

Public Hearing
November 9, 2023

Wastewater Rate Study



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Elsinore Valley Municipal Water District – 2023 Wastewater Rate Study

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Executive Summary

The Elsinore Valley Municipal Water District (District) provides essential wastewater services to its customers that include Lake Elsinore, Canyon Lake, Wildomar, Murrieta, and portions of the unincorporated area of Riverside County. As a public agency, the District must collect sufficient revenues from its customers to pay the costs to (1) prudently operate and maintain the wastewater collection system and treatment plants; (2) renew, replace, and upgrade its infrastructure, which includes pipelines, lift stations, treatment plant, as well as operation buildings and related facilities; and (3) ensure a prudent reserve of funds.

The primary source of revenue for the District's wastewater services comes from user fees, encompassing rates and charges. These fees are structured to ensure that each customer pays their fair share based on their demand on the system. This Cost-of-Service Study is intended to (1) establish the total projected cost of the wastewater enterprise over a four-year period from Fiscal Year 2024 (FY 2024) through FY 2027 (Rate Setting Period); and (2) allocate those costs among customers in a way that ensures that each customer pays its proportional share of those costs in compliance with California Constitution Article XIII D, section 6, also known as Proposition 218.

The District's most recent rate schedule was adopted in June 2021 and set rates through FY 2025. Due to increases in capital expenses, operating costs, and the recent hyper-inflationary climate, the District determined that the financial plan needed to be updated to reflect increased costs, and that rate increases would be needed to replace the current noticed rates for FY 2024 and FY 2025. The District selected IB Consulting to conduct a comprehensive cost-of-service analysis to establish rates for the District's wastewater enterprise over the Rate Setting Period. That analysis is set forth below.

Updating the wastewater utility's long-term financial plan and conducting an in-depth cost-of-service analysis are essential for ensuring the District's financial sustainability through FY 2027 and beyond. A thorough evaluation of the wastewater utility's financial health under current and noticed rates through FY 2025 indicates potential challenges in meeting the minimum reserve target in FY 2024 after funding operating and capital expenses. The wastewater utility capital replacement spending over the next four years equals approximately \$35.5M. Without rate adjustments, reserves would be depleted by FY 2026. Given the inflationary environment, it is essential to adapt to these circumstances by adjusting rates to ensure proper funding for operations and ongoing system reinvestment.

The proposed financial plan introduces additional rate revenue, amounting to approximately \$27M, phased in over the Rate Setting Period. This gradual increase in revenue will facilitate a Pay-As-You-Go (PAYGO) approach to funding the capital replacement projects through FY 2027. If adopted, the wastewater rates would go into effect January 1, 2024, and increase each July 1, beginning July 1, 2025 through and including July 1, 2027.

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Wastewater rates include a monthly fixed charge to all accounts, including each residential unit. Residential wastewater variable rates are connected to each customer’s indoor water budget allotment, based on indoor water efficiency standards of 55 gallons per capita per day (gpcd) times the number of people per household (PPH). As residential customers request changes to their indoor Tier 1 water allotment to account for the number of people living at their residence, wastewater charges change accordingly. Non-residential variable rates are based on water usage and vary based on commercial use. Water use is measured in units of hundred cubic feet (HCF). One HCF is equal to 748 gallons of water. Non-residential variable rates differ based on the expected strength concentrations of influent, measured by Biological Oxygen Demand (BOD) and Total Suspended Solids (TSS).

The rate structure itself is not changing, but a comprehensive cost-of-service update was performed capturing total accounts, total PPH, and recent projected flows from each customer class. Furthermore, Canyon Lake customers will continue to pay a monthly surcharge to cover the debt service related to prior capital projects within their service area¹. The surcharge is not proposed to increase and will continue until the debt service is fully retired.

With the proposed rates, the utility will generate sufficient positive net income to fully fund its capital replacement and meet the minimum operating and rate stabilization reserves through the Rate Setting Period. Recommended rates have been incorporated into a notice and mailed to each property owner and customer of record as part of the Proposition 218 noticing requirements. The District will hold a Public Hearing on November 9, 2023, on the proposed rates identified in Table 1 and Table 2. Fixed charges are based on a 30-day billing cycle and the actual charge is adjusted based on the number of days within the billing period.

Table 1: Wastewater Proposed Monthly Fixed Charges

Fixed Charges (\$/Month)					
Customer Class	Existing	FY 2024	FY 2025	FY 2026	FY 2027
Residential	\$22.90	\$23.21	\$25.30	\$27.46	\$29.80
Commercial II	\$22.90	\$23.21	\$25.30	\$27.46	\$29.80
Commercial III	\$22.90	\$23.21	\$25.30	\$27.46	\$29.80
Commercial IV	\$22.90	\$23.21	\$25.30	\$27.46	\$29.80
Institutional	\$22.90	\$23.21	\$25.30	\$27.46	\$29.80
Schools	\$22.90	\$23.21	\$25.30	\$27.46	\$29.80

¹ Original debt service for the 2008B Certificates of Participation (COPs) was refunded in 2021 into a fixed-rate water revenue bond.

Elsinore Valley Municipal Water District – 2023 Wastewater Rate Study

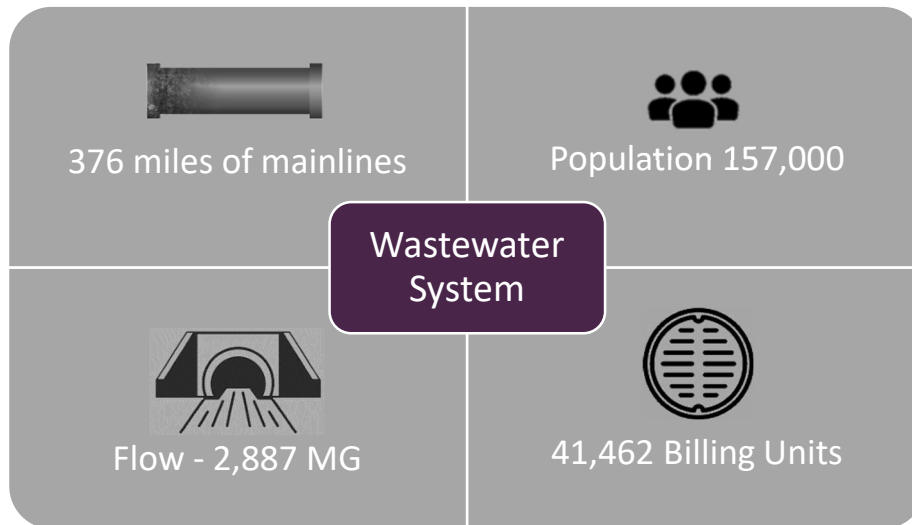
Table 2: Wastewater Proposed Variable Rates

Variable Rates (\$/PPH) or (\$/HCF)						
Customer Class		Existing	FY 2024	FY 2025	FY 2026	FY 2027
Residential	<i>(\$/PPH)</i>	\$7.82	\$8.94	\$9.75	\$10.58	\$11.48
Commercial II	<i>(\$/HCF)</i>	\$4.70	\$5.40	\$5.89	\$6.40	\$6.95
Commercial III	<i>(\$/HCF)</i>	\$5.64	\$5.53	\$6.03	\$6.55	\$7.11
Commercial IV	<i>(\$/HCF)</i>	\$10.49	\$12.37	\$13.49	\$14.64	\$15.89
Institutional	<i>(\$/HCF)</i>	\$4.26	\$4.40	\$4.80	\$5.21	\$5.66
Schools	<i>(\$/HCF)</i>	\$4.26	\$4.40	\$4.80	\$5.21	\$5.66

Wastewater Utility

The District owns and operates gravity sewer pipelines and force mains, sewer lift stations, and treats approximately 2,887 Million Gallons (MG) of collected wastewater at the following wastewater treatment plants (WWTPs): Railroad Canyon, Regional, Santa Rosa (operated by Santa Rosa Regional Resources Authority), and Horsethief. The District provides wastewater service to 40,454 residential Equivalent Dwelling Units (EDUs) and 1,008 commercial accounts, for a total of 41,462 billing units.

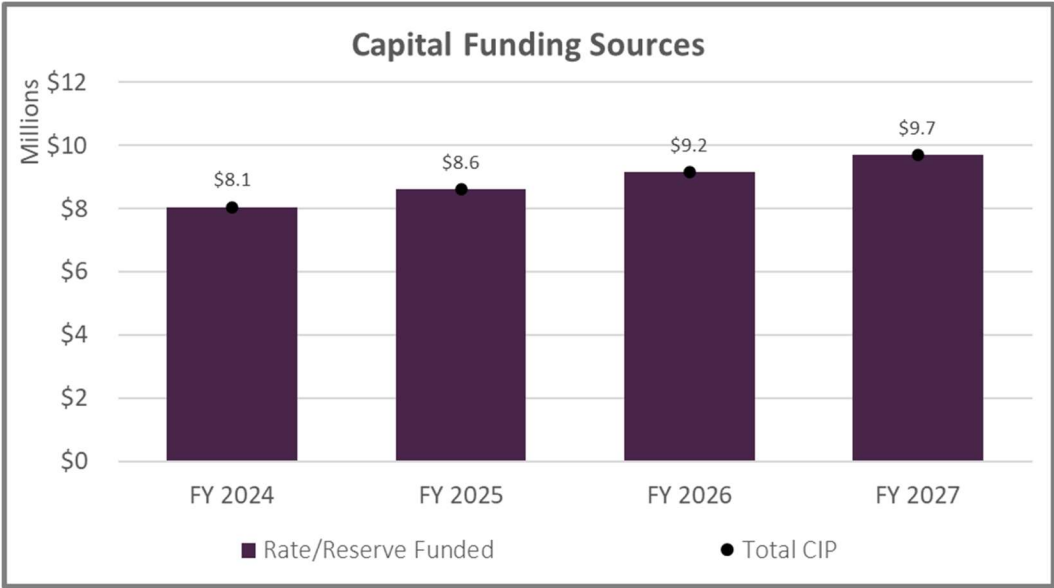
Figure 1: Wastewater System



The annual capital replacement funding is based on the District's reserve policy that sets an annual target funding level of 100% of depreciation for the wastewater division. The District is continuing to increase the amount funded annually until this target level is met and has an expected capital funding need of \$35.5M over the next four years. Figure 2 shows the District's expected capital replacement funding through FY 2027.

