



EAST ORANGE COUNTY WATER DISTRICT

**Retail Zone, Wholesale Zone,
and Sewer Rate, and Capacity
Fee Study**

FINAL REPORT / MARCH 3, 2023



March 3, 2023

Mr. David Youngblood
General Manager
East Orange County Water District
185 N McPherson Road
Orange, CA 92869-3720

Subject: Retail Zone, Wholesale Zone, and Sewer Rate and Capacity Fee Study - Final

Dear Mr. Youngblood:

Raftelis Financial Consultants, Inc. (Raftelis) is pleased to provide this Retail Zone, Wholesale Zone, and Sewer Rate and Capacity Fee Study report for the East Orange County Water District (District or EOCWD). This report explains the methodologies and rationale used to develop the financial plan and rates for water and sewer service within the District's service areas that align with the requirements of Proposition 218.

The major study objectives include the following:

- Develop a financial plan for the Retail Zone, Wholesale Zone, and Sewer Enterprises to ensure financial sufficiency, meet operational and maintenance (O&M) costs, and maintain sufficient funding for capital refurbishment and replacement (R&R) needs;
- Conduct a cost-of-service analysis for water and sewer services;
- Develop fair, and equitable, water and sewer rates over a five-year period; and
- Conduct a customer impact analysis for the proposed water and sewer rates; and
- Update the connection fees to reflect the current state of the water and sewer systems.

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,



Steve Gagnon, PE (AZ)
Vice President

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Glossary

Terms	Descriptions
AF	Acre foot / Acre feet, 1 AF = 435.6 CCF
AWWA	American Water Works Association
BPP	Basin Pumping Percentage (percentage of water demand to be met by Groundwater)
CCF	Hundred cubic feet or 100 cubic feet, 1 CCF = 748 gallons
CPI	Consumer Price Index/Indices
ENR CCI	Engineering News Records Construction Cost Indices
FY	Fiscal Year (July 1 – June 30)
M1 Manual	"Principles of Water Rates, Fees, and Charges: Manual of Water Supply Practices M1" published by AWWA
MWD or MET	Metropolitan Water District of Southern California
MWDOC	Municipal Water District of Orange County
O&M	Operations and Maintenance
OCWD	Orange County Water District
PAYGO	Pay-As-You-Go
R&R	Refurbishment and Replacement
Raftelis	Raftelis Financial Consultants, Inc.
RCLD	Replacement Cost Less Depreciation

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1. Executive Summary

1.1. Background

In 2021, the East Orange County Water District (EOCWD or District) engaged Raftelis to conduct a Water and Wastewater Financial Plan and Capacity Fee study to update rates and charges for wholesale and retail water, sewer, and capacity fees for the period FY 2024 – FY 2028 that align with Proposition 218.

The major study objectives include the following:

- Develop a financial plan for the Retail Zone, Wholesale Zone, and Sewer Enterprises to ensure financial sufficiency, meet operational and maintenance (O&M) costs, and maintain sufficient funding for capital refurbishment and replacement (R&R) needs;
- Conduct a cost-of-service analysis for water and sewer services;
- Develop fair and equitable water and sewer rates over a five-year period;
- Conduct a customer impact analysis for the proposed water and sewer rates; and
- Update the capacity fees to reflect the current state of the water and sewer systems.

1.2. Process and Approach

The study is informed by the District's policy objectives, the current wholesale & retail water system rates and the current sewer system rates, as well as the legal requirements in California (namely, Proposition 218). The resulting cost-of-service analysis and rate design process considers 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.

1.2.1. Step 1: Revenue Requirement Calculation

The rate-making process begins by determining the revenue requirement for the base year, also known as the test year or rate-setting year. The base year for this study is FY 2024 (July 1, 2023 to June 30, 2024). The revenue requirement should sufficiently fund the utility's operation and maintenance (O&M) costs, annual debt service, capital project expenses, and reserve funding as projected in the District's budgets.

1.2.2. Step 2: Cost-of-Service Analysis

The annual cost of providing the utility service, or the revenue requirement, is then distributed among customer classes commensurate with their use and burden on the system. A cost-of-service analysis involves the following steps:

- Functionalize costs – the O&M expense budget is categorized into functions such as supply, treatment, pumping, transmission and distribution (T&D), etc.
- Allocate to cost components – the functionalized costs are then allocated to system cost components such as supply, delivery, peaking, conservation, etc.
- Develop unit costs – unit costs for each cost component are determined using appropriate units-of-service for each.
- Distribute cost components – the cost components are allocated to each customer class using the unit costs in proportion to their demand and burden on the system.

A cost-of-service analysis considers both the average water demand and peak demand. Peaking costs¹ are incurred during maximum consumption periods, most often coinciding with summertime irrigation use. Additional capacity-related costs are associated with designing, constructing, operating, maintaining, replacing, and refurbishing facilities to meet peak demand. These peaking costs must be allocated to the customer classes whose water demand patterns generate additional costs for the utility, proportionate to their burden on the peaking-related facilities.

Since the District’s sewer enterprise is collection only, rates are derived from the financial plan’s revenue adjustments. Treatment is provided by the Orange County Sanitation District. Flow data is not available for sewer customers.

1.2.3. Step 3: Rate Design and Calculation

After allocating the revenue requirement for each system and to its corresponding customer classes, the rate design and calculation process can begin. Rates do more than simply recover costs; within the legal framework and industry standards, properly designed rates should support the District's policy objectives while adhering to cost-of-service principles. Rates are not only a financial instrument but act as a public information tool in communicating policy objectives to customers. The rate design process also includes a rate impact analysis for all customer classes and a sample customer bill impact analysis.

