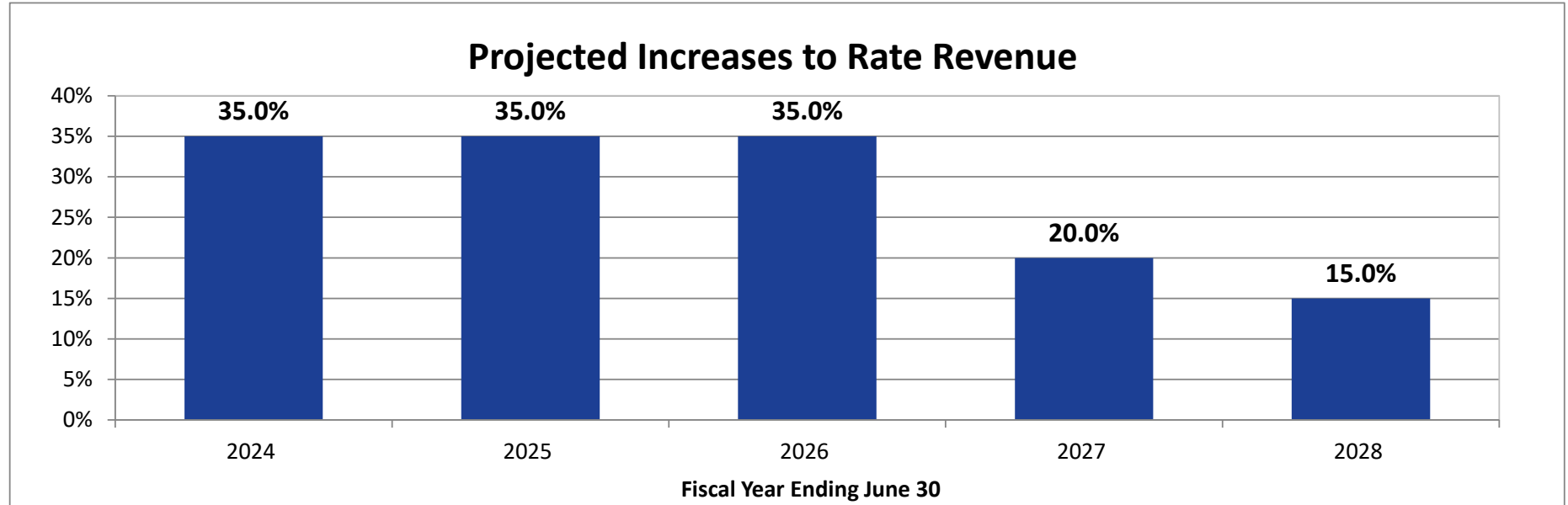


CHART 3



VALLEY SANITARY DISTRICT
SEWER RATE STUDY
Operating Revenue and Expenses

Exhibit 1

TABLE 4: REVENUE FORECAST¹

| Operations and Maintenance Forecast | | | | Budget | | Projected Rates for Adoption Period | | | | | | Projected | | | | |
|---|------|------------------------------|--------|----------------------|----------------------|-------------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|--|--|
| DEPT. | CODE | DESCRIPTION | Basis | 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 | FY 2032/33 | | |
| SEWER REVENUE | | | | | | | | | | | | | | | | |
| <i>Operating Revenue</i> | | | | | | | | | | | | | | | | |
| 11 | 4120 | Sewer Service - Current | 1 | \$ 15,376,980 | \$ 15,530,749 | \$ 15,686,057 | \$ 15,842,918 | \$ 16,001,347 | \$ 16,161,360 | \$ 16,322,974 | \$ 16,486,203 | \$ 16,651,066 | \$ 16,817,576 | \$ 16,985,752 | | |
| 11 | 4210 | Permit/Inspection Fees | 1 | 44,571 | 45,017 | 45,467 | 45,922 | 46,381 | 46,845 | 47,313 | 47,786 | 48,264 | 48,747 | 49,234 | | |
| 11 | 4270 | Plan Check Fees | 1 | 12,474 | 12,598 | 12,724 | 12,851 | 12,980 | 13,110 | 13,241 | 13,373 | 13,507 | 13,642 | 13,779 | | |
| 11 | 4285 | Other Services | 1 | 22,277 | 22,500 | 22,725 | 22,952 | 23,182 | 23,414 | 23,648 | 23,884 | 24,123 | 24,364 | 24,608 | | |
| <i>Non-Operating Revenue</i> | | | | | | | | | | | | | | | | |
| 11 | 4510 | Interest Revenue | See FP | - | - | - | - | - | - | - | - | - | - | - | | |
| 11 | 4430 | Taxes - Current Secured | 1 | 1,041,449 | 1,051,864 | 1,062,382 | 1,073,006 | 1,083,736 | 1,094,573 | 1,105,519 | 1,116,574 | 1,127,740 | 1,139,017 | 1,150,408 | | |
| 11 | 4440 | Taxes - Current Unsecured | 1 | 35,061 | 35,412 | 35,766 | 36,123 | 36,485 | 36,849 | 37,218 | 37,590 | 37,966 | 38,346 | 38,729 | | |
| 11 | 4450 | Taxes - Prior Secured | 1 | 8,552 | 8,638 | 8,724 | 8,811 | 8,900 | 8,989 | 9,078 | 9,169 | 9,261 | 9,354 | 9,447 | | |
| 11 | 4470 | Taxes - Supplemental Current | 1 | 4,914 | 4,963 | 5,013 | 5,063 | 5,114 | 5,165 | 5,216 | 5,269 | 5,321 | 5,374 | 5,428 | | |
| 11 | 4480 | Taxes - Supplemental Prior | 1 | 11,369 | 11,482 | 11,597 | 11,713 | 11,830 | 11,948 | 12,068 | 12,189 | 12,310 | 12,434 | 12,558 | | |
| 11 | 4500 | Homeowner's Tax Relief | 1 | 6,735 | 6,802 | 6,870 | 6,939 | 7,008 | 7,078 | 7,149 | 7,221 | 7,293 | 7,366 | 7,440 | | |
| 11 | 4574 | Non-Operating Revenue | 1 | 22,021 | 22,241 | 22,464 | 22,688 | 22,915 | 23,144 | 23,376 | 23,610 | 23,846 | 24,084 | 24,325 | | |
| SUBTOTAL: SEWER REVENUE | | | | \$ 16,586,403 | \$ 16,752,267 | \$ 16,919,789 | \$ 17,088,987 | \$ 17,259,877 | \$ 17,432,476 | \$ 17,606,801 | \$ 17,782,869 | \$ 17,960,697 | \$ 18,140,304 | \$ 18,321,707 | | |
| CONNECTION FEE REVENUE² | | | | | | | | | | | | | | | | |
| 13 | 4200 | Connection Fees | 1 | 1,001,526 | 1,011,541 | 1,021,657 | 1,031,873 | 1,042,192 | 1,052,614 | 1,063,140 | 1,073,772 | 1,084,509 | 1,095,354 | 1,106,308 | | |
| 13 | 4510 | Interest Revenue | See FP | - | - | - | - | - | - | - | - | - | - | - | | |
| TOTAL: REVENUE | | | | \$ 17,587,929 | \$ 17,763,808 | \$ 17,941,446 | \$ 18,120,860 | \$ 18,302,069 | \$ 18,485,090 | \$ 18,669,941 | \$ 18,856,640 | \$ 19,045,206 | \$ 19,235,659 | \$ 19,428,015 | | |

TABLE 5: REVENUE SUMMARY

| DESCRIPTION | Basis | 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 | FY 2032/33 |
|--|-------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| SEWER REVENUE | | | | | | | | | | | | |
| Sewer Service Charge | | \$ 15,376,980 | \$ 15,530,749 | \$ 15,686,057 | \$ 15,842,918 | \$ 16,001,347 | \$ 16,161,360 | \$ 16,322,974 | \$ 16,486,203 | \$ 16,651,066 | \$ 16,817,576 | \$ 16,985,752 |
| Plan Check & Inspection Fees (incl. Permits) | | 57,045 | 57,615 | 58,191 | 58,773 | 59,361 | 59,955 | 60,554 | 61,160 | 61,771 | 62,389 | 63,013 |
| Other Services | | 22,277 | 22,500 | 22,725 | 22,952 | 23,182 | 23,414 | 23,648 | 23,884 | 24,123 | 24,364 | 24,608 |
| OTHER REVENUE | | | | | | | | | | | | |
| Non-Operating Revenue | | 1,130,101 | 1,141,402 | 1,152,816 | 1,164,344 | 1,175,988 | 1,187,747 | 1,199,625 | 1,211,621 | 1,223,737 | 1,235,975 | 1,248,334 |
| SUBTOTAL: SEWER REVENUE | | \$ 16,586,403 | \$ 16,752,267 | \$ 16,919,789 | \$ 17,088,987 | \$ 17,259,877 | \$ 17,432,476 | \$ 17,606,801 | \$ 17,782,869 | \$ 17,960,697 | \$ 18,140,304 | \$ 18,321,707 |

VALLEY SANITARY DISTRICT
SEWER RATE STUDY
Operating Revenue and Expenses

Exhibit 1

TABLE 6: OPERATING EXPENSE FORECAST¹

| DEPT. | CODE | DESCRIPTION | Basis | 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 | FY 2032/33 |
|------------------------------------|------|---------------------------|-------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| ENGINEERING | | | | | | | | | | | | | | |
| <i>Salary</i> | | | | | | | | | | | | | | |
| 11 | 5030 | Salaries | 3 | \$ 613,752 | \$ 674,473 | \$ 708,197 | \$ 743,606 | \$ 780,787 | \$ 819,826 | \$ 860,817 | \$ 903,858 | \$ 949,051 | \$ 996,504 | \$ 1,046,329 |
| 11 | 5070 | Overtime | 3 | 1,000 | 1,000 | 1,050 | 1,103 | 1,158 | 1,216 | 1,276 | 1,340 | 1,407 | 1,477 | 1,551 |
| <i>Benefits</i> | | | | | | | | | | | | | | |
| 11 | 5110 | Longevity | 3 | 7,500 | 9,500 | 9,975 | 10,474 | 10,997 | 11,547 | 12,125 | 12,731 | 13,367 | 14,036 | 14,738 |
| 11 | 5112 | Retirement | 3 | 68,480 | 84,180 | 88,389 | 92,808 | 97,449 | 102,321 | 107,437 | 112,809 | 118,450 | 124,372 | 130,591 |
| 11 | 5116 | Payroll Taxes | 3 | 56,003 | 61,648 | 64,730 | 67,967 | 71,365 | 74,934 | 78,680 | 82,614 | 86,745 | 91,082 | 95,636 |
| 11 | 5124 | Group Life Insurance | 3 | 1,248 | 1,452 | 1,525 | 1,601 | 1,681 | 1,765 | 1,853 | 1,946 | 2,043 | 2,145 | 2,253 |
| 11 | 5126 | Group Health Insurance | 3 | 51,774 | 56,328 | 59,144 | 62,102 | 65,207 | 68,467 | 71,890 | 75,485 | 79,259 | 83,222 | 87,383 |
| 11 | 5128 | Dental/Vision Insurance | 3 | 5,829 | 6,777 | 7,116 | 7,472 | 7,845 | 8,237 | 8,649 | 9,082 | 9,536 | 10,013 | 10,513 |
| 11 | 5132 | Disability Insurance | 3 | 1,800 | 2,028 | 2,129 | 2,236 | 2,348 | 2,465 | 2,588 | 2,718 | 2,854 | 2,996 | 3,146 |
| 11 | 5152 | Clothing/Safety | 3 | 4,700 | 4,700 | 4,935 | 5,182 | 5,441 | 5,713 | 5,999 | 6,298 | 6,613 | 6,944 | 7,291 |
| <i>Services & Supplies</i> | | | | | | | | | | | | | | |
| 11 | 5350 | Memberships/Subscriptions | 2 | 1,200 | 1,200 | 1,260 | 1,323 | 1,389 | 1,459 | 1,532 | 1,608 | 1,689 | 1,773 | 1,862 |
| 11 | 5420 | Permits & Fees | 2 | 1,000 | 1,000 | 1,050 | 1,103 | 1,158 | 1,216 | 1,276 | 1,340 | 1,407 | 1,477 | 1,551 |
| 11 | 5500 | Contract Services | 2 | 5,000 | 4,000 | 4,200 | 4,410 | 4,631 | 4,862 | 5,105 | 5,360 | 5,628 | 5,910 | 6,205 |
| 11 | 5720 | Small Tools | 2 | 1,000 | 1,000 | 1,050 | 1,103 | 1,158 | 1,216 | 1,276 | 1,340 | 1,407 | 1,477 | 1,551 |
| 11 | 5800 | Travel/Mtgs/Education | 2 | 10,000 | 6,761 | 7,099 | 7,454 | 7,827 | 8,218 | 8,629 | 9,060 | 9,513 | 9,989 | 10,489 |
| 11 | 5801 | Certifications/TCPS | 2 | 3,870 | 3,870 | 4,064 | 4,267 | 4,480 | 4,704 | 4,939 | 5,186 | 5,445 | 5,718 | 6,004 |
| 11 | 5950 | Other Expenses | 2 | 4,000 | - | - | - | - | - | - | - | - | - | - |
| TOTAL: ENGINEERING Expenses | | | | \$ 838,156 | \$ 919,917 | \$ 965,913 | \$ 1,014,208 | \$ 1,064,919 | \$ 1,118,165 | \$ 1,174,073 | \$ 1,232,777 | \$ 1,294,416 | \$ 1,359,136 | \$ 1,427,093 |

VALLEY SANITARY DISTRICT
SEWER RATE STUDY
Operating Revenue and Expenses

Exhibit 1

TABLE 7: OPERATING EXPENSE FORECAST¹

| DEPT. | CODE | DESCRIPTION | Basis | 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 | FY 2032/33 |
|------------------------------------|------|---------------------------|-------|------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| COLLECTIONS | | | | | | | | | | | | | | |
| <i>Salary</i> | | | | | | | | | | | | | | |
| 11 | 5030 | Salaries | 3 | \$ 391,801 | \$ 411,400 | \$ 431,970 | \$ 453,569 | \$ 476,247 | \$ 500,059 | \$ 525,062 | \$ 551,315 | \$ 578,881 | \$ 607,825 | \$ 638,216 |
| 11 | 5070 | Overtime | 3 | 1,600 | 1,600 | 1,680 | 1,764 | 1,852 | 1,945 | 2,042 | 2,144 | 2,251 | 2,364 | 2,482 |
| 11 | 5080 | Callout | 3 | 5,000 | 6,000 | 6,300 | 6,615 | 6,946 | 7,293 | 7,658 | 8,041 | 8,443 | 8,865 | 9,308 |
| 11 | 5090 | Standby | 3 | 41,216 | 44,892 | 47,137 | 49,493 | 51,968 | 54,567 | 57,295 | 60,160 | 63,168 | 66,326 | 69,642 |
| <i>Benefits</i> | | | | | | | | | | | | | | |
| 11 | 5110 | Longevity | 3 | 5,200 | 4,800 | 5,040 | 5,292 | 5,557 | 5,834 | 6,126 | 6,432 | 6,754 | 7,092 | 7,446 |
| 11 | 5112 | Retirement | 3 | 41,523 | 47,818 | 50,209 | 52,719 | 55,355 | 58,123 | 61,029 | 64,081 | 67,285 | 70,649 | 74,181 |
| 11 | 5116 | Payroll Taxes | 3 | 40,034 | 42,093 | 44,198 | 46,408 | 48,728 | 51,164 | 53,723 | 56,409 | 59,229 | 62,191 | 65,300 |
| 11 | 5124 | Group Life Insurance | 3 | 888 | 984 | 1,033 | 1,085 | 1,139 | 1,196 | 1,256 | 1,319 | 1,385 | 1,454 | 1,527 |
| 11 | 5126 | Group Health Insurance | 3 | 105,508 | 114,732 | 120,469 | 126,492 | 132,817 | 139,457 | 146,430 | 153,752 | 161,439 | 169,511 | 177,987 |
| 11 | 5128 | Dental/Vision Insurance | 3 | 9,852 | 10,392 | 10,912 | 11,457 | 12,030 | 12,632 | 13,263 | 13,926 | 14,623 | 15,354 | 16,121 |
| 11 | 5132 | Disability Insurance | 3 | 1,200 | 1,392 | 1,462 | 1,535 | 1,611 | 1,692 | 1,777 | 1,865 | 1,959 | 2,057 | 2,159 |
| 11 | 5152 | Clothing/Safety | 3 | 5,700 | 5,700 | 5,985 | 6,284 | 6,598 | 6,928 | 7,275 | 7,639 | 8,020 | 8,421 | 8,843 |
| <i>Services & Supplies</i> | | | | | | | | | | | | | | |
| 11 | 5350 | Memberships/Subscriptions | 2 | 2,050 | 2,050 | 2,153 | 2,260 | 2,373 | 2,492 | 2,616 | 2,747 | 2,885 | 3,029 | 3,180 |
| 11 | 5420 | Permits & Fees | 2 | 23,600 | 24,200 | 25,410 | 26,681 | 28,015 | 29,415 | 30,886 | 32,430 | 34,052 | 35,754 | 37,542 |
| 11 | 5450 | Operating Supplies | 2 | 5,000 | 5,000 | 5,250 | 5,513 | 5,788 | 6,078 | 6,381 | 6,700 | 7,036 | 7,387 | 7,757 |
| 11 | 5500 | Contract Services | 2 | 121,200 | 115,220 | 120,981 | 127,030 | 133,382 | 140,051 | 147,053 | 154,406 | 162,126 | 170,232 | 178,744 |
| 11 | 5700 | Repairs/Maintenance | 2 | 154,500 | 159,000 | 166,950 | 175,298 | 184,062 | 193,265 | 202,929 | 213,075 | 223,729 | 234,915 | 246,661 |
| 11 | 5720 | Small Tools | 2 | 2,000 | 2,000 | 2,100 | 2,205 | 2,315 | 2,431 | 2,553 | 2,680 | 2,814 | 2,955 | 3,103 |
| 11 | 5800 | Travel/Mtgs/Education | 2 | 10,000 | 10,000 | 10,500 | 11,025 | 11,576 | 12,155 | 12,763 | 13,401 | 14,071 | 14,775 | 15,513 |
| 11 | 5801 | Certifications/TCPS | 2 | 5,120 | 5,120 | 5,376 | 5,645 | 5,927 | 6,223 | 6,535 | 6,861 | 7,204 | 7,565 | 7,943 |
| 11 | 5902 | Electricity | 2 | 6,000 | 9,000 | 9,450 | 9,923 | 10,419 | 10,940 | 11,487 | 12,061 | 12,664 | 13,297 | 13,962 |
| 11 | 5905 | Utility Water | 2 | 7,500 | 8,000 | 8,400 | 8,820 | 9,261 | 9,724 | 10,210 | 10,721 | 11,257 | 11,820 | 12,411 |
| 11 | 5950 | Other Expenses | 2 | 10,000 | 10,000 | 10,500 | 11,025 | 11,576 | 12,155 | 12,763 | 13,401 | 14,071 | 14,775 | 15,513 |
| TOTAL: COLLECTIONS Expenses | | | | \$ 996,492 | \$ 1,041,393 | \$ 1,093,463 | \$ 1,148,136 | \$ 1,205,543 | \$ 1,265,820 | \$ 1,329,111 | \$ 1,395,566 | \$ 1,465,345 | \$ 1,538,612 | \$ 1,615,542 |

VALLEY SANITARY DISTRICT
SEWER RATE STUDY
Operating Revenue and Expenses

Exhibit 1

TABLE 8: OPERATING EXPENSE FORECAST, cont.¹

| DEPT. | CODE | DESCRIPTION | Basis | 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 | FY 2032/33 |
|-----------------------------------|------|---------------------------|-------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| OPERATIONS | | | | | | | | | | | | | | |
| <i>Salary</i> | | | | | | | | | | | | | | |
| 11 | 5030 | Salaries | 3 | \$ 836,734 | \$ 923,982 | \$ 970,181 | \$ 1,018,690 | \$ 1,069,625 | \$ 1,123,106 | \$ 1,179,261 | \$ 1,238,224 | \$ 1,300,135 | \$ 1,365,142 | \$ 1,433,399 |
| 11 | 5070 | Overtime | 3 | 18,000 | 22,000 | 23,100 | 24,255 | 25,468 | 26,741 | 28,078 | 29,482 | 30,956 | 32,504 | 34,129 |
| 11 | 5080 | Callout | 3 | 6,500 | 14,000 | 14,700 | 15,435 | 16,207 | 17,017 | 17,868 | 18,761 | 19,699 | 20,684 | 21,719 |
| 11 | 5090 | Standby | 3 | 18,135 | 19,753 | 20,741 | 21,778 | 22,867 | 24,010 | 25,210 | 26,471 | 27,794 | 29,184 | 30,643 |
| <i>Benefits</i> | | | | | | | | | | | | | | |
| 11 | 5110 | Longevity | 3 | 15,800 | 17,400 | 18,270 | 19,184 | 20,143 | 21,150 | 22,207 | 23,318 | 24,484 | 25,708 | 26,993 |
| 11 | 5112 | Retirement | 3 | 87,904 | 106,181 | 111,490 | 117,065 | 122,918 | 129,064 | 135,517 | 142,293 | 149,407 | 156,878 | 164,722 |
| 11 | 5116 | Payroll Taxes | 3 | 80,565 | 89,743 | 94,230 | 98,942 | 103,889 | 109,083 | 114,537 | 120,264 | 126,277 | 132,591 | 139,221 |
| 11 | 5124 | Group Life Insurance | 3 | 1,584 | 1,896 | 1,991 | 2,090 | 2,195 | 2,305 | 2,420 | 2,541 | 2,668 | 2,801 | 2,941 |
| 11 | 5126 | Group Health Insurance | 3 | 150,768 | 174,504 | 183,229 | 192,391 | 202,010 | 212,111 | 222,716 | 233,852 | 245,545 | 257,822 | 270,713 |
| 11 | 5128 | Dental/Vision Insurance | 3 | 10,284 | 11,880 | 12,474 | 13,098 | 13,753 | 14,440 | 15,162 | 15,920 | 16,716 | 17,552 | 18,430 |
| 11 | 5132 | Disability Insurance | 3 | 2,484 | 3,048 | 3,200 | 3,360 | 3,528 | 3,705 | 3,890 | 4,085 | 4,289 | 4,503 | 4,728 |
| 11 | 5152 | Clothing/Safety | 3 | 15,200 | 16,200 | 17,010 | 17,861 | 18,754 | 19,691 | 20,676 | 21,710 | 22,795 | 23,935 | 25,132 |
| <i>Services & Supplies</i> | | | | | | | | | | | | | | |
| 11 | 5250 | Gas/Oil | 2 | 58,000 | 70,000 | 73,500 | 77,175 | 81,034 | 85,085 | 89,340 | 93,807 | 98,497 | 103,422 | 108,593 |
| 11 | 5350 | Memberships/Subscriptions | 2 | 2,900 | 3,400 | 3,570 | 3,749 | 3,936 | 4,133 | 4,339 | 4,556 | 4,784 | 5,023 | 5,275 |
| 11 | 5420 | Permits & Fees | 2 | 77,025 | 85,260 | 89,523 | 93,999 | 98,699 | 103,634 | 108,816 | 114,257 | 119,969 | 125,968 | 132,266 |
| 11 | 5450 | Operating Supplies | 2 | 122,500 | 152,700 | 160,335 | 168,352 | 176,769 | 185,608 | 194,888 | 204,633 | 214,864 | 225,607 | 236,888 |
| 11 | 5470 | Chemicals | 2 | 529,620 | 603,300 | 633,465 | 665,138 | 698,395 | 733,315 | 769,981 | 808,480 | 848,904 | 891,349 | 935,916 |
| 11 | 5500 | Contract Services | 2 | 421,750 | 638,500 | 670,425 | 703,946 | 739,144 | 776,101 | 814,906 | 855,651 | 898,434 | 943,355 | 990,523 |
| 11 | 5700 | Repairs/Maintenance | 2 | 64,000 | 73,000 | 76,650 | 80,483 | 84,507 | 88,732 | 93,169 | 97,827 | 102,718 | 107,854 | 113,247 |
| 11 | 5720 | Small Tools | 2 | 1,000 | 1,000 | 1,050 | 1,103 | 1,158 | 1,216 | 1,276 | 1,340 | 1,407 | 1,477 | 1,551 |
| 11 | 5800 | Travel/Mtgs/Education | 2 | 29,800 | 20,690 | 21,725 | 22,811 | 23,951 | 25,149 | 26,406 | 27,727 | 29,113 | 30,569 | 32,097 |
| 11 | 5801 | Certifications/TCPS | 2 | 8,780 | 7,420 | 7,791 | 8,181 | 8,590 | 9,019 | 9,470 | 9,944 | 10,441 | 10,963 | 11,511 |
| 11 | 5902 | Electricity | 2 | 697,387 | 792,001 | 1,663,202 | 1,746,362 | 1,833,680 | 3,850,729 | 4,043,265 | 4,245,428 | 4,457,700 | 4,680,585 | 4,914,614 |
| 11 | 5903 | Natural Gas | 2 | 7,000 | 7,700 | 8,085 | 8,489 | 8,914 | 9,359 | 9,827 | 10,319 | 10,835 | 11,376 | 11,945 |
| 11 | 5904 | Trash Collection | 2 | 35,052 | 44,000 | 46,200 | 48,510 | 50,936 | 53,482 | 56,156 | 58,964 | 61,912 | 65,008 | 68,258 |
| 11 | 5905 | Utility Water | 2 | 18,200 | 22,000 | 23,100 | 24,255 | 25,468 | 26,741 | 28,078 | 29,482 | 30,956 | 32,504 | 34,129 |
| 11 | 5950 | Other Expenses | 2 | 20,000 | 22,000 | 23,100 | 24,255 | 25,468 | 26,741 | 28,078 | 29,482 | 30,956 | 32,504 | 34,129 |
| TOTAL: OPERATIONS Expenses | | | | \$ 3,336,972 | \$ 3,943,558 | \$ 4,972,337 | \$ 5,220,954 | \$ 5,482,001 | \$ 7,681,466 | \$ 8,065,539 | \$ 8,468,816 | \$ 8,892,257 | \$ 9,336,870 | \$ 9,803,713 |

