GOLETA
WEST SANITARY DISTRICT
Wastewater Cost-of-Service and Rate Study

DRAFT REPORT / APRIL 10, 2023

RAFTELIS

306644.v4

RAFTELIS

April 10, 2023

Brian McCarthy
General Manager/Superintendent
Goleta West Sanitary District
PO Box 4
Goleta, CA 93116-0004

Subject: Wastewater Cost of Service Study Report

Dear Mr. McCarthy,

Raftelis Financial Consultants is pleased to present this report on the wastewater cost-of-service study to the Goleta West Sanitary District (District). The Study involved a comprehensive review of the District's financial plan and rate structure. We are confident that the results, based on cost-of-service principles, result in fair and equitable wastewater rates for the District's customers and meet the requirements of Prop. 218.

The report includes an executive summary followed by an overview of the Study, the financial plan, and a detailed rate derivation for the wastewater utility. Customer bill impacts are presented in the final section of the report.

It was a pleasure working with you, and we wish to express our thanks for your and other staff members' support during the study. If you have any questions, please call me at (626) 583-1894.

Sincerely,

Sudhir D. Pardiwala, PE
Executive Vice President

Katelyn Milius, PE
Senior Consultant

Contents

Tables

Figures

THIS PAGE INTENTIONALLY LEFT BLANK

1. Executive Summary

1.1. Study Background

The Goleta West Sanitary District (District) engaged Raftelis Financial Consultants (Raftelis) to conduct a comprehensive financial plan and develop cost-of-service wastewater rates for implementation for the five-year period in fiscal years (FY) 2024 through FY 2028. This report documents the resultant findings, analyses, and proposed changes developed with input from and approved by District staff. This executive summary provides an overview of the study and includes findings and recommendations for wastewater rates.

1.2. Objectives of the Study

The primary objectives of the study include the following:

1. Ensure revenue sufficiency to meet the operation and maintenance (O&M), capital needs, and provide adequate financial reserves for the District's wastewater utility.
2. Ensure that rates are fair and equitable and are based on the cost-of-service guidelines used in the industry.
3. Plan for rate and revenue stability to prevent rate spikes and provide adequate operating and capital reserves and the overall financial health of the wastewater utility under varying conditions.

1.3. System Background

The Goleta West Sanitary District is located west of the City of Santa Barbara and serves part of the City of Goleta and unincorporated areas of Santa Barbara County. The District provides wastewater collection and treatment services to over 6,000 residential and non-residential customers within the District's service area. The District discharges wastewater to the Goleta Sanitary District (GSD) for treatment and disposal. A joint use agreement for treatment and disposal provides the District capacity rights of 40.78 percent in the GSD treatment plant.

The current annual sewer service charge is $262 per equivalent residential unit (ERU) and is collected by the County on the customers' property tax bill. Sewer service charges provide approximately 53 percent of the District's total revenue and they fund the vast majority of operating expenses. The District's other significant source of revenue is property tax revenue, which accounts for almost 39 percent of the District's total revenue. Property tax revenue is used to fund street sweeping, capital and debt expenditures and any shortfall of revenues from rates.

GSD has started to make improvements for the biosolids treatment on site to minimize disposal costs which are becoming very expensive through the implementation of the Biosolids & Energy Strategic Plan (BESP) project. The District has incurred a debt of $14 million to fund its share of the BESP project costs. This project is therefore an important factor in the resulting rate adjustments shown for the District's five-year planning horizon.

1.4. Current Rates

The District's current wastewater rates were implemented on July 16, 2013, by District Ordinance No 13-84, and include a monthly fixed charge per ERU[1] for its residential users and a separate set of fixed surcharges for its non-residential customers, which vary according to the associated strength loadings and estimated wastewater discharge volumes for each non-residential class. **Table 1** summarizes the District's existing rates for its residential and non-residential customers. Note that, while customers are charged on a monthly basis, the District sets rates as an annual dollar per ERU value. Each ERU is currently defined as 184 gal/day (gpd) of wastewater flow or 74,600 gal per year of water use with a 90 percent return factor.

Table 1: Current Wastewater Rates

Description	Current Fixed ($/ERU/year)
Residential (assigned one ERU/dwelling unit)	$262.00
All Non-Residential Customers (per ERU)	$262.00
Non-residential Surcharge Rates (per ERU)	
Hospitals and Convalescent Homes	$10.00
Service Stations without trailer dump facilities, machine shops, auto repair	$15.00
Hotels, motels, boarding, dorms lodging house	$26.00
Service stations with trailer dump facilities	$84.00
Take our or drive-in, churches with food service facilities, factories, industrial plants, etc.	$136.00
Markets with garbage disposals, mortuaries	$260.00
Restaurants, food service facilities	$276.00

1.5. Process and Approach

Raftelis held several meetings with District staff to discuss and understand objectives, characteristics, and challenges of the District's water utility to provide the recommendations and results detailed in this report. Raftelis confirmed various assumptions and inputs and used an iterative process to view several scenarios to determine the recommended financial plan and wastewater rates for service. District staff discussed the capital project requirements over a 5-year horizon (particularly as it relates to the BESP program), which is the primary driver of the increase in future revenue needs of the utility.

The proposed financial plan detailed in this report follows industry standards for long-term financial planning. The financial plan relies on reasonable assumptions based on industry indices, such as general inflation based on the Consumer Price Index (CPI) and input from District Staff. Raftelis worked closely with District staff to determine the most accurate methodology to project future revenues and expenses to reinforce sound fiscal management practices.

The financial plan includes the five-year period between FY 2024 to FY 2028. The cost-of-service analysis and resulting wastewater rates are developed using the principles established by the Water Environment Federation's (WEF) *Manual of Practice No. 27.*

[1] One ERU = 74,600 gallons per year of water usage.

1.6. Legal Requirements

California Constitution - Article XIII D, Section 6 (Proposition 218)

Proposition 218, reflected in the California Constitution as Article XIII D, was enacted in 1996 to ensure that rates and fees are reasonable and proportional to the cost of providing service. The principal requirements, as they relate to public water and wastewater service, are as follows:

1. A property-related charge (such as wastewater rates) imposed by a public agency on a parcel shall not exceed the costs required to provide the property-related service.
2. Revenues derived from the charge shall not be used for any purpose other than that for which the charge was imposed.
3. The amount of the charge imposed upon any parcel shall not exceed the proportional cost of service attributable to the parcel.
4. No charge may be imposed for a service unless that service is actually used or immediately available to the property owner.
5. A written notice of the proposed charge shall be mailed to the record owner of each parcel at least 45 days prior to the public hearing when the agency considers all written protests against the charge.

Wastewater rates and charges should be recovered from classes of customers in proportion to the cost of serving those customers. Proposition 218 makes clear that wastewater rates cannot be "arbitrary and capricious," meaning that the rate-setting methodology must be sound and that there must be a nexus between the costs and the rates charged.

1.7. Organization of the Report

This Report includes four sections in addition to the Executive Summary and this overview. A brief description of the remaining sections follows:

1. **Financial Plan** – describes the long-range financial plan for the wastewater utility and overall revenue requirements from rates used to determine the cost of service and rates during the study period.
2. **Cost of Service** – describes the wastewater cost-of-service methodology, which includes allocating costs to wastewater parameters and determining unit costs.
3. **Rates and Bill Impacts** – includes the wastewater rates derivation and customer impacts resulting from the proposed rates.

1.8. Financial Plan

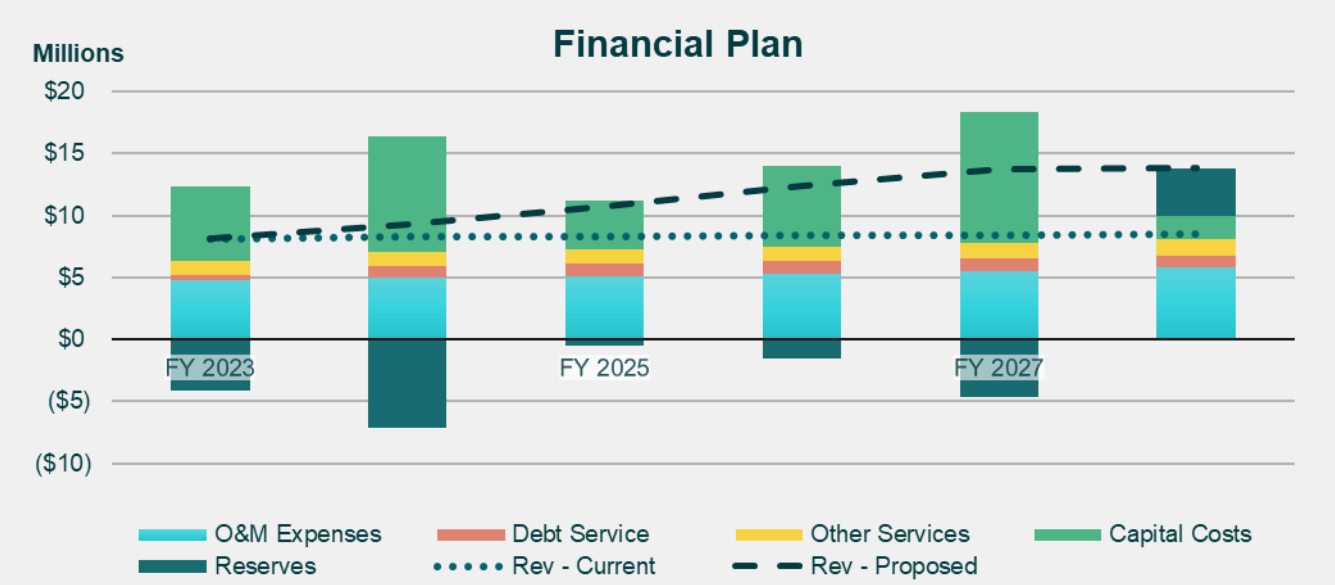
To determine the revenue adjustments required to meet the ongoing expenses of the District and provide fiscal stability, Raftelis projected the revenue requirements, including operations and maintenance (O&M) expenses, capital improvement expenses, debt service costs, reserve requirements, etc., for the study period FY 2024-2028. O&M expenses include the cost of operating and maintaining the collection system lines and lift stations, the costs of treatment from GSD, as well as the costs of providing technical services such as engineering services and other administrative costs of the wastewater system such as billing and customer service. O&M projections are based on the District's FY 2023 budget using a set of key inflationary factors starting in FY 2024 to project all O&M expenditures related to general expenses, salaries, and benefits. **Table 2** shows the key O&M inflation assumptions used in the study based on average historical trends. **Figure 1** graphically illustrates the projected wastewater financial plan, including O&M expenses, rate-funded CIP, and revenues under the current and proposed rates over the planning period. Reserves below the X-axis

denote use of reserves to fund capital costs. Positive cash flow is set aside to fund reserves for prudent fiscal management.

