



Los
Altos

CITY OF LOS ALTOS

Draft Report

Sewer Rate Study

January 2023

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Section 1. EXECUTIVE SUMMARY

Background

The City of Los Altos has a sewer collection system that serves the residents and businesses within the City, as well as a portion of the Town of Los Altos Hills. The sewer collection system has 140 miles of pipes; wastewater is then conveyed via a sewer trunk line to the Palo Alto Regional Water Quality Control Plant (RWQCP) for treatment. The City is one of several partner agencies that send wastewater to the RWQCP for treatment and disposal.

Purpose

The City of Los Altos (City) retained NBS in 2022 to perform a comprehensive sewer rate study for a number of reasons, including developing rates that support the sewer utility's long-term financial health, reflect the cost of providing service to each customer class, and are defensible and equitable. This report is provided in part to assist the City in its effort to communicate transparently with the residents and businesses it serves.

In developing new sewer rates, NBS worked cooperatively with City staff in selecting appropriate rate alternatives. Based on input from City staff, the proposed rates are summarized in this study.

Key Findings

REVENUE REQUIREMENTS

As a part of this rate study, NBS projected revenues and expenditures on a cash flow basis for the next twenty years. Future system rehabilitation and replacement projects are expected to draw down existing reserves and affect annual sewer rates. Capital and operational reserve funding targets are intended to meet the utility's specific financial objectives and the rate adjustments aim to meet those minimum levels. The amount of rate revenue required, that will allow reserves to be maintained at the recommended levels, is known as the *net revenue requirement*.

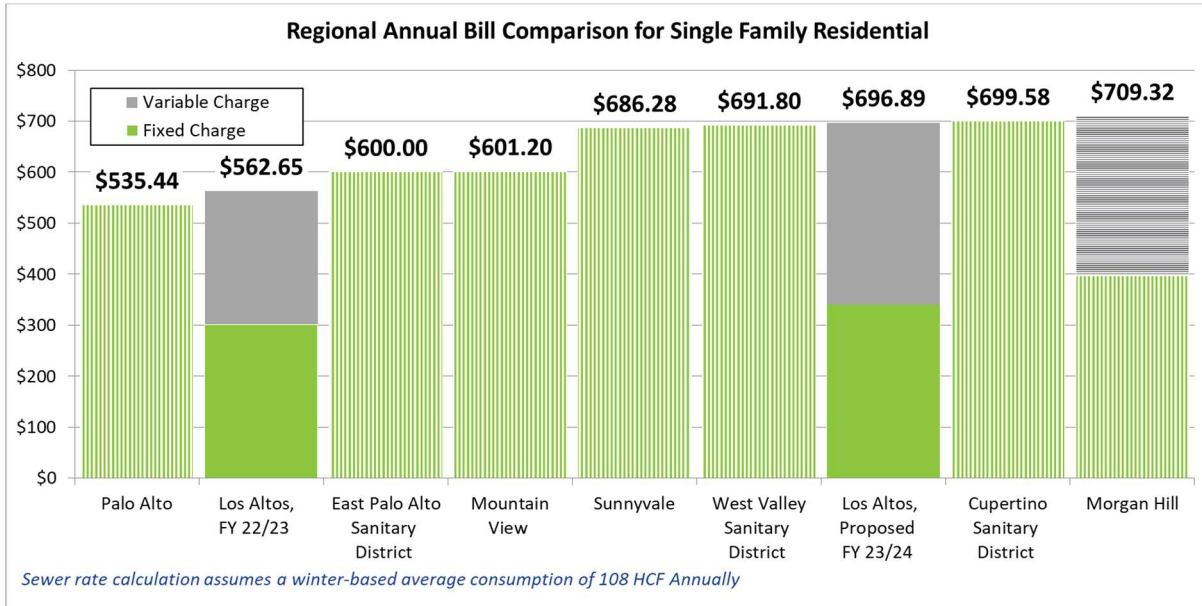
To keep meeting net revenue requirements, critical rate adjustments – or more accurately, adjustments in the total revenue collected from rates – are recommended over the next five years.

SEWER RATES

The current sewer rate design includes an annual fixed service charge per equivalent dwelling unit (EDU) and a single volumetric rate based on average winter water consumption (monthly average of lowest consecutive three months). After discussion and review of rate alternatives, City staff decided to maintain the existing rate structure.

Figure 1 below shows the estimated annual sewer bill for a typical single-family customer in the City compared to annual bills in other nearby communities. Even after rates are adjusted, residential customer bills in Los Altos still compare favorably with other communities in the region. Many of these other communities may have or may currently be going through a rate study process; and as such, sewer rates in these communities may be higher in the future.

FIGURE 1. REGIONAL ANNUAL SEWER BILL COMPARISON FOR SFR CUSTOMERS



FIXED CHARGES

Fixed charges can be called base charges, minimum charges, etc. Although fixed charges are typically a significant percentage of a utility’s overall costs, utilities rarely collect 100 percent of their fixed costs through fixed charges. In general, customers prefer that charges include a volumetric component, as there is an inherent and widely recognized equity in a “pay-for-what-you-use” philosophy. Fixed charges are often charged on a per equivalent dwelling unit (EDU).

VARIABLE CHARGES

In contrast, variable costs such as the cost of electricity and chemicals used in the treatment facilities tend to change with the quantity of wastewater treated. For sewer utilities, variable charges are often based on winter water consumption and charged on a dollar-per-unit cost (per 100 cubic feet, or hcf, in the City’s case). Variable sewer rate structures typically include one rate (\$/hcf); sometimes variable rates are specific to customer classes (i.e., residential, commercial, etc.). The intent with a rate structure that varies by customer class is to reflect the cost of service differences between customer classes in rates, with respect to the amount of wastewater treated (flow based costs) as well as the costs of treating the level of sewer “strength” (i.e., the amount of chemical oxygen demand (COD) and total suspended solids (TSS) components). The cost per unit does not change with consumption and provides a simple and straightforward approach from the perspective of customer understanding, rate administration, and customer billing.

Study Recommendations

A public hearing and protest balloting process are the next steps required to adopt new sewer rates. As a part of this process, NBS recommends the City take the following actions:

- **Approve and Accept This Study Report:** NBS recommends the City Council formally approve and adopt this report and its recommendations. This will provide the documentation and administrative record necessary to adopt and implement the proposed sewer rates.
- **Implement Proposed Rates:** Based on successfully meeting Proposition 218 balloting requirements, the City Council should proceed with implementing the rates proposed in this report for the next five years. These rates are intended to ensure the continued financial health of the City's sewer utility.

Section 2. SEWER RATE STUDY

Key Sewer Rate Study Issues

The sewer rate study was undertaken with the goal of maintaining the strong financial health of the City's sewer utility. Additional study goals included reviewing the existing sewer rate structure and developing rate alternatives that promote equity among customer classes. The City has had various types of sewer rates over the last two decades – 100% fixed, 100% volumetric, and now a combination of the two.

NBS recommends the City maintain the existing rate structure of a single fixed charge and a variable charged based on the customer's previous year's average monthly winter water usage (lowest consecutive three months). The fixed and variable charges were developed based on the net revenue requirements, number of customer accounts and EDU's, water consumption and other City-provided information. Detailed tables showing the systematic development of the analysis are presented in Appendix B – Sewer Rate Study Summary Tables.

Financial Plan

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

KEY ASSUMPTIONS

The following are the key assumptions used in the rate analysis:

- **Funding Capital Projects** – The analysis assumes that capital project costs will be funded with reserves and sewer rates over the next five years.
- **Reserve Targets** – NBS has maintained reserve targets that are based on the City's specific needs and accommodate the timing of annual billing on the tax roll.
- **Inflation and Growth Projections** – The following inflation factors were applied to revenues and expenditures in the analysis, based on data from City staff as well as inflation averages from the Bureau of Labor Statistics:
 - General inflation is 4.0 percent annually.
 - Labor cost inflation is 5.0 percent annually.
 - PERS Obligation inflation is 5.57 percent based on City trends annually.
 - Energy cost inflation is 5.0 percent annually.
 - Palo Alto RWQCP cost inflation is approximately 6.76 percent annually.
 - No customer growth is anticipated in order to remain conservative.

The City of Palo Alto also provided a 10-year projection of costs for the Regional Water Quality Control Plant (RWQCP). The RWQCP cost projection includes the City's share of annual operating costs, debt service payments and capital improvement costs. RWQCP costs are allocated to the City of Los Altos based on annual metered flow sent to the treatment plant; typically, the City represents around 10 percent of total RWQCP flows.

KEY OBJECTIVES

This financial plan addresses three primary objectives:

1. **Meeting Operating Costs:** The sewer utility must generate enough revenue to cover the expenses of sewer operations, including administration, maintenance of the collection system, and RWQCP treatment costs. Operating costs are approximately \$7.38 million in FY 2023/24.
2. **Meeting Capital Improvement Costs:** The sewer utility plans to adequately fund necessary capital improvements, which includes roughly \$24 million in planned capital improvements for the current fiscal year through the end of FY 2027/28.
3. **Maintaining Reserve Funds:** Currently, the sewer utility's reserves are higher than target levels. Recommended rate adjustments will help maintain unrestricted and restricted reserve fund balances over the next ten years, but due to the capital costs, the balances will fall below target levels in three years of the Prop 218 rate period. After discussions with City staff, the following reserve targets were maintained for this analysis:
 - **Operating Reserve** equals about 50 percent of the utility's budgeted annual operating expenses. This reserve target is equal to a six-month (or 180-day) cash cushion for normal operations. In FY 2023/24 the operating reserve target is \$3.69 million. This reserve is intended to ensure financial stability in the event of any short-term fluctuation in revenues and/or expenditures. Also of note, since the City collects sewer rates on the tax roll (and not on a monthly billing cycle), a higher reserve fund level will help carry the utility through semi-annual payments from Santa Clara County.
 - **Capital Rehabilitation and Replacement (R&R) Reserve** equal to annual capital expenditures serves as a starting point for supporting long-term capital needs. For FY 2023/24, this reserve target is \$3.18 million and is inflated by CPI estimates each year thereafter. The primary purpose of capital reserves is to set aside a cash resource to address long-term capital rehabilitation and replacement needs.
 - **City of Palo Alto RWQCP Reserve** is intended to accumulate funds equal to the average 5-year CIP costs that the City pays to Palo Alto (for RWQCP costs). Target reserve level is initially set at \$700,000.
 - **Debt Reserves** for the sewer utility's existing debt obligations has a target level of about \$500,000 from FY 2023/23-27/28. Starting in 2028, the City will have a new debt service payment to the City of Palo Alto for about an additional \$685,000 annually. Debt reserves increase in anticipation of new bonds being issued for projects at the RWQCP. Debt reserve funds are typically considered restricted funds.

Figure 2 summarizes the sources and uses of funds and net revenue requirements for the next five years. Without proposed rate increases, the City is estimated to fall to a total deficit of about \$20.3 million through 2028. **Figure 3** summarizes the utility's projected reserve funds and target balances for the next five years.

FIGURE 2. SUMMARY OF SEWER REVENUE REQUIREMENTS

| Summary of Sources and Uses of Funds and Net Revenue Requirements | Budget | | Projected | | | |
|---|---------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| | FY 2022/23 | FY 2023/24 | FY 2024/25 | FY 2025/26 | FY 2026/27 | FY 2027/28 |
| Sources of Wastewater Funds | | | | | | |
| Rate Revenue Under Prevailing Rates | \$ 7,910,000 | \$ 7,910,000 | \$ 7,910,000 | \$ 7,910,000 | \$ 7,910,000 | \$ 7,910,000 |
| Sewer Service Charge not on Tax Roll | 600,000 | 600,000 | 600,000 | 600,000 | 600,000 | 600,000 |
| Non-Rate Revenues | 55,000 | 84,563 | 69,972 | 49,071 | 59,435 | 62,077 |
| Total Sources of Funds | \$ 8,565,000 | \$ 8,594,563 | \$ 8,579,972 | \$ 8,559,071 | \$ 8,569,435 | \$ 8,572,077 |
| Projected Annual Rate Increase | 0.00% | 15.00% | 15.00% | 15.00% | 15.00% | 15.00% |
| Additional Rate Revenue from Increases ¹ | - | 1,186,500 | 2,550,975 | 4,120,121 | 5,924,639 | 7,999,835 |
| Rate Revenue with Annual Rate Increases | \$ 7,910,000 | \$ 9,096,500 | \$ 10,460,975 | \$ 12,030,121 | \$ 13,834,639 | \$ 15,909,835 |
| Uses of Wastewater Funds | | | | | | |
| Los Altos Operating Expenses | \$ 3,908,587 | \$ 4,102,113 | \$ 4,305,256 | \$ 4,518,498 | \$ 4,742,340 | \$ 4,977,314 |
| Palo Alto Operating Expenses | 3,142,000 | 3,278,000 | 3,382,000 | 3,471,000 | 3,549,000 | 3,617,000 |
| Palo Alto Debt Service | 468,090 | 468,007 | 492,102 | 492,306 | 491,782 | 491,477 |
| Rate-Funded Capital Expenses | - | 2,151,973 | 5,509,254 | 3,057,450 | 5,503,738 | 3,310,887 |
| Total Use of Funds | \$ 7,518,678 | \$ 10,000,092 | \$ 13,688,611 | \$ 11,539,254 | \$ 14,286,861 | \$ 12,396,677 |
| Net Revenue Requirement² | \$ 6,863,678 | \$ 9,315,529 | \$ 13,018,639 | \$ 10,890,182 | \$ 13,627,425 | \$ 11,734,600 |
| Reserves Used for Capital Expenses | 3,084,000 | 1,507,617 | - | - | - | - |
| <i>Surplus (Deficiency) before Rate Increase</i> | <i>1,046,322</i> | <i>(1,405,529)</i> | <i>(5,108,639)</i> | <i>(2,980,182)</i> | <i>(5,717,425)</i> | <i>(3,824,600)</i> |
| <i>Surplus (Deficiency) after Rate Increase³</i> | <i>1,046,322</i> | <i>(219,029)</i> | <i>(2,557,664)</i> | <i>1,139,939</i> | <i>207,214</i> | <i>4,175,235</i> |

1. Assumes new rates are implemented July 1, 2023.
2. Total Use of Funds less non-rate revenues. This is the annual amount needed from wastewater rates.
3. The surplus/deficiency represents the dollar amount that is contributing or using reserves.

FIGURE 3. SUMMARY OF SEWER RESERVE FUNDS

| Beginning Reserve Fund Balances and Recommended Reserve Targets | Budget | | Projected | | | |
|---|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|
| | FY 2022/23 | FY 2023/24 | FY 2024/25 | FY 2025/26 | FY 2026/27 | FY 2027/28 |
| Un-Restricted Reserves | | | | | | |
| Operating Reserve | | | | | | |
| Ending Balance | \$ 3,525,300 | \$ 3,310,235 | \$ 752,571 | \$ 1,876,172 | \$ 2,088,080 | \$ 4,297,200 |
| <i>Recommended Minimum Target</i> | <i>\$ 3,525,300</i> | <i>\$ 3,690,100</i> | <i>\$ 3,843,600</i> | <i>\$ 3,994,700</i> | <i>\$ 4,145,700</i> | <i>\$ 4,297,200</i> |
| Capital Rehabilitation & Replacement Reserve | | | | | | |
| Ending Balance | \$ 4,687,617 | \$ 3,180,000 | \$ 3,270,000 | \$ 3,370,000 | \$ 3,470,000 | \$ 5,260,586 |
| <i>Recommended Minimum Target</i> | <i>\$ 3,084,000</i> | <i>\$ 3,180,000</i> | <i>\$ 3,270,000</i> | <i>\$ 3,370,000</i> | <i>\$ 3,470,000</i> | <i>\$ 3,580,000</i> |
| City of Palo Alto RWQCP R&R Reserve | | | | | | |
| Ending Balance | \$ 700,000 | \$ 700,000 | \$ 610,000 | \$ 510,000 | \$ 410,000 | \$ 590,000 |
| <i>Recommended Minimum Target</i> | <i>\$ 700,000</i> | <i>\$ 700,000</i> | <i>\$ 600,000</i> | <i>\$ 600,000</i> | <i>\$ 600,000</i> | <i>\$ 700,000</i> |
| Restricted Reserves | | | | | | |
| Debt Reserve | | | | | | |
| Ending Balance | \$ 468,007 | \$ 468,007 | \$ 471,971 | \$ 492,306 | \$ 491,782 | \$ 491,477 |
| <i>Recommended Minimum Target</i> | <i>\$ 468,090</i> | <i>\$ 468,007</i> | <i>\$ 492,102</i> | <i>\$ 492,306</i> | <i>\$ 491,782</i> | <i>\$ 491,477</i> |
| Total Ending Balance | \$ 9,380,924 | \$ 7,658,242 | \$ 5,104,542 | \$ 6,248,478 | \$ 6,459,862 | \$ 10,639,263 |
| <i>Recommended Minimum Target</i> | <i>\$ 7,777,390</i> | <i>\$ 8,038,107</i> | <i>\$ 8,205,702</i> | <i>\$ 8,457,006</i> | <i>\$ 8,707,482</i> | <i>\$ 9,068,677</i> |

A summary of the entire 10-year financial plan, showing revenue requirements, revenues, and recommended rate increases is presented in Appendix B, which includes a summary of the City’s capital improvement program, at the end of this report.

Cost-of-Service Summary

Once the revenue requirements are determined, the cost-of-service analysis distributes the revenue requirements to cost classification components. These include the estimated amount of effluent (flow or volume), effluent strengths (COD and TSS), and customer-related costs (e.g., billing and administrative costs). **Figure 4** shows the net revenue requirements of \$9,096,500 to be collected from sewer rates in the first year.

FIGURE 4. RATE REVENUE REQUIREMENTS BY COST CLASSIFICATION

| Adjustment to Current Rate Level: | Total | Flow | COD | TSS | Customer |
|-----------------------------------|--------------|--------------|--------------|--------------|--------------|
| Adjusted Net Revenue Req'ts | \$ 9,096,500 | \$ 4,505,760 | \$ 1,714,007 | \$ 1,714,007 | \$ 1,162,726 |
| Percent of Revenue | | 49.5% | 18.8% | 18.8% | 12.8% |

Actual sewer flow data from FY 2020/21 was used in the Study. The City uses average winter water consumption from the previous calendar year (lowest water consumption for three months) to estimate annual sewer usage¹.

Figure 5 shows winter-average flow by customer class. The City's sewer customer classes are represented by the following types of customers: single-family residential, multi-family residential, commercial, and public/institutional.