VALLEY SANITARY DISTRICT
SEWER RATE STUDY
Operating Revenue and Expenses

Exhibit 1

TABLE 9: OPERATING EXPENSE FORECAST, cont.¹

| DEPT. | CODE | DESCRIPTION | Basis | 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 | FY 2032/33 |
|------------------------------------|------|---------------------------|-------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| MAINTENANCE | | | | | | | | | | | | | | |
| <i>Salary</i> | | | | | | | | | | | | | | |
| 11 | 5030 | Salaries | 3 | \$ 606,392 | \$ 687,579 | \$ 721,958 | \$ 758,056 | \$ 795,959 | \$ 835,757 | \$ 877,544 | \$ 921,422 | \$ 967,493 | \$ 1,015,867 | \$ 1,066,661 |
| 11 | 5070 | Overtime | 3 | 5,000 | 5,000 | 5,250 | 5,513 | 5,788 | 6,078 | 6,381 | 6,700 | 7,036 | 7,387 | 7,757 |
| 11 | 5080 | Callout | 3 | 1,500 | 5,000 | 5,250 | 5,513 | 5,788 | 6,078 | 6,381 | 6,700 | 7,036 | 7,387 | 7,757 |
| 11 | 5090 | Standby | 3 | 2,473 | 2,694 | 2,829 | 2,970 | 3,119 | 3,275 | 3,438 | 3,610 | 3,791 | 3,980 | 4,179 |
| <i>Benefits</i> | | | | | | | | | | | | | | |
| 11 | 5110 | Longevity | 3 | 9,700 | 10,200 | 10,710 | 11,246 | 11,808 | 12,398 | 13,018 | 13,669 | 14,352 | 15,070 | 15,824 |
| 11 | 5112 | Retirement | 3 | 51,723 | 61,462 | 64,535 | 67,762 | 71,150 | 74,707 | 78,443 | 82,365 | 86,483 | 90,807 | 95,348 |
| 11 | 5116 | Payroll Taxes | 3 | 56,256 | 63,943 | 67,140 | 70,497 | 74,022 | 77,723 | 81,609 | 85,690 | 89,974 | 94,473 | 99,197 |
| 11 | 5124 | Group Life Insurance | 3 | 1,380 | 1,656 | 1,739 | 1,826 | 1,917 | 2,013 | 2,114 | 2,219 | 2,330 | 2,447 | 2,569 |
| 11 | 5126 | Group Health Insurance | 3 | 148,445 | 178,488 | 187,412 | 196,783 | 206,622 | 216,953 | 227,801 | 239,191 | 251,151 | 263,708 | 276,893 |
| 11 | 5128 | Dental/Vision Insurance | 3 | 13,332 | 17,328 | 18,194 | 19,104 | 20,059 | 21,062 | 22,115 | 23,221 | 24,382 | 25,601 | 26,881 |
| 11 | 5132 | Disability Insurance | 3 | 1,860 | 2,244 | 2,356 | 2,474 | 2,598 | 2,728 | 2,864 | 3,007 | 3,158 | 3,315 | 3,481 |
| 11 | 5152 | Clothing/Safety | 3 | 14,620 | 16,080 | 16,884 | 17,728 | 18,615 | 19,545 | 20,523 | 21,549 | 22,626 | 23,757 | 24,945 |
| <i>Services & Supplies</i> | | | | | | | | | | | | | | |
| 11 | 5350 | Memberships/Subscriptions | 2 | 2,900 | 3,190 | 3,350 | 3,517 | 3,693 | 3,877 | 4,071 | 4,275 | 4,489 | 4,713 | 4,949 |
| 11 | 5420 | Permits & Fees | 2 | 2,100 | 2,310 | 2,426 | 2,547 | 2,674 | 2,808 | 2,948 | 3,096 | 3,250 | 3,413 | 3,584 |
| 11 | 5450 | Operating Supplies | 2 | 93,000 | 75,820 | 79,611 | 83,592 | 87,771 | 92,160 | 96,768 | 101,606 | 106,686 | 112,021 | 117,622 |
| 11 | 5500 | Contract Services | 2 | 213,220 | 197,510 | 207,386 | 217,755 | 228,643 | 240,075 | 252,078 | 264,682 | 277,916 | 291,812 | 306,403 |
| 11 | 5700 | Repairs/Maintenance | 2 | 392,762 | 427,795 | 449,185 | 471,644 | 495,226 | 519,987 | 545,987 | 573,286 | 601,951 | 632,048 | 663,650 |
| 11 | 5720 | Small Tools | 2 | 32,300 | 14,000 | 14,700 | 15,435 | 16,207 | 17,017 | 17,868 | 18,761 | 19,699 | 20,684 | 21,719 |
| 11 | 5800 | Travel/Mtgs/Education | 2 | 16,000 | 17,600 | 18,480 | 19,404 | 20,374 | 21,393 | 22,463 | 23,586 | 24,765 | 26,003 | 27,303 |
| 11 | 5801 | Certifications/TCPS | 2 | 4,960 | 5,800 | 6,090 | 6,395 | 6,714 | 7,050 | 7,402 | 7,773 | 8,161 | 8,569 | 8,998 |
| 11 | 5950 | Other Expenses | 2 | 10,000 | 11,000 | 11,550 | 12,128 | 12,734 | 13,371 | 14,039 | 14,741 | 15,478 | 16,252 | 17,065 |
| TOTAL: MAINTENANCE Expenses | | | | \$ 1,679,923 | \$ 1,806,699 | \$ 1,897,034 | \$ 1,991,886 | \$ 2,091,480 | \$ 2,196,054 | \$ 2,305,857 | \$ 2,421,149 | \$ 2,542,207 | \$ 2,669,317 | \$ 2,802,783 |

VALLEY SANITARY DISTRICT
SEWER RATE STUDY
Operating Revenue and Expenses

Exhibit 1

TABLE 10: OPERATING EXPENSE FORECAST, cont.¹

| DEPT. | CODE | DESCRIPTION | Basis | 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 | FY 2032/33 |
|--------------------------------|------|---------------------------|-------|------------|------------|------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|
| LAB | | | | | | | | | | | | | | |
| <i>Salary</i> | | | | | | | | | | | | | | |
| 11 | 5030 | Salaries | 3 | \$ 291,738 | \$ 388,481 | \$ 407,905 | \$ 428,300 | \$ 449,715 | \$ 472,201 | \$ 495,811 | \$ 520,602 | \$ 546,632 | \$ 573,963 | \$ 602,662 |
| 11 | 5070 | Overtime | 3 | 3,000 | 2,500 | 2,625 | 2,756 | 2,894 | 3,039 | 3,191 | 3,350 | 3,518 | 3,694 | 3,878 |
| <i>Benefits</i> | | | | | | | | | | | | | | |
| 11 | 5110 | Longevity | 3 | 1,200 | 1,200 | 1,260 | 1,323 | 1,389 | 1,459 | 1,532 | 1,608 | 1,689 | 1,773 | 1,862 |
| 11 | 5112 | Retirement | 3 | 22,674 | 24,356 | 25,574 | 26,852 | 28,195 | 29,605 | 31,085 | 32,639 | 34,271 | 35,985 | 37,784 |
| 11 | 5116 | Payroll Taxes | 3 | 26,635 | 35,297 | 37,062 | 38,915 | 40,861 | 42,904 | 45,049 | 47,301 | 49,666 | 52,150 | 54,757 |
| 11 | 5124 | Group Life Insurance | 3 | 648 | 924 | 970 | 1,019 | 1,070 | 1,123 | 1,179 | 1,238 | 1,300 | 1,365 | 1,433 |
| 11 | 5126 | Group Health Insurance | 3 | 45,840 | 67,092 | 70,447 | 73,969 | 77,667 | 81,551 | 85,628 | 89,910 | 94,405 | 99,125 | 104,082 |
| 11 | 5128 | Dental/Vision Insurance | 3 | 4,188 | 6,144 | 6,451 | 6,774 | 7,112 | 7,468 | 7,841 | 8,234 | 8,645 | 9,077 | 9,531 |
| 11 | 5132 | Disability Insurance | 3 | 924 | 1,308 | 1,373 | 1,442 | 1,514 | 1,590 | 1,669 | 1,753 | 1,840 | 1,933 | 2,029 |
| 11 | 5152 | Clothing/Safety | 3 | 5,400 | 3,863 | 4,056 | 4,259 | 4,472 | 4,696 | 4,930 | 5,177 | 5,436 | 5,707 | 5,993 |
| <i>Services & Supplies</i> | | | | | | | | | | | | | | |
| 11 | 5350 | Memberships/Subscriptions | 2 | 3,100 | 2,275 | 2,389 | 2,508 | 2,634 | 2,765 | 2,904 | 3,049 | 3,201 | 3,361 | 3,529 |
| 11 | 5420 | Permits & Fees | 2 | 11,200 | 10,000 | 10,500 | 11,025 | 11,576 | 12,155 | 12,763 | 13,401 | 14,071 | 14,775 | 15,513 |
| 11 | 5450 | Operating Supplies | 2 | 52,000 | 29,300 | 30,765 | 32,303 | 33,918 | 35,614 | 37,395 | 39,265 | 41,228 | 43,289 | 45,454 |
| 11 | 5500 | Contract Services | 2 | 15,300 | 40,300 | 42,315 | 44,431 | 46,652 | 48,985 | 51,434 | 54,006 | 56,706 | 59,541 | 62,519 |
| 11 | 5700 | Repairs/Maintenance | 2 | 20,000 | 20,000 | 21,000 | 22,050 | 23,153 | 24,310 | 25,526 | 26,802 | 28,142 | 29,549 | 31,027 |
| 11 | 5720 | Small Tools | 2 | 8,000 | 10,000 | 10,500 | 11,025 | 11,576 | 12,155 | 12,763 | 13,401 | 14,071 | 14,775 | 15,513 |
| 11 | 5750 | Research | 2 | 97,000 | 101,500 | 106,575 | 111,904 | 117,499 | 123,374 | 129,543 | 136,020 | 142,821 | 149,962 | 157,460 |
| 11 | 5800 | Travel/Mtgs/Education | 2 | 6,000 | 8,000 | 8,400 | 8,820 | 9,261 | 9,724 | 10,210 | 10,721 | 11,257 | 11,820 | 12,411 |
| 11 | 5801 | Certifications/TCPS | 2 | 1,200 | 1,510 | 1,586 | 1,665 | 1,748 | 1,835 | 1,927 | 2,024 | 2,125 | 2,231 | 2,343 |
| 11 | 5950 | Other Expenses | 2 | 10,000 | 10,000 | 10,500 | 11,025 | 11,576 | 12,155 | 12,763 | 13,401 | 14,071 | 14,775 | 15,513 |
| TOTAL: LAB Expenses | | | | \$ 626,047 | \$ 764,050 | \$ 802,253 | \$ 842,365 | \$ 884,483 | \$ 928,708 | \$ 975,143 | \$ 1,023,900 | \$ 1,075,095 | \$ 1,128,850 | \$ 1,185,292 |

VALLEY SANITARY DISTRICT
SEWER RATE STUDY
Operating Revenue and Expenses

Exhibit 1

TABLE 11: OPERATING EXPENSE FORECAST¹

| DEPT. | CODE | DESCRIPTION | Basis | 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 | FY 2032/33 |
|---|------|---------------------------|------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| ADMINISTRATION/BOARD | | | | | | | | | | | | | | |
| <i>Salary</i> | | | | | | | | | | | | | | |
| 11 | 5030 | Salaries | 3 | \$ 850,608 | \$ 951,307 | \$ 998,872 | \$ 1,048,816 | \$ 1,101,257 | \$ 1,156,320 | \$ 1,214,136 | \$ 1,274,842 | \$ 1,338,584 | \$ 1,405,514 | \$ 1,475,789 |
| 11 | 5070 | Overtime | 3 | 5,000 | 5,000 | 5,250 | 5,513 | 5,788 | 6,078 | 6,381 | 6,700 | 7,036 | 7,387 | 7,757 |
| <i>Benefits</i> | | | | | | | | | | | | | | |
| 11 | 5110 | Longevity | 3 | 3,600 | 3,600 | 3,780 | 3,969 | 4,167 | 4,376 | 4,595 | 4,824 | 5,066 | 5,319 | 5,585 |
| 11 | 5112 | Retirement | 3 | 93,224 | 97,086 | 101,940 | 107,037 | 112,389 | 118,009 | 123,909 | 130,105 | 136,610 | 143,440 | 150,612 |
| 11 | 5116 | Payroll Taxes | 3 | 68,780 | 86,284 | 90,598 | 95,128 | 99,885 | 104,879 | 110,123 | 115,629 | 121,410 | 127,481 | 133,855 |
| 11 | 5118 | Unemployment Insurance | 3 | - | - | - | - | - | - | - | - | - | - | - |
| 11 | 5122 | Workers Compensation | 3 | 76,618 | 85,722 | 90,008 | 94,509 | 99,234 | 104,196 | 109,405 | 114,876 | 120,619 | 126,650 | 132,983 |
| 11 | 5124 | Group Life Insurance | 3 | 1,488 | 1,668 | 1,751 | 1,839 | 1,931 | 2,027 | 2,129 | 2,235 | 2,347 | 2,464 | 2,588 |
| 11 | 5126 | Group Health Insurance | 3 | 119,983 | 147,696 | 155,081 | 162,835 | 170,977 | 179,525 | 188,502 | 197,927 | 207,823 | 218,214 | 229,125 |
| 11 | 5128 | Dental/Vision Insurance | 3 | 8,964 | 11,460 | 12,033 | 12,635 | 13,266 | 13,930 | 14,626 | 15,357 | 16,125 | 16,932 | 17,779 |
| 11 | 5132 | Disability Insurance | 3 | 2,100 | 2,352 | 2,470 | 2,593 | 2,723 | 2,859 | 3,002 | 3,152 | 3,310 | 3,475 | 3,648 |
| <i>Services & Supplies</i> | | | | | | | | | | | | | | |
| 11 | 5225 | Election | 2 | 70,000 | - | 76,413 | - | 81,011 | - | 85,887 | - | 91,055 | - | 96,535 |
| 11 | 5300 | Comprehensive Insurance | 2 | 358,993 | 393,465 | 826,277 | 867,590 | 910,970 | 1,221,803 | 1,282,893 | 1,347,038 | 1,767,988 | 1,856,387 | 1,949,206 |
| 11 | 5350 | Memberships/Subscriptions | 2 | 47,388 | 53,153 | 55,811 | 58,601 | 61,531 | 64,608 | 67,838 | 71,230 | 74,792 | 78,531 | 82,458 |
| 11 | 5400 | Office Expenses | 2 | 23,300 | 26,500 | 27,825 | 29,216 | 30,677 | 32,211 | 33,821 | 35,513 | 37,288 | 39,153 | 41,110 |
| 11 | 5410 | County/City Charges | 2 | 23,100 | 23,100 | 24,255 | 25,468 | 26,741 | 28,078 | 29,482 | 30,956 | 32,504 | 34,129 | 35,836 |
| 11 | 5420 | Permits & Fees | 2 | 3,000 | 3,000 | 3,150 | 3,308 | 3,473 | 3,647 | 3,829 | 4,020 | 4,221 | 4,432 | 4,654 |
| 11 | 5450 | Operating Supplies | 2 | 11,000 | 11,000 | 11,550 | 12,128 | 12,734 | 13,371 | 14,039 | 14,741 | 15,478 | 16,252 | 17,065 |
| 11 | 5500 | Contract Services | 2 | 866,355 | 742,829 | 779,970 | 818,969 | 859,917 | 902,913 | 948,059 | 995,462 | 1,045,235 | 1,097,497 | 1,152,372 |
| 11 | 5550 | Professional/Legal | 2 | 363,824 | 405,968 | 426,266 | 447,580 | 469,959 | 493,457 | 518,129 | 544,036 | 571,238 | 599,800 | 629,790 |
| 11 | 5600 | Publications | 2 | 3,500 | - | - | - | - | - | - | - | - | - | - |
| 11 | 5700 | Repairs/Maintenance | 2 | 13,375 | 19,375 | 20,344 | 21,361 | 22,429 | 23,550 | 24,728 | 25,964 | 27,263 | 28,626 | 30,057 |
| 11 | 5800 | Travel/Mtgs/Education | 2 | 119,523 | 159,404 | 167,374 | 175,743 | 184,530 | 193,757 | 203,444 | 213,617 | 224,297 | 235,512 | 247,288 |
| 11 | 5801 | Certifications/TCPS | 2 | - | - | - | - | - | - | - | - | - | - | - |
| 11 | 5901 | Telephone/VOIP | 2 | 31,255 | 35,434 | 37,206 | 39,066 | 41,019 | 43,070 | 45,224 | 47,485 | 49,859 | 52,352 | 54,970 |
| 11 | 5950 | Other Expenses | 2 | 20,000 | 20,000 | 21,000 | 22,050 | 23,153 | 24,310 | 25,526 | 26,802 | 28,142 | 29,549 | 31,027 |
| 11 | 9160 | Refunding Bonds | See Exh. 3 | - | - | - | - | - | - | - | - | - | - | - |
| 11 | 3650 | CWSRF Loan Payment | See Exh. 3 | - | - | - | - | - | - | - | - | - | - | - |
| 11 | 8660 | General Facilities | 2 | 379,434 | 464,000 | 487,200 | 511,560 | 537,138 | 563,995 | 592,195 | 621,804 | 652,895 | 685,539 | 719,816 |
| TOTAL: ADMINISTRATION/BOARD Expenses | | | | \$ 3,564,412 | \$ 3,749,403 | \$ 4,426,424 | \$ 4,567,512 | \$ 4,876,899 | \$ 5,300,967 | \$ 5,651,902 | \$ 5,844,316 | \$ 6,581,184 | \$ 6,814,636 | \$ 7,251,902 |

TABLE 12: OPERATING EXPENSE FORECAST¹

| DEPT. | CODE | DESCRIPTION | Basis | 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 | FY 2032/33 |
|--|------|------------------------------|-------|-------------------|-------------------|-------------------|-------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| ADDITIONAL STAFFING | | | | | | | | | | | | | | |
| | | Engineering Technician | 3 | \$ - | \$ 139,000 | - | - | - | - | - | - | - | - | - |
| | | Maintenance Tech-in-Training | 3 | - | 90,000 | - | - | - | - | - | - | - | - | - |
| | | Operator-in-Training | 3 | - | 98,000 | - | - | - | - | - | - | - | - | - |
| | | Laboratory Technician | 3 | 139,505 | - | - | - | - | - | - | - | - | - | - |
| | | Assistant to the Board | 3 | - | - | 122,000 | - | - | - | - | - | - | - | - |
| | | Associate Engineer | 3 | - | - | 180,000 | - | - | - | - | - | - | - | - |
| | | Electrician Tech-in-Training | 3 | - | - | 101,000 | - | - | - | - | - | - | - | - |
| | | Operator-in-Training | 3 | - | - | 98,000 | - | - | - | - | - | - | - | - |
| | | Collection Tech-in-Training | 3 | - | - | - | 90,000 | - | - | - | - | - | - | - |
| | | Maintenance Tech-in-Training | 3 | - | - | - | 90,000 | - | - | - | - | - | - | - |
| | | Operator-in-Training | 3 | - | - | - | 98,000 | - | - | - | - | - | - | - |
| TOTAL: ADDITIONAL STAFFING Expenses | | | | \$ 139,505 | \$ 327,000 | \$ 501,000 | \$ 278,000 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |

VALLEY SANITARY DISTRICT
SEWER RATE STUDY
Operating Revenue and Expenses

Exhibit 1

TABLE 13: OPERATING EXPENSE FORECAST

| DEPT. | CODE | DESCRIPTION | Basis | 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 | FY 2032/33 | |
|---|------|----------------------------|-------|------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| ADDITIONAL RETIREMENT EXPENSE | | | | | | | | | | | | | | | |
| | | Unfunded Accrued Liability | 3 | 736,606 | 752,121 | 789,727 | 829,213 | 870,674 | 914,208 | 959,918 | 1,007,914 | 1,058,310 | 1,111,225 | 1,166,787 | |
| TOTAL: Unfunded Accrued Liability Expenses | | | | | \$ 736,606 | \$ 752,121 | \$ 789,727 | \$ 829,213 | \$ 870,674 | \$ 914,208 | \$ 959,918 | \$ 1,007,914 | \$ 1,058,310 | \$ 1,111,225 | \$ 1,166,787 |
| GRAND TOTAL: SEWER EXPENSES | | | | | \$ 11,918,113 | \$ 13,304,141 | \$ 15,448,150 | \$ 15,892,274 | \$ 16,475,999 | \$ 19,405,386 | \$ 20,461,542 | \$ 21,394,438 | \$ 22,908,813 | \$ 23,958,646 | \$ 25,253,113 |

TABLE 14: FORECASTING ASSUMPTIONS³

| COST INFLATION FACTORS | Basis | 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 | FY 2032/33 |
|--|-------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Customer Growth ⁴ | 1 | 1.00% | 1.00% | 1.00% | 1.00% | 1.00% | 1.00% | 1.00% | 1.00% | 1.00% | 1.00% | 1.00% |
| General Cost Inflation (prior 5-year average) ⁵ | 2 | 5.00% | 5.00% | 5.00% | 5.00% | 5.00% | 5.00% | 5.00% | 5.00% | 5.00% | 5.00% | 5.00% |
| Labor Cost Inflation ⁶ | 3 | 5.00% | 5.00% | 5.00% | 5.00% | 5.00% | 5.00% | 5.00% | 5.00% | 5.00% | 5.00% | 5.00% |
| No Cost Inflation | 4 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |

1. Revenues and expenses for FY 2022/23 were provided by District staff. Source file: 1. *O and M 02-15-23*.
2. Connection fee revenues for FY 2022/23 through FY 2042/43 provided by the District. Source file: 2. *Annual Revenue.xlsx*.
3. Expenses are inflated each year by the following annual inflation factor categories. These factors are from the BLS website: <https://data.bls.gov>.
4. Source: *Population.xlsx*.
5. General cost inflation is the annual change in CPI for all Urban Consumers in the Riverside-San Bernardino-Ontario areas per the BLS.
6. Labor cost inflation is the 5-year average change in the Riverside County Employment and Wage Inflation Index (all industries) per the BLS.