Table 2: Inflationary Factors

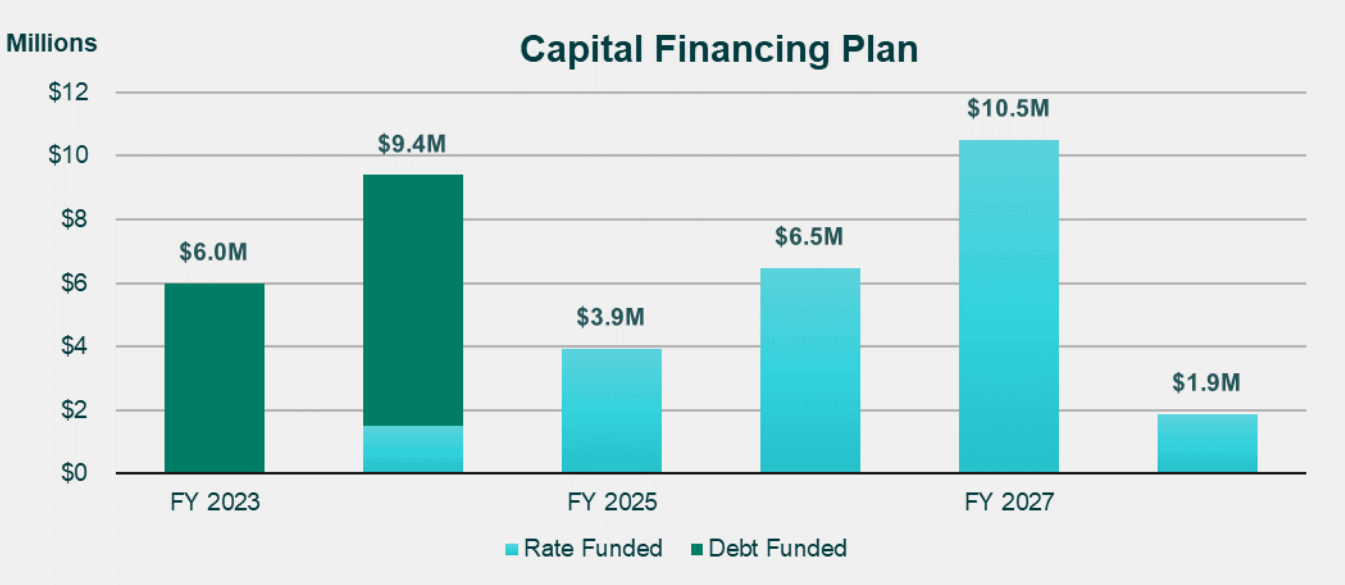
Customer Class	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
General	4.5%	4.5%	4.5%	4.5%	4.5%
Salaries	3.0%	3.0%	3.0%	3.0%	3.0%
Benefits	3.0%	3.0%	3.0%	3.0%	3.0%
Capital	5.0%	4.0%	4.0%	4.0%	4.0%
Treatment	5.0%	5.0%	5.0%	5.0%	5.0%
Utilities	5.0%	5.0%	5.0%	5.0%	5.0%

Figure 1: Proposed Financial Plan



In addition to the operating expenses, the District has planned capital expenditures over the next five years (FY 2024-2028) totaling approximately $32M (adjusted for inflation), the majority of this is for the BESP project at GSD which is for the treatment and disposal of wastewater and the solids generated from treatment. The wastewater utility does not anticipate issuing new debt during the study period. **Figure 2** shows the inflation-adjusted wastewater CIP funding plan over the planning period.

Figure 2: Projected CIP



To ensure that the District will have adequate revenues to fund wastewater operating and capital expenses and maintain sufficient reserves, Raftelis recommends the revenue adjustments in Table 3 per the financial plan. These increases are required to finance the capital and operating expenditures, inclusive of inflation. The increases are large based on percentages, however the increases in monthly charges are reasonable.

Table 3: Proposed Revenue Adjustments

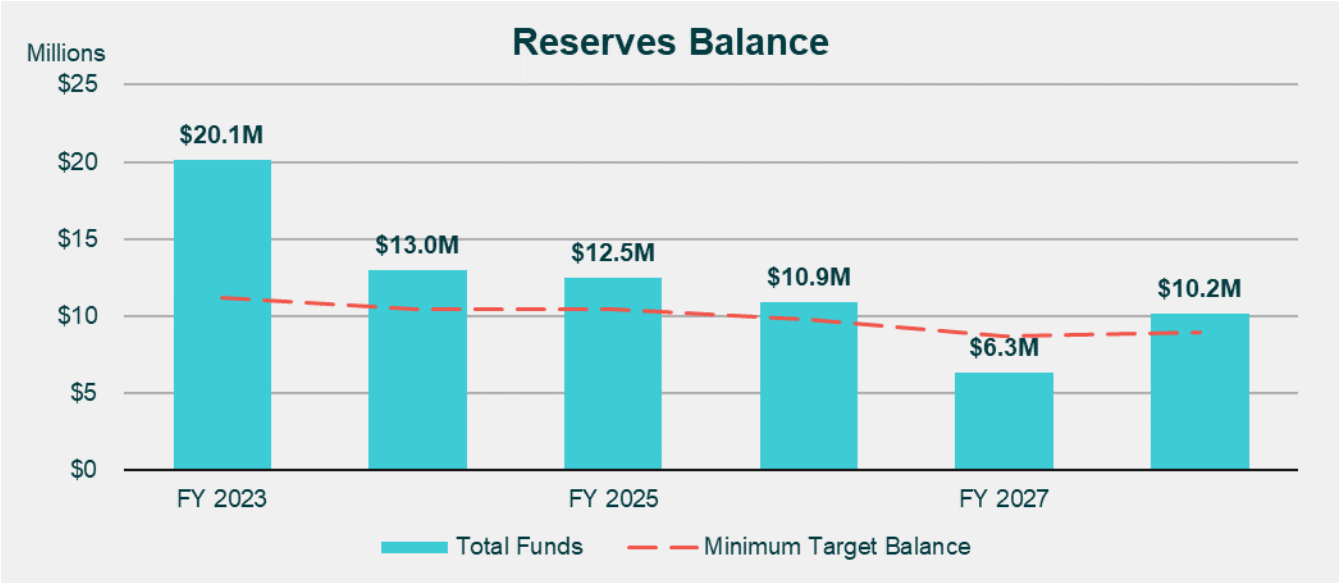
FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
25.0%	25.0%	25.0%	15.0%	0.0%

Figure 3 shows the resulting fund balance for the wastewater utility given the revenue increases in **Table 3**. The red line represents the total fund balance target, composed of operating and capital reserve targets consistent with industry standards. Several criteria for various reserve components establish financial reserves for the wastewater enterprise fund. The reserve target policies are shown in **Table 4**. **Figure 3** shows that the wastewater enterprise will achieve its target reserves in FY 2028.

Table 4: Reserve Policies

Reserve	Policy
Operating Reserve	100% of annual O&M expenses
Capital R&R Reserves	100% of five-year average CIP costs
Dedicated Capital Project Reserves	100% of five-year average capital expenditures

Figure 3: Projected Fund Balances



1.9. Cost of Service

To calculate fair and equitable rates so that users pay in proportion to the cost of providing service, Raftelis performed a cost allocation of the total revenue requirements consistent with industry standards. This report was prepared using the principles established by WEF, which establishes commonly accepted professional standards for cost-of-service studies. The general principles of rate structure design and the Report's objectives are described further in sections 3.2 Cost-of-Service Analysis, and 4 Rate Derivation and Bill Impacts. Costs to serve different customer classes are determined; rates are then designed to recover the costs equitably and be consistent with Proposition 218 requirements.

1.10. Proposed Wastewater Rates

Raftelis recommends that the District retain its current rate structure, in which all customers pay a monthly fixed rate determined through an annual dollar per ERU value that varies based on estimated customer strength loadings and wastewater discharge volumes. This rate structure is consistent with the cost-of-service and allows for more revenue stability. While the rate structure is recommended to remain the same, Raftelis recommends updating the definition of ERU to better reflect current residential water use. Each ERU is currently defined as 184 gal/day (gpd) of wastewater flow or 74,600 gal per year of water use. This study recommends updating the ERU to 160 gpd of wastewater flow or 64,889 gal per year of water use. The revision is based on water usage records for residential customers from Goleta Water District.

Table 5 shows the proposed fixed rates and commercial surcharges for FY 2024 through FY 2028. These rates are effective on July 1st of each fiscal year of the study, beginning on July 1, 2023.

Table 5: Proposed Wastewater Rates

Customer Class	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Residential (assigned one ERU/dwelling unit)	$308.00	$388.00	$484.00	$559.00	$559.00
All Non-Residential Customers (per ERU)	$308.00	$388.00	$484.00	$559.00	$559.00
Commercial Surcharges for Additional Strength for the Following Commercial User Categories (per ERU)					
Hospitals and Convalescent Homes	$12.00	$16.00	$21.00	$23.00	$23.00
Service Stations without trailer dump facilities, machine shops, auto repair	$18.00	$23.00	$30.00	$34.00	$34.00
Hotels, motels, boarding, dorms lodging house	$33.00	$43.00	$57.00	$63.00	$63.00
Service stations with trailer dump facilities	$111.00	$144.00	$190.00	$209.00	$209.00
Take our or drive-in, churches with food service facilities, factories, industrial plants, etc.	$180.00	$235.00	$310.00	$341.00	$341.00
Markets with garbage disposals, mortuaries	$344.00	$448.00	$592.00	$650.00	$650.00
Restaurants, food service facilities	$367.00	$477.00	$630.00	$693.00	$693.00

1.11. Customer Impacts

Table 6 shows the impact of the rate change as a percent change year over year for residential customers. Residential customers are assessed these sewer rates on their property taxes. The rates are flat rates for residential customers, independent of sewer use.