1.2.4. Step 4: Report Preparation and Rate Adoption

The final step in a cost-of-service and rate study is to develop the report in preparation for the rate adoption process. The report documents the rate study results and presents the methodologies, rationale, justifications, and calculations utilized to derive the proposed rates. A thorough and methodical report serves two important functions: fully deriving the rates and showing the nexus to costs and communicating the rate adoption process to customers and other important stakeholders.

1.3. Retail Water Summary

1.3.1. Financial Plan, Retail

Table 1-1 displays the proposed retail water revenue adjustments over the study period. The current financial plan shows that revenue adjustments are required to adequately fund all operating expenses, debt coverage requirements, and achieve reserve policy targets.

Table 1-1: Proposed Retail Water Revenue Adjustments²

Fiscal Year	Effective Month	Proposed Revenue Adjustment
2024	Jul	7.5%
2025	Jul	7.5%
2026	Jul	7.5%
2027	Jul	7.5%
2028	Jul	7.5%

¹ Collectively, maximum day and maximum hour costs are known as peaking costs.

² The adjustments beyond FY 2023 are for planning purposes only.

Figure 1-1 illustrates the retail water operating financial plan for FY 2023 – FY 2030. Revenues from proposed rates are sufficient to recover O&M costs (including water supply) and debt service while sufficiently funding reserves that will be drawn by the District to fund future capital improvement needs.

Figure 1-1: Retail Water Operating Financial Plan

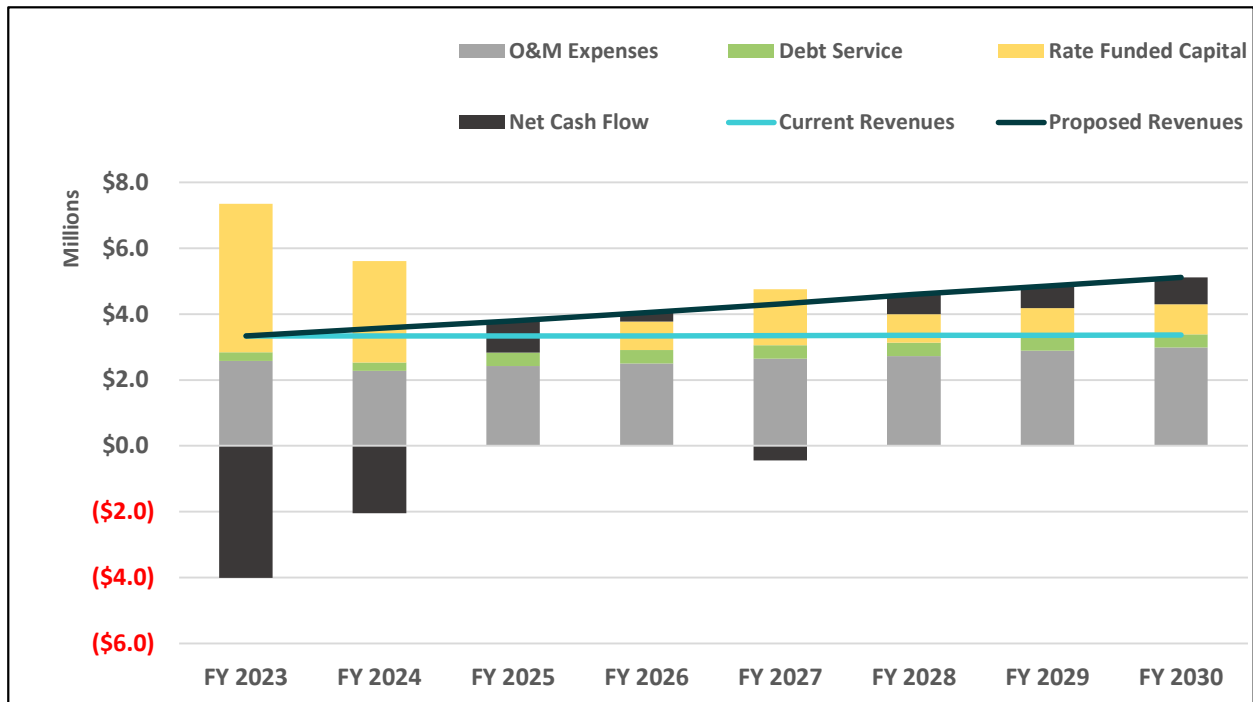


Figure 1-2 illustrates the ending reserve balances and targeted balances for FY 2023- - FY 2030. Ending reserve balances show a planned draw upon reserves to accomplish planned capital improvements with a gradual return to the target capital and operating reserve balance just outside the rate-setting period. The operating reserve shown in the graph reflects a potential change to 6 months of operating expenses from 10 months.