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Figure 2: Wastewater Capital Improvement Plan



Financial Plan Overview

Accounts

For FY 2024, the District is projecting 41,462 active billing units for wastewater, comprised of residential EDUs and commercial accounts, as summarized in Table 3.

Table 3: Billing Units

Customer Class	Billing Units
Residential	40,454
Commercial II	587
Commercial III	108
Commercial IV	184
Institutional	92
Schools	37
Total	41,462

As previously mentioned, the existing wastewater rates include a monthly fixed charge to all accounts, including each residential unit, and variable rates. Residential wastewater variable rates are indirectly connected to each customer’s indoor water budget allotment, based on indoor water efficiency standards of 55 gpcd times the number of PPH. As residential customers request changes to their indoor Tier 1 water allotment based on reporting the number of people living at their residence, wastewater charges change accordingly. Non-residential customers are charged a variable rate based on water usage that varies based on commercial use. Non-residential variable rates differ based on the expected strength concentrations of influent, measured by Biological Oxygen Demand (BOD) and Total Suspended Solids (TSS).

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Existing monthly fixed charges are identified in Table 4 and variable rates in Table 5. Fixed charges are based on a 30-day billing cycle and the actual charge is adjusted based on the number of days within the billing period.

Table 4: FY 2024 Wastewater Monthly Fixed Charges

Fixed Charges (\$/Month)	
Customer Class	Existing
Residential	\$22.90
Commercial II	\$22.90
Commercial III	\$22.90
Commercial IV	\$22.90
Institutional	\$22.90
Schools	\$22.90

Table 5: FY 2024 Wastewater Variable Rates

Variable Rates (\$/PPH) or (\$/HCF)		
Customer Class		Existing
Residential	<i>(\$/PPH)</i>	\$7.82
Commercial II	<i>(\$/HCF)</i>	\$4.70
Commercial III	<i>(\$/HCF)</i>	\$5.64
Commercial IV	<i>(\$/HCF)</i>	\$10.49
Institutional	<i>(\$/HCF)</i>	\$4.26
Schools	<i>(\$/HCF)</i>	\$4.26

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Financial Planning Assumptions

Developing a long-term financial plan requires an understanding of the utility’s financial position by evaluating existing revenue streams, ongoing expenses, how those expenses will change over time, existing debt requirements, capital replacement and reserve policies. The biennial District budget, adopted on June 23, 2023, was used for the wastewater utility revenues and expenses in FY 2024 and FY 2025. Certain assumptions are required for projecting revenues, expenses, and expected ending fund balances. Table 6 identifies assumptions used for forecasting revenues, including the number of accounts/units and PPH over the Rate Setting Period. Growth assumptions were provided by the District based on internal review of historical increases. The number of PPH (occupancy) is from the District’s customer database, which includes total PPH for each account. As accounts increase based on the growth rate, the PPH also increases proportionally. Non-residential and Canyon Lake accounts will remain constant over the Rate Setting Period as negligible non-residential growth is expected and Canyon Lake is substantially built-out. Table 7 identifies non-residential water usage and flow projections, equal to 90% of water usage, through the Rate Setting Period based on discussions with staff and a review of flows during very wet rainy periods in FY 2020 and FY 2023.

Table 8 identifies assumptions used for forecasting expenses over the Rate Setting Period based on discussions with staff and their internal review of historical trends and anticipated increases to employee Benefits, Utilities, Salaries, and Water Treatment. Capital Construction and General Costs inflation factors are based on the Engineer’s News Record (ENR) and Consumer Price Index (CPI) to reflect trends in construction and services, respectively.

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Table 6: Assumptions for Forecasting Revenues – Accounts/Units and PPH

Key Assumptions	FY 2024	FY 2025	FY 2026	FY 2027
Revenue Escalation				
Non-Rate Revenues	Budget	Budget	0.0%	0.0%
Reserve Interest	Budget	Budget	1.0%	1.0%
Account Growth				
Elsinore				
Single Family	1.1%	1.1%	1.1%	1.1%
Canyon Lake	0.0%	0.0%	0.0%	0.0%
Total Accounts	41,462	41,808	42,158	42,512
Occupancy (# of people)	FY 2024	FY 2025	FY 2026	FY 2027
Elsinore				
Single Family	129,887	131,251	132,629	134,022
Multifamily	15,342	15,342	15,342	15,342
Subtotal Elsinore Occupancy	145,229	146,593	147,971	149,364
Canyon Lake				
Single Family	12,191	12,191	12,191	12,191
Multifamily	344	344	344	344
Subtotal Canyon Lake Occupancy	12,535	12,535	12,535	12,535
Total Occupancy	157,764	159,128	160,506	161,899

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Table 7: Non-Residential Water Usage Assumptions

Non-Residential Water Usage	FY 2024	FY 2025	FY 2026	FY 2027
Commercial II	187,614	187,614	187,614	187,614
Commercial III	74,219	74,219	74,219	74,219
Commercial IV	119,457	119,457	119,457	119,457
Institutional	18,834	18,834	18,834	18,834
Schools	42,205	42,205	42,205	42,205
Total Non-Residential Water Usage (HCF)	442,329	442,329	442,329	442,329

Table 8: Assumptions for Forecasting Expense Requirements

Key Assumptions	FY 2024	FY 2025	FY 2026	FY 2027
Expenditure Escalation				
Benefits	Budget	Budget	3.0%	3.0%
Capital Construction	<i>ENR - LA</i> 5-Year Average	Budget	Budget	2.7%
General Costs	<i>CPI - Riverside (BLS)</i> 5-Year Average	Budget	Budget	3.7%
Salaries	Budget	Budget	5.0%	5.0%
Treatment	Budget	Budget	5.0%	5.0%
Utilities	Budget	Budget	5.0%	5.0%

Current Financial Position

Revenues

Revenues generated by existing rates (Table 4 and Table 5) are calculated using the account data and water usage forecast identified in Table 6 and Table 7. Table 9 shows the calculated rate revenues through the Rate Setting Period. Table 10 summarizes calculated rate revenues and other non-rate revenues available through the Rate Setting Period with future projections rounded to the nearest thousands.

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Table 9: Calculated Rate Revenues

Monthly Fixed Revenue	FY 2024	FY 2025	FY 2026	FY 2027
Total Monthly Fixed Revenue	\$11,393,758	\$11,488,838	\$11,585,018	\$11,682,298
Variable Revenue	FY 2024	FY 2025	FY 2026	FY 2027
\$/PPH				
Elsinore				
Single Family	\$12,188,596	\$12,316,594	\$12,445,905	\$12,576,624
Multifamily	\$1,439,693	\$1,439,693	\$1,439,693	\$1,439,693
Canyon Lake				
Single Family	\$1,144,003	\$1,144,003	\$1,144,003	\$1,144,003
Multifamily	\$32,281	\$32,281	\$32,281	\$32,281
\$/HCF				
Commercial II	\$881,786	\$881,786	\$881,786	\$881,786
Commercial III	\$418,595	\$418,595	\$418,595	\$418,595
Commercial IV	\$1,253,104	\$1,253,104	\$1,253,104	\$1,253,104
Institutional	\$80,233	\$80,233	\$80,233	\$80,233
Schools	\$179,793	\$179,793	\$179,793	\$179,793
Total Variable Rate Revenue	\$17,618,085	\$17,746,083	\$17,875,394	\$18,006,113
Total Rate Revenue	\$29,011,842	\$29,234,921	\$29,460,412	\$29,688,411

Table 10: Projected Revenues

Revenue Summary	FY 2024	FY 2025	FY 2026	FY 2027
Wastewater Rate Revenues				
Monthly Fixed Revenue	\$11,394,000	\$11,489,000	\$11,585,000	\$11,682,000
Variable Revenue	\$17,618,000	\$17,746,000	\$17,875,000	\$18,006,000
Sewer Only On Tax Roll	\$7,000	\$7,000	\$7,000	\$7,000
Subtotal Wastewater Rate Revenues	\$29,019,000	\$29,242,000	\$29,467,000	\$29,695,000
Other Revenues				
Canyon Lake Surcharge Revenues	\$609,000	\$609,000	\$609,000	\$609,000
Service Revenues	\$502,000	\$514,000	\$514,000	\$514,000
Non-Operating Revenues	\$2,037,000	\$2,011,000	\$2,011,000	\$2,011,000
Subtotal Other Revenues	\$3,148,000	\$3,134,000	\$3,134,000	\$3,134,000
Total Revenues	\$32,167,000	\$32,376,000	\$32,601,000	\$32,829,000

Elsinore Valley Municipal Water District – 2023 Wastewater Rate Study

Expenses

The biennial FY 2024 and FY 2025 budget was used as the baseline expenses of the wastewater utility and adjusted in subsequent years based on the escalation factors shown in Table 8. Table 11 provides projected operations and maintenance (O&M) costs through FY 2027. Each expense category includes detailed line items discussed with staff to determine the appropriate escalation factor for forecasting how costs will increase over time. Miscellaneous non-operating revenue are from the District's general fund and includes property tax and lease revenues. These revenues were approved by the Board during the previous rate study to smooth out rates for FY 2024 and FY 2025, which will sunset and not continue for FY 2026 and FY 2027.