TABLE 15: CAPITAL FUNDING SUMMARY

| CAPITAL FUNDING FORECAST | Budget | | Projected Rates for Adoption Period | | | | | Projected | | | | |
|---|----------------------|----------------------|-------------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|---------------------|---------------------|---------------------|--|
| | 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 | FY 2032/33 | |
| Funding Sources: | | | | | | | | | | | | |
| Grants | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | |
| Use of Connection Fee Reserves | 7,285,462 | 6,553,722 | 1,021,657 | 1,031,873 | 1,042,192 | 1,052,614 | 1,063,140 | 1,073,772 | 713,540 | 927,780 | 1,656,738 | |
| Future Loan Proceeds | - | 15,000,000 | 44,037,165 | 20,428,505 | 11,293,090 | 23,303,240 | - | - | - | - | - | |
| Use of Capital Rehabilitation and Replacement Reserve | 21,507,320 | 9,865,075 | - | - | - | - | 2,486,481 | - | - | 6,024,911 | 5,478,580 | |
| Rate Revenue | 4,152,881 | 26,737,181 | - | 18,783,612 | 8,618,538 | 16,839,708 | 37,412,868 | 15,817,354 | 5,520,971 | - | - | |
| Total Sources of Capital Funds | \$ 32,945,663 | \$ 58,155,978 | \$ 45,058,822 | \$ 40,243,990 | \$ 20,953,820 | \$ 41,195,562 | \$ 40,962,490 | \$ 16,891,125 | \$ 6,234,511 | \$ 6,952,692 | \$ 7,135,318 | |
| Uses of Capital Funds: | | | | | | | | | | | | |
| Total Project Costs | \$ 32,945,663 | \$ 58,155,978 | \$ 45,058,822 | \$ 40,243,990 | \$ 20,953,820 | \$ 41,195,562 | \$ 40,962,490 | \$ 16,891,125 | \$ 6,234,511 | \$ 6,952,692 | \$ 7,135,318 | |
| Capital Funding Surplus (Deficiency) | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | |
| Loan Proceeds | \$ - | \$ 15,000,000 | \$ - | \$ 55,000,000 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | |
| WIFIA Loan | \$ - | \$ - | \$ 44,062,000 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | |

Selection of Financial Plan Alternative

Insert policy choice in box to right, based on options listed above

| Alternative | Bond Funding Options - to populate rows 24 & 25 | 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 | FY 2032/33 |
|-------------|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| 1 | Alternative 1 - Full CIP with No Debt Issue | - | - | - | - | - | - | - | - | - | - | - |
| 2 | Alternative 2 - Full CIP with a \$70 Million Debt | - | 15,000,000 | 23,387,679 | 31,612,321 | - | - | - | - | - | - | - |
| 3 | Alternative 3 - Full CIP with a \$114 Million Debt | - | 15,000,000 | 44,037,165 | 20,428,505 | 11,293,090 | 23,303,240 | - | - | - | - | - |

CAPITAL IMPROVEMENT PROGRAM¹

TABLE 16: CAPITAL IMPROVEMENT PROGRAM COSTS (in Future-Year Dollars)²

| Project Description | 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 | FY 2032/33 |
|---|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|---------------------|---------------------|---------------------|---------------------|
| FUND 12 - CIP Replacement | | | | | | | | | | | |
| PLANT | | | | | | | | | | | |
| Recycled Water Project Phase 1 Design Build | \$ 10,658,194 | \$ 23,288,410 | \$ 11,061,199 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Recycled Water Project Phase 2 Design Build | - | - | 2,971,408 | 12,242,202 | - | - | - | - | - | - | - |
| Recycled Water Project Phase 3 Design | - | - | - | - | 4,517,236 | - | - | - | - | - | - |
| Recycled Water Project Phase 3 Construction | - | - | - | - | - | 13,122,339 | 13,576,009 | 4,398,329 | - | - | - |
| Future Plant Expansion 2040 & beyond | - | - | - | - | - | - | - | - | - | - | - |
| Influent Pump Station Rehabilitation Design Build | 3,300,000 | - | - | - | - | - | - | - | - | - | - |
| Laboratory Building - Final Design | - | 1,000,000 | - | - | - | - | - | - | - | - | - |
| Laboratory Building - Construction | - | - | 4,000,000 | 4,000,000 | - | - | - | - | - | - | - |
| Steel Waterline Replacement | 350,000 | - | - | - | - | - | - | - | - | - | - |
| Electrical Control Panel Replacements Blower Building | 120,000 | - | - | - | - | - | - | - | - | - | - |
| Vehicle & Major Equipment Replacement Fund | 760,000 | 831,280 | 863,783 | 897,557 | 932,651 | 969,118 | 1,007,011 | 1,046,385 | 1,087,298 | 1,129,812 | 1,173,987 |
| Treatment Plant Asphalt Repair | 50,000 | - | - | - | - | - | - | - | - | - | - |
| ASP Concrete Repair | 50,000 | - | - | - | - | - | - | - | - | - | - |
| SCADA | 60,000 | - | - | - | - | - | - | - | - | - | - |
| Future Operation Projects | - | 467,595 | 485,878 | 504,876 | 524,616 | 545,129 | 566,443 | 588,591 | 2,038,684 | 2,118,397 | 2,201,226 |
| SUBTOTAL - PLANT | \$ 15,348,194 | \$ 25,587,285 | \$ 19,382,268 | \$ 17,644,635 | \$ 5,974,504 | \$ 14,636,586 | \$ 15,149,463 | \$ 6,033,305 | \$ 3,125,983 | \$ 3,248,209 | \$ 3,375,214 |
| COLLECTIONS | | | | | | | | | | | |
| Lateral Grant Program | \$ 50,000 | \$ 51,000 | \$ 52,020 | \$ 53,060 | \$ 54,121 | \$ 55,203 | \$ 56,307 | \$ 57,433 | \$ 58,582 | \$ 59,754 | \$ 60,949 |
| Sewer Main Rehabilitation or Replacement Design | 1,228,340 | 1,762,810 | 1,822,040 | 1,584,182 | 1,328,282 | 1,053,397 | 758,540 | 784,027 | 457,553 | 494,157 | - |
| Sewer Main Rehabilitation or Replacement Const. | 3,666,667 | 5,698,051 | 7,051,446 | 7,288,374 | 6,291,929 | 5,220,294 | 4,069,542 | 2,835,566 | 1,514,074 | 1,635,200 | - |
| Manhole Rehabilitation | - | - | - | - | - | - | - | - | - | 150,000 | 154,500 |
| Replacement of Calhoun Lift Station Pumps (2) | 50,000 | - | - | - | - | - | - | - | - | - | - |
| Sewer Main Emergency Repairs | 115,000 | 118,450 | 122,004 | 125,664 | 129,434 | 133,317 | 137,317 | 141,437 | 145,680 | 150,050 | 154,552 |
| Avenue 48 Sewer Main Upgrade Design | - | - | - | - | - | - | - | - | - | 62,114 | - |
| Avenue 48 Sewer Main Upgrade Construction | - | - | - | - | - | - | - | - | - | - | 596,929 |
| Interim Collection System CIP Design | - | - | - | - | - | - | - | - | - | - | - |
| Interim Collection System CIP Construction | - | - | - | - | - | - | - | - | - | - | - |
| Future Collection Projects | - | 77,933 | 80,980 | 84,146 | 87,436 | 90,855 | 94,407 | 98,099 | 101,934 | 105,920 | 110,061 |
| Emergency Sewer Siphon Replacement Design | 638,000 | 830,000 | - | - | - | - | - | - | - | - | - |
| Emergency Sewer Siphon Replacement Const. | 4,464,000 | 4,821,000 | - | - | - | - | - | - | - | - | - |
| SUBTOTAL - COLLECTIONS | \$ 10,212,007 | \$ 13,359,244 | \$ 9,128,490 | \$ 9,135,426 | \$ 7,891,202 | \$ 6,553,066 | \$ 5,116,113 | \$ 3,916,562 | \$ 2,277,823 | \$ 2,657,195 | \$ 1,076,991 |
| TOTAL - FUND 12 | \$ 25,560,201 | \$ 38,946,529 | \$ 28,510,758 | \$ 26,780,061 | \$ 13,865,706 | \$ 21,189,652 | \$ 20,265,577 | \$ 9,949,867 | \$ 5,403,806 | \$ 5,905,403 | \$ 4,452,205 |

TABLE 17: CAPITAL IMPROVEMENT PROGRAM COSTS (in Future-Year Dollars), cont.²

| Project Description | 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 | FY 2032/33 |
|---|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|---------------------|---------------------|---------------------|
| FUND 13 - CIP Expansion | | | | | | | | | | | |
| PLANT | | | | | | | | | | | |
| Recycled Water Project Phase 1 Design Build | \$ 7,105,462 | \$ 15,525,607 | \$ 7,374,133 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Lystek Biosolids Conversion Project | - | 2,000,000 | 1,000,000 | - | - | - | - | - | - | - | - |
| Recycled Water Project Phase 2 Design Build | - | - | 1,980,939 | 8,161,468 | - | - | - | - | - | - | - |
| Recycled Water Project Phase 3 Design | - | - | - | - | 6,775,854 | - | - | - | - | - | - |
| Recycled Water Project Phase 3 Construction | - | - | - | - | - | 19,683,508 | 20,364,014 | 6,597,494 | - | - | - |
| Future Plant Expansion 2040 & beyond | - | - | - | - | - | - | - | - | - | - | - |
| New Office Building for Belt Filter Press | 20,000 | - | - | - | - | - | - | - | - | - | - |
| Training & Office Building - Design (Carry Over) | - | 1,000,000 | - | - | - | - | - | - | - | - | - |
| Training & Office Building - Construction | - | - | 5,000,000 | 5,000,000 | - | - | - | - | - | - | - |
| Master Plan | - | 400,000 | 400,000 | - | - | - | - | - | - | - | - |
| 12.5 Ton Air conditioner, Blower Building | 30,000 | - | - | - | - | - | - | - | - | - | - |
| Laboratory Information Management System (LIMS) | 70,000 | - | - | - | - | - | - | - | - | - | - |
| SCADA | 60,000 | - | - | - | - | - | - | - | - | - | - |
| Additional Parking & Landscaping | - | - | 500,000 | - | - | - | - | - | - | - | - |
| Future Operation Projects | - | 155,865 | 161,959 | 168,292 | 174,872 | 181,710 | 188,814 | 196,197 | 679,561 | 706,132 | 733,742 |
| SUBTOTAL - PLANT | \$ 7,285,462 | \$ 19,081,472 | \$ 16,417,031 | \$ 13,329,760 | \$ 6,950,726 | \$ 19,865,218 | \$ 20,552,828 | \$ 6,793,691 | \$ 679,561 | \$ 706,132 | \$ 733,742 |
| COLLECTIONS | | | | | | | | | | | |
| Lateral Grant Program | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Avenue 48 Sewer Main Upgrade Design | - | - | - | - | - | - | - | - | - | 186,341 | - |
| Avenue 48 Sewer Main Upgrade Construction | - | - | - | - | - | - | - | - | - | - | 1,790,786 |
| Interim Collection System CIP Design | - | - | - | - | - | - | - | - | - | - | - |
| Interim Collection System CIP Construction | - | - | - | - | - | - | - | - | - | - | - |
| Build-out Collection System CIP projects | - | - | - | - | - | - | - | - | - | - | - |
| Future Collection Projects | - | 25,978 | 26,993 | 28,049 | 29,145 | 30,285 | 31,469 | 32,700 | 33,978 | 35,307 | 36,687 |
| SUBTOTAL - COLLECTIONS | \$ - | \$ 25,978 | \$ 26,993 | \$ 28,049 | \$ 29,145 | \$ 30,285 | \$ 31,469 | \$ 32,700 | \$ 33,978 | \$ 221,648 | \$ 1,827,473 |
| TOTAL - FUND 13 | \$ 7,285,462 | \$ 19,107,449 | \$ 16,444,024 | \$ 13,357,809 | \$ 6,979,872 | \$ 19,895,503 | \$ 20,584,297 | \$ 6,826,390 | \$ 713,540 | \$ 927,780 | \$ 2,561,215 |
| CONTINGENCY³ | \$ 100,000 | \$ 102,000 | \$ 104,040 | \$ 106,121 | \$ 108,243 | \$ 110,408 | \$ 112,616 | \$ 114,868 | \$ 117,165 | \$ 119,508 | \$ 121,898 |
| Total: CIP Program Costs (Future-Year Dollars) | \$ 32,945,663 | \$ 58,155,978 | \$ 45,058,822 | \$ 40,243,990 | \$ 20,953,820 | \$ 41,195,562 | \$ 40,962,490 | \$ 16,891,125 | \$ 6,234,511 | \$ 6,952,692 | \$ 7,135,318 |

TABLE 18: FORECASTING ASSUMPTIONS

| Economic Variables | 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 | FY 2032/33 |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Annual Construction Cost Inflation, Per Engineering News Record ⁴ | 0.00% | 3.91% | 3.91% | 3.91% | 3.91% | 3.91% | 3.91% | 3.91% | 3.91% | 3.91% | 3.91% |
| Cumulative Construction Cost Multiplier | 1.00 | 1.04 | 1.08 | 1.12 | 1.17 | 1.21 | 1.26 | 1.31 | 1.36 | 1.41 | 1.47 |

1. The capital improvement plan provided by the District. Source file: 12. CIP Spreadsheets_NBS.xlsx .
2. Planned capital improvements for Fund 12 provided by the District. Source file: 12. CIP Spreadsheets_NBS.xlsx .
3. The estimated contingency includes all departments per District.
4. For reference purposes, the annual Construction Cost Inflation percentage is the 5-year average change in the Construction Cost Index from 2017 to 2022 (3.91%). The District provided costs in future-year dollars.
 Source: *Engineering News Record website* (<http://enr.construction.com>).

TABLE 19: EXISTING DEBT OBLIGATIONS

| WASTEWATER UTILITY EXISTING DEBT OBLIGATIONS | Budget | Projected Rates for Adoption Period | | | | | | Projected | | | | |
|---|---------------------|-------------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--|
| | 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 | FY 2032/33 | |
| Wastewater Revenue Refunding Bonds, Series 2015, - \$7,540,000¹ | | | | | | | | | | | | |
| Principal Payment | \$ 750,000 | \$ 765,000 | \$ 805,000 | \$ 845,000 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | |
| Interest Payment | 136,688 | 120,750 | 82,500 | 42,250 | - | - | - | - | - | - | - | |
| Subtotal: Annual Debt Service | \$ 886,688 | \$ 885,750 | \$ 887,500 | \$ 887,250 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | |
| Coverage Requirement (%-Amnt above annual payment) ² | 125% | 125% | 125% | 125% | | | | | | | | |
| Reserve Requirement (total fund balance) ³ | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | |
| 2016 CA CWSRF Revolving Fund Loan, \$11,999,000⁴ | | | | | | | | | | | | |
| Principal Payment | \$ 351,029 | \$ 356,996 | \$ 363,065 | \$ 369,237 | \$ 375,514 | \$ 381,898 | \$ 388,390 | \$ 394,993 | \$ 401,708 | \$ 408,537 | \$ 415,482 | |
| Interest Payment | 202,332 | 196,365 | 190,296 | 184,124 | 177,846 | 171,463 | 164,970 | 158,368 | 151,653 | 144,824 | 137,879 | |
| Subtotal: Annual Debt Service | \$ 553,361 | \$ 553,361 | \$ 553,361 | \$ 553,361 | \$ 553,361 | \$ 553,361 | \$ 553,361 | \$ 553,361 | \$ 553,361 | \$ 553,361 | \$ 553,361 | |
| Coverage Requirement (\$-Amnt above annual payment) ⁵ | 125% | 125% | 125% | 125% | 125% | 125% | 125% | 125% | 125% | 125% | 125% | |
| Reserve Requirement (total fund balance) ⁶ | \$ 1,494,074 | \$ 1,438,738 | \$ 1,383,402 | \$ 1,328,066 | \$ 1,272,730 | \$ 1,217,394 | \$ 1,162,057 | \$ 1,106,721 | \$ 1,051,385 | \$ 996,049 | \$ 940,713 | |
| 2022 Installment Sale Agreement, \$71,000,000⁷ | | | | | | | | | | | | |
| Principal Payment | \$ 920,296 | \$ 1,901,556 | \$ 1,272,389 | \$ 2,366,972 | \$ 2,576,648 | \$ 3,686,912 | \$ 3,943,191 | \$ 3,990,682 | \$ 4,039,081 | \$ 4,095,285 | \$ 4,146,057 | |
| Interest Payment | 2,050,125 | 1,927,192 | 1,874,899 | 1,839,908 | 1,774,817 | 1,703,959 | 1,602,569 | 1,494,131 | 1,384,387 | 1,273,313 | 1,160,692 | |
| Subtotal: Annual Debt Service | \$ 2,970,421 | \$ 3,828,748 | \$ 3,147,289 | \$ 4,206,880 | \$ 4,351,465 | \$ 5,390,871 | \$ 5,545,760 | \$ 5,484,813 | \$ 5,423,469 | \$ 5,368,597 | \$ 5,306,749 | |
| Coverage Requirement (%-Amnt above annual payment) ⁸ | 125% | 125% | 125% | 125% | 125% | 125% | 125% | 125% | 125% | 125% | 125% | |
| Reserve Requirement (total fund balance) ⁹ | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | |
| Grand Total: Existing Annual Debt Service | \$ 4,410,469 | \$ 5,267,858 | \$ 4,588,149 | \$ 5,647,491 | \$ 4,904,826 | \$ 5,944,231 | \$ 6,099,120 | \$ 6,038,173 | \$ 5,976,829 | \$ 5,921,958 | \$ 5,860,110 | |
| Grand Total: Existing Annual Coverage Requirement | \$ 5,513,087 | \$ 6,584,823 | \$ 5,735,187 | \$ 7,059,363 | \$ 6,131,032 | \$ 7,430,289 | \$ 7,623,901 | \$ 7,547,717 | \$ 7,471,037 | \$ 7,402,447 | \$ 7,325,137 | |
| Grand Total: Existing Debt Reserve Target | \$ 1,494,074 | \$ 1,438,738 | \$ 1,383,402 | \$ 1,328,066 | \$ 1,272,730 | \$ 1,217,394 | \$ 1,162,057 | \$ 1,106,721 | \$ 1,051,385 | \$ 996,049 | \$ 940,713 | |

1. Wastewater Revenue Refunding Bonds, Series 2015 issued by The Bank of New York Mellon Trust Company, N.A.. Source file: 7c. *Refunding Bonds 2015 Indenture of Trust-c1.pdf*.
2. The debt service coverage requirement for the 2015 Revenue Refunding Bonds is 125%. Source file: 7c. *Refunding Bonds 2015 Indenture of Trust-c1.pdf*. Page 18, Section 3.05, Subsection (b).
3. Per the Official Statement, the District will not fund a debt service reserve fund for the Bonds. Source file: 7c. *Refunding Bonds 2015 Indenture of Trust-c1.pdf*. Page 29.
4. The State Water Resources Control Board Revolving Fund Loan for Project No. C-06-8116-110, Agreement No. D1601003-550-03. Source file: 7a. *SRF Agreement.pdf*.
5. The debt service coverage requirement for the 2016 CWSRF Revolving Fund Loan is 125%. Source file: 7a. *SRF Agreement.pdf*, pages 39-40.
6. The District is required to maintain a debt reserve fund equal to the average annual payment of the total outstanding loan balance. Source file: 7a. *SRF Agreement.pdf*, page 25.
7. 2022 Installment Sale Agreement issued by Banc of America Public Capital Corp Source file: 7b. *Bank of America Installment Sale Agreement.pdf*.
8. There is no mention of a coverage requirement in the 2022 installment Sale Agreement, however 125% was used as a best practice. Source file: 7b. *Bank of America Installment Sale Agreement*.
9. Per the Official Statement, the District will not fund a debt service reserve fund for the Bonds. Source file: 7b. *Bank of America Installment Sale Agreement*, Page 3, Section (d).

TABLE 20: EXISTING ANNUAL DEBT OBLIGATIONS TO BE SATISFIED BY WATER RATES

| | | | | | | | | | | | |
|---|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Existing Annual Debt Service | \$ 4,410,469 | \$ 5,267,858 | \$ 4,588,149 | \$ 5,647,491 | \$ 4,904,826 | \$ 5,944,231 | \$ 6,099,120 | \$ 6,038,173 | \$ 5,976,829 | \$ 5,921,958 | \$ 5,860,110 |
| Existing Annual Coverage Requirement | 5,513,087 | 6,584,823 | 5,735,187 | 7,059,363 | 6,131,032 | 7,430,289 | 7,623,901 | 7,547,717 | 7,471,037 | 7,402,447 | 7,325,137 |
| Existing Debt Reserve Target | 1,494,074 | 1,438,738 | 1,383,402 | 1,328,066 | 1,272,730 | 1,217,394 | 1,162,057 | 1,106,721 | 1,051,385 | 996,049 | 940,713 |

TABLE 21: FUTURE DEBT FINANCING ASSUMPTIONS

| Long-Term Debt Terms | Loan Proceeds Bonds | WIFIA Loan Proceeds |
|---|---------------------|---------------------|
| Issuance Cost | 2.00% | 2.00% |
| Annual Interest Cost (%) | 6.00% | 4.00% |
| Term | 20 | 20 |
| Debt Reserve Funded? | No | No |
| Loan Amount | \$ 70,000,000 | \$ 44,062,000 |
| Coverage Requirement (% above annual pmt) | 125% | 125% |

TABLE 22: FUTURE DEBT OBLIGATIONS

| Annual Repayment Schedules | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 |
|--|------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Loan Proceeds | | | | | | | | | | | |
| Principal Payment | \$ - | \$ 407,768 | \$ 432,234 | \$ 1,953,319 | \$ 2,070,518 | \$ 2,194,749 | \$ 2,326,434 | \$ 2,466,020 | \$ 2,613,982 | \$ 2,770,821 | \$ 2,937,070 |
| Interest Payment | - | 900,000 | 875,534 | 4,149,600 | 4,032,401 | 3,908,170 | 3,776,485 | 3,636,899 | 3,488,937 | 3,332,098 | 3,165,849 |
| Subtotal: Annual Debt Service | \$ - | \$ 1,307,768 | \$ 1,307,768 | \$ 6,102,919 | \$ 6,102,919 | \$ 6,102,919 | \$ 6,102,919 | \$ 6,102,919 | \$ 6,102,919 | \$ 6,102,919 | \$ 6,102,919 |
| WIFIA Loan Funding | | | | | | | | | | | |
| Principal Payment | \$ - | \$ - | \$ 1,479,679 | \$ 1,538,866 | \$ 1,600,421 | \$ 1,664,438 | \$ 1,731,015 | \$ 1,800,256 | \$ 1,872,266 | \$ 1,947,157 | \$ 2,025,043 |
| Interest Payment | - | - | 1,762,480 | 1,703,293 | 1,641,738 | 1,577,721 | 1,511,144 | 1,441,903 | 1,369,893 | 1,295,002 | 1,217,116 |
| Subtotal: Annual Debt Service | \$ - | \$ - | \$ 3,242,159 | \$ 3,242,159 | \$ 3,242,159 | \$ 3,242,159 | \$ 3,242,159 | \$ 3,242,159 | \$ 3,242,159 | \$ 3,242,159 | \$ 3,242,159 |
| Grand Total: Future Annual Debt Service | \$ - | \$ 1,307,768 | \$ 4,549,927 | \$ 9,345,078 | \$ 9,345,078 | \$ 9,345,078 | \$ 9,345,078 | \$ 9,345,078 | \$ 9,345,078 | \$ 9,345,078 | \$ 9,345,078 |
| Grand Total: Future Annual Coverage Requirement | \$ - | \$ 1,634,710 | \$ 5,687,409 | \$ 11,681,348 | \$ 11,681,348 | \$ 11,681,348 | \$ 11,681,348 | \$ 11,681,348 | \$ 11,681,348 | \$ 11,681,348 | \$ 11,681,348 |
| Grand Total: Future Debt Reserve Target | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |

TABLE 23: TOTAL DEBT SERVICE

| Annual Obligations | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 |
|------------------------------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Annual Debt Service | \$ 4,410,469 | \$ 6,575,627 | \$ 9,138,077 | \$ 14,992,569 | \$ 14,249,904 | \$ 15,289,309 | \$ 15,444,199 | \$ 15,383,251 | \$ 15,321,907 | \$ 15,267,036 | \$ 15,205,188 |
| Annual Coverage Requirement | 5,513,087 | 8,219,533 | 11,422,596 | 18,740,711 | 17,812,380 | 19,111,637 | 19,305,248 | 19,229,064 | 19,152,384 | 19,083,795 | 19,006,485 |
| Total Debt Reserve Target | 1,494,074 | 1,438,738 | 1,383,402 | 1,328,066 | 1,272,730 | 1,217,394 | 1,162,057 | 1,106,721 | 1,051,385 | 996,049 | 940,713 |

VALLEY SANITARY DISTRICT
 SEWER RATE STUDY
 Projected Sewer Rates Under Existing Rate Schedule

TABLE 24: Current Sewer Rates

| Sewer Rate Schedule | Current Rates (\$/EDU) |
|---|------------------------|
| Fixed Service Charges (Per EDU or Accounts) ¹ | |
| Residential | |
| Single-Family Residential | \$385.56 |
| Multi-Family Residential | \$168.75 |
| Mobile Home | \$203.94 |
| RV Park | \$158.91 |
| Non-Residential | |
| Commercial - Low Strength | \$223.91 |
| Commercial - High Strength | \$682.88 |
| Volumetric Rate (\$/hcf) ² | |
| Residential ³ | |
| Single-Family Residential | \$1.10 |
| Multi-Family Residential | \$1.10 |
| Mobile Home | \$1.10 |
| RV Park | \$1.23 |
| Non-Residential ³ | |
| Commercial - Low Strength | \$0.99 |
| Commercial - High Strength | \$2.25 |

1. Rates for SFR and MFR customers are calculated based on EDU, while rates for MH and RV Park customers are based on the number of accounts, or lots. Commercial rates are based on estimated EDUs.
2. One Unit is equal to one HCF (Hundred Cubic Feet) or 748 gallons.
3. HCF based on **average winter consumption** for SFR, MFR and MH customers and