FIGURE 5. SUMMARY OF FLOW TO TREATMENT PLANT

| Customer Class ¹ | Number of Accounts | Annual Winter-Average Based Volume (HCF) | Percentage of Adjusted Volume |
|-----------------------------------|--------------------|--|-------------------------------|
| Residential | | | |
| Single Family Home | 10,363 | 1,062,455 | 80.3% |
| Multifamily Residence (2 units) | 65 | 2,744 | 0.2% |
| Multifamily Residence (3-4 units) | 11 | 475 | 0.0% |
| Multifamily Residence (5+ units) | 68 | 60,592 | 4.6% |
| Condominium Unit | 1,033 | 52,954 | 4.0% |
| Commercial | | | |
| Commercial/Industrial | 458 | 41,829 | 3.2% |
| Church | 22 | 4,001 | 0.3% |
| Restaurant | 69 | 78,160 | 5.9% |
| Public/Institutional | | | |
| Government | 10 | 3,207 | 0.2% |
| Institutional | 3 | 10,369 | 0.8% |
| Parks | 4 | 2,119 | 0.2% |
| School | 10 | 3,991 | 0.3% |
| Total: | 12,116 | 1,322,896 | 100% |

1. Customer billing data summarized from data Source: ~Data for Report_2021.22_JT.xlsx

Figure 6 compares the total number of accounts and equivalent dwelling units (EDUs) by customer class. EDUs are assigned to customers based on average winter water consumption. Typically, a single-family residential customer represents one EDU. Multi-family residential customers are assigned one EDU per unit (i.e., a triplex would be equal to three EDUs). Commercial customer EDUs are recalculated annually based on water consumption data from California Water Company (Cal Water).

Figure 7 develops the strength allocation factors of chemical oxygen demand (COD) and total suspended solids (TSS). This represents the strain each customer class puts on the treatment plant based on what the customer puts into the sewer system for treatment. For example, the food waste discharge at restaurants

¹ The City bills sewer usage on a per unit basis; one estimated sewer unit is equal to 748 gallons or one (1) hundred cubic feet (hcf).

will take more effort for the plant to treat than a single family home, which mostly discharges water from toilets, sinks, etc. into the sewer system.

FIGURE 6. SUMMARY OF SEWER CUSTOMER ACCOUNTS AND EQUIVALENT DWELLING UNITS (EDU'S)

| Customer Class | Number of Accounts ¹ | Percent of Total | Number of Equivalent Dwelling Units ¹ | Percent of Total |
|-----------------------------------|---------------------------------|------------------|--|------------------|
| Residential | | | | |
| Single Family Home | 10,363 | 86.0% | 10,363 | 74.6% |
| Multifamily Residence (2 units) | 65 | 0.5% | 130 | 0.9% |
| Multifamily Residence (3-4 units) | 11 | 0.1% | 34 | 0.2% |
| Multifamily Residence (5+ units) | 68 | 0.6% | 550 | 4.0% |
| Condominium Unit | 1,033 | 8.6% | 1,033 | 7.4% |
| Commercial | | | | |
| Commercial/Industrial | 458 | 3.8% | 554 | 4.0% |
| Church | 22 | 0.2% | 77 | 0.6% |
| Restaurant | - | 0.0% | 770 | 5.5% |
| Public/Institutional | | | | |
| Government | 10 | 0.1% | 89 | 0.6% |
| Institutional | 3 | 0.0% | 125 | 0.9% |
| Parks | 4 | 0.0% | 58 | 0.4% |
| School | 10 | 0.1% | 109 | 0.8% |
| Total: | 12,047 | 100% | 13,892 | 100% |

1. Data Source: ~Data for Report_2021.22_JT.xlsx

FIGURE 7. SUMMARY OF STRENGTH ALLOCATION FACTOR FOR COD AND TSS

| Customer Class | Adjusted Annual Volume Total (HCF) | Annual Flow (million gallons) | Chemical Oxygen Demand (COD) | | | | Total Suspended Solids (TSS) | | |
|-----------------------------------|------------------------------------|-------------------------------|---|---------------------------|-------------------------|------------------|---|-------------------------|------------------|
| | | | Average Strength Factor (mg/l) ¹ | Calculated COD (lbs./yr.) | Adjusted COD (lbs./yr.) | Percent of Total | Average Strength Factor (mg/l) ¹ | Adjusted TSS (lbs./yr.) | Percent of Total |
| Residential | | | | | | | | | |
| Single Family Home | 959,544 | 717.79 | 622 | 3,723,506 | 4,049,292 | 72.0% | 250 | 1,979,172 | 74.8% |
| Multifamily Residence (2 units) | 2,478 | 1.85 | 622 | 9,617 | 10,458 | 0.2% | 250 | 5,112 | 0.2% |
| Multifamily Residence (3-4 units) | 429 | 0.32 | 622 | 1,664 | 1,809 | 0.0% | 250 | 884 | 0.0% |
| Multifamily Residence (5+ units) | 54,723 | 40.94 | 622 | 212,352 | 230,932 | 4.1% | 250 | 112,873 | 4.3% |
| Condominium Unit | 47,825 | 35.78 | 622 | 185,584 | 201,821 | 3.6% | 250 | 98,644 | 3.7% |
| Commercial | | | | | | | | | |
| Commercial/Industrial | 37,778 | 28.26 | 622 | 146,596 | 159,422 | 2.8% | 250 | 77,921 | 2.9% |
| Church | 3,614 | 2.70 | 622 | 14,023 | 15,250 | 0.3% | 250 | 7,454 | 0.3% |
| Restaurant | 70,589 | 52.80 | 1,888 | 831,453 | 904,200 | 16.1% | 600 | 349,437 | 13.2% |
| Public/Institutional | | | | | | | | | |
| Government | 2,896 | 2.17 | 419 | 7,570 | 8,233 | 0.1% | 100 | 2,389 | 0.1% |
| Institutional | 9,365 | 7.01 | 419 | 24,480 | 26,622 | 0.5% | 100 | 7,727 | 0.3% |
| Parks | 1,913 | 1.43 | 419 | 5,002 | 5,439 | 0.1% | 100 | 1,579 | 0.1% |
| School | 3,604 | 2.70 | 419 | 9,421 | 10,246 | 0.2% | 100 | 2,974 | 0.1% |
| Total: | 1,194,758 | 894 | | 5,171,268 | 5,623,725 | 100% | | 2,646,165 | 100% |

1. BOD strength factors (Source: Page G-21, SWRCB Revenue Program Guidelines Appendix G) converted to COD using formula referenced in Operation of Municipal Wastewater Treatment Plants, Chapter 17, pg. 9.

Fixed and Variable Charges

The City's sewer rates consist of a fixed annual base charge per equivalent dwelling unit (EDU), and a volumetric rate for water consumed. Water consumption charges are based on average winter water use from the prior year².

² Average winter consumption is recalculated each year using the most recent winter water consumption (lowest consecutive 3 months).

The existing rate structure collects 48 percent of revenue from volumetric charges and 52 percent of revenue from fixed charges; NBS recommends the City maintain this revenue allocation in the proposed rates. **Figure 8** calculates the fixed charge per EDU; and **Figure 9** calculates the volumetric charge per HCF for all customers. **Figure 10** shows the current and proposed sewer rates through FY 2027/28.

FIGURE 8. SEWER RATE CALCULATION – FIXED CHARGES

| Fixed Charges (per EDU) | Total Revenue Requirements | % of Total Rev. Req't. from Fixed Charges | Fixed Charges | Number of Equivalent Dwelling Units | Rate per EDU |
|-------------------------|----------------------------|---|------------------|-------------------------------------|------------------|
| | <i>A</i> | <i>B</i> | <i>C = A * B</i> | <i>D</i> | <i>E = C / D</i> |
| All Customers | \$9,096,500 | 52% | \$4,730,180 | 13,892 | \$340.49 |

FIGURE 9. SEWER RATE CALCULATION – VOLUMETRIC CHARGES

| Volumetric Charges (per HCF) | Total Revenue Requirements | % of Total Rev. Req't. from Volumetric Charges | Volumetric Charges | Annual Billable Volume (hcf) | Rate per HCF |
|------------------------------|----------------------------|--|--------------------|------------------------------|------------------|
| | <i>F</i> | <i>G = 1 - B</i> | <i>H = F * G</i> | <i>I</i> | <i>J = H / I</i> |
| All Customers | \$9,096,500 | 48% | \$4,366,320 | 1,322,896 | \$3.30 |

FIGURE 10. CURRENT (FY 2022/23) AND PROPOSED SEWER RATES (FY 2023/24 – FY 2027/28)

| Sewer Rate Schedule | Current Rates | Proposed Yearly 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 |
| Annual Fixed Service Charge per EDU | \$301.29 | \$340.49 | \$391.56 | \$450.29 | \$517.83 | \$595.50 |
| Volumetric Rate (\$/hcf) ^{1,2} | \$2.42 | \$3.30 | \$3.80 | \$4.37 | \$5.03 | \$5.78 |

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

2. Rates are charged based on average winter water consumption (three lowest consecutive months from previous year).

Customer Bill Comparisons

RESIDENTIAL SEWER CUSTOMERS

Figure 11 compares typical single-family annual sewer bills over the next five years, under the current and proposed rates. Similarly, **Figure 12** compares typical multi-family annual sewer bills over the next five years, under the current and proposed rates.

FIGURE 11. ANNUAL SINGLE-FAMILY SEWER BILL COMPARISON

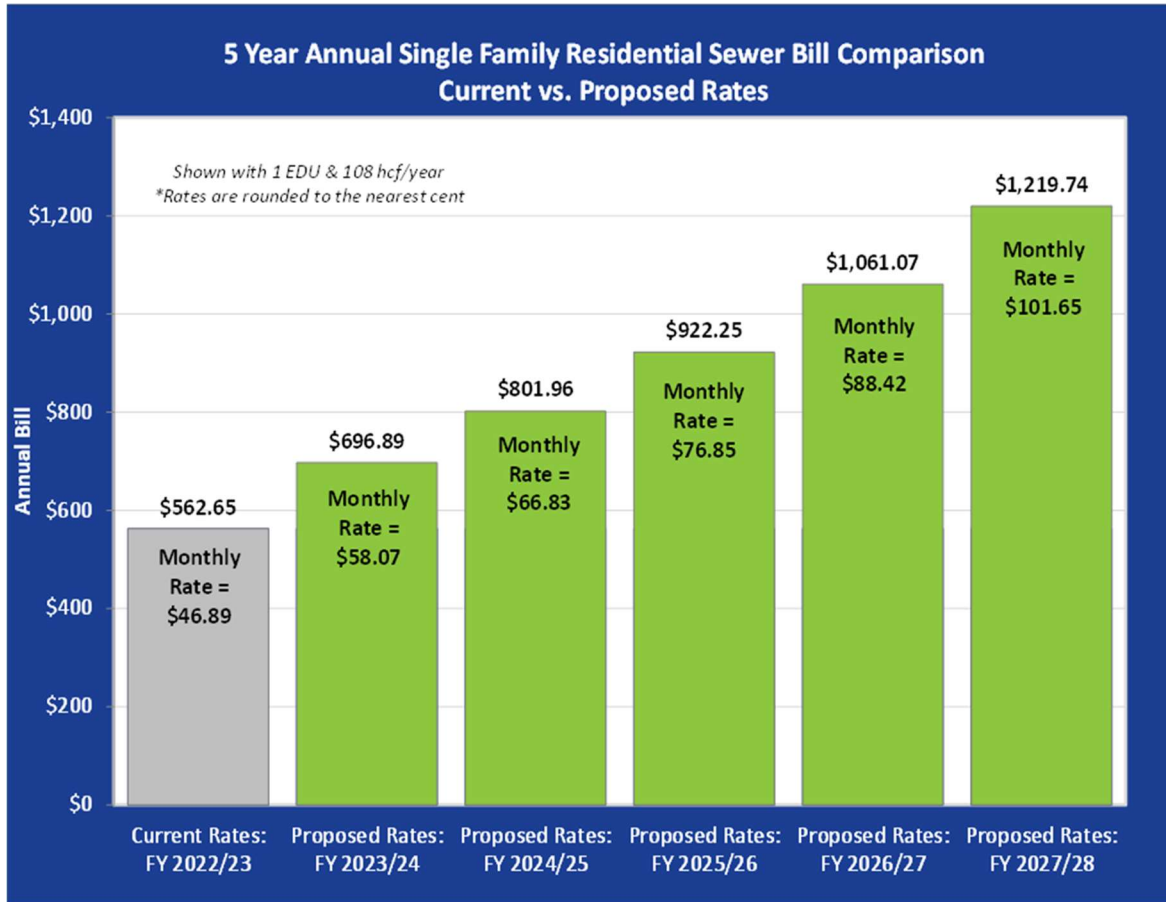
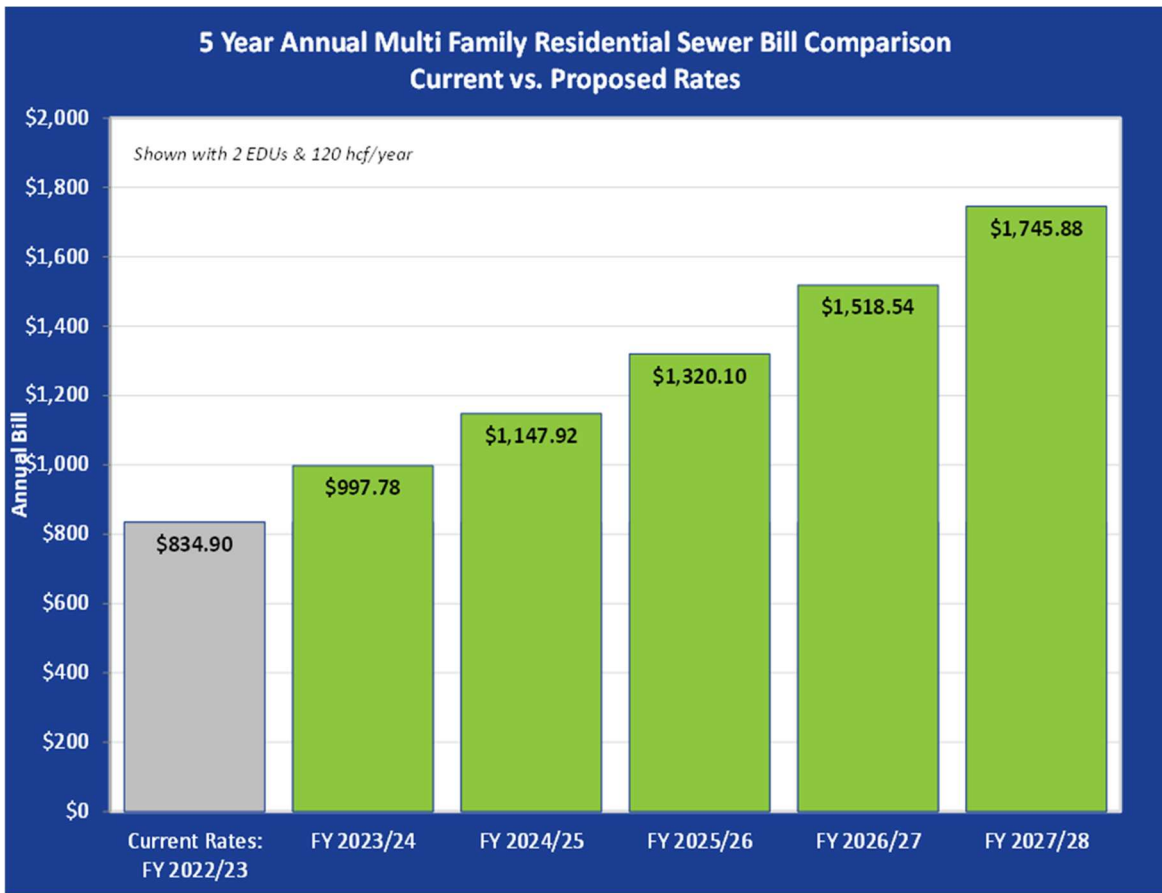


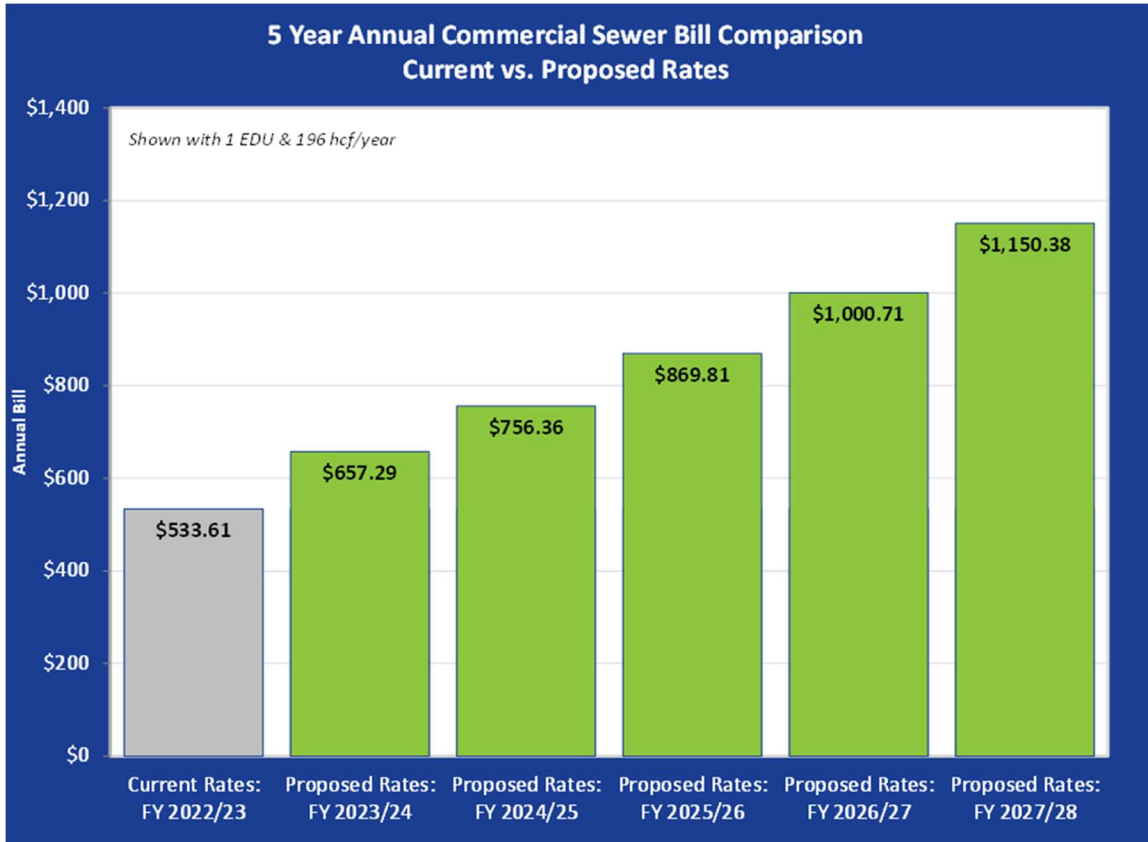
FIGURE 12. ANNUAL MULTI-FAMILY SEWER BILL COMPARISON (2 UNITS)



COMMERCIAL SEWER CUSTOMERS

Figure 13 compares typical commercial annual sewer bills over the next five years, under the current and proposed rates.