Table 11: Projected O&M Expenses

O&M Expenses	FY 2024	FY 2025	FY 2026	FY 2027
Operating Expenses				
General	\$123,000	\$123,000	\$128,000	\$132,000
Administrative	\$8,331,000	\$8,751,000	\$9,078,000	\$9,417,000
Regional WWTP	\$5,833,000	\$6,244,000	\$6,504,000	\$6,775,000
Billable Work Order	\$10,000	\$12,000	\$12,000	\$13,000
Pretreatment Program	\$460,000	\$484,000	\$505,000	\$526,000
Collection Systems	\$1,390,000	\$1,471,000	\$1,528,000	\$1,588,000
Sewage Lift Stations	\$2,747,000	\$2,858,000	\$2,985,000	\$3,119,000
Railroad Canyon WWTP	\$1,742,000	\$1,864,000	\$1,947,000	\$2,034,000
Horsethief WWTP	\$1,191,000	\$1,293,000	\$1,346,000	\$1,402,000
SRRRA Contractual Agreement	\$1,356,000	\$1,383,000	\$1,443,000	\$1,505,000
Total Expenses	\$23,183,000	\$24,483,000	\$25,476,000	\$26,511,000
Transfers				
Direct Transfers				
From/(To) Operating Reserve	(\$744,429)	(\$260,000)	(\$198,600)	(\$207,000)
From/(To) Capital Surcharge	(\$257,000)	(\$257,000)	(\$257,000)	(\$257,000)
From/(To) Sewer Replacement	(\$8,053,000)	(\$8,603,000)	(\$9,153,000)	(\$9,703,000)
Subtotal Direct Transfers	(\$9,054,429)	(\$9,120,000)	(\$9,608,600)	(\$10,167,000)
Other Transfers				
From Misc. Non-Op Revenue	\$2,425,000	\$980,000	\$0	\$0
Debt Service	(\$4,328,000)	(\$4,352,000)	(\$4,402,000)	(\$4,063,000)
To 2021A Refunding Wtr Rev fund	(\$352,000)	(\$352,000)	(\$352,000)	(\$352,000)
Transfers Out	(\$999,000)	(\$1,006,000)	(\$1,006,000)	(\$1,006,000)
Subtotal Other Transfers	(\$3,254,000)	(\$4,730,000)	(\$5,760,000)	(\$5,421,000)
Net Transfers	(\$12,308,429)	(\$13,850,000)	(\$15,368,600)	(\$15,588,000)

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Reserves

Figure 3: Utility Reserves



Established wastewater reserves include Operating Reserve, Rate Stabilization Reserve, Capital Surcharge Reserve, and Sewer Replacement Reserve. These reserves help smooth rates and mitigate rate spikes due to emergencies or above-average system costs. The most recent adopted reserve policies identify the function of each reserve. Table 12 summarizes the minimum reserve requirements and the ideal funding targets of each reserve. The Capital Surcharge receives revenues generated by the Canyon Lake surcharge that was established in 2006, net of debt associated with the capital improvements. The capital improvements included the Lighthouse and Continental Lift Stations as well as the Railroad Canyon Water Reclamation Facility. The District first fully funds the Operating Reserve, followed by the transfers to the Capital Surcharge and Sewer Replacement Reserve. The District then satisfies the Rate Stabilization minimum reserve requirement. Therefore, meeting the minimum requirements of the Operating Reserve and Rate Stabilization Reserve ensures all reserve requirements are met.

Table 12: Reserve Requirements and Targets

Reserve	Minimum Requirement	Reserve Target
Operating	20% of operating costs	20% of operating costs
Rate Stabilization	15% of operating costs	15% - 30% of operating costs
Capital Surcharge	No minimum	No minimum
Sewer Replacement	Based on the District's multi-year asset replacement schedule	Same as Minimum

The total combined beginning balance of the Operating and Rate Stabilization reserves as of July 1, 2023, were estimated to be approximately \$8.4M.

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Financial Outlook at Existing Rates

Calculating revenue using existing rates and projecting expenses helps determine the current financial health of the utility. Revenues from existing rates are sufficient to fund O&M through the Rate Setting Period. Net operating income is limited and reduces annually as projected expenses increase and can only fund a limited amount of capital needs. Therefore, reserves would need to cover the remaining capital costs, which would not be sustainable long-term, as reserves would be depleted in FY 2026 due to the \$35.5M in capital replacement funding. Table 13 forecasts existing revenues and expenses through the Rate Setting Period. Table 14 takes net operating from Table 13 and identifies net cash after direct transfers. Table 15 identifies reserve transfers and reserves activity, with projected FY 2024 starting reserve balances shown for each reserve.

Table 13: Financial Plan at Existing Rates

Revenue		FY 2024	FY 2025	FY 2026	FY 2027
Wastewater Rate Revenues					
Monthly Fixed Revenue	Table 9	\$11,394,000	\$11,489,000	\$11,585,000	\$11,682,000
Variable Revenue	Table 9	\$17,618,000	\$17,746,000	\$17,875,000	\$18,006,000
Sewer Only On Tax Roll	Table 10	\$7,000	\$7,000	\$7,000	\$7,000
Total Wastewater Rate Revenues		\$29,019,000	\$29,242,000	\$29,467,000	\$29,695,000
Other Revenues					
Canyon Lake Surcharge Revenues	Table 10	\$609,000	\$609,000	\$609,000	\$609,000
Service Revenues		\$502,000	\$514,000	\$514,000	\$514,000
Non-Operating Revenues		\$2,037,000	\$2,011,000	\$2,011,000	\$2,011,000
Subtotal Other Revenues		\$3,148,000	\$3,134,000	\$3,134,000	\$3,134,000
Total Revenues		\$32,167,000	\$32,376,000	\$32,601,000	\$32,829,000
		FY 2024	FY 2025	FY 2026	FY 2027
Operating Expenses					
General	Table 11	\$123,000	\$123,000	\$128,000	\$132,000
Administrative		\$8,331,000	\$8,751,000	\$9,078,000	\$9,417,000
Regional WWTP		\$5,833,000	\$6,244,000	\$6,504,000	\$6,775,000
Billable Work Order		\$10,000	\$12,000	\$12,000	\$13,000
Pretreatment Program		\$460,000	\$484,000	\$505,000	\$526,000
Collection Systems		\$1,390,000	\$1,471,000	\$1,528,000	\$1,588,000
Sewage Lift Stations		\$2,747,000	\$2,858,000	\$2,985,000	\$3,119,000
Railroad Canyon WWTP		\$1,742,000	\$1,864,000	\$1,947,000	\$2,034,000
Horsethief WWTP		\$1,191,000	\$1,293,000	\$1,346,000	\$1,402,000
SRRRA Contractual Agreement		\$1,356,000	\$1,383,000	\$1,443,000	\$1,505,000
Subtotal Operating Expenses		\$23,183,000	\$24,483,000	\$25,476,000	\$26,511,000
Net Operating		\$8,984,000	\$7,893,000	\$7,125,000	\$6,318,000

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Table 14: Direct Transfers

Transfers		FY 2024	FY 2025	FY 2026	FY 2027
Direct Transfers	Table 11				
From/(To) Operating Reserve	↓	(\$744,429)	(\$260,000)	(\$198,600)	(\$207,000)
From/(To) Capital Surcharge		(\$257,000)	(\$257,000)	(\$257,000)	(\$257,000)
From/(To) Sewer Replacement		(\$8,053,000)	(\$8,603,000)	(\$9,153,000)	(\$9,703,000)
Subtotal Direct Transfers		(\$9,054,429)	(\$9,120,000)	(\$9,608,600)	(\$10,167,000)
Other Transfers	Table 11				
From Misc. Non-Op Revenue	↓	\$2,425,000	\$980,000	\$0	\$0
Debt Service		(\$4,328,000)	(\$4,352,000)	(\$4,402,000)	(\$4,063,000)
To 2021A RefundingWtr Rev fund		(\$352,000)	(\$352,000)	(\$352,000)	(\$352,000)
Transfers Out		(\$999,000)	(\$1,006,000)	(\$1,006,000)	(\$1,006,000)
Subtotal Other Transfers		(\$3,254,000)	(\$4,730,000)	(\$5,760,000)	(\$5,421,000)
Net Transfers		(\$12,308,429)	(\$13,850,000)	(\$15,368,600)	(\$15,588,000)
Net Cashflow		FY 2024	FY 2025	FY 2026	FY 2027
Net Operating	Table 13	\$8,984,000	\$7,893,000	\$7,125,000	\$6,318,000
Net Transfers		(\$12,308,429)	(\$13,850,000)	(\$15,368,600)	(\$15,588,000)
Net Cashflow (after Transfers)		(\$3,324,429)	(\$5,957,000)	(\$8,243,600)	(\$9,270,000)

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Table 15: Transfers and Reserve Activity at Existing Rates

Operating Reserve	FY 2024	FY 2025	FY 2026	FY 2027
Beginning Balance	\$3,892,171	\$4,636,600	\$4,896,600	\$5,095,200
Direct Transfer From/(To) Operating Reserve	\$744,429	\$260,000	\$198,600	\$207,000
Ending Balance	\$4,636,600	\$4,896,600	\$5,095,200	\$5,302,200
Rate Stabilization Reserve	FY 2024	FY 2025	FY 2026	FY 2027
Beginning Balance	\$4,500,000	\$1,175,571	(\$4,781,429)	(\$13,025,029)
Net Cashflow (after Transfers)	(\$3,324,429)	(\$5,957,000)	(\$8,243,600)	(\$9,270,000)
Ending Balance	\$1,175,571	(\$4,781,429)	(\$13,025,029)	(\$22,295,029)
Total Operating & Rate Stabilization Balance	\$5,812,171	\$115,171	(\$7,929,829)	(\$16,992,829)
Capital Surcharge Reserve	FY 2024	FY 2025	FY 2026	FY 2027
Beginning Balance	\$2,590,000	\$2,847,000	\$3,104,000	\$3,361,000
Direct Transfer From/(To) Capital Surcharge	\$257,000	\$257,000	\$257,000	\$257,000
Ending Balance	\$2,847,000	\$3,104,000	\$3,361,000	\$3,618,000
Sewer Replacement Fund	FY 2024	FY 2025	FY 2026	FY 2027
Beginning Balance	\$5,211,606	\$5,263,722	\$5,316,359	\$5,369,523
Plus:				
Direct Transfer From/(To) Sewer Replacement	\$8,053,000	\$8,603,000	\$9,153,000	\$9,703,000
Less:				
CIP	(\$8,053,000)	(\$8,603,000)	(\$9,153,000)	(\$9,703,000)
Subtotal Sewer Replacement Fund	\$5,211,606	\$5,263,722	\$5,316,359	\$5,369,523
Interest Earnings	\$52,116	\$52,637	\$53,164	\$53,695
Ending Balance	\$5,263,722	\$5,316,359	\$5,369,523	\$5,423,218
Total Reserve Balance	\$13,922,893	\$8,535,530	\$800,694	(\$7,951,611)

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Figure 4 illustrates the operating position of the utility, with O&M expenses shown with the dashed red trendline and total revenues at existing rates displayed by the horizontal black trendline. The bars represent the amount of net operating income available for capital replacement and reserve funding.