VALLEY SANITARY DISTRICT
SEWER RATE STUDY
Cost of Service Analysis

TABLE 25: CLASSIFICATION OF EXPENSES FOR COST OF SERVICE ANALYSIS

| Classification of Expenses | | | | | | | | | |
|--------------------------------|----------------------------|-------------------|-------------------|-------------------|------------------|-------------------------|--------------|--------------|-------------|
| Budget Categories | Total Revenue Requirements | Flow | Strength | | Customer | Basis of Classification | | | |
| | FY 2023/24 | (VOL) | (BOD) | (TSS) | (CA) | (VOL) | (BOD) | (TSS) | (CA) |
| ENGINEERING | | | | | | | | | |
| <i>Salary</i> | | | | | | | | | |
| Salaries | \$ 674,473 | \$ 391,194 | \$ 134,895 | \$ 134,895 | \$ 13,489 | 58.0% | 20.0% | 20.0% | 2.0% |
| Overtime | 1,000 | 580 | 200 | 200 | 20 | 58.0% | 20.0% | 20.0% | 2.0% |
| <i>Benefits</i> | | | | | | | | | |
| Retirement | 9,500 | 5,510 | 1,900 | 1,900 | 190 | 58.0% | 20.0% | 20.0% | 2.0% |
| Payroll Taxes | 84,180 | 48,824 | 16,836 | 16,836 | 1,684 | 58.0% | 20.0% | 20.0% | 2.0% |
| Unemployment Insurance | 61,648 | 35,756 | 12,330 | 12,330 | 1,233 | 58.0% | 20.0% | 20.0% | 2.0% |
| Group Health Insurance | 1,452 | 842 | 290 | 290 | 29 | 58.0% | 20.0% | 20.0% | 2.0% |
| Dental/Vision Insurance | 56,328 | 32,670 | 11,266 | 11,266 | 1,127 | 58.0% | 20.0% | 20.0% | 2.0% |
| Disability Insurance | 6,777 | 3,931 | 1,355 | 1,355 | 136 | 58.0% | 20.0% | 20.0% | 2.0% |
| Clothing/Safety | 2,028 | 1,176 | 406 | 406 | 41 | 58.0% | 20.0% | 20.0% | 2.0% |
| Gas/Oil | 4,700 | 2,726 | 940 | 940 | 94 | 58.0% | 20.0% | 20.0% | 2.0% |
| <i>Services & Supplies</i> | | | | | | | | | |
| Memberships/Subscriptions | 1,200 | 696 | 240 | 240 | 24 | 58.0% | 20.0% | 20.0% | 2.0% |
| Permits & Fees | 1,000 | 580 | 200 | 200 | 20 | 58.0% | 20.0% | 20.0% | 2.0% |
| Contract Services | 4,000 | 2,320 | 800 | 800 | 80 | 58.0% | 20.0% | 20.0% | 2.0% |
| Small Tools | 1,000 | 580 | 200 | 200 | 20 | 58.0% | 20.0% | 20.0% | 2.0% |
| Travel/Mtgs/Education | 6,761 | 3,921 | 1,352 | 1,352 | 135 | 58.0% | 20.0% | 20.0% | 2.0% |
| Certifications/TCPS | 3,870 | 2,245 | 774 | 774 | 77 | 58.0% | 20.0% | 20.0% | 2.0% |
| SUB-TOTAL | \$ 919,917 | \$ 533,552 | \$ 183,983 | \$ 183,983 | \$ 18,398 | 58.0% | 20.0% | 20.0% | 2.0% |

VALLEY SANITARY DISTRICT
SEWER RATE STUDY
Cost of Service Analysis

TABLE 26: CLASSIFICATION OF EXPENSES FOR COST OF SERVICE ANALYSIS, cont.

| Classification of Expenses | | | | | | | | | |
|--------------------------------|----------------------------|-------------------|-------------------|-------------------|-------------------|-------------------------|--------------|--------------|--------------|
| Budget Categories | Total Revenue Requirements | Flow | Strength | | Customer | Basis of Classification | | | |
| | FY 2023/24 | (VOL) | (BOD) | (TSS) | (CA) | (VOL) | (BOD) | (TSS) | (CA) |
| COLLECTIONS | | | | | | | | | |
| <i>Salary</i> | | | | | | | | | |
| Salaries | \$ 411,400 | \$ 143,990 | \$ 102,850 | \$ 102,850 | \$ 61,710 | 35.0% | 25.0% | 25.0% | 15.0% |
| Overtime | 1,600 | 560 | 400 | 400 | 240 | 35.0% | 25.0% | 25.0% | 15.0% |
| Callout | 6,000 | 2,100 | 1,500 | 1,500 | 900 | 35.0% | 25.0% | 25.0% | 15.0% |
| Standby | 44,892 | 15,712 | 11,223 | 11,223 | 6,734 | 35.0% | 25.0% | 25.0% | 15.0% |
| <i>Benefits</i> | | | | | | | | | |
| Longevity | 4,800 | 1,680 | 1,200 | 1,200 | 720 | 35.0% | 25.0% | 25.0% | 15.0% |
| Retirement | 47,818 | 16,736 | 11,955 | 11,955 | 7,173 | 35.0% | 25.0% | 25.0% | 15.0% |
| Payroll Taxes | 42,093 | 14,733 | 10,523 | 10,523 | 6,314 | 35.0% | 25.0% | 25.0% | 15.0% |
| Group Life Insurance | 984 | 344 | 246 | 246 | 148 | 35.0% | 25.0% | 25.0% | 15.0% |
| Group Health Insurance | 114,732 | 40,156 | 28,683 | 28,683 | 17,210 | 35.0% | 25.0% | 25.0% | 15.0% |
| Dental/Vision Insurance | 10,392 | 3,637 | 2,598 | 2,598 | 1,559 | 35.0% | 25.0% | 25.0% | 15.0% |
| Disability Insurance | 1,392 | 487 | 348 | 348 | 209 | 35.0% | 25.0% | 25.0% | 15.0% |
| Clothing/Safety | 5,700 | 1,995 | 1,425 | 1,425 | 855 | 35.0% | 25.0% | 25.0% | 15.0% |
| <i>Services & Supplies</i> | | | | | | | | | |
| Memberships/Subscriptions | 2,050 | 718 | 513 | 513 | 308 | 35.0% | 25.0% | 25.0% | 15.0% |
| Permits & Fees | 24,200 | 8,470 | 6,050 | 6,050 | 3,630 | 35.0% | 25.0% | 25.0% | 15.0% |
| Operating Supplies | 5,000 | 1,750 | 1,250 | 1,250 | 750 | 35.0% | 25.0% | 25.0% | 15.0% |
| Contract Services | 115,220 | 40,327 | 28,805 | 28,805 | 17,283 | 35.0% | 25.0% | 25.0% | 15.0% |
| Repairs/Maintenance | 159,000 | 55,650 | 39,750 | 39,750 | 23,850 | 35.0% | 25.0% | 25.0% | 15.0% |
| Small Tools | 2,000 | 700 | 500 | 500 | 300 | 35.0% | 25.0% | 25.0% | 15.0% |
| Travel/Mtgs/Education | 10,000 | 3,500 | 2,500 | 2,500 | 1,500 | 35.0% | 25.0% | 25.0% | 15.0% |
| Certifications/TCPS | 5,120 | 1,792 | 1,280 | 1,280 | 768 | 35.0% | 25.0% | 25.0% | 15.0% |
| Electricity | 9,000 | 3,150 | 2,250 | 2,250 | 1,350 | 35.0% | 25.0% | 25.0% | 15.0% |
| Utility Water | 8,000 | 2,800 | 2,000 | 2,000 | 1,200 | 35.0% | 25.0% | 25.0% | 15.0% |
| Other Expenses | 10,000 | 3,500 | 2,500 | 2,500 | 1,500 | 35.0% | 25.0% | 25.0% | 15.0% |
| SUB-TOTAL | \$ 1,041,393 | \$ 364,488 | \$ 260,348 | \$ 260,348 | \$ 156,209 | 35.0% | 25.0% | 25.0% | 15.0% |

VALLEY SANITARY DISTRICT
SEWER RATE STUDY
Cost of Service Analysis

TABLE 27: CLASSIFICATION OF EXPENSES FOR COST OF SERVICE ANALYSIS, cont.

| Classification of Expenses | | | | | | | | | |
|--------------------------------|----------------------------|---------------------|-------------------|-------------------|------------------|-------------------------|--------------|--------------|-------------|
| Budget Categories | Total Revenue Requirements | Flow | Strength | | Customer | Basis of Classification | | | |
| | FY 2023/24 | (VOL) | (BOD) | (TSS) | (CA) | (VOL) | (BOD) | (TSS) | (CA) |
| OPERATIONS | | | | | | | | | |
| <i>Salary</i> | | | | | | | | | |
| Salaries | \$ 923,982 | \$ 582,109 | \$ 161,697 | \$ 161,697 | \$ 18,480 | 63.0% | 17.5% | 17.5% | 2.0% |
| Overtime | 22,000 | 13,860 | 3,850 | 3,850 | 440 | 63.0% | 17.5% | 17.5% | 2.0% |
| Callout | 14,000 | 8,820 | 2,450 | 2,450 | 280 | 63.0% | 17.5% | 17.5% | 2.0% |
| Standby | 19,753 | 12,444 | 3,457 | 3,457 | 395 | 63.0% | 17.5% | 17.5% | 2.0% |
| <i>Benefits</i> | | | | | | | | | |
| Longevity | 17,400 | 10,962 | 3,045 | 3,045 | 348 | 63.0% | 17.5% | 17.5% | 2.0% |
| Retirement | 106,181 | 66,894 | 18,582 | 18,582 | 2,124 | 63.0% | 17.5% | 17.5% | 2.0% |
| Payroll Taxes | 89,743 | 56,538 | 15,705 | 15,705 | 1,795 | 63.0% | 17.5% | 17.5% | 2.0% |
| Group Life Insurance | 1,896 | 1,194 | 332 | 332 | 38 | 63.0% | 17.5% | 17.5% | 2.0% |
| Group Health Insurance | 174,504 | 109,938 | 30,538 | 30,538 | 3,490 | 63.0% | 17.5% | 17.5% | 2.0% |
| Dental/Vision Insurance | 11,880 | 7,484 | 2,079 | 2,079 | 238 | 63.0% | 17.5% | 17.5% | 2.0% |
| Disability Insurance | 3,048 | 1,920 | 533 | 533 | 61 | 63.0% | 17.5% | 17.5% | 2.0% |
| Clothing/Safety | 16,200 | 10,206 | 2,835 | 2,835 | 324 | 63.0% | 17.5% | 17.5% | 2.0% |
| <i>Services & Supplies</i> | | | | | | | | | |
| Gas/Oil | 70,000 | 44,100 | 12,250 | 12,250 | 1,400 | 63.0% | 17.5% | 17.5% | 2.0% |
| Memberships/Subscriptions | 3,400 | 2,142 | 595 | 595 | 68 | 63.0% | 17.5% | 17.5% | 2.0% |
| Permits & Fees | 85,260 | 53,714 | 14,921 | 14,921 | 1,705 | 63.0% | 17.5% | 17.5% | 2.0% |
| Operating Supplies | 152,700 | 96,201 | 26,723 | 26,723 | 3,054 | 63.0% | 17.5% | 17.5% | 2.0% |
| Chemicals | 603,300 | 380,079 | 105,578 | 105,578 | 12,066 | 63.0% | 17.5% | 17.5% | 2.0% |
| Contract Services | 638,500 | 402,255 | 111,738 | 111,738 | 12,770 | 63.0% | 17.5% | 17.5% | 2.0% |
| Repairs/Maintenance | 73,000 | 45,990 | 12,775 | 12,775 | 1,460 | 63.0% | 17.5% | 17.5% | 2.0% |
| Small Tools | 1,000 | 630 | 175 | 175 | 20 | 63.0% | 17.5% | 17.5% | 2.0% |
| Travel/Mtgs/Education | 20,690 | 13,035 | 3,621 | 3,621 | 414 | 63.0% | 17.5% | 17.5% | 2.0% |
| Certifications/TCPS | 7,420 | 4,675 | 1,299 | 1,299 | 148 | 63.0% | 17.5% | 17.5% | 2.0% |
| Electricity | 792,001 | 498,961 | 138,600 | 138,600 | 15,840 | 63.0% | 17.5% | 17.5% | 2.0% |
| Natural Gas | 7,700 | 4,851 | 1,348 | 1,348 | 154 | 63.0% | 17.5% | 17.5% | 2.0% |
| Trash Collection | 44,000 | 27,720 | 7,700 | 7,700 | 880 | 63.0% | 17.5% | 17.5% | 2.0% |
| Utility Water | 22,000 | 13,860 | 3,850 | 3,850 | 440 | 63.0% | 17.5% | 17.5% | 2.0% |
| Other Expenses | 22,000 | 13,860 | 3,850 | 3,850 | 440 | 63.0% | 17.5% | 17.5% | 2.0% |
| SUB-TOTAL | \$ 3,943,558 | \$ 2,484,442 | \$ 690,123 | \$ 690,123 | \$ 78,871 | 63.0% | 17.5% | 17.5% | 2.0% |

VALLEY SANITARY DISTRICT
SEWER RATE STUDY
Cost of Service Analysis

TABLE 28: CLASSIFICATION OF EXPENSES FOR COST OF SERVICE ANALYSIS, cont.

| Classification of Expenses | | | | | | | | | |
|--------------------------------|----------------------------|---------------------|-------------------|-------------------|-------------|-------------------------|-------------|-------------|-------------|
| Budget Categories | Total Revenue Requirements | Flow | Strength | | Customer | Basis of Classification | | | |
| | FY 2023/24 | (VOL) | (BOD) | (TSS) | (CA) | (VOL) | (BOD) | (TSS) | (CA) |
| MAINTENANCE | | | | | | | | | |
| <i>Salary</i> | | | | | | | | | |
| Salaries | \$ 687,579 | \$ 412,547 | \$ 137,516 | \$ 137,516 | \$ - | 60.0% | 20.0% | 20.0% | 0.0% |
| Overtime | 5,000 | 3,000 | 1,000 | 1,000 | - | 60.0% | 20.0% | 20.0% | 0.0% |
| Callout | 5,000 | 3,000 | 1,000 | 1,000 | - | 60.0% | 20.0% | 20.0% | 0.0% |
| Standby | 2,694 | 1,616 | 539 | 539 | - | 60.0% | 20.0% | 20.0% | 0.0% |
| <i>Benefits</i> | | | | | | | | | |
| Longevity | 10,200 | 6,120 | 2,040 | 2,040 | - | 60.0% | 20.0% | 20.0% | 0.0% |
| Retirement | 61,462 | 36,877 | 12,292 | 12,292 | - | 60.0% | 20.0% | 20.0% | 0.0% |
| Payroll Taxes | 63,943 | 38,366 | 12,789 | 12,789 | - | 60.0% | 20.0% | 20.0% | 0.0% |
| Group Life Insurance | 1,656 | 994 | 331 | 331 | - | 60.0% | 20.0% | 20.0% | 0.0% |
| Group Health Insurance | 178,488 | 107,093 | 35,698 | 35,698 | - | 60.0% | 20.0% | 20.0% | 0.0% |
| Dental/Vision Insurance | 17,328 | 10,397 | 3,466 | 3,466 | - | 60.0% | 20.0% | 20.0% | 0.0% |
| Disability Insurance | 2,244 | 1,346 | 449 | 449 | - | 60.0% | 20.0% | 20.0% | 0.0% |
| Clothing/Safety | 16,080 | 9,648 | 3,216 | 3,216 | - | 60.0% | 20.0% | 20.0% | 0.0% |
| <i>Services & Supplies</i> | | | | | | | | | |
| Memberships/Subscriptions | 3,190 | 1,914 | 638 | 638 | - | 60.0% | 20.0% | 20.0% | 0.0% |
| Permits & Fees | 2,310 | 1,386 | 462 | 462 | - | 60.0% | 20.0% | 20.0% | 0.0% |
| Operating Supplies | 75,820 | 45,492 | 15,164 | 15,164 | - | 60.0% | 20.0% | 20.0% | 0.0% |
| Contract Services | 197,510 | 118,506 | 39,502 | 39,502 | - | 60.0% | 20.0% | 20.0% | 0.0% |
| Repairs/Maintenance | 427,795 | 256,677 | 85,559 | 85,559 | - | 60.0% | 20.0% | 20.0% | 0.0% |
| Small Tools | 14,000 | 8,400 | 2,800 | 2,800 | - | 60.0% | 20.0% | 20.0% | 0.0% |
| Travel/Mtgs/Education | 17,600 | 10,560 | 3,520 | 3,520 | - | 60.0% | 20.0% | 20.0% | 0.0% |
| Certifications/TCPS | 5,800 | 3,480 | 1,160 | 1,160 | - | 60.0% | 20.0% | 20.0% | 0.0% |
| Other Expenses | 11,000 | 6,600 | 2,200 | 2,200 | - | 60.0% | 20.0% | 20.0% | 0.0% |
| SUB-TOTAL | \$ 1,806,699 | \$ 1,084,019 | \$ 361,340 | \$ 361,340 | \$ - | 27.5% | 9.2% | 9.2% | 0.0% |

VALLEY SANITARY DISTRICT
SEWER RATE STUDY
Cost of Service Analysis

TABLE 29: CLASSIFICATION OF EXPENSES FOR COST OF SERVICE ANALYSIS, cont.

| Classification of Expenses | | | | | | | | | |
|--------------------------------|----------------------------|-------------------|-------------------|-------------------|------------------|-------------------------|-------------|-------------|-------------|
| Budget Categories | Total Revenue Requirements | Flow | Strength | | Customer | Basis of Classification | | | |
| | FY 2023/24 | (VOL) | (BOD) | (TSS) | (CA) | (VOL) | (BOD) | (TSS) | (CA) |
| LAB | | | | | | | | | |
| <i>Salary</i> | | | | | | | | | |
| Salaries | \$ 388,481 | \$ 213,665 | \$ 77,696 | \$ 77,696 | \$ 19,424 | 55.0% | 20.0% | 20.0% | 5.0% |
| Overtime | 2,500 | 1,375 | 500 | 500 | 125 | 55.0% | 20.0% | 20.0% | 5.0% |
| <i>Benefits</i> | | | | | | | | | |
| Longevity | 1,200 | 660 | 240 | 240 | 60 | 55.0% | 20.0% | 20.0% | 5.0% |
| Retirement | 24,356 | 13,396 | 4,871 | 4,871 | 1,218 | 55.0% | 20.0% | 20.0% | 5.0% |
| Payroll Taxes | 35,297 | 19,413 | 7,059 | 7,059 | 1,765 | 55.0% | 20.0% | 20.0% | 5.0% |
| Group Life Insurance | 924 | 508 | 185 | 185 | 46 | 55.0% | 20.0% | 20.0% | 5.0% |
| Group Health Insurance | 67,092 | 36,901 | 13,418 | 13,418 | 3,355 | 55.0% | 20.0% | 20.0% | 5.0% |
| Dental/Vision Insurance | 6,144 | 3,379 | 1,229 | 1,229 | 307 | 55.0% | 20.0% | 20.0% | 5.0% |
| Disability Insurance | 1,308 | 719 | 262 | 262 | 65 | 55.0% | 20.0% | 20.0% | 5.0% |
| Clothing/Safety | 3,863 | 2,125 | 773 | 773 | 193 | 55.0% | 20.0% | 20.0% | 5.0% |
| <i>Services & Supplies</i> | | | | | | | | | |
| Memberships/Subscriptions | 2,275 | 1,251 | 455 | 455 | 114 | 55.0% | 20.0% | 20.0% | 5.0% |
| Permits & Fees | 10,000 | 5,500 | 2,000 | 2,000 | 500 | 55.0% | 20.0% | 20.0% | 5.0% |
| Operating Supplies | 29,300 | 16,115 | 5,860 | 5,860 | 1,465 | 55.0% | 20.0% | 20.0% | 5.0% |
| Contract Services | 40,300 | 22,165 | 8,060 | 8,060 | 2,015 | 55.0% | 20.0% | 20.0% | 5.0% |
| Repairs/Maintenance | 20,000 | 11,000 | 4,000 | 4,000 | 1,000 | 55.0% | 20.0% | 20.0% | 5.0% |
| Small Tools | 10,000 | 5,500 | 2,000 | 2,000 | 500 | 55.0% | 20.0% | 20.0% | 5.0% |
| Research | 101,500 | 55,825 | 20,300 | 20,300 | 5,075 | 55.0% | 20.0% | 20.0% | 5.0% |
| Travel/Mtgs/Education | 8,000 | 4,400 | 1,600 | 1,600 | 400 | 55.0% | 20.0% | 20.0% | 5.0% |
| Certifications/TCPS | 1,510 | 831 | 302 | 302 | 76 | 55.0% | 20.0% | 20.0% | 5.0% |
| Other Expenses | 10,000 | 5,500 | 2,000 | 2,000 | 500 | 55.0% | 20.0% | 20.0% | 5.0% |
| SUB-TOTAL | \$ 764,050 | \$ 420,228 | \$ 152,810 | \$ 152,810 | \$ 38,203 | 11.2% | 4.1% | 4.1% | 1.0% |

VALLEY SANITARY DISTRICT
SEWER RATE STUDY
Cost of Service Analysis

TABLE 30: CLASSIFICATION OF EXPENSES FOR COST OF SERVICE ANALYSIS, cont.

| Classification of Expenses | | | | | | | | | |
|--------------------------------|----------------------------|---------------------|-------------------|-------------------|-------------------|-------------------------|--------------|--------------|--------------|
| Budget Categories | Total Revenue Requirements | Flow | Strength | | Customer | Basis of Classification | | | |
| | FY 2023/24 | (VOL) | (BOD) | (TSS) | (CA) | (VOL) | (BOD) | (TSS) | (CA) |
| ADMINISTRATION/BOARD | | | | | | | | | |
| <i>Salary</i> | | | | | | | | | |
| Salaries | \$ 951,307 | \$ 380,523 | \$ 190,261 | \$ 190,261 | \$ 190,261 | 40.0% | 20.0% | 20.0% | 20.0% |
| Overtime | 5,000 | 2,000 | 1,000 | 1,000 | 1,000 | 40.0% | 20.0% | 20.0% | 20.0% |
| <i>Benefits</i> | | | | | | | | | |
| Longevity | 3,600 | 1,440 | 720 | 720 | 720 | 40.0% | 20.0% | 20.0% | 20.0% |
| Retirement | 97,086 | 38,834 | 19,417 | 19,417 | 19,417 | 40.0% | 20.0% | 20.0% | 20.0% |
| Payroll Taxes | 86,284 | 34,514 | 17,257 | 17,257 | 17,257 | 40.0% | 20.0% | 20.0% | 20.0% |
| Workers Compensation | 85,722 | 34,289 | 17,144 | 17,144 | 17,144 | 40.0% | 20.0% | 20.0% | 20.0% |
| Group Life Insurance | 1,668 | 667 | 334 | 334 | 334 | 40.0% | 20.0% | 20.0% | 20.0% |
| Group Health Insurance | 147,696 | 59,078 | 29,539 | 29,539 | 29,539 | 40.0% | 20.0% | 20.0% | 20.0% |
| Dental/Vision Insurance | 11,460 | 4,584 | 2,292 | 2,292 | 2,292 | 40.0% | 20.0% | 20.0% | 20.0% |
| Disability Insurance | 2,352 | 941 | 470 | 470 | 470 | 40.0% | 20.0% | 20.0% | 20.0% |
| <i>Services & Supplies</i> | | | | | | | | | |
| Comprehensive Insurance | 393,465 | 157,386 | 78,693 | 78,693 | 78,693 | 40.0% | 20.0% | 20.0% | 20.0% |
| Memberships/Subscriptions | 53,153 | 21,261 | 10,631 | 10,631 | 10,631 | 40.0% | 20.0% | 20.0% | 20.0% |
| Office Expenses | 26,500 | 10,600 | 5,300 | 5,300 | 5,300 | 40.0% | 20.0% | 20.0% | 20.0% |
| County/City Charges | 23,100 | 9,240 | 4,620 | 4,620 | 4,620 | 40.0% | 20.0% | 20.0% | 20.0% |
| Permits & Fees | 3,000 | 1,200 | 600 | 600 | 600 | 40.0% | 20.0% | 20.0% | 20.0% |
| Operating Supplies | 11,000 | 4,400 | 2,200 | 2,200 | 2,200 | 40.0% | 20.0% | 20.0% | 20.0% |
| Contract Services | 742,829 | 297,132 | 148,566 | 148,566 | 148,566 | 40.0% | 20.0% | 20.0% | 20.0% |
| Professional/Legal | 405,968 | 162,387 | 81,194 | 81,194 | 81,194 | 40.0% | 20.0% | 20.0% | 20.0% |
| Repairs/Maintenance | 19,375 | 7,750 | 3,875 | 3,875 | 3,875 | 40.0% | 20.0% | 20.0% | 20.0% |
| Travel/Mtgs/Education | 159,404 | 63,762 | 31,881 | 31,881 | 31,881 | 40.0% | 20.0% | 20.0% | 20.0% |
| Telephone/VOIP | 35,434 | 14,174 | 7,087 | 7,087 | 7,087 | 40.0% | 20.0% | 20.0% | 20.0% |
| Other Expenses | 20,000 | 8,000 | 4,000 | 4,000 | 4,000 | 40.0% | 20.0% | 20.0% | 20.0% |
| General Facilities | 464,000 | 185,600 | 92,800 | 92,800 | 92,800 | 40.0% | 20.0% | 20.0% | 20.0% |
| SUB-TOTAL | \$ 3,749,403 | \$ 1,499,761 | \$ 749,881 | \$ 749,881 | \$ 749,881 | 40.0% | 20.0% | 20.0% | 20.0% |

