



SUNNYSLOPE COUNTY WATER DISTRICT

Water, Wastewater and Capacity Fee Rate Study

DRAFT REPORT / MAY 21, 2024



May 21, 2024

Mr. Drew Lander
General Manager
Sunnyslope County Water District
3570 Airline Hwy
Hollister, CA 95023

Subject: Water and Wastewater Rate Study Report - DRAFT

Dear Mr. Lander:

Raftelis is pleased to provide this Water and Wastewater Rate Study report for the Sunnyslope County Water District (District) to address current financial challenges the District is facing and to establish water and wastewater rates that are equitable and align with Proposition 218.

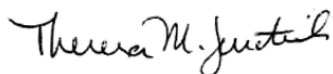
The major objectives of the study include the following:

- Develop financial plans for the water and wastewater enterprises to ensure financial sufficiency, meet operation and maintenance (O&M) costs, ensure sufficient funding for capital replacement and refurbishment (R&R) needs, and improve the financial health of the enterprises
- Develop a cost-of-service analysis for both enterprises
- Review and update current rate structures for the water and wastewater enterprises

This report summarizes the key findings and recommendations related to the development of the financial plans for the water and wastewater enterprises and the development of the updated water and wastewater rates.

It has been a pleasure working with you, and we thank you and the District staff for the support provided during the course of this study.

Sincerely,

A handwritten signature in blue ink that reads 'Theresa M. Jurotich'.

Theresa Jurotich, P.E., PMP
Manager

A handwritten signature in blue ink that reads 'Sudhir Pardiwala'.

Sudhir Pardiwala, PE
Executive Vice President

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1. Executive Summary

1.1. Study Background

In 2022, the Sunnyslope County Water District (District) engaged Raftelis to conduct a Water and Wastewater Rate Study to develop solvent financial plans as well as design rates for the water and wastewater systems. The District's water system is operating in an environment where water revenues from rates will soon be outpaced by water system operating and debt expenditures, caused primarily by significant capital expenditures for necessary upgrades to the water system. For the water system, the increase in operating expenditures from the Lessalt Water Treatment Plant and West Hills Surface Water Treatment Plant, as well as raw water costs, represent the most significant pressure on net revenues. The District last conducted a comprehensive water rate study in 2012 and the rates were last updated in December 2018.

The major objectives of the study include the following:

- Develop financial plans for the water and wastewater systems to ensure financial sufficiency, meet operation and maintenance (O&M) costs, ensure sufficient funding for capital replacement and refurbishment (R&R) needs, and improve the financial health of the enterprises
- Review current rate structures for the water and wastewater enterprises
- Develop a cost-of-service analysis for each enterprise
- Develop fair and equitable water and wastewater rates

1.2. Rate Study Process

The study is informed by the District's policy objectives, the current water and wastewater system rates, and the legal requirements in California (namely, Proposition 218). The resulting cost-of-service analyses and rate design processes consider all these factors and follows four key steps, outlined below, to derive proposed rates that fulfill the District's policy objectives, meet industry standards, and align with Proposition 218.

This study was also conducted using industry-standard principles outlined by the American Water Works Association's Manual M1 and the Water Environment Federation's Financing and Charges for Wastewater Systems. The overall process outlined below applies to the development of both water and wastewater rates.

1. **Financial Plan:** Develop cash flow projections for the Water and Wastewater Enterprise to determine the amount of revenue required from water and wastewater rates to fully recover the costs of providing service.
2. **Cost-of-Service Analysis:** Allocate total costs to system components, and then to various user classes, based on customers' unique characteristics.
3. **Rate Design:** Develop rates for different customers classes and sub-classes, based on cost of service, that generate sufficient revenues to recover costs, and communicate policy preferences of the agency.
4. **Report Preparation:** Develop a study report to document the underlying inputs, assumptions, analyses, and results of the rate study.
5. **Rate Adoption:** Proposed rates may be adopted by the District only after holding a public hearing in accordance with Proposition 218 requirements.

1.3. Proposed Water Financial Plan

Raftelis conducted a status quo cash flow analysis to evaluate whether existing water rates adequately fund the Water Enterprise's various expenses over a nine-year planning period. Annual projections of revenues, O&M expenses, debt service payments, and capital expenditures through FY 2032 were developed with District staff. Raftelis projects that with no rate increases over the study period, the Water Enterprise will run out of reserves in FY 2026. The exercise demonstrates a clear need for revenue adjustments (i.e., gross water rate revenue increases relative to existing rate revenues). Table 1-1 shows the proposed revenue adjustments for the rate-setting period.

Table 1-1: Proposed Water Revenue Adjustments

Effective Date	Revenue Adjustment
1-Aug-24	15.0%
1-Jul-25	8.0%
1-Jul-26	8.0%
1-Jul-27	8.0%
1-Jul-28	8.0%

Key factors influencing the need for proposed revenue adjustments include:

- **Cost inflation:** Operating costs continue to increase year-over-year due to inflationary pressures. The San Francisco-Oakland-Hayward Consumer Price Index has increased almost 19 percent since the District last increased rates.
- **Raw water cost increases:** Raw water costs are increasing higher than the rate of general inflation
- **Planned capital expenditures:** capital improvement plan project expenditures through FY 2032

Figure 1-1 shows the proposed capital improvement plan over the study period. Capital projects are assumed to be funded by a mix of revenue bonds, grants, and rate revenue. The use of debt allows for lower rate increases over the long-term by financing significant capital reinvestment and repaying over a longer horizon. The debt issues included in the financing shown below (teal bars) include proceeds of \$3.5 million in FY 2026 and \$4.25 million in FY 2030. Almost \$1.1 million in grant funding is presumed for two well projects (bright blue bars).

Figure 1-1: Water Capital Improvement Plan

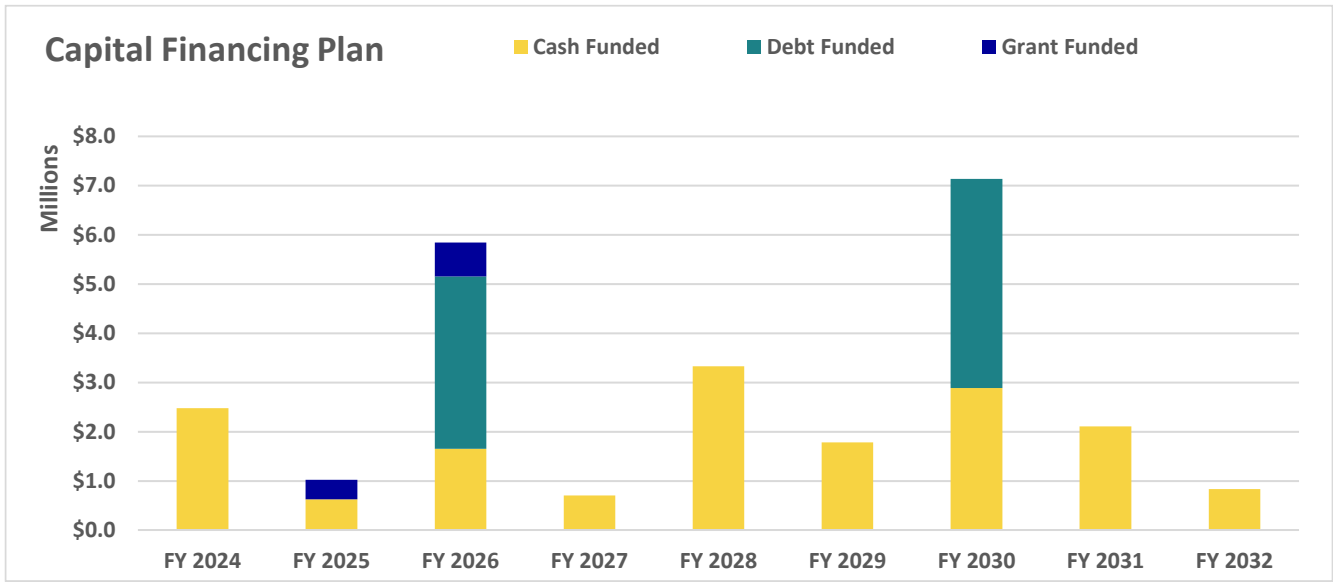


Figure 1-2 shows the proposed versus status quo Water Enterprise operating financial plan. Revenues under the proposed financial plan and status quo financial plan are represented by the black and light blue solid lines, respectively. Revenue requirements including O&M expenses, debt service, and capital projects are represented by the various stacked bars. Revenue adjustments are required to generate additional revenue to recover O&M expenses and debt service payments over the study period while maintaining minimum debt coverage and reserve targets.

Figure 1-2: Proposed vs. Status Quo Water Financial Plan

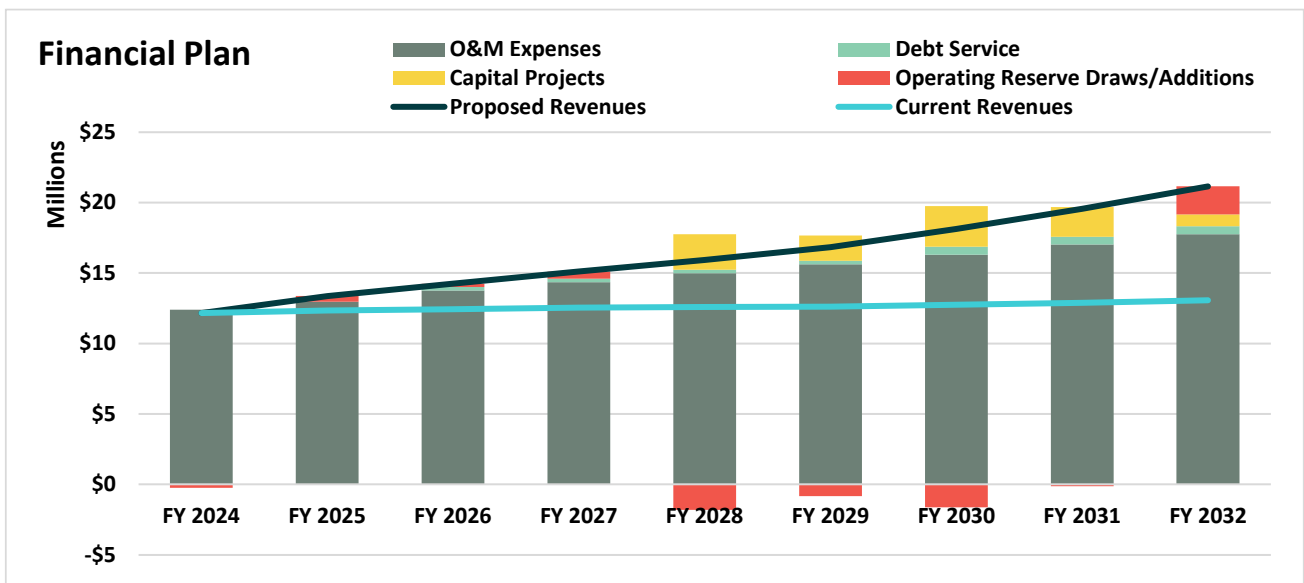


Figure 1-3 shows the Water Enterprise’s projected fiscal year-end balance under the proposed financial plan. As a result of increasing revenues by the levels shown on Table 1-1, the water fund balance is slowly drawn down to target minimums by FY 2029, the end of the rate-setting period.

Figure 1-3: Proposed Water Financial Plan – Projected Ending Balance

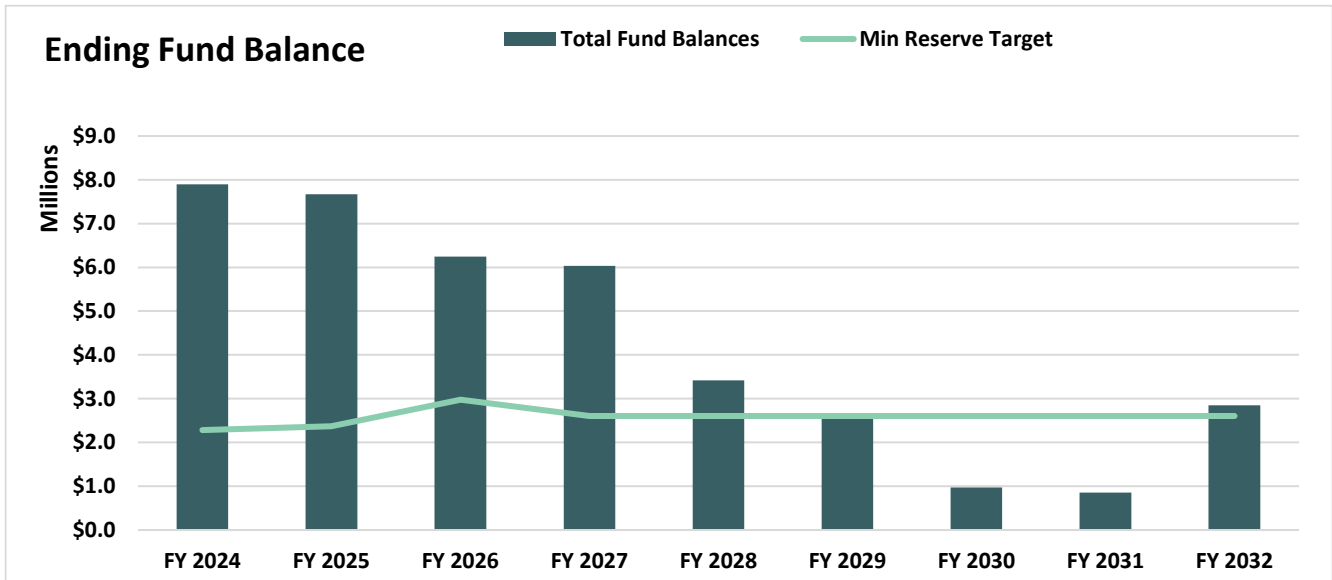
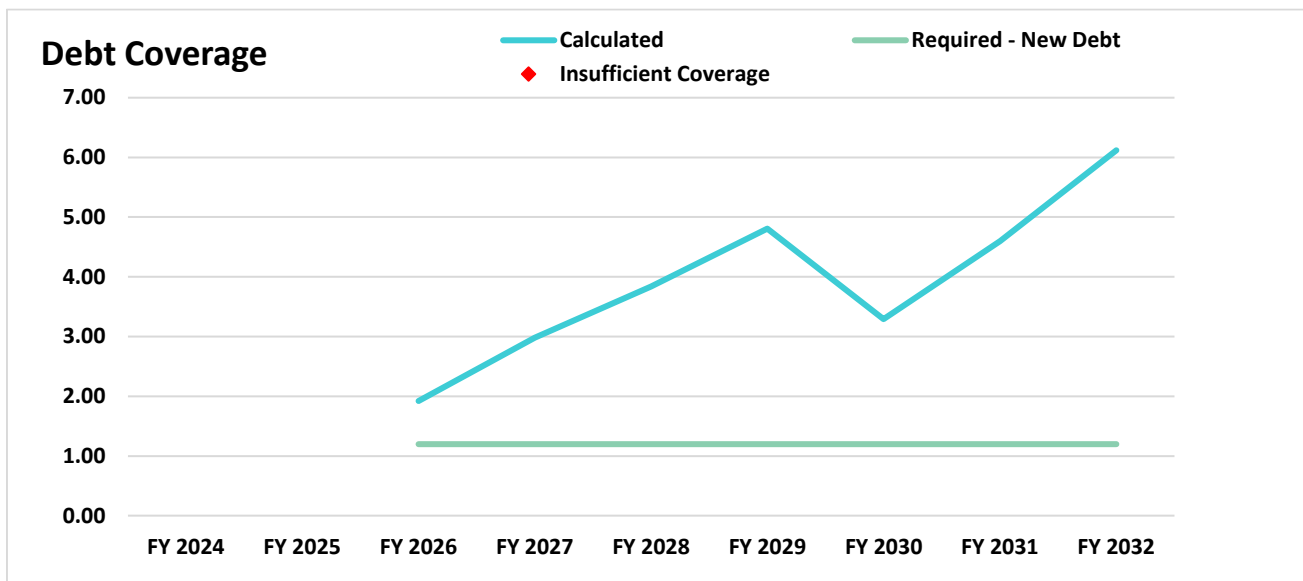


Figure 1 4 displays the debt service coverage for the new bond/loan. Debt coverage is expected to decline in FY 2030 due to a second debt issuance to finance the ASR Pilot project. This demonstrates the need for revenue adjustments early in the study period to ensure sufficient debt capacity with which to finance planned capital. Failure to meet debt service coverage results in a technical default, which without foreseeable remedial action such as implementing rate increases, could result in a downgrade of credit rating, higher costs in future debt issuances, or a denial of credit. The proposed revenue adjustments are sufficient to satisfy debt coverage requirements.

Figure 1-4: Proposed Water Financial Plan – Projected Debt Coverage



1.4. Proposed Water Rates

The District’s water rates and charges comprise a fixed monthly charge and a volumetric charge. Private fire protection is charged monthly based on fire connection size. The District’s current single-family residential

rate design is a three-tiered inclining water rate structure. Non-single family residential and construction water each have a uniform rate. The District also has two different commodity charges: one for customers inside San Benito County Water District (SBCWD) Zone 3 and one for those outside SBCWD Zone 3. All customers are currently inside Improvement District No. 1.

The proposed rates maintain the fixed and volume charge structure but remove the outside SBCWD Zone 3 volumetric rate. All customers are subject to the same fixed charges based on meter size and the same volume charges depending on class. Table 1-2, Table 1-3, and Table 1-4 show the proposed 5-year schedule of water rates. FY 2025 reflects the cost-of-service analysis. Rates for FY 2026 and beyond equal the prior year rates multiplied by the revenue adjustment. Rates are rounded up to the nearest penny to ensure revenue sufficiency.

Table 1-2: Proposed 5-Year Monthly Water Service Charge Schedule

Monthly Service Charge	Current FY 2024	Proposed FY 2025	Proposed FY 2026	Proposed FY 2027	Proposed FY 2028	Proposed FY 2029
5/8"	\$32.54	\$36.21	\$41.65	\$44.99	\$48.59	\$52.48
3/4"	\$32.54	\$36.21	\$41.65	\$44.99	\$48.59	\$52.48
1"	\$32.54	\$36.21	\$41.65	\$44.99	\$48.59	\$52.48
1 1/2"	\$53.22	\$65.91	\$75.80	\$81.87	\$88.42	\$95.50
2"	\$78.02	\$101.55	\$116.79	\$126.14	\$136.24	\$147.14
3"	\$156.60	\$214.43	\$246.60	\$266.33	\$287.64	\$310.66
4"	\$272.39	\$380.77	\$437.89	\$472.93	\$510.77	\$551.64
6"	\$549.45	\$778.80	\$895.62	\$967.27	\$1,044.66	\$1,128.24
8"	\$1,004.35	\$1,669.92	\$1,920.41	\$2,074.05	\$2,239.98	\$2,419.18

Table 1-3: Proposed 5-Year Monthly Private Fireline Charge Schedule

Private Fireline Charges	Current FY 2024	Proposed FY 2025	Proposed FY 2026	Proposed FY 2027	Proposed FY 2028	Proposed FY 2029
1"	\$8.73	\$8.27	\$9.52	\$10.29	\$11.12	\$12.01
1 1/2"	--	\$11.62	\$13.37	\$14.44	\$15.60	\$16.85
2"	\$18.09	\$17.42	\$20.04	\$21.65	\$23.39	\$25.27
3"	--	\$38.21	\$43.95	\$47.47	\$51.27	\$55.38
4"	\$87.33	\$74.07	\$85.19	\$92.01	\$99.38	\$107.34
6"	\$130.98	\$202.77	\$233.19	\$251.85	\$272.00	\$293.76
8"	\$180.90	\$424.76	\$488.48	\$527.56	\$569.77	\$615.36

Table 1-4: Proposed 5-year Volume Charge Schedule, \$/hcf

Volume Charges	Current FY 2024	Proposed FY 2025	Proposed FY 2026	Proposed FY 2027	Proposed FY 2028	Proposed FY 2029
SFR						
Tier 1: First 1,000 cu ft	\$3.17	\$3.77	\$4.34	\$4.69	\$5.07	\$5.48
Tier 2: 1,100 - 2,000 cu ft	\$4.70	\$5.78	\$6.65	\$7.19	\$7.77	\$8.40
Tier 3: Over 2,100 cu ft	\$6.97	\$6.99	\$8.04	\$8.69	\$9.39	\$10.15
Non-SFR	\$4.22	\$5.09	\$5.86	\$6.33	\$6.84	\$7.39

1.5. Wastewater Summary

Raftelis conducted a status quo cash flow analysis to evaluate whether existing wastewater rates adequately fund the Wastewater Enterprise’s various expenses over a nine-year planning period. Annual projections of revenues, O&M expenses, debt service payments, and capital expenditures through FY 2032 were developed with District staff. While an immediate revenue adjustment is not needed, Raftelis recommends starting smaller revenue adjustments in FY 2028 to help mitigate possible larger revenue adjustments due solely to delaying adjustments. Table 1-5 shows the proposed revenue adjustments for the rate-setting period.