Figure 1-2: Estimated Retail Water Ending Fund Balances

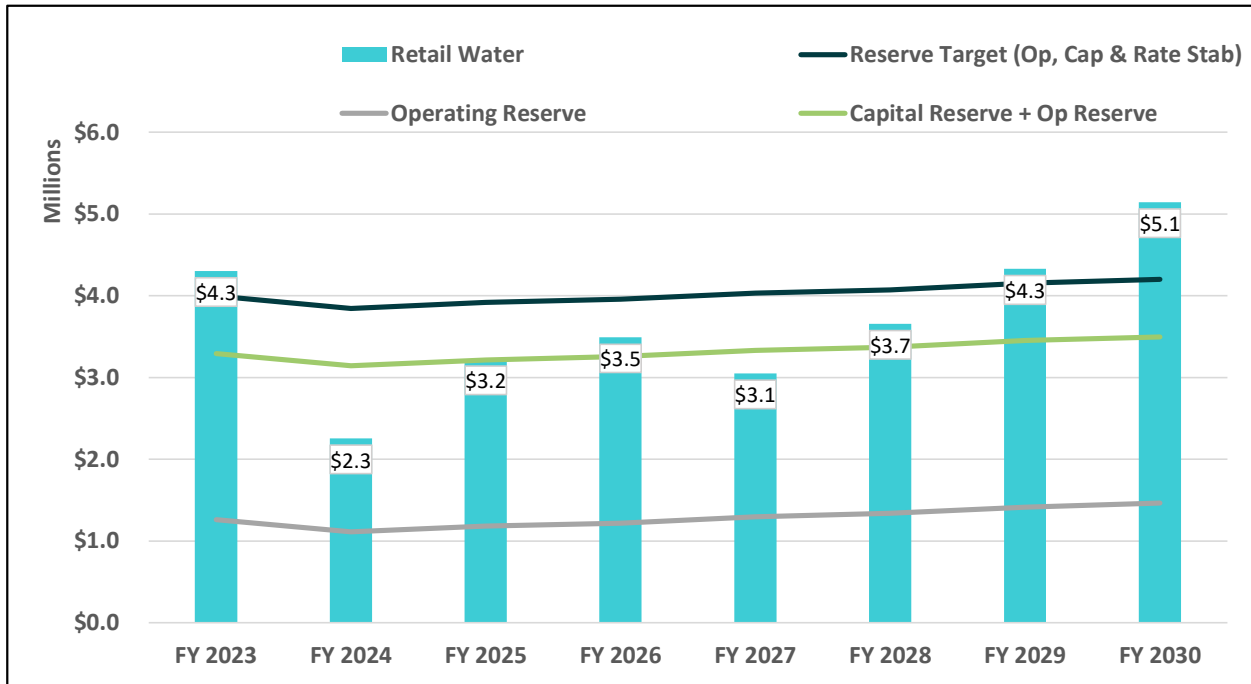
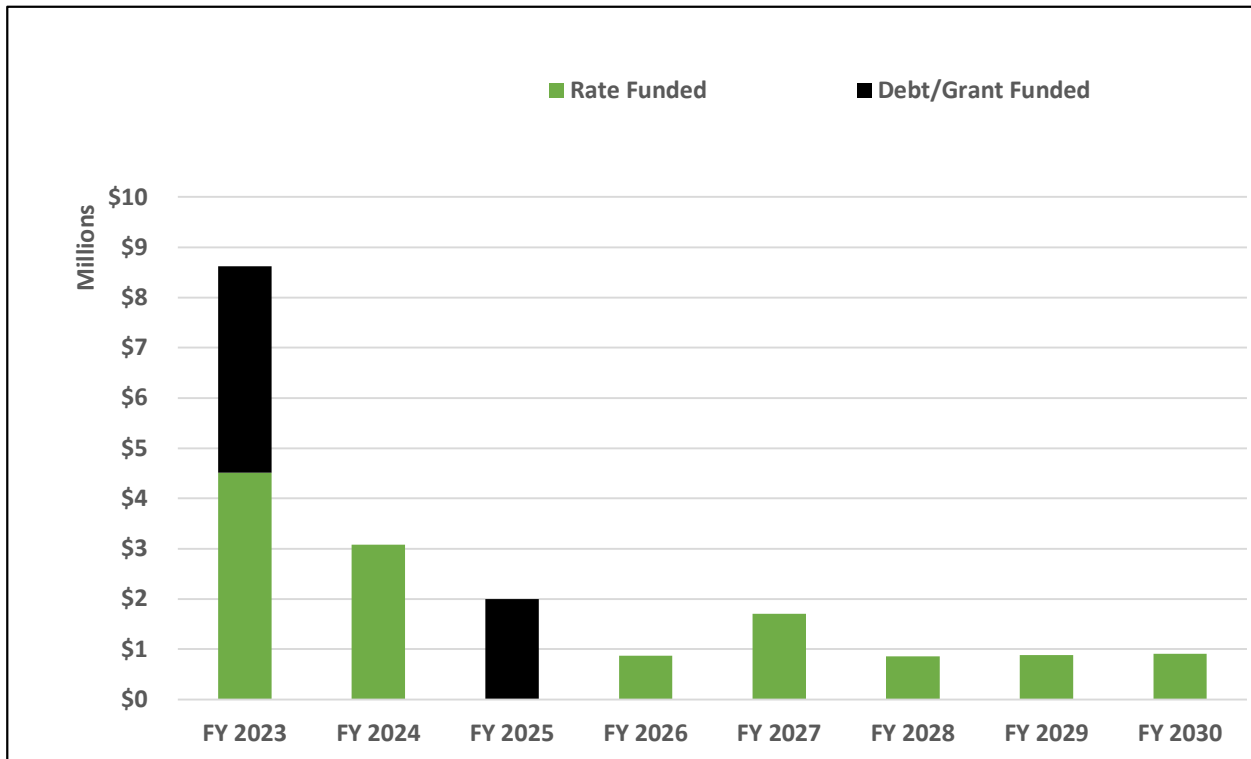


Figure 1-3 illustrates the Retail Water Enterprise’s scheduled capital improvement project expenses and funding sources. The District anticipates funding capital projects in the study period with a combination of remaining bond proceeds and rate-based revenues. A portion of FY 2023 capital projects is funded with existing debt proceeds.

Figure 1-3: Retail Water Capital Improvement Program Funding



1.3.2. Proposed Retail Water Rates

Table 1-2 shows the current and proposed monthly service charge, commodity rate, and monthly capital charge. The rates shown in FY 2024 are set using a cost-of-service analysis and overall, recover 7.5% more revenue than the prior year. Future years are escalated by the revenue adjustments shown.