FIGURE 13. ANNUAL COMMERCIAL SEWER BILL COMPARISON



Section 3. NEXT STEPS

Next Steps

A public hearing and protest balloting process are the next steps required to adopt new sewer rates. As a part of this process, NBS recommends the City take the following actions:

- **Approve and Accept This Study Report:** NBS recommends the City Council formally approve and adopt this report and its recommendations. This will provide the documentation and administrative record necessary to adopt and implement the proposed sewer rates.
- **Implement Proposed Rates:** Based on successfully meeting Proposition 218 balloting requirements, the City Council should proceed with implementing the rates proposed in this report for the next five years. These rates are intended to ensure the continued financial health of the City's sewer utility.

ANNUALLY REVIEW RATES AND REVENUE

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

PRINCIPAL ASSUMPTIONS AND CONSIDERATIONS

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

While we believe NBS' use of such information and assumptions is reasonable for the purpose of this report and its recommendations, some assumptions will invariably not materialize as stated herein or may vary significantly due to unanticipated events and circumstances. Therefore, the actual results can be expected to vary from those projected to the extent that actual future conditions differ from those assumed by us or provided to us by others.

Section 4. APPENDIX A – ABBREVIATIONS & ACRONYMS³

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

3 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.

Section 5. APPENDIX B – SEWER RATE STUDY SUMMARY TABLES

TABLE 1: FINANCIAL PLAN AND SUMMARY OF REVENUE REQUIREMENTS

| RATE REVENUE REQUIREMENTS SUMMARY | Budget | | Projected | | | | | 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 Funds (Sewer Revenues)¹ | | | | | | | | | | | | |
| Rate Revenue: | | | | | | | | | | | | |
| Sewer Service Charge on Tax Roll | 7,910,000 | 7,910,000 | 7,910,000 | 7,910,000 | 7,910,000 | 7,910,000 | 7,910,000 | 7,910,000 | 7,910,000 | 7,910,000 | 7,910,000 | 7,910,000 |
| Revenue from Rate Increases ² | - | 1,186,500 | 2,550,975 | 4,120,121 | 5,924,639 | 7,999,835 | 8,795,327 | 9,630,593 | 10,507,623 | 11,428,504 | 12,395,430 | 12,395,430 |
| Subtotal: Rate Revenue After Rate Increases | 7,910,000 | 9,096,500 | 10,460,975 | 12,030,121 | 13,834,639 | 15,909,835 | 16,705,327 | 17,540,593 | 18,417,623 | 19,338,504 | 20,305,430 | 20,305,430 |
| Non-Rate Revenue: | | | | | | | | | | | | |
| Sewer Service Charge not on Tax Roll | 600,000 | 600,000 | 600,000 | 600,000 | 600,000 | 600,000 | 600,000 | 600,000 | 600,000 | 600,000 | 600,000 | 600,000 |
| Other Revenues | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 |
| Interest Income ³ | 40,000 | 69,563 | 54,972 | 34,071 | 44,435 | 47,077 | 80,954 | 86,563 | 122,135 | 139,674 | 182,613 | 182,613 |
| Subtotal: Rate Revenue After Rate Increases | 655,000 | 684,563 | 669,972 | 649,071 | 659,435 | 662,077 | 695,954 | 701,563 | 737,135 | 754,674 | 797,613 | 797,613 |
| Total Sources of Funds | \$ 8,565,000 | \$ 9,781,063 | \$ 11,130,947 | \$ 12,679,192 | \$ 14,494,075 | \$ 16,571,912 | \$ 17,401,282 | \$ 18,242,157 | \$ 19,154,758 | \$ 20,093,178 | \$ 21,103,042 | \$ 21,103,042 |
| Uses of Funds | | | | | | | | | | | | |
| Operating Expenses ⁴ | | | | | | | | | | | | |
| Salaries and Benefits | \$ 2,165,070 | \$ 2,274,400 | \$ 2,389,258 | \$ 2,509,924 | \$ 2,636,691 | \$ 2,769,869 | \$ 2,909,783 | \$ 3,056,772 | \$ 3,211,196 | \$ 3,373,432 | \$ 3,543,874 | \$ 3,543,874 |
| Utilities | 70,300 | 73,459 | 76,762 | 80,215 | 83,825 | 87,600 | 91,547 | 95,674 | 99,989 | 104,501 | 109,219 | 109,219 |
| Repair and Services | 1,673,218 | 1,754,254 | 1,839,236 | 1,928,359 | 2,021,824 | 2,119,844 | 2,222,643 | 2,330,454 | 2,443,522 | 2,562,105 | 2,686,475 | 2,686,475 |
| City of Palo Alto RWQCP O&M | 3,142,000 | 3,278,000 | 3,382,000 | 3,471,000 | 3,549,000 | 3,617,000 | 3,695,000 | 3,776,000 | 3,860,000 | 3,921,000 | 4,019,000 | 4,019,000 |
| Subtotal: Operating Expenses | \$ 7,050,587 | \$ 7,380,113 | \$ 7,687,256 | \$ 7,989,498 | \$ 8,291,340 | \$ 8,594,314 | \$ 8,918,972 | \$ 9,258,899 | \$ 9,614,707 | \$ 9,961,038 | \$ 10,358,568 | \$ 10,358,568 |
| Other Expenditures: | | | | | | | | | | | | |
| Existing Debt Service - Palo Alto RWQCP | \$ 468,090 | \$ 468,007 | \$ 492,102 | \$ 492,306 | \$ 491,782 | \$ 491,477 | \$ 1,178,647 | \$ 1,178,182 | \$ 1,125,683 | \$ 1,125,477 | \$ 1,125,358 | \$ 1,125,358 |
| Rate-Funded Capital Expenses | - | 2,151,973 | 5,509,254 | 3,057,450 | 5,503,738 | 3,310,887 | 4,267,882 | 1,645,355 | 525,788 | - | - | - |
| Subtotal: Other Expenditures | \$ 468,090 | \$ 2,619,979 | \$ 6,001,355 | \$ 3,549,756 | \$ 5,995,520 | \$ 3,802,363 | \$ 5,446,528 | \$ 2,823,537 | \$ 1,651,471 | \$ 1,125,477 | \$ 1,125,358 | \$ 1,125,358 |
| Total Uses of Sewer Funds | \$ 7,518,678 | \$ 10,000,092 | \$ 13,688,611 | \$ 11,539,254 | \$ 14,286,861 | \$ 12,396,677 | \$ 14,365,501 | \$ 12,082,436 | \$ 11,266,178 | \$ 11,086,516 | \$ 11,483,926 | \$ 11,483,926 |
| Annual Surplus/(Deficit) | \$ 1,046,322 | \$ (219,029) | \$ (2,557,664) | \$ 1,139,939 | \$ 207,214 | \$ 4,175,235 | \$ 3,035,781 | \$ 6,159,720 | \$ 7,888,580 | \$ 9,006,663 | \$ 9,619,116 | \$ 9,619,116 |
| Net Revenue Req¹ | \$ 6,863,678 | \$ 9,315,529 | \$ 13,018,639 | \$ 10,890,182 | \$ 13,627,425 | \$ 11,734,600 | \$ 13,669,546 | \$ 11,380,873 | \$ 10,529,043 | \$ 10,331,841 | \$ 10,686,313 | \$ 10,686,313 |
| (Total Uses less Non-Rate Revenue) | | | | | | | | | | | | |
| Total Rate Revenue After Rate Increases | \$ 7,910,000 | \$ 9,096,500 | \$ 10,460,975 | \$ 12,030,121 | \$ 13,834,639 | \$ 15,909,835 | \$ 16,705,327 | \$ 17,540,593 | \$ 18,417,623 | \$ 19,338,504 | \$ 20,305,430 | \$ 20,305,430 |
| Projected Annual Rate Revenue Increase | 0.00% | 15.00% | 15.00% | 15.00% | 15.00% | 15.00% | 5.00% | 5.00% | 5.00% | 5.00% | 5.00% | 5.00% |
| Cumulative Increase from Annual Revenue Increases | 0.00% | 15.00% | 32.25% | 52.09% | 74.90% | 101.14% | 111.19% | 121.75% | 132.84% | 144.48% | 156.71% | 156.71% |
| Debt Coverage After Rate Increase | 3.24 | 5.13 | 7.00 | 9.53 | 12.61 | 16.23 | 7.20 | 7.62 | 8.47 | 9.00 | 9.55 | 9.55 |

1. Revenues are budgeted for 2022/2023. Source: Multiyear Budget to Actual Sewer.pdf
2. Revenue from rate increases assumes an implementation date of July 1, 2023 for new rates.
For each year thereafter, the assumption is that new rates will be implemented on July 1st. Rate revenue collected on property tax bills.
3. Interest earnings beginning in FY 2023/24 are calculated based on historical LAIF returns.
4. Expenses are budgeted for 2022/2023. Source: Multiyear Budget to Actual Sewer.pdf

| SUMMARY OF CASH ACTIVITY | Projected | | | | | | | | | | | |
|--|---------------------|---------------------|-----------------------|-----------------------|-----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| | Budget | 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 | | | | | | | | | | | | |
| Un-Restricted Reserves: | | | | | | | | | | | | |
| Operating Reserve | | | | | | | | | | | | |
| Beginning Reserve Balance ² | \$ 3,525,300 | \$ 3,525,300 | \$ 3,525,300 | \$ 3,310,235 | \$ 752,571 | \$ 1,876,172 | \$ 2,088,080 | \$ 4,297,200 | \$ 4,459,500 | \$ 4,629,400 | \$ 4,807,400 | \$ 4,980,500 |
| Plus: Net Cash Flow (After Rate Increases) | 1,046,322 | (219,029) | 3,964 | (2,557,664) | 1,139,939 | 207,214 | 4,175,235 | 3,035,781 | 6,159,720 | 7,888,580 | 9,006,663 | 9,619,116 |
| Plus: Transfer of Debt Reserve Surplus | 4,048 | | | | 3,998 | 4,694 | 4,471 | 4,163 | 10,448 | 62,478 | 9,740 | 9,652 |
| Plus: Transfer of Capital R&R Reserve Surplus | | | | | | | | | | | | |
| Less: Transfer Out to Debt Service Reserve | | | | | (20,335) | | | (687,170) | | | | |
| Less: Transfer Out to Palo Alto RWQCP R&R Reserve | (400,000) | | | | | | (290,000) | (110,000) | | | | |
| Less: Transfer Out to Capital Replacement Reserve | (650,371) | | | | | | (1,680,586) | (2,080,474) | (6,000,268) | (7,773,058) | (8,843,303) | (9,429,969) |
| Ending Operating Reserve Balance | \$ 3,525,300 | \$ 3,310,235 | \$ 3,310,235 | \$ 752,571 | \$ 1,876,172 | \$ 2,088,080 | \$ 4,297,200 | \$ 4,459,500 | \$ 4,629,400 | \$ 4,807,400 | \$ 4,980,500 | \$ 5,179,300 |
| Target Ending Balance (6 months of O&M) | \$ 3,525,300 | \$ 3,690,100 | \$ 3,180,000 | \$ 3,843,600 | \$ 3,994,700 | \$ 4,145,700 | \$ 4,297,200 | \$ 4,459,500 | \$ 4,629,400 | \$ 4,807,400 | \$ 4,980,500 | \$ 5,179,300 |
| Capital Rehabilitation & Replacement Reserve | | | | | | | | | | | | |
| Beginning Reserve Balance ² | \$ 7,121,247 | \$ 4,687,617 | \$ 3,370,000 | \$ 3,370,000 | \$ 3,270,000 | \$ 3,370,000 | \$ 3,470,000 | \$ 5,260,586 | \$ 5,760,474 | \$ 9,790,268 | \$ 11,683,058 | \$ 16,579,422 |
| Plus: Grant Proceeds | | | | | | | | | | | | |
| Plus: Transfer of Operating Reserve Surplus | 650,371 | | | | | | 1,680,586 | 2,080,474 | 6,000,268 | 7,773,058 | 8,843,303 | 9,429,969 |
| Plus: Transfer of Palo Alto RWQCP R&R Reserve Surplus | | | | 90,000 | 100,000 | 100,000 | 110,000 | | | | | |
| Less: Transfer Out to Operating Replacement Reserve | | | | | | | | | | | | |
| Less: Transfer Out for Capital Projects | (3,084,000) | (1,507,617) | | | | | | (1,580,586) | (1,970,474) | (5,880,268) | (3,946,939) | (8,461,566) |
| Ending Capital Rehab & Replacement Reserve Balance | \$ 4,687,617 | \$ 3,180,000 | \$ 3,180,000 | \$ 3,270,000 | \$ 3,370,000 | \$ 3,470,000 | \$ 5,260,586 | \$ 5,760,474 | \$ 9,790,268 | \$ 11,683,058 | \$ 16,579,422 | \$ 17,547,824 |
| Capital R&R Reserve (based on estimated annual CIP) | \$ 3,084,000 | \$ 3,180,000 | \$ 3,180,000 | \$ 3,270,000 | \$ 3,370,000 | \$ 3,470,000 | \$ 3,580,000 | \$ 3,680,000 | \$ 3,790,000 | \$ 3,910,000 | \$ 4,020,000 | \$ 4,140,000 |
| City of Palo Alto RWQCP R&R Reserve | | | | | | | | | | | | |
| Beginning Reserve Balance ² | \$ 300,000 | \$ 700,000 | \$ 700,000 | \$ 700,000 | \$ 610,000 | \$ 510,000 | \$ 410,000 | \$ 590,000 | \$ 700,000 | \$ 700,000 | \$ 700,000 | \$ 700,000 |
| Plus: Transfer of Operating Reserve Surplus | 400,000 | | | | | | 290,000 | 110,000 | | | | |
| Less: Transfer Out for Capital Projects | | | | (90,000) | (100,000) | (100,000) | (110,000) | | | | | |
| Ending Capital Rehab & Replacement Reserve Balance | \$ 700,000 | \$ 700,000 | \$ 700,000 | \$ 610,000 | \$ 510,000 | \$ 410,000 | \$ 590,000 | \$ 700,000 | \$ 700,000 | \$ 700,000 | \$ 700,000 | \$ 700,000 |
| RWQCP R&R Reserve (average annual CIP costs) | \$ 700,000 | \$ 700,000 | \$ 700,000 | \$ 600,000 | \$ 600,000 | \$ 600,000 | \$ 700,000 | \$ 700,000 | \$ 600,000 | \$ 500,000 | \$ 300,000 | \$ 200,000 |
| Ending Balance - Excl. Restricted Reserves | \$ 8,912,917 | \$ 7,190,235 | \$ 4,632,571 | \$ 5,756,172 | \$ 10,147,786 | \$ 10,919,974 | \$ 15,119,668 | \$ 17,190,458 | \$ 22,259,922 | \$ 23,427,124 | \$ 23,427,124 | \$ 23,427,124 |
| Min. Target Ending Balance - Excl. Restricted Reserves | \$ 7,309,300 | \$ 7,570,100 | \$ 7,713,600 | \$ 7,964,700 | \$ 8,215,700 | \$ 8,577,200 | \$ 8,839,500 | \$ 9,019,400 | \$ 9,217,400 | \$ 9,300,500 | \$ 9,300,500 | \$ 9,519,300 |
| Ending Surplus/(Deficit) Compared to Reserve Targets | \$ 1,603,617 | \$ (379,865) | \$ (3,081,029) | \$ (2,208,528) | \$ (2,247,620) | \$ 1,570,586 | \$ 2,080,474 | \$ 7,973,058 | \$ 6,100,268 | \$ 12,959,422 | \$ 13,907,824 | \$ 13,907,824 |

CITY OF LOS ALTOS
SEWER RATE STRUCTURE ANALYSIS
Financial Plan and Reserve Projections
TABLE 3: RESERVE FUND SUMMARY

| | Budget | | 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 | | | | |
| SUMMARY OF CASH ACTIVITY | | | | | | | | | | | | | | | |
| Restricted Reserves: | | | | | | | | | | | | | | | |
| Connection Fee Reserve | | | | | | | | | | | | | | | |
| Beginning Reserve Balance | \$ - | \$ 5,000 | \$ 10,042 | \$ 15,127 | \$ 20,256 | \$ 25,427 | \$ 30,642 | \$ 35,902 | \$ 41,206 | \$ 46,555 | \$ 51,949 | \$ 51,949 | \$ 51,949 | | |
| Plus: Interest Earnings | - | 42 | 85 | 128 | 172 | 215 | 260 | 304 | 349 | 394 | 440 | 440 | 440 | | |
| Plus: Connection Fee Revenue | 5,000 | 5,000 | 5,000 | 5,000 | 5,000 | 5,000 | 5,000 | 5,000 | 5,000 | 5,000 | 5,000 | 5,000 | 5,000 | | |
| Less: Use of Reserves for Capital Projects | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| Ending Connection Fee Fund Balance | \$ 5,000 | \$ 10,042 | \$ 15,127 | \$ 20,256 | \$ 25,427 | \$ 30,642 | \$ 35,902 | \$ 41,206 | \$ 46,555 | \$ 51,949 | \$ 51,949 | \$ 51,949 | \$ 57,389 | | |
| Target Ending Balance | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | | |
| Debt Reserve | | | | | | | | | | | | | | | |
| Beginning Reserve Balance | \$ 468,090 | \$ 468,007 | \$ 468,007 | \$ 471,971 | \$ 492,306 | \$ 491,782 | \$ 491,477 | \$ 1,178,647 | \$ 1,178,182 | \$ 1,125,683 | \$ 1,125,477 | \$ 1,125,477 | \$ 1,125,477 | | |
| Plus: Reserve Funding from Operating Reserve | - | - | - | 20,335 | - | - | - | 687,170 | - | - | - | - | - | | |
| Plus: Reserve Funding from Future Debt Obligations | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| Plus: Interest Earnings | 3,965 | 3,964 | 3,964 | 3,998 | 4,170 | 4,165 | 4,163 | 9,983 | 9,979 | 9,535 | 9,533 | 9,533 | | | |
| Less: Transfer of Surplus to Operating Reserve | (4,048) | (3,964) | - | (3,998) | (4,694) | (4,471) | (4,163) | (10,448) | (62,478) | (9,740) | (9,652) | (9,652) | | | |
| Ending Debt Reserve Balance | \$ 468,007 | \$ 468,007 | \$ 471,971 | \$ 492,306 | \$ 491,782 | \$ 491,477 | \$ 1,178,647 | \$ 1,178,182 | \$ 1,125,683 | \$ 1,125,477 | \$ 1,125,477 | \$ 1,125,477 | \$ 1,125,358 | | |
| Target Ending Balance | \$ 468,090 | \$ 468,007 | \$ 492,102 | \$ 492,306 | \$ 491,782 | \$ 491,477 | \$ 1,178,647 | \$ 1,178,182 | \$ 1,125,683 | \$ 1,125,477 | \$ 1,125,477 | \$ 1,125,477 | \$ 1,125,358 | | |
| Ending Balance - Restricted Reserves | \$ 473,007 | \$ 478,049 | \$ 487,098 | \$ 512,561 | \$ 517,209 | \$ 522,119 | \$ 1,214,549 | \$ 1,219,388 | \$ 1,172,238 | \$ 1,177,427 | \$ 1,177,427 | \$ 1,182,747 | \$ 1,182,747 | | |
| Min. Target Ending Balance - Restricted Reserves | \$ 468,090 | \$ 468,007 | \$ 492,102 | \$ 492,306 | \$ 491,782 | \$ 491,477 | \$ 1,178,647 | \$ 1,178,182 | \$ 1,125,683 | \$ 1,125,477 | \$ 1,125,477 | \$ 1,125,477 | \$ 1,125,358 | | |
| Ending Surplus/(Deficit) Compared to Reserve Targets | \$ 4,917 | \$ 10,042 | \$ (5,003) | \$ 20,256 | \$ 25,427 | \$ 30,642 | \$ 35,902 | \$ 41,206 | \$ 46,555 | \$ 51,949 | \$ 51,949 | \$ 57,389 | \$ 57,389 | | |
| Annual Interest Earnings Rate³ | 0.85% | 0.85% | 0.85% | 0.85% | 0.85% | 0.85% | 0.85% | 0.85% | 0.85% | 0.85% | 0.85% | 0.85% | 0.85% | | |

1. The Beginning Cash balance is equal to the amount in the Sewer Fund, Claim on Cash per source file: Beginning balance of FY22.xlsx
 2. NBS assumes total unrestricted cash of \$11,414,637 is first used to fully fund operating reserve. The remainder is placed in Capital Rehabilitation & Replacement Reserve and City of Palo Alto R&R Reserve.
 3. Historical interest earnings rates were referenced on the California Treasurer's Office website for funds invested in LAIF. Future years earnings are historical 10 year average interest earnings rate.