VALLEY SANITARY DISTRICT
SEWER RATE STUDY
Cost of Service Analysis

TABLE 31: CLASSIFICATION OF EXPENSES FOR COST OF SERVICE ANALYSIS, cont.

| Classification of Expenses | | | | | | | | | |
|--------------------------------------|----------------------------|---------------------|---------------------|---------------------|---------------------|-------------------------|--------------|--------------|-------------|
| Budget Categories | Total Revenue Requirements | Flow | Strength | | Customer | Basis of Classification | | | |
| | FY 2023/24 | (VOL) | (BOD) | (TSS) | (CA) | (VOL) | (BOD) | (TSS) | (CA) |
| ADDITIONAL STAFFING | | | | | | | | | |
| Engineering Technician | \$ 139,000 | \$ 76,450 | \$ 27,800 | \$ 27,800 | \$ 6,950 | 55.0% | 20.0% | 20.0% | 5.0% |
| Maintenance Tech-in-Training | 90,000 | 49,500 | 18,000 | 18,000 | 4,500 | 55.0% | 20.0% | 20.0% | 5.0% |
| Operator-in-Training | 98,000 | 53,900 | 19,600 | 19,600 | 4,900 | 55.0% | 20.0% | 20.0% | 5.0% |
| ADDITIONAL RETIREMENT EXPENSE | | | | | | | | | |
| Unfunded Accrued Liability | \$ 752,121 | 413,667 | 150,424 | 150,424 | 37,606 | 55.0% | 20.0% | 20.0% | 5.0% |
| SUB-TOTAL | \$ 1,079,121 | \$ 593,517 | \$ 215,824 | \$ 215,824 | \$ 53,956 | 55.0% | 20.0% | 20.0% | 5.0% |
| GRAND TOTAL | \$ 13,304,141 | \$ 6,980,006 | \$ 2,614,309 | \$ 2,614,309 | \$ 1,095,518 | 52.5% | 19.7% | 19.7% | 8.2% |

TABLE 32: CLASSIFICATION OF EXPENSES FOR COST OF SERVICE ANALYSIS, cont.

| Classification of Expenses | | | | | | | | | |
|---|----------------------------|----------------------|---------------------|---------------------|---------------------|-------------------------|--------------|--------------|-------------|
| Budget Categories | Total Revenue Requirements | Flow | Strength | | Customer | Basis of Classification | | | |
| | FY 2023/24 | (VOL) | (BOD) | (TSS) | (CA) | (VOL) | (BOD) | (TSS) | (CA) |
| Debt Service Payments | | | | | | | | | |
| Existing Annual Debt Service | \$ 5,267,858 | \$ 3,160,715 | \$ 1,053,572 | \$ 1,053,572 | \$ - | 60.0% | 20.0% | 20.0% | 0.0% |
| Future Annual Debt Service | 1,307,768 | 784,661 | 261,554 | 261,554 | - | 60.0% | 20.0% | 20.0% | 0.0% |
| Total Debt Service Payments | \$ 6,575,627 | \$ 3,945,376 | \$ 1,315,125 | \$ 1,315,125 | \$ - | 60.0% | 20.0% | 20.0% | 0.0% |
| Capital Expenditures | | | | | | | | | |
| Rate Funded Capital Expenses | \$ 26,737,181 | \$ 16,042,309 | \$ 5,347,436 | \$ 5,347,436 | \$ - | 60.0% | 20.0% | 20.0% | 0.0% |
| TOTAL REVENUE REQUIREMENTS | \$ 46,616,949 | \$ 26,967,690 | \$ 9,276,870 | \$ 9,276,870 | \$ 1,095,518 | 57.8% | 19.9% | 19.9% | 2.4% |
| Less: Non-Rate Revenues | | | | | | | | | |
| Permit/Inspection Fees | \$ (45,017) | \$ (26,042) | \$ (8,958) | \$ (8,958) | \$ (1,058) | 57.8% | 19.9% | 19.9% | 2.4% |
| Plan Check Fees | (12,598) | (7,288) | (2,507) | (2,507) | (296) | 57.8% | 19.9% | 19.9% | 2.4% |
| Other Services | (22,500) | (13,016) | (4,478) | (4,478) | (529) | 57.8% | 19.9% | 19.9% | 2.4% |
| Interest Revenue | (285,847) | (165,361) | (56,884) | (56,884) | (6,718) | 57.8% | 19.9% | 19.9% | 2.4% |
| Taxes - Current Secured | (1,051,864) | (608,498) | (209,323) | (209,323) | (24,719) | 57.8% | 19.9% | 19.9% | 2.4% |
| Taxes - Current Unsecured | (35,412) | (20,485) | (7,047) | (7,047) | (832) | 57.8% | 19.9% | 19.9% | 2.4% |
| Taxes - Prior Secured | (8,638) | (4,997) | (1,719) | (1,719) | (203) | 57.8% | 19.9% | 19.9% | 2.4% |
| Taxes - Supplemental Current | (4,963) | (2,871) | (988) | (988) | (117) | 57.8% | 19.9% | 19.9% | 2.4% |
| Taxes - Supplemental Prior | (11,482) | (6,642) | (2,285) | (2,285) | (270) | 57.8% | 19.9% | 19.9% | 2.4% |
| Homeowner's Tax Relief | (6,802) | (3,935) | (1,354) | (1,354) | (160) | 57.8% | 19.9% | 19.9% | 2.4% |
| Non-Operating Revenue | (22,241) | (12,866) | (4,426) | (4,426) | (523) | 57.8% | 19.9% | 19.9% | 2.4% |
| NET REVENUE REQUIREMENTS | \$ 45,109,585 | \$ 26,095,687 | \$ 8,976,902 | \$ 8,976,902 | \$ 1,060,094 | | | | |
| <i>Allocation of Revenue Requirements</i> | <i>100.0%</i> | <i>57.8%</i> | <i>19.9%</i> | <i>19.9%</i> | <i>2.4%</i> | | | | |

TABLE 33: ADJUSTMENT TO CLASSIFICATION OF EXPENSES FOR COST OF SERVICE ANALYSIS

| Adjustments to Classification of Expenses | Total | Flow (VOL) | Strength (BOD) | Strength (TSS) | Customer (CA) |
|--|----------------------|----------------------|---------------------|---------------------|-------------------|
| Adjustment to Current Rate Level: | | | | | |
| Test Year (FY 2023/24) Target Rate Rev. After Rate Increases | \$ 23,587,326 | | | | |
| Projected Rate Revenue at Current Rates | 15,530,749 | | | | |
| Test Year (FY 2023/24) Projected Rate Adjustment | 35.0% | | | | |
| Adjusted Net Revenue Req'ts | \$ 23,587,326 | \$ 13,645,159 | \$ 4,693,927 | \$ 4,693,927 | \$ 554,312 |
| <i>Percent of Revenue</i> | <i>100.0%</i> | <i>57.8%</i> | <i>19.9%</i> | <i>19.9%</i> | <i>2.4%</i> |

VALLEY SANITARY DISTRICT
SEWER RATE STUDY
Sewer Cost of Service Analysis

TABLE 34: DEVELOPMENT OF THE VOLUME ALLOCATION FACTOR

| Development of the VOLUME Allocation Factor ¹ | | | | | | |
|--|---------------------------------|----------------|---------------------|-------------------------------------|--|-------------------------------|
| Customer Class | Number of Accounts ² | Number of EDUs | Annual Volume (hcf) | Winter Water Use (hcf) ³ | Est. Annual Sewer Flow (ccf/year) ⁴ | Percentage of Adjusted Volume |
| <i>Calculation Components</i> | | | <i>A</i> | <i>B</i> | <i>C = B * 4</i> | |
| Residential | | | | | | |
| Single-Family Residential | 19,972 | 19,980 | 4,090,849 | 746,686 | 2,986,744 | 72.4% |
| Multi-Family Residential | 298 | 5,566 | 447,858 | 96,850 | 387,400 | 9.4% |
| Mobile Home ³ | 1,528 | 1,518 | 140,899 | 28,248 | 112,992 | 2.7% |
| RV Park ³ | 2,816 | 1,576 | 155,494 | 38,099 | 155,494 | 3.8% |
| Non-Residential | | | | | | |
| Commercial - Low/Med. Strength | 703 | 4,250 | 412,315 | 90,540 | 412,315 | 10.0% |
| Commercial - High Strength | 71 | 535 | 69,566 | 15,974 | 69,566 | 1.7% |
| Total: | 25,388 | 33,425 | 5,316,980 | 1,016,396 | 4,124,510 | 100.0% |

1. Consumption, customer accounts, and EDUs from source file: *Net Join Tax Roll 07-30-2020 Final V8.xlsx* .
2. Number of accounts for Mobile Homes and RV Parks are based on the number of lots.
3. The three consecutive month period of lowest water usage overall during FY 2019/20.
4. RV Parks and Commercial customers are based on annual water consumption. The remaining residential accounts are based on annual average winter water use.

TABLE 35: DEVELOPMENT OF THE STRENGTH ALLOCATION FACTOR

| Development of the STRENGTH Allocation Factor | | | | | | | | | |
|---|---|--|--|---------------------------------|------------------|--|--|---------------------------------|------------------|
| Customer Class | Adjusted Total Annual Volume (HCF) ¹ | Biochemical Oxygen Demand (BOD) | | | | Total Suspended Solids (TSS) | | | |
| | | Avg. Strength Factor (mg/l) ² | Calculated BOD (lbs./yr.) ³ | Adjusted BOD (lbs./yr.) | Percent of Total | Avg. Strength Factor (mg/l) ² | Calculated TSS (lbs./yr.) ³ | Adjusted TSS (lbs./yr.) | Percent of Total |
| Residential | | | | | | | | | |
| Single-Family Residential | 2,986,744 | 175 | 3,260,646 | 1,501,866 | 70.1% | 175 | 3,260,646 | 2,477,906 | 70.0% |
| Multi-Family Residential | 387,400 | 175 | 422,927 | 194,802 | 9.1% | 175 | 422,927 | 321,400 | 9.1% |
| Mobile Home | 112,992 | 175 | 123,354 | 56,817 | 2.7% | 175 | 123,354 | 93,742 | 2.6% |
| RV Park | 155,494 | 175 | 169,754 | 78,189 | 3.6% | 175 | 169,754 | 129,003 | 3.6% |
| Non-Residential Totals | | | | | | | | | |
| Commercial - Low/Med. Strength | 412,315 | 150 | 385,822 | 177,711 | 8.3% | 150 | 385,822 | 293,203 | 8.3% |
| Commercial - High Strength | 69,566 | 670 | 290,761 | 133,926 | 6.2% | 680 | 295,101 | 224,260 | 6.3% |
| Total: | 4,124,510 | | 4,653,265 | 2,143,311 | 100.0% | | 4,657,604 | 3,539,514 | 100.0% |
| | | <i>Target, from WWTP Data</i> | | <i>2,143,311 BOD (lbs./yr.)</i> | | | | <i>3,539,514 TSS (lbs./yr.)</i> | |
| | | | | <i>0.461 BOD Adj. Factor</i> | | | | <i>0.760 TSS Adj. Factor</i> | |

1. RV Parks and Commercial customers are based on annual water consumption. The remaining residential accounts are based on annual average winter water use.
2. Source: CA State Water Resources Control Board, *Revenue Program Guidelines (Appendix G)* , G-21 .
3. Calculated BOD and TSS are from source file: *16.ASP & Pond Effluent Data + loading (01.2017 - 08.2020).xlsx* .

VALLEY SANITARY DISTRICT
SEWER RATE STUDY
Sewer Cost of Service Analysis

TABLE 36: DEVELOPMENT OF THE CUSTOMER ALLOCATION FACTOR

| Development of the CUSTOMER Allocation Factor | | | | |
|---|---------------------------------|------------------|----------------|------------------|
| Sewer Customer Classes | Number of Accounts ¹ | Percent of Total | Number of EDUs | Percent of Total |
| Residential | | | | |
| Single-Family Residential | 19,972 | 78.67% | 19,980 | 57.62% |
| Multi-Family Residential | 298 | 1.17% | 5,566 | 16.05% |
| Mobile Home | 1,528 | 6.02% | 1,528 | 4.41% |
| RV Park | 2,816 | 11.09% | 2,816 | 8.12% |
| Non-Residential | | | | |
| Commercial - Low/Med. Strength | 703 | 2.77% | 4,250 | 12.26% |
| Commercial - High Strength | 71 | 0.28% | 535 | 1.54% |
| Total: | 25,388 | 100.00% | 34,675 | 100.00% |

1. Number of accounts for Mobile Homes and RV Parks are based on the number of lots.

TABLE 37 : TOTAL REVENUE BY CUSTOMER CLASS

| Customer Class | FY 2019/20 Rate Revenue ¹ | Percentage of Accounts |
|--------------------------------|--------------------------------------|------------------------|
| Residential | | |
| Single-Family Residential | \$ 6,593,400 | 59.78% |
| Multi-Family Residential | 1,836,798 | 16.65% |
| Mobile Home | 500,775 | 4.54% |
| RV Park | 520,235 | 4.72% |
| Non-Residential | | |
| Commercial - Low/Med. Strength | \$ 1,402,500 | 12.72% |
| Commercial - High Strength | 176,550 | 1.60% |
| Total | \$ 11,030,259 | 100% |

1. Source file: Net Join Tax Roll 07-30-2020 Final V8.xlsx.

VALLEY SANITARY DISTRICT
SEWER RATE STUDY
Sewer Cost of Service Analysis

TABLE 38: ALLOCATION OF REVENUE REQUIREMENTS

| Allocation of FY 2023/24 Revenue Requirements by Customer Class | | | | | | |
|---|--------------------------------|---------------------|---------------------|-------------------------------|-------------------------------------|------------------------------|
| Customer Class | Cost Classification Components | | | | Cost-of-Service Net Revenue Req'ts. | % of COS Net Revenue Req'ts. |
| | Volume | Treatment | | Customer Related ³ | | |
| | | BOD | TSS | | | |
| Net Revenue Requirements¹ | \$ 13,645,159 | \$ 4,693,927 | \$ 4,693,927 | \$ 554,312 | \$ 23,587,326 | -- |
| | 57.8% | 19.9% | 19.9% | 2.4% | 100.0% | |
| Residential | | | | | | |
| Single-Family Residential | \$ 9,881,076 | \$ 3,289,140 | \$ 3,286,075 | \$ 436,061 | \$ 16,892,352 | 71.6% |
| Multi-Family Residential | 1,281,639 | 426,623 | 426,225 | 6,506 | 2,140,994 | 9.1% |
| Mobile Home | 373,813 | 124,432 | 124,316 | 33,362 | 655,922 | 2.8% |
| RV Park | 514,422 | 171,237 | 171,078 | 61,483 | 918,221 | 3.9% |
| Residential Totals | \$ 12,050,951 | \$ 4,011,431 | \$ 4,007,694 | \$ 537,413 | \$ 20,607,488 | 87.4% |
| Non-Residential | | | | | | |
| Commercial - Low/Med. Strength | \$ 1,364,064 | \$ 389,194 | \$ 388,831 | \$ 15,349 | \$ 2,157,439 | 9.1% |
| Commercial - High Strength | 230,144 | 293,302 | 297,402 | 1,550 | 822,399 | 3.5% |
| Non-Residential Totals | \$ 1,594,209 | \$ 682,496 | \$ 686,234 | \$ 16,899 | \$ 2,979,837 | 12.6% |
| Total | \$ 13,645,159 | \$ 4,693,927 | \$ 4,693,927 | \$ 554,312 | \$ 23,587,326 | 100% |

1. The 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.

TABLE 39: PROPOSED SEWER RATES

Current Rate Design - 70% Fixed / 30% Volumetric

| Customer Class | Number of Accounts | No. of EDUs ¹ | Estimated Sewer Flow ² | Total Revenue Requirement | Fixed & Volumetric Charges | |
|--------------------------------|--------------------|--------------------------|-----------------------------------|---------------------------|------------------------------------|------------------|
| | | | | | Annual Fixed Charge | Vol. Rate \$/hcf |
| Residential | | | | | <u>\$ Per EDU/Acct³</u> | |
| Single-Family Residential | 19,972 | 19,980 | 2,986,744 | \$ 16,892,352 | \$591.82 | \$1.69 |
| Multi-Family Residential | 298 | 5,566 | 387,400 | 2,140,994 | \$269.26 | \$1.69 |
| Mobile Home | 1,528 | 1,518 | 112,992 | 655,922 | \$300.49 | \$1.69 |
| RV Park | 2,816 | 1,576 | 155,494 | 918,221 | \$228.25 | \$1.77 |
| Residential Totals | 24,614 | 28,640 | 3,642,630 | \$ 20,607,488 | | |
| Non-Residential | | | | | <u>\$ Per EDU</u> | |
| Commercial - Low/Med. Strength | 703 | 4,250 | 412,315 | \$ 2,157,439 | \$355.34 | \$1.57 |
| Commercial - High Strength | 71 | 535 | 69,566 | 822,399 | \$1,076.04 | \$3.55 |
| Non-Residential Totals | 774 | 4,785 | 481,880 | \$ 2,979,837 | | |
| Total | 25,388 | 33,425 | 4,124,510 | \$ 23,587,326 | | |

- EDUs are from the tax roll. Source file: 4. FY 21 Tax Roll for Rate Study.xlsx.
- Estimated sewer flow based on average winter consumption for SFR, MFR and MH customers. RV Parks and Commercial customers are based on annual consumption. Source file: 14. IWA Net Billed Water Consumption by Location (RAC) Jan 2019 - Sept 2020.xlsx.
- Fixed charges for SFR and MFR customers are calculated based on EDU, while rates for MH and RV Park customers are based on the number of accounts, or lots.

VALLEY SANITARY DISTRICT
SEWER RATE STUDY
Sewer Cost of Service Analysis

TABLE 40: CALCULATION OF RV-DUMP CHARGES

| Calculation of RV-Dump Charges | | | | | |
|--|---|--|--------------------------|--|--------------------------|
| Customer Class | One-Time Effluent Volume (HCF) ¹ | Biochemical Oxygen Demand (BOD) | | Total Suspended Solids (TSS) | |
| | | Avg. Strength Factor (mg/l) ² | Lbs. of BOD ³ | Avg. Strength Factor (mg/l) ² | Lbs. of TSS ³ |
| RV Dump Charge Components: | | | | | |
| 1. Septage Vol. , Strength and lbs. | 0.05348 | 5,400 | 1.80 | 12,000 | 4.00 |
| 2. Unit costs (\$/HCF or /lbs.) ⁴ | \$3.31 | | \$2.19 | | \$1.33 |
| 3. Charge (1. x 2.) | \$0.18 | | \$3.95 | | \$5.31 |
| Total Flow & Strength Charges | \$9.43 | | | | |
| Admin. Charges (.25 hrs @ \$58/hr) | \$14.50 | | | | |
| RV Dump Charge (\$/ 40-Gal.) | \$23.93 | | | | |

1. Assumes a standard RV dump of 40 gallons.
2. Typical septage strength from Water Resource Control Board Guidelines (Appendix G).
3. Formula: Effluent Volume (HCF)*748 gal/HCF*Strength Factor (mg/L)*(8.34/10⁶).
4. From COSA results (Table 30: Flow, BOD and TSS Costs divided by system-wide units).

VALLEY SANITARY DISTRICT
SEWER RATE STUDY
Sewer Cost of Service Analysis/Rate Design

TABLE 41: CURRENT VS. PROPOSED SEWER RATES (ANNUAL)

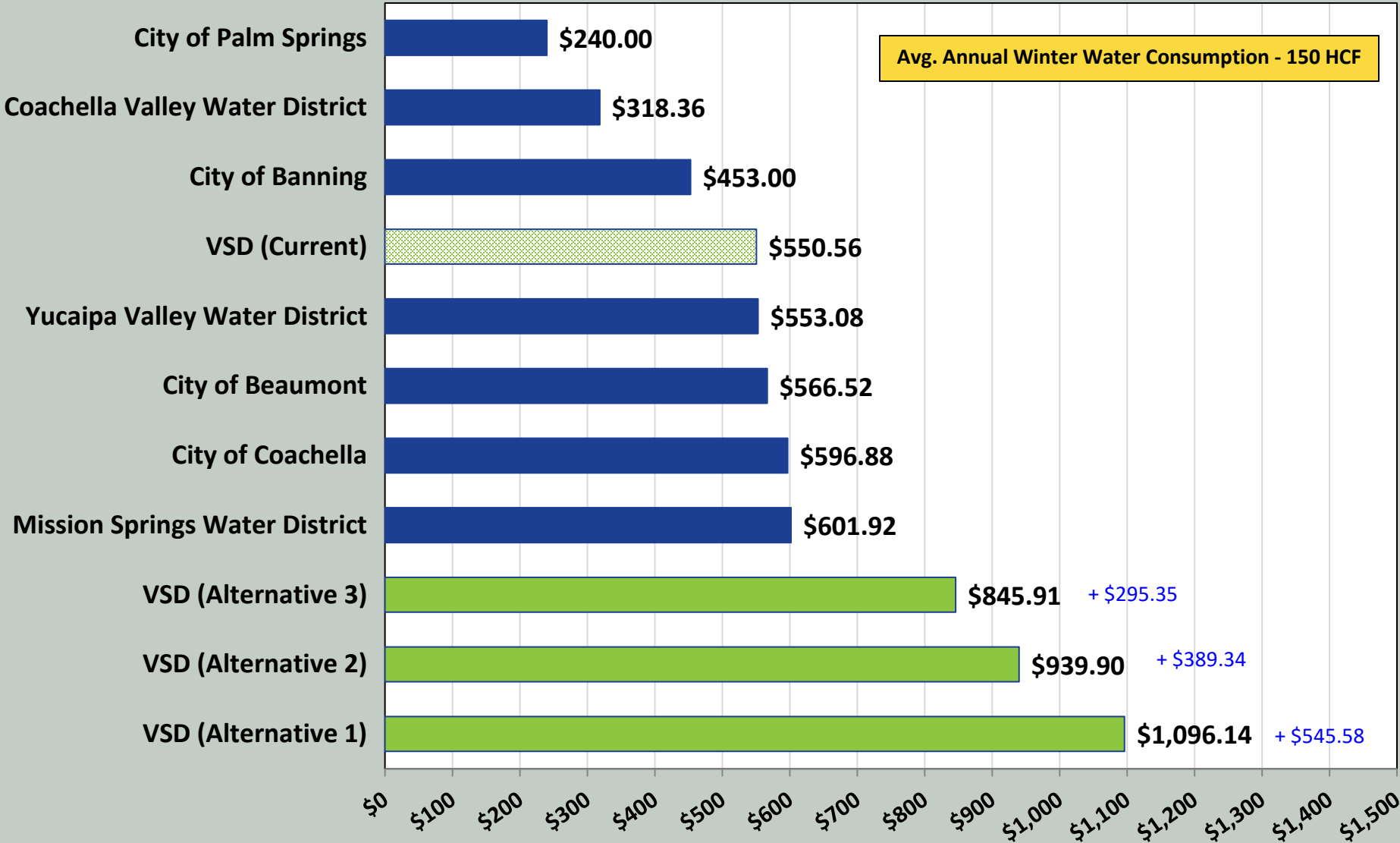
Current Rate Design - 70% Fixed / 30% Volumetric

| Sewer Rate Schedule | Current Rates (\$/EDU) | Proposed Annual Sewer Rates | | | | |
|--|------------------------|----------------------------------|------------|------------|------------|------------|
| | | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| | | FY 2023/24 | FY 2024/25 | FY 2025/26 | FY 2026/27 | FY 2027/28 |
| <i>Projected Increase in Rate Revenue:</i> ¹ | | 35.00% | 35.00% | 35.00% | 20.00% | 15.00% |
| Fixed Service Charges (Per EDU or Accounts)² | | | | | | |
| Residential | | Rates Per EDU or Account | | | | |
| Single-Family Residential | \$385.56 | \$591.82 | \$798.96 | \$1,078.60 | \$1,294.32 | \$1,488.47 |
| Multi-Family Residential | \$168.75 | \$269.26 | \$363.50 | \$490.73 | \$588.88 | \$677.21 |
| Mobile Home | \$203.94 | \$300.49 | \$405.66 | \$547.64 | \$657.17 | \$755.75 |
| RV Park | \$158.91 | \$228.25 | \$308.14 | \$415.99 | \$499.19 | \$574.07 |
| Non-Residential | | Rates Per EDU | | | | |
| Commercial - Low Strength | \$223.91 | \$355.34 | \$479.71 | \$647.61 | \$777.13 | \$893.70 |
| Commercial - High Strength | \$682.88 | \$1,076.04 | \$1,452.65 | \$1,961.08 | \$2,353.30 | \$2,706.30 |
| Volumetric Rate (\$/hcf)³ | | | | | | |
| Residential | | Rates Per HCF⁴ | | | | |
| Single-Family Residential | \$1.10 | \$1.69 | \$2.29 | \$3.09 | \$3.71 | \$4.27 |
| Multi-Family Residential | \$1.10 | \$1.69 | \$2.29 | \$3.09 | \$3.71 | \$4.27 |
| Mobile Home | \$1.10 | \$1.69 | \$2.29 | \$3.09 | \$3.71 | \$4.27 |
| RV Park | \$1.23 | \$1.77 | \$2.39 | \$3.23 | \$3.88 | \$4.46 |
| Non-Residential | | | | | | |
| Commercial - Low Strength | \$0.99 | \$1.57 | \$2.12 | \$2.86 | \$3.43 | \$3.94 |
| Commercial - High Strength | \$2.25 | \$3.55 | \$4.79 | \$6.47 | \$7.76 | \$8.92 |

1. This is the increase in annual rate revenue as shown in the Financial Plan, not an across-the-board adjustment to individual rate.
2. Rates for SFR and MFR customers are calculated based on EDU, while rates for MH and RV Park customers are based on the number of accounts, or lots. Commercial rates are based on estimated EDUs.
3. One Unit is equal to one HCF (Hundred Cubic Feet) or 748 gallons.
4. HCF based on **average winter consumption** for SFR, MFR and MH customers and **annual consumption** for RV Parks and Commercial customers.