Table 1-2: Current and Proposed Retail Water Rates and Charges

Proposed Rates	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Effective Date	Current Rate	Jul 2023	Jul 2024	Jul 2025	Jul 2026	Jul 2027
Revenue Adjustment		COS	7.5%	7.5%	7.5%	7.5%
Meter Size Fixed Charge						
5/8"	\$22.50	\$32.78	\$35.24	\$37.88	\$40.72	\$43.77
3/4"	\$33.75	\$32.78	\$35.24	\$37.88	\$40.72	\$43.77
1"	\$56.24	\$48.68	\$52.33	\$56.26	\$60.48	\$65.01
1.5"	\$112.46	\$88.43	\$95.07	\$102.20	\$109.86	\$118.10
2"	\$179.92	\$136.14	\$146.35	\$157.33	\$169.13	\$181.81
3"	\$393.56	\$287.21	\$308.75	\$331.90	\$356.80	\$383.56
Commodity Rate (\$/ccf)	\$5.07	\$4.45	\$4.78	\$5.14	\$5.52	\$5.94
Capital Charge						
All Accounts	\$32.52					
5/8"		\$51.59	\$55.46	\$59.62	\$64.09	\$68.89
3/4"		\$51.59	\$55.46	\$59.62	\$64.09	\$68.89
1"		\$85.98	\$92.43	\$99.36	\$106.81	\$114.82
1.5"		\$171.96	\$184.86	\$198.72	\$213.63	\$229.65
2"		\$275.14	\$295.77	\$317.96	\$341.80	\$367.44
3"		\$601.86	\$647.00	\$695.53	\$747.69	\$803.77

1.4. Wholesale Water Summary

1.4.1. Financial Plan, Wholesale

Table 1-3 displays the proposed revenue adjustments for the wholesale water enterprise over the study period. The current financial plan shows that revenue adjustments are required to adequately fund all operating expenses, debt coverage requirements, and achieve reserve policy targets.

Table 1-3: Proposed Wholesale Water Revenue Adjustments³

Fiscal Year	Effective Month	Proposed Revenue Adjustment
2024	Jul	7.0%
2024	Jul	7.0%
2025	Jul	7.0%
2026	Jul	7.0%
2027	Jul	7.0%

Figure 1-4 illustrates the wholesale water operating financial plan. Revenues from proposed rates are sufficient to recover O&M costs (including water supply) and debt service while sufficiently funding reserves that will be drawn by the District to fund future capital improvement project needs as shown by the black bars below the x-axis.

Figure 1-4: Wholesale Water Operating Financial Plan

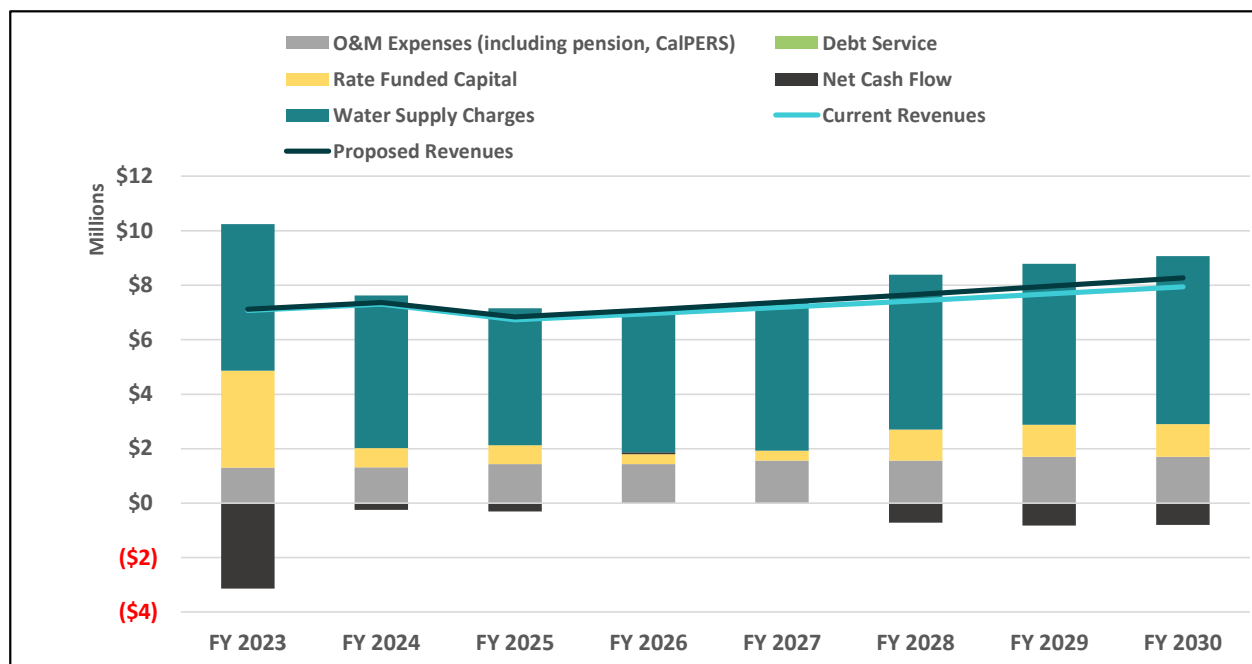


Figure 1-5 illustrates the ending reserve balances and targeted balances for FY 2023 – FY 2030. Reserve balances are used in conjunction with revenue adjustments to meet revenue requirements. The FY 2028 ending balance is projected to be above the total reserve target; however capital projects in years beyond the study are expecting to lower reserves.

³ The adjustments beyond FY 2023 are for planning purposes only.