Table 6: Annual Single Family Bill Impacts

	Current Rate	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Annual Residential Rate (per dwelling unit)	$262.00	$308.00	$388.00	$484.00	$559.00	$559.00
Monthly Charge	$21.83	$25.67	$32.33	$40.33	$46.58	$46.58
Monthly Increase from Previous Year	-	$3.83	$6.67	$8.00	$6.25	$0.00
Percent Difference from Previous Year		18%	26%	25%	15%	0%

2. Financial Plan

This section of the report describes the wastewater fund and the proposed financial plan. To develop the financial plan, Raftelis projected annual revenues and expenses, modeled reserve balances, and projected capital expenditures to estimate the amount of additional rate revenue needed each year. Numbers shown in the tables of this section are rounded. Therefore, hand calculations based on the displayed numbers, such as summing or multiplying, may not equal the exact results shown.

2.1. System Background

The wastewater utility provides service to over 6,000 customer accounts in the District. Goleta West Sanitary District's wastewater service consists of 69 miles of wastewater collection lines and two wastewater lift stations. The collection system delivers wastewater to the GSD regional wastewater plant for treatment, disposal and recycling.

2.2. Current Rates

The District's current wastewater rates were implemented on July 16, 2013, by District Ordinance No. 13-83, and include a monthly fixed charge per ERU[2] for its residential users and a separate set of fixed surcharges for its non-residential customers, which vary according to the associated strength loadings and estimated wastewater discharge volumes for each non-residential class. **Table 7** summarizes the District's existing rates for its residential and non-residential customers. Note that, while customers are charged on a monthly basis, the District sets rates as an annual dollar per ERU value and collects these charges for most customers on the annual property tax bill. Additionally, the District bills a few customers manually based on their water use and wastewater strength.

Table 7: Current Wastewater Rates

Description	Current Fixed ($/ERU/year)
Residential (assigned one ERU/dwelling unit)	$262.00
All Non-Residential Customers (per ERU)	$262.00
Non-residential Surcharge Rates (per ERU)	
Hospitals and Convalescent Homes	$10.00
Service Stations without trailer dump facilities, machine shops, auto repair	$15.00
Hotels, motels, boarding, dorms lodging house	$26.00
Service stations with trailer dump facilities	$84.00
Take our or drive-in, churches with food service facilities, factories, industrial plants, etc.	$136.00
Markets with garbage disposals, mortuaries	$260.00
Restaurants, food service facilities	$276.00

[2] One ERU = 74,600 gallons per year of water usage.

2.3. Account Usage and Assumptions

Table 8 shows the estimated number of wastewater accounts for FY 2023 through FY 2028. According to the *Land Use Survey/Wastewater Generation Projection Study* from 2020, the estimated 10 year wastewater demand is 0.144 mgd from anticipated developments. This wastewater projection distributed over 10 years through 2023 resulted in approximately 46 ERUs per year. The growth is assumed to be residential so the yearly increase in ERUs is assigned to "All Customers – Residential." All Customers – Commercial are customers that are billed the same as residential customers based on their wastewater characteristics. The number of accounts is used to forecast the amount of fixed revenue the District will recover in the proposed rates.

Table 8: Projected ERUs

Customer Class	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
All Customers - Residential	**11,823**	**11,869**	**11,915**	**11,961**	**12,007**	**12,054**
All Customers - Commercial	630	630	630	630	630	630
Hospitals and Convalescent Homes	29	29	29	29	29	29
Service Stations without trailer dump facilities, machine shops, auto repair	8	8	8	8	8	8
Hotels, motels, boarding, dorms lodging house	599	599	599	599	599	599
Service stations with trailer dump facilities	5	5	5	5	5	5
Take our or drive-in, churches with food service facilities, factories, industrial plants, etc.	406	406	406	406	406	406
Markets with garbage disposals, mortuaries	3	3	3	3	3	3
Restaurants, food service facilities	333	333	333	333	333	333
Subtotal - Commercial	**1,383**	**1,383**	**1,383**	**1,383**	**1,383**	**1,383**
Manual Billing Customers	**1,721**	**1,721**	**1,721**	**1,721**	**1,721**	**1,721**
Total – All Customers	**15,557**	**15,603**	**15,649**	**15,695**	**15,742**	**15,788**

Table 9 shows the actual water use for FY 2022 by rate class. Water use for customers that are billed manually are included in the table under their corresponding customer class.

Table 9: Water Use, hcf/year

Customer Class	FY 2022
All Customers - Residential	**638,136**
All Customers - Commercial	224,039
Hospitals and Convalescent Homes	2,972
Service Stations without trailer dump facilities, machine shops, auto repair	573
Hotels, motels, boarding, dorms lodging house	68,589
Service stations with trailer dump facilities	502
Take our or drive-in, churches with food service facilities, factories, industrial plants, etc.	42,633
Markets with garbage disposals, mortuaries	268
Restaurants, food service facilities	35,548
Subtotal - Commercial	**375,124**
Total – All Customers	**1,013,260**

2.4. Inflationary and Other Assumptions

This section describes the assumptions used in projecting operating and capital expenses as well as reserve coverage requirements that determine the overall revenue adjustments required to ensure the financial stability of the District's utility. Revenue adjustments represent the average increase in rates for the utility as a whole. Rate changes for individual classes depends on the cost-of-service analysis described in later sections.

To ensure that future costs are reasonably projected, it is necessary to make informed assumptions about inflationary factors and water use. **Table 10** shows the inflationary assumptions incorporated in the five-year financial plan. O&M projections are based on the District's FY 2023 budget using inflationary factors to project O&M expenditures related to general expenses and salaries. General inflation was assigned based on All Urban Consumers, Los Angeles-Long Beach-Anaheim (March to March CPI to calculate Cost of Living Pay Adjustments (COLA). for the past five years and is projected to increase at 4.5% per year.(COLA adjustments for 2018-2022 equal 3.8, 3.0, 4.0, 2.5, & 8.5% respectively, for an average of 4.36%). Interest earned on reserves are approximately 2% throughout the planning period.

Table 10: Inflationary Assumptions

Customer Class	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
General	4.5%	4.5%	4.5%	4.5%	4.5%
Salaries	3.0%	3.0%	3.0%	3.0%	3.0%
Benefits	3.0%	3.0%	3.0%	3.0%	3.0%
Capital	5.0%	4.0%	4.0%	4.0%	4.0%
Treatment	5.0%	5.0%	5.0%	5.0%	5.0%
Utilities	5.0%	5.0%	5.0%	5.0%	5.0%
Reserve Interest Rate	1.8%	2.0%	2.0%	2.0%	2.0%

2.5. Financial Plan

The assumptions shown above are incorporated into the five-year financial plan. To develop the financial plan, Raftelis projects annual expenses and revenues, capital expenditures, calculated debt service coverage ratios and models reserves to estimate the amount of additional rate revenue required in each year. This section of the report provides a discussion of projected revenue under existing rates, O&M expenses, the capital improvement plan (CIP), reserve funding, and the revenue adjustments needed to ensure the fiscal sustainability and solvency of the District's wastewater utility.

2.5.1. Projected Revenues

Table 11 shows the calculated rate revenues and projected non-operating revenues for FY 2023 through FY 2028 based on the District's current wastewater rates. The projected annual rate revenue is determined by multiplying the number of ERUs by the corresponding monthly fixed charges for 12 months.

Table 11: Projected Revenues

Customer Class	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Rate Revenues	$4,211,106	$4,219,496	$4,231,581	$4,243,666	$4,255,751	$4,267,836
Miscellaneous Permits	$60,000	$60,000	$60,000	$60,000	$60,000	$60,000
Planning & Engineering-Plan Ck Fees	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000
Inspection Fees	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000
Other Services Income	$240,000	$240,000	$240,000	$240,000	$240,000	$240,000
Operating Revenues	$4,538,106	$4,544,496	$4,556,581	$4,568,666	$4,580,751	$4,592,836
Property Taxes	$3,175,000	$3,238,500	$3,303,270	$3,369,335	$3,436,722	$3,505,457
Interest Income	$286,413	$294,121	$252,781	$237,439	$194,615	$202,182
Homeowners Property Tax Relief	$13,500	$13,770	$14,045	$14,326	$14,613	$14,905
Connection Fees	$130,000	$187,273	$187,273	$187,273	$187,273	$187,273
Non-Operating Revenues	$3,604,913	$3,733,664	$3,757,369	$3,808,374	$3,833,223	$3,909,817
Total Revenues	**$8,143,020**	**$8,268,666**	**$8,269,050**	**$8,267,890**	**$8,211,346**	**$8,193,813**

2.5.2. Projected O&M Expenses

The District's FY 2023 O&M budget and projected O&M expenses are shown in **Table 12**. The financial plan study period is from FY 2024 through FY 2028. The O&M budget incorporates the inflationary factors shown in **Table 10**. O&M expenses include the costs to operate and maintain the collection system including wastewater lines and pump stations, as well as the costs of providing technical services such as engineering services and other administrative and operating costs. The expenses also include costs associated with billing and customer service.

Table 12: Projected O&M Expenses

	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Administration	$931,660	$963,580	$996,637	$1,030,874	$1,066,333	$1,103,062
Collection	$726,900	$750,852	$775,620	$801,235	$827,727	$855,126
Pump Station	$310,839	$322,697	$335,032	$347,864	$361,215	$375,106
Treatment	$2,778,000	$2,916,110	$3,061,090	$3,213,282	$3,373,044	$3,540,754
Other Services	$1,069,785	$1,115,185	$1,162,554	$1,211,975	$1,263,541	$1,317,345
Total	**$5,817,184**	**$6,068,423**	**$6,330,933**	**$6,605,230**	**$6,891,860**	**$7,191,394**

2.5.3. Projected O&M Expenses

Table 13 shows the District's existing debt service for the period from FY 2023 to FY 2028. Given that the District issued the debt shown below during this past fiscal year, additional debt issues are not required during the course of the five-year period.