Figure 4: Current Operating Financial Position

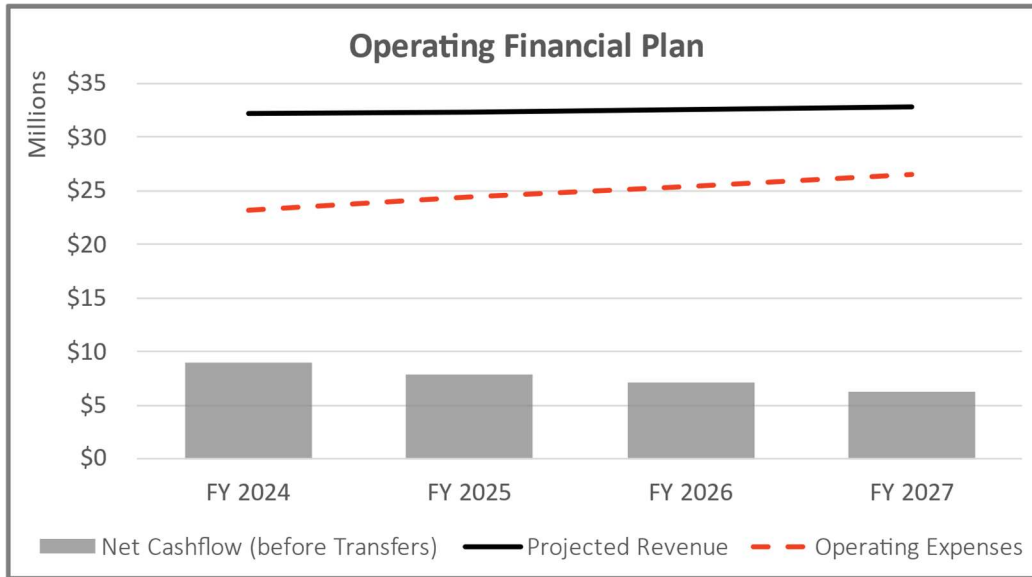
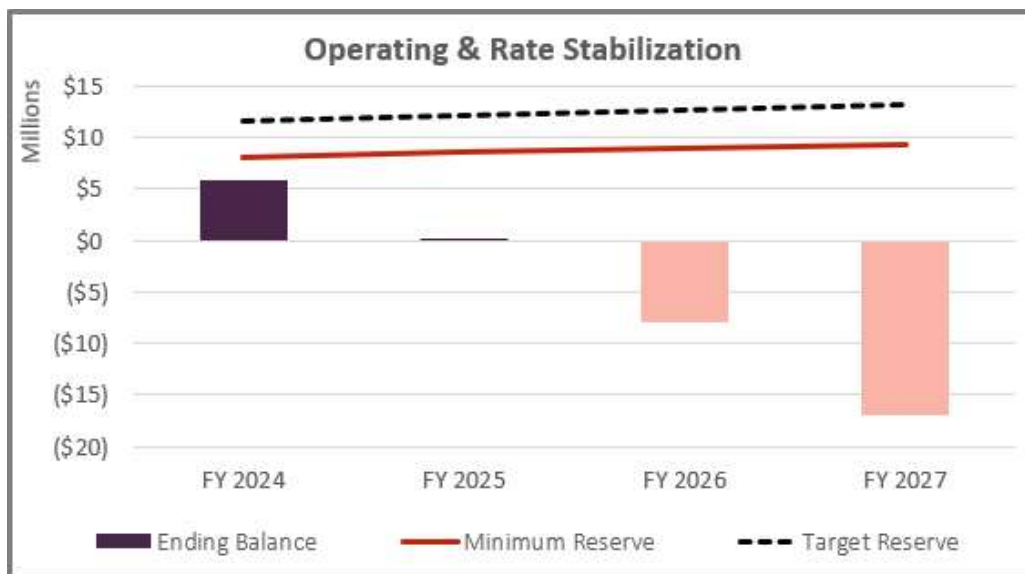


Figure 5 reflects the projected ending balances of operating and rate stabilization reserves after funding capital replacement (Figure 2). Reserves are projected to be below the minimum requirement by the end of FY 2024 and depleted by FY 2026.

Figure 5: Projected Ending Operating and Rate Stabilization Reserves



Proposed Financial Plan

From the financial outlook at existing rates, a proposed financial plan can be developed to adequately fund the multi-year revenue requirements. Based on funding capital replacement and ensuring reserves meet minimum targets, wastewater requires revenue adjustments equal to 9.0%, 9.0%, 8.5%, 8.5%, for FY 2024 through FY 2027, respectively. Table 16 forecasts projected revenues and expenses over the Rate Setting Period. Table 17 takes net operating from Table 16 and identifies net cash after direct transfers. Table 18 identifies the projected FY 2024 total starting reserve balances, activity within each reserve (including net cashflow after transfers from Table 17, transfers between reserves, and annual CIP), and projected ending balances for each fiscal year of the Rate Setting Period.

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Table 16: Proposed Financial Plan

Revenue			FY 2024	FY 2025	FY 2026	FY 2027
Wastewater Rate Revenues						
Monthly Fixed Revenue	Table 9		\$11,394,000	\$11,489,000	\$11,585,000	\$11,682,000
Variable Revenue	Table 9		\$17,618,000	\$17,746,000	\$17,875,000	\$18,006,000
Sewer Only On Tax Roll	Table 10		\$7,000	\$7,000	\$7,000	\$7,000
Total Wastewater Rate Revenues			\$29,019,000	\$29,242,000	\$29,467,000	\$29,695,000
Fiscal Year	Revenue Adjustment	Effective Month				
FY 2024	9.0%	January	\$1,305,000	\$2,631,000	\$2,652,000	\$2,672,000
FY 2025	9.0%	July		\$2,868,000	\$2,890,000	\$2,913,000
FY 2026	8.5%	July			\$2,975,000	\$2,998,000
FY 2027	8.5%	July				\$3,253,000
Total Additional Revenue			\$1,305,000	\$5,499,000	\$8,517,000	\$11,836,000
Projected Rate Revenue			\$30,324,000	\$34,741,000	\$37,984,000	\$41,531,000
Other Revenues			Table 10			
Canyon Lake Surcharge Revenues			\$609,000	\$609,000	\$609,000	\$609,000
Service Revenues			\$502,000	\$514,000	\$514,000	\$514,000
Non-Operating Revenues			\$2,037,000	\$2,011,000	\$2,011,000	\$2,011,000
Subtotal Other Revenues			\$3,148,000	\$3,134,000	\$3,134,000	\$3,134,000
Total Revenues			\$33,472,000	\$37,875,000	\$41,118,000	\$44,665,000
			FY 2024	FY 2025	FY 2026	FY 2027
Operating Expenses			Table 11			
General			\$123,000	\$123,000	\$128,000	\$132,000
Administrative			\$8,331,000	\$8,751,000	\$9,078,000	\$9,417,000
Regional WWTP			\$5,833,000	\$6,244,000	\$6,504,000	\$6,775,000
Billable Work Order			\$10,000	\$12,000	\$12,000	\$13,000
Pretreatment Program			\$460,000	\$484,000	\$505,000	\$526,000
Collection Systems			\$1,390,000	\$1,471,000	\$1,528,000	\$1,588,000
Sewage Lift Stations			\$2,747,000	\$2,858,000	\$2,985,000	\$3,119,000
Railroad Canyon WWTP			\$1,742,000	\$1,864,000	\$1,947,000	\$2,034,000
Horsethief WWTP			\$1,191,000	\$1,293,000	\$1,346,000	\$1,402,000
SRRRA Contractual Agreement			\$1,356,000	\$1,383,000	\$1,443,000	\$1,505,000
Subtotal Operating Expenses			\$23,183,000	\$24,483,000	\$25,476,000	\$26,511,000
Total Expenses (before funding capital)			\$23,183,000	\$24,483,000	\$25,476,000	\$26,511,000
Net Operating (available for reserve and capital funding)			\$10,289,000	\$13,392,000	\$15,642,000	\$18,154,000

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Table 17: Direct Transfers

Transfers		FY 2024	FY 2025	FY 2026	FY 2027
Direct Transfers	Table 11				
From/(To) Operating Reserve	↓	(\$744,429)	(\$260,000)	(\$198,600)	(\$207,000)
From/(To) Capital Surcharge		(\$257,000)	(\$257,000)	(\$257,000)	(\$257,000)
From/(To) Sewer Replacement		(\$8,053,000)	(\$8,603,000)	(\$9,153,000)	(\$9,703,000)
Subtotal Direct Transfers		(\$9,054,429)	(\$9,120,000)	(\$9,608,600)	(\$10,167,000)
Other Transfers	Table 11				
From Misc. Non-Op Revenue	↓	\$2,425,000	\$980,000	\$0	\$0
Debt Service		(\$4,328,000)	(\$4,352,000)	(\$4,402,000)	(\$4,063,000)
To 2021A Refunding Wtr Rev fund		(\$352,000)	(\$352,000)	(\$352,000)	(\$352,000)
Transfers Out		(\$999,000)	(\$1,006,000)	(\$1,006,000)	(\$1,006,000)
Subtotal Other Transfers		(\$3,254,000)	(\$4,730,000)	(\$5,760,000)	(\$5,421,000)
Net Transfers		(\$12,308,429)	(\$13,850,000)	(\$15,368,600)	(\$15,588,000)
Net Cashflow		FY 2024	FY 2025	FY 2026	FY 2027
Net Operating	Table 16	\$10,289,000	\$13,392,000	\$15,642,000	\$18,154,000
Net Transfers		(\$12,308,429)	(\$13,850,000)	(\$15,368,600)	(\$15,588,000)
Net Cashflow (after Transfers)		(\$2,019,429)	(\$458,000)	\$273,400	\$2,566,000