Figure 1-5: Estimated Wholesale Water Ending Fund Balances

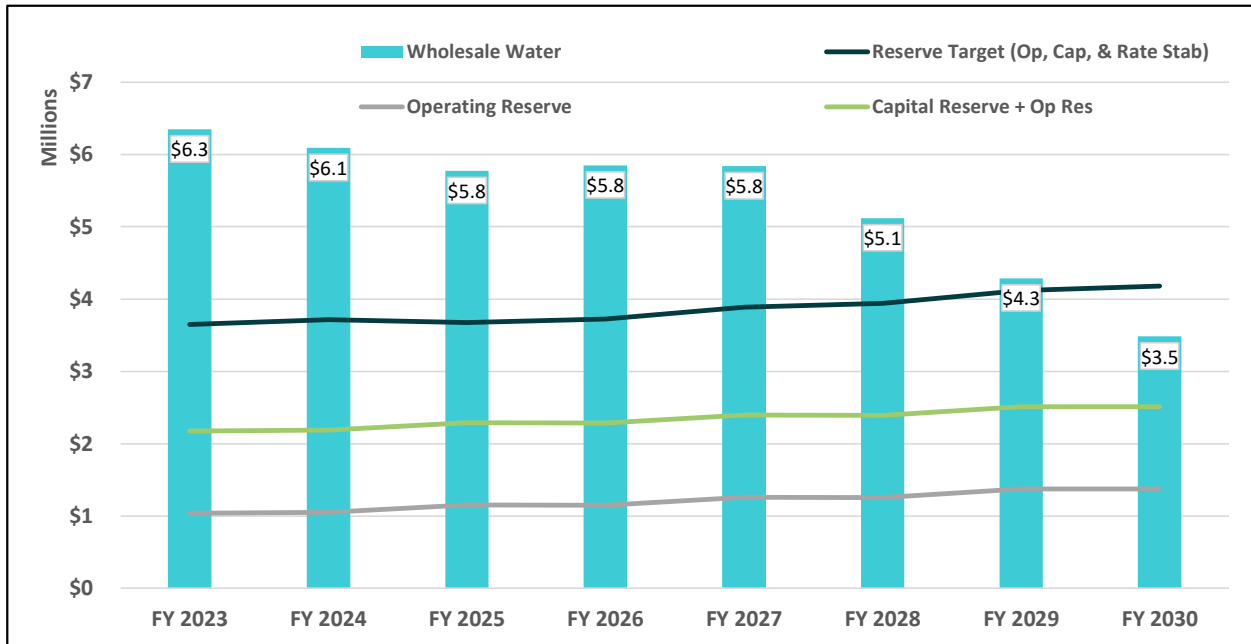
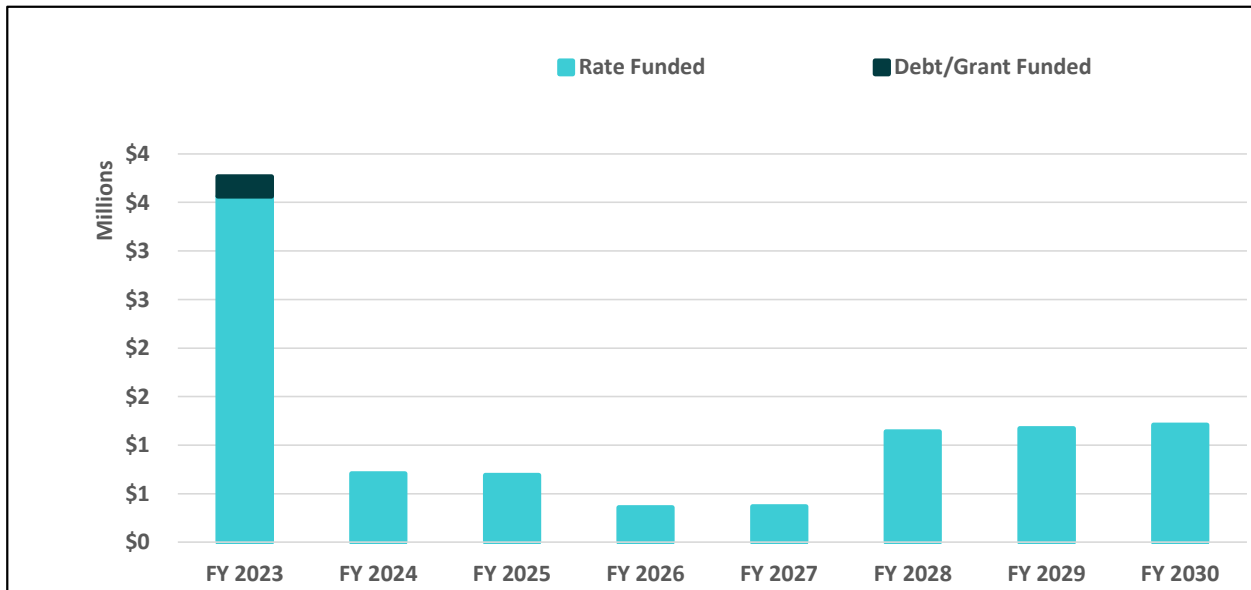


Figure 1-6 illustrates the Wholesale Water Enterprise’s scheduled capital improvement project expenses and funding sources. The District anticipates funding capital improvement projects in the study period with a combination of grants, reserves, and rate-based revenues.

Figure 1-6: Wholesale Water Capital Improvement Program Funding



1.4.2. Proposed Wholesale Water Rates

Table 1-4 shows the current and proposed monthly readiness-to-serve charge and replacement reserve fund charge. The rates shown in the FY 2024 column are derived using a cost-of-service analysis and recover 7% more revenue than the prior year. Future years are escalated by the revenue adjustments.