CHART 1

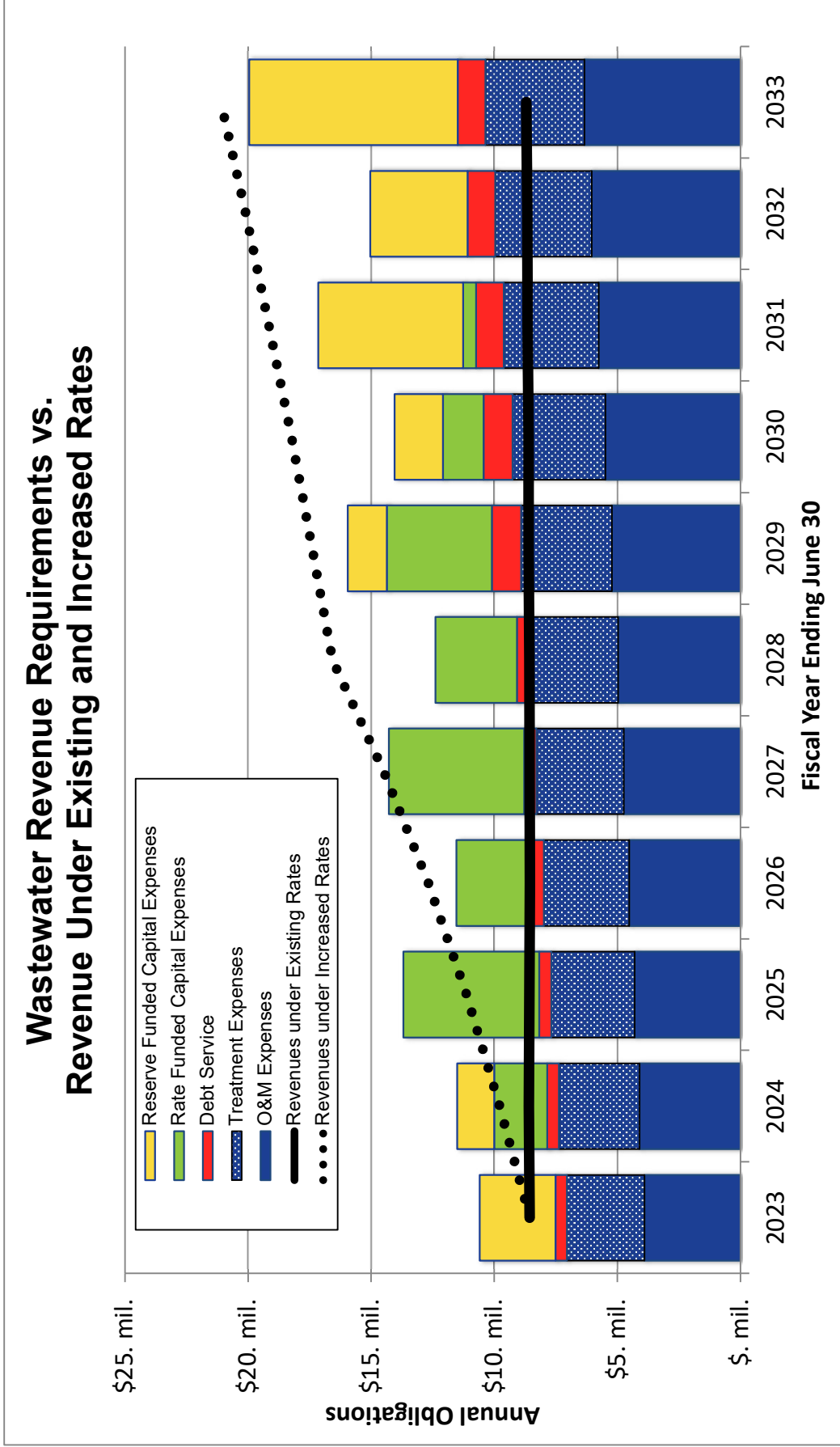


CHART 2

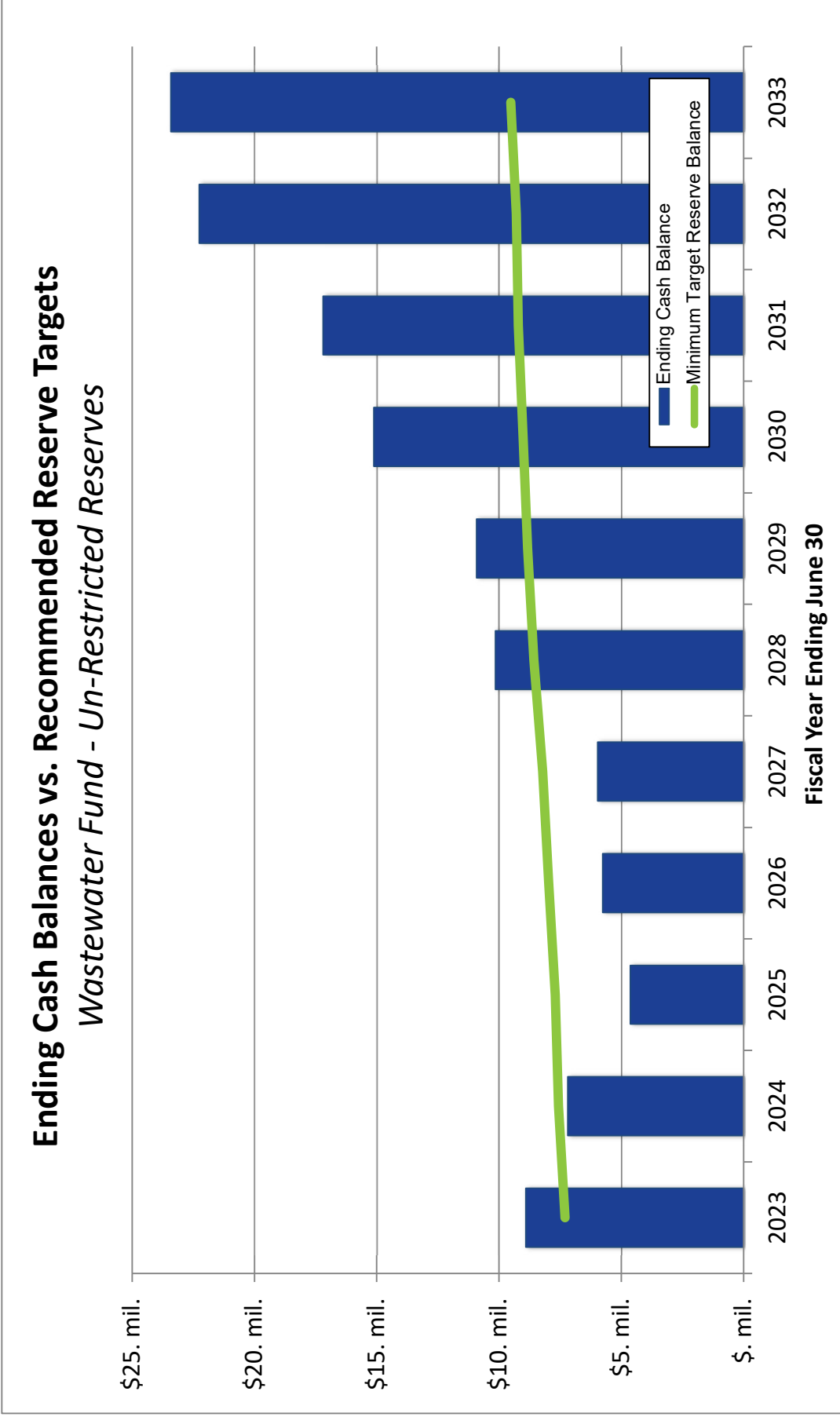
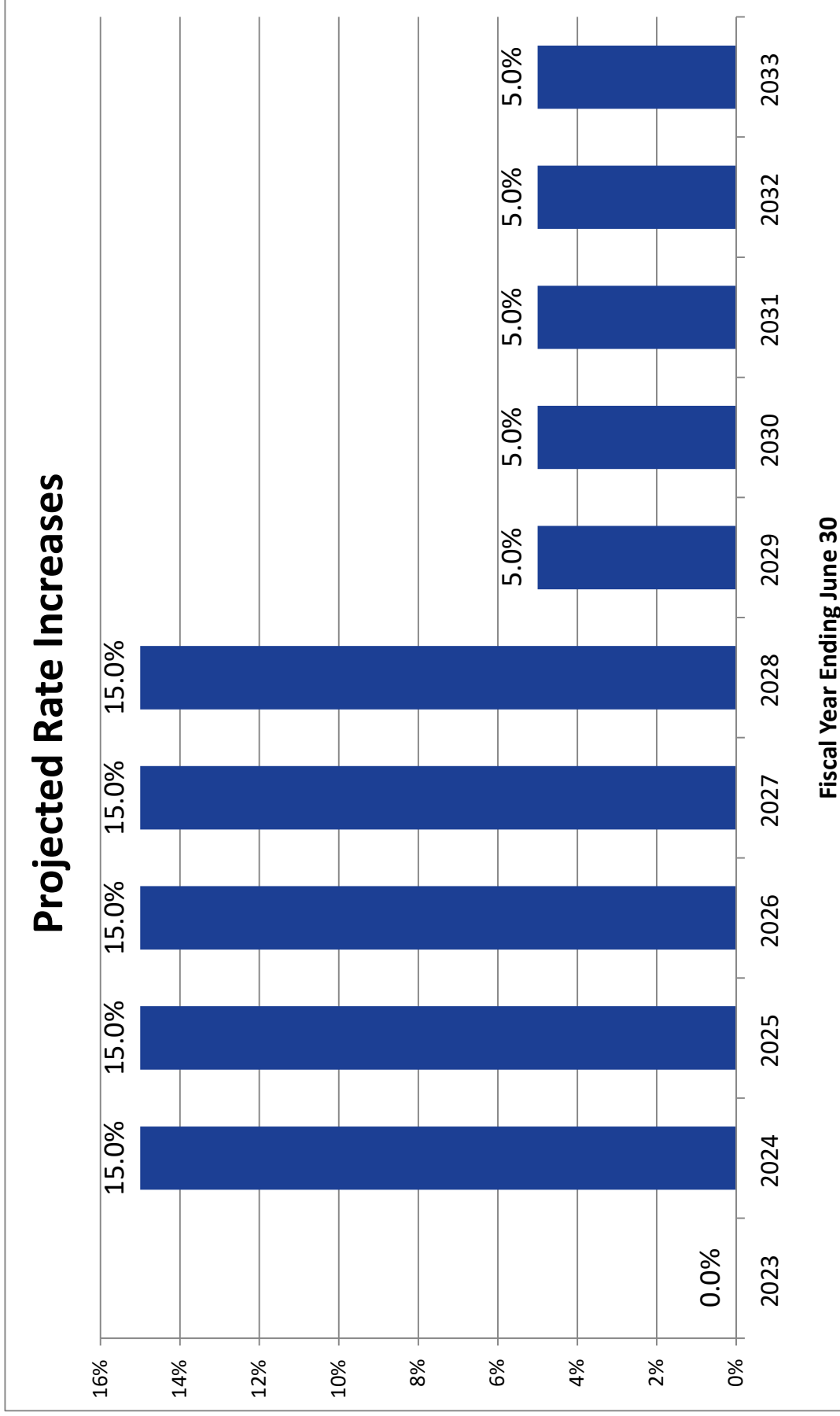


CHART 3



CITY OF LOS ALTOS
SEWER RATE STRUCTURE ANALYSIS
Operating Revenue and Expenses

EXHIBIT 1

TABLE 4: REVENUE FORECAST

Budget

| DESCRIPTION | Basis | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 |
|----------------------------------|-------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| SEWER REVENUE¹ | | | | | | | | | | | | |
| Interest Income | FP | \$ 40,000 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Sewer Fees- Tax Roll | 1 | 7,910,000 | 7,910,000 | 7,910,000 | 7,910,000 | 7,910,000 | 7,910,000 | 7,910,000 | 7,910,000 | 7,910,000 | 7,910,000 | 7,910,000 |
| Sewer Fees- Not on Tax Roll | 1 | 600,000 | 600,000 | 600,000 | 600,000 | 600,000 | 600,000 | 600,000 | 600,000 | 600,000 | 600,000 | 600,000 |
| Sewer Connection Fees | 1 | 5,000 | 5,000 | 5,000 | 5,000 | 5,000 | 5,000 | 5,000 | 5,000 | 5,000 | 5,000 | 5,000 |
| Misc. Sewer Fees | 1 | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 |
| TOTAL: REVENUE | | \$ 8,570,000 | \$ 8,530,000 | \$ 8,530,000 | \$ 8,530,000 | \$ 8,530,000 | \$ 8,530,000 | \$ 8,530,000 | \$ 8,530,000 | \$ 8,530,000 | \$ 8,530,000 | \$ 8,530,000 |

TABLE 5: REVENUE SUMMARY

| | | | | | | | | | | | | |
|---|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| SEWER REVENUE¹ | | | | | | | | | | | | |
| Sewer Service Charges | | \$ 7,910,000 | \$ 7,910,000 | \$ 7,910,000 | \$ 7,910,000 | \$ 7,910,000 | \$ 7,910,000 | \$ 7,910,000 | \$ 7,910,000 | \$ 7,910,000 | \$ 7,910,000 | \$ 7,910,000 |
| Sewer Service Charges - Not on Tax Roll | | 600,000 | 600,000 | 600,000 | 600,000 | 600,000 | 600,000 | 600,000 | 600,000 | 600,000 | 600,000 | 600,000 |
| Sewer Connection Fee | | 5,000 | 5,000 | 5,000 | 5,000 | 5,000 | 5,000 | 5,000 | 5,000 | 5,000 | 5,000 | 5,000 |
| Interest Earnings | | 40,000 | - | - | - | - | - | - | - | - | - | - |
| Other Revenues | | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 |
| TOTAL: REVENUE | | \$ 8,570,000 | \$ 8,530,000 | \$ 8,530,000 | \$ 8,530,000 | \$ 8,530,000 | \$ 8,530,000 | \$ 8,530,000 | \$ 8,530,000 | \$ 8,530,000 | \$ 8,530,000 | \$ 8,530,000 |

CITY OF LOS ALTOS
SEWER RATE STRUCTURE ANALYSIS
Operating Revenue and Expenses

EXHIBIT 1

TABLE 6: SEWER FUND OPERATING EXPENSE FORECAST

| DESCRIPTION ¹ | Basis | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 |
|--|-------|------------|------------|------------|------------|------------|------------|------------|------------|--------------|--------------|--------------|
| Sewer System Administration | | | | | | | | | | | | |
| Salaries and Benefits | 3 | \$ 697,845 | \$ 732,738 | \$ 769,374 | \$ 807,843 | \$ 848,235 | \$ 890,647 | \$ 935,179 | \$ 981,938 | \$ 1,031,035 | \$ 1,082,587 | \$ 1,136,716 |
| Salaries | 3 | 5,339 | 5,606 | 5,886 | 6,180 | 6,489 | 6,814 | 7,154 | 7,512 | 7,888 | 8,282 | 8,696 |
| Overtime | 3 | 3,125 | 3,281 | 3,445 | 3,618 | 3,799 | 3,988 | 4,188 | 4,397 | 4,617 | 4,848 | 5,090 |
| Special Pay | 3 | 68,782 | 72,221 | 75,832 | 79,623 | 83,604 | 87,785 | 92,174 | 96,783 | 101,622 | 106,703 | 112,038 |
| Retirement | 3 | 73,368 | 77,451 | 81,762 | 86,313 | 91,117 | 96,189 | 101,543 | 107,194 | 113,161 | 119,459 | 126,108 |
| Pers Unfunded Liability | 4 | 6,894 | 7,238 | 7,600 | 7,980 | 8,379 | 8,798 | 9,238 | 9,700 | 10,185 | 10,695 | 11,229 |
| Deferred Comp | 3 | 8,398 | 8,818 | 9,259 | 9,722 | 10,208 | 10,718 | 11,254 | 11,817 | 12,408 | 13,028 | 13,679 |
| Quality of Life | 3 | 15,887 | 16,681 | 17,515 | 18,391 | 19,310 | 20,276 | 21,290 | 22,354 | 23,472 | 24,645 | 25,878 |
| Health Insurance | 3 | 102,783 | 107,922 | 113,318 | 118,984 | 124,933 | 131,180 | 137,739 | 144,626 | 151,857 | 159,450 | 167,423 |
| Dental Plan | 3 | 3,409 | 3,546 | 3,688 | 3,835 | 3,988 | 4,148 | 4,314 | 4,486 | 4,666 | 4,853 | 5,047 |
| Uniforms | 2 | 1,501 | 1,576 | 1,655 | 1,737 | 1,824 | 1,915 | 2,011 | 2,112 | 2,217 | 2,328 | 2,445 |
| Life Insurance | 3 | 34,895 | 36,639 | 38,471 | 40,395 | 42,415 | 44,535 | 46,762 | 49,100 | 51,555 | 54,133 | 56,840 |
| Workers Comp Insurance | 3 | 10,462 | 10,985 | 11,535 | 12,111 | 12,717 | 13,353 | 14,020 | 14,721 | 15,457 | 16,230 | 17,042 |
| Medicare Tax | 3 | 500 | 520 | 541 | 562 | 585 | 608 | 633 | 658 | 684 | 712 | 740 |
| Utilities | | | | | | | | | | | | |
| Telephone | 2 | 1,200 | 1,248 | 1,298 | 1,350 | 1,404 | 1,460 | 1,518 | 1,579 | 1,642 | 1,708 | 1,776 |
| Office Supplies | 2 | 3,400 | 3,536 | 3,677 | 3,825 | 3,978 | 4,137 | 4,302 | 4,474 | 4,653 | 4,839 | 5,033 |
| Postal Services | 2 | 100 | 105 | 110 | 116 | 122 | 128 | 134 | 141 | 148 | 155 | 163 |
| Mileage | 7 | 5,500 | 5,720 | 5,949 | 6,187 | 6,434 | 6,692 | 6,959 | 7,238 | 7,527 | 7,828 | 8,141 |
| Training and Meetings | 2 | 3,500 | 3,640 | 3,786 | 3,937 | 4,095 | 4,258 | 4,429 | 4,606 | 4,790 | 4,982 | 5,181 |
| Repair and Services | | | | | | | | | | | | |
| Special Departmental Supplies | 2 | 335,000 | 351,750 | 369,338 | 387,804 | 407,195 | 427,554 | 448,932 | 471,379 | 494,948 | 519,695 | 545,680 |
| Professional Services ² | 3 | 3,142,000 | 3,278,000 | 3,382,000 | 3,471,000 | 3,549,000 | 3,617,000 | 3,695,000 | 3,776,000 | 3,860,000 | 3,921,000 | 4,019,000 |
| City of Palo Alto RWQCP O&M | 6 | 772,151 | 810,758 | 851,296 | 893,861 | 938,554 | 985,482 | 1,034,756 | 1,086,494 | 1,140,818 | 1,197,859 | 1,257,752 |
| Other Services ² | 3 | 150,000 | 156,000 | 162,240 | 168,730 | 175,479 | 182,498 | 189,798 | 197,390 | 205,285 | 213,497 | 222,037 |
| Miscellaneous | | | | | | | | | | | | |
| Liability Insurance | 2 | 5,446,037 | 5,695,979 | 5,919,574 | 6,134,104 | 6,343,864 | 6,550,163 | 6,773,327 | 7,006,699 | 7,250,636 | 7,479,516 | 7,753,734 |
| TOTAL: Sewer System Administration Expenses | | | | | | | | | | | | |