Table 13: Existing Debt

	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
2022 Biosolids Financing	$487,194	$975,230	$975,573	$975,285	$975,368	$975,768

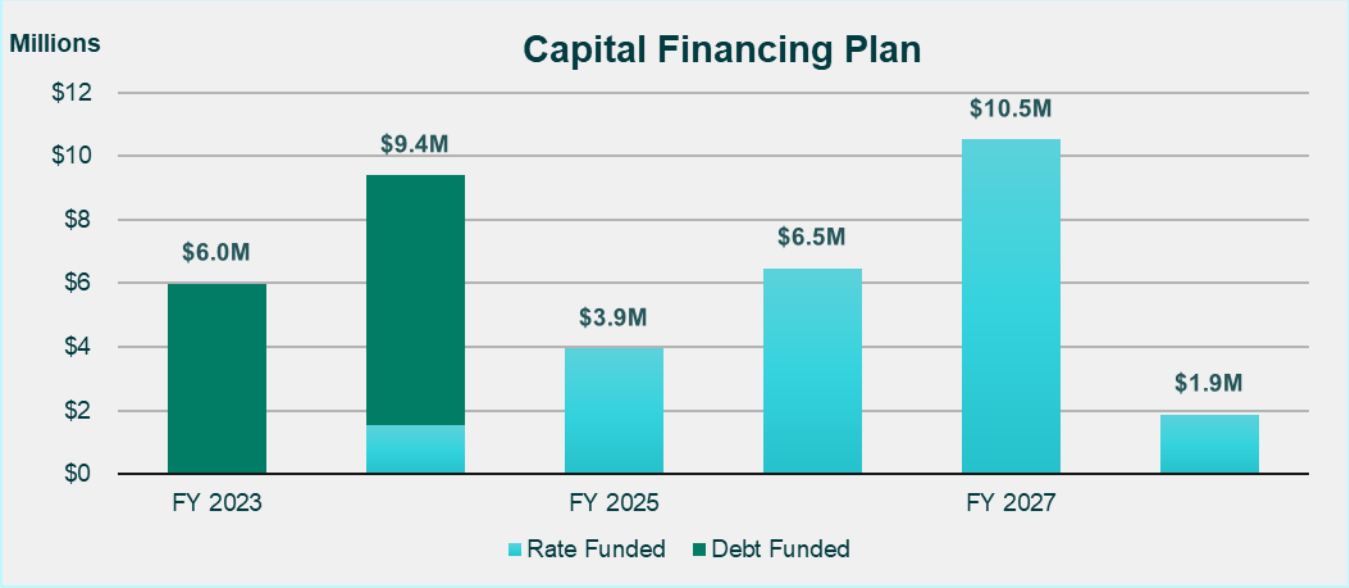
2.5.4. Capital Improvement Plan

Table 14 details the District's wastewater capital improvement plan. District staff provided the 5-year CIP based on current year dollars. From FY 2027 onward, CIP costs are inflated using the expense escalation factor for capital. The 5-year CIP totals approximately $32M. These projects will be funded through a combination of available debt funds and rates, as shown in **Figure 5**.

Table 14: Projected 5-Year CIP Plan

	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Total Capital R&R	$1,676,273	$4,858,484	$2,506,100	$6,117,276	$9,192,931	$1,604,347
Total Building R&R and Miscellaneous Capital Expenses	$4,090,000	$4,294,500	$1,190,280	$102,211	$1,051,185	$-
Total Vehicle Replacement	$228,000	$239,400	$248,976	$258,935	$269,292	$280,064
TOTAL INFLATED CIP	**$5,994,273**	**$9,392,384**	**$3,945,356**	**$6,478,423**	**$10,513,408**	**$1,884,411**
Rate Funded	*$-*	*$1,527,157*	*$3,945,356*	*$6,478,423*	*$10,513,408*	*$1,884,411*
Debt Funded	*$5,994,273*	*$7,865,227*	*$-*	*$-*	*$-*	*$-*

Figure 4: Capital Funding Plan



2.5.5. Status Quo Financial Plan

Table 15 shows the projected financial plan based on revenues at existing rates with no adjustments, or the "status quo" scenario. Revenues are derived from **Table 11.**. O&M expenses are from **Table 12.** Cash-funded CIP is from **Table 14.**

Table 15: Status Quo Financial Plan

		FY 2023 Budgeted	FY 2024 Projected	FY 2025 Projected	FY 2026 Projected	FY 2027 Projected	FY 2028 Projected
1	**REVENUES**						
2	**Operating Revenues**						
3	Revenues from Current Rates	$4,211,106	$4,219,496	$4,231,581	$4,243,666	$4,255,751	$4,267,836
4	Miscellaneous Permits	$60,000	$60,000	$60,000	$60,000	$60,000	$60,000
5	Planning & Engineering-Plan Ck Fees	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000
6	Insurance Refunds	$0	$0	$0	$0	$0	$0
7	Inspection Fees	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000
8	Other Services Income	$240,000	$240,000	$240,000	$240,000	$240,000	$240,000
9	Gain/Loss on Sale of Fixed Assets	$2,000					
10	**Total Operating Revenues**	$4,538,106	$4,544,496	$4,556,581	$4,568,666	$4,580,751	$4,592,836
11							
12	**Non-Operating Revenues**						
13	Property Taxes	$3,175,000	$3,238,500	$3,303,270	$3,369,335	$3,436,722	$3,505,457
14	Interest Income	$286,413	$284,551	$207,538	$127,501	-$9,444	-$108,944
15	Unrealized Gain/Loss Investments	$0	$0	$0	$0	$0	$0
16	Homeowners Property Tax Relief	$13,500	$13,770	$14,045	$14,326	$14,613	$14,905
17	Connection Fees	$130,000	$187,273	$187,273	$187,273	$187,273	$187,273
18	**Total Non-Operating Revenues**	$3,604,913	$3,724,094	$3,712,126	$3,698,436	$3,629,163	$3,598,690
19							
20	**TOTAL REVENUES**	**$8,143,020**	**$8,268,590**	**$8,268,707**	**$8,267,101**	**$8,209,914**	**$8,191,526**
21							
22	**REVENUE REQUIREMENTS**						
23	**Operating Expenses**						
24	Administration	$931,660	$963,580	$996,637	$1,030,874	$1,066,333	$1,103,062
25	Collection	$726,900	$750,852	$775,620	$801,235	$827,727	$855,126
26	Pump Station	$310,839	$322,697	$335,032	$347,864	$361,215	$375,106
27	Treatment	$2,778,000	$2,916,110	$3,061,090	$3,213,282	$3,373,044	$3,540,754
28	Electricity Savings on Ph 1	$0	$0	-$61,858	-$65,569	-$69,503	-$73,673
29	**Subtotal Operating Expenses**	$4,747,399	$4,953,238	$5,106,521	$5,327,686	$5,558,816	$5,800,376
30							
31	**Non-Operating Expenses**						
32	Existing Debt Service	$487,194	$975,230	$975,573	$975,285	$975,368	$975,768
33	Proposed Debt Service	$0	$0	$0	$0	$0	$0
34	Total Debt Service	$487,194	$975,230	$975,573	$975,285	$975,368	$975,768
35	Other Services	$1,069,785	$1,115,185	$1,162,554	$1,211,975	$1,263,541	$1,317,345
36	**Subtotal Non-Operating Expenses**	$1,556,979	$2,090,415	$2,138,126	$2,187,260	$2,238,909	$2,293,113
37							
38	**TOTAL REVENUE REQUIREMENTS**	**$6,304,378**	**$7,043,653**	**$7,244,647**	**$7,514,946**	**$7,797,725**	**$8,093,488**
39							
40	**NET CASH FLOWS**	**$1,838,641**	**$1,224,936**	**$1,024,059**	**$752,155**	**$412,189**	**$98,038**

		FY 2023 Budgeted	FY 2024 Projected	FY 2025 Projected	FY 2026 Projected	FY 2027 Projected	FY 2028 Projected
41	**Operations Reserve**						
42	4900 Fund Balance	$886,633					
43	4930 Fund Balance	$2,567,229					
44	Beginning Balances	$3,453,862	$4,750,000	$4,960,000	$5,110,000	$5,330,000	$5,560,000
45	Net Cash Flows	$1,838,641	$1,224,936	$1,024,059	$752,155	$412,189	$98,038
46	Transfers from / (to) Capital Fund	$(542,503)	$(1,014,936)	$(874,059)	$(532,155)	$(182,189)	$ -
47	**Ending Balances**	**$4,750,000**	**$4,960,000**	**$5,110,000**	**$5,330,000**	**$5,560,000**	**$5,658,038**
48	Target Balances	$4,750,000	$4,960,000	$5,110,000	$5,330,000	$5,560,000	$5,810,000
49							
50	**Capital R&R Reserves**						
51	4910 Fund Balance	$1,670,748					
52	4932 Fund Balance	$2,386,456					
53	4935 Fund Balance	$616,878					
54	Beginning Balances	$4,674,082	$17,399,812	$13,556,264	$11,924,224	$6,339,102	$(2,671,639)
55	Debt Proceeds for new Debt Issues	$13,859,500	$ -	$ -	$ -	$ -	$ -
56	CIP Expenditure	$(1,676,273)	$(4,858,484)	$(2,506,100)	$(6,117,276)	$(9,192,931)	$(1,604,347)
57	Transfers from / (to) Operating Fund	$542,503	$1,014,936	$874,059	$532,155	$182,189	$ -
58	**Ending Balances**	**$17,399,812**	**$13,556,264**	**$11,924,224**	**$6,339,102**	**$(2,671,639)**	**$(4,275,986)**
59	Target Balances	$4,860,000	$4,220,000	$4,070,000	$3,210,000	$1,900,000	$1,900,000
60							
61	**Dedicated Capital Project Reserves**						
62	4960 Fund Balance	$ 230,211					
63	4965 Fund Balance	$ 2,035,162					
64	Beginning Balances	$ 2,265,373	$(2,052,627)	$(6,586,527)	$(8,025,783)	$(8,386,929)	(9,707,407)
65	Building R&R and Misc Capital Expenditures	$(4,090,000)	$(4,294,500)	$(1,190,280)	$(102,211)	$(1,051,185)	$ -
66	Vehicle Replacement Expenditures	$(228,000)	$ (239,400)	$(248,976)	$(258,935)	$(269,292)	$(280,064)
67	**Ending Balances**	**$(2,052,627)**	**$(6,586,527)**	**$(8,025,783)**	**$(8,386,929)**	**$(9,707,407)**	**$(9,987,471)**
68	Target Balances	$ 1,590,000	$ 1,230,000	$ 1,230,000	$ 1,230,000	$ 1,230,000	$ 1,230,000
69							
70	**Total Reserves**						
71	Beginning Balances	$ 10,393,317	$ 20,097,185	$ 11,929,737	$ 9,008,441	$ 3,282,173	$(6,819,046)
72	Inflows	$ 22,002,520	$ 8,268,590	$ 8,268,707	$ 8,267,101	$ 8,209,914	$ 8,191,526
73	Outflows	$(12,298,651)	$(16,436,037)	$(11,190,003)	$(13,993,369)	$(18,311,133)	$(9,977,899)