Elsinore Valley Municipal Water District – 2023 Wastewater Rate Study

Table 18: Reserve Activity through FY 2027

Operating Reserve	FY 2024	FY 2025	FY 2026	FY 2027
Beginning Balance	\$3,892,171	\$4,636,600	\$4,896,600	\$5,095,200
Direct Transfer From/(To) Operating Reserve	\$744,429	\$260,000	\$198,600	\$207,000
Ending Balance	\$4,636,600	\$4,896,600	\$5,095,200	\$5,302,200
Rate Stabilization Reserve	FY 2024	FY 2025	FY 2026	FY 2027
Beginning Balance	\$4,500,000	\$2,480,571	\$2,022,571	\$2,295,971
Net Cashflow (after Transfers)	(\$2,019,429)	(\$458,000)	\$273,400	\$2,566,000
Ending Balance	\$2,480,571	\$2,022,571	\$2,295,971	\$4,861,971
Total Operating & Rate Stabilization Balance	\$7,117,171	\$6,919,171	\$7,391,171	\$10,164,171
Capital Surcharge Reserve	FY 2024	FY 2025	FY 2026	FY 2027
Beginning Balance	\$2,590,000	\$2,847,000	\$3,104,000	\$3,361,000
Direct Transfer From/(To) Capital Surcharge	\$257,000	\$257,000	\$257,000	\$257,000
Ending Balance	\$2,847,000	\$3,104,000	\$3,361,000	\$3,618,000
Sewer Replacement Fund	FY 2024	FY 2025	FY 2026	FY 2027
Beginning Balance	\$5,211,606	\$5,263,722	\$5,316,359	\$5,369,523
Plus:				
Direct Transfer From/(To) Sewer Replacement	\$8,053,000	\$8,603,000	\$9,153,000	\$9,703,000
Less:				
CIP	(\$8,053,000)	(\$8,603,000)	(\$9,153,000)	(\$9,703,000)
Subtotal Sewer Replacement Fund	\$5,211,606	\$5,263,722	\$5,316,359	\$5,369,523
Interest Earnings	\$52,116	\$52,637	\$53,164	\$53,695
Ending Balance	\$5,263,722	\$5,316,359	\$5,369,523	\$5,423,218
Total Reserve Balance	\$15,227,893	\$15,339,530	\$16,121,694	\$19,205,389

Figure 6 identifies the operating position based on the proposed financial plan, and Figure 7 shows the projected ending operating and rate stabilization reserve balances after funding capital replacement.

Elsinore Valley Municipal Water District – 2023 Wastewater Rate Study

Figure 6: Proposed Operating Position

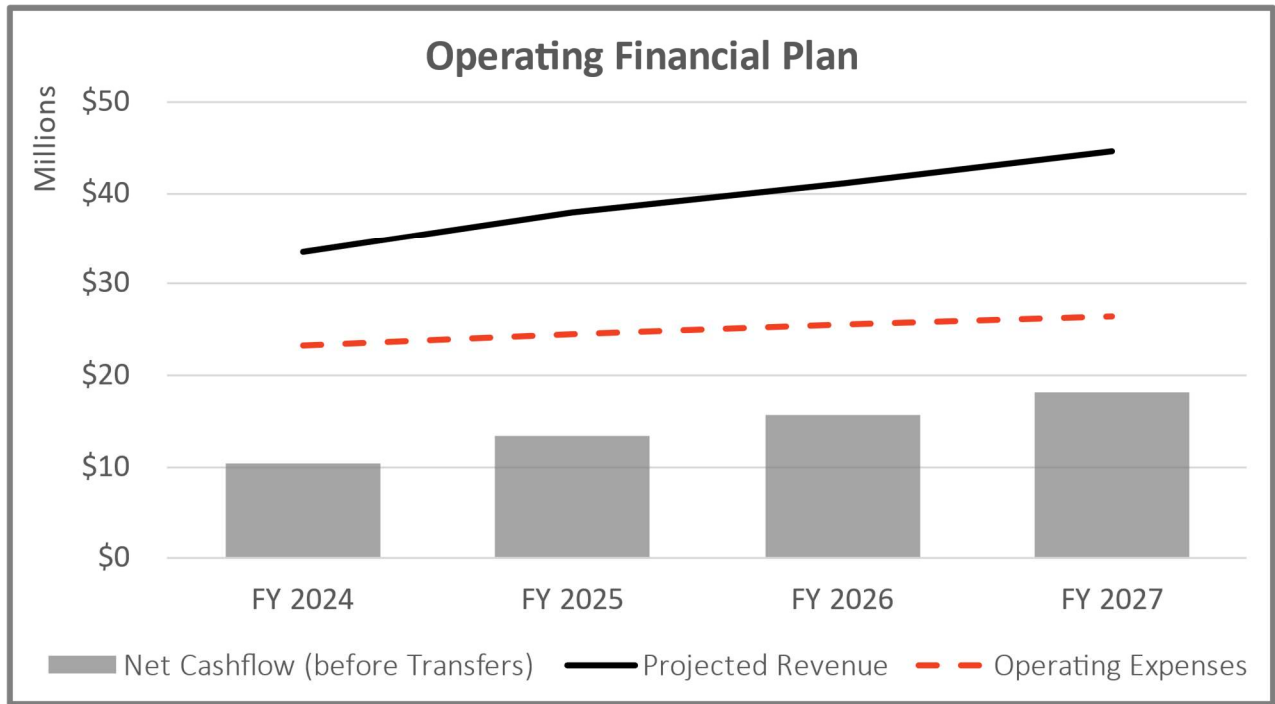
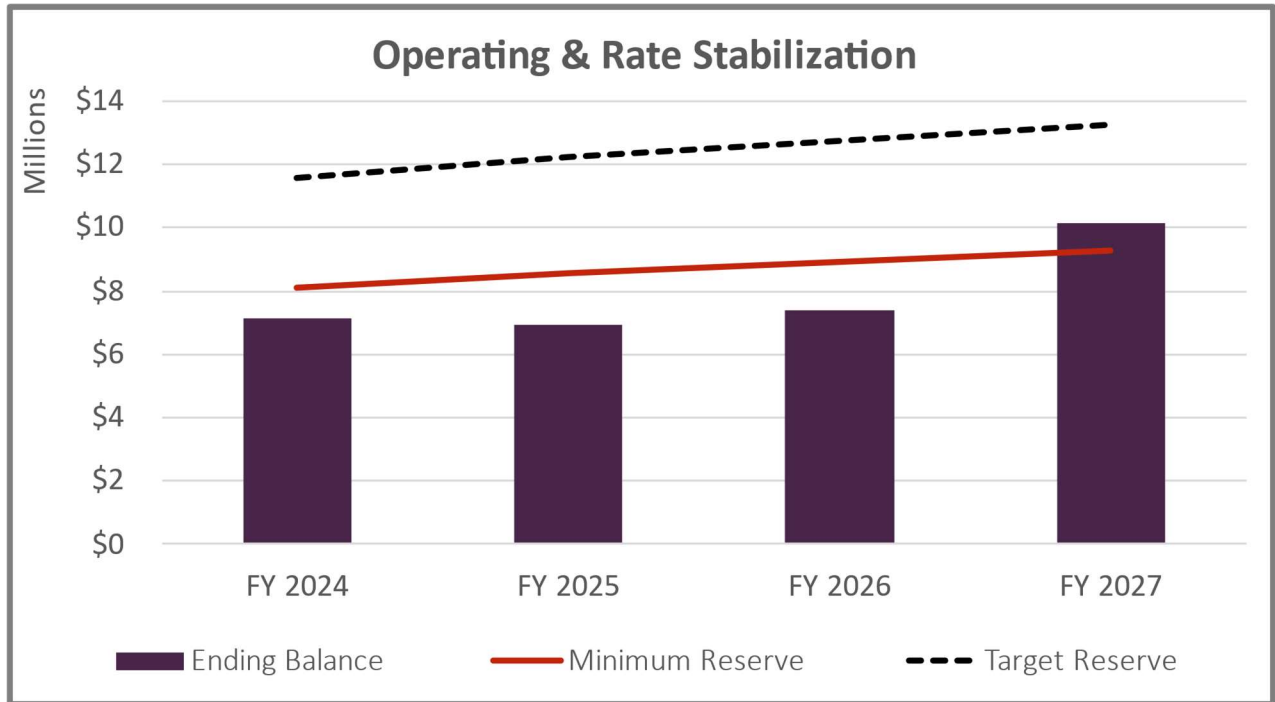


Figure 7: Proposed Ending Operating and Rate Stabilization Reserve



Cost of Service Analysis

Cost of Service Process

The next step in developing wastewater rates is to perform a cost-of-service analysis. Through this process, costs incurred are allocated to customer classes based on their proportional share. As a result, the proposed rates are cost-based and reflect the costs incurred to provide service to each customer class and corresponding accounts.

Revenue Requirements

With FY 2024 as the first year of the proposed rate schedule, revenue requirements are determined for FY 2024 and used for the cost-of-service. Revenue requirements include O&M expenses, available offsets from other operating and non-operating revenues, annual net income, and any mid-year adjustments if rates are implemented after the start of the fiscal year. The proposed revenue adjustments and corresponding rates collectively accumulate the necessary funding over the Rate Setting Period to fund total revenue requirements, including capital replacement, while meeting minimum reserve requirements by FY 2027. The results of the financial plan analysis are summarized in Table 19 and represent the revenue required from rates over the Rate Setting Period.