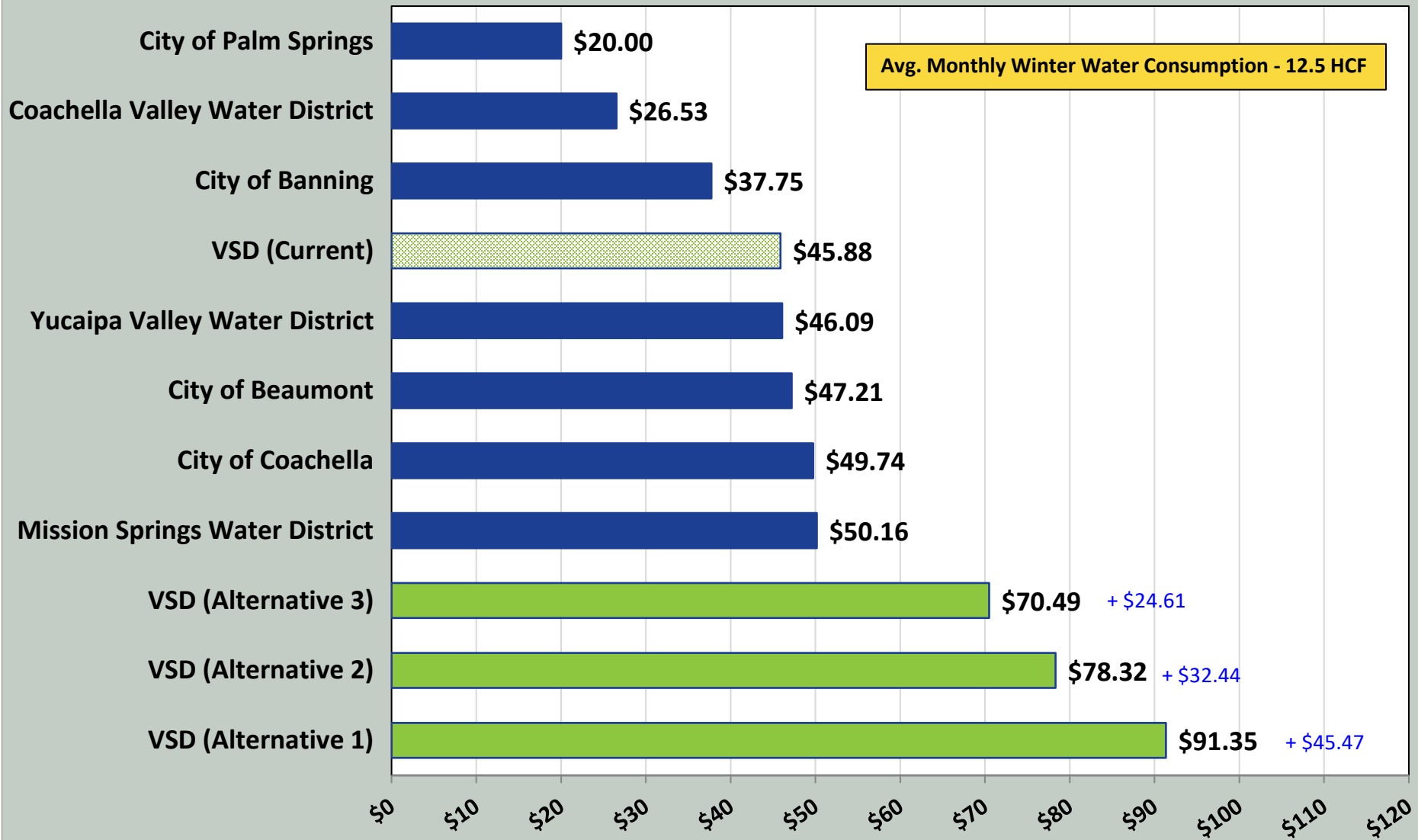
Riverside County, CA

Annual Sewer Bill Comparison - Single Family Accounts



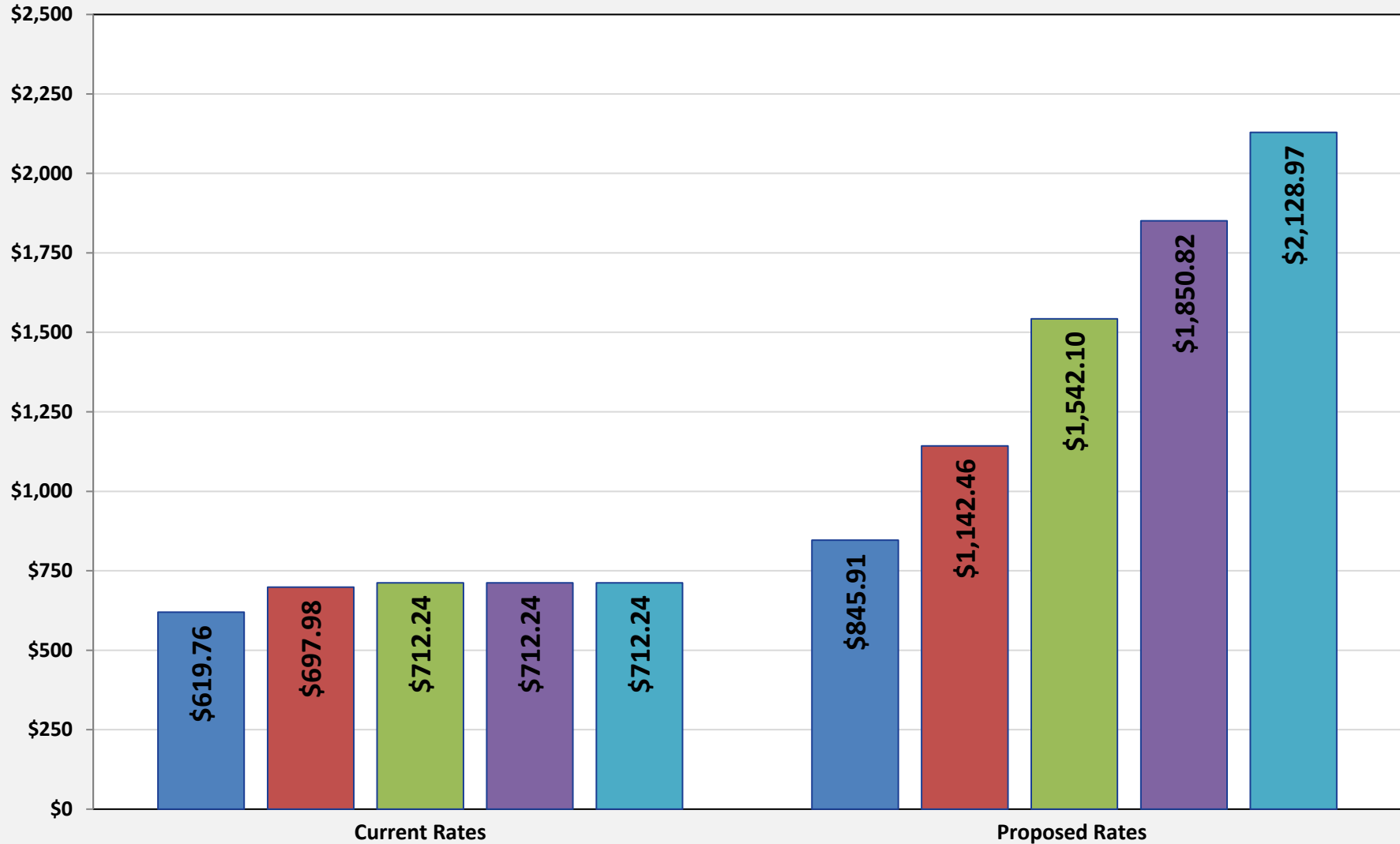
Riverside County, CA

Monthly Sewer Bill Comparison - Single Family Accounts

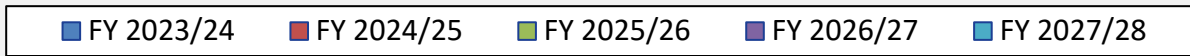


Single Family Residential Annual Sewer Bills - 5-Year Projections

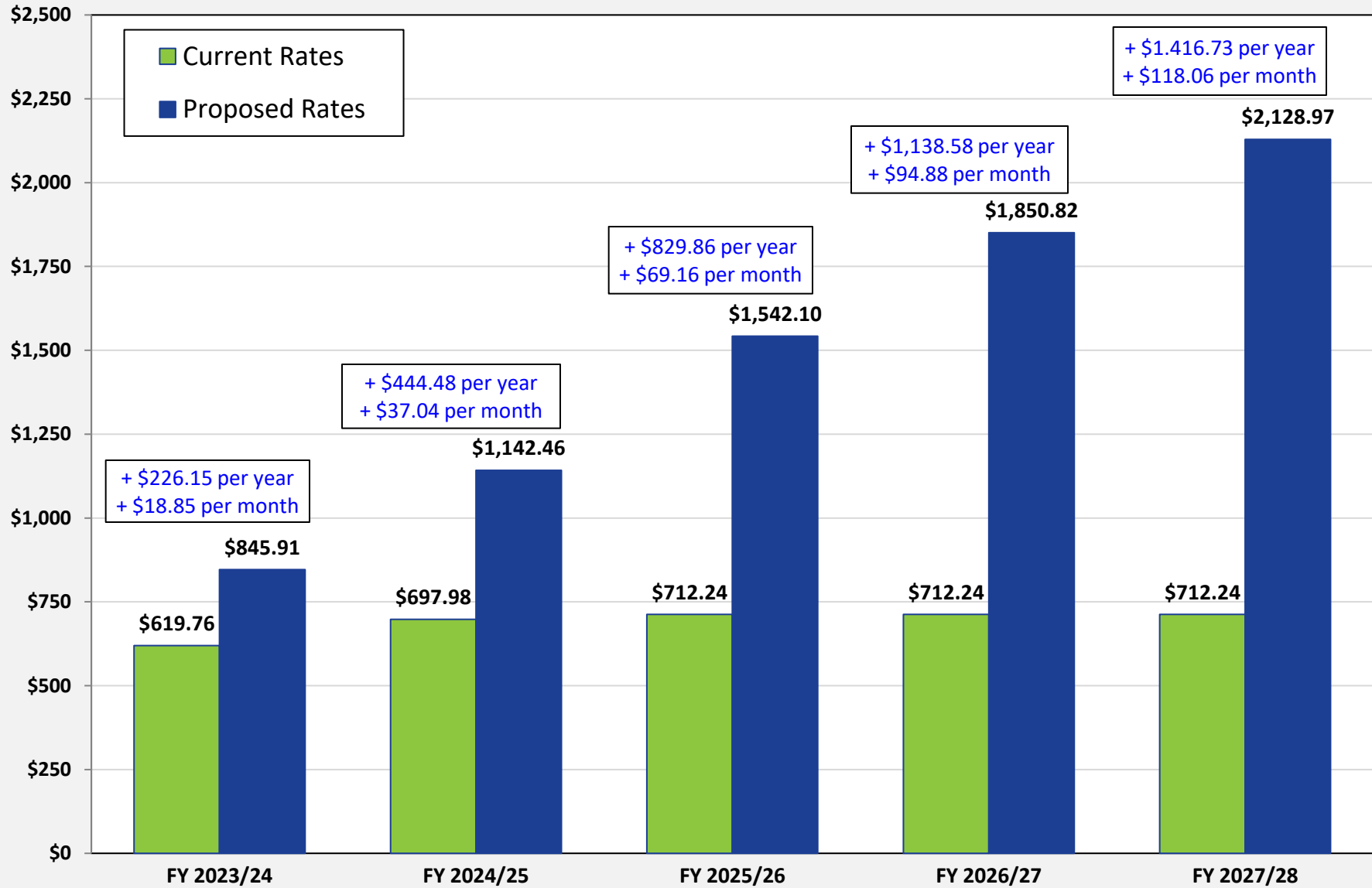
20-Year Debt Issue: Full CIP with a \$114 Million Debt Issue



Note: Annual Single Family Residential bills are based on average winter water consumption of 150 hcf per year.



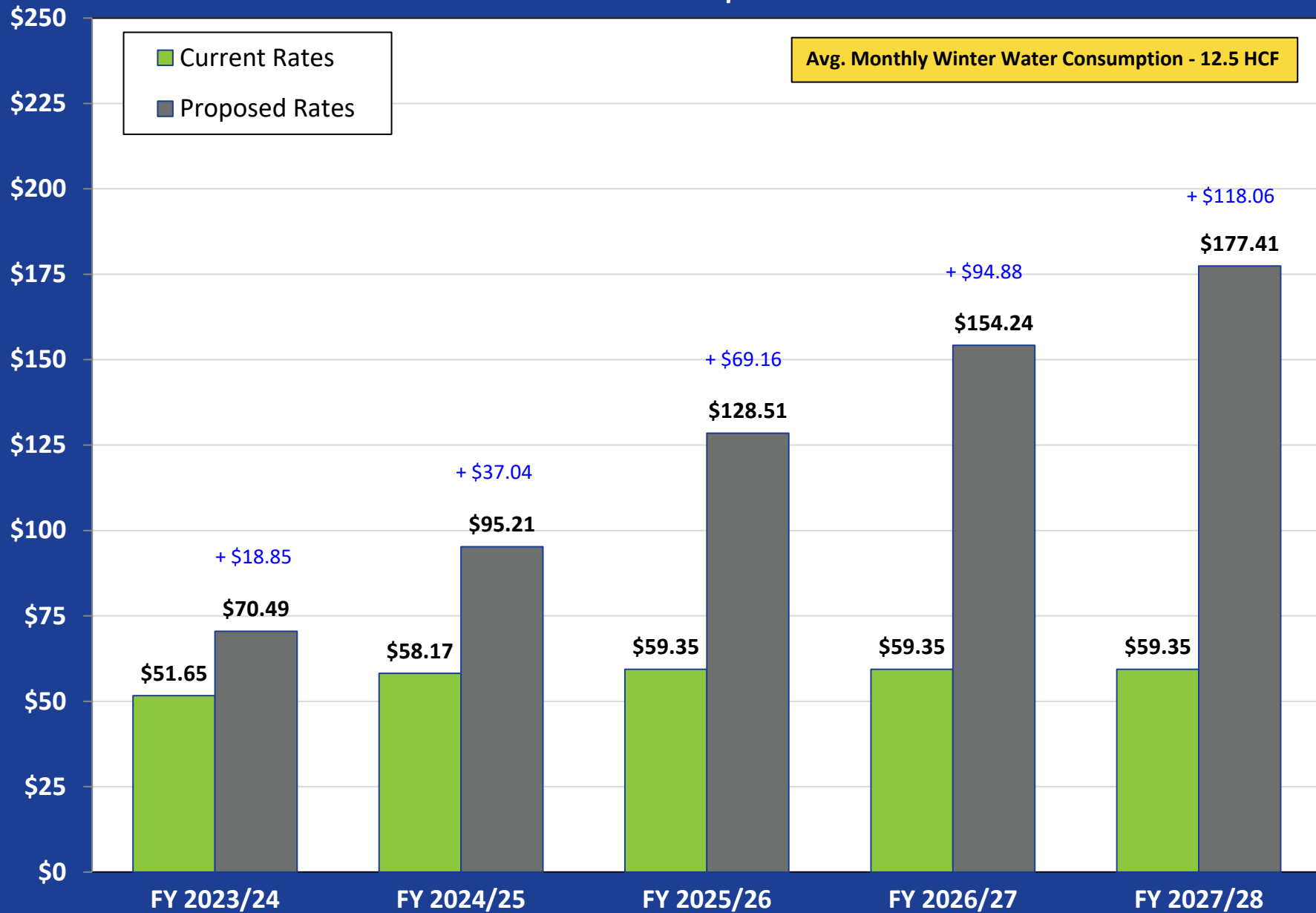
Single Family Residential Annual Sewer Bills - 5-Year Projections



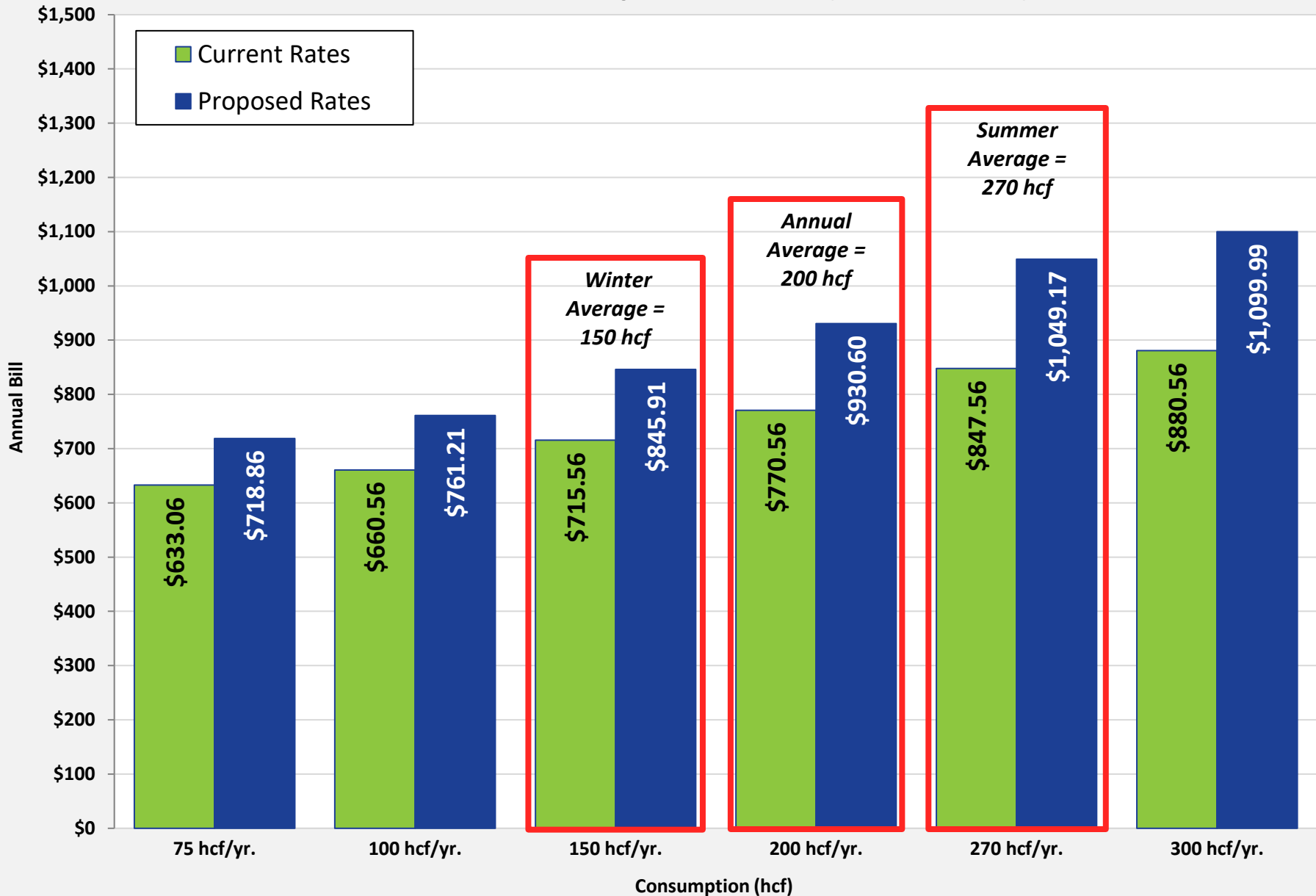
Note: Annual Single Family Residential bills are based on average winter water consumption of 150 hcf per year.