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CITY OF LOS ALTOS
SEWER RATE STRUCTURE ANALYSIS
Operating Revenue and Expenses

EXHIBIT 1

TABLE 7: SEWER FUND OPERATING EXPENSE FORECAST

| DESCRIPTION ¹ | Basis | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 |
|---|-------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|
| Sewer System Maintenance | | | | | | | | | | | | |
| Salaries and Benefits | 3 | \$ 635,330 | \$ 667,096 | \$ 700,451 | \$ 735,473 | \$ 772,247 | \$ 810,859 | \$ 851,402 | \$ 893,973 | \$ 938,671 | \$ 985,605 | \$ 1,034,885 |
| Salaries | 3 | 31,142 | 32,699 | 34,334 | 36,051 | 37,853 | 39,746 | 41,733 | 43,820 | 46,011 | 48,311 | 50,727 |
| Overtime | 3 | 41,011 | 43,062 | 45,215 | 47,476 | 49,850 | 52,342 | 54,959 | 57,707 | 60,592 | 63,622 | 66,803 |
| Specialty Pay | 3 | 89,172 | 93,631 | 98,312 | 103,228 | 108,389 | 113,809 | 119,499 | 125,474 | 131,748 | 138,335 | 145,252 |
| Retirement | 4 | 131,708 | 139,039 | 146,778 | 154,948 | 163,572 | 172,676 | 182,287 | 192,433 | 203,144 | 214,451 | 226,387 |
| Pers Unfunded Liability | 3 | 1,105 | 1,160 | 1,218 | 1,279 | 1,343 | 1,410 | 1,481 | 1,555 | 1,633 | 1,714 | 1,800 |
| Deferred Comp | 3 | 8,450 | 8,873 | 9,316 | 9,782 | 10,271 | 10,785 | 11,324 | 11,890 | 12,484 | 13,109 | 13,764 |
| Quality of Life | 3 | 25,711 | 26,997 | 28,347 | 29,764 | 31,252 | 32,815 | 34,456 | 36,178 | 37,987 | 39,887 | 41,881 |
| Dental Plan | 3 | 133,392 | 140,062 | 147,065 | 154,418 | 162,139 | 170,246 | 178,758 | 187,696 | 197,081 | 206,935 | 217,282 |
| Health Insurance | 2 | 4,965 | 5,163 | 5,370 | 5,585 | 5,808 | 6,040 | 6,282 | 6,533 | 6,795 | 7,066 | 7,349 |
| Uniforms | 3 | 1,724 | 1,810 | 1,900 | 1,996 | 2,095 | 2,200 | 2,310 | 2,426 | 2,547 | 2,674 | 2,808 |
| Life Insurance | 3 | 18,234 | 19,146 | 20,103 | 21,109 | 22,164 | 23,272 | 24,436 | 25,658 | 26,941 | 28,288 | 29,702 |
| Workers Comp Insurance | 3 | 10,439 | 10,961 | 11,509 | 12,084 | 12,688 | 13,323 | 13,989 | 14,688 | 15,423 | 16,194 | 17,004 |
| Medicare Tax | 3 | | | | | | | | | | | |
| Utilities | | | | | | | | | | | | |
| Utilities | 5 | 10,400 | 10,920 | 11,466 | 12,039 | 12,641 | 13,273 | 13,937 | 14,634 | 15,366 | 16,134 | 16,941 |
| Telephone | 2 | 1,500 | 1,560 | 1,622 | 1,687 | 1,755 | 1,825 | 1,898 | 1,974 | 2,053 | 2,135 | 2,220 |
| Radio & Radar | 2 | 3,350 | 3,484 | 3,623 | 3,768 | 3,919 | 4,076 | 4,239 | 4,408 | 4,585 | 4,768 | 4,959 |
| Office Supplies | 2 | 850 | 884 | 919 | 956 | 994 | 1,034 | 1,076 | 1,119 | 1,163 | 1,210 | 1,258 |
| Postal Services | 2 | 300 | 312 | 324 | 337 | 351 | 365 | 380 | 395 | 411 | 427 | 444 |
| Mileage | 7 | 2,200 | 2,310 | 2,426 | 2,547 | 2,674 | 2,808 | 2,948 | 3,096 | 3,250 | 3,413 | 3,584 |
| Training and Meetings | 2 | 7,000 | 7,280 | 7,571 | 7,874 | 8,189 | 8,517 | 8,857 | 9,212 | 9,580 | 9,963 | 10,362 |
| Memberships | 2 | 12,000 | 12,480 | 12,979 | 13,498 | 14,038 | 14,600 | 15,184 | 15,791 | 16,423 | 17,080 | 17,763 |
| Gasoline & Oil | 7 | 22,000 | 23,100 | 24,255 | 25,468 | 26,741 | 28,078 | 29,482 | 30,956 | 32,504 | 34,129 | 35,836 |
| Repair and Services | | | | | | | | | | | | |
| Vehicle Maintenance/Repair | 2 | 35,000 | 36,400 | 37,856 | 39,370 | 40,945 | 42,583 | 44,286 | 46,058 | 47,900 | 49,816 | 51,809 |
| Equipment Repairs | 2 | 7,000 | 7,280 | 7,571 | 7,874 | 8,189 | 8,517 | 8,857 | 9,212 | 9,580 | 9,963 | 10,362 |
| Building & Grounds | 2 | 7,000 | 7,280 | 7,571 | 7,874 | 8,189 | 8,517 | 8,857 | 9,212 | 9,580 | 9,963 | 10,362 |
| Rentals | 2 | 10,000 | 10,400 | 10,816 | 11,249 | 11,699 | 12,167 | 12,653 | 13,159 | 13,686 | 14,233 | 14,802 |
| Special Departmental Supplies | 2 | 50,000 | 52,000 | 54,080 | 56,243 | 58,493 | 60,833 | 63,266 | 65,797 | 68,428 | 71,166 | 74,012 |
| Professional Services | 3 | 1,300 | 1,365 | 1,433 | 1,505 | 1,580 | 1,659 | 1,742 | 1,829 | 1,921 | 2,017 | 2,118 |
| Other Services | 3 | 302,267 | 317,380 | 333,249 | 349,912 | 367,407 | 385,778 | 405,067 | 425,320 | 446,586 | 468,915 | 492,361 |
| TOTAL: Sewer System Maintenance Expenses | | \$ 1,604,550 | \$ 1,684,133 | \$ 1,767,682 | \$ 1,855,394 | \$ 1,947,477 | \$ 2,044,151 | \$ 2,145,645 | \$ 2,252,200 | \$ 2,364,071 | \$ 2,481,522 | \$ 2,604,834 |
| GRAND TOTAL: SEWER EXPENSES | | \$ 7,050,587 | \$ 7,380,113 | \$ 7,687,256 | \$ 7,989,498 | \$ 8,291,340 | \$ 8,594,314 | \$ 8,918,972 | \$ 9,258,899 | \$ 9,614,707 | \$ 9,961,038 | \$ 10,358,568 |

CITY OF LOS ALTOS
SEWER RATE STRUCTURE ANALYSIS
Operating Revenue and Expenses

EXHIBIT 1

TABLE 8: FORECASTING ASSUMPTIONS

| INFLATION FACTORS ³ | Basis | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 |
|--|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Customer Growth ⁴ | 1 | -- | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| General Cost Inflation | 2 | -- | 4.00% | 4.00% | 4.00% | 4.00% | 4.00% | 4.00% | 4.00% | 4.00% | 4.00% | 4.00% |
| Labor & Benefits Cost Inflation | 3 | -- | 5.00% | 5.00% | 5.00% | 5.00% | 5.00% | 5.00% | 5.00% | 5.00% | 5.00% | 5.00% |
| PERS Obligation Inflation ⁵ | 4 | -- | 5.57% | 5.57% | 5.57% | 5.57% | 5.57% | 5.57% | 5.57% | 5.57% | 5.57% | 5.57% |
| Energy | 5 | -- | 5.00% | 5.00% | 5.00% | 5.00% | 5.00% | 5.00% | 5.00% | 5.00% | 5.00% | 5.00% |
| RWQCP Treatment ⁶ | 6 | -- | 6.76% | 6.76% | 6.76% | 6.76% | 6.76% | 6.76% | 6.76% | 6.76% | 6.76% | 6.76% |
| Fuel | 7 | -- | 5.00% | 5.00% | 5.00% | 5.00% | 5.00% | 5.00% | 5.00% | 5.00% | 5.00% | 5.00% |
| No Escalation | 8 | -- | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |

1. Revenue and expenses are budgeted for 2022/2023. Source: *Multyear Budget to Actual Sewer.pdf*

2. Updated salaries and benefits from City staff in file: Sewer allocation.xlsx

3. Inflation factors developed with the City and from Bureau of Labor Statistics for the region.

4. Customer growth is assumed to be zero.

5. PERS Obligation data source: *los-altos-city-miscellaneous-2016.pdf*

6. Treatment Factor based on Palo Alto costs allocated to Los Altos; data project 10 years of O&M costs, which include inflation. From City staff on 11/14/22.

CITY OF LOS ALTOS
SEWER RATE STRUCTURE ANALYSIS
Capital Improvement Plan Expenditures

TABLE 9: CAPITAL FUNDING SUMMARY

| CAPITAL FUNDING FORECAST | Projected | | | | | | | | | | | |
|--|-----------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| | Budget | 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: | | | | | | | | | | | | |
| Use of Capital Rehabilitation and Replacement Rese | | 3,084,000 | 1,507,617 | - | - | - | - | 1,580,586 | 1,970,474 | 5,880,268 | 3,946,939 | 8,461,566 |
| Rate Revenue | | - | 2,151,973 | 5,509,254 | 3,057,450 | 5,503,738 | 3,310,887 | 4,267,882 | 1,645,355 | 525,788 | - | - |
| Total Sources of Capital Funds | | \$ 3,084,000 | \$ 3,659,590 | \$ 5,509,254 | \$ 3,057,450 | \$ 5,503,738 | \$ 3,310,887 | \$ 5,848,468 | \$ 3,615,829 | \$ 6,406,056 | \$ 3,946,939 | \$ 8,461,566 |
| <i>Uses of Capital Funds:</i> | | | | | | | | | | | | |
| Total Project Costs | | \$ 3,084,000 | \$ 3,659,590 | \$ 5,509,254 | \$ 3,057,450 | \$ 5,503,738 | \$ 3,310,887 | \$ 5,848,468 | \$ 3,615,829 | \$ 6,406,056 | \$ 3,946,939 | \$ 8,461,566 |
| Capital Funding Surplus (Deficiency) | | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |

TABLE 10: CAPITAL IMPROVEMENT PROGRAM COSTS (IN CURRENT YEAR DOLLARS)

| Project Description ^{1,2} | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 |
|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Sewer System Repair Program | \$ 630,000 | \$ 640,000 | \$ 650,000 | \$ 660,000 | \$ 670,000 | \$ 680,000 | \$ 690,000 | \$ 700,000 | \$ 710,000 | \$ 720,000 | |
| Structural Reach Replacement | 800,000 | 800,000 | 800,000 | 800,000 | 800,000 | 800,000 | 800,000 | 800,000 | 800,000 | 800,000 | |
| Root Foaming | 200,000 | 200,000 | 200,000 | 200,000 | 200,000 | 200,000 | 200,000 | 200,000 | 200,000 | 200,000 | |
| CIPP Corrosion Replacement | 465,000 | 480,000 | 500,000 | 520,000 | 535,000 | 550,000 | 565,000 | 580,000 | 595,000 | 610,000 | |
| Fats, Oils, Grease Program (FOG) | 66,000 | 68,000 | 70,000 | 72,000 | 74,000 | 76,000 | 78,000 | 80,000 | 82,000 | 84,000 | |
| GIS Updates | 66,000 | 68,000 | 70,000 | 72,000 | 74,000 | 76,000 | 78,000 | 80,000 | 82,000 | 84,000 | |
| Sewer System Management Plan Update | 25,000 | 25,000 | 25,000 | 25,000 | 25,000 | - | - | - | 75,000 | - | |
| Sanitary Sewer Video Inspection | 430,000 | - | 440,000 | - | - | - | - | - | - | - | |
| Adobe Creek Sewer Main Replacement | - | - | 2,000,000 | - | 2,000,000 | - | 2,000,000 | - | 2,000,000 | - | 2,000,000 |
| City of Palo Alto RWQCP Minor CIP Fund ³ | 402,000 | 1,272,000 | 438,000 | 449,000 | 462,000 | 474,000 | 487,000 | 500,000 | 513,000 | 527,000 | 541,000 |
| <i>Placeholder for Future Year Capital Projects⁴</i> | - | - | - | - | - | - | - | - | - | - | 3,755,200 |
| Total: CIP Program Costs | \$ 3,084,000 | \$ 3,553,000 | \$ 5,193,000 | \$ 2,798,000 | \$ 4,890,000 | \$ 2,856,000 | \$ 4,898,000 | \$ 2,940,000 | \$ 5,057,000 | \$ 3,025,000 | \$ 6,296,200 |

CITY OF LOS ALTOS
SEWER RATE STRUCTURE ANALYSIS
Capital Improvement Plan Expenditures

EXHIBIT 2

TABLE 11: CAPITAL IMPROVEMENT PROGRAM COSTS (IN FUTURE YEAR DOLLARS)

| Project Description | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 |
|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Sewer System Repair Program | \$ 630,000 | \$ 659,200 | \$ 689,585 | \$ 721,200 | \$ 754,091 | \$ 788,306 | \$ 823,896 | \$ 860,912 | \$ 899,407 | \$ 939,437 | \$ - |
| Structural Reach Replacement | 800,000 | 824,000 | 848,720 | 874,182 | 900,407 | 927,419 | 955,242 | 983,899 | 1,013,416 | 1,043,819 | - |
| Root Foaming | 200,000 | 206,000 | 212,180 | 218,545 | 225,102 | 231,855 | 238,810 | 245,975 | 253,354 | 260,955 | - |
| CIPP Corrosion Replacement | 465,000 | 494,400 | 530,450 | 568,218 | 602,147 | 637,601 | 674,640 | 713,327 | 753,728 | 795,912 | - |
| Fats, Oils, Grease Program (FOG) | 66,000 | 70,040 | 74,263 | 78,676 | 83,288 | 88,105 | 93,136 | 98,390 | 103,875 | 109,601 | - |
| GIS Updates | 66,000 | 70,040 | 74,263 | 78,676 | 83,288 | 88,105 | 93,136 | 98,390 | 103,875 | 109,601 | - |
| Sewer System Management Plan Update | 25,000 | 25,750 | 26,523 | 27,318 | 84,413 | - | - | - | 95,008 | - | - |
| Sanitary Sewer Video Inspection | 430,000 | - | 466,796 | - | - | - | - | - | - | - | - |
| Adobe Creek Sewer Main Replacement | - | - | 2,121,800 | - | 2,251,018 | - | 2,388,105 | - | 2,533,540 | - | 2,687,833 |
| City of Palo Alto RWQCP Minor CIP Fund | 402,000 | 1,310,160 | 464,674 | 490,634 | 519,985 | 549,496 | 581,503 | 614,937 | 649,853 | 687,615 | 727,059 |
| Total: Capital Improvement Program Costs <i>(Future-Year Dollars)</i> | \$ 3,084,000 | \$ 3,659,590 | \$ 5,509,254 | \$ 3,057,450 | \$ 5,503,738 | \$ 3,310,887 | \$ 5,848,468 | \$ 3,615,829 | \$ 6,406,056 | \$ 3,946,939 | \$ 8,461,566 |

TABLE 12: FORECASTING ASSUMPTIONS

| Economic Variables | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 |
|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Annual Construction Cost Inflation, Per Engineering News Record ⁵ | 0.00% | 3.00% | 3.00% | 3.00% | 3.00% | 3.00% | 3.00% | 3.00% | 3.00% | 3.00% | 3.00% |
| Cumulative Construction Cost Multiplier from 2023 | 1.00 | 1.03 | 1.06 | 1.09 | 1.13 | 1.16 | 1.19 | 1.23 | 1.27 | 1.30 | 1.34 |
| Inflation Factor for City of Palo Alto RWQCP Minor CIP Fund ³ | 0.00% | 0.00% | 2.84% | 3.02% | 2.93% | 2.84% | 3.00% | 2.91% | 2.83% | 2.96% | 0.00% |
| Cumulative Construction Cost Multiplier from 2023 | 1.00 | 1.00 | 1.03 | 1.06 | 1.09 | 1.12 | 1.16 | 1.19 | 1.22 | 1.26 | 1.26 |

1. Capital project costs were provided by City Staff in source file: *fy_21-22_and_22-23_budget.pdf for the sewer fund*.
 City of Palo Alto Wastewater Treatment Plant Minor CIP Fund Source: 6.1.2022 Partners Meeting Presentation.pdf
 2. Future project costs are inflated by 3.0% per year.
 3. Inflation Factor determined based on file: *6.1.2022 Partners Meeting Presentation.pdf*
 4. NBS has initially estimated Future Projects based on average annual project expenditures for the previous five years; City needs to confirm this amount.
 5. For reference purposes, the annual Construction Cost Inflation percentage is the 10 year average change in the Construction Cost Index for 2012-2022 (3.0%). Source: *Engineering News Record website (http://enr.construction.com)*.