Table 1-4: Current and Proposed Wholesale Water Rates and Charges

Proposed Rates	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Effective Date	Current Rate	Jul 2023	Jul 2024	Jul 2025	Jul 2026	Jul 2027
Revenue Adjustment						
Readiness to Serve Charge		COS	7.0%	7.0%	7.0%	7.0%
Replacement Reserve Fund Charge		COS	7.0%	7.0%	7.0%	7.0%
Readiness to Serve Charge						
Annual Charge, \$/meter	\$8.50	\$10.82	\$11.58	\$12.39	\$13.25	\$14.18
Replacement Reserve Fund Charge						
Meter Size						
5/8-Inch	\$16.00	\$9.69	\$10.37	\$11.09	\$11.87	\$12.70
3/4-Inch	\$16.00	\$9.69	\$10.37	\$11.09	\$11.87	\$12.70
1-Inch	\$16.00	\$16.15	\$17.28	\$18.49	\$19.78	\$21.17
1-1/2-Inch	\$16.00	\$32.29	\$34.55	\$36.97	\$39.56	\$42.33
2-Inch	\$16.00	\$51.67	\$55.29	\$59.16	\$63.30	\$67.73
3-Inch	\$16.00	\$113.03	\$120.94	\$129.41	\$138.47	\$148.16
4-Inch	\$16.00	\$203.45	\$217.69	\$232.93	\$249.24	\$266.68
6-Inch	\$16.00	\$516.70	\$552.87	\$591.57	\$632.98	\$677.29
8-Inch	\$16.00	\$904.23	\$967.53	\$1,035.26	\$1,107.72	\$1,185.26

1.5. Sewer Summary

1.5.1. Financial Plan, Sewer

Table 1-5 displays the proposed sewer enterprise revenue adjustments over the study period. The current financial plan shows that revenue adjustments are required to adequately fund all operating expenses, debt coverage requirements, and achieve reserve policy targets. Rates for the sewer enterprise have not been adjusted since 2016, when the rates were cut in half.

Table 1-5: Proposed Sewer Revenue Adjustments⁴

Fiscal Year	Effective Month	Proposed Revenue Adjustment
2024	Jul	12.0%
2024	Jul	12.0%
2025	Jul	12.0%
2026	Jul	12.0%
2027	Jul	12.0%

Figure 1-7 illustrates the sewer operating financial plan. Revenues from proposed rates are sufficient to recover O&M costs and debt service while sufficiently funding reserves that will be drawn upon by the District to fund future capital project needs as shown by the black bars below the x-axis.

⁴ The adjustments beyond FY 2023 are for planning purposes only.

Figure 1-7: Sewer Operating Financial Plan

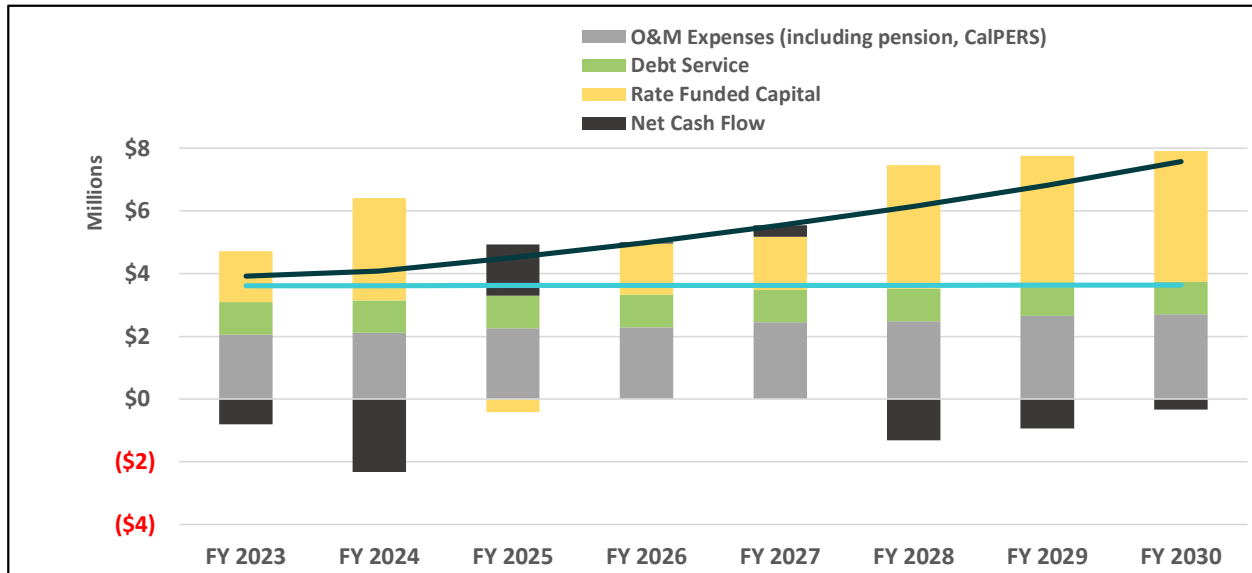


Figure 1-8 illustrates the ending reserve balances and targeted balances for FY 2023 – FY 2030. Reserve balances are used in conjunction with revenue adjustments to meet revenue requirements. The FY 2028 ending balance is projected to be above the total reserve target.