		FY 2023 Budgeted	FY 2024 Projected	FY 2025 Projected	FY 2026 Projected	FY 2027 Projected	FY 2028 Projected
74	**Total Ending Balance**	**$ 20,097,185**	**$ 11,929,737**	**$ 9,008,441**	**$ 3,282,173**	**$(6,819,046)**	**$(8,605,419)**

Net cash flow equals total revenues less O&M expenses, less debt service. District staff provided beginning fund balances for FY 2023. Ending balances are calculated by adding beginning balances to net cash flow and proceeds from the debt issue. The reserve target is derived from the reserve policies summarized in Table 4**.** The reserves will become negative in FY 2027 as shown in Figure 7

Figure 6 shows the projected status quo financial plan in graphical format. The bars represent the wastewater utility's cash needs. The dotted line represents the current revenues, which is below the stacked bars for each year, signifying that the District's wastewater revenues are insufficient to fund its costs.

Figure 5: Status Quo Financial Plan

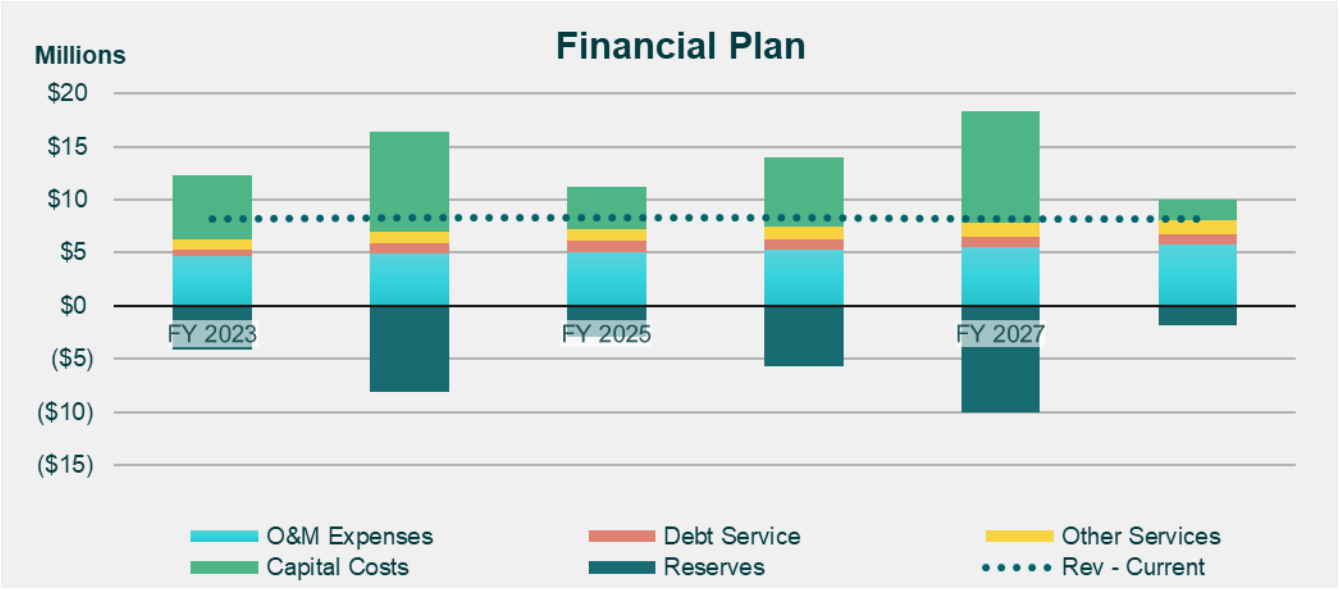
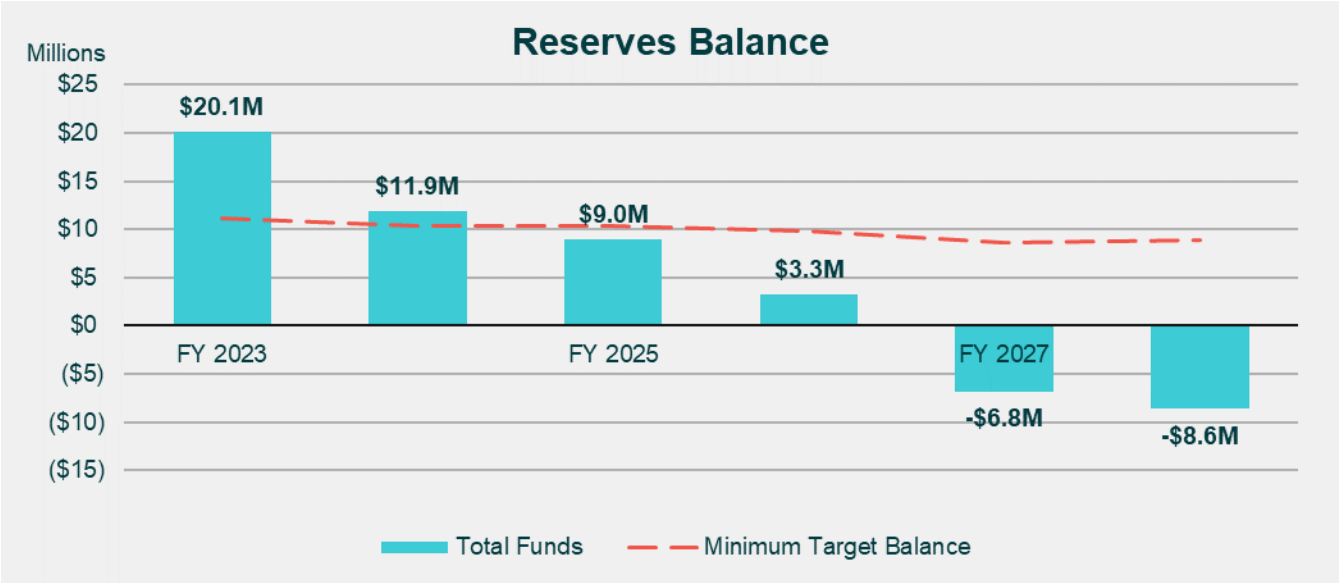


Figure 7 shows the projected fund balances under the status quo scenario for a 5-year period. The light blue bars represent the ending balances of the wastewater fund, and the dashed red line represents the reserve target amounts.

Figure 6: Status Quo Fund Balances



2.5.6. Proposed Financial Plan and Revenue Adjustments

The current revenues from wastewater fees are approximately $4.2 million. The District is currently receiving about $3.2 million from property tax to fund street sweeping expenses and to help fund future capital refurbishment and replacement (capital R&R) projects. It is assumed that property tax revenue will increase by two percent per year. The interest rates for the District's reserves are assumed at 1.8 percent in FY 2024 and at 2 percent in subsequent years. Non-operating revenues, except property tax and interest income, if any, are not inflated.

It is assumed that the District will collect $187,000 in connection fees each year during the planning period.

Table 16 shows the projected financial plan with the proposed revenue adjustments applied to the wastewater rate revenues. Revenues from interest income are greater than those shown in the status quo scenario due to additional cash from the proposed adjustments. O&M expenses, debt service, and cash funded CIP are the same as the status quo scenario.

Table 16: Projected Financial Plan with Revenue Adjustments

		FY 2024 Projected	FY 2025 Projected	FY 2026 Projected	FY 2027 Projected	FY 2028 Projected
1	**REVENUES**					
2	**Operating Revenues**					
3	Revenues from Current Rates	$4,219,496	$4,231,581	$4,243,666	$4,255,751	$4,267,836
4						
5	Fiscal Year					
6	FY 2024	$1,054,874	$1,057,895	$1,060,916	$1,063,938	$1,066,959
7	FY 2025		$1,322,369	$1,326,146	$1,329,922	$1,333,699
8	FY 2026			$1,657,682	$1,662,403	$1,667,123
9	FY 2027				$1,246,802	$1,250,343
10	Subtotal Proposed Revenue Adjustments	$1,054,874	$2,380,264	$4,044,744	$5,303,064	$5,318,124
11	**Subtotal Revenues from Rates**	**$5,274,369**	**$6,611,845**	**$8,288,410**	**$9,558,815**	**$9,585,960**
12						
13	Miscellaneous Permits	$60,000	$60,000	$60,000	$60,000	$60,000
14	Planning & Engineering-Plan Ck Fees	$10,000	$10,000	$10,000	$10,000	$10,000
15	Insurance Refunds	$0	$0	$0	$0	$0
16	Inspection Fees	$15,000	$15,000	$15,000	$15,000	$15,000
17	Other Services Income	$240,000	$240,000	$240,000	$240,000	$240,000
18	Gain/Loss on Sale of Fixed Assets					
19	**Subtotal Other Operating Revenues**	**$325,000**	**$325,000**	**$325,000**	**$325,000**	**$325,000**
20						
21	**Total Operating Revenues**	**$5,599,369**	**$6,936,845**	**$8,613,410**	**$9,883,815**	**$9,910,960**
22						
23	Property Taxes	$3,238,500	$3,303,270	$3,369,335	$3,436,722	$3,505,457
24	Interest Income	$294,121	$252,781	$237,439	$194,615	$202,182
25	Unrealized Gain/Loss Investments	$0	$0	$0	$0	$0
26	Homeowners Property Tax Relief	$13,770	$14,045	$14,326	$14,613	$14,905
27	Connection Fees	$187,273	$187,273	$187,273	$187,273	$187,273
28	**Total Non-Operating Revenues**	**$3,733,664**	**$3,757,369**	**$3,808,374**	**$3,833,223**	**$3,909,817**
29						
30	**TOTAL REVENUES**	**$9,333,033**	**$10,694,214**	**$12,421,784**	**$13,717,039**	**$13,820,776**