TABLE 13: WASTEWATER UTILITY EXISTING DEBT OBLIGATIONS

| Annual Repayment Schedules: | 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 |
|---|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| 1999 Bond- New Money for Incinerator Rehabilitation Utility Revenue Bond- Los Altos Share is 9.47% ¹ | | | | | | | | | | | |
| Principal Payment | \$ 45,456 | \$ 47,824 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Interest Payment | \$ 4,897 | \$ 2,511 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Amortization of Bond Discount and Issuance Cost of New Money Bonds ⁴ | \$ 823 | \$ 755 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Subtotal: Annual Debt Service | \$ 51,176 | \$ 51,089 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Coverage Requirement (%-Amount above annual payment) | 120% | 120% | 120% | 120% | 120% | 120% | 120% | 0% | 0% | 0% | 0% |
| Reserve Requirement (total fund balance) | \$ 18,262 | \$ 10,643 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| City of Palo Alto 1999 Refunding of 1990 Utility Revenue Bonds- Los Altos share 7.80% ² | | | | | | | | | | | |
| Principal Payment | \$ 19,772 | \$ 20,841 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Interest Payment | \$ 2,132 | \$ 1,094 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Amortization of Issuance Costs and Bond Discount of 1999 Refunding of 1990 Bonds ⁴ | \$ 321 | \$ 295 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Subtotal: Annual Debt Service | \$ 22,226 | \$ 22,230 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Coverage Requirement (\$-Amount above annual payment) | 120% | 120% | 120% | 120% | 120% | 120% | 120% | 0% | 0% | 0% | 0% |
| Reserve Requirement (total fund balance) | \$ 7,938 | \$ 4,631 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| SWRCB SRF Loan- C-06-5044-110 UV Disinfection Facility- Los Altos share is 9.47% ³ | | | | | | | | | | | |
| Principal Payment | \$ 42,858 | \$ 43,972 | \$ 45,116 | \$ 46,289 | \$ 47,492 | \$ 48,727 | \$ 49,994 | \$ 51,294 | \$ - | \$ - | \$ - |
| Interest Payment | \$ 9,769 | \$ 8,655 | \$ 7,512 | \$ 6,339 | \$ 5,135 | \$ 3,900 | \$ 2,633 | \$ 1,334 | \$ - | \$ - | \$ - |
| Subtotal: Annual Debt Service | \$ 52,627 | \$ 52,627 | \$ 52,627 | \$ 52,627 | \$ 52,627 | \$ 52,627 | \$ 52,627 | \$ 52,627 | \$ - | \$ - | \$ - |
| Coverage Requirement (%-Amount above annual payment) | 120% | 120% | 120% | 120% | 120% | 120% | 120% | 120% | 120% | 120% | 120% |
| Reserve Requirement (total fund balance) | \$ 37,591 | \$ 35,422 | \$ 32,892 | \$ 29,902 | \$ 26,314 | \$ 21,928 | \$ 16,446 | \$ 9,398 | \$ - | \$ - | \$ - |
| California Clean Water SRF Payment Schedule Project No. 8190-110- Sludge Dewatering and Loadout Facility- Los Altos share is 9.47% ⁵ | | | | | | | | | | | |
| Principal Payment | \$ 63,875 | \$ 65,024 | \$ 66,195 | \$ 67,386 | \$ 68,599 | \$ 69,834 | \$ 71,091 | \$ 72,371 | \$ 73,673 | \$ 74,999 | \$ 76,349 |
| Interest Payment | \$ 39,525 | \$ 38,375 | \$ 37,205 | \$ 36,013 | \$ 34,800 | \$ 33,565 | \$ 32,308 | \$ 31,029 | \$ 29,726 | \$ 28,400 | \$ 27,050 |
| Subtotal: Annual Debt Service | \$ 103,399 | \$ 103,399 | \$ 103,399 | \$ 103,399 | \$ 103,399 | \$ 103,399 | \$ 103,399 | \$ 103,399 | \$ 103,399 | \$ 103,399 | \$ 103,399 |
| Coverage Requirement (%-Amount above annual payment) | 120% | 120% | 120% | 120% | 120% | 120% | 120% | 120% | 120% | 120% | 120% |
| Reserve Requirement (total fund balance) | \$ - | \$ - | \$ 103,399 | \$ 103,399 | \$ 103,399 | \$ 103,399 | \$ 103,399 | \$ 103,399 | \$ 103,399 | \$ 103,399 | \$ 103,399 |
| 2018A Wastewater Utility Revenue Bonds with Capitalized Interest First Bond Issuance ⁵ | | | | | | | | | | | |
| Principal Payment | \$ - | \$ - | \$ 65,346 | \$ 68,785 | \$ 72,224 | \$ 75,663 | \$ 79,532 | \$ 83,402 | \$ 87,701 | \$ 92,000 | \$ 96,729 |
| Interest Payment | \$ 156,249 | \$ 156,249 | \$ 154,615 | \$ 151,262 | \$ 147,737 | \$ 144,040 | \$ 140,160 | \$ 136,086 | \$ 131,809 | \$ 127,316 | \$ 122,598 |
| Subtotal: Annual Debt Service | \$ 156,249 | \$ 156,249 | \$ 219,961 | \$ 220,047 | \$ 219,961 | \$ 219,703 | \$ 219,692 | \$ 219,488 | \$ 219,510 | \$ 219,316 | \$ 219,327 |
| Coverage Requirement (%-Amount above annual payment) | 120% | 120% | 120% | 120% | 120% | 120% | 120% | 120% | 120% | 120% | 120% |
| Reserve Requirement (total fund balance) | \$ - | \$ - | \$ 184,171 | \$ 184,171 | \$ 184,171 | \$ 184,171 | \$ 184,171 | \$ 184,171 | \$ 184,171 | \$ 184,171 | \$ 184,171 |

TABLE 13: WASTEWATER UTILITY EXISTING DEBT OBLIGATIONS

| Annual Repayment Schedules: | 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 |
|--|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| 2018A Wastewater Utility Revenue Bonds with Capitalized Interest Second Bond Issuance ⁵ | | | | | | | | | | | |
| Principal Payment | \$ - | \$ - | \$ 34,566 | \$ 36,460 | \$ 37,880 | \$ 39,774 | \$ 42,142 | \$ 44,036 | \$ 46,403 | \$ 48,771 | \$ 51,138 |
| Interest Payment | \$ 82,413 | \$ 82,413 | \$ 81,549 | \$ 79,773 | \$ 77,914 | \$ 75,973 | \$ 73,925 | \$ 71,771 | \$ 69,510 | \$ 67,130 | \$ 64,633 |
| Subtotal: Annual Debt Service | \$ 82,413 | \$ 82,413 | \$ 116,114 | \$ 116,232 | \$ 115,794 | \$ 115,747 | \$ 116,067 | \$ 115,806 | \$ 115,913 | \$ 115,901 | \$ 115,771 |
| Coverage Requirement (\$-Amount above annual payment) | 120% | 120% | 120% | 120% | 120% | 120% | 120% | 120% | 120% | 120% | 120% |
| Reserve Requirement (total fund balance) | \$ - | \$ 97,210 | \$ 97,210 | \$ 97,210 | \$ 97,210 | \$ 97,210 | \$ 97,210 | \$ 97,210 | \$ 97,210 | \$ 97,210 | \$ 97,210 |
| CMSRF Loan with Palo Alto - Secondary Treatment Upgrades (STU) - Los Altos share is 9.47% ⁶ | | | | | | | | | | | |
| Principal Payment | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Interest Payment | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Subtotal: Annual Debt Service | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 686,861 | \$ 686,861 | \$ 686,861 | \$ 686,861 | \$ 686,861 |
| Coverage Requirement (\$-Amount above annual payment) | 120% | 120% | 120% | 120% | 120% | 120% | 120% | 120% | 120% | 120% | 120% |
| Reserve Requirement (total fund balance) | \$ 81,401 | \$ 81,401 | \$ 81,401 | \$ 81,401 | \$ 81,401 | \$ 81,401 | \$ 81,401 | \$ 81,401 | \$ 81,401 | \$ 81,401 | \$ 81,401 |
| Grand Total: Existing Annual Debt Service (Palo Alto RWQCP) | \$ 468,090 | \$ 468,007 | \$ 492,102 | \$ 492,306 | \$ 491,782 | \$ 491,477 | \$ 1,178,647 | \$ 1,178,182 | \$ 1,125,683 | \$ 1,125,477 | \$ 1,125,358 |
| Grand Total: Existing Annual Coverage Requirement | \$ 561,708 | \$ 561,608 | \$ 590,522 | \$ 590,767 | \$ 590,138 | \$ 589,772 | \$ 1,414,376 | \$ 1,413,818 | \$ 1,350,819 | \$ 1,350,573 | \$ 1,350,429 |
| Grand Total: Existing Debt Reserve Target | \$ 145,192 | \$ 413,479 | \$ 499,073 | \$ 496,083 | \$ 492,495 | \$ 488,109 | \$ 482,627 | \$ 475,579 | \$ 466,181 | \$ 466,181 | \$ 466,181 |

152%

1. Debt Service Schedule from Bond Statement Source: Invoice_7800004388 (Oct 2016) Q2.pdf page 10 of 10 of pdf.
 2. Debt Service Schedule from Bond Statement Source: Invoice_7800004388 (Oct 2016) Q2.pdf page 9 of 10 of pdf.
 3. Debt Service Schedule from Bond Statement Source: Invoice_7800004388 (Oct 2016) Q2.pdf page 8 of 10 of pdf.
 4. Amortization of Issuance Costs and Bond Discounts share is same as share as bonds. Source: Invoice_7800004733.4 (Apr 2017) Q4.pdf and Invoice_7800004733.5 (Apr 2017) Q4.pdf
 5. Source: Estimated Debt Service Schedule v2017.9.25.pdf
 6. New bond service agreement with City of Palo Alto for STU project. From City staff on Oct. 24, 2022.

EXHIBIT 4

**CITY OF LOS ALTOS
SEWER RATE STRUCTURE ANALYSIS
Projected Sewer Rates Under Existing Rate Schedule**

TABLE 14: CURRENT WASTEWATER RATE SCHEDULE

| Base Charges | Rate per Dwelling Unit | Quantity Charge (per HCF) ¹ |
|--|------------------------|--|
| FY 22/23 Per-Parcel Sewer Service Charge | \$301.29 | \$2.42 |

1. One Unit is equal to one HCF (Hundred Cubic Feet) or 748 gallons.
Source: *sewer_service_charge_report_fy2122.pdf, signed_resolution_no._2021-28.pdf*

CITY OF LOS ALTOS
SEWER RATE STRUCTURE ANALYSIS
Cost of Service Analysis

TABLE 15: CLASSIFICATION OF EXPENSES

| Budget Categories | Total Revenue Requirements | | Flow | | Strength | | Customer | | Basis of Classification | | | | | |
|------------------------------------|----------------------------|--------------|-------|--------------|----------|--------------|----------|--------------|-------------------------|------------|-------|-------|-------|--------|
| | FY 2023/24 | (VOL) | (COD) | (TSS) | (CA) | (VOL) | (COD) | (TSS) | (CA) | (VOL) | (COD) | (TSS) | (CA) | |
| Sewer System Administration | | | | | | | | | | | | | | |
| Salaries and Benefits | \$ | 732,738 | \$ | 219,821 | \$ | 219,821 | \$ | 219,821 | \$ | 36,637 | 35.0% | 30.0% | 30.0% | 5.0% |
| Salaries | | 5,606 | | 1,682 | | 1,682 | | 1,682 | | 280 | 35.0% | 30.0% | 30.0% | 5.0% |
| Overtime | | 3,281 | | 984 | | 984 | | 984 | | 164 | 35.0% | 30.0% | 30.0% | 5.0% |
| Special Pay | | 72,221 | | 25,277 | | 21,666 | | 21,666 | | 3,611 | 35.0% | 30.0% | 30.0% | 5.0% |
| Retirement | | 77,451 | | 27,108 | | 23,235 | | 23,235 | | 3,873 | 35.0% | 30.0% | 30.0% | 5.0% |
| Pers Unfunded Liability | | 7,238 | | 2,533 | | 2,172 | | 2,172 | | 362 | 35.0% | 30.0% | 30.0% | 5.0% |
| Deferred Comp | | 8,818 | | 3,086 | | 2,645 | | 2,645 | | 441 | 35.0% | 30.0% | 30.0% | 5.0% |
| Quality of Life | | 16,681 | | 5,838 | | 5,004 | | 5,004 | | 834 | 35.0% | 30.0% | 30.0% | 5.0% |
| Dental Plan | | 107,922 | | 37,773 | | 32,377 | | 32,377 | | 5,396 | 35.0% | 30.0% | 30.0% | 5.0% |
| Health Insurance | | 3,546 | | 1,241 | | 1,064 | | 1,064 | | 177 | 35.0% | 30.0% | 30.0% | 5.0% |
| Uniforms | | 1,576 | | 552 | | 473 | | 473 | | 79 | 35.0% | 30.0% | 30.0% | 5.0% |
| Life Insurance | | 36,639 | | 12,824 | | 10,992 | | 10,992 | | 1,832 | 35.0% | 30.0% | 30.0% | 5.0% |
| Workers Comp Insurance | | 10,985 | | 3,845 | | 3,296 | | 3,296 | | 549 | 35.0% | 30.0% | 30.0% | 5.0% |
| Medicare Tax | | | | | | | | | | - | | | | |
| Utilities | | 520 | | 182 | | 156 | | 156 | | 26 | 35.0% | 30.0% | 30.0% | 5.0% |
| Telephone | | 1,248 | | - | | - | | - | | 1,248 | 0.0% | 0.0% | 0.0% | 100.0% |
| Office Supplies | | 3,536 | | - | | - | | - | | 3,536 | 0.0% | 0.0% | 0.0% | 100.0% |
| Postal Services | | 105 | | 37 | | 32 | | 32 | | 5 | 35.0% | 30.0% | 30.0% | 5.0% |
| Mileage | | 5,720 | | 2,002 | | 1,716 | | 1,716 | | 286 | 35.0% | 30.0% | 30.0% | 5.0% |
| Training and Meetings | | | | | | | | | | - | | | | |
| Repair and Services | | 3,640 | | 2,730 | | 364 | | 364 | | 182 | 75.0% | 10.0% | 10.0% | 5.0% |
| Special Departmental Supplies | | 351,750 | | 193,463 | | 35,175 | | 35,175 | | 87,938 | 55.0% | 10.0% | 10.0% | 25.0% |
| Professional Services | | 3,278,000 | | 1,966,800 | | 655,600 | | 655,600 | | - | 60.0% | 20.0% | 20.0% | 0.0% |
| City of Palo Alto RWQCP O&M | | 810,758 | | 486,455 | | - | | - | | 324,303 | 60.0% | 0.0% | 0.0% | 40.0% |
| Other Services ² | | | | | | | | | | - | | | | |
| Miscellaneous | | 156,000 | | 85,800 | | 31,200 | | 31,200 | | 7,800 | 55.0% | 20.0% | 20.0% | 5.0% |
| Liability Insurance | | \$ 5,695,979 | | \$ 3,117,114 | | \$ 1,049,653 | | \$ 1,049,653 | | \$ 479,559 | 54.7% | 18.4% | 18.4% | 8.4% |
| SUB-TOTAL | | | | | | | | | | | | | | |