Table 1-5: Proposed Wastewater Revenue Adjustments

Effective Date	Revenue Adjustment
1-Aug-24	0.0%
1-Jul-25	0.0%
1-Jul-26	0.0%
1-Jul-27	3.0%
1-Jul-28	3.0%

Key factors influencing the need for proposed revenue adjustments include:

- Cost inflation: Operating costs continue to increase year over year due to inflationary pressures. The San Francisco-Oakland-Hayward Consumer Price Index has increased almost 19 percent since the District last increased rates.
- Planned capital expenditures: capital improvement plan project expenditures through FY 2032
- Draw down of reserves without any revenue adjustments

Figure 1-5 shows the proposed capital improvement plan over the study period. Capital projects are assumed to be funded by cash.

Figure 1-5: Wastewater Capital Improvement Plan

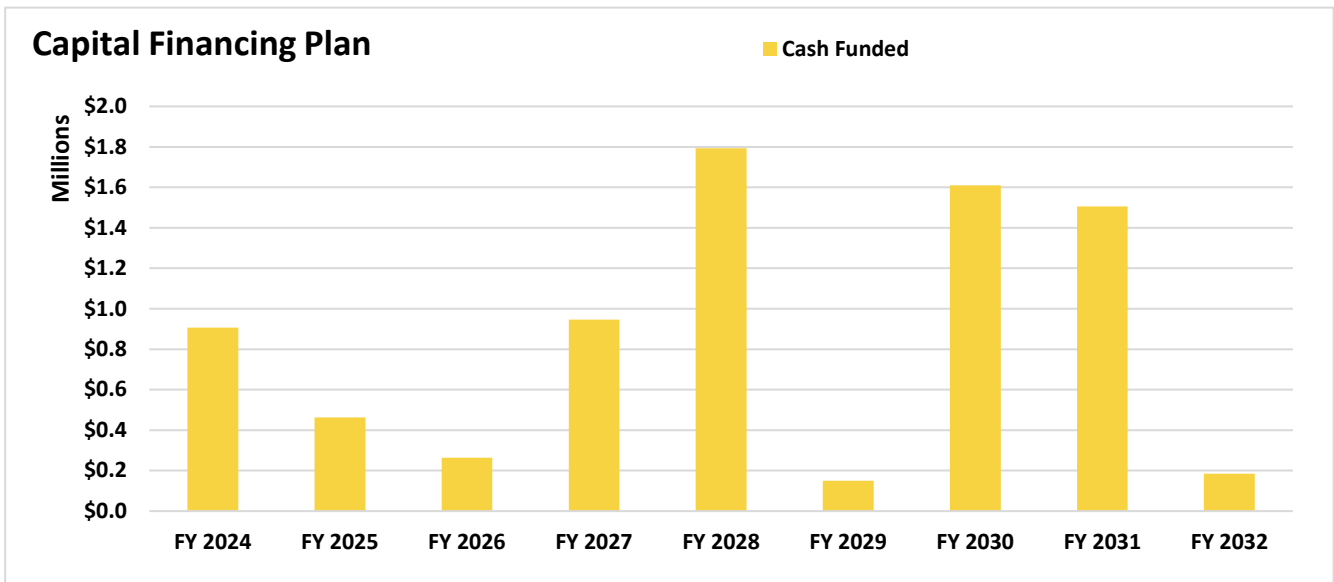


Figure 1-2 shows the proposed versus status quo Wastewater Enterprise operating financial plan. Revenues under the proposed financial plan and status quo financial plan are represented by the black and light blue solid lines, respectively. Revenue requirements including O&M expenses, debt service, and capital projects are represented by the various stacked bars. Revenue adjustments are recommended to generate additional revenue to recover O&M expenses and debt service payments over the study period while maintaining minimum debt coverage and reserve targets.

Figure 1-6: Proposed vs. Status Quo Wastewater Financial Plan

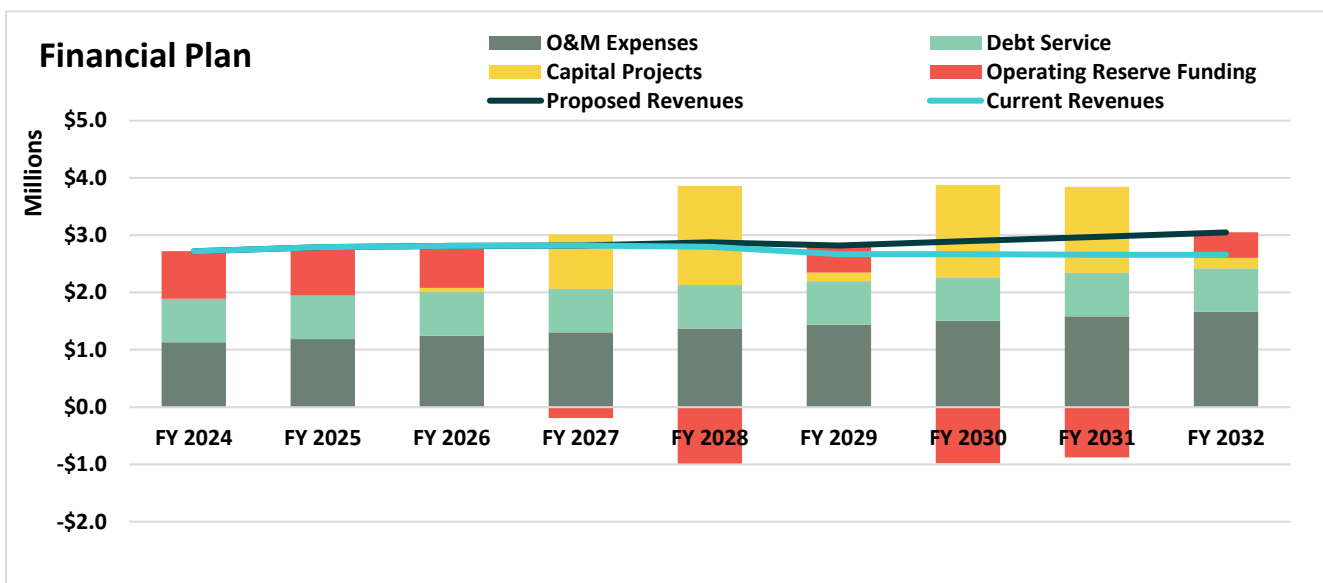


Figure 1-7 shows the Wastewater Enterprise’s projected fiscal year-ending balance under the proposed financial plan. As a result of increasing revenues to the level shown on Table 1-5, the wastewater fund balance is expected to stay above the minimum level.

Figure 1-7: Proposed Wastewater Financial Plan – Projected Ending Balance

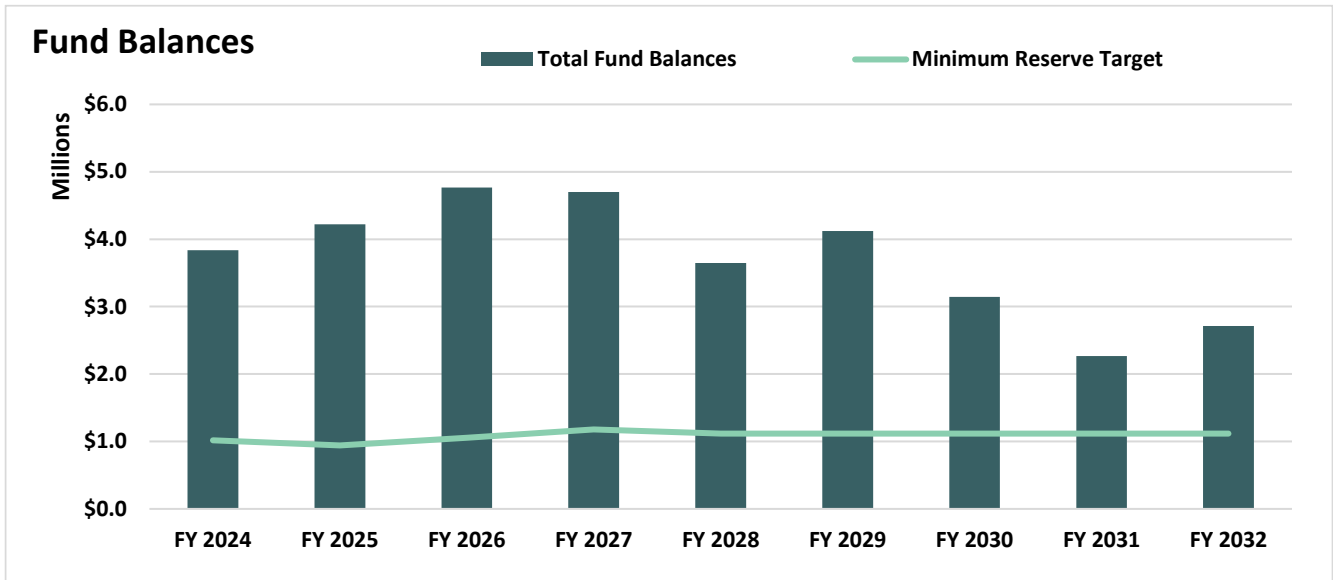
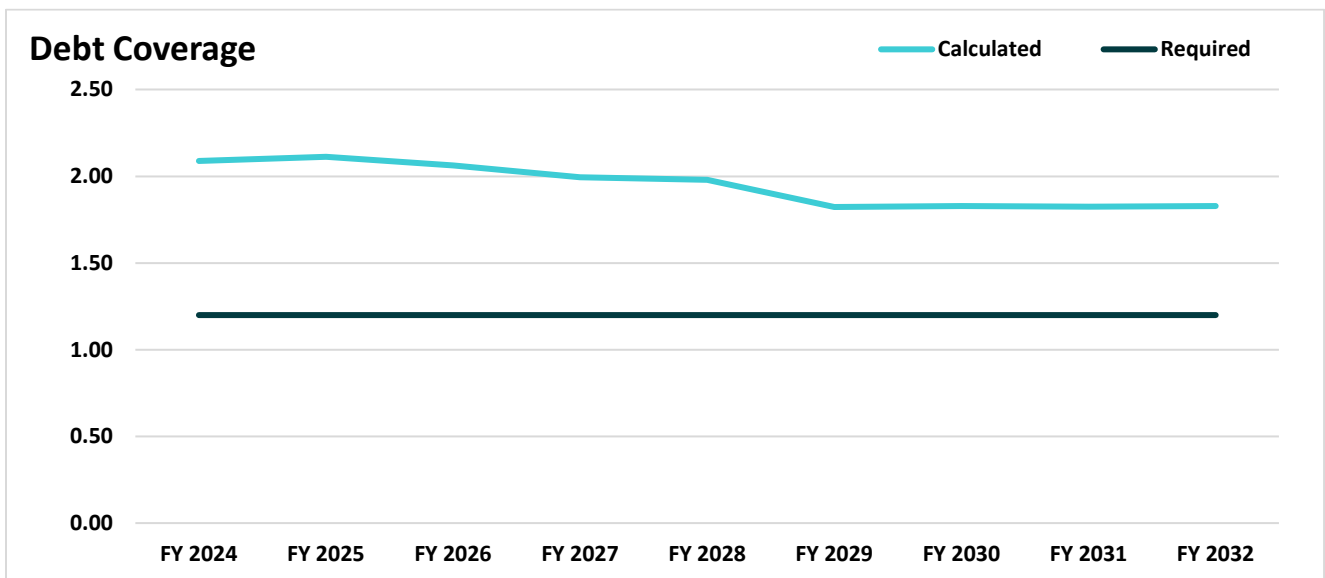


Figure 1-8 displays the debt service coverage ratio for the existing loan. The proposed revenue adjustments are sufficient to satisfy debt coverage requirements and are projected to level out the debt coverage in the later years. Failure to meet debt service coverage results in a technical default, which without foreseeable remedial action such as implementing rate increases, could result in a downgrade of credit rating, higher costs in future debt issuance, or a denial of credit.

Figure 1-8: Proposed WasteWater Financial Plan – Projected Debt Coverage



1.6. Proposed Wastewater Rates

The District’s current wastewater rates and charges comprise a fixed monthly charge per dwelling unit (du) and a consumption rate for residential customers and a consumption-only charge for all the remaining customer types. The consumption rate for residential customers is applied to each customers’ average winter

water consumption. The consumption rate for non-residential customers is applied to the billed water consumption.

Based on discussions with District staff, to meet the goal of simplifying the wastewater billing, the residential rate has been updated to be a flat monthly fee. Non-residential customs will continue to be billed on water consumption subject to a minimum charge equal to one multifamily unit. Table 1-6 presents the current and proposed rates.

Table 1-6: Proposed 5-Year Wastewater Service Charge Schedule

Customer Class	Current	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Effective Date		8/1/2024	7/1/2025	7/1/2026	7/1/2027	7/1/2028
Monthly Fixed, \$/mo/du						
Single Family	\$95.93/mo/du + \$5.64/hcf	\$137.25	\$137.25	\$137.25	\$141.37	\$145.62
Multifamily	\$72.98/mo/du + \$5.64/hcf	\$89.58	\$89.58	\$89.58	\$92.27	\$95.04
Volume Charge (1)						
Cottages, Motels, Trailer Parks, Laundries, etc.	\$9.20/hcf	\$18.11/hcf	\$18.11/hcf	\$18.11/hcf	\$18.66/hcf	\$19.22/hcf
Commercial and Industrial	\$12.14/hcf	\$23.77/hcf	\$23.77/hcf	\$23.77/hcf	\$24.49/hcf	\$25.23/hcf
Minimum Charge	--	\$89.58	\$89.58	\$89.58	\$92.27	\$95.04

(1) Proposed rates include a minimum charge.

2. Rate Setting Methodology

This study was conducted using industry-standard principles outlined by the American Water Works Association (AWWA) Manual M1 and Water Environment Federation (WEF) Manual of Practice No. 27. The process and approach Raftelis utilized in the study to determine water and wastewater rates is informed by the District's policy objectives, the current water and wastewater systems and rates, and the legal requirements in California (namely, Proposition 218). The resulting financial plans, cost-of-service analyses, and rate design process follows five key steps, outlined below, to determine proposed rates that fulfill the District's objectives, meet industry standards, and align with relevant regulations.

- **Financial Plan - Projections:** The first step is to develop a multi-year financial plan that projects the District's revenues, expenses, capital project financing, annual debt service, and reserve funding. The financial plan is used to determine the revenue adjustment, which allows the City to recover adequate revenues to fund expenses and reserves.
- **Financial Plan - Revenue Requirement Determination:** After completing the financial plan, the rate-making process begins by determining the revenue requirement for the test year, also known as the rate-setting year. The test year for this study is FY 2025. The revenue requirement should sufficiently fund the District's operating costs, annual debt service (including coverage requirements), capital expenditures, and reserve funding as projected based on the annual budget estimates.
- **Cost-of Service-Analysis:** The annual cost of providing water/wastewater service, or the revenue requirement, is then distributed to customer classes commensurate with their use of and burden on the water/wastewater system. A cost-of-service analysis involves the following steps:
 - **Functionalize costs** – the different components of the revenue requirement are categorized into functions such as supply, transmission/collection, storage, customer service, etc.
 - **Allocate to cost causation components** – the functionalized costs are then allocated to cost causation components such as supply, base delivery, peaking, etc. for water and collection, customer service, etc. for wastewater.
 - **Develop unit costs** – unit costs for each cost causation component are determined using units of service, such as total use, peaking units, equivalent meters, number of customers, etc., for each component.
 - **Distribute cost components** – the cost components are allocated to each customer class using the unit costs in proportion to their units of service (demand and burden on the system).

A water cost-of-service analysis considers both the average water demand and peak demand using best available data in the rate design process. Peaking costs are incurred during periods of peak consumption, most often coinciding with summer water use. There are additional capacity-related costs associated with designing, constructing, operating, maintaining, and replacing facilities to meet peak demand. Peaking imposes additional costs on a water utility and are used to determine the cost burden of peaking-related facilities.

- **Rate Design:** After allocating the revenue requirement to each customer class, the project team designs and calculates rates. Rates do more than simply recover costs; within the legal framework and industry standards, properly designed rates should support and optimize the District's policy objectives. Rates also act as a public information tool in communicating these policy objectives to customers. This process also includes a rate impact analysis and sample customer bill impacts.

- **Report Preparation and Rate Adoption:** The final step in a rate study is to develop the report in conjunction with the rate adoption process. The report documents the study results and presents the methodologies, rationale, justifications, and calculations used to determine the proposed rates.

Values shown in report tables and figures are rounded to the digit shown. Therefore, any manual reproduction of the calculations shown may not match the precise results displayed in the report.

3. Water Financial Plan

3.1. Water Assumptions

The study period for the rate study is from Fiscal Year (FY) 2024 to 2032. The rate setting period is FY 2025 – FY 2029. The District’s fiscal year starts July 1 of each year. Various types of assumptions and inputs were incorporated into this study. These assumptions were based on discussion with and/or direction from District staff, including projected accounts and annual growth rates in accounts, inflationary assumptions, and other miscellaneous assumptions. Table 3-1 presents the inflationary assumptions. The inflation factors for FY 2030 – FY 2032 are the same as shown for FY 2029. Additionally, the District has locked in higher interest rates on reserves in the near term. Therefore the financial plan uses 4 percent per year for interest through FY 2028, then drops to a conservative 1 percent per year. Table 3-2 shows the growth rate and water demand factor assumptions that were applied to the FY 2022 billing data. Demand in FY 2023 decreased from FY 2022 and is expected to return to a level similar to FY 2022 in FY 2024 and then is held constant.

Table 3-1: Inflation Factor Assumptions

Line Item	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029+
General	3%	3%	3%	3%	3%
Salary	6%	6%	6%	6%	6%
Benefits	6%	6%	6%	6%	6%
Utilities	4%	4%	4%	4%	4%
Capital	3%	3%	3%	3%	3%
Water Purchase	7%	15%	5%	5%	5%
Raw Water Power	4%	4%	4%	4%	4%
Chemicals	4%	4%	4%	4%	4%

Table 3-2: Account Growth Rate Assumptions and Water Demand Factor

Line Item	FY 2023	FY 2024	FY 2025+
Single Family Residential	5%	5%	0%
Non-Single Family	0%	0%	0%
Fire Line	0%	0%	0%
Hydrant	0%	0%	0%
Demand	90%	102%	100%

3.2. Water Financial Plan

The District owns and operates a water utility serving approximately 7,300 customers served by **five** groundwater wells owned and operated by the District. In addition, the District is provided its treated water supply by the Lessalt Surface Water Treatment Plant and West Hills Water Treatment Plant. Both facilities are shared between the City of Hollister and the District.