Figure 1-8: Estimated Sewer Ending Fund Balances

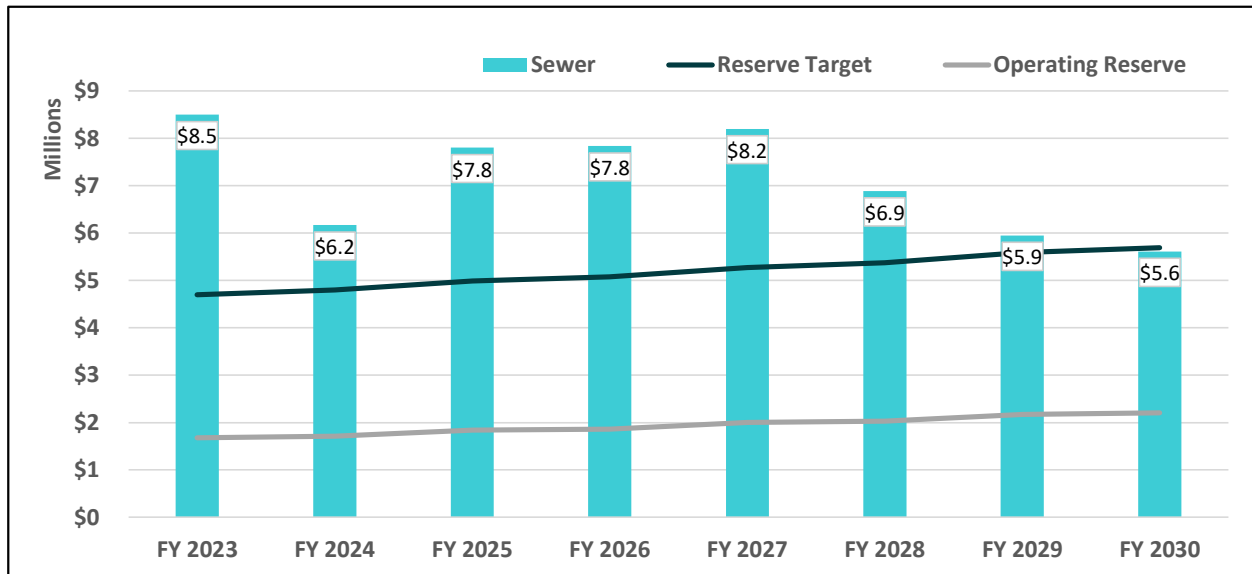
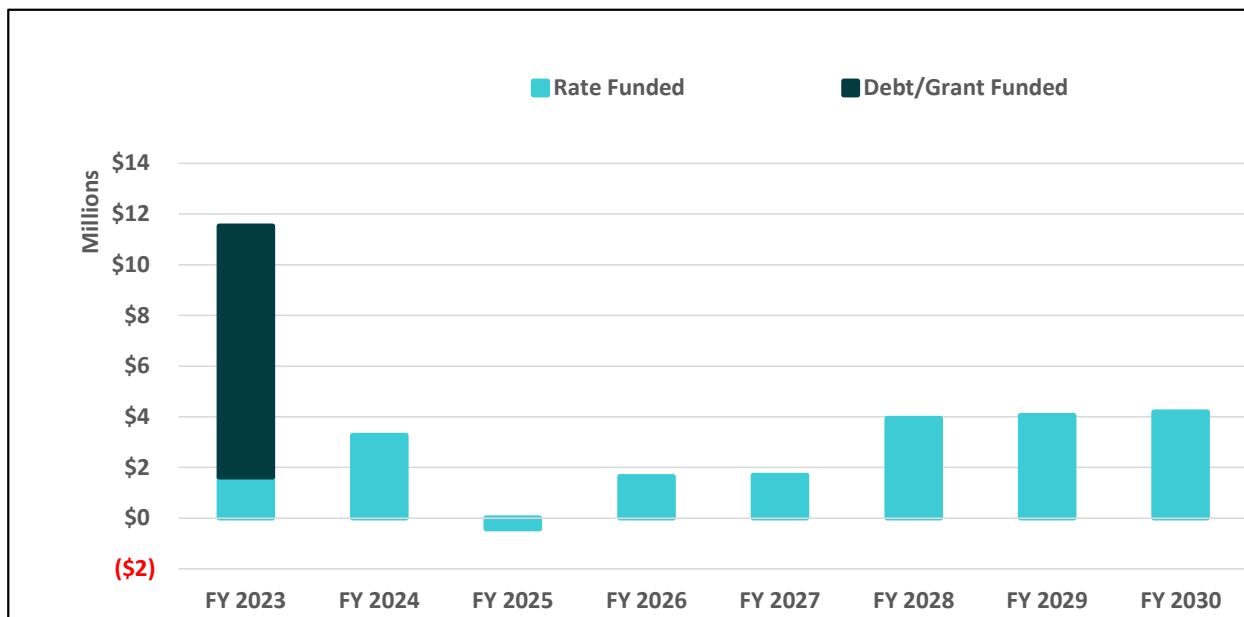


Figure 1-9 illustrates the Sewer Enterprise’s scheduled capital improvement project expenses and funding sources. A portion of FY 2023 capital projects is funded with existing debt proceeds.

Figure 1-9: Sewer Capital Improvement Program Funding



1.5.2. Proposed Sewer Rates

Table 1-6 shows the current and proposed annual charge for residential customers. Non-residential customers are charged based on the single-family rate times a property use classification factor (as shown in Appendix A) and the square footage or number of units.

Table 1-6: Current and Proposed Sewer Charges, Annual

Proposed Rates	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Effective Date	Current Rate	Jul 2023	Jul 2024	Jul 2025	Jul 2026	Jul 2027
Adjustment (%)	0.0%	12.0%	12.0%	12.0%	12.0%	12.0%
Single-Family	\$108.00	\$120.96	\$135.48	\$151.73	\$169.94	\$190.33
Multi-Family	\$75.60	\$84.67	\$94.83	\$106.21	\$118.96	\$133.23

1.6. Capacity Fees

Given the District has available retail, wholesale and sewer system capacity, Raftelis used the equity buy-in method to calculate updated capacity fees. The asset value as replacement cost new less depreciation was determined for each enterprise and divided by the existing equivalent meters (water) or equivalent dwelling units (sewer) to determine the updated fees. Table 1-7 through Table 1-9 present the projected capacity fees for retail, wholesale, and sewer, respectively.