CITY OF LOS ALTOS
SEWER RATE STRUCTURE ANALYSIS
Cost of Service Analysis

TABLE 16: CLASSIFICATION OF EXPENSES

| Budget Categories | Total Revenue Requirements | | Flow | | Strength | | Customer | | Basis of Classification | | | |
|-----------------------------------|----------------------------|---------------------|---------------------|---------------------|---------------------|-------------------|--------------|--------------|-------------------------|--------------|-------------|--|
| | FY 2023/24 | (VOL) | (VOL) | (COD) | (TSS) | (CA) | (VOL) | (COD) | (TSS) | (CA) | | |
| Sewer System Maintenance | | | | | | | | | | | | |
| Salaries and Benefits | \$ 667,096 | \$ 233,484 | \$ 200,129 | \$ 200,129 | \$ 200,129 | \$ 33,355 | 35.0% | 30.0% | 30.0% | 30.0% | 5.0% | |
| Salaries | - | - | - | - | - | - | 35.0% | 30.0% | 30.0% | 30.0% | 5.0% | |
| Vacation/Sick Leave Payout | 32,699 | 11,445 | 9,810 | 9,810 | 9,810 | 1,635 | 35.0% | 30.0% | 30.0% | 30.0% | 5.0% | |
| Overtime | 43,062 | 15,072 | 12,919 | 12,919 | 12,919 | 2,153 | 35.0% | 30.0% | 30.0% | 30.0% | 5.0% | |
| Specialty Pay | 93,631 | 32,771 | 28,089 | 28,089 | 28,089 | 4,682 | 35.0% | 30.0% | 30.0% | 30.0% | 5.0% | |
| Retirement | 139,039 | 48,664 | 41,712 | 41,712 | 41,712 | 6,952 | 35.0% | 30.0% | 30.0% | 30.0% | 5.0% | |
| Pers Unfunded Liability | 8,873 | 3,105 | 2,662 | 2,662 | 2,662 | 444 | 35.0% | 30.0% | 30.0% | 30.0% | 5.0% | |
| Quality of Life | 26,997 | 9,449 | 8,099 | 8,099 | 8,099 | 1,350 | 35.0% | 30.0% | 30.0% | 30.0% | 5.0% | |
| Dental Plan | 140,062 | 49,022 | 42,018 | 42,018 | 42,018 | 7,003 | 35.0% | 30.0% | 30.0% | 30.0% | 5.0% | |
| Health Insurance | 5,163 | 1,807 | 1,549 | 1,549 | 1,549 | 258 | 35.0% | 30.0% | 30.0% | 30.0% | 5.0% | |
| Uniforms | 1,810 | 633 | 543 | 543 | 543 | 90 | 35.0% | 30.0% | 30.0% | 30.0% | 5.0% | |
| Life Insurance | 19,146 | 6,701 | 5,744 | 5,744 | 5,744 | 957 | 35.0% | 30.0% | 30.0% | 30.0% | 5.0% | |
| Workers Comp Insurance | 10,961 | 3,836 | 3,288 | 3,288 | 3,288 | 548 | 35.0% | 30.0% | 30.0% | 30.0% | 5.0% | |
| Medicare Tax | | | | | | | | | | | | |
| Utilities | | | | | | | | | | | | |
| Utilities | 10,920 | 8,190 | 1,092 | 1,092 | 1,092 | 546 | 75.0% | 10.0% | 10.0% | 10.0% | 5.0% | |
| Telephone | 1,560 | 546 | 468 | 468 | 468 | 78 | 35.0% | 30.0% | 30.0% | 30.0% | 5.0% | |
| Radio & Radar | 3,484 | 1,219 | 1,045 | 1,045 | 1,045 | 174 | 35.0% | 30.0% | 30.0% | 30.0% | 5.0% | |
| Office Supplies | 884 | - | - | - | - | 884 | 0.0% | 0.0% | 0.0% | 100.0% | 100.0% | |
| Postal Services | 312 | - | - | - | - | 312 | 0.0% | 0.0% | 0.0% | 100.0% | 100.0% | |
| Mileage | 2,310 | 809 | 693 | 693 | 693 | 116 | 35.0% | 30.0% | 30.0% | 30.0% | 5.0% | |
| Training and Meetings | 7,280 | 2,548 | 2,184 | 2,184 | 2,184 | 364 | 35.0% | 30.0% | 30.0% | 30.0% | 5.0% | |
| Memberships | 12,480 | 4,368 | 3,744 | 3,744 | 3,744 | 624 | 35.0% | 30.0% | 30.0% | 30.0% | 5.0% | |
| Gasoline & Oil | 23,100 | 23,100 | - | - | - | - | 100.0% | 0.0% | 0.0% | 0.0% | 0.0% | |
| Repair and Services | | | | | | | | | | | | |
| Vehicle Maintenance/Repair | 36,400 | 27,300 | 3,640 | 3,640 | 3,640 | 1,820 | 75.0% | 10.0% | 10.0% | 10.0% | 5.0% | |
| Equipment Repairs | 7,280 | 5,460 | 728 | 728 | 728 | 364 | 75.0% | 10.0% | 10.0% | 10.0% | 5.0% | |
| Building & Grounds | 7,280 | 5,460 | 728 | 728 | 728 | 364 | 75.0% | 10.0% | 10.0% | 10.0% | 5.0% | |
| Rentals | 10,400 | 7,800 | 1,040 | 1,040 | 1,040 | 520 | 75.0% | 10.0% | 10.0% | 10.0% | 5.0% | |
| Special Departmental Supplies | 52,000 | 39,000 | 5,200 | 5,200 | 5,200 | 2,600 | 75.0% | 10.0% | 10.0% | 10.0% | 5.0% | |
| Professional Services | 1,365 | 1,024 | 137 | 137 | 137 | 68 | 75.0% | 10.0% | 10.0% | 10.0% | 5.0% | |
| Other Services | 317,380 | 174,559 | 31,738 | 31,738 | 31,738 | 79,345 | 55.0% | 10.0% | 10.0% | 10.0% | 25.0% | |
| SUB-TOTAL | \$ 1,682,973 | \$ 717,371 | \$ 408,998 | \$ 408,998 | \$ 408,998 | \$ 147,606 | 42.6% | 24.3% | 24.3% | 24.3% | 8.8% | |
| GRAND TOTAL - Sewer System | \$ 7,378,952 | \$ 3,834,485 | \$ 1,458,651 | \$ 1,458,651 | \$ 1,458,651 | \$ 627,165 | 52.0% | 19.8% | 19.8% | 19.8% | 8.5% | |

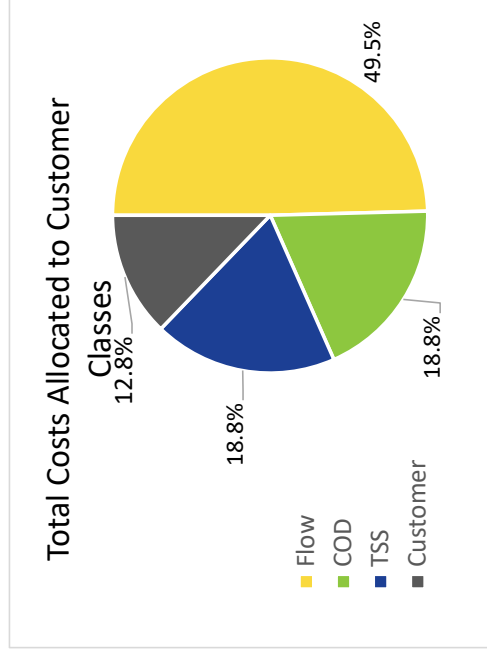
CITY OF LOS ALTOS
SEWER RATE STRUCTURE ANALYSIS
Cost of Service Analysis

TABLE 17: CLASSIFICATION OF EXPENSES

| Budget Categories | Total Revenue Requirements | | Flow | | Strength | | Customer | | Basis of Classification | | | | |
|---|----------------------------|---------------------|---------------------|---------------------|---------------------|--------------|--------------|--------------|-------------------------|--------------|--------------|--------------|---------------|
| | FY 2023/24 | (VOL) | (COD) | (TSS) | (CA) | (VOL) | (COD) | (TSS) | (CA) | (VOL) | (COD) | (TSS) | (CA) |
| Debt Service Payments | | | | | | | | | | | | | |
| Existing Annual Debt Service | \$ 468,007 | \$ - | \$ - | \$ - | \$ 468,007 | 0.0% | 0.0% | 0.0% | 100.0% | 0.0% | 0.0% | 0.0% | 100.0% |
| Future Annual Debt Service | - | - | - | - | - | 0.0% | 0.0% | 0.0% | 100.0% | 0.0% | 0.0% | 0.0% | 100.0% |
| Total Debt Service Payments | \$ 468,007 | \$ - | \$ - | \$ - | \$ 468,007 | 0.0% | 0.0% | 0.0% | 100.0% | 0.0% | 0.0% | 0.0% | 100.0% |
| Capital Expenditures | | | | | | | | | | | | | |
| Rate Funded Capital Expenses | \$ 2,151,973 | \$ 1,118,276 | \$ 425,396 | \$ 425,396 | \$ 182,904 | 52.0% | 19.8% | 19.8% | 8.5% | 49.5% | 18.8% | 18.8% | 12.8% |
| TOTAL REVENUE REQUIREMENTS | \$ 9,998,932 | \$ 4,952,761 | \$ 1,884,047 | \$ 1,884,047 | \$ 1,278,076 | 49.5% | 18.8% | 18.8% | 12.8% | 49.5% | 18.8% | 18.8% | 12.8% |
| Less: Non-Rate Revenues | | | | | | | | | | | | | |
| Sewer Service Charge not on Tax Roll | \$ (600,000) | (297,197) | (113,055) | (113,055) | (76,693) | 49.5% | 18.8% | 18.8% | 12.8% | 49.5% | 18.8% | 18.8% | 12.8% |
| Other Revenues | \$ (15,000) | (7,430) | (2,826) | (2,826) | (1,917) | 49.5% | 18.8% | 18.8% | 12.8% | 49.5% | 18.8% | 18.8% | 12.8% |
| Interest Income | \$ (69,563) | (34,457) | (13,107) | (13,107) | (8,892) | 49.5% | 18.8% | 18.8% | 12.8% | 49.5% | 18.8% | 18.8% | 12.8% |
| NET REVENUE REQUIREMENTS | \$ 9,314,368 | \$ 4,613,677 | \$ 1,755,059 | \$ 1,755,059 | \$ 1,190,574 | 49.5% | 18.8% | 18.8% | 12.8% | 49.5% | 18.8% | 18.8% | 12.8% |
| Allocation of Revenue Requirements | 100.0% | 49.5% | 18.8% | 18.8% | 12.8% | 49.5% | 18.8% | 18.8% | 12.8% | 49.5% | 18.8% | 18.8% | 12.8% |

TABLE 18: ADJUSTMENT TO CLASSIFICATION OF EXPENSES

| | Total | Flow | COD | TSS | Customer |
|-----------------------------------|--------------|--------------|--------------|--------------|--------------|
| Adjustment to Current Rate Level: | \$ 9,096,500 | \$ 4,505,760 | \$ 1,714,007 | \$ 1,714,007 | \$ 1,162,726 |
| Adjusted Net Revenue Req'ts | | 49.5% | 18.8% | 18.8% | 12.8% |
| Percent of Revenue | | | | | |



| Current Revenue | |
|-----------------|--------------|
| Fixed | \$ 4,063,773 |
| Variable | \$ 3,732,634 |
| | \$ 7,796,408 |
| | 52% |
| | 48% |
| | 100% |

CITY OF LOS ALTOS
SEWER RATE STRUCTURE ANALYSIS
Sewer Cost of Service Analysis

TABLE 19: DEVELOPMENT OF THE VOLUME ALLOCATION FACTOR

| Customer Class ¹ | Number of Accounts | Annual Winter-Average Based Volume (HCF) | Adjusted Annual Volume (HCF) ² | Percentage of Adjusted Volume |
|-----------------------------------|--------------------|--|---|-------------------------------|
| Residential | | | | |
| Single Family Home | 10,363 | 1,062,455 | 959,544 | 80.3% |
| Multifamily Residence (2 units) | 65 | 2,744 | 2,478 | 0.2% |
| Multifamily Residence (3-4 units) | 11 | 475 | 429 | 0.0% |
| Multifamily Residence (5+ units) | 68 | 60,592 | 54,723 | 4.6% |
| Condominium Unit | 1,033 | 52,954 | 47,825 | 4.0% |
| Commercial | | | | |
| Commercial/Industrial | 458 | 41,829 | 37,778 | 3.2% |
| Church | 22 | 4,001 | 3,614 | 0.3% |
| Restaurant | 69 | 78,160 | 70,589 | 5.9% |
| Public/Institutional | | | | |
| Government | 10 | 3,207 | 2,896 | 0.2% |
| Institutional | 3 | 10,369 | 9,365 | 0.8% |
| Parks | 4 | 2,119 | 1,913 | 0.2% |
| School | 10 | 3,991 | 3,604 | 0.3% |
| Total: | 12,116 | 1,322,896 | 1,194,758 | 100% |
| Vacant | 4 | - | - | 0.0% |
| Grand Total: | 12,120 | 1,322,896 | 1,194,758 | Flow (hcf/yr.) |
| | | | 0.90 | Flow Adjust. |

1. Customer billing data summarized from data source: "Data for Report_2021.22_IT.xlsx"
2. Actual plant data from source file: Los Altos Monthly Flow BOD TSS NH3 pounds FY 19 20 21.xlsx

TABLE 20: DEVELOPMENT OF THE STRENGTH ALLOCATION FACTOR

| Customer Class | Adjusted Annual Volume Total (HCF) | Annual Flow (million gallons) | Chemical Oxygen Demand (COD) | | | Total Suspended Solids (TSS) | | | |
|-----------------------------------|------------------------------------|-------------------------------|---|---------------------------|-------------------------|------------------------------|---|-------------------------|------------------|
| | | | Average Strength Factor (mg/l) ¹ | Calculated COD (lbs./yr.) | Adjusted COD (lbs./yr.) | Percent of Total | Average Strength Factor (mg/l) ¹ | Adjusted TSS (lbs./yr.) | Percent of Total |
| Residential | | | | | | | | | |
| Single Family Home | 959,544 | 717.79 | 622 | 3,723,506 | 4,049,292 | 72.0% | 250 | 1,979,172 | 74.8% |
| Multifamily Residence (2 units) | 2,478 | 1.85 | 622 | 9,617 | 10,458 | 0.2% | 250 | 5,112 | 0.2% |
| Multifamily Residence (3-4 units) | 429 | 0.32 | 622 | 1,664 | 1,809 | 0.0% | 250 | 884 | 0.0% |
| Multifamily Residence (5+ units) | 54,723 | 40.94 | 622 | 212,352 | 230,932 | 4.1% | 250 | 112,873 | 4.3% |
| Condominium Unit | 47,825 | 35.78 | 622 | 185,584 | 201,821 | 3.6% | 250 | 98,644 | 3.7% |
| Commercial | | | | | | | | | |
| Commercial/Industrial | 37,778 | 28.26 | 622 | 146,596 | 159,422 | 2.8% | 250 | 77,921 | 2.9% |
| Church | 3,614 | 2.70 | 622 | 14,023 | 15,250 | 0.3% | 250 | 7,454 | 0.3% |
| Restaurant | 70,589 | 52.80 | 1,888 | 831,453 | 904,200 | 16.1% | 600 | 349,437 | 13.2% |
| Public/Institutional | | | | | | | | | |
| Government | 2,896 | 2.17 | 419 | 7,570 | 8,233 | 0.1% | 100 | 2,389 | 0.1% |
| Institutional | 9,365 | 7.01 | 419 | 24,480 | 26,622 | 0.5% | 100 | 7,727 | 0.3% |
| Parks | 1,913 | 1.43 | 419 | 5,002 | 5,439 | 0.1% | 100 | 1,579 | 0.1% |
| School | 3,604 | 2.70 | 419 | 9,421 | 10,246 | 0.2% | 100 | 2,974 | 0.1% |
| Total: | 1,194,758 | 894 | | 5,171,268 | 5,623,725 | 100% | | 2,646,165 | 100% |

1. BOD strength factors (Source: Page G-21, SWRCB Revenue Program Guidelines Appendix G) converted to COD using formula referenced in Operation of Municipal Wastewater Treatment Plants, Chapter 17, pg. 9.

CITY OF LOS ALTOS
SEWER RATE STRUCTURE ANALYSIS
Sewer Cost of Service Analysis

TABLE 21: DEVELOPMENT OF THE CUSTOMER ALLOCATION FACTOR

| Customer Class | Number of Accounts ¹ | Percent of Total | Number of Equivalent Dwelling Units ¹ | Percent of Total |
|-----------------------------------|---------------------------------|------------------|--|------------------|
| Residential | | | | |
| Single Family Home | 10,363 | 85.5% | 10,363 | 74.6% |
| Multifamily Residence (2 units) | 65 | 0.5% | 130 | 0.9% |
| Multifamily Residence (3-4 units) | 11 | 0.1% | 34 | 0.2% |
| Multifamily Residence (5+ units) | 68 | 0.6% | 550 | 4.0% |
| Condominium Unit | 1,033 | 8.5% | 1,033 | 7.4% |
| Commercial | | | | |
| Commercial/Industrial | 458 | 3.8% | 554 | 4.0% |
| Church | 22 | 0.2% | 77 | 0.6% |
| Restaurant | 69 | 0.6% | 770 | 5.5% |
| Public/Institutional | | | | |
| Government | 10 | 0.1% | 89 | 0.6% |
| Institutional | 3 | 0.0% | 125 | 0.9% |
| Parks | 4 | 0.0% | 58 | 0.4% |
| School | 10 | 0.1% | 109 | 0.8% |
| Total: | 12,116 | 100% | 13,892 | 100% |

1. Data Source: ~Data for Report_2021.22_JT.xlsx

CITY OF LOS ALTOS
SEWER RATE STRUCTURE ANALYSIS
Sewer Cost of Service Analysis

TABLE 22: COST OF SERVICE ALLOCATIONS BY CUSTOMER CLASS

| Cost Classification Components ¹ | Volume | Treatment | | Customer Related | Cost-of-Service Net Revenue Requirement | % of COS Net Revenue Req't. |
|---|---------------------|---------------------|---------------------|---------------------|---|-----------------------------|
| | | COD | TSS | | | |
| Net Revenue Requirements | \$ 4,505,760 | \$ 1,714,007 | \$ 1,714,007 | \$ 1,162,726 | \$ 9,096,500 | -- |
| <i>% of Net Revenue Requirements</i> | <i>49.5%</i> | <i>18.8%</i> | <i>18.8%</i> | <i>12.8%</i> | <i>100.0%</i> | |
| Residential | | | | | | |
| Single Family Home | \$ 3,618,704 | \$ 1,234,149 | \$ 1,281,974 | \$ 994,497 | \$ 7,129,324 | 78.4% |
| Multifamily Residence (2 units) | 9,346 | 3,187 | 3,311 | 6,238 | 22,082 | 0.2% |
| Multifamily Residence (3-4 units) | 1,617 | 551 | 573 | 1,056 | 3,796 | 0.0% |
| Multifamily Residence (5+ units) | 206,375 | 70,384 | 73,111 | 6,526 | 356,396 | 3.9% |
| Condominium Unit | 180,360 | 61,511 | 63,895 | 99,133 | 404,900 | 4.5% |
| Commercial | | | | | | |
| Commercial/Industrial | 142,470 | 48,589 | 50,472 | 43,953 | 285,483 | 3.1% |
| Church | 13,628 | 4,648 | 4,828 | 2,111 | 25,216 | 0.3% |
| Restaurant | 266,212 | 275,583 | 226,342 | 6,622 | 774,758 | 8.5% |
| Public/Institutional | | | | | | |
| Government | 10,922 | 2,509 | 1,548 | 960 | 15,938 | 0.2% |
| Institutional | 35,318 | 8,114 | 5,005 | 288 | 48,724 | 0.5% |
| Parks | 7,216 | 1,658 | 1,023 | 384 | 10,280 | 0.1% |
| School | 13,592 | 3,123 | 1,926 | 960 | 19,601 | 0.2% |
| Total | \$ 4,505,760 | \$ 1,714,007 | \$ 1,714,007 | \$ 1,162,726 | \$ 9,096,500 | 100% |

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

CITY OF LOS ALTOS
SEWER RATE STRUCTURE ANALYSIS
Sewer Cost of Service Analysis

TABLE 23: SEWER RATE CALCULATION

| Customer Class | Number of Accounts | No. of Equivalent Dwelling Units | Annual Billable Volume (hcf) | Annual Rev. Req't ¹ | | | Annual Fixed Charge (\$ Per EDU) ² | Volumetric Charge Per hcf ³ |
|-----------------------------------|--------------------|----------------------------------|------------------------------|--------------------------------|--------------------|------------|---|--|
| | | | | Total | Fixed | Volumetric | | |
| Residential | | | | | | | | |
| Single Family Home | 10,363 | 10,363 | 1,062,455 | \$7,129,324 | 3,707,249 | \$340.49 | \$3.30 | |
| Multifamily Residence (2 units) | 65 | 130 | 2,744 | \$22,082 | 11,483 | \$340.49 | \$3.30 | |
| Multifamily Residence (3-4 units) | 11 | 34 | 475 | \$3,796 | 1,974 | \$340.49 | \$3.30 | |
| Multifamily Residence (5+ units) | 68 | 550 | 60,592 | \$356,396 | 185,326 | \$340.49 | \$3.30 | |
| Condominium Unit | 1,033 | 1,033 | 52,954 | \$404,900 | 210,548 | \$340.49 | \$3.30 | |
| Commercial | | | | | | | | |
| Commercial/Industrial | 458 | 554 | 41,829 | 285,483 | 148,451 | \$340.49 | \$3.30 | |
| Church | 22 | 77 | 4,001 | 25,216 | 13,112 | \$340.49 | \$3.30 | |
| Restaurant | 69 | 770 | 78,160 | 774,758 | 402,874 | \$340.49 | \$3.30 | |
| Public/Institutional | | | | | | | | |
| Government | 10 | 89 | 3,207 | 15,938 | 8,288 | \$340.49 | \$3.30 | |
| Institutional | 3 | 125 | 10,369 | 48,724 | 25,337 | \$340.49 | \$3.30 | |
| Parks | 4 | 58 | 2,119 | 10,280 | 5,346 | \$340.49 | \$3.30 | |
| School | 10 | 109 | 3,991 | 19,601 | 10,192 | \$340.49 | \$3.30 | |
| Total | 12,116 | 13,892 | 1,322,896 | \$9,096,500 | \$4,730,180 | -- | -- | |
| | | | | 100% | 52% | | 48% | |

1. Annual revenue requirement adjusted to 52 percent collected from fixed rates and the rest from volumetric rates.
2. Annual fixed charge calculated by dividing the total fixed revenue by the total number of EDUs.
3. Volumetric charge per unit of usage (HCF) calculated by dividing the total variable revenue by the annual billable volume.