3.2.1. Projected Revenue

The District’s water rates and charges comprise a fixed monthly charge and a volumetric charge. Private fire protection is charged monthly based on fire connection size. The District’s current single-family residential rate design is a three-tiered inclining water rate structure. Non-single family residential customers have a uniform rate. The current rates are shown in Table 3-3. The District also has two different commodity charges one for customers inside San Benito County Water District (SBCWD) Zone 3 and those outside SBCWD Zone 3. All customers are currently inside Improvement District No. 1.

Table 3-3: Current Rates

Fixed Monthly Charges, \$/mo		
Meter Size	Water Meter	Private Fire Service
5/8"	\$32.54	\$8.73
3/4"	\$32.54	\$8.73
1"	\$32.54	\$8.73
1 1/2"	\$53.22	
2"	\$78.02	\$18.09
3"	\$156.60	
4"	\$272.39	\$87.33
6"	\$549.45	\$130.98
8"	\$1,004.35	\$180.90
Consumption Charge, \$/hcf		
Customer Class	Inside District & SBCWD Zone 3	Inside District & Outside SBCWD Zone 3
Single Family		
Tier 1: First 10 hcf	\$3.17	\$3.23
Tier 2: 11 - 20 hcf	\$4.70	\$4.76
Tier 3: > 20 hcf	\$6.97	\$7.03
Non Single-Family	\$4.22	\$4.28

Table 3-4 displays the projected revenues for FY 2024 – FY 2032 including the revenue from current rates and other operating and non-operating revenues. The District will receive compensation for operating the Lessalt and West Hills treatment plants from the City of Hollister; this is reflected in the “Revenues from Operating WTPs” line item on Table 3-4. The revenue numbers for the operations of the WTPs were provided by District staff.

Table 3-4: Revenues for FY 2024 – FY 2032 Under Existing Rates

Line Item	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Revenue from Current Rates	\$7,470,647	\$7,470,647	\$7,470,647	\$7,470,647	\$7,470,647
Revenues from Operating WTPs	\$4,261,000	\$4,388,830	\$4,520,495	\$4,656,110	\$4,795,793
Other Revenues	\$420,796	\$463,269	\$365,627	\$254,537	\$180,820
Total Revenues	\$12,152,443	\$12,322,746	\$12,356,769	\$12,381,294	\$12,447,260
Line Item	FY 2029	FY 2030	FY 2031	FY 2032	
Revenue from Current Rates	\$7,470,647	\$7,470,647	\$7,470,647	\$7,470,647	
Revenues from Operating WTPs	\$4,939,667	\$5,087,857	\$5,240,493	\$5,397,707	
Other Revenues	\$180,820	\$180,820	\$180,820	\$180,820	
Total Revenues	\$12,591,133	\$12,739,323	\$12,891,959	\$13,049,174	

3.2.2. Projected Operating and Maintenance Expenses

Table 3-5 displays total projected expenses for the study period. Expenses are projected to increase by an average of about 4 percent per year over the rate-setting period.

Table 3-5: O&M Expenses for FY 2023 – FY 2032

Line Item	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Cost of Goods(1)	\$2,660,460	\$2,819,233	\$2,987,506	\$3,165,849	\$3,354,866
Raw Water-Related	\$2,473,400	\$2,640,106	\$3,011,595	\$3,159,855	\$3,315,436
Operational Expenses	\$7,279,837	\$7,529,442	\$7,787,784	\$8,055,174	\$8,331,936
Non-Operating Expenses	-\$21,000	-\$21,630	-\$22,279	-\$22,947	-\$23,636
Total	\$12,392,697	\$12,967,151	\$13,764,605	\$14,357,931	\$14,978,603
Line Item	FY 2029	FY 2030	FY 2031	FY 2032	
Cost of Goods(1)	\$3,555,196	\$3,767,516	\$3,992,546	\$4,231,047	
Raw Water-Related	\$3,478,700	\$3,650,027	\$3,829,815	\$4,018,484	
Operational Expenses	\$8,618,406	\$8,914,930	\$9,221,868	\$9,539,594	
Non-Operating Expenses	-\$24,345	-\$25,075	-\$25,827	-\$26,602	
Total	\$15,627,956	\$16,307,397	\$17,018,402	\$17,762,524	

(1) Includes salaries and benefits.

3.2.3. Projected Capital Improvement Program

Table 3-6 presents the District's water capital improvement program. The program averages \$2.6 million per year over the study period, which includes an expansion of the West Hills water treatment plant in FY 2026. The West Hills expansion project and the ASR Pilot project are presumed to be debt financed. Two well projects are presumed to be 50 percent grant financed. Appendix A shows a listing of the currently planned water projects.

Table 3-6: Capital Expenses for FY 2023 – FY 2032

Line Item	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Water Supply & Treatment	\$0	\$0	\$3,384,675	\$191,008	\$151,938
Water Distribution	\$499,500	\$228,375	\$1,460,813	\$468,838	\$2,443,168
Water Irrigation System	\$360,000	\$787,500	\$981,225	\$0	\$607,753
Admin Capital - Water Portion	\$63,700	\$6,825	\$17,916	\$43,642	\$126,413
Total	\$923,200	\$1,022,700	\$5,844,628	\$703,489	\$3,329,272
Line Item	FY 2029	FY 2030	FY 2031	FY 2032	
Water Supply & Treatment	\$1,276,282	\$5,561,397	\$1,407,100	\$73,873	
Water Distribution	\$382,884	\$1,521,009	\$703,550	\$762,367	
Water Irrigation System	\$0	\$0	\$0	\$0	
Admin Capital - Water Portion	\$124,437	\$52,264	\$0	\$0	
Total	\$1,783,603	\$7,134,669	\$2,110,651	\$836,240	

3.2.4. Existing and Proposed Debt

The District currently has three debt tranches with SBCWD for the Lessalt and West Hills water treatment plants. Table 3-7 shows the District’s existing debt service. Capacity fee revenue has been set aside to pay this debt service; therefore, it will not impact the financial plan.

Table 3-7: Existing Debt Service

Line Item	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Tranche 1	\$395,215	\$395,215	\$395,215	\$395,215	\$395,215
Tranche 2	\$618,100	\$618,100	\$618,100	\$618,100	\$618,100
Tranche 3	\$171,357	\$171,357	\$171,357	\$171,357	\$171,357
Total	\$1,184,672	\$1,184,672	\$1,184,672	\$1,184,672	\$1,184,672
Line Item	FY 2029	FY 2030	FY 2031	FY 2032	
Tranche 1	\$395,215	\$395,215	\$395,215	\$395,215	
Tranche 2	\$618,100	\$618,100	\$618,100	\$618,100	
Tranche 3	\$171,357	\$171,357	\$128,518	\$0	
Total	\$1,184,672	\$1,184,672	\$1,141,832	\$1,013,315	

To minimize revenue adjustments, the financial plan proposes two loan issues. The first is \$3.5 million for the West Hills treatment plant expansion in FY 2026. The second is \$4.25 million in FY 2030 for the ASR Pilot project. The loan terms are presumed to be 3.5 percent over 20 years with a 1.5 percent cost of issuance. As the timing and cost of the expansion and pilot projects become more certain, the District should work with its financial advisor to determine the size, timing, and terms of any bond issue or loan. Table 3-8 shows the presumed annual debt service.

Table 3-8: Proposed Debt Service

Line Item	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
West Hills			\$250,014	\$250,014	\$250,014
ASR Pilot Project					
Total	\$0	\$0	\$250,014	\$250,014	\$250,014
Line Item	FY 2029	FY 2030	FY 2031	FY 2032	
West Hills	\$250,014	\$250,014	\$250,014	\$250,014	
ASR Pilot Project		\$303,588	\$303,588	\$303,588	
Total	\$250,014	\$553,602	\$553,602	\$553,602	

3.2.5. Reserve Targets

The District has several reserve funds, which are shown in Table 3-9 along with the minimum combined target level. This list does not include restricted debt service reserves, capacity fund reserves, and CalPERS reserves. The operating-related (i.e., not capital improvement) minimum targets are presumed to be split 65 percent to the water enterprise and 35 percent to the wastewater enterprise based on input from District staff.

Table 3-9: Reserve Funds and Combined Minimum Targets

Fund	Target
Capital Improvement (1)	50% of the 5-year average CIP
Rate Stabilization	Target minimum balance \$125,000 per June 2023 Board meeting
Drought Contingency	Intially funded at 10% of budgeted revenue, presuming target minimum balance of \$250,000 per June 2023 Board meeting
Emergency	\$500,000 per June 2023 Board meeting
Vehicle	Depreciation plus Board authorized additions. Presume balance (~\$394,000) is current minimum.
Office & Misc. Equip	Depreciation plus Board authorized additions. Presume balance (~\$421,000) is current minimum.

(1) Based on discussions with District staff. Board policy minimum is currently 2 years of CIP.

3.2.6. Status Quo Operating Financial Plan

Figure 3-1 shows the water operating financial plan without any revenue adjustments (status quo). The different colored stacked columns represent the District’s operating and non-operating expenses. The light blue line represents revenues at current rates. Since no revenue adjustments are shown in the status quo scenario, the proposed revenues are the same as the current revenues. The red column displays the revenues that are withdrawn from the fund balance. Without any revenue adjustments, the District will need to draw from available reserves each year.

Figure 3-1: Water Operating Financial Plan - Status Quo

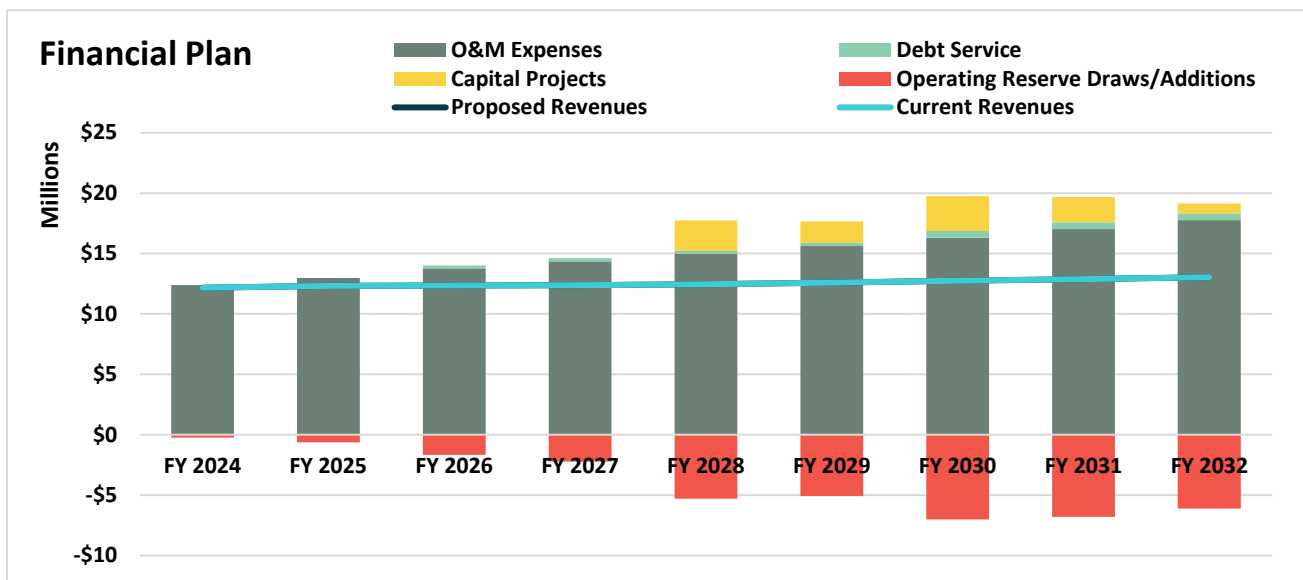
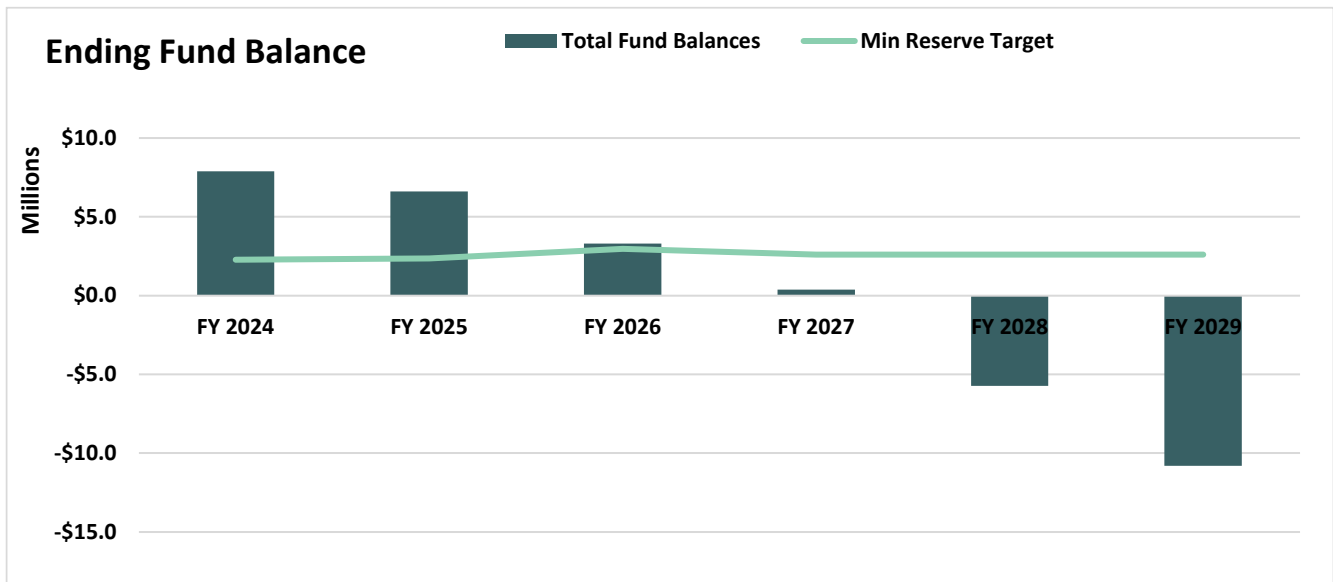


Figure 3-2 displays the amount of cash that the District has available for the water enterprise. The columns show the projected ending balance of the operating and capital reserves. The green line represents the minimum target operating reserves. By the end of FY 2027, the water fund is projected to be below the minimum target.

Figure 3-2: Status Quo Water Fund – Ending Balance



To ensure that the Water Enterprise will have adequate revenues to fund operating expenses, capital expenditures, and meet minimum reserve targets, Raftelis recommends the following water revenue adjustments (Table 3-10). The adjustments for FY 2030 – FY 2032 are for planning purposes only. To keep revenue adjustments at this level, two bond issues are planned. As the timing and cost of the projects are more certain, the District should work with its financial advisor to determine the size, timing, and terms of any bond issue or loan. A detailed discussion of the water financial plan can be seen in the following subsection.

Table 3-10: Proposed Water Revenue Adjustments

Effective Date	Revenue Adjustment
1-Aug-24	15.0%
1-Jul-25	8.0%
1-Jul-26	8.0%
1-Jul-27	8.0%
1-Jul-28	8.0%
1-Jul-29	10.0%
1-Jul-30	10.0%
1-Jul-31	10.0%

3.2.7. Proposed Financial Plan

As mentioned in the previous sections, proposed expenses outpace revenues. To bridge the gap, revenue adjustments as shown in Table 3-10 will be necessary for the District to remain financially solvent. The next four figures graphically display the effects of the proposed revenue adjustments on the District’s financial position.

Figure 3-3 displays the debt service coverage for the new bond/loans. The proposed revenue adjustments are sufficient to satisfy debt coverage requirements.

Figure 3-3: Proposed Debt Coverage

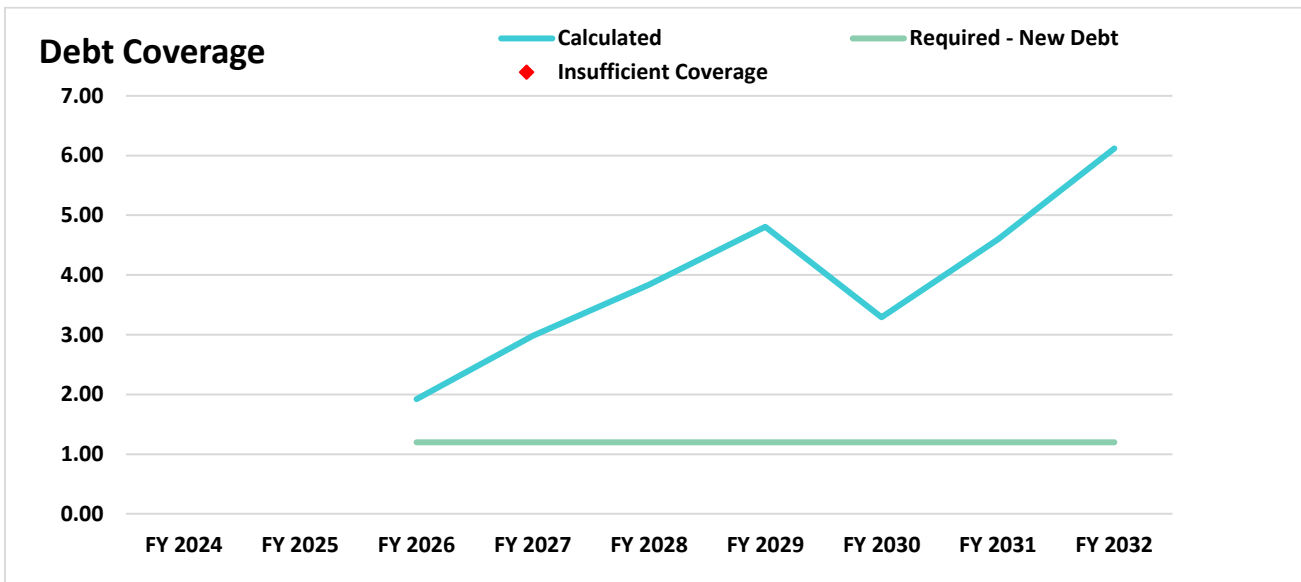


Figure 3-4 displays the proposed operating financial plan. The black line displays the proposed revenues, and the blue line shows projected revenues under existing rates. The red bars show when funds are added to the ending balance (above the \$0 line) or drawn down (below the \$0 line).