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Table 19: Revenue Requirements

	FY 2024	FY 2025	FY 2026	FY 2027
Revenue Requirements	Total	Total	Total	Total
Operating Expenses				
General	\$123,000	\$123,000	\$128,000	\$132,000
Administrative	\$8,331,000	\$8,751,000	\$9,078,000	\$9,417,000
Regional WWTP	\$5,833,000	\$6,244,000	\$6,504,000	\$6,775,000
Billable Work Order	\$10,000	\$12,000	\$12,000	\$13,000
Pretreatment Program	\$460,000	\$484,000	\$505,000	\$526,000
Collection Systems	\$1,390,000	\$1,471,000	\$1,528,000	\$1,588,000
Sewage Lift Stations	\$2,747,000	\$2,858,000	\$2,985,000	\$3,119,000
Railroad Canyon WWTP	\$1,742,000	\$1,864,000	\$1,947,000	\$2,034,000
Horsethief WWTP	\$1,191,000	\$1,293,000	\$1,346,000	\$1,402,000
SRRRA Contractual Agreement	\$1,356,000	\$1,383,000	\$1,443,000	\$1,505,000
Total Operating Expenses	\$23,183,000	\$24,483,000	\$25,476,000	\$26,511,000
Other Funding				
<i>Revenue Offsets</i>				
Canyon Lake Surcharge Revenues	(\$609,000)	(\$609,000)	(\$609,000)	(\$609,000)
Service Revenues	(\$502,000)	(\$514,000)	(\$514,000)	(\$514,000)
Non-Operating Revenues	(\$2,037,000)	(\$2,011,000)	(\$2,011,000)	(\$2,011,000)
Subtotal Revenue Offsets	(\$3,148,000)	(\$3,134,000)	(\$3,134,000)	(\$3,134,000)
<i>Transfers</i>				
From/(To) Operating Reserve	\$744,429	\$260,000	\$198,600	\$207,000
From/(To) Capital Surcharge	\$257,000	\$257,000	\$257,000	\$257,000
From/(To) Sewer Replacement	\$8,053,000	\$8,603,000	\$9,153,000	\$9,703,000
From Misc. Non-Op Revenue	(\$2,425,000)	(\$980,000)	\$0	\$0
Debt Service	\$4,328,000	\$4,352,000	\$4,402,000	\$4,063,000
To 2021A Refunding Wtr Rev fund	\$352,000	\$352,000	\$352,000	\$352,000
Transfers Out	\$999,000	\$1,006,000	\$1,006,000	\$1,006,000
Subtotal Transfers	\$12,308,429	\$13,850,000	\$15,368,600	\$15,588,000
<i>Adjustments</i>				
CIP / Reserve Funding	(\$2,019,429)	(\$458,000)	\$273,400	\$2,566,000
Adjustment for Mid-Year Increase	\$1,305,000	\$0	\$0	\$0
Subtotal Adjustments	(\$714,429)	(\$458,000)	\$273,400	\$2,566,000
Total Other Funding	\$8,446,000	\$10,258,000	\$12,508,000	\$15,020,000
Revenue Requirement from Rates	\$31,629,000	\$34,741,000	\$37,984,000	\$41,531,000

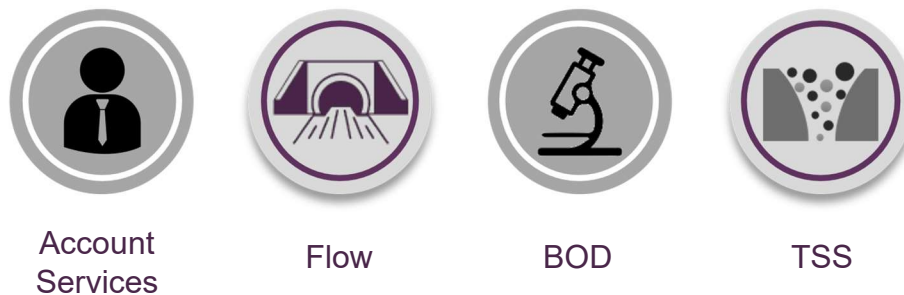
Elsinore Valley Municipal Water District – 2023 Wastewater Rate Study

Define Cost Components

The District's wastewater cost-of-service requirements were allocated to cost components and then to customer classes to develop cost-based rates in compliance with Proposition 218. The utility incurs costs to accommodate the total flow demand generated by different customer classes. Therefore, to determine the most appropriate way to recover the utility's expenses, cost components are identified and used to allocate expenses based on how they are incurred. Through our review of the revenue requirements and understanding of the wastewater system, the cost-of-service allocation documented in this report is based on total billing units (accounts plus additional dwelling units), flow (volume influent in HCF), and the strength characteristics of each customer class.

Strength loading factors for Biological Oxygen Demand (BOD) and Total Suspended Solids (TSS) are based on the State Water Resources Control Board (SWRCB) user strength characteristics. The SWRCB reflects a substantial dataset of discharge characteristics for various commercial uses, which typically would not vary by geographical location. The cost components shown in Figure 8 are used within the cost-of-service to allocate costs to customer classes in relation to the demand that each place on the system.

Figure 8: Cost Components



Account Services – Fixed expenses related to the collection system and treatment plants that do not necessarily fluctuate based on flow. Administration, utility billing services, and overhead costs are incurred based on having an account. In addition, a portion of maintenance is recovered as part of Account Services.

Flow – Expenses associated with the collection system and volume of flow treated at the WWTPs.

BOD – Expenses associated with treating microbial and organic compounds at the WWTPs.

TSS – Expenses associated with treating TSS at the WWTPs.

Allocate Expenses to Cost Components

When allocating expenses to the defined cost components, it is important to have a sound basis as to why an expense was allocated to a certain fixed cost component versus a variable cost component or split between both fixed and variable. The distribution of expenses to the cost components should be straightforward to ensure the method of apportionment is **understandable** and easily **correlates to how expenses are incurred**. A description of each expense category is identified below.

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Table 20 summarizes the percent allocation of O&M expenses to the cost components with Account Services as a fixed component and Flow, BOD, and TSS as variable cost components. General, Administrative, and Billable Work Order were allocated to the cost component of Account Services. Collection Systems and Sewage Lift Stations expenses categories are allocated to the Flow cost component. Regional WWTP, Pretreatment Program, Railroad Canyon WWTP, Horsethief WWTP, and SRRRA Contractual Agreement expense categories are associated with the daily operating costs of the treatment plants and allocated to Flow, BOD and TSS based on the District’s review of its internal treatment plant processes and how costs are incurred at the plants in treated influent, equal to 40% Flow, 30% BOD and 30% TSS. Table 21 uses the percent allocations in Table 20 to allocate expenses in dollars to each cost component.

Table 20: O&M Expense Allocation to Cost Components (%)

Operating Expenses	Methodology / Allocation Basis	Cost Components				Total
		Account Services	Flow	BOD	TSS	
General	Account Services	100.0%	0.0%	0.0%	0.0%	100.0%
Administrative	Account Services	100.0%	0.0%	0.0%	0.0%	100.0%
Regional WWTP	Specific	0.0%	40.0%	30.0%	30.0%	100.0%
Billable Work Order	Account Services	100.0%	0.0%	0.0%	0.0%	100.0%
Pretreatment Program	Specific	0.0%	40.0%	30.0%	30.0%	100.0%
Collection Systems	Flow	0.0%	100.0%	0.0%	0.0%	100.0%
Sewage Lift Stations	Flow	0.0%	100.0%	0.0%	0.0%	100.0%
Railroad Canyon WWTP	Specific	0.0%	40.0%	30.0%	30.0%	100.0%
Horsethief WWTP	Specific	0.0%	40.0%	30.0%	30.0%	100.0%
SRRRA Contractual Agreement	Specific	0.0%	40.0%	30.0%	30.0%	100.0%

Table 21: O&M Expense Allocation to Cost Components (\$)

Operating Expenses	Methodology / Allocation Basis	Cost Components				Total
		Account Services	Flow	BOD	TSS	
General	Account Services	\$123,000	\$0	\$0	\$0	\$123,000
Administrative	Account Services	\$8,331,000	\$0	\$0	\$0	\$8,331,000
Regional WWTP	Specific	\$0	\$2,333,200	\$1,749,900	\$1,749,900	\$5,833,000
Billable Work Order	Account Services	\$10,000	\$0	\$0	\$0	\$10,000
Pretreatment Program	Specific	\$0	\$184,000	\$138,000	\$138,000	\$460,000
Collection Systems	Flow	\$0	\$1,390,000	\$0	\$0	\$1,390,000
Sewage Lift Stations	Flow	\$0	\$2,747,000	\$0	\$0	\$2,747,000
Railroad Canyon WWTP	Specific	\$0	\$696,800	\$522,600	\$522,600	\$1,742,000
Horsethief WWTP	Specific	\$0	\$476,400	\$357,300	\$357,300	\$1,191,000
SRRRA Contractual Agreement	Specific	\$0	\$542,400	\$406,800	\$406,800	\$1,356,000
Total Operating Expenses Allocation (\$)		\$8,464,000	\$8,369,800	\$3,174,600	\$3,174,600	\$23,183,000
<i>Operating Expenses Allocation (%)</i>		<i>36.5%</i>	<i>36.1%</i>	<i>13.7%</i>	<i>13.7%</i>	<i>100.0%</i>

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Other Funding includes other operating revenue, non-operating revenue, transfers, and reserve funding. All line items under "Other Funding" are allocated based on O&M percentages derived in Table 21 to allocate each line item to the cost components proportionately. Table 22 summarizes the percent allocation to the cost components, and Table 23 uses the percent allocations in Table 22 to allocate expenses in dollars to each cost component. Table 24 summarizes the FY 2024 revenue requirement derived in Table 19 by cost component.