Single Family Residential Annual Sewer Bills - 5-Year Projections

Financial Alternative 3 - \$114 Million Debt Issue

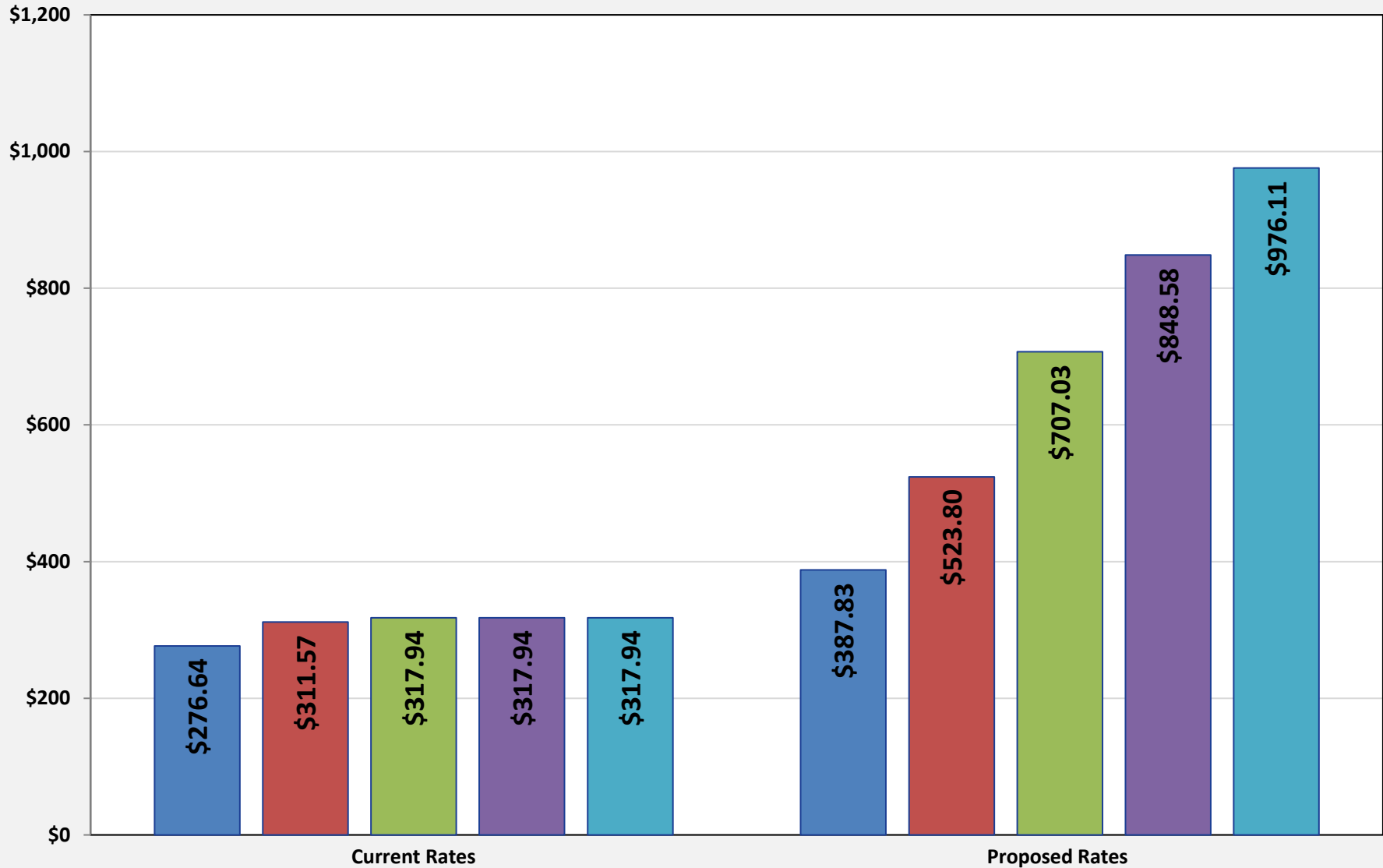


Single Family Residential Sewer Bill Comparison Current vs. Proposed Rates (FY 2023/24)



Multi-Family Annual Sewer Bills - 5-Year Projections

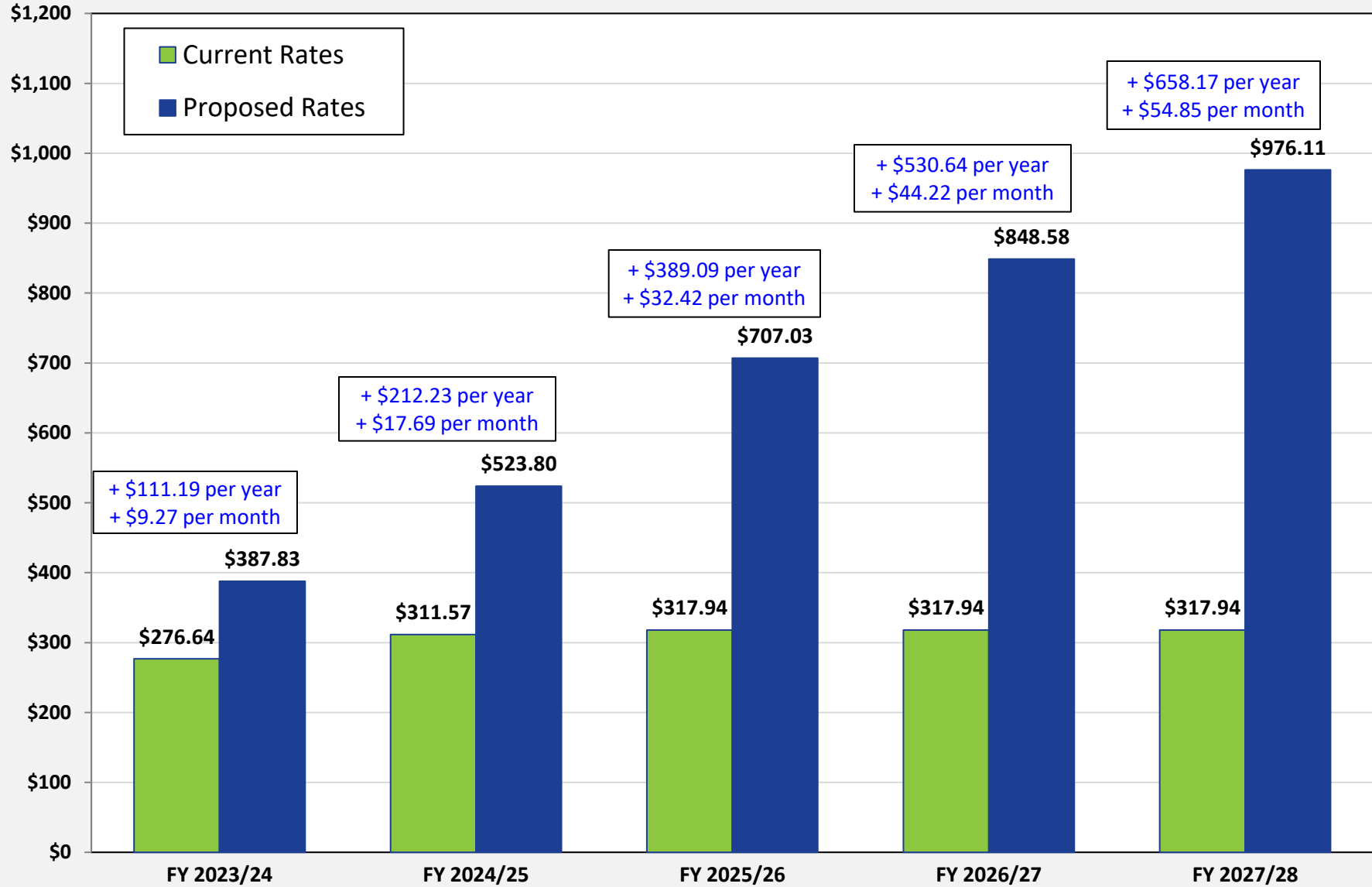
20-Year Debt Issue: Full CIP with a \$114 Million Debt Issue



Note: Annual Multi-Family Residential bills are based on average winter water consumption of 70 hcf.

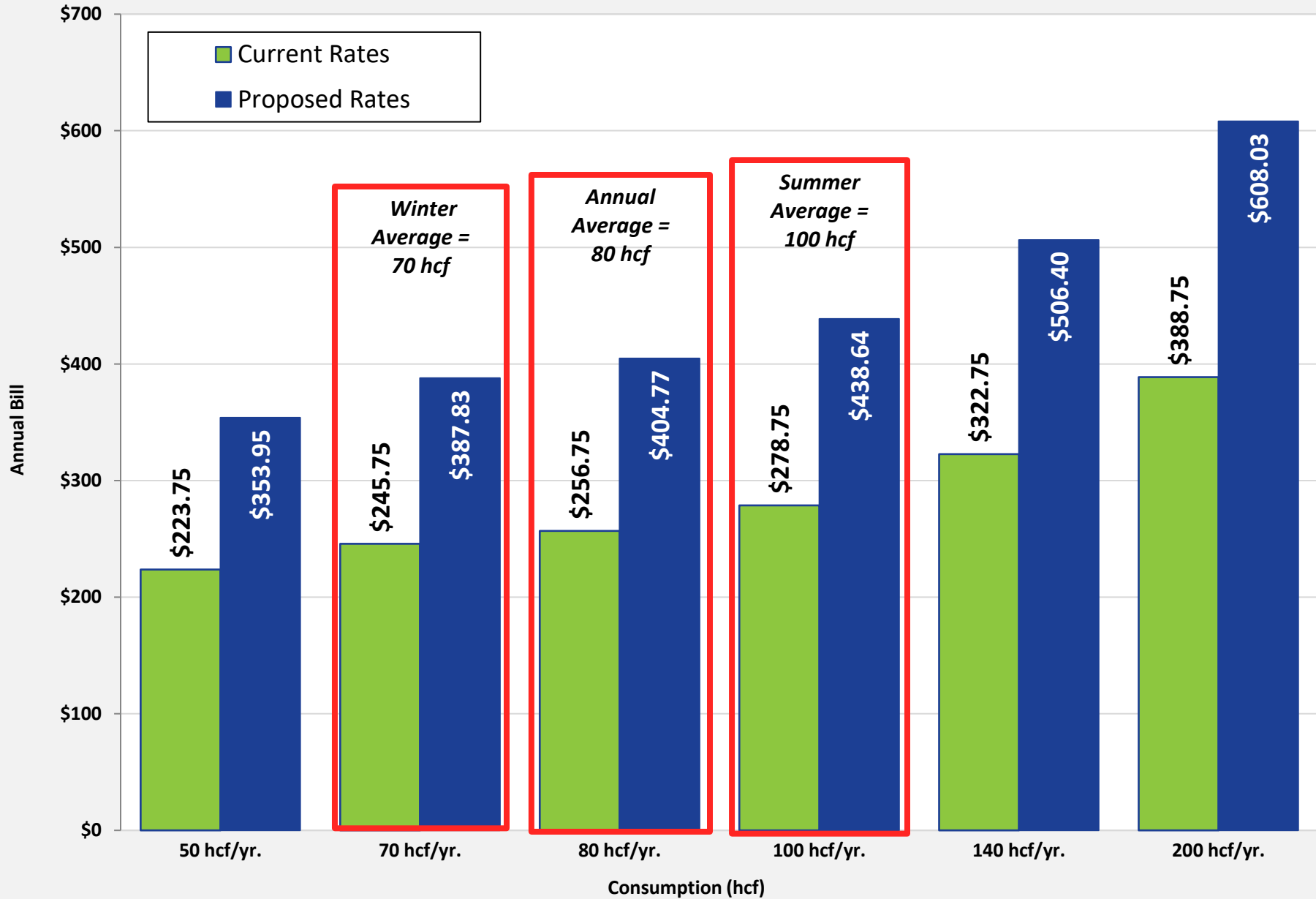
■ FY 2023/24
 ■ FY 2024/25
 ■ FY 2025/26
 ■ FY 2026/27
 ■ FY 2027/28

Multi-Family Residential Annual Sewer Bills - 5-Year Projections



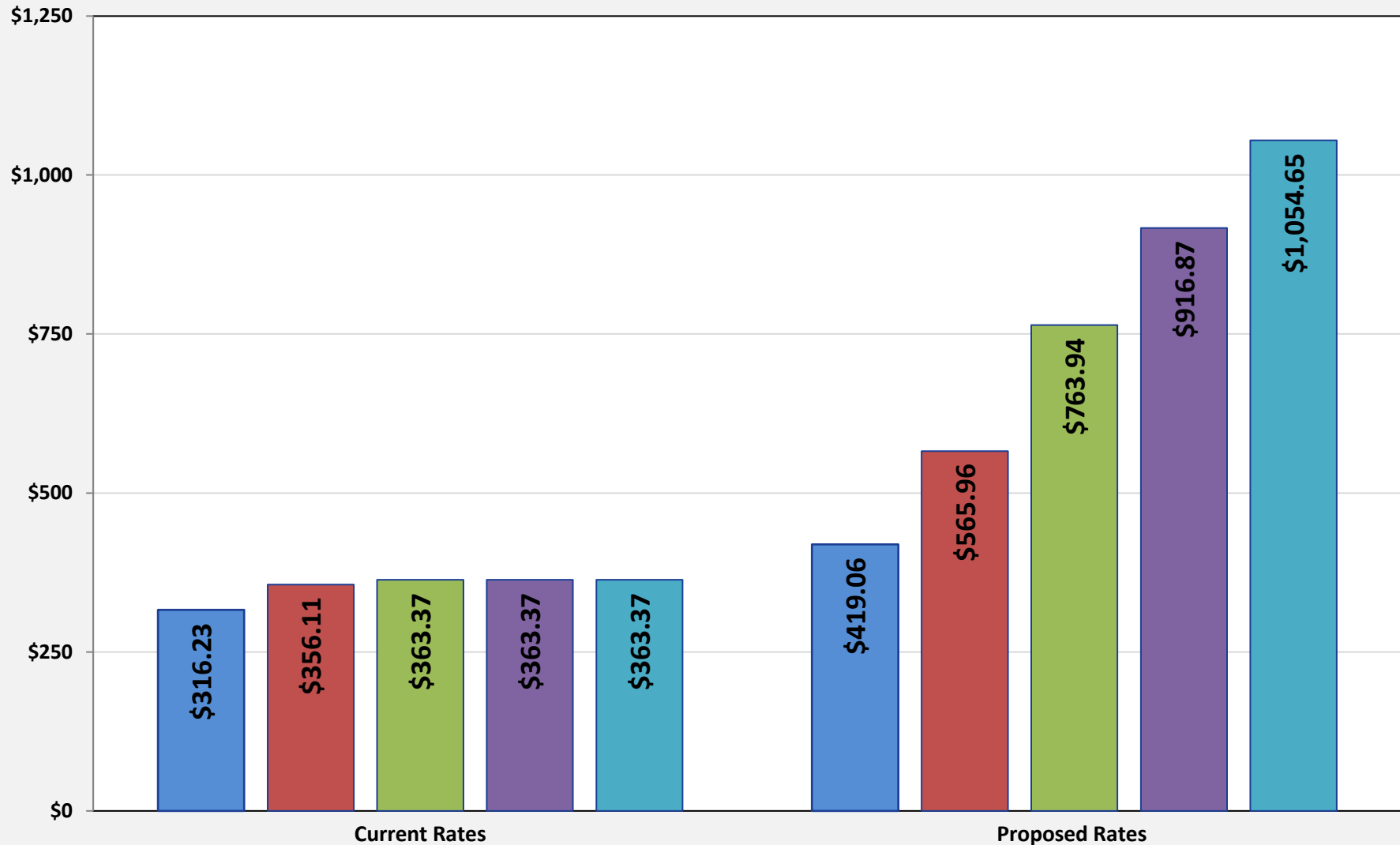
Note: Annual Multi-Family Residential bills are based on average winter water consumption of 70 hcf per year.

Multi-Family Residential Sewer Bill Comparison Current vs. Proposed Rates (FY 2023/24)



Mobile Home Annual Sewer Bills - 5-Year Projections

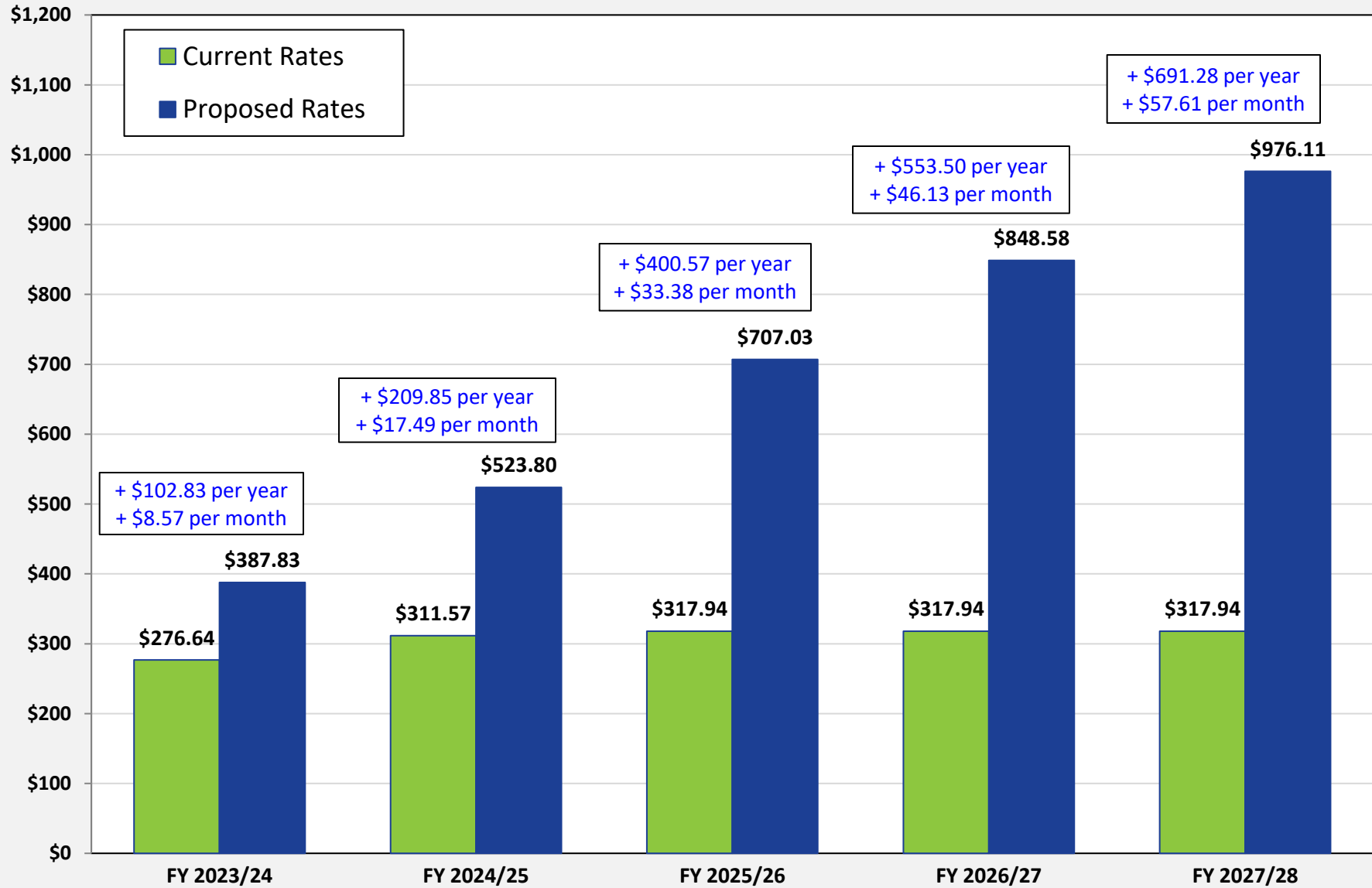
20-Year Debt Issue: Full CIP with a \$114 Million Debt Issue



Note: Annual Single Family Residential bills are based on average winter water consumption of 150 hcf per year.

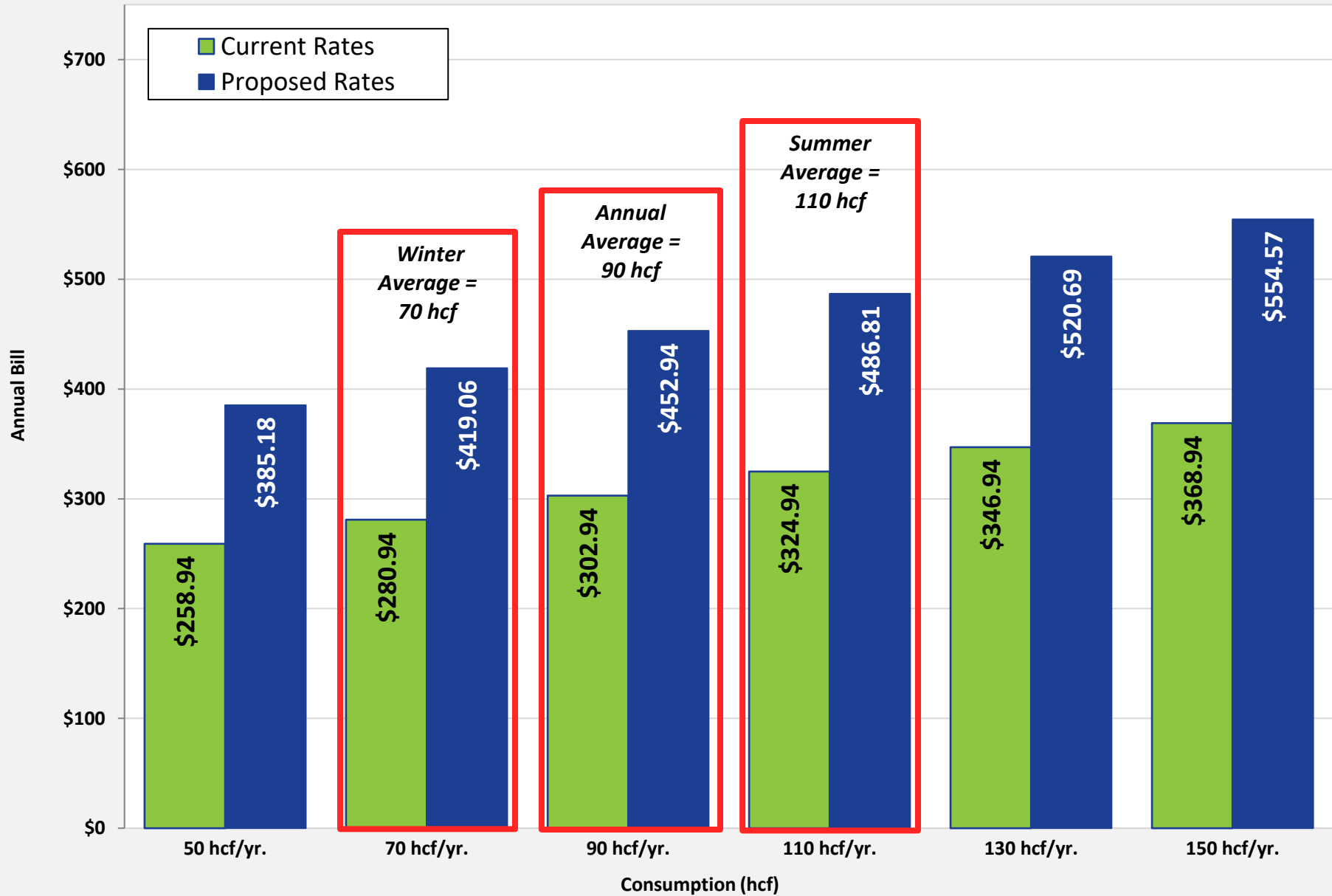
■ FY 2023/24
 ■ FY 2024/25
 ■ FY 2025/26
 ■ FY 2026/27
 ■ FY 2027/28

Mobile Home Annual Sewer Bills - 5-Year Projections



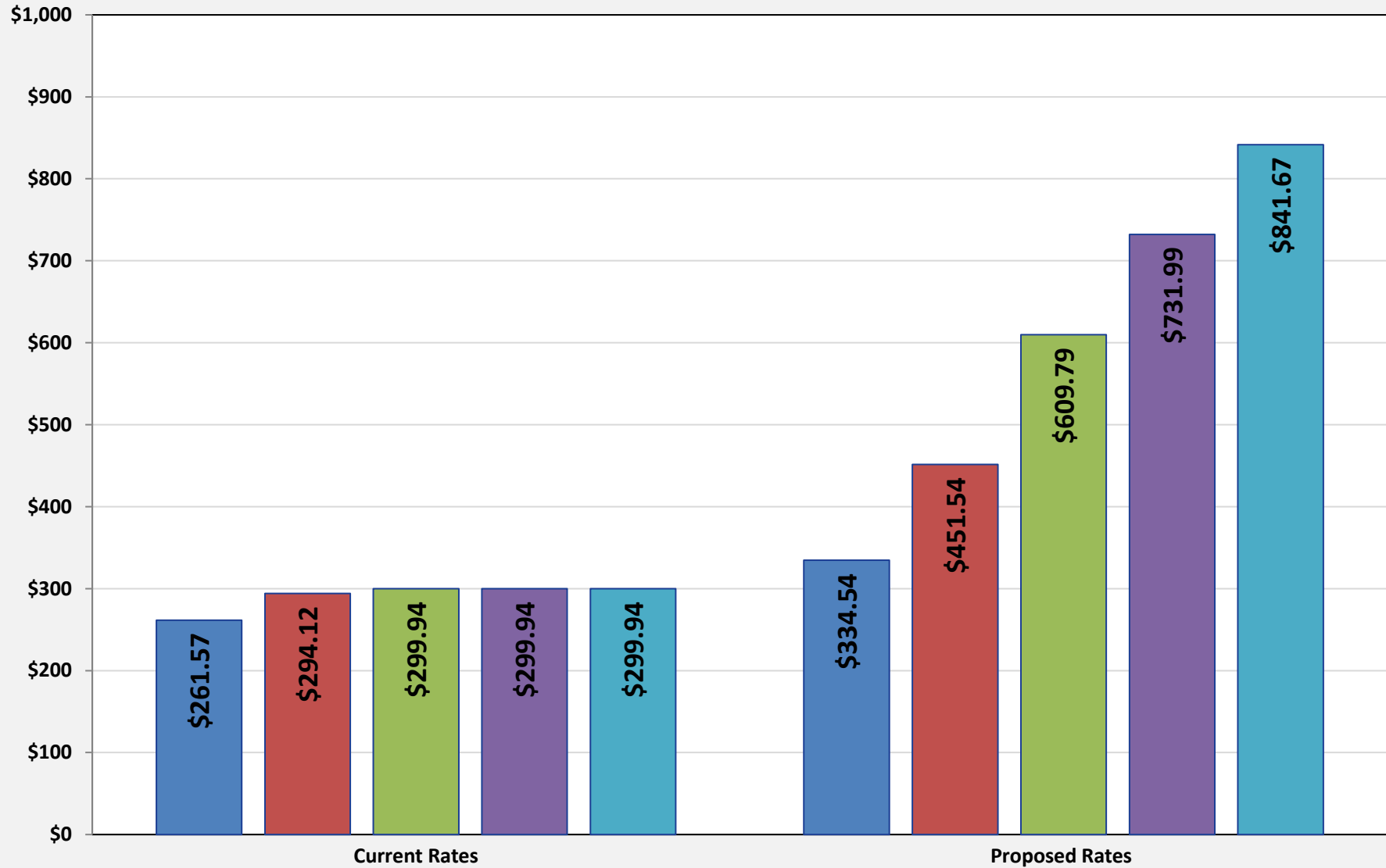
Note: Annual Mobile Home bills are based on average winter water consumption of 70 hcf per year.