Figure 3-4: Proposed Operating Financial Plan

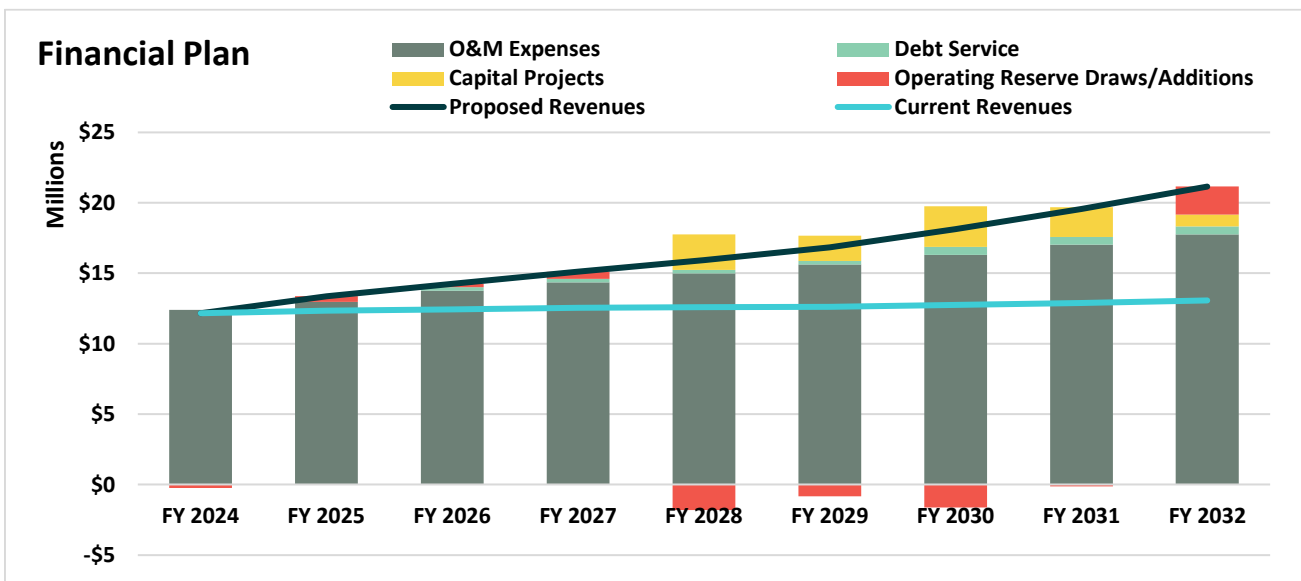


Figure 3-5 displays the capital improvement plan through the study period as well as the sources of funding. The yellow bars display the amount of capital the District will expend per year that is cash funded. The teal bars display the amount of capital that will be debt funded. The bright blue bars show the projected grant funding.

Figure 3-5: Proposed Capital Expenditures

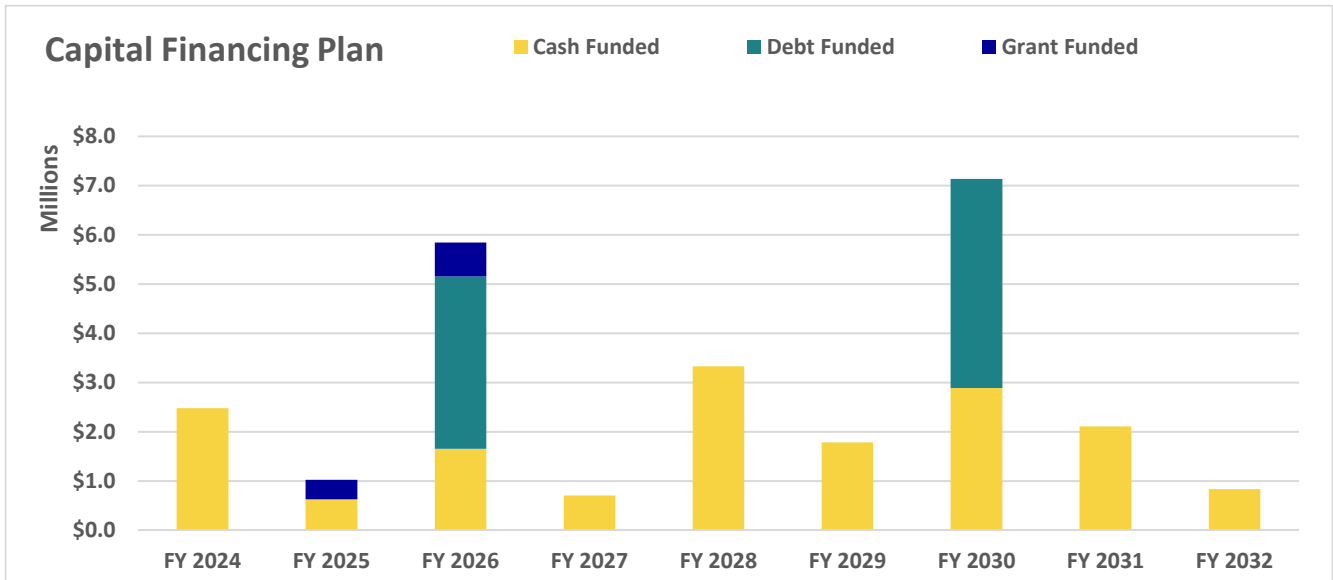


Figure 3-6 displays the projected water fund balance (operating and capital combined). As a result of increasing revenues to the level shown on Figure 3-4, the water fund balance is drawn down to near minimum levels by FY 2029, the end of the rate-setting period.

Figure 3-6: Proposed Water Fund Balance

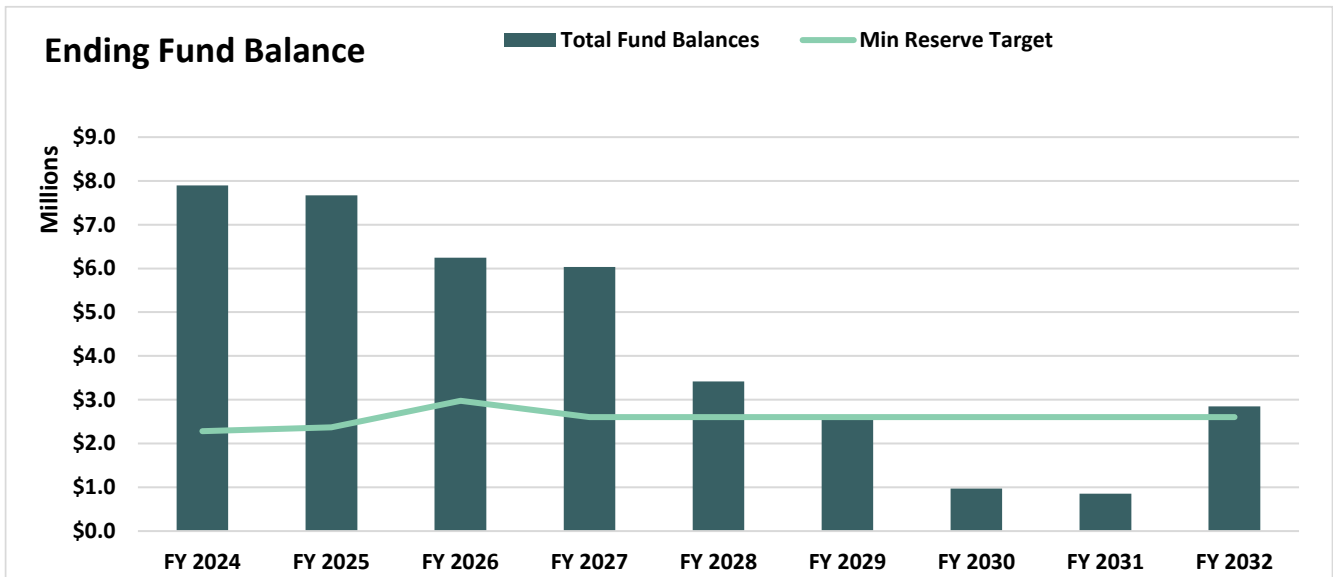


Table 3-11 displays the proposed financial plan scenario cashflow. The Net Revenues line shows that the projected revenue, including the proposed revenue adjustments, is more than sufficient to cover annual operating expenses after FY 2024. The Annual Surplus (Deficit) line shows the draws on or additions to the operating fund after debt service and capital expenditures.

4. Water Cost-of-Service and Rate Design

A cost-of-service analysis distributes a utility's revenue requirement (costs) to each customer class. This section explains the details of the cost-of-service analysis conducted for the District for providing water services to customers.

After determining a utility's revenue requirement, the next step in a cost-of-service analysis is to functionalize its O&M costs to the following functions:

- Supply – cost of purchasing raw water and supplying groundwater
- Treatment – cost of treating water
- Transmission and Distribution (T&D) – cost associated with pipes, pumps, mains, etc
- Storage – cost associated with storing treated water
- Meter service – costs associated with meter maintenance and replacement
- Billing and collection – costs associated with meter reading, billing, and customer service
- Fire protection – costs associated with public fire hydrants

The functionalization of costs allows us to better allocate the costs to the rate components: monthly service charge, monthly CIP component charge, and volumetric charge.

4.1. Revenue Requirement Determination

Table 4-1 shows the net revenue requirement from rates for FY 2025, the test year. The total revenue requirement shown in Line 3 is equal to operating expenses (Table 3-5) and Capital-related expenses (Table 3-12). Other operating revenues, totaled in Line 8, comprise WTP O&M Revenue, miscellaneous revenues, and interest income (Table 3-4) and reduce the total revenue required from rates. The adjustment for operating cash (Line 9) is added to account for the addition to reserves. Line 10 shows the adjustment in the capital fund to cover capital-related costs. The mid-year increase (Line 11) reflects that the FY 2025 revenue adjustment occurs part way through the fiscal year. The revenue required from rates (Line 13) is equal to the total revenue requirements (Line 3) plus total revenue offsets (Line 8) and total adjustments (Line 12).

Table 4-1: Net Revenue Requirements

No.	Revenue Requirement - FY 2025	Operating	Capital-Related	Total
Revenue Requirements				
1	O&M Expenses	\$12,967,151		\$12,967,151
2	Capital Reserve Funded CIP		\$1,022,700	\$1,022,700
3	Total - Revenue Requirements	\$12,967,151	\$1,022,700	\$13,989,851
Revenue Offsets				
4	Other Operating Revenue	-\$76,000		-\$76,000
5	WTP O&M Revenue	-\$4,388,830		-\$4,388,830
6	Other Revenue	-\$104,820		-\$104,820
7	Interest Income	-\$303,412		-\$303,412
8	Total - Revenue Offsets	-\$4,873,062	\$0	-\$4,873,062
Adjustments				
9	Adjustment for Cash Balance	\$403,772		\$403,772
10	Adjustment for Capital Cash Balance		-\$1,022,700	-\$1,022,700
11	Adjustment to Annualize Rate Increase	\$93,383		\$93,383
12	Total - Adjustments	\$497,155	-\$1,022,700	-\$525,545
13	Total Costs to be Recovered from Rates	\$8,591,244	\$0	\$8,591,244

4.2. Functionalization of Net Revenue Requirement

Functionalizing expenses allows Raftelis to follow the principles of rate setting theory in which the end goal is to allocate the City's revenue requirements to cost causation components. Table 4-2 shows the resulting functionalization of the City's operating expenses (Line 3, Table 4-1). The functionalization of O&M costs is shown in Appendix B. No costs were directly associated with outside Zone 3 customers.

Table 4-2: Functionalization of O&M Requirements

Function	Amount	Percentage
Supply	\$3,802,962	29%
Treatment	\$6,885,592	53%
T&D	\$1,309,502	10%
Storage	\$0	0%
Meters	\$436,501	3%
Billing	\$532,595	4%
Public Fire	\$0	0%
Total	\$12,967,151	100%

Table 4-3 shows the functionalization basis for the Operating offsets (Lines 6-9, Table 4-1). Since WTP O&M revenue is specific to the operating and maintenance costs of the two water treatment plants, that offset is allocated like the total allocation of the water treatment plant O&M (see Appendix B).

Table 4-3: Functionalization Basis for Operating Offsets

Line Item	Basis
Other Operating Revenue	Like O&M (Table 4-2)
WTP O&M Revenue	Like WTP O&M
Other Revenue	Like O&M (Table 4-2)
Interest Income	Like O&M (Table 4-2)

4.3. Allocation of Functionalized Net Revenue Requirements to Cost Components

After functionalizing the net revenue requirements, the next step is to allocate the functionalized net revenue requirements to the following cost components.

- Base – fixed costs associated with providing service under average demand conditions
- Peaking (Max Day and Peak Hour) – costs associated with meeting demand in excess of average use
- Customer Service – the costs associated with meter reading, billing, and customer service
- Equivalent Meters – costs associated with meter maintenance and replacement and capacity
- Fire Protection – costs associated with providing and maintaining hydrants

4.3.1. Peaking Factors

Peaking costs are computed for a maximum day and peak hour. The maximum day (max day) demand is the maximum amount of water used in a single day in a year. The peak hour demand is the maximum amount of water used in a single hour on the maximum day. Different facilities, such as distribution and treatment facilities (and the O&M costs associated with those facilities), are designed to meet peak hour and max day demands, respectively. Therefore, extra capacity¹ costs include the O&M and capital costs associated with meeting peak customer demand. This method is consistent with the AWWA Manual M1 and is widely used in the water industry to perform cost-of-service analyses.

Table 4-4 shows the system-wide peaking factors used to derive the cost component allocation bases for base and peaking costs. Base costs represent average daily demand during the year, which is normalized to a factor of 1.00 (Column B, Line 1). The max day demand factor (Column B, Line 2) was provided by City staff. The peak hour demand factor (Column B, Line 3) was estimated based on the City of Hollister’s peak hour factor. The allocation bases (Columns C, D, and E) are calculated using the equations outlined below the table.

Table 4-4: Water System Peaking Factors

No.	Cost Component (A)	Demand Factor (B)	Base (C)	Max Day (D)	Peak Hour (E)
1	Base	1.00	100.0%		
2	Max Day	2.00	50.0%	50.0%	
3	Peak Hour	3.50	28.6%	28.6%	42.9%

The max day allocations are calculated as follows:

- Base Delivery: $B1 / B2 \times 100\% = C2$
- Max Day: $100\% - C2 = D2$

¹ The terms extra capacity, peaking and capacity costs are used interchangeably.

The peak hour allocations are calculated as follows:

- Base Delivery: $B1 / B3 \times 100\% = C3$
- Max Day: $(B2 - B1) / B3 \times 100\% = D3$
- Peak Hour: $100\% - C3 - D3 = E3$

Table 4-5 shows the customer-specific peaking factors based on the maximum monthly usage divided by average monthly usage for each class and tier. The maximum month peaking factor is used as a proxy for the class and tier specific max day peaking factors. The peaking factors for Single Family customers are based on the tiers. All other customers have a uniform rate; and therefore, have a class-specific peaking factor.

Table 4-5: Customer-Specific Peaking Factors

Class/Tier	Peaking Factor
Single Family	1.39
Tier 1: 0 - 10 hcf	1.15
Tier 2: 11 - 20 hcf	1.76
Tier 3: > 20 hcf	2.13
Non-Single Family	1.55

4.3.2. Operating and Capital Allocation

Table 4-6 shows the system functions, the rationale for allocating each function to the various cost components, and the percentage allocation to each component. Most functions have a one-to-one relationship with a cost component. Supply costs are allocated to the base and max day cost components based on historical weighted average costs of well supply (which are allocated 50/50 base and max day) and water treatment plant supply costs (which are allocated all to base). WTP O&M is comprised of both supply and treatment costs. These costs are allocated using the supply and treatment allocations in the table below to calculate a weighted average allocation of WTP costs to base and max day.

Table 4-6: Allocation of Functions to Cost Components

Functional Allocation	Rationale	Base	Max Day	Max Hour	Meters	Fire Protection	Billing	Total
Supply	Prorated	76.5%	23.5%					100%
Treatment	Max Day	50.0%	50.0%					100%
T&D	Max Hour	28.6%	28.6%	42.9%				100%
Storage	Max Day	50.0%	50.0%					100%
Meters	Meters				80.0%		20.0%	100%
CS/Billing	Billing						100.0%	100%
Public Fire	Fire					100.0%		100%
WTP O&M	Proportional*	58.0%	42.0%					100%

*Proportional to supply and treatment

Table 4-7 shows the detailed, net operating costs by cost component (Table 4-2) allocated to the cost components using the allocations shown in Table 4-6.

Table 4-7: Allocation of Net Operation & Maintenance to Cost Components

Operating Expenses	Base	Max Day	Max Hour	Meters	Fire Protection	Billing	Total
Supply	\$2,909,266	\$893,696	\$0	\$0	\$0	\$0	\$3,802,962
Treatment	\$3,442,796	\$3,442,796	\$0	\$0	\$0	\$0	\$6,885,592
T&D	\$374,143	\$374,143	\$561,215	\$0	\$0	\$0	\$1,309,502
Storage	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Meters	\$0	\$0	\$0	\$349,200	\$0	\$87,300	\$436,501
CS/Billing	\$0	\$0	\$0	\$0	\$0	\$532,595	\$532,595
Public Fire	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total	\$6,726,205	\$4,710,635	\$561,215	\$349,200	\$0	\$619,895	\$12,967,151
Allocation %	52%	36%	4%	3%	0%	5%	100%

Table 4-8 shows the allocation of operating offsets (Table 4-1) to the cost components. All lines except WTP O&M Revenue are allocated per the percentages shown at the bottom of Table 4-7. The WTP O&M Revenue offsets are allocated as identified in Table 4-6.

Table 4-8: Allocation of Operating Offsets to Cost Components

Operating Offsets	Base	Max Day	Max Hour	Meters	Billing	Total
Other Operating Revenue	-\$39,422	-\$27,609	-\$3,289	-\$2,047	-\$3,633	-\$76,000
WTP O&M Revenue	-\$2,543,754	-\$1,845,076	\$0	\$0	\$0	-\$4,388,830
Other Revenue	-\$54,371	-\$38,078	-\$4,537	-\$2,823	-\$5,011	-\$104,820
Interest Income	-\$25,211	-\$17,656	-\$2,103	-\$1,309	-\$2,323	-\$48,602
Adjustment for Cash Balance	\$77,268	\$54,114	\$6,447	\$4,011	\$7,121	\$148,962
Adjustment to Annualize Rate Increase	\$48,439	\$33,924	\$4,042	\$2,515	\$4,464	\$93,383
Total Operating Offsets	-\$2,537,051	-\$1,840,381	\$559	\$348	\$618	-\$4,375,907

4.4. Derivation of Units of Service

4.4.1. Equivalent Meters

Equivalent meters (EMs) are used to allocate meter-related costs. Larger meters can impose greater demands on the system and are more expensive to install, maintain, and replace than smaller meters. This study uses a hydraulic capacity (capacity) ratio to calculate equivalent meters. The capacity ratio is based on meter hydraulic capacity and is calculated to represent the potential demand on the water system compared to the base meter size. A ratio of hydraulic capacity is calculated by dividing the capacity of a meter at a given size by the base meter capacity using the maximum safe operating flow rates in gallons per minute (gpm). The base meter used in the study is the 1" meter.

Table 4-9 shows the meter capacity and capacity ratio for each meter size. The capacity in gpm is based on the safe operating flow rates provided in the AWWA Manual M1, except that 5/8" and 3/4" meters are treated like 1" meters as the District installs 1" meters as the minimum size. This is consistent with the methodology used in the last rate study. The capacity ratios (Column C) are calculated by dividing the capacity in gpm (Column B) for each meter size (Column A) by the capacity in gpm for the 1" meter (Column B, Line 3)².

² Except for meters smaller than 1", which are assigned the same capacity ratio as the 1" meter.

Meter counts (Column D) at each size are multiplied by the capacity ratio (Column C) to arrive at the total number of equivalent meters, shown in Column E.

Table 4-9: Equivalent Meters

No.	Meter Size (A)	Capacity (gpm) (B)	AWWA Ratio (C)	No. of Meters (D)	Equivalent Meters (E)
1	5/8"	20	1.00	5,579	5,579
2	3/4"	30	1.00	3	3
3	1"	50	1.00	2,235	2,235
4	1 1/2"	100	2.00	38	76
5	2"	160	3.20	47	150
6	3"	350	7.00	46	322
7	4"	630	12.60	7	88
8	6"	1,300	26.00	0	0
9	8"	2,800	56.00	0	0
10	Total			7,955	8,454

4.4.2. Allocation of Public and Private Fire Protection Costs

Water systems provide two types of fire protection: public fire protection for firefighting (i.e., fire hydrants) and private fire protection (i.e., fire lines for private structures with sprinkler systems for fire suppression and private fire hydrants). Raftelis performed a fire demand analysis to determine the share of fire protection costs allocated to public versus private fire protection.