Table 22: Other Funding to Cost Components (%)

Other Funding	Methodology / Allocation Basis	Cost Components				Total
		Account Services	Flow	BOD	TSS	
<i>Revenue Offsets</i>						
Service Revenues	O&M Allocation	36.5%	36.1%	13.7%	13.7%	100.0%
Non-Operating Revenues	O&M Allocation	36.5%	36.1%	13.7%	13.7%	100.0%
<i>Transfers</i>						
From/(To) Operating Reserve	O&M Allocation	36.5%	36.1%	13.7%	13.7%	100.0%
From/(To) Sewer Replacement	O&M Allocation	36.5%	36.1%	13.7%	13.7%	100.0%
From Misc. Non-Op Revenue	O&M Allocation	36.5%	36.1%	13.7%	13.7%	100.0%
Debt Service	O&M Allocation	36.5%	36.1%	13.7%	13.7%	100.0%
Transfers Out	O&M Allocation	36.5%	36.1%	13.7%	13.7%	100.0%
<i>Adjustments</i>						
CIP / Reserve Funding	O&M Allocation	36.5%	36.1%	13.7%	13.7%	100.0%
Adjustment for Mid-Year Increase	O&M Allocation	36.5%	36.1%	13.7%	13.7%	100.0%

Table 23: Other Funding to Cost Components (\$)

Other Funding	Methodology / Allocation Basis	Cost Components				Total
		Account Services	Flow	BOD	TSS	
<i>Revenue Offsets</i>						
Service Revenues	O&M Allocation	(\$183,278)	(\$181,238)	(\$68,742)	(\$68,742)	(\$502,000)
Non-Operating Revenues	O&M Allocation	(\$743,699)	(\$735,422)	(\$278,940)	(\$278,940)	(\$2,037,000)
<i>Transfers</i>						
From/(To) Operating Reserve	O&M Allocation	\$271,787	\$268,763	\$101,940	\$101,940	\$744,429
From/(To) Sewer Replacement	O&M Allocation	\$2,940,111	\$2,907,389	\$1,102,750	\$1,102,750	\$8,053,000
From Misc. Non-Op Revenue	O&M Allocation	(\$885,356)	(\$875,502)	(\$332,071)	(\$332,071)	(\$2,425,000)
Debt Service	O&M Allocation	\$1,580,132	\$1,562,546	\$592,661	\$592,661	\$4,328,000
Transfers Out	O&M Allocation	\$364,730	\$360,671	\$136,800	\$136,800	\$999,000
<i>Adjustments</i>						
CIP / Reserve Funding	O&M Allocation	(\$737,284)	(\$729,078)	(\$276,534)	(\$276,534)	(\$2,019,429)
Adjustment for Mid-Year Increase	O&M Allocation	\$476,449	\$471,146	\$178,702	\$178,702	\$1,305,000
Total Other Funding Allocation (\$)		\$3,083,593	\$3,049,275	\$1,156,566	\$1,156,566	\$8,446,000

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Table 24: FY 2024 Cost-of-Service Requirements by Cost Component

Revenue Requirement	Account Services	Flow	BOD	TSS	Total
Operating Expenses Table 21	\$8,464,000	\$8,369,800	\$3,174,600	\$3,174,600	\$23,183,000
Other Funding Table 23	\$3,083,593	\$3,049,275	\$1,156,566	\$1,156,566	\$8,446,000
COS Requirements	\$11,547,593	\$11,419,075	\$4,331,166	\$4,331,166	\$31,629,000

Rate Design

Develop Units of Service

Residential customer flows were projected using the FY 2023 winter average water use per account for December and January. FY 2023 was an unusually wet year in terms of precipitation and December and January had the lowest total water use for the fiscal year. This should correlate to reduced outdoor water use during these months. The indoor water budget for each account was then applied as a cap to the winter average water use for each account to eliminate outdoor usage from our analysis and to determine the total projected flows from residential customers. The result of the FY 2023 Winter Average with the Indoor Budget cap is shown in Table 25.

Table 25: Residential Projected Flows (HCF)

Customer Class	FY 2023 Winter Average w/ Indoor Budget Cap (HCF)
Residential	
Single Family	2,690,529
Multifamily	293,812
Subtotal Residential	2,984,341

Non-residential customer flows were determined by applying flow return factors to the non-residential customer class water use, equal to 90%, based on our review of the monthly flows during wet rainy periods and what was treated at the wastewater plants. Table 26 derives the amount of projected flow generated by non-residential customers, which is used for allocating a proportionate share of costs to the non-residential customer classes.

Table 26: Non-Residential Projected Flows (HCF)

Customer Class	Non-Residential Water Usage (HCF) [A]	Non-Residential Flow Return Factor [B]	Projected Flow (HCF) [C] = A x B
Non-Residential			
Commercial II	187,614	90.0%	168,853
Commercial III	74,219	90.0%	66,797
Commercial IV	119,457	90.0%	107,511
Institutional	18,834	90.0%	16,951
Schools	42,205	90.0%	37,985
Subtotal Non-Residential	442,329		398,096

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Unit rates for the cost components are derived by identifying the units of service for each cost component (distribution basis). The distribution basis varies by cost component and includes billable units (total accounts/dwelling units), occupancy, and projected flow, weighted BOD, and weighted TSS. Table 27 summarizes the fixed units of service, which includes total residential occupancies. The District requests occupancy from all new customers, when opening an account, for determining each account’s indoor water budget for its tiered water rates. This same information is then used for wastewater as each pph generates wastewater flow. Table 28 summarizes the variable units of service. Strength concentrations are weighted by total flow in Million Gallons (MG) to develop BOD units of service (Weighted BOD) and TSS units of service (Weighted TSS). The BOD and TSS strength loading factors in parts per million (ppm), are from the SWRCB and represent the highest commercial use type within each commercial category (Commercial II = Bars, Commercial III = Hotel/Motel, and Commercial IV = Restaurant). Table 29 summarizes all the annual units of service for each cost component.

Table 27: Fixed Units of Service

Annual Billing Units		
Customer Class	Billing Units	Annual Billing Units
	[A]	[B] = A x 12
Residential		
Single Family	37,059	444,708
Multifamily	3,395	40,740
Subtotal Residential	40,454	485,448
Non-Residential		
Commercial II	587	7,044
Commercial III	108	1,296
Commercial IV	184	2,208
Institutional	92	1,104
Schools	37	444
Subtotal Non-Residential	1,008	12,096
Total	41,462	497,544
Annual Occupancy		
Customer Class	Occupancy	Annual Occupancy
	[A]	[B] = A x 12
Single Family	142,078	1,704,936
Multifamily	15,686	188,232
Total	157,764	1,893,168

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Table 28: Variable Units of Service

Annual Variable Units of Service								
Customer Class	Non-Residential Water Usage (HCF)	Non-Residential Flow Return Factor	Projected Flow (HCF)	BOD (ppm)	TSS (ppm)	Conversion Factor (HCF to MG)	Weighted BOD	Weighted TSS
	[A]	[B]	[C] = A x B	[D]	[E]	[F]	[G] = CxDxF	[H] = CxExF
Residential								
Single Family			2,690,529	175	175	0.075%	352,214	352,214
Multifamily			293,812	175	175	0.075%	38,463	38,463
Subtotal Residential			2,984,341				390,676	390,676
Non-Residential								
Commercial II	187,614	90.0%	168,853	200	200	0.075%	25,262	25,262
Commercial III	74,219	90.0%	66,797	310	120	0.075%	15,490	5,996
Commercial IV	119,457	90.0%	107,511	1,000	600	0.075%	80,424	48,254
Institutional	18,834	90.0%	16,951	130	100	0.075%	1,648	1,268
Schools	42,205	90.0%	37,985	130	100	0.075%	3,694	2,841
Subtotal Non-Residential	442,329		398,096				126,518	83,622
Total	442,329		3,382,437				517,194	474,298

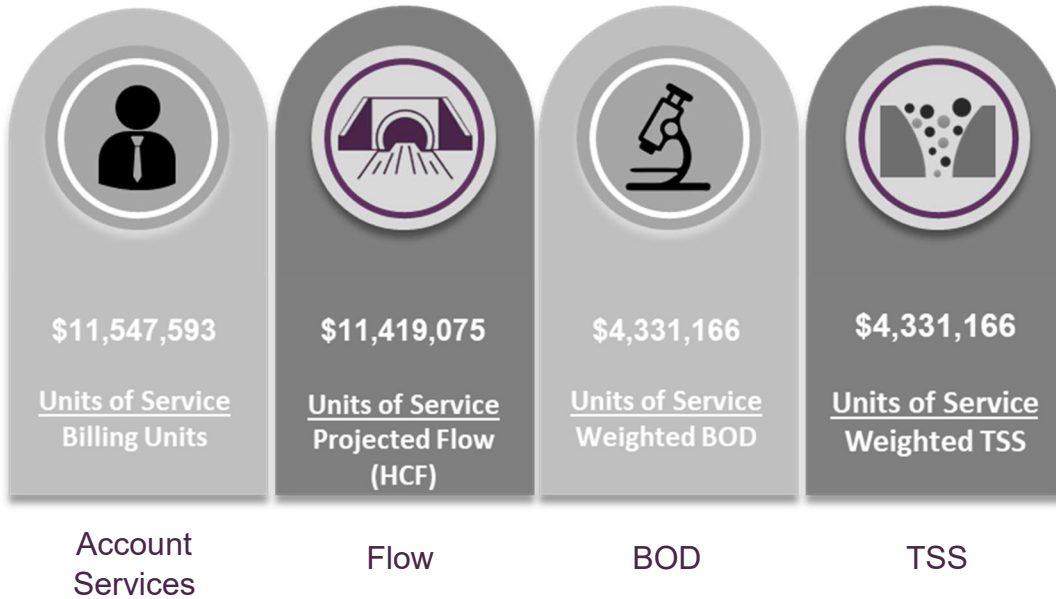
Table 29: Annual Units of Service

Customer Class	Annual Billing Units	Annual Occupancy	Projected Flow (HCF)	Weighted BOD	Weighted TSS
Residential	485,448	1,893,168	2,984,341	390,676	390,676
Commercial II	7,044	0	168,853	25,262	25,262
Commercial III	1,296	0	66,797	15,490	5,996
Commercial IV	2,208	0	107,511	80,424	48,254
Institutional	1,104	0	16,951	1,648	1,268
Schools	444	0	37,985	3,694	2,841
Total	497,544	1,893,168	3,382,437	517,194	474,298

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With the units of service shown in Table 28, the distribution basis can be identified for each cost component. The total revenue requirements by cost component from Table 24 is shown in Figure 9 with the corresponding units of service.

Figure 9: Distribution Basis and Units of Service by Cost Component



Allocate to Customer Class

Using the FY 2024 revenue requirements, the cost-of-service allocates expenses to customer classes based on the service demands that each place on the system (cost causation). Using this approach provides a clear connection between costs incurred and the proportionate share attributable to each customer class. When designing rates, the most critical component is to connect costs to the proposed rates, resulting in a cost-based rate structure in compliance with Proposition 218. In the previous section, costs were summarized by expense category and allocated to cost components based on how each cost is incurred. The next step in designing rates is to allocate each cost component to customers in relation to their use of the system and facilities. This ensures that each customer proportionately shares in the financial obligation of the wastewater utility. For the following unit rate computations, unit rates were rounded up to the nearest penny.

Fixed Cost Recovery

Account Services

Account Services costs are spread equally across all billable units over 12 months. Therefore, the revenue requirement for Account Services is apportioned based on the annual billing units to determine the monthly unit cost-of-service shown in Table 30.