Mobile Home Sewer Bill Comparison Current vs. Proposed Rates (FY 2023/24)

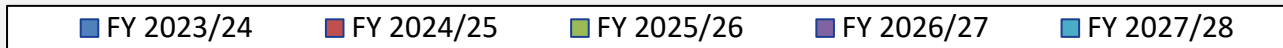


RV Parks Annual Sewer Bills - 5-Year Projections

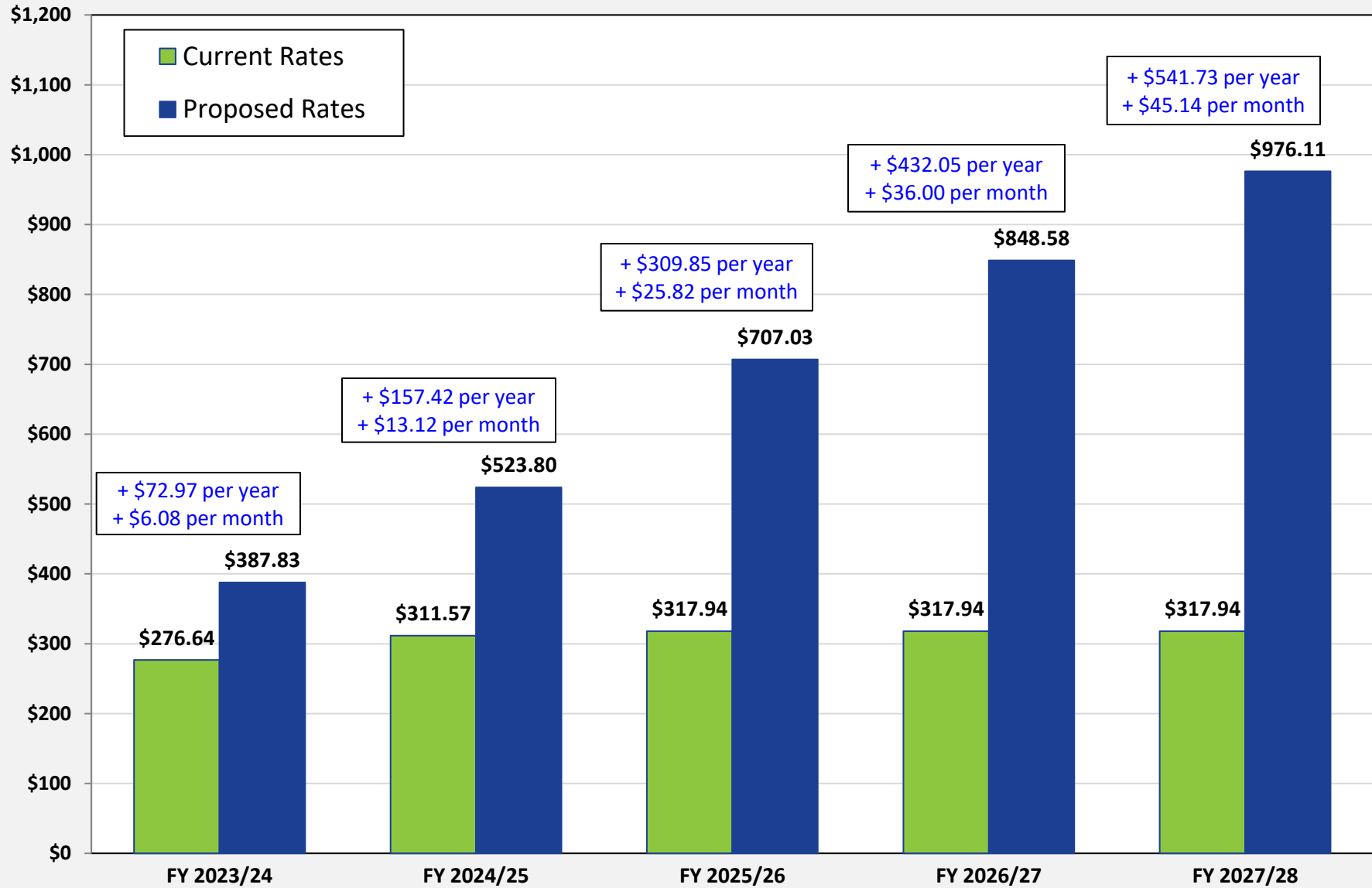
20-Year Debt Issue: Full CIP with a \$114 Million Debt Issue



Note: Annual RV Park bill comp is based on average annual consumption of 60 hcf.

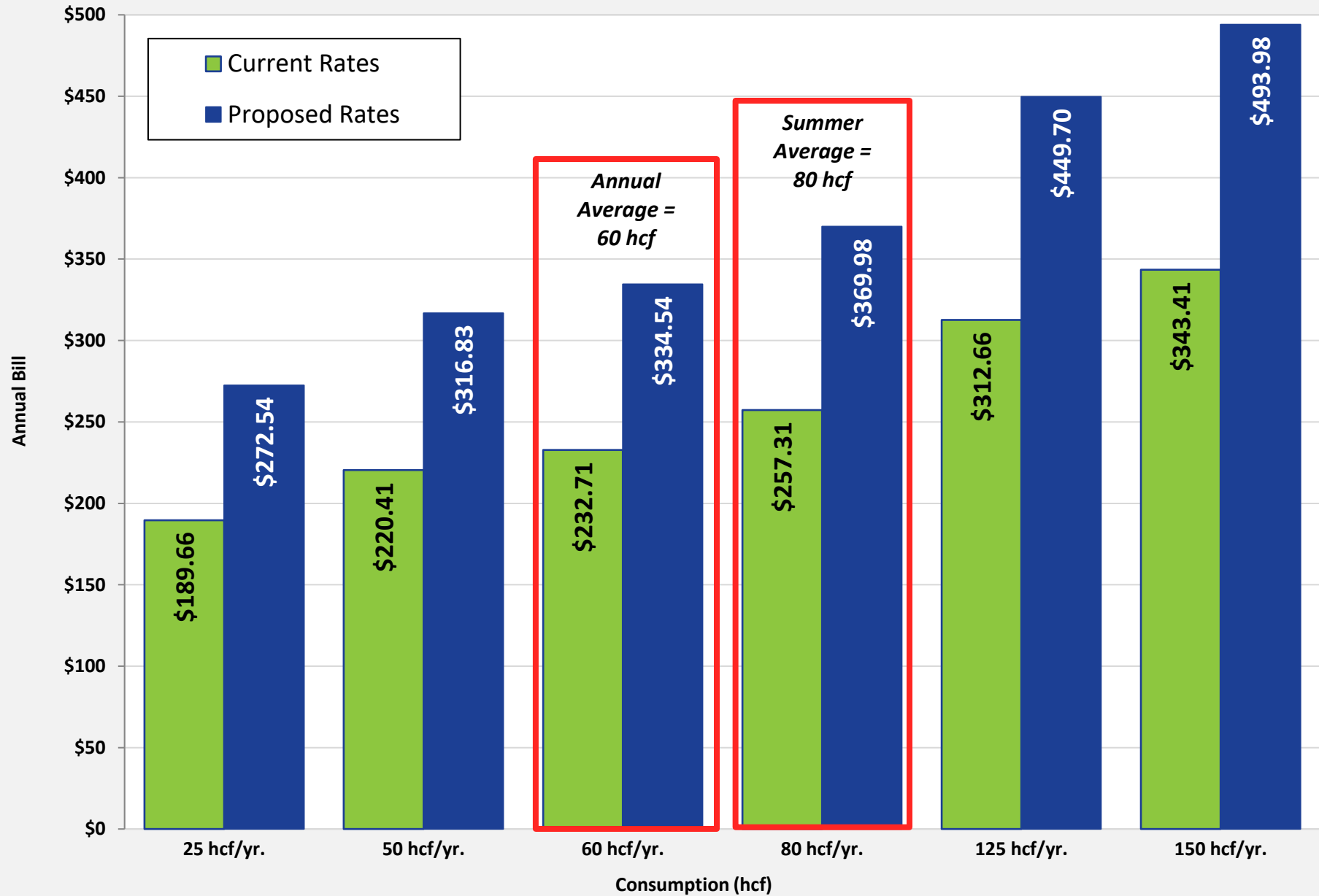


RV Park Residential Annual Sewer Bills - 5-Year Projections



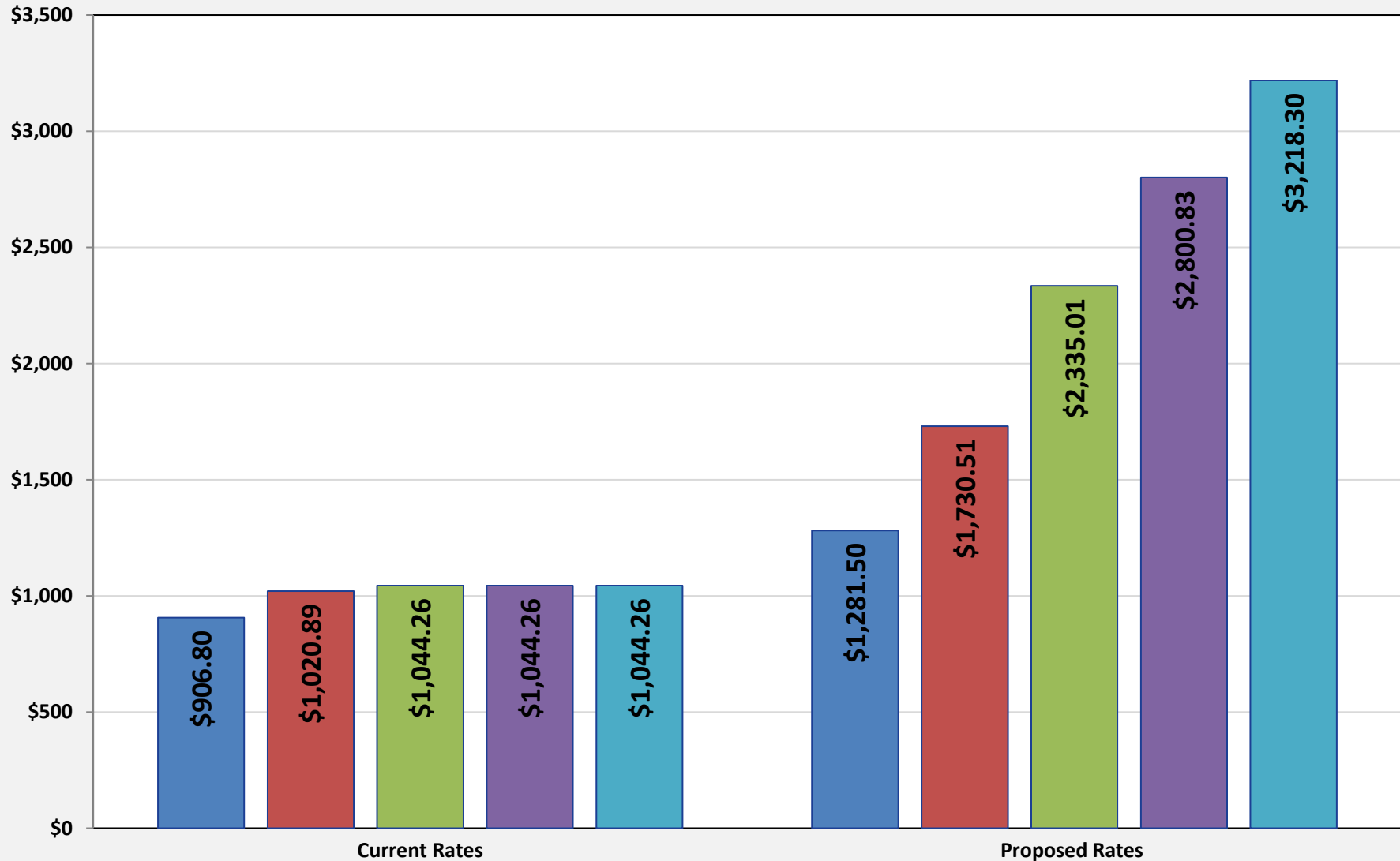
Note: Annual RV Park bills are based on average winter water consumption of 60 hcf per year.

RV Parks Sewer Bill Comparison Current vs. Proposed Rates (FY 2023/24)

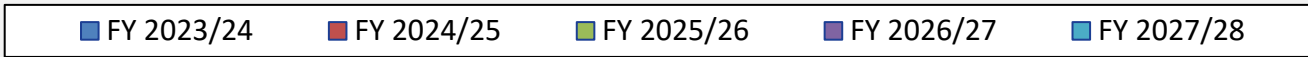


Commercial Low/Medium Strength Annual Sewer Bills - 5-Year Projections

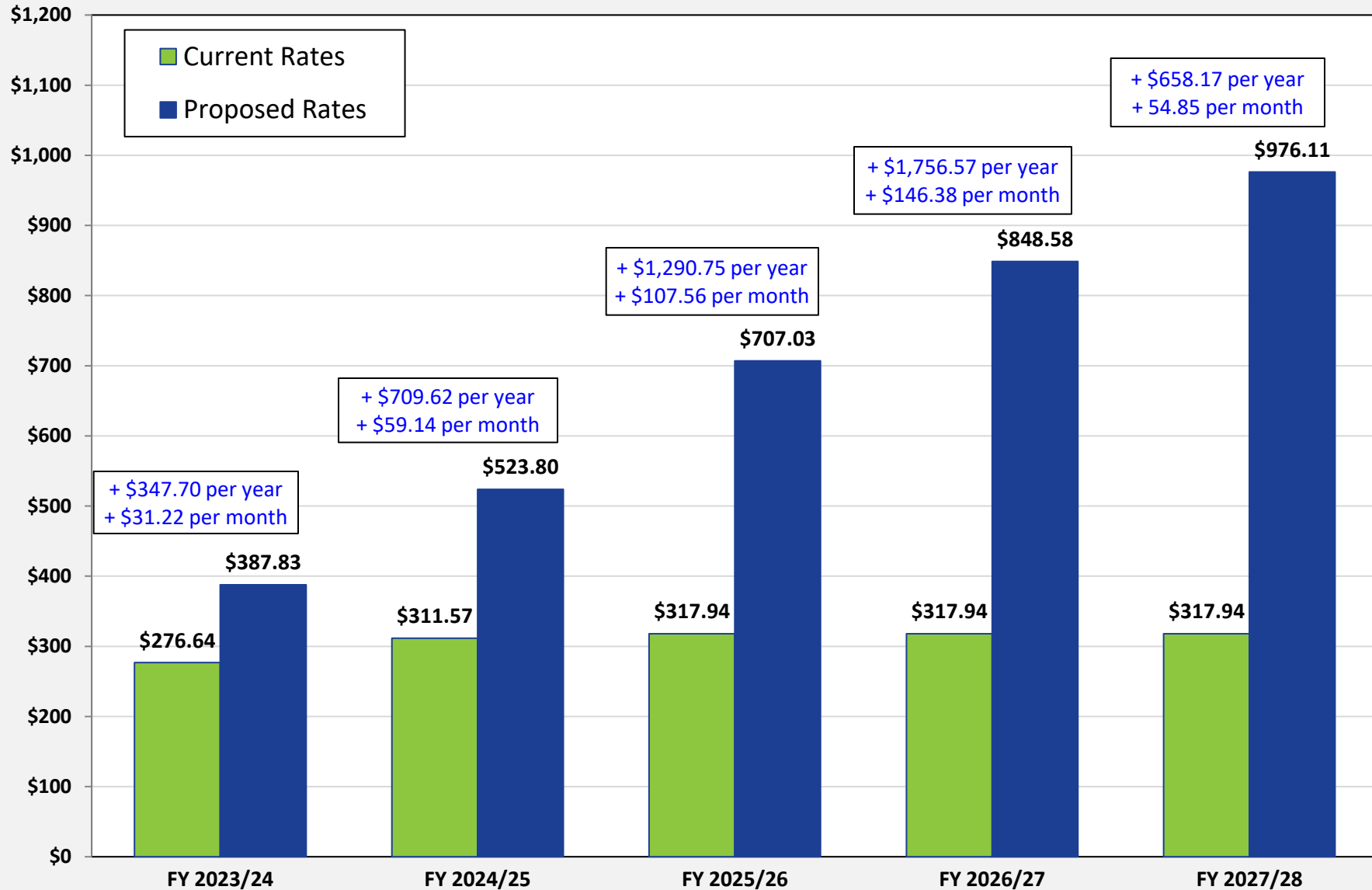
20-Year Debt Issue: Full CIP with a \$114 Million Debt Issue



Note: Annual Commercial Low Strength bill comp is based on average annual consumption of 590 hcf per.

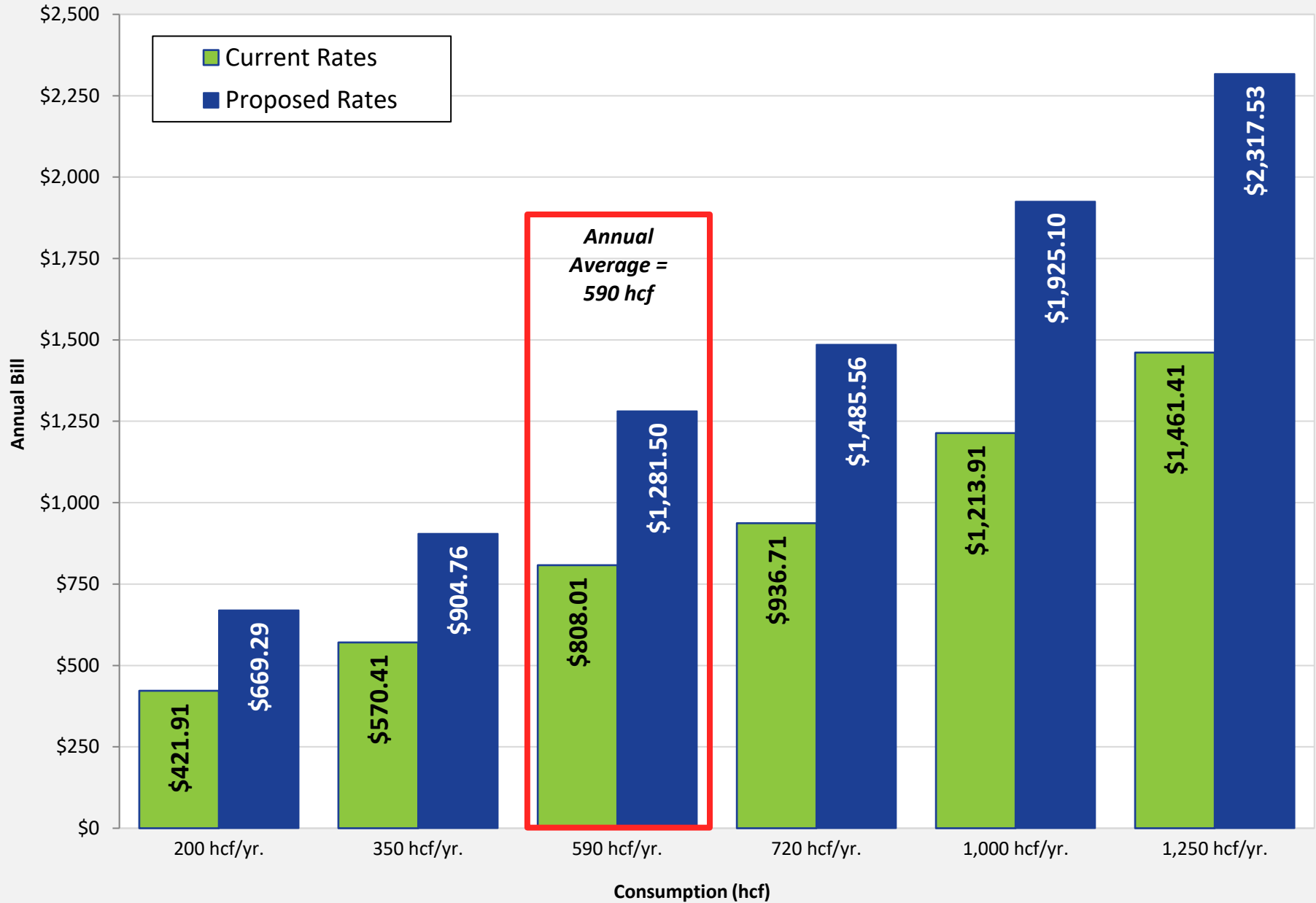


Commercial Low Strength Annual Sewer Bills - 5-Year Projections



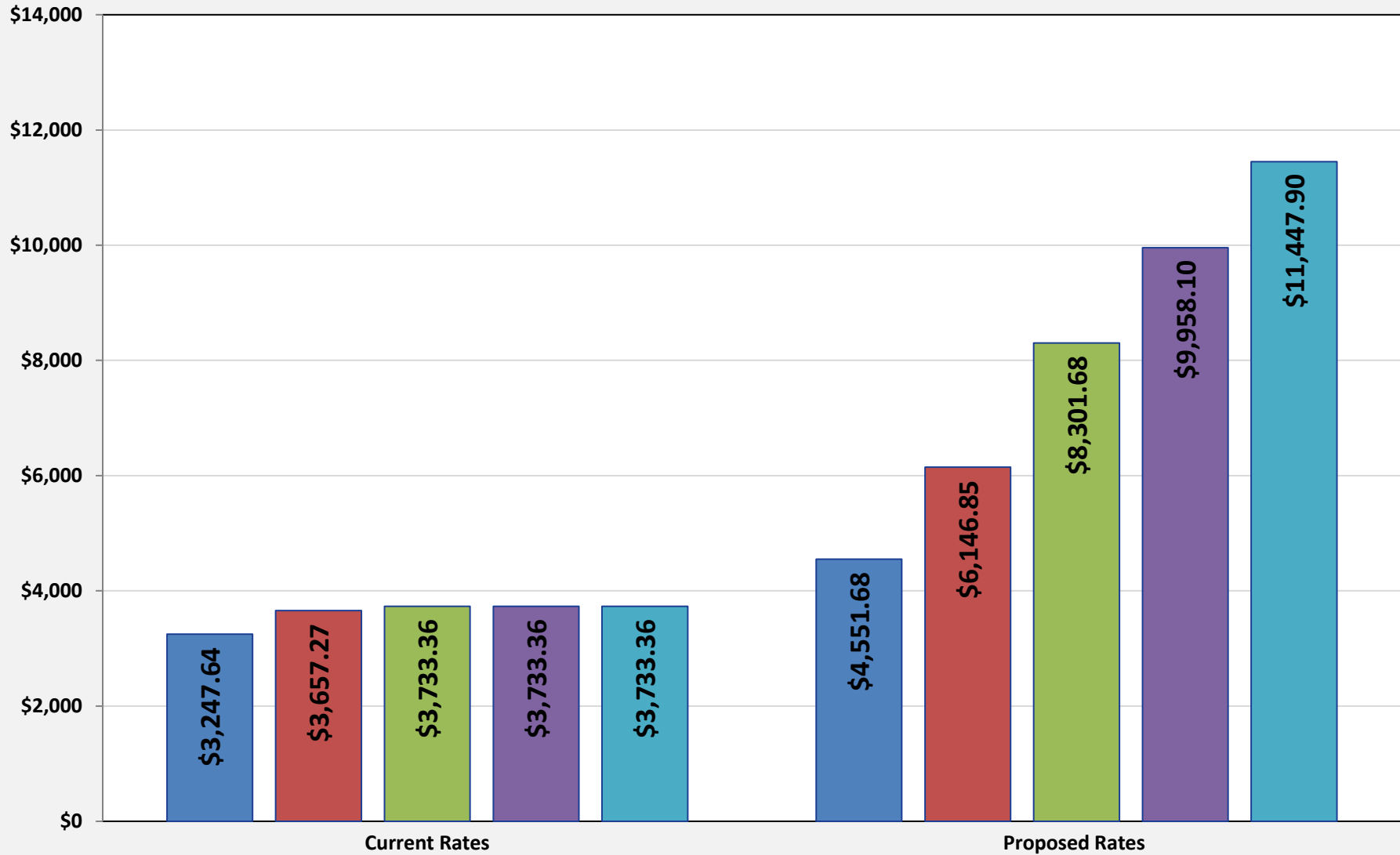
Note: Annual Commercial Low Strength bills are based on average winter water consumption of 590 hcf per year.

Commercial Low/Medium Strength - Sewer Bill Comparison Current vs. Proposed Rates (FY 2023/24)

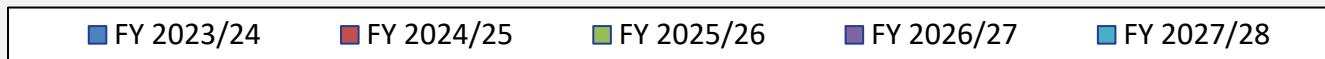


Commercial High Strength Annual Sewer Bills - 5-Year Projections

20-Year Debt Issue: Full CIP with a \$114 Million Debt Issue



Note: Annual Commercial High Strength bill comp is based on average annual consumption of 980 hcf per year.



Commercial High Strength - Sewer Bill Comparison Current vs. Proposed Rates (FY 2023/24)