Table 4-10 shows the calculation of equivalent fire demand associated with public hydrants and private fire lines. Each connection size has a fire flow demand factor similar to the hydraulic capacity factor of a water meter. The diameter of the connection (in inches) is raised to the 2.63 power to determine the fire demand factor (Column B).³ Hydrants are presumed to have one 4-inch and two 2-inch openings. The equivalent demand ratio (Column C) takes the relative flow capacity factor at each fire line size (Column A) divided by the 1-inch line flow capacity (Line 1, Column B) to establish each connection on an equivalent basis. The equivalent demand ratio is multiplied by the number of hydrants (Column D) or connections (Column E) at each size and summed to calculate the equivalent number of hydrants (Column D, Line 9) and connections (Column E, Line 9). Line 11 shows the proportional share of equivalent fire connections between public (Column D) and private (Column C).

³ Hazen-Williams equation and AWWA Manual M1

Table 4-10: Equivalent Fire Connections

Fire Line No.	Fire Line Size	Relative Flow Capacity Factor (B)	Equivalent Demand Ratio (C)	Public Fire Hydrants (D)	Private Fire Connections (E)
1	1"	1.00	1.00		2
2	1 1/2"	2.90	2.90		0
3	2"	6.19	6.19		1
4	3"	17.98	17.98		0
5	4"	38.32	38.32		0
6	Hydrants	50.70	50.70	965	0
7	6"	111.31	111.31		0
8	8"	237.21	237.21		1
9	Total			965	4
10	Equivalent No. of Connections			48,925	245
11	Proportional Share			99.5%	0.5%

Table 4-11 shows the max day and peak hour extra capacity requirements based on generic fire flow assumptions. The flow rate (Column A) and duration (Column B) are converted to hcf per day to determine max day and peak hour requirements⁴. The max day and peak hour requirements are allocated between public and private using the proportional share shown in Table 4-10.

Table 4-11: Fire Service Share of Peaking Requirements

Line Item	Max Fire Flow (gpm) (A)	Duration (hrs) (B)	Max Day Fire Flow (hcf/day) (C)	Peak Hour Fire Flow (hcf/day) (D)
Total	2,500	2	401	4,813
Public			399	4,789
Private			2	24

4.4.3. Unit Costs of Service

Raftelis calculated unit costs for each cost component by assessing the total water demand, peak demand, meter count, or equivalent meters. Table 4-12 shows the units of service for the water system. The Max Day Capacity Factor (Column C) matches the demand factors shown in Table 4-5, Column B. The Peak Hour Capacity Factor (Column F) is the Max Day Capacity Factor (Column C) multiplied by the ratio of system peak hour and system max day from Table 4-4. Max Day Total Capacity (Column D) is the Average Daily Use (Column B) multiplied by the Max Day Capacity Factor (Column C). Max Day Extra Capacity (Column E) is the difference between the Max Day Total Capacity (Column D) and the Average Daily Use (Column B). Peak Hour Total Capacity (Column G) is the Average Daily Use (Column B) multiplied by the Peak Hour Capacity Factor (Column F). Peak Hour Extra Capacity (Column H) is the difference between the Peak Hour Total Capacity (Column G) and the Max Day Total Capacity (Column D).

⁴ For example, max day fire flow = Column A * 60 min/hr * Column B * 1hcf/748gal and the peak hour fire flow = Column A * 60 min/hr * 24hr/day * 1hcf/748gal.

Table 4-12: Units of Service

Customer Class	Annual Use (hcf) (A)	Average Daily Use (hcf/day) (B)	Max Day			Peak Hour			Number of Equiv. Meters (I)	Number of Equiv. Fire Lines (J)	Number of Customers (K)	Number of Bills (L)
			Peaking Factor (C)	Total Capacity (hcf/day) (D)	Extra Capacity (hcf/day) (E)	Peaking Factor (F)	Total Capacity (hcf/day) (G)	Extra Capacity (hcf/day) (H)				
Single Family	892,328	2,445	1.39	3,402	957	2.43	5,953	2,551	7,567	7,556	90,672	
Tier 1: 0 - 10 hcf	598,839	1,641	1.15	1,887	246	2.01	3,302	1,415				
Tier 2: 11 - 20 hcf	195,039	534	1.76	940	406	3.08	1,646	705				
Tier 3: > 20 hcf	98,450	270	2.13	575	305	3.73	1,005	431				
Non-SF	173,712	476	1.55	738	262	2.71	1,291	553	887	399	4,788	
Subtotal	1,066,040	2,921		4,139	1,219		7,244	3,105	8,454	7,955	95,460	
Private Fire				2	2		24	22		245	4	48
Public Fire				399	399		4789	4390				
Total	1,066,040	2,921			1,620			7,516	8,454	245	7,959	95,508

Table 4-13 shows the total adjusted cost of service and resulting unit costs of service. The totals shown in Line 4 and Line 10 both match the total from the net revenue requirements, Table 4-1. Line 5 reallocates public fire max day and max hour costs to meters because it is common to recover public fire protection costs through a fixed charge in proportion to meter size. This allocation is based on the percent of public fire’s proportion of total max day extra capacity and total max hour extra capacity. Line 6 does a similar reallocation as Line 5 for private fire service, moving those extra capacity costs to the private fire protection component. Since a large portion of the District’s costs are fixed, a portion of base costs are allocated to meter. Part of the peaking costs are also reallocated to meters as these costs are related to capacity of the water system and bring the percentage of rate-based revenue from fixed charges back to historic levels. The portion of the max day and peak hour costs allocated to the meter component are shown in Lines 8 and 9. Line 10 shows the adjusted cost of service. Line 13 is the adjusted cost of service (Line 10) for each component divided by that component’s units of service (Line 11).

Table 4-13: Total Adjusted Cost-of-Service and Units of Service

No.	Revenue Requirement	Base	Max Day	Max Hour	Meters	Private FP	Billing	Total
1	Operating Revenue Requirement	\$6,726,205	\$4,710,635	\$561,215	\$349,200	\$0	\$619,895	\$12,967,151
2	Revenue Offsets & Adjustments	-\$2,537,051	-\$1,840,381	\$559	\$348	\$0	\$618	-\$4,375,907
3	Capital Revenue Requirement	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4	Total - Cost of Service	\$4,189,154	\$2,870,254	\$561,774	\$349,548	\$0	\$620,512	\$8,591,244
5	Allocation of Capacity for Public Fire	\$0	-\$707,130	-\$328,092	\$1,035,223	\$0	\$0	\$0
6	Allocation of Capacity for Private Fire	\$0	-\$3,547	-\$1,646	\$0	\$5,192	\$0	\$0
7	Reallocation of Base to Meter	-\$837,831			\$837,831			\$0
8	Reallocation of Max Day to Meter		-\$755,852		\$755,852			\$0
9	Reallocation of Peak Hour to Meter			-\$34,805	\$34,805			\$0
10	Total - Adjusted Cost of Service	\$3,351,323	\$1,403,725	\$197,231	\$3,013,259	\$5,192	\$620,512	\$8,591,244
11	Units	1,066,040	1,219	3,105	101,443	2,945	95,508	
12		hcf/yr	hcf/day	hcf/day	EM-yr	yr	Annual Bills	
13	Unit Cost, \$/unit	\$3.14	\$1,151.77	\$63.53	\$29.70	\$1.76	\$6.50	

5. Proposed Water Rates

5.1. Monthly Service Charge Derivation, Test Year

Using the unit costs in Table 4-13, the proposed fixed monthly service charges are determined for each meter size. Table 5-1 shows the derivation of the monthly service charge. The Meter component (Column C) is the Equivalent Meters unit rate shown in Line 13, Table 4-13. For meters larger than 1", this unit rate is multiplied by the meter ratio (Column B) to derive the meter capacity cost associated with those larger meter sizes. The Billing component (Column D) is equal to the unit rate for the Billing component (Line 13, Table 4-13). As the cost of issuing a bill does not vary by meter size, it remains constant for all meter sizes. The total proposed monthly service charge (Column E) is the sum of Columns C and D rounded up to the nearest cent. The current charge is shown in Column F for comparison.

Table 5-1: Monthly Service Charge Derivation, Test Year

No.	Meter Size (A)	Capacity		Billing, \$/bill (D)	Proposed Monthly Charge (E)	Current Monthly Charge (F)
		Ratio (B)	Meter, \$/mtr/mo (C)			
1	5/8"	1.00	\$29.70	\$6.50	\$36.21	\$32.54
2	3/4"	1.00	\$29.70	\$6.50	\$36.21	\$32.54
3	1"	1.00	\$29.70	\$6.50	\$36.21	\$32.54
4	1 1/2"	2.00	\$59.41	\$6.50	\$65.91	\$53.22
5	2"	3.20	\$95.05	\$6.50	\$101.55	\$78.02
6	3"	7.00	\$207.93	\$6.50	\$214.43	\$156.60
7	4"	12.60	\$374.27	\$6.50	\$380.77	\$272.39
8	6"	26.00	\$772.30	\$6.50	\$778.80	\$549.45
9	8"	56.00	\$1,663.42	\$6.50	\$1,669.92	\$1,004.35

5.2. Private Fire Service Charge Derivation, Test Year

The derivation of the private fire service charge is shown in Table 5-2. The charge shown for the 1" connection size comes from Line 13 of Table 4-13. For connections larger than 1", this charge is multiplied by the fire ratio (Column B) to derive the cost associated with those larger connections. The fire ratios are used to derive fire service costs by connection size because larger connections are more expensive to install, maintain, and replace than smaller fire lines and have greater potential capacity on the water system. The proposed charge (Column E) is the sum of Columns C and D, rounded up to the nearest cent.

Table 5-2: Monthly Private Fire Service Derivation, Test Year

No.	Fire Connection Size (A)	Capacity Ratio (B)	Fireline, \$/line/mo (C)	Billing, \$/bill (D)	Proposed Monthly Charge (E)	Current Monthly Charge (F)
1	1"	1.00	\$1.76	\$6.50	\$8.27	\$8.73
2	1 1/2"	2.90	\$5.12	\$6.50	\$11.62	--
3	2"	6.19	\$10.92	\$6.50	\$17.42	\$18.09
4	3"	17.98	\$31.71	\$6.50	\$38.21	--
5	4"	38.32	\$67.57	\$6.50	\$74.07	\$87.33
6	6"	111.31	\$196.27	\$6.50	\$202.77	\$130.98
7	8"	237.21	\$418.26	\$6.50	\$424.76	\$180.90

5.3. Volumetric Rate Derivation, Test Year

Since costs were not identified specific to serving customers located outside SBCWD Zone 3, the proposed commodity charges are condensed into a single set of charges. The water volumetric rates include the base, max day, and max hour costs from Table 4-13. Since the base cost captures average usage, each customer class is assessed the base unit rate shown in Line 13 of Table 4-13. The max day and max hour unit rates shown in Line 13 of Table 4-13 are applied to the customer classes based on each class's max day and max hour extra capacity (Table 4-12 Column E and Column H, respectively), to derive the max day and peak hour costs for each class shown in Columns D and F of Table 5-3. The max day peaking cost total in Line 6, Column D matches the total shown in Table 4-13, Line 10 for Max Day. The max hour peaking cost total in Line 6, Column F matches the total shown in Table 4-13, Line 10 for Peak Hour. The total peaking cost (Column G) is the sum of Columns D and F. The peaking unit rate, Column H, is the peaking cost in Column G divided by the annual use in Column B for each class or tier.

Table 5-3: Peaking Component of Volumetric Charge

No.	Customer Class (A)	Annual Use (hcf) (B)	Max Day Extra Capacity (C)	Max Day Peaking Cost (D)	Peak Hour Extra Capacity (E)	Peak Hour Cost (F)	Total Peaking Cost (G)	Peaking Unit Cost (\$/hcf) (H)
1	SFR							
2	Tier 1	598,839	246	\$283,449	1,415	\$89,898	\$373,347	\$0.62
3	Tier 2	195,039	406	\$467,744	705	\$44,810	\$512,554	\$2.63
4	Tier 3	98,450	305	\$351,047	431	\$27,374	\$378,421	\$3.84
5	Non-SFR	173,712	262	\$301,486	553	\$35,148	\$336,634	\$1.94
6	Total	1,066,040		\$1,403,725		\$197,231	\$1,600,956	

Table 5-4 shows the components of the volumetric charge added together to derive the proposed charge. The current charges are also shown for reference. The proposed charge has been rounded up to the nearest cent for revenue sufficiency.

Table 5-4: Commodity Rate Calculation

Customer Class	Base, \$/hcf	Peaking, \$/hcf	Proposed Charge, \$/ccf	Current Charge Inside, \$/ccf	Current Charge Outside, \$/ccf
SFR					
Tier 1	\$3.14	\$0.62	\$3.77	\$3.17	\$3.23
Tier 2	\$3.14	\$2.63	\$5.78	\$4.70	\$4.76
Tier 3	\$3.14	\$3.84	\$6.99	\$6.97	\$7.03
Non-SFR	\$3.14	\$1.94	\$5.09	\$4.22	\$4.28

5.4. Proposed 5-Year Water Rate Schedule

Table 5-5, Table 5-6, and Table 5-7 show the proposed 5-year schedule of water rates. FY 2025 reflects the cost-of-service analysis. Rates for FY 2026 and beyond equal the prior year rates multiplied by the revenue adjustment. Rates are rounded up to the nearest penny to ensure revenue sufficiency.

Table 5-5: Proposed 5-Year Monthly Water Service Charge Schedule

Monthly Service Charge	Current FY 2024	Proposed FY 2025	Proposed FY 2026	Proposed FY 2027	Proposed FY 2028	Proposed FY 2029
5/8"	\$32.54	\$36.21	\$41.65	\$44.99	\$48.59	\$52.48
3/4"	\$32.54	\$36.21	\$41.65	\$44.99	\$48.59	\$52.48
1"	\$32.54	\$36.21	\$41.65	\$44.99	\$48.59	\$52.48
1 1/2"	\$53.22	\$65.91	\$75.80	\$81.87	\$88.42	\$95.50
2"	\$78.02	\$101.55	\$116.79	\$126.14	\$136.24	\$147.14
3"	\$156.60	\$214.43	\$246.60	\$266.33	\$287.64	\$310.66
4"	\$272.39	\$380.77	\$437.89	\$472.93	\$510.77	\$551.64
6"	\$549.45	\$778.80	\$895.62	\$967.27	\$1,044.66	\$1,128.24
8"	\$1,004.35	\$1,669.92	\$1,920.41	\$2,074.05	\$2,239.98	\$2,419.18

Table 5-6: Proposed 5-Year Monthly Private Fireline Charge Schedule

Private Fireline Charges	Current FY 2024	Proposed FY 2025	Proposed FY 2026	Proposed FY 2027	Proposed FY 2028	Proposed FY 2029
1"	\$8.73	\$8.27	\$9.52	\$10.29	\$11.12	\$12.01
1 1/2"	--	\$11.62	\$13.37	\$14.44	\$15.60	\$16.85
2"	\$18.09	\$17.42	\$20.04	\$21.65	\$23.39	\$25.27
3"	--	\$38.21	\$43.95	\$47.47	\$51.27	\$55.38
4"	\$87.33	\$74.07	\$85.19	\$92.01	\$99.38	\$107.34
6"	\$130.98	\$202.77	\$233.19	\$251.85	\$272.00	\$293.76
8"	\$180.90	\$424.76	\$488.48	\$527.56	\$569.77	\$615.36

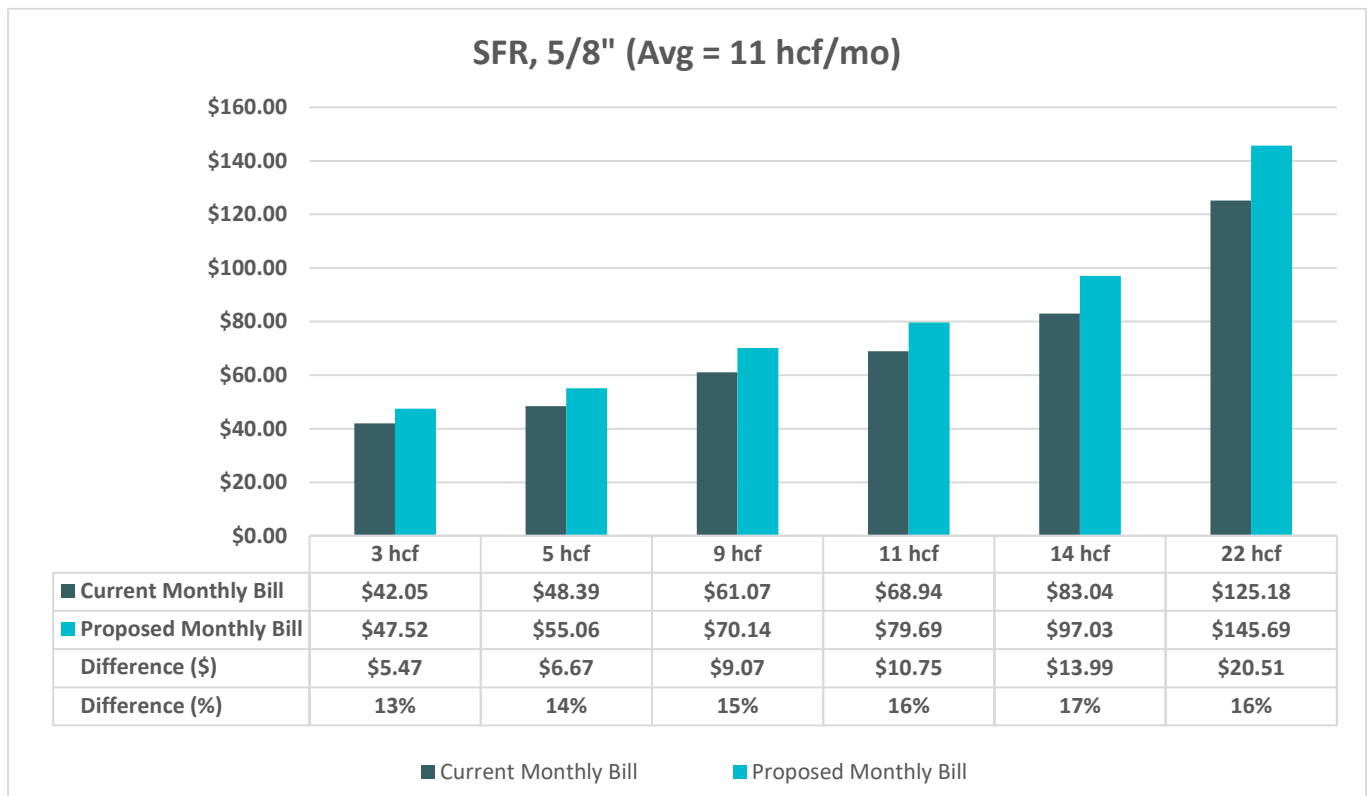
Table 5-7: Proposed 5-year Volume Charge Schedule, \$/hcf

Volume Charges	Current FY 2024	Proposed FY 2025	Proposed FY 2026	Proposed FY 2027	Proposed FY 2028	Proposed FY 2029
SFR						
Tier 1: First 1,000 cu ft	\$3.17	\$3.77	\$4.34	\$4.69	\$5.07	\$5.48
Tier 2: 1,100 - 2,000 cu ft	\$4.70	\$5.78	\$6.65	\$7.19	\$7.77	\$8.40
Tier 3: Over 2,100 cu ft	\$6.97	\$6.99	\$8.04	\$8.69	\$9.39	\$10.15
Non-SFR	\$4.22	\$5.09	\$5.86	\$6.33	\$6.84	\$7.39

5.5. Single Family Bill Impacts

Figure 5-1 compares the monthly water bill for a single family customer at the current rates and the proposed FY 2025 rates at different usage levels.