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Table 30: FY 2024 Account Services Monthly Unit Rate

Account Services Component Unit Rate	
Revenue Requirement	\$11,547,593
÷ Annual Billing Units	497,544
Monthly Unit Rate	\$23.21

Variable Cost Recovery

Flow

Flow is a function of total volume of influent conveyed through the collection system and pumped through the treatment plants. Therefore, the revenue requirement for Flow is apportioned to each customer class based on their percentage of the total projected flow, as summarized in Table 31.

Table 31: FY 2024 Flow Allocation by Customer Class

Customer Class	Projected Flow (HCF)	% Allocation	Revenue Requirement
	[A]	[B] = A as a %	[C] = \$11,419,075 x B
Residential	2,984,341	88.2%	\$10,075,106
Commercial II	168,853	5.0%	\$570,045
Commercial III	66,797	2.0%	\$225,506
Commercial IV	107,511	3.2%	\$362,957
Institutional	16,951	0.5%	\$57,225
Schools	37,985	1.1%	\$128,235
Total	3,382,437	100%	\$11,419,075

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BOD

BOD costs relate to the treatment process of breaking down organic material in wastewater. Higher BOD strengths require increased costs and longer periods of treatment time to dilute the high levels of BOD prior to discharging effluent into waterways. Therefore, the revenue requirement for BOD is apportioned based on Weighted BOD for each customer class, as shown in Table 32.

Table 32: FY 2024 BOD Allocation by Customer Class

Customer Class	Weighted BOD [A]	% Allocation [B] = A as a %	Revenue Requirement [C] = \$4,331,166 x B
Residential	390,676	75.5%	\$3,271,660
Commercial II	25,262	4.9%	\$211,553
Commercial III	15,490	3.0%	\$129,718
Commercial IV	80,424	15.6%	\$673,497
Institutional	1,648	0.3%	\$13,804
Schools	3,694	0.7%	\$30,934
Total	517,194	100%	\$4,331,166

TSS

TSS costs relate to the treatment process of removing solids from wastewater through settling, screening, and filtering. Higher TSS strengths require increased costs and additional filtration to treat and remove the high levels of TSS prior to discharging effluent into waterways. Therefore, the revenue requirement for TSS is apportioned based on Weighted TSS for each customer class, as shown in Table 33.

Table 33: FY 2024 TSS Allocation by Customer Class

Customer Class	Weighted TSS [A]	% Allocation [B] = A as a %	Revenue Requirement [C] = \$4,331,166 x B
Residential	390,676	82.4%	\$3,567,553
Commercial II	25,262	5.3%	\$230,686
Commercial III	5,996	1.3%	\$54,755
Commercial IV	48,254	10.2%	\$440,646
Institutional	1,268	0.3%	\$11,579
Schools	2,841	0.6%	\$25,947
Total	474,298	100%	\$4,331,166

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Collectively, the total allocation of costs associated with Account Services, Flow, BOD and TSS (Total Revenue Requirement) derives the cost of providing service to each customer class. Table 34 summarizes the combined revenue requirement by customer class.

Table 34: FY 2024 Total Revenue Requirement by Customer Class

Customer Class	Account Services	Flow	BOD	TSS	Allocated Revenue Requirement
Residential	\$11,266,855	\$10,075,106	\$3,271,660	\$3,567,553	\$28,181,174
Commercial II	\$163,486	\$570,045	\$211,553	\$230,686	\$1,175,770
Commercial III	\$30,079	\$225,506	\$129,718	\$54,755	\$440,059
Commercial IV	\$51,246	\$362,957	\$673,497	\$440,646	\$1,528,346
Institutional	\$25,623	\$57,225	\$13,804	\$11,579	\$108,231
Schools	\$10,305	\$128,235	\$30,934	\$25,947	\$195,421
Total	\$11,547,593	\$11,419,075	\$4,331,166	\$4,331,166	\$31,629,000

Each account is charged a monthly fixed amount for Account Services as shown in Table 35.

Table 35: FY 2024 Monthly Fixed Charge

Customer Class	Annual Billing Units [A]	Account Services [B]	Total Monthly Fixed Charge [C] = B / A
Residential	485,448	\$11,266,855	\$23.21
Commercial II	7,044	\$163,486	\$23.21
Commercial III	1,296	\$30,079	\$23.21
Commercial IV	2,208	\$51,246	\$23.21
Institutional	1,104	\$25,623	\$23.21
Schools	444	\$10,305	\$23.21
Total	497,544	\$11,547,593	

Residential accounts are charged a commodity rate based on the reported number of people living in their household (PPH) as each occupant may generate flow and ensures equity between different household sizes based on indoor water budget data maintained by the District. The variable rate is derived by summing the variable revenue requirements of Flow, BOD, and TSS and dividing by the annual occupancy (Table 27) as shown in Table 36.

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Table 36: FY 2024 Residential Variable Rates

Customer Class	Annual Occupancy [A] <i>Table 27</i>	Flow [B] <i>Table 34</i>	BOD [C] <i>Table 34</i>	TSS [D] <i>Table 34</i>	Total Variable Cost [E] = B+C+D	Total Variable Rate [F] = E / A
Residential	1,893,168	\$10,075,106	\$3,271,660	\$3,567,553	\$16,914,319	\$8.94

Non-residential accounts are charged a commodity rate that varies by class. Variable rates are derived for the variable components of Flow, BOD, and TSS by dividing the total allocated cost by total water usage (Table 26) as wastewater flows are not metered. Table 37 derives the variable rates for non-residential customers.

Table 37: FY 2024 Non-Residential Variable Rates

Customer Class	Non-Residential Water Usage (HCF) [A] <i>Table 26</i>	Flow [B] <i>Table 34</i>	BOD [C] <i>Table 34</i>	TSS [D] <i>Table 34</i>	Flow [E] = B / A	BOD [F] = C / A	TSS [G] = D / A	Total Variable Rate [H] = E+F+G
Commercial II	187,614	\$570,045	\$211,553	\$230,686	\$3.04	\$1.13	\$1.23	\$5.40
Commercial III	74,219	\$225,506	\$129,718	\$54,755	\$3.04	\$1.75	\$0.74	\$5.53
Commercial IV	119,457	\$362,957	\$673,497	\$440,646	\$3.04	\$5.64	\$3.69	\$12.37
Institutional	18,834	\$57,225	\$13,804	\$11,579	\$3.04	\$0.74	\$0.62	\$4.40
Schools	42,205	\$128,235	\$30,934	\$25,947	\$3.04	\$0.74	\$0.62	\$4.40
<i>Total</i>	442,329	\$1,343,969	\$1,059,506	\$763,613				

Cost-Based Rates

Cost-of-Service and Rate Summary

The methods taken to apportion costs based upon customer class in this comprehensive cost-of-service analysis and rate development meet the requirements of Proposition 218 and identify the cost components that make up the proposed wastewater fixed charges and variable rates. Proposition 218 requires the following conditions:

1. An agency cannot collect revenue beyond what is necessary to provide service.
The long-term financial plan identifies the District's revenue requirements for the wastewater utility, including operating expenses, capital replacement funding, debt, and reserves.
2. Revenues derived by the charge shall not be used for any other purpose other than that for which the charge was imposed.
The District's wastewater utility is analyzed as a separate business enterprise to track revenues and expenses and do not fund services other than those necessary for the provision of wastewater.
3. The amount of the fee may not exceed the proportional cost-of-service for the parcel.
The comprehensive cost-of-service analysis, updated fixed charges, and variable rates reflect each customer's fair share of wastewater costs. Through this updated analysis, each customer will pay the proportional cost of providing service to that parcel.
4. No charge may be imposed for a service unless that service is actually used or immediately available to the owner of a property.
Only properties that are actually receiving utility service or are currently connected to the wastewater system rendering service immediately available to them are required to pay the fixed and variable charges described in this study.
5. A written notice of the proposed charge shall be mailed to the record owner of each parcel at least 45 days prior to the public hearing.
Notices were mailed to each affected parcel owner and non-owner customers of record responsible for paying the wastewater bills at least 45 days prior to the November 9, 2023, Public Hearing.

The proposed wastewater 4-year rate schedules (FY 2024 through FY 2027) are shown in the following section. If a majority protest does not exist at the November 9th Public Hearing, the District Board may adopt the rates with an effective date of January 1, 2024, with annual increases effective each July 1 beginning July 1, 2025, through and including July 1, 2027.

Rate Schedules

Table 38 and Table 39 provide the four-year wastewater rate schedule over the Rate Setting Period for monthly fixed charges and variable rates. For FY 2025 through FY 2027, the revenue adjustments are applied across the board to the cost-of-service rates derived for FY 2024.

Table 38: Wastewater Proposed Fixed Charges

Fixed Charges (\$/Month)				
Revenue Adjustment		9.0%	8.5%	8.5%
Customer Class	FY 2024	FY 2025	FY 2026	FY 2027
Residential	\$23.21	\$25.30	\$27.46	\$29.80
Commercial II	\$23.21	\$25.30	\$27.46	\$29.80
Commercial III	\$23.21	\$25.30	\$27.46	\$29.80
Commercial IV	\$23.21	\$25.30	\$27.46	\$29.80
Institutional	\$23.21	\$25.30	\$27.46	\$29.80
Schools	\$23.21	\$25.30	\$27.46	\$29.80

Table 39: Wastewater Proposed Variable Rates

Variable Rates (\$/PPH) or (\$/HCF)					
Revenue Adjustment		9.0%	8.5%	8.5%	
Customer Class		FY 2024	FY 2025	FY 2026	FY 2027
Residential	(\$/PPH)	\$8.94	\$9.75	\$10.58	\$11.48
Commercial II	(\$/HCF)	\$5.40	\$5.89	\$6.40	\$6.95
Commercial III	(\$/HCF)	\$5.53	\$6.03	\$6.55	\$7.11
Commercial IV	(\$/HCF)	\$12.37	\$13.49	\$14.64	\$15.89
Institutional	(\$/HCF)	\$4.40	\$4.80	\$5.21	\$5.66
Schools	(\$/HCF)	\$4.40	\$4.80	\$5.21	\$5.66