		FY 2024 Projected	FY 2025 Projected	FY 2026 Projected	FY 2027 Projected	FY 2028 Projected
31	**REVENUE REQUIREMENTS**					
32	Operating Expenses					
33	Administration	$966,376	$1,002,472	$1,040,006	$1,079,039	$1,119,634
34	Collection	$753,323	$780,769	$809,282	$838,904	$869,682
35	Pump Station	$322,478	$334,581	$347,169	$360,262	$373,882
36	Treatment	$2,913,740	$3,056,172	$3,205,628	$3,362,457	$3,527,023
37	Electricity Savings on Ph 1	$0	($61,858)	($65,569)	($69,503)	($73,673)
38	**Total Operating Expenses**	**$4,955,917**	**$5,112,137**	**$5,336,516**	**$5,571,159**	**$5,816,548**
39						
40	Non-Operating Expenses					
32	Existing Debt Service	$975,230	$975,573	$975,285	$975,368	$975,768
33	Proposed Debt Service	$0	$0	$0	$0	$0
34	Total Debt Service	$975,230	$975,573	$975,285	$975,368	$975,768
35	Other Services	$1,104,069	$1,139,492	$1,176,092	$1,213,911	$1,252,992
36						
37	**Total Non-Operating Expenses**	**$2,079,299**	**$2,115,064**	**$2,151,377**	**$2,189,279**	**$2,228,760**
38						
39	**TOTAL REVENUE REQUIREMENTS**	**$7,035,215**	**$7,227,201**	**$7,487,893**	**$7,760,437**	**$8,045,307**
40						
41	**NET CASH FLOWS**	**$2,297,818**	**$3,467,013**	**$4,933,891**	**$5,956,601**	**$5,775,469**

		FY 2024 Projected	FY 2025 Projected	FY 2026 Projected	FY 2027 Projected	FY 2028 Projected
42	**Operations Reserve**					
43	Beginning Balances	$4,750,000	$4,960,000	$5,110,000	$5,330,000	$5,560,000
44	Net Cash Flows	$2,289,304	$3,449,223	$4,906,049	$5,917,882	$5,725,002
45	Transfers from / (to) Capital Fund	$(2,079,304)	$(3,299,223)	$(4,686,049)	$(5,687,882)	$(5,475,002)
46	**Ending Balances**	$4,960,000	$5,110,000	$5,330,000	$5,560,000	$5,810,000
47	Target Balances	$4,960,000	$5,110,000	$5,330,000	$5,560,000	$5,810,000
48						
49	**Capital R&R Reserves**					
53	Beginning Balances	$17,399,812	$14,620,632	$15,413,756	$13,982,529	$10,477,480
54	Debt Proceeds for new Debt Issues	$-	$-	$-	$-	$-
55	CIP Expenditure	$(4,858,484)	$(2,506,100)	$(6,117,276)	$(9,192,931)	$(1,604,347)
56	Transfers from / (to) Operating Fund	$2,079,304	$3,299,223	$4,686,049	$5,687,882	$5,475,002
57	**Ending Balances**	$14,620,632	$15,413,756	$13,982,529	$10,477,480	$14,348,135
58	Target Balances	$4,220,000	$4,070,000	$3,210,000	$1,900,000	$1,900,000
59						
60	**Dedicated Capital Project Reserves**					
63	Beginning Balances	$(2,052,627)	$(6,586,527)	$(8,025,783)	$(8,386,929)	$(9,707,407)
64	Building R&R and Misc Capital Expenditures	$(4,294,500)	$(1,190,280)	$(102,211)	$(1,051,185)	$-
65	Vehicle Replacement Expenditures	$(239,400)	$(248,976)	$(258,935)	$(269,292)	$(280,064)
66	**Ending Balances**	$(6,586,527)	$(8,025,783)	$(8,386,929)	$(9,707,407)	$(9,987,471)
67	Target Balances	$1,230,000	$1,230,000	$1,230,000	$1,230,000	$1,230,000
68						
69	**Total Reserves**					
70	Beginning Balances	$20,097,185	$12,994,105	$12,497,973	$10,925,599	$6,330,073
71	Inflows	$9,332,957	$10,693,871	$12,420,995	$13,715,607	$13,818,490
72	Outflows	$(16,436,037)	$(11,190,003)	$(13,993,369)	$(18,311,133)	$(9,977,899)
73	**Total Ending Balance**	**$12,994,105**	**$12,497,973**	**$10,925,599**	**$6,330,073**	**$10,170,664**

Net cash flow is negative in FY 2023 through FY 2027, which means that the District will be drawing down its wastewater fund to pay for capital costs. The ending balances will not meet the recommended reserve target until FY 2028.

Figure 8 shows the projected financial plan with the proposed revenue adjustments. The dotted line represents current revenues; the extended dashed line represents the proposed revenues with adjustments applied.

Figure 7: Projected Proposed Financial Plan

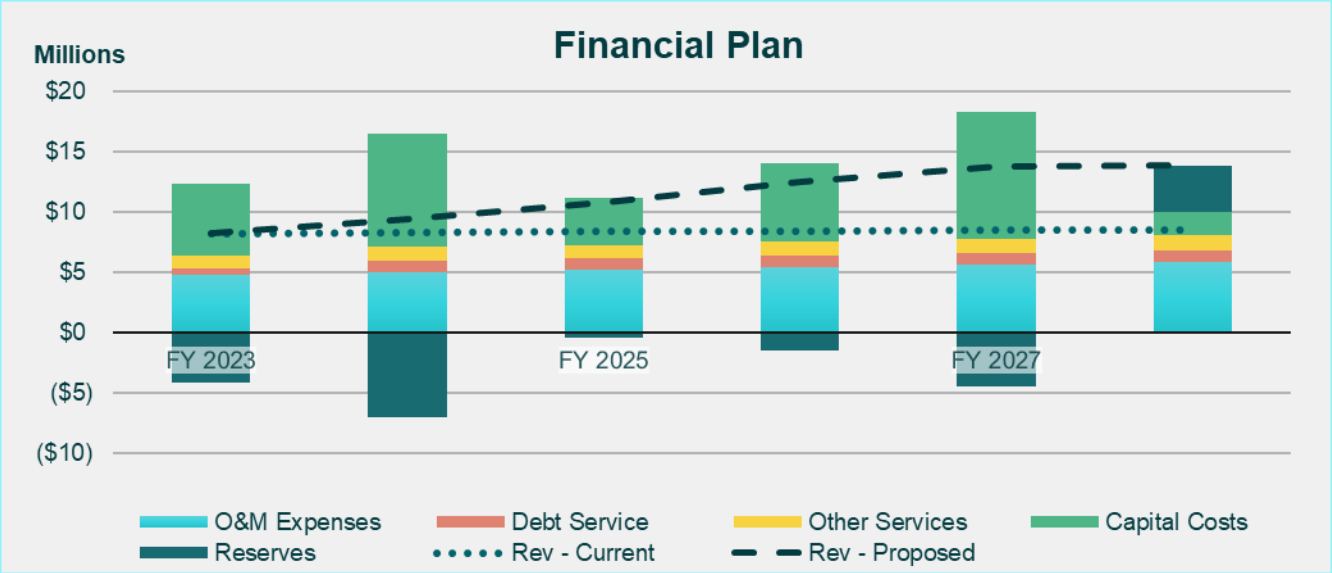


Figure 9 shows the projected reserve balances with the proposed adjustments in **Table 3** applied over a 5-year period. The reserve balance dips below target in FY 2027 but achieves its next year.