CITY OF LOS ALTOS
SEWER RATE STRUCTURE ANALYSIS
Sewer Cost of Service Analysis/Rate Design

TABLE 24: SEWER RATE CALCULATION FOR FIXED CHARGES

| Fixed Charges (per EDU) | | Total Revenue Requirements | % of Total Rev. Req't. from Fixed Charges | Fixed Charges | Number of Equivalent Dwelling Units | Rate per EDU |
|-------------------------|--|----------------------------|---|------------------|-------------------------------------|------------------|
| | | <i>A</i> | <i>B</i> | <i>C = A * B</i> | <i>D</i> | <i>E = C / D</i> |
| All Customers | | \$9,096,500 | 52% | \$4,730,180 | 13,892 | \$340.49 |

TABLE 25: SEWER RATE CALCULATION FOR VOLUMETRIC CHARGES

| Volumetric Charges (per HCF) | | Total Revenue Requirements | % of Total Rev. Req't. from Volumetric Charges | Volumetric Charges | Annual Billable Volume (hcf) | Rate per HCF |
|------------------------------|--|----------------------------|--|--------------------|------------------------------|------------------|
| | | <i>F</i> | <i>G = I - B</i> | <i>H = F * G</i> | <i>I</i> | <i>J = H / I</i> |
| All Customers | | \$9,096,500 | 48% | \$4,366,320 | 1,322,896 | \$3.30 |

TABLE 26: CURRENT VS. PROPOSED SEWER RATES

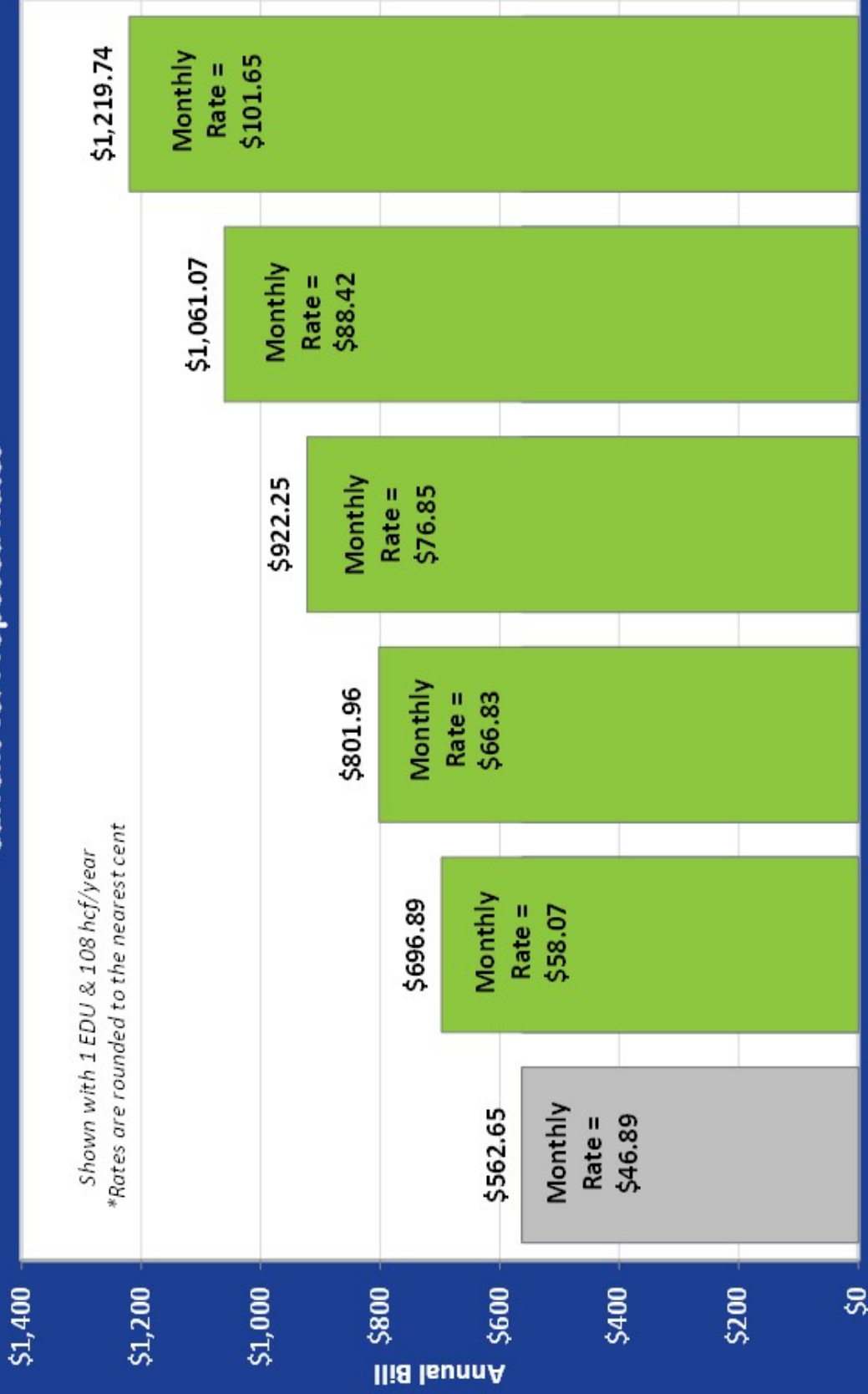
| Sewer Rate Schedule | Current Rates | Proposed Yearly Sewer Rates | | | | |
|---|---------------|-----------------------------|------------|------------|------------|------------|
| | | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| | | FY 2023/24 | FY 2024/25 | FY 2025/26 | FY 2026/27 | FY 2027/28 |
| Annual Fixed Service Charge per EDU | \$301.29 | \$340.49 | \$391.56 | \$450.29 | \$517.83 | \$595.50 |
| Volumetric Rate (\$/hcf) ^{1,2} | \$2.42 | \$3.30 | \$3.80 | \$4.37 | \$5.03 | \$5.78 |

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

2. Rates are charged based on average winter water consumption (three lowest consecutive months from previous year).

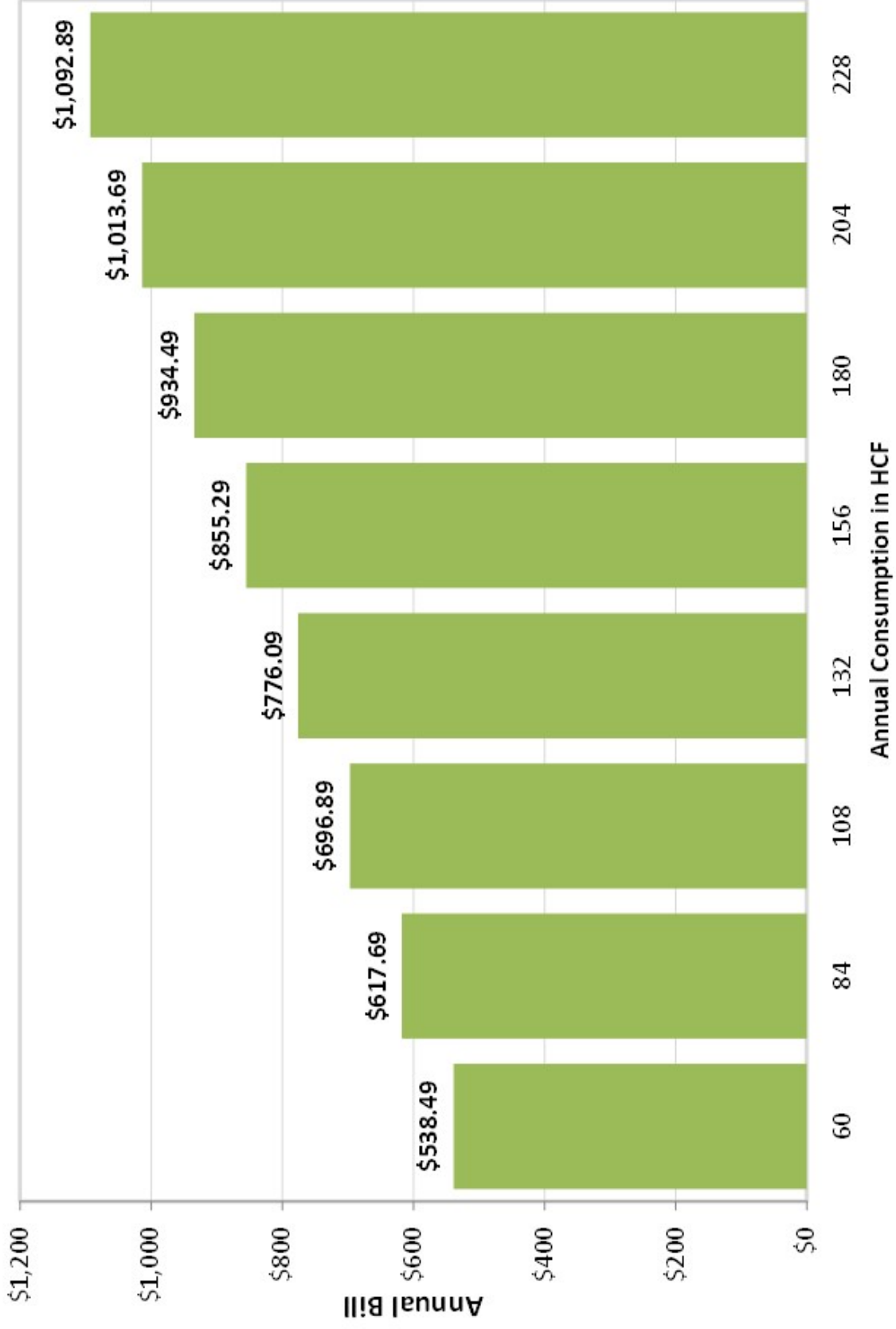
5 Year Annual Single Family Residential Sewer Bill Comparison

Current vs. Proposed Rates



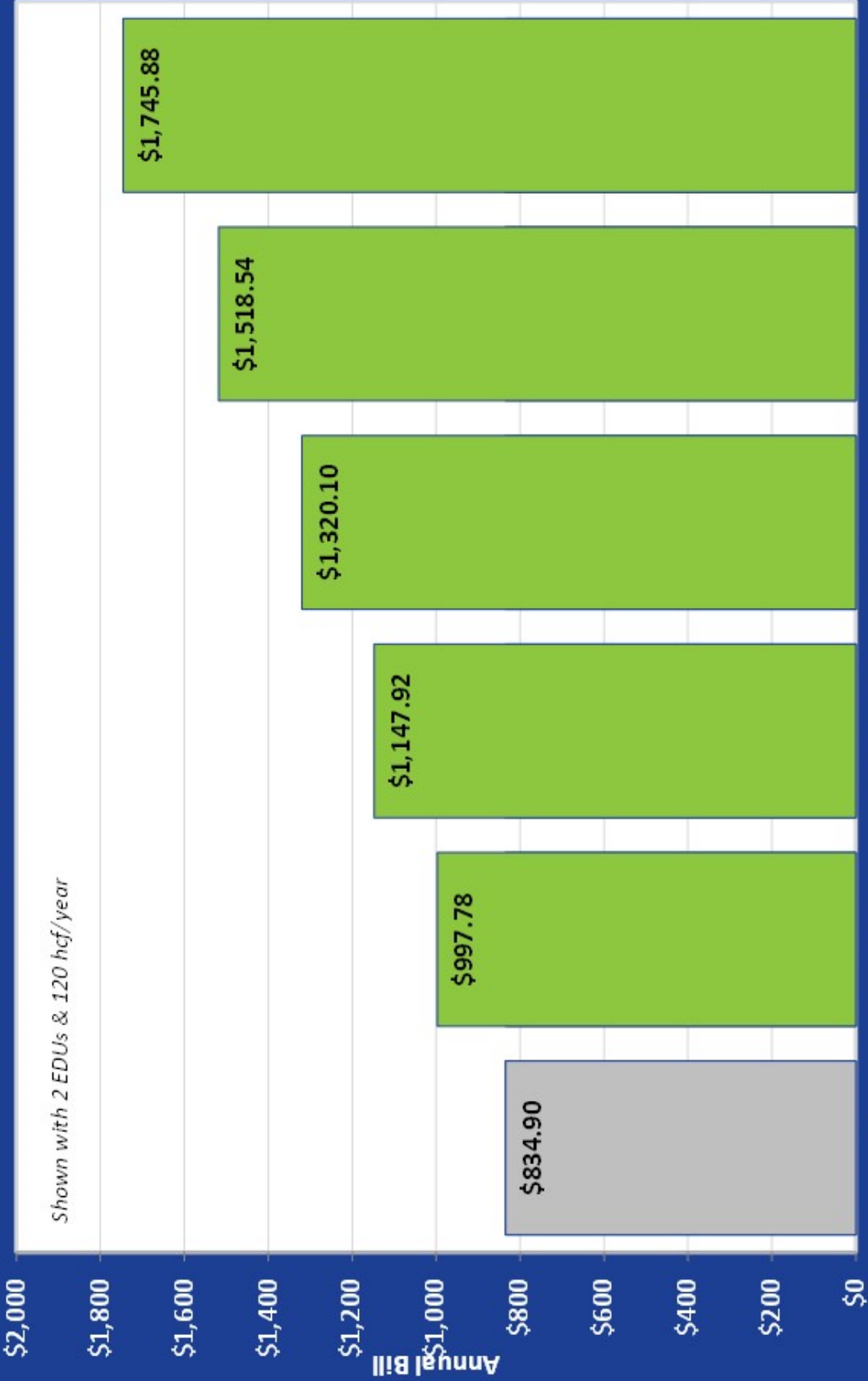
Current Rates: FY 2022/23 Proposed Rates: FY 2023/24 Proposed Rates: FY 2024/25 Proposed Rates: FY 2025/26 Proposed Rates: FY 2026/27 Proposed Rates: FY 2027/28

Annual Single Family Residential Sewer Bill Comparison Current vs. Proposed Rates with Various Consumption Levels



5 Year Annual Multi Family Residential Sewer Bill Comparison

Current vs. Proposed Rates



Current Rates: FY 2022/23

FY 2023/24

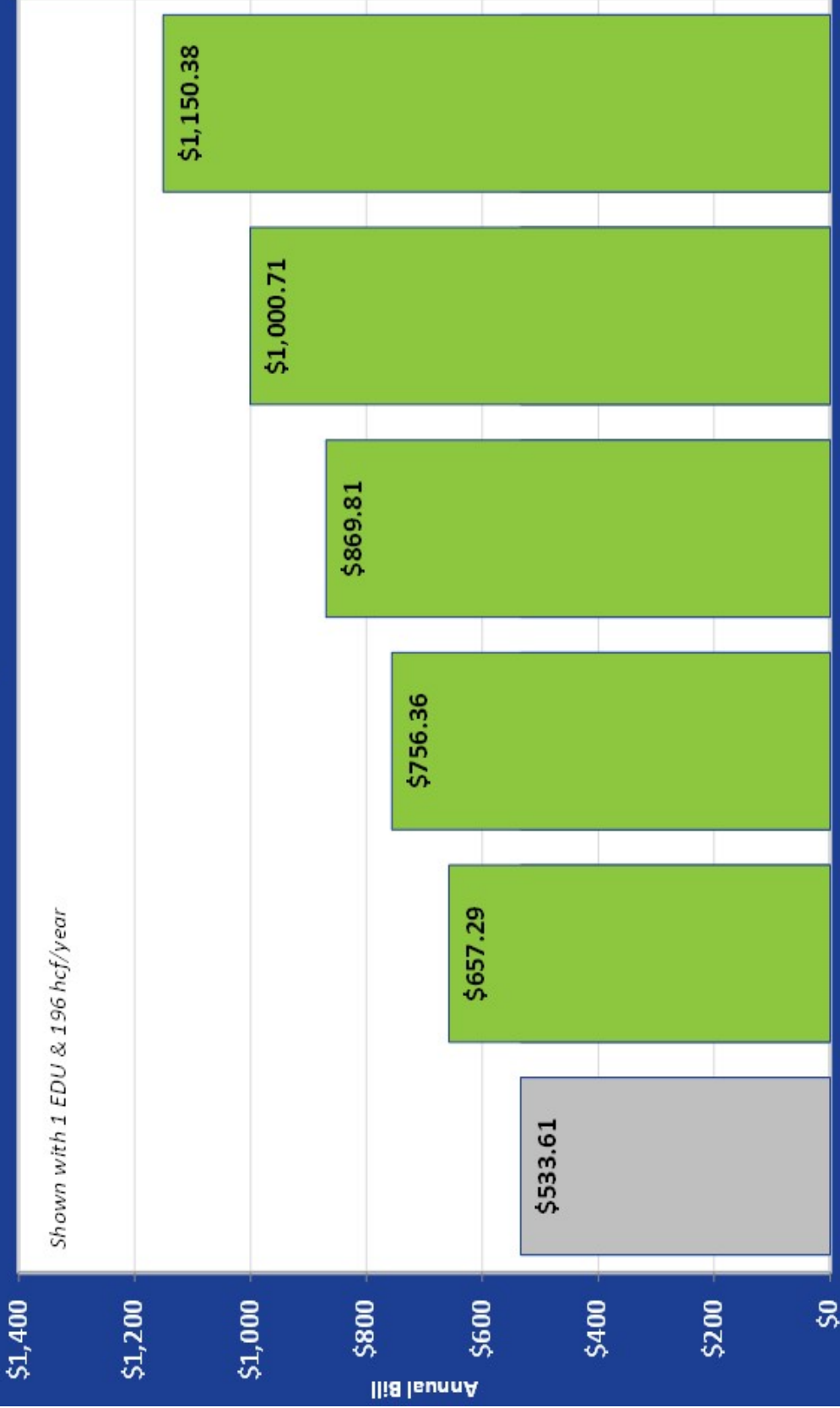
FY 2024/25

FY 2025/26

FY 2026/27

FY 2027/28

5 Year Annual Commercial Sewer Bill Comparison Current vs. Proposed Rates



Current Rates: FY 2022/23 Proposed Rates: FY 2023/24 Proposed Rates: FY 2024/25 Proposed Rates: FY 2025/26 Proposed Rates: FY 2026/27 Proposed Rates: FY 2027/28