Figure 5-1: Single Family Typical Bill, 5/8" Meter



6. Wastewater Financial Plan

6.1. Wastewater Assumptions

As with the Water enterprise, various types of assumptions and inputs were incorporated into this study. These assumptions were based on discussion with and/or direction from District staff, including projected accounts and annual growth rates in accounts, inflationary assumptions, and other miscellaneous assumptions. Table 6-1 presents the inflationary assumptions. The inflation factors for FY 2030 – FY 2032 are the same as shown for FY 2029. These inflationary assumptions are the same as for the water system. Additionally, the District has locked in higher interest rates on reserves. Therefore the financial plan uses 4 percent per year for interest through FY 2028, then drops to a conservative 1 percent per year.

Table 6-1: Inflation Factor Assumptions

Line Item	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029+
General	3%	3%	3%	3%	3%
Salary	6%	6%	6%	6%	6%
Benefits	6%	6%	6%	6%	6%
Utilities	4%	4%	4%	4%	4%
Capital	3%	3%	3%	3%	3%
Chemicals	4%	4%	4%	4%	4%

Table 6-2 shows the growth rate and water demand factor assumptions that were applied to the FY 2022 billing data. The single family growth rate is based on District staff information on planned additions to the sewer customer base. Water demand in FY 2023 decreased from FY 2022 and is expected to return to a level similar to FY 2022 in FY 2024 and then is held constant except for growth in demand due to new accounts.

Table 6-2: Account Growth Rate Assumptions

Line Item	FY 2023	FY 2024	FY 2025	FY 2026+
Single Family Residential	3.7%	9.5%	5.4%	0.0%
Mutli-Family Residential	0.0%	0.0%	0.0%	0.0%
Cottages, Motels, Trailer Park	0.0%	0.0%	0.0%	0.0%
Commercial and Industrial	0.0%	0.0%	0.0%	0.0%
Demand - Residential	90%	102%	100%	100%

6.2. Wastewater Financial Plan

6.2.1. Projected Revenue

The District's wastewater rates and charges comprise a fixed monthly charge per dwelling unit (du) for residential customers and a consumption charge for all customer types, as shown in Table 6-3. The consumption rate for residential customers is applied to each customers' average winter water consumption. The consumption rate for non-residential customers is applied to the billed water consumption.

Table 6-3: Current Wastewater Charges

Customer Class	Fixed Charge, \$/mo/du	Consumption, \$/hcf
Single Family Residential	\$95.93	\$5.64*
Multifamily Residential	\$72.98	\$5.64*
Cottages, Motels, Trailer Parks, Laundries, etc.	--	\$9.20
Commercial and Industrial	--	\$12.14

* applied to average winter consumption

Table 6-4 presents the projected revenues under the existing rates plus other revenue and interest income.

Table 6-4: Projected Revenues Under Existing Rates

Line Item	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Revenue from Current Rates	\$2,332,934	\$2,457,434	\$2,457,434	\$2,457,434	\$2,457,434
Other Revenue	\$231,880	\$175,000	\$175,000	\$175,000	\$175,000
Interest Income	\$155,093	\$161,155	\$179,694	\$189,254	\$165,431
Total Revenues	\$2,719,907	\$2,793,589	\$2,812,128	\$2,821,688	\$2,797,865

Line Item	FY 2029	FY 2030	FY 2031	FY 2032
Revenue from Current Rates	\$2,457,434	\$2,457,434	\$2,457,434	\$2,457,434
Other Revenue	\$175,000	\$175,000	\$175,000	\$175,000
Interest Income	\$37,351	\$32,917	\$20,899	\$15,153
Total Revenues	\$2,669,785	\$2,665,351	\$2,653,333	\$2,647,587

6.2.2. Projected Operating and Maintenance Expense

Table 6-8 displays total projected expenses for the study period. Increases in expenses are projected to average about 4 percent per year over the rate-setting period.

Table 6-5: O&M Expenses for FY 2024 – FY 2032

Line Item	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Cost of Goods(1)	\$669,740	\$709,870	\$752,407	\$797,494	\$845,285
Operational Expenses	\$472,275	\$486,965	\$502,117	\$517,746	\$533,865
Non-Operating Expenses	-\$9,000	-\$9,270	-\$9,548	-\$9,835	-\$10,130
Total	\$1,133,015	\$1,187,566	\$1,244,976	\$1,305,405	\$1,369,021

Line Item	FY 2029	FY 2030	FY 2031	FY 2032
Cost of Goods(1)	\$895,941	\$949,635	\$1,006,549	\$1,066,875
Operational Expenses	\$550,493	\$567,643	\$585,334	\$603,582
Non-Operating Expenses	-\$10,433	-\$10,746	-\$11,069	-\$11,401
Total	\$1,436,000	\$1,506,532	\$1,580,813	\$1,659,056

(1) Includes salaries and benefits.

6.2.3. Projected Capital Improvement Program

Table 6-6 presents the District's wastewater capital improvement program. The program averages \$855,000 per year over the study period. Detailed projects are shown in Appendix C.

Table 6-6: Capital Expenses for FY 2023 – FY 2032

Line Item	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Wastewater Treatment	\$222,500	\$39,375	\$0	\$497,779	\$1,215,506
Wastewater Collection	\$650,000	\$420,000	\$253,575	\$300,983	\$510,513
Admin Capital - WW Portion	\$34,300	\$3,675	\$9,647	\$23,500	\$68,068
Total	\$906,800	\$463,050	\$263,222	\$822,261	\$1,794,087
Line Item	FY 2029	FY 2030	FY 2031	FY 2032	
Wastewater Treatment	\$0	\$1,031,874	\$0	\$110,809	
Wastewater Collection	\$82,958	\$549,439	\$1,505,597	\$73,873	
Admin Capital - WW Portion	\$67,005	\$28,142	\$0	\$0	
Total	\$149,963	\$1,609,455	\$1,505,597	\$184,682	

6.2.4. Existing and Proposed Debt Service

The District currently has a State Revolving Fund loan with annual debt service during the study period, as shown in Table 6-7

Table 6-7: Existing Debt Service

Line Item	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Principal	\$573,031	\$587,930	\$603,216	\$618,900	\$634,991
Interest	\$115,042	\$105,874	\$96,467	\$86,815	\$76,913
Service Charge	\$71,901	\$66,171	\$60,292	\$54,260	\$48,071
Total	\$759,975	\$759,975	\$759,975	\$759,975	\$759,975
Line Item	FY 2029	FY 2030	FY 2031	FY 2032	
Principal	\$651,501	\$668,440	\$685,819	\$703,650	
Interest	\$66,753	\$56,329	\$45,634	\$34,661	
Service Charge	\$41,721	\$35,206	\$28,521	\$21,663	
Total	\$759,975	\$759,975	\$759,975	\$759,975	

Raftelis does not propose any new debt service for the wastewater enterprise during the study period.

6.2.5. Reserve Targets

The District has several reserve funds, which are shown in Table 6-8 along with the minimum combined target level. This list does not include restricted debt service reserves, capacity fund reserves, and CalPERS reserves. The operating-related (i.e., not capital improvement) minimum targets are presumed to be split 65 percent to the water enterprise and 35 percent to the wastewater enterprise based on input from District staff.

Table 6-8: Reserve Funds and Combined Minimum Targets

Fund	Target
Capital Improvement (1)	50% of the 5-year average CIP
Rate Stabilization	No minimum, but presuming current balance (\$250,000) is the minimum.
Drought Contingency	Intitally funded at 10% of budgeted revenue, presume current balance (\$500,000) is minimum.
Emergency	Initially funded at \$250,000.
Vehicle	Depreciation plus Board authorized additions. Presume balance (~\$394,000) is current minimum.
Office & Misc. Equip	Depreciation plus Board authorized additions. Presume balance (~\$421,000) is current minimum.

(1) Based on discussions with District staff. Board policy minimum is currently 2 years of CIP.

6.2.6. Status Quo Financial Plan

Figure 6-1 displays the status quo operating financial plan. The colored stacked bars represent the District’s operating and non-operating expenses. The blue line represents revenues at current rates. Since the status quo plan does not include revenue adjustments, the black line (proposed revenues) is hidden by the blue line. The red bar displays the revenues added to the fund balance (above \$0 line) or draws from reserves (below \$0 line). In most years, projected revenues are sufficient to meet projected operating and capital costs.

Figure 6-1: Status Quo Operating Financial Plan

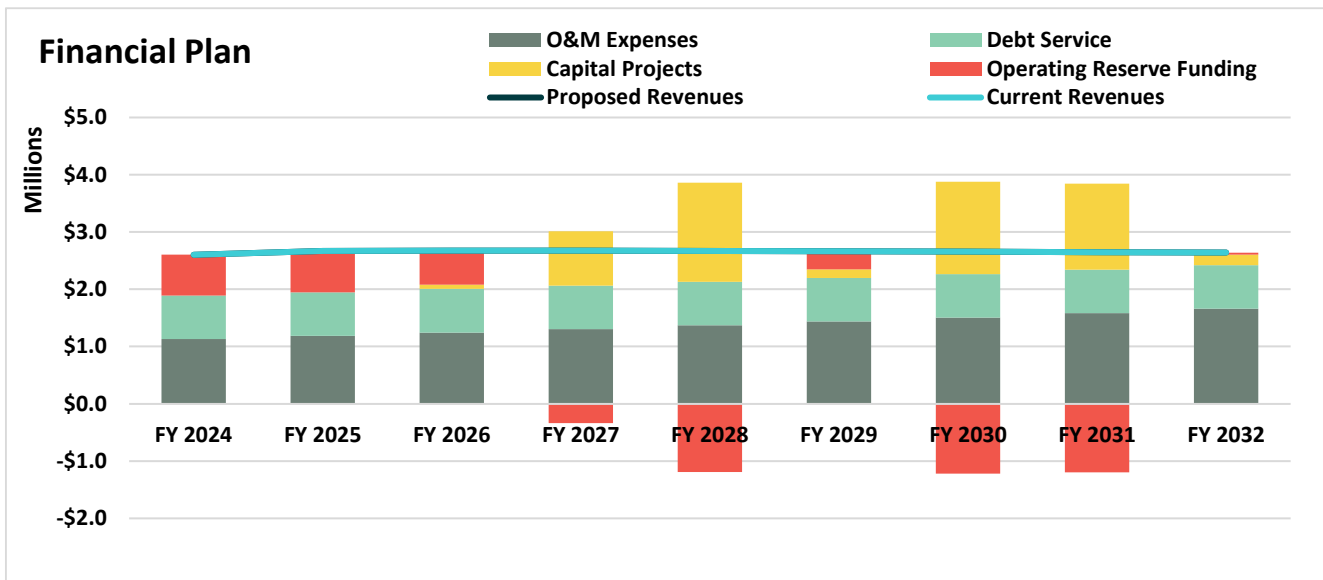
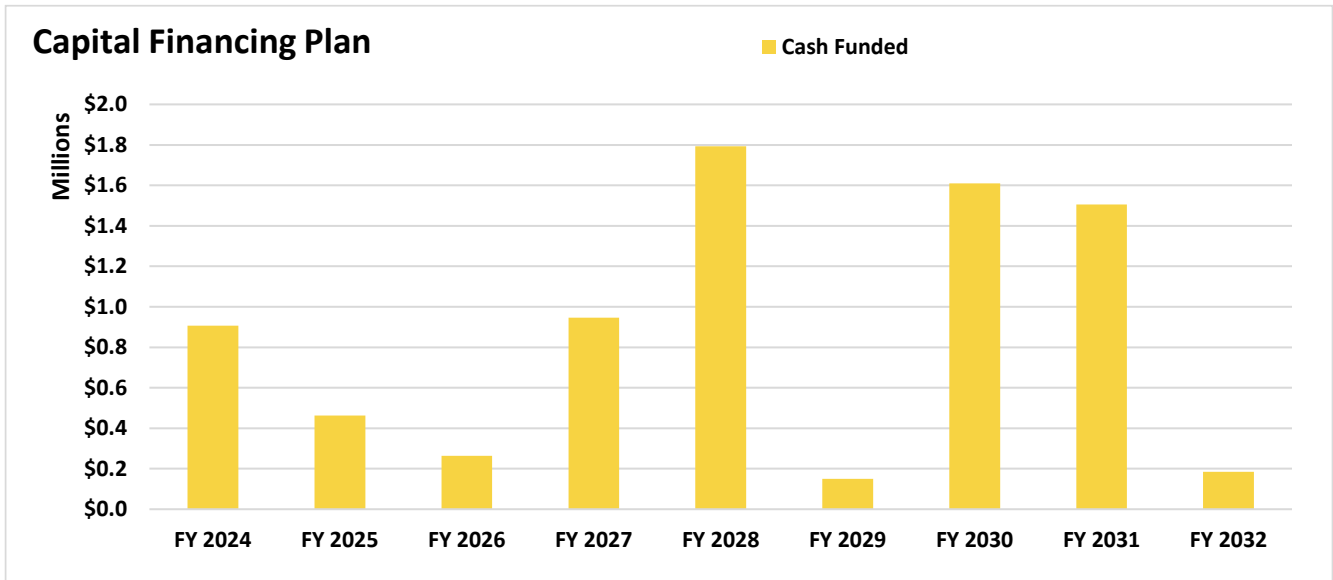


Figure 6-2 displays the capital improvement schedule through the study period. The yellow bars display the amount of capital the District will expend per year that is cash funded. The District does not plan on issuing any debt to finance future capital projects.

Figure 6-2: Status Quo CIP Expenditure



While the District does not expect to add additional debt, it does have existing debt. Figure 6-3 shows the projected debt coverage versus the required debt coverage over the study period under the Status Quo case.

Figure 6-3: Debt Coverage, Wastewater

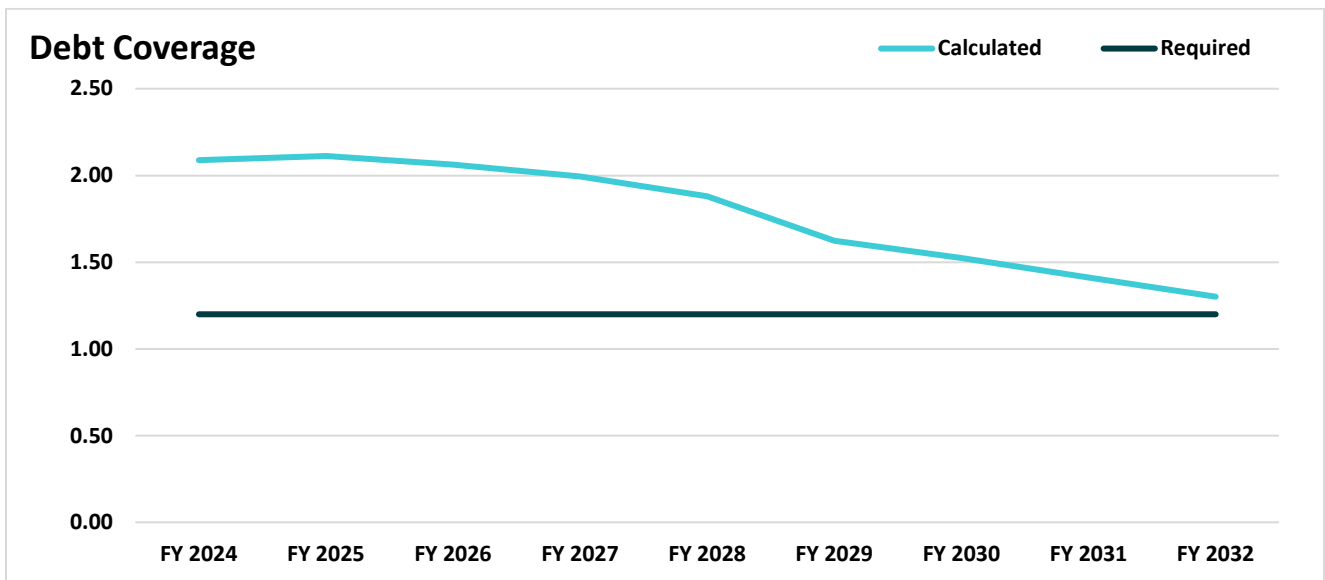
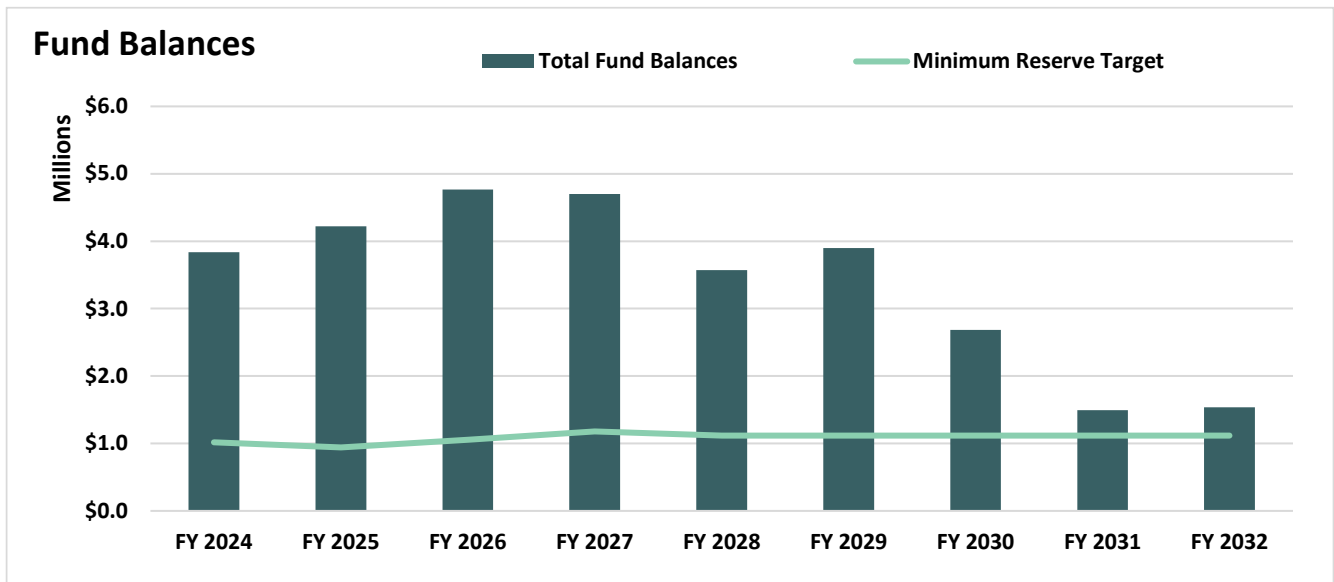


Figure 6-4 displays the combined operating and capital wastewater fund balances. This figure shows the amount of cash that the District has available for the Wastewater Enterprise. The green line indicates the minimum balance the District should have in its Wastewater Fund. Under Status Quo, the wastewater fund is expected to exceed the minimum wastewater reserve targets.

Figure 6-4: Status Quo Wastewater Fund Balance



While the Wastewater enterprise financials are projected to be above minimum reserve levels and meet coverage requirements, coverage ratios drop quickly in the out years. To minimize the need for larger increases later, Raftelis recommends small, regular revenue adjustments starting in FY 2028 as shown in Table 6-9. The adjustments for FY 2030 – FY 2032 are for planning purposes only.