Figure 8: Projected Proposed Fund Balances

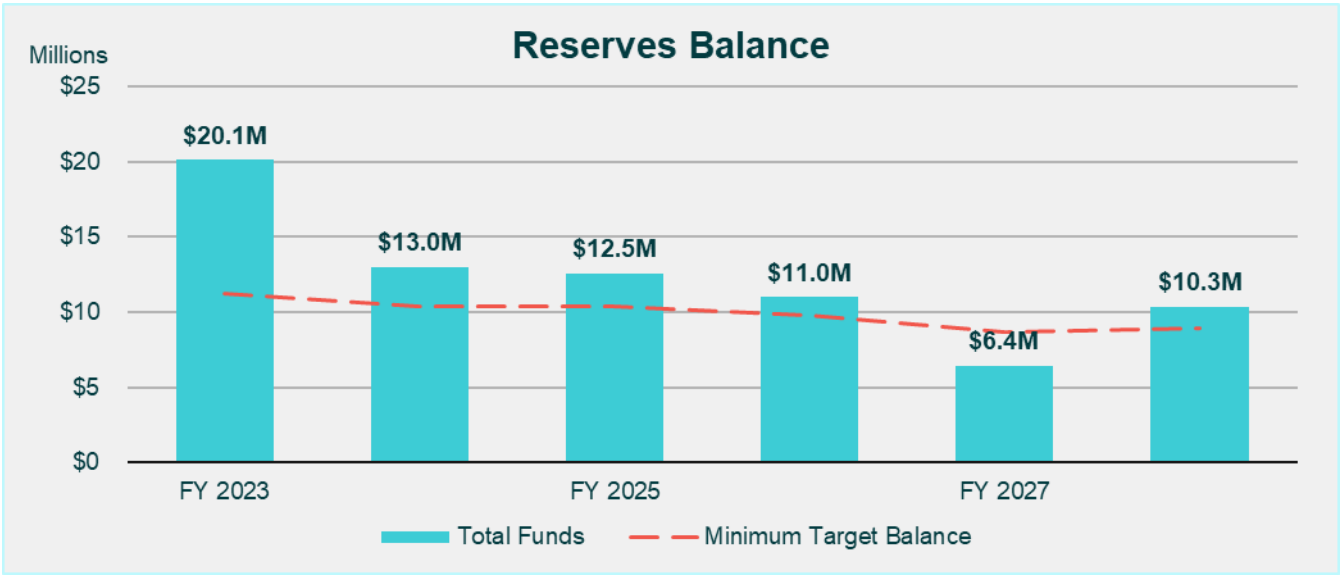
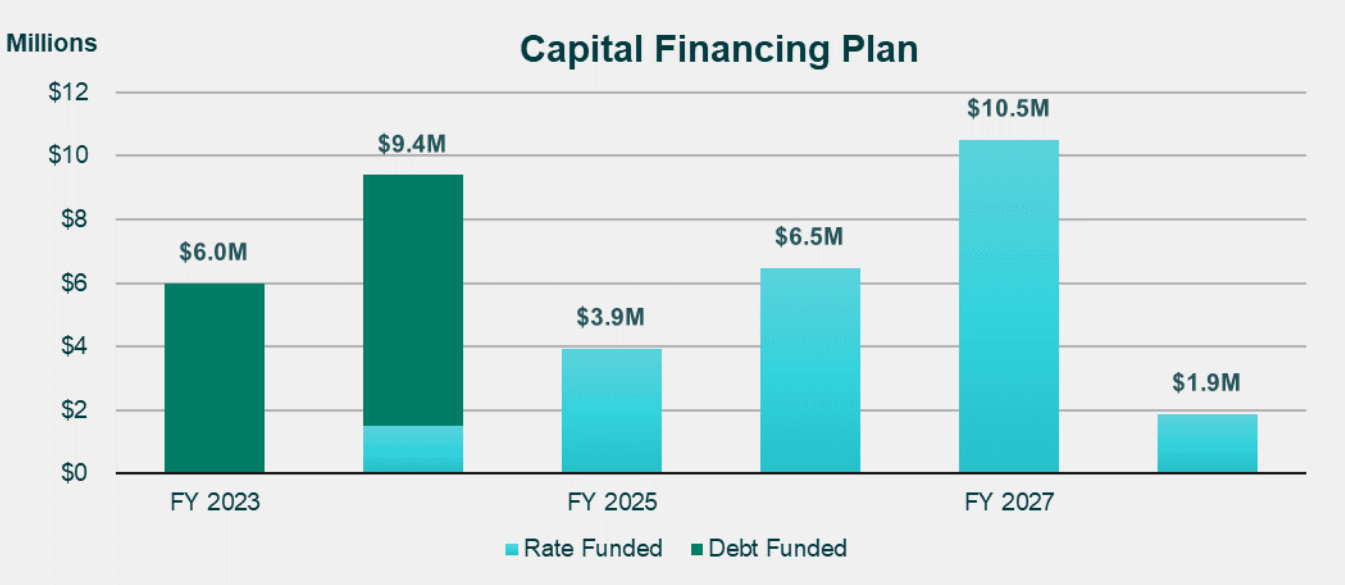


Figure 10 summarizes the projected CIP funding plan. The District will fund its planned CIP through a combination of rate and debt funding, as shown by the color-coded bars below.

Figure 9: Projected Inflated CIP



3. Cost-of-Service Analysis

3.1. Cost-Based Rate-Setting Methodology

This section discusses the allocation of O&M expenses and capital costs to wastewater functions, cost components, and determination of unit costs and rate calculation by customer class. The proposed wastewater utility costs-of-service for the District were developed consistent with guidelines detailed in WEF *Manual of Practice No. 27.* To develop utility rates that comply with Proposition 218 and industry standards while meeting other emerging goals and objectives of the utility, the four major steps are discussed below:

3.1.1. Calculating Revenue Requirement

The first step in the cost-of-service analysis is determining the adequate and appropriate level of funding for the wastewater utility. This is referred to as determining the "revenue requirement" for the test year, which for this study is FY 2024. This analysis considers the short-term and long-term service objectives of the wastewater utility over a given planning horizon, including capital facilities, O&M, and financial reserve policies to determine the revenues required from rates to recover its costs.

3.1.2. Cost-of-Service Analysis

The cost-of-service analysis provides a basis for distributing revenue requirement among the customer classes commensurate with their service requirements. A cost-of-service analysis involves the following:

1. Functionalize O&M and capital costs into functions: administration, collection, pump station, and treatment.
2. Allocate the costs for each functional category to cost causation components: Flow, BOD, TSS, General
3. Establish the wastewater flow and strength for each customer class .
4. Calculate the unit cost component rates by dividing the total cost in the cost component from Step 2 by the flow and strength from Step 3.
5. Calculate the cost by customer class by multiplying the unit cost component from Step 4 by the flow and strength established from Step 3.

3.1.3. Rate Design and Calculations

Rates do more than simply recover costs. Within the legal framework and industry standards, properly designed rates should support and optimize a blend of various utility objectives, such as revenue stability, and equity among customers, among other objectives. Rates may also function as a public information tool in communicating these objectives to customers.

3.1.4. Rate Adoption

Rate adoption is the last step of the rate-making process to comply with Proposition 218. Raftelis documents the rate study results in this Study Report to help educate the public about the proposed changes, the rationale and justifications behind the changes, and their anticipated financial impacts in lay terms.

3.2. Cost-of-Service Analysis

3.2.1. Revenue Requirement Determination

Table 17 shows the revenue requirement derivation with the total revenue required from rates. The totals shown in the "Operating" and "Capital" columns are the total O&M and capital revenue requirements. Line 23 shows the revenue offset, which comes from other operating revenue that is not rate-generated revenue. This source of funds is not subject to Prop 218 and can therefore be used to lower rates for customers.

Table 17: Revenue Requirement FY 2024

Line		Operating	Capital	Total
1	**Revenue Requirements**			
2	Operating Expenses			
3	Administration	$963,580		$963,580
4	Collection	$750,852		$750,852
5	Pump Station	$322,697		$322,697
6	Treatment	$2,916,110		$2,916,110
7	Non-Operating Expenses			
8	Existing Debt Service		$975,230	$975,230
9	Other Services		$1,115,185	$1,115,185
10	**Total Revenue Requirements**	**$4,953,238**	**$2,090,415**	**$7,043,653**
11				
12	**Revenue Offsets**			
13	Other Operating Revenues			
14	Miscellaneous Permits	$60,000		$60,000
15	Planning & Engineering-Plan Ck Fees	$10,000		$10,000
16	Inspection Fees	$15,000		$15,000
17	Other Services Income	$240,000		$240,000
18	Non-Operating Revenues			
19	Property Taxes		$ 3,238,500	$ 3,238,500
20	Homeowners Property Tax Relief		$13,770	$13,770
21	Interest Income		$294,045	$294,045
22	Connection Fees		$ 187,273	$ 187,273
23	**Total Revenue Offsets**	**$325,000**	**$3,733,588**	**$4,058,588**
24				
25	**Adjustments**			
26	Transfers from (to) Reserves	$(2,289,304)		$(2,289,304)
27	**Total Adjustments**	**$(2,289,304)**	**$-**	**$(2,289,304)**
28				
29	**Net Revenue to be Recovered from Rates**	**$6,917,542**	**$(1,643,173)**	**$5,274,369**

Raftelis calculates the revenue requirement using FY 2024 expenses, which include O&M expenses and rate funded capital expenses. The adjustments are subtracted to arrive at the total revenue requirement from rates. This is the amount that the rates should collect.

3.2.2. Allocation of Functionalized Expenses to Cost Components

After functionalizing expenses, the next step is to allocate the functionalized expenses to cost causation components. These include wastewater flow, biochemical oxygen demand (BOD), total suspended solids (TSS) and general.

3.2.3. Cost-of-Service

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

3.2.4. Cost Allocation to Wastewater Parameters

The three main cost allocation parameters are wastewater flow, BOD, and TSS. BOD and TSS constitute the strength components of the wastewater discharge. The percentages used to allocate the FY 2024 cost of service to the wastewater parameters are derived based on the design method of allocation, i.e., based on the design of the facilities.. Under the design method of allocation, costs are assigned based on the parameters which dictate the design of each process.

The treatment costs are allocated to flow, BOD and TSS at 49 percent, 32 percent, and 19 percent, respectively, based on the Goleta Sanitary District treatment allocations. Pipelines, outfall, and pumping stations costs are all allocated to flow. Similarly, capital costs identified with the collection system are allocated to flow, and treatment plant costs are allocated in the same manner as the treatment operating costs. Costs that could not be specifically identified were allocated to general and then proportionately reallocated to the allocations of the remaining capital or operating costs. The O&M and Capital Allocations are provided in Table 18 and Table 19, respectively.

Table 18: O&M Allocation

	WW Flow	BOD	TSS	General	Total
Administration %				100%	100%
Collection %	100%				100%
Pump Station %	100%				100%
Treatment %	49%	32%	19%		100%
Administration	$ -	$ -	$ -	$963,580	$963,580
Collection	$750,852	$ -	$ -	$ -	$750,852
Pump Station	$322,697	$ -	$ -	$ -	$322,697
Treatment	$1,428,894	$933,155	$554,061	$ -	$2,916,110
Total O&M Expenses	**$2,502,442**	**$ 933,155**	**$554,061**	**$963,580**	**$4,953,238**

Allocation %	**50.5%**	**18.8%**	**11.2%**	**19.5%**	

Table 19: Capital Allocation

	WW Flow	BOD	TSS	Total
Total Collection System CIP	100%			100%
Total WWTP CIP	49%	32%	19%	100%
Building & Vehicle CIP	100%			100%
Total Capital R&R	$4,858,484	$ -	$ -	$4,858,484
Total Building R&R and Miscellaneous Capital Expenses	$2,104,305	$1,374,240	$815,955	$4,294,500
Total Vehicle Replacement	$239,400	$ -	$ -	$239,400
Total Capital Expenses	**$7,202,189**	**$1,374,240**	**$815,955**	**$9,392,384**
Allocation %	**76.7%**	**14.6%**	**8.7%**	

3.2.5. Calculation of Unit Cost

In order to allocate costs of service to the different user classes, unit costs of service need to be developed 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 of the respective parameter (such as the projected annual flow, BOD, and TSS loadings). The total flow is determined based on the water usage records for non-residential customers and the ERU definition of 160 gpd for residential customers. The revision is based on winter water usage records for residential customers from Goleta Water District.

The BOD and TSS loadings are determined based on the assigned strength for each customer classification based on industry accepted data as shown in **Table 20**.

Table 20: Units of Service for Each Customer Class

Customer Class	WW Strength[1] BOD mg/L	TSS mg/L	Flow hcf	BOD lbs/yr	TSS lbs/yr
Residential					
SFR	215	205	400,135	537,025	512,047
Apartments	215	205	525,441	705,198	672,398
Commercial					
Hospitals and Convalescent Homes	250	205	2,675	4,174	3,423
Service Stations without Trailer Dump Facilities, Machine Shops, Auto Repair	215	280	516	692	901
Hotels, Motels, Boarding, Dorms, or Lodging House	310	205	68,589	132,728	87,772
Service Stations with Trailer Dump Facilities	400	400	452	1,128	1,128
Take Out or Drive-In, Churches with Food Service Facilities, Factories, Industrial Plants, Etc.	600	400	38,370	143,712	95,808
Markets with Garbage Disposals, Mortuaries	800	800	241	1,205	1,205
Restaurants, Food Service Facilities	1,000	600	31,993	199,713	119,828
Other Commercial Customers (“All Customers”)	215	205	201,635	270,616	258,030
Total Units of Service			**1,270,047**	**1,996,192**	**1,752,539**

[1]BOD and TSS concentrations based on City of Los Angeles and LACSD.

The total plant loadings provide a basis for determining unit costs. The residential and non-residential wastewater loadings are used in **Table 21** and shown as the units of service to develop the FY 2024 unit costs 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.

Table 21: Development of Unit Costs

		Flow	BOD	TSS	General	Total
1	**Operating Expenses**	$3,494,835	$1,303,216	$773,785	$1,345,707	$6,917,542
2	**Capital Expenses**	$(1,260,004)	$(240,420)	$(142,749)	$0	$(1,643,173)
3	**Total Expenses**	**$2,234,831**	**$1,062,797**	**$631,035**	**$1,345,707**	**$5,274,369**
4	**Allocation of General Expenses**	$765,509	$364,046	$216,152	$(1,345,707)	$0
5	**Total Cost of Service**	**$3,000,340**	**$1,426,842**	**$847,188**	**$0**	**$5,274,369**
6						
7	**Units of Service**	1,270,047	1,996,192	1,752,539		
8	**Unit**	hcf/yr	lbs/yr	lbs/yr		
9						
10	**Unit Cost**	$2.36	$0.71	$0.48		
11	**Unit**	hcf	lb	lb		

3.2.6. Revised Commercial ERU Definition

Water usage for residential customers has been decreasing for a variety of reasons including drought, conservation, low flow appliances and fixtures. Correspondingly the wastewater generated by residential customers has also decreased. In 2004, the GWSD Board of Directors (Board) adopted a flow of 184 GPD of wastewater per ERU pursuant to a Connection Fee study prepared by Black & Veatch. This is codified in the District's current fee Ordinance #13-83. Section 1.10 of Ordinance #13-83 lists each user type and its annual charge per increment of 74,600 gallons of water per year. A standard practice to determine wastewater flow for commercial customers is to provide a 90 percent return factor (10 percent for irrigation etc.) on the water usage.

Raftelis proposes that the District redefine the commercial ERU to 160 gpd of wastewater, or 178 gpd of water, which equates to 64,889gallons of water per year. This change will effectively increase the number of ERUs for commercial users.

3.2.7. Allocation of Costs to Customer Classes

The unit costs developed in **Table 21** are applied to the total flow and strength of each customer class, as shown in **Table 20**, to determine the total revenue requirements for each customer class in **Table 22**. The total revenue required based on the COS analysis is compared with the projected FY 2024 revenue under the current rates for each customer class. This analysis shows that commercial customers need to contribute more than they are currently, consistent with the cost of providing service. The larger increase reflected in the table below is based on the revised ERU definition which increases the ERUs for commercial customers.

Table 22: Allocation of Costs to Customer Class

Customer Class	Flow	BOD	TSS	COS Total	Existing Revenue	Difference
Residential	**$2,186,567**	**$887,919**	**$572,567**	**$ 3,647,053**	**$ 3,223,106**	**13.2%**
SFR	$945,274	$383,856	$247,526	$ 1,576,655		
Apartments	$1,241,293	$504,063	$325,041	$ 2,070,398		
Commercial	**$813,773**	**$538,923**	**$274,620**	**$ 1,627,316**	**$ 988,000**	**64.7%**
Hospitals and Convalescent Homes	$6,319	$2,984	$1,655	$ 10,957		
Service Stations without Trailer Dump Facilities, Machine Shops, Auto Repair	$1,218	$495	$436	$ 2,149		
Hotels, Motels, Boarding, Dorms, or Lodging House	$162,033	$94,872	$42,429	$ 299,334		
Service Stations with Trailer Dump Facilities	$1,067	$806	$545	$ 2,419		
Take Out or Drive-In, Churches with Food Service Facilities, Factories, Industrial Plants, Etc.	$90,645	$102,723	$46,314	$ 239,681		
Markets with Garbage Disposals, Mortuaries	$570	$861	$582	$ 2,013		
Restaurants, Food Service Facilities	$75,580	$142,752	$57,926	$ 276,258		
Other Commercial Customers ("All Customers")	$476,340	$193,432	$124,733	$ 794,505		
TOTAL	**$ 3,000,340**	**$ 1,426,842**	**$ 847,188**	**$ 5,274,369**	**$ 4,211,106**	**25.2%**

4. Rate Derivation and Bill Impacts

4.1. Existing Rate Structure and Rates

The District's existing rate structure consists of a fixed charge for all customers that varies based on the associated strength loadings and flow estimates of each customer class. **Table 7** shows the current fixed charge for residential and the surcharges for each customer class.

4.2. Proposed Fixed Rates

Table 23 shows the derivation of the proposed fixed charge. The annual fixed charge is calculated by dividing the total cost to each customer class by the corresponding number of accounts/EDUs associated with that class. This value is then converted into monthly terms. The charges are rounded up to the nearest cent.

Table 23: Derivation of the Monthly Fixed Charges

Customer Class	COS Total	ERU 160 gpd	Proposed $/ERU, Annual	Proposed $/ERU/month
Residential				
SFR	$1,576,655	5,125	$308.00	$25.67
Apartments	$2,070,398	6,730	$308.00	$25.67
Commercial				
Hospitals and Convalescent Homes	$10,957	34	$320.00	$26.67
Service Stations without Trailer Dump Facilities, Machine Shops, Auto Repair	$2,149	7	$326.00	$27.17
Hotels, Motels, Boarding, Dorms, or Lodging House	$299,334	878	$341.00	$28.42
Service Stations with Trailer Dump Facilities	$2,419	6	$419.00	$34.92
Take Out or Drive-In, Churches with Food Service Facilities, Factories, Industrial Plants, Etc.	$239,681	491	$488.00	$40.67
Markets with Garbage Disposals, Mortuaries	$2,013	3	$652.00	$54.33
Restaurants, Food Service Facilities	$276,258	410	$675.00	$56.25
Other Commercial Customers ("All Customers")	$794,505	2,583	$308.00	$25.67
TOTAL	**$5,274,369**	**16,267**		

4.3. Proposed Rate Schedule

Table 24 shows the proposed wastewater rate schedule for the next five years. Non-residential rates include the "All Non-Residential Customers" rate and any applicable surcharge for the customer class. The proposed rates will be effective in July of each year.

Table 24: Proposed Wastewater Rate Schedule

Customer Class	Jul 1, 2023	Jul 1, 2024	Jul 1, 2025	Jul 1, 2026	Jul 1, 2027
Residential (assigned one ERU/dwelling unit)	$308.00	$388.00	$484.00	$559.00	$559.00
All Non-Residential Customers (per ERU)	$308.00	$388.00	$484.00	$559.00	$559.00
Commercial Surcharges for Additional Strength for the Following Commercial User Categories (per ERU)					
Hospitals and Convalescent Homes	$12.00	$16.00	$21.00	$23.00	$23.00
Service Stations without trailer dump facilities, machine shops, auto repair	$18.00	$23.00	$30.00	$34.00	$34.00
Hotels, motels, boarding, dorms lodging house	$33.00	$43.00	$57.00	$63.00	$63.00
Service stations with trailer dump facilities	$111.00	$144.00	$190.00	$209.00	$209.00
Take our or drive-in, churches with food service facilities, factories, industrial plants, etc.	$180.00	$235.00	$310.00	$341.00	$341.00
Markets with garbage disposals, mortuaries	$344.00	$448.00	$592.00	$650.00	$650.00
Restaurants, food service facilities	$367.00	$477.00	$630.00	$693.00	$693.00

4.4. Bill Impacts

Table 25 shows the impacts to each billing class in FY 2024. The annual charge for a single-family residence increases from $262 to $308, an increase of about $3.83 per month in fiscal year (FY) 2024. At the end of the five year period – through FY 2027 – residential customers will experience a total increase of $297 from FY 2023 rates as shown in **Table 26**. Non-residential customers' impacts will vary based on the customer's classification.

Table 25: FY 2024 Rate Increase Annual and Monthly Impact ($/ERU)

Customer Class	Current Rates	Proposed Rates	Difference $/yr/ERU	Difference $/mo/ERU	Difference %
All Customers	$262.00	$308.00	$46.00	$3.83	18%
Commercial					
Hospitals and Convalescent Homes	$272.00	$320.00	$48.00	$4.00	18%
Service Stations without trailer dump facilities, machine shops, auto repair	$277.00	$326.00	$49.00	$4.08	18%
Hotels, motels, boarding, dorms lodging house	$288.00	$341.00	$53.00	$4.42	18%
Service stations with trailer dump facilities	$346.00	$419.00	$73.00	$6.08	21%
Take our or drive-in, churches with food service facilities, factories, industrial plants, etc.	$398.00	$488.00	$90.00	$7.50	23%
Markets with garbage disposals, mortuaries	$522.00	$652.00	$130.00	$10.83	25%
Restaurants, food service facilities	$538.00	$675.00	$137.00	$11.42	25%

Table 26: Residential Rate Increase Annual and Monthly Impact ($/ERU)

Fiscal Year	Annual Increases ($/ ERU)	**Monthly Increases ($/ERU)**
FY 2024	$46.00	$3.83
FY 2025	$80.00	$6.67
FY 2026	$96.00	$8.00
FY 2027	$75.00	$6.25
TOTAL INCREASE	$297.00	$24.75
Average Increase	$74.25	$6.19