Table 6-9: Proposed Wastewater Revenue Adjustments

Effective Date	Revenue Adjustment
1-Aug-24	0.0%
1-Jul-25	0.0%
1-Jul-26	0.0%
1-Jul-27	3.0%
1-Jul-28	3.0%
1-Jul-29	3.0%
1-Jul-30	3.0%
1-Jul-31	3.0%

6.2.7. Proposed Financial Plan

To prepare for future capital outside the rate-setting period and to make sure debt coverage does not fall below minimum requirements, the revenue adjustments as shown in Table 6-9 will help minimize larger increases later. The next four figures graphically display the effects of the proposed revenue adjustments on the District’s financial position.

Figure 6-5 displays the debt service coverage for the existing loan under proposed revenue adjustments. The proposed revenue adjustments level out the coverage in later years and are sufficient to satisfy debt coverage requirements.

Figure 6-5: Proposed Debt Coverage

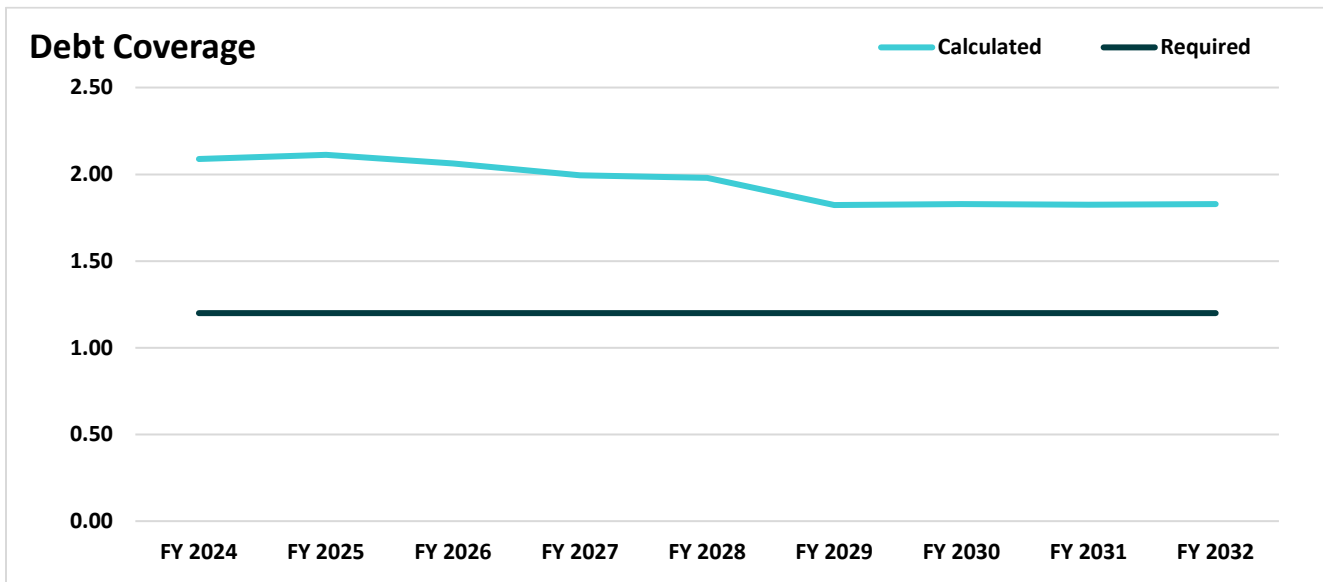


Figure 6-6 displays the proposed operating financial plan. The black line displays the proposed revenues, and the blue line shows projected revenues under existing rates. The red bars show when funds are added to the ending balance (above the \$0 line) or reserves are drawn down (below the \$0 line).

Figure 6-6: Proposed Operating Financial Plan

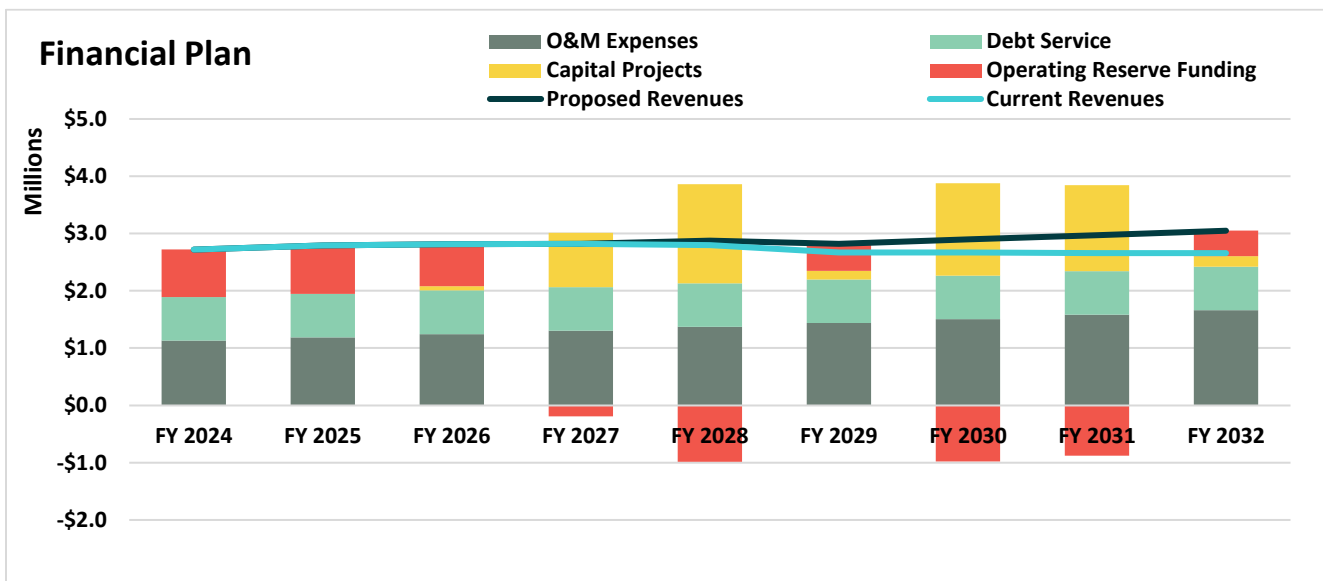


Figure 6-7 displays the capital improvement plan through the study period as well as the sources of funding. The yellow bars display the amount of capital the District will expend per year, which is all cash-funded.

Figure 6-7: Proposed Capital Expenditures

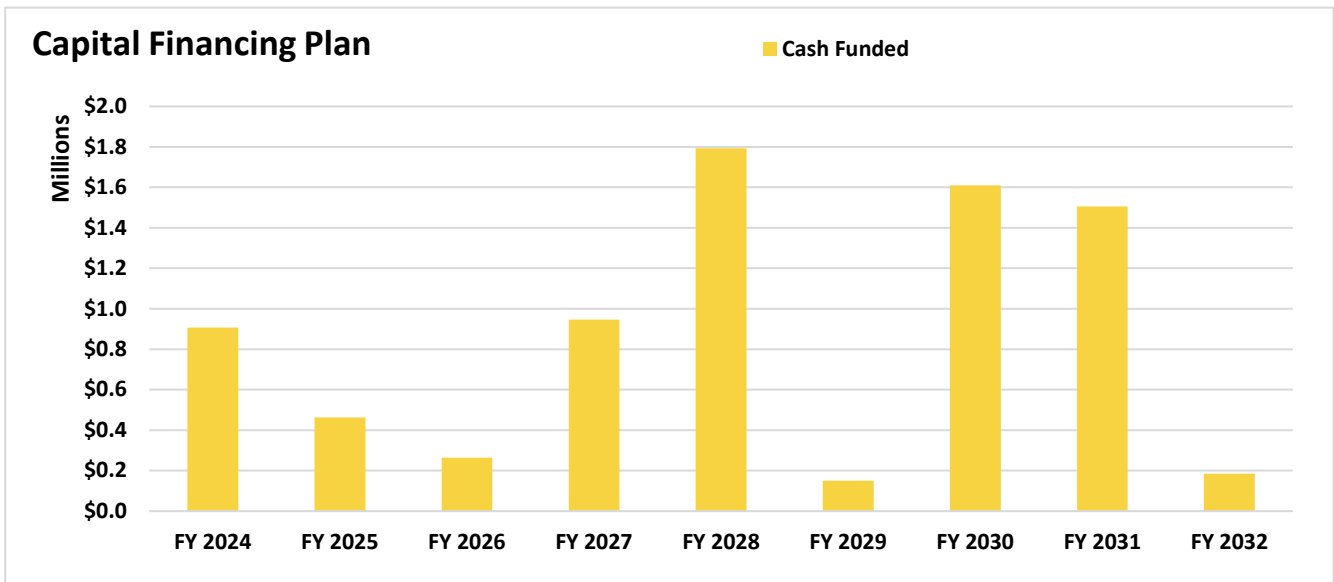


Figure 6-8 displays the projected wastewater fund balance (operating and capital combined). As a result of increasing revenues to the level shown on Figure 6-6, the wastewater fund balance remains above minimum levels through the planning period.

Figure 6-8: Proposed Wastewater Fund Balance

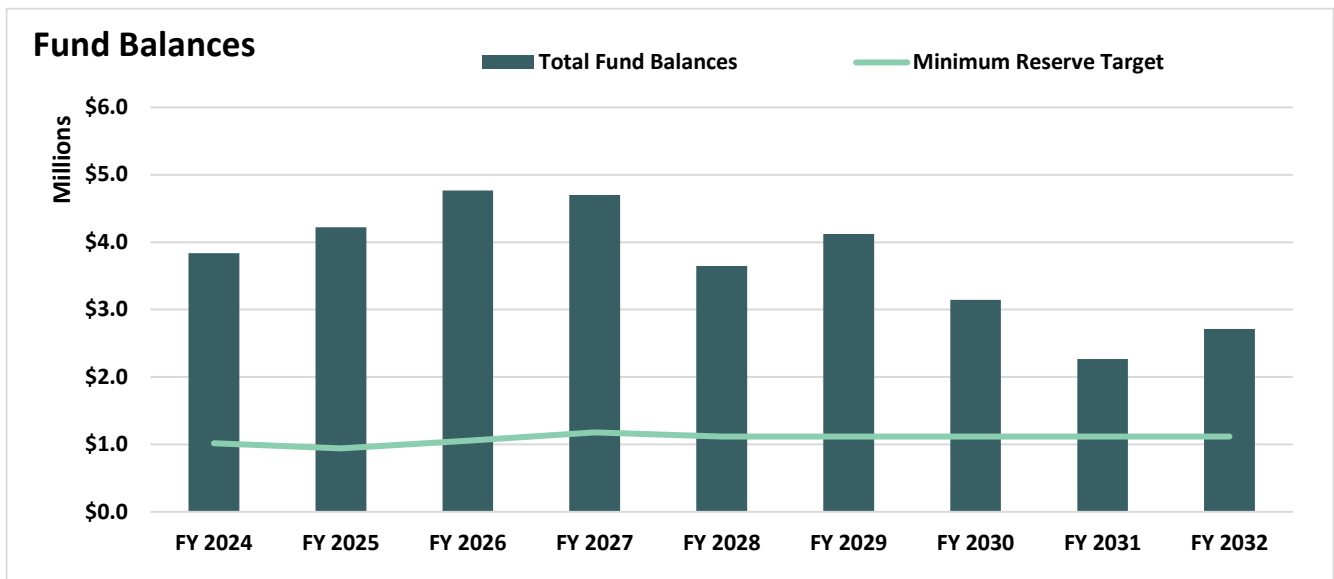


Table 6-10 below displays the projected pro forma cashflow for the wastewater enterprise. The Net Revenues line shows that the proposed revenue, including the proposed revenue adjustments, is sufficient to cover annual operating expenses through the financial planning period. The Annual Surplus (Deficit) line shows the draws on or additions to the operating fund after debt service and capital expenditures.

Table 6-10: Proposed Wastewater Proforma

Line Item	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032
Beginning Operating Balance	\$1,896,838	\$2,723,755	\$3,569,804	\$4,300,430	\$4,110,240	\$3,124,008	\$3,599,021	\$2,619,703	\$1,741,230
Revenues									
Under Existing Rates	\$2,332,934	\$2,457,434	\$2,457,434	\$2,457,434	\$2,457,434	\$2,457,434	\$2,457,434	\$2,457,434	\$2,457,434
Proposed Revenue Adjustments	\$0	\$0	\$0	\$0	\$73,723	\$149,658	\$227,871	\$308,430	\$391,406
Other Revenues	\$231,880	\$175,000	\$175,000	\$175,000	\$175,000	\$175,000	\$175,000	\$175,000	\$175,000
Interest Income	\$155,093	\$161,155	\$179,694	\$189,254	\$166,935	\$38,859	\$36,337	\$27,048	\$24,881
Total Revenue	\$2,719,907	\$2,793,589	\$2,812,128	\$2,821,688	\$2,873,093	\$2,820,951	\$2,896,642	\$2,967,913	\$3,048,721
Operating Expenses									
Cost of Goods	\$669,740	\$709,870	\$752,407	\$797,494	\$845,285	\$895,941	\$949,635	\$1,006,549	\$1,066,875
Operational Expenses	\$472,275	\$486,965	\$502,117	\$517,746	\$533,865	\$550,493	\$567,643	\$585,334	\$603,582
Non-Operating Expenses	-\$9,000	-\$9,270	-\$9,548	-\$9,835	-\$10,130	-\$10,433	-\$10,746	-\$11,069	-\$11,401
Total Operating	\$1,133,015	\$1,187,566	\$1,244,976	\$1,305,405	\$1,369,021	\$1,436,000	\$1,506,532	\$1,580,813	\$1,659,056
Net Revenues	\$1,586,892	\$1,606,024	\$1,567,152	\$1,516,283	\$1,504,072	\$1,384,951	\$1,390,111	\$1,387,099	\$1,389,665
Debt Service									
Existing	\$759,975	\$759,975	\$759,975	\$759,975	\$759,975	\$759,975	\$759,975	\$759,975	\$759,975
Proposed	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Debt Service	\$759,975	\$759,975	\$759,975	\$759,975	\$759,975	\$759,975	\$759,975	\$759,975	\$759,975
Rate Funded CIP	\$0	\$0	\$76,552	\$946,499	\$1,730,329	\$149,963	\$1,609,455	\$1,505,597	\$184,682
Annual Surplus (Deficit)	\$826,917	\$846,049	\$730,625	-\$190,190	-\$986,232	\$475,013	-\$979,319	-\$878,473	\$445,009
Ending Operating Balance	\$2,723,755	\$3,569,804	\$4,300,430	\$4,110,240	\$3,124,008	\$3,599,021	\$2,619,703	\$1,741,230	\$2,186,239
Minimum Operating Reserve Target	\$591,499	\$591,499	\$591,499	\$591,499	\$591,499	\$591,499	\$591,499	\$591,499	\$591,499
Debt Coverage	2.09	2.11	2.06	2.00	1.98	1.82	1.83	1.83	1.83

Table 6-11 shows the proposed sources and uses of capital funds for the wastewater enterprise.

Table 6-11: Proposed Wastewater Capital Sources & Uses of Funds

Line Item	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032
Beginning Capital Balance	\$2,020,418	\$1,113,618	\$650,568	\$463,899	\$588,136	\$524,378	\$524,378	\$524,378	\$524,378
Sources of Funds									
Rate Funded	\$0	\$0	\$76,552	\$946,499	\$1,730,329	\$149,963	\$1,609,455	\$1,505,597	\$184,682
Debt Funded	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Sources	\$0	\$0	\$76,552	\$946,499	\$1,730,329	\$149,963	\$1,609,455	\$1,505,597	\$184,682
Uses of Funds									
Capital	\$906,800	\$463,050	\$263,222	\$822,261	\$1,794,087	\$149,963	\$1,609,455	\$1,505,597	\$184,682
Total Uses	\$906,800	\$463,050	\$263,222	\$822,261	\$1,794,087	\$149,963	\$1,609,455	\$1,505,597	\$184,682
Ending Capital Balance	\$1,113,618	\$650,568	\$463,899	\$588,136	\$524,378	\$524,378	\$524,378	\$524,378	\$524,378
Minimum Capital Reserve Target	\$424,942	\$349,258	\$463,899	\$588,136	\$524,378	\$524,378	\$524,378	\$524,378	\$524,378

7. Wastewater Cost-of-Service and Proposed Wastewater Rates

The total revenue requirement is, by definition, the net cost of providing service. This cost-of-service is then used as the basis to develop unit rates for the wastewater parameters and to allocate costs to the various user classes. The concept of proportionate allocation to user classes implies that allocations should take into consideration the quantity of wastewater a user contributes as well as the strength (i.e., treatment requirements) of the wastewater.

The cost-of-service analysis and rate calculations consist of the following steps:

1. Determination of the total costs to be recovered from rates (cost-of-service)
2. Determination of the wastewater loadings for each customer class, to ensure costs are allocated to each class proportionately
3. Allocation of the cost-of-service to the loading parameters- Flow, Biochemical Oxygen Demand (BOD) and Total Suspended Solids (TSS)
4. Calculation of unit costs for the three parameters and the costs to serve the various user classes based on their loadings
5. Calculation of rates for each user class

This section of the report discusses the allocation of operating and capital costs to the Flow, BOD, and TSS parameters, the determination of unit rates, and the calculation of user class cost responsibility.

In this study, wastewater rates were calculated for FY 2025, and accordingly FY 2025 revenue requirements are used in the cost allocation process.

7.1. Costs-of-Service to be Allocated

The annual cost-of-service to be recovered from wastewater rates (i.e., revenue requirement) includes O&M expenses (Table 6-5), capital improvement projects covered through reserves (Table 6-11), and debt service (Table 6-7). O&M expenses include costs directly related to the collection, treatment, and disposal of wastewater and maintenance of system facilities.

The total FY 2025 net cost-of-service to be recovered from the City's wastewater users, is shown Line 11 of Table 7-1. The cost-of-service analysis is based on the need to generate revenues adequate to meet this estimated revenue requirement. As part of the cost-of-service analysis, revenues from sources other than wastewater rates and charges are deducted from the appropriate cost elements (Line 7). Adjustments are also made for transfers to/from reserves (Line 8 and Line 9).

Table 7-1: Allocation of Wastewater Revenue Requirements, Test Year

No.	Line Item	Operating	Capital-Related	Total
Revenue Requirements				
1	O&M Expenses	\$1,187,566		\$1,187,566
2	Debt Service		\$759,975	\$759,975
3	Capital Reserve Funded CIP		\$463,050	\$463,050
4	Total - Revenue Requirements	\$1,187,566	\$1,223,025	\$2,410,590
Revenue Offsets				
5	Other Revenue	-\$175,000		-\$175,000
6	Interest Income	-\$161,155		-\$161,155
7	Total - Revenue Offsets	-\$336,155	\$0	-\$336,155
Adjustments				
8	Adjustment for Cash Balance	\$846,049		\$846,049
9	Adjustment for Cash Balance-Capital		-\$463,050	-\$463,050
10	Total - Adjustments	\$846,049	-\$463,050	\$382,999
11	Total Revenue to be Recovered from Rates	\$1,697,460	\$759,975	\$2,457,434

To allocate the cost-of-service to the various user classes in proportion to their flow and strength contributions, costs first need to be allocated to selected wastewater cost causation parameters. The following subsection describes the allocation of the operating and capital cost-of-service amounts to the parameters of Flow, BOD, and TSS.

7.2. Cost Allocation to Wastewater Cost Causation Parameters

The cost-of-service allocations in this study are based on Raftelis' experience with wastewater treatment plants and are consistent with the revenue program guidelines of the Water Environment Federation (WEF).

The three main cost causation parameters are Flow, BOD (biological oxygen demand), and TSS (total suspended solids). BOD and TSS constitute the strength components of the wastewater discharge. Additional parameters include infiltration and inflow, customers, and laterals. Costs are assigned based on the parameters that dictate the design of each process. The allocation of costs to the three main parameters involves:

1. Detailed breakdown and functionalization of O&M costs.
2. Itemization of the capital costs by functions such as collection, treatment, outfall, etc.
3. Allocation of the functional costs to the wastewater cost causation parameters.

In the absence of a detailed breakdown of fixed assets by process, the WWTP treatment costs are allocated to flow, BOD, and TSS at 50 percent, 25 percent, and 25 percent, respectively. This allocation is representative of other similar treatment plants. Costs that could not be specifically identified were categorized as general costs. The allocation of O&M functions to cost components is shown in Table 7-2. The allocation of wastewater assets is shown in Table 7-3.

Table 7-2: O&M Cost Category Allocations

Functional Allocation	Rationale	Flow	BOD	TSS	Billing	General	Total
Collection	Flow	100.0%					100.0%
Treatment	Flow & Strength	50.0%	25.0%	25.0%			100.0%
CS/Billing	CS/Billing				100.0%		100.0%
G&A						100.0%	100.0%

Note: CS = customer service

Table 7-3: Asset Allocations

Functional Allocation	Rationale	Flow	BOD	TSS	Billing	General	Total
Buildings	G&A	\$0	\$0	\$0	\$0	\$714,091	\$714,091
Collection	Collection	\$718,989	\$0	\$0	\$0	\$0	\$718,989
Treatment	Treatment	\$7,347,253	\$3,673,626	\$3,673,626	\$0	\$0	\$14,694,506
Land	General	\$0	\$0	\$0	\$0	\$531,577	\$531,577
Mach&Equip	General	\$0	\$0	\$0	\$0	\$38,551	\$38,551
CS/Billing	Billing	\$0	\$0	\$0	\$47,741	\$0	\$47,741
ForceMain/LiftStation	Flow	\$226,898	\$0	\$0	\$0	\$0	\$226,898
G&A	General	\$0	\$0	\$0	\$0	\$49,048	\$49,048
Total		\$8,293,140	\$3,673,626	\$3,673,626	\$47,741	\$1,333,268	\$17,021,402
Percent Allocation		48.7%	21.6%	21.6%	0.3%	7.8%	100.0%

7.3. Unit Cost-of-Service

The next step of the cost-of-service analysis is to calculate unit costs for Flow, BOD, and TSS. The unit costs of service are developed by dividing the total annual costs allocated to each parameter by the total annual loadings for each parameter. Raftelis determined the total billed residential wastewater flow based on District data for the average winter month billed water use. The non-residential flow is presumed to be the billed water times a return-to-sewer factor. Raftelis has used 85 percent for cottages, motels, etc., and 90 percent for commercial and industrial. Inflow and infiltration has been estimated at 1 percent. The plant loadings provide a basis for determining unit costs.

The strength of different types of non-residential customers is based on data from Los Angeles Sanitation. Table 7-4 shows the calculation of the units of service for residential and non-residential customers using the method described above for calendar year 2020.

Table 7-4: Mass Balance Calendar Year 2020

Line Item	WW Flow		
	(hcf/yr)	BOD (lbs/yr)	TSS (lbs/yr)
Total Plant Influent	78,476	119,048	117,088
Estimated I/I	785	980	980
Net Plant	77,691	118,068	116,108
Non-Residential			
Cottages, Motels, Trailer Parks, Laundries, etc.	162	403	338
Commercial and Industrial	989	4,014	3,180
Total Non-Residential	1,151	4,417	3,518
Residential			
Single Family	76,037	112,903	111,850
Multi-Family	504	748	741
Total Residential	76,541	113,651	112,591

The residential and non-residential wastewater loadings are used in Table 7-5 to develop the FY 2025 units of service based on estimated test year flows.

Table 7-5: Units of Service, Test Year

Customer Class	Water Use (hcf)	WW Flow		Accounts or dwelling units		Bills
		(hcf)	BOD (lb/yr)	TSS (lb/yr)	units	
Residential WW						
Single Family Residential		131,329	194,991	193,171	1,463	17,556
Multi-Family Residential (dwelling units)		703	1,044	1,034	12	12
Cottages, Motels, Trailer Parks, Laundries, etc.	284	241	603	505	2	24
Commercial and Industrial	1,277	1,149	4,663	3,695	8	96

These units of service are then used in Table 7-6 to determine the unit costs (Line 9) for each of the wastewater parameters. These unit costs are then used along with the loadings to develop the cost to be collected from the different customer classes. Note that general costs are reallocated based on the proportions of the other costs.

Table 7-6: Development of Unit Costs

No.	Revenue Requirement	WW Flow	BOD	TSS	Billing	General	Total
1	Net Operating Revenue Requirement	\$1,179,022	\$209,148	\$209,148	\$100,141	\$0	\$1,697,460
2	Net Capital Revenue Requirement	\$370,274	\$164,021	\$164,021	\$2,132	\$59,528	\$759,975
3	Total - Cost of Service	\$1,549,295	\$373,169	\$373,169	\$102,273	\$59,528	\$2,457,434
4	Allocation of General Costs - Operating	\$0	\$0	\$0	\$0	\$0	\$0
5	Allocation of General Costs - Capital	\$31,468	\$13,939	\$13,939	\$181	-\$59,528	\$0
6	Total - Adjusted Cost of Service	\$1,580,763	\$387,109	\$387,109	\$102,454	\$0	\$2,457,434
7	Units of Service	133,423	201,301	198,405	17,688		
8	Units	hcf/yr	lb/yr	lb/yr	bills/yr		
9	Unit Cost	\$11.85	\$1.92	\$1.95	\$5.79		
10		per hcf	per lb	per lb	per bill		

8. Wastewater Rate Derivation

8.1. Proposed Rates

Based on District staff direction, Raftelis has developed a new flat, monthly rate structure for residential customers. Non-residential customers will continue to be charged based on billed water consumption, subject to a minimum monthly charge equal to the Multifamily charge for one dwelling unit.

Table 8-1 shows the derivation of each of the customer-class charges. The total costs allocated to single family and multifamily residential customer classes are divided by the number of dwelling units and adjusted by the equivalent dwelling unit factor to determine the monthly charge per dwelling unit. Based on the 2011 American Community Survey 5-Year data for the Sunnyslope census designated place, multifamily density is about 65 percent of single family density. The non-residential customer rates are based on the total allocated cost divided by the total billed water use.

Table 8-1: Wastewater Rate Derivation, Test Year

Customer Class	Flow	Strength	Customer	Total	Dwelling Units	EDU Ratio	\$/EDU/mo	Water Use, hcf	\$/hcf
Single Family	\$1,555,957	\$751,872	\$101,689	\$2,409,518	1,463	1.00	\$137.25		
Multifamily	\$8,329	\$4,025	\$70	\$12,424	12	0.65	\$89.58		
Cottages, Motels, Trailer Parks, Laundries, etc. (1)	\$2,860	\$2,144	\$139	\$5,143				190	\$27.07
Commercial and Industrial (1)	\$13,617	\$16,177	\$556	\$30,349				1,099	\$27.62

(1) Subject to a minimum charge equal to \$89.58

Table 8-2 shows the proposed wastewater rates for the next five years. Rates are adjusted by the cost-of-service for FY 2025 and then by the revenue adjustments (starting in FY 2028) on July 1 of each fiscal year through the rate-setting period.

Table 8-2: Proposed Wastewater Rates

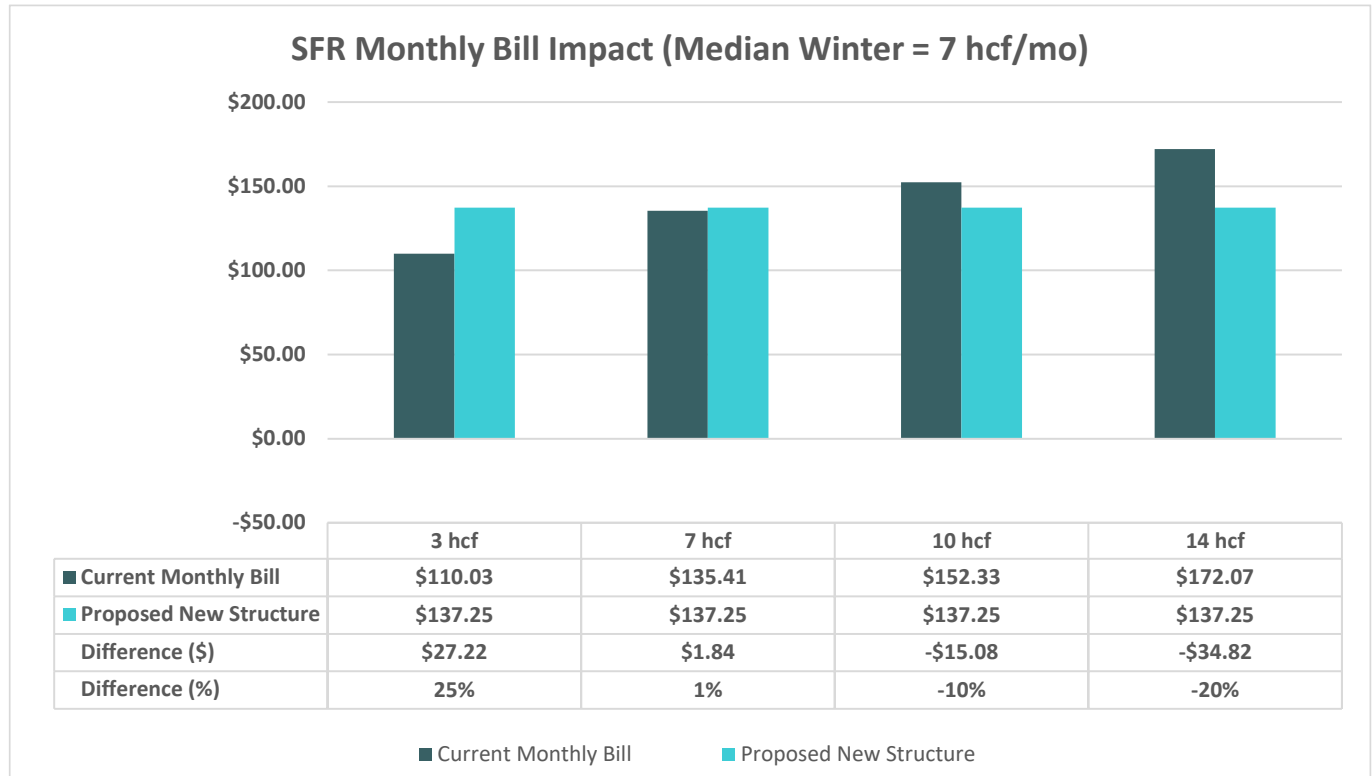
Customer Class	Current	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Effective Date		8/1/2024	7/1/2025	7/1/2026	7/1/2027	7/1/2028
Monthly Fixed, \$/mo/du						
Single Family	\$95.93/mo/du + \$5.64/hcf	\$137.25	\$137.25	\$137.25	\$141.37	\$145.62
Multifamily	\$72.98/mo/du + \$5.64/hcf	\$89.58	\$89.58	\$89.58	\$92.27	\$95.04
Volume Charge (1)						
Cottages, Motels, Trailer Parks, Laundries, etc.	\$9.20/hcf	\$27.07/hcf	\$27.07/hcf	\$27.07/hcf	\$27.89/hcf	\$28.73/hcf
Commercial and Industrial	\$12.14/hcf	\$27.62/hcf	\$27.62/hcf	\$27.62/hcf	\$28.45/hcf	\$29.31/hcf
Minimum Charge	--	\$89.58	\$89.58	\$89.58	\$92.27	\$95.04

(1) Proposed rates include a minimum charge.

8.2. Wastewater Bill Impacts

Figure 8-1 shows the monthly bill impact of the proposed rates on a residential customer.

Figure 8-1: Residential Wastewater Monthly Rate Impacts at Different Average Winter Usage Amounts



APPENDIX A:

**Water Capital Improvement
Plan**



Capital Improvement Plan - Uninflated	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032
Water Supply & Treatment									
Hollister Urban Area Master Plan Update				\$50,000	\$25,000				\$50,000
West Hills WTP Expansion		\$3,000,000							
*Cross Town Pipeline Inspection							\$150,000		
Well 2 - Pump Rehabilitation				\$35,000					
Well 7 - Pump Rehabilitation			\$35,000						
Well 8 - Pump Rehabilitation			\$35,000						
Well 12 - Development				\$80,000		\$1,000,000	\$500,000		
Well 12 - Water Quality Treatment					\$80,000		\$500,000	\$1,000,000	
Facility Fencing					\$20,000				
ASR Pilot Project							\$3,000,000		
Water Distribution									
Union Road Pressure Reducing Station SCADA		\$30,000		\$75,000					
New Enterprise Booster Station		\$100,000	\$335,000						
Enterprise Road Garage Facility @ Well #7					\$320,000				
Upgrade Airline Highway Booster Station SCADA	\$50,000				\$100,000				
Rehabilitate 2.0 MG Fairview Tank					\$1,500,000				
Rehabilitate 3.5 MG Fairview Tank (painting)							\$300,000		
Well 8 Irrigation System Supply			\$500,000						
Replace 12" Pipe from Ridgemark Tanks to Georges								\$150,000	
Upsize water main from Well 2 to Airline Hwy									\$166,000
Water Meter AMI Radio Network and Upgrades (Itron)	\$412,000								
Well 2 VFD Electrical Rewiring			\$40,000						
Update Water System Model for Fire Flows					\$40,000				
Water Main Upgrades for Fire Flows							\$300,000	\$300,000	
Convert Water Distribution SCADA	\$37,500	\$37,500							
Replace Cathodic Protection Anodes in Water Tanks							\$30,000		
Well 7 - Maintenance and Materials Facility			\$450,000						
Tank Asphalt Chip Sealing				\$100,000					
Well Head Asphalt Chip Sealing						\$150,000			
Properly Abandon and Seal Well 1				\$30,000					
Properly Abandon and Seal Well 6				\$30,000					
ACP Water Main Replacement							\$300,000		
Gate Valve Replacement		\$50,000		\$50,000		\$50,000		\$50,000	
Pressure Reducing Valve Replacement					\$50,000		\$50,000		\$50,000
Fire Hydrant Replacement						\$100,000			
Ridgemark Tanks Rehabilitation									\$300,000
Electric Truck							\$75,000		
Electric Truck							\$80,000		
Crane Truck, Diesel				\$120,000					
Water Irrigation System									
Well 5 Irrigation System Supply		\$750,000	\$750,000						
Irrigation Line - Fairview Road Extension	\$300,000								
Pipe Repair and Replacement			\$100,000						
Well 8 Intertie Design and Construction			\$40,000		\$500,000				
Promontory Landscape Pipeline	\$60,000								
Admin Capital - Water Portion									
Replace floor electrical and re-carpet District Office	\$44,200			\$31,200					
Paint District Office Inside & Outside							\$39,000		
Vehicle Replacement					\$104,000				
Backhoe						\$97,500			
Roof Repair/Gutter Replacement	\$9,750		\$9,750						
Replacement Electronic Devices/Desktop Computers	\$9,750	\$6,500	\$6,500	\$6,500					
Total Project Costs - Uninflated	\$923,200	\$974,000	\$5,301,250	\$607,700	\$2,739,000	\$1,397,500	\$5,324,000	\$1,500,000	\$566,000
Total Project Costs - Inflated	\$923,200	\$1,022,700	\$5,844,628	\$703,489	\$3,329,272	\$1,783,603	\$7,134,669	\$2,110,651	\$836,240

APPENDIX BA:

Water O&M Allocation



O&M Functionalization

O&M Line Item	Test Year	Supply	Treatment	T&D	Storage	Meters	CS/Billing
Water Distribution							
Cost of Goods	\$1,472,240			60%		20%	20%
Operating Expenses							
Quality Testing	\$42,230		100%				
All Other Operating Expenses	\$723,906			60%		20%	20%
Other	\$0			60%		20%	20%
Water Production	\$968,666	90%					10%
Lessalt TP							
Cost of Goods	\$502,380	29%	71%				
Operating Expenses							
Cost of Raw Water	\$805,710	100%					
Cost of Raw Water - Power	\$139,360	100%					
True-Up Annual Raw Water Cost & Power	\$0	100%					
All Other Operating Expenses	\$2,355,236		100%				
West Hills TP							
Cost of Goods	\$498,416	31%	69%				
Operating Expenses							
Cost of Raw Water	\$1,611,420	100%					
Cost of Raw Water - Power	\$83,616	100%					
True-Up Annual Raw Water Cost & Power	\$0	100%					
All Other Operating Expenses	\$3,785,602		100%				
Non-Operating Expenses							
Non-Op Allocation - Water Distribution	-\$13,905		2%	59%		20%	20%
Non-Op Allocation - Water Production	-\$7,725	90%					10%
Total	\$12,967,151	\$3,802,962	\$6,885,592	\$1,309,502	\$0	\$436,501	\$532,595
Allocation		29%	53%	10%	0%	3%	4%

Allocation of WTP O&M Revenue

Treatment Plant O&M	Supply	Treatment
Lessalt TP	\$1,088,931	\$2,713,755
West Hills TP	\$1,849,185	\$4,129,869
Total	\$2,938,115	\$6,843,624
Allocation	30%	70%

Function	WTP O&M Rev	Base	Max Day
Supply	\$1,318,261	\$1,008,470	\$309,791
Treatment	\$3,070,569	\$1,535,284	\$1,535,284
WTP O&M Revenue	\$4,388,830	\$2,543,754	\$1,845,076
Allocation		58%	42%

APPENDIX C:

**Wastewater Capital
Improvement Plan**

Capital Improvement Plan - Uninflated	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032
Wastewater Treatment									
Pond 6 Lift Station Wet Well, Pump, Electrical	\$50,000								
Dredge and Remove Sludge from RM I Pond 1							\$750,000		
Replace SBR Monitoring Wells	\$50,000								
Facility Fencing							\$20,000		
Undesignated Future									\$75,000
Wastewater Collection									
New Enterprise Lift Station (replace Oak Canyon)	\$100,000								
New Airline/Ridgemark Dr. Lift Station (replace Paullus)		\$150,000							
New Force Main Sewer from Main Lift to Vista del Calabria				\$150,000					
New Gravity Sewer Everest toward Main Lift				\$80,000					
Connection to City Sewer via Lico North				\$30,000	\$420,000				
Ridgemark Golf Course Sewer Upsizing						\$65,000			
Upsizing City Sewer Mains Union/Southside to City WWTP							\$60,000	\$1,000,000	
Manhole and Sewer Main Repair/Replace from CCTV Inspection	\$50,000	\$50,000					\$50,000	\$50,000	\$50,000
VCP Sewer Main Replacement							\$300,000		
Facility Fencing								\$20,000	
SCADA System Upgrade			\$80,000						
Vista Del Calabria Pumpstation Cost Share	\$200,000								
Pump Station Control Panels	\$300,000	\$200,000	\$150,000						
Admin Capital - WW Portion									
Replace floor electrical and re-carpet District Office	\$23,800			\$16,800					
Paint District Office Inside & Outside							\$21,000		
Vehicle Replacement					\$56,000				
Backhoe						\$52,500			
Roof Repair/Gutter Replacement	\$5,250		\$5,250						
Replacement Electronic Devices/Desktop Computers	\$5,250	\$3,500	\$3,500	\$3,500					
Total Project Costs - Uninflated	\$906,800	\$441,000	\$238,750	\$710,300	\$1,476,000	\$117,500	\$1,201,000	\$1,070,000	\$125,000
Total Project Costs - Inflated	\$906,800	\$463,050	\$263,222	\$822,261	\$1,794,087	\$149,963	\$1,609,455	\$1,505,597	\$184,682