Table 1-7: Proposed and Existing Retail Water Capacity Fees

Line No.	By Meter Size	EM Capacity Ratio	Proposed Fees	Existing Fees	Percent Difference
1	5/8"	1.0	\$8,011	\$6,103	31.3%
2	3/4"	1.0	\$8,011	\$6,103	31.3%
3	1"	1.7	\$13,352	\$10,171	31.3%
4	1 1/2"	3.3	\$26,703	\$20,342	31.3%
5	2"	5.3	\$42,725	\$32,547	31.3%
6	3"	11.7	\$93,462	\$71,196	31.3%

Table 1-8: Proposed and Existing Wholesale Water Capacity Fees

Line No.	By Meter Size	EM Capacity Ratio	Proposed Fees	Existing Fees	Percent Difference
1	5/8"	1.0	\$1,079	\$952	13.3%
2	3/4"	1.0	\$1,079	\$952	13.3%
3	1"	1.7	\$1,798	\$1,586	13.4%
4	1 1/2"	3.3	\$3,597	\$3,173	13.4%
5	2"	5.3	\$5,755	\$5,076	13.4%
6	3"	11.7	\$12,588	\$11,103	13.4%
7	4"	21.0	\$22,659	\$19,986	13.4%
8	6"	53.3	\$57,547	\$50,856	13.2%
9	8"	93.3	\$100,707	\$88,828	13.4%
10	10"	140.0	\$151,060	\$133,243	13.4%

Table 1-9: Proposed Sewer Capacity Fee

Line No.	Proposed and Existing Sewer Capacity Fee	
1	Proposed Sewer Capacity Fee (per EDU)	\$10,598
2	Old 2020 Sewer Capacity Fee (per EDU)	\$2,469
3	% Difference	329%

2. Legal Requirements and Rate Setting Methodology

2.1. Legal Requirements⁵

2.1.1. 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 service, are as follows:

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

As stated in the American Water Works Association's (AWWA) *Principles of Water Rates, Fees, and Charges: Manual of Water Supply Practices - M1 Seventh Edition* (Manual M1), "water rates and charges should be recovered from classes of customers in proportion to the cost of serving those customers." Raftelis follows industry-standard rate-setting methodologies set forth by the AWWA Manual M1 to ensure this study meets Proposition 218 requirements and establishes rates that do not exceed the proportionate cost of providing water services on a parcel basis. The methodology in the Manual M1 is a nationally recognized industry rate-making standard that courts have recognized as consistent with Proposition 218.

2.1.2. California Constitution Article X, Section 2

California Constitution Article X, Section 2 mandates that water resources be put to beneficial use and that the waste or unreasonable use of water be prevented through conservation. Section 106 of the Water Code declares that the highest priority use of water is for domestic purposes, with irrigation secondary. Thus, the management of water resources is part of the property-related service provided by public water suppliers to ensure the resource is available over time.

⁵ Raftelis does not practice law nor does it provide legal advice. The above discussion means to provide a general review of apparent state institutional constraints and is labeled "legal framework" for literary convenience only. The District should consult with its counsel for clarification and/or specific review of any of the above or other matters.

Two Constitutional provisions govern and impact water rates — Article X, Section 2 (“Article X”) and Article XIII D, Section 6 (“Article XIII D”). Article X was added to the California Constitution in 1928 as former Article XIV, Section 3, and amended in 1976. Article X provides that:

“It is hereby declared that because of the conditions prevailing in this State the general welfare requires that the water resources of the State be put to beneficial use to the fullest extent of which they are capable, and that the waste or unreasonable use or unreasonable method of use of water be prevented, and that the conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare.”

In November 1996, California voters approved Proposition 218, which amended the California Constitution by adding Article XIII C and Article XIII D. Article XIII D placed substantive limitations on the use of the revenue collected from property-related fees and on the amount of the fee that may be imposed on each parcel. Additionally, it established procedural requirements for imposing new, or increasing existing, property-related fees. Water service fees are property-related fees.

In accordance with these provisions, a property-related fee must meet all of the following requirements: (1) revenues derived from the fee must not exceed the funds required to provide the property-related service; (2) revenues from the fee must not be used for any purpose other than that for which the fee is imposed; (3) the amount of a fee imposed upon any parcel or person as an incident of property ownership must not exceed the proportional cost of the service attributable to the parcel; (4) the fee may not be imposed for a service, unless the service is actually used by, or immediately available to, the owner of the property subject to the fee. A fee based on potential or future use of a service is not permitted, and stand-by charges must be classified as assessments subject to the ballot protest and proportionality requirements for assessments; (5) no fee may be imposed for general governmental services, such as police, fire, ambulance, or libraries, where the service is available to the public in substantially the same manner as it is to property owners. The five substantive requirements in Article XIII D are structured to place limitations on (1) the use of the revenue collected from property-related fees and (2) the allocation of costs recovered by such fees to ensure that they are proportionate to the cost of providing the service attributable to each parcel.

2.2. Rate Setting Methodology

This study was conducted using industry-standard principles outlined by the AWWA Manual M1. The process and approach Raftelis utilized in the study to determine water and sewer rates is informed by the District’s policy objectives, the current water and sewer system and rates, and the legal requirements in California (namely, Proposition 218). The resulting financial plan, cost-of-service analyses, and rate design processes follows five key steps, outlined below, to determine proposed rates that fulfill the District’s objectives, meet industry standards, and comply with relevant regulations.

1. **Financial Plan:** The first study step is to develop a multi-year financial plan that projects the City’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.
2. **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 2024. 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.

3. **Cost-of-Service Analysis:** The annual cost of providing water service, or the revenue requirement, is then distributed to customer classes and tiers commensurate with their use of and burden on the water or sewer 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, 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.
 - » 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 and tier using the unit costs in proportion to their demand and burden on the system.

A water cost-of-service analysis considers both the average water demand and peak demand. Peaking costs are incurred during periods of peak consumption, most often coinciding with summer water use. Additional capacity-related costs are incurred associated with designing, constructing, operating, maintaining, and replacing facilities to meet peak demand. Patterns of use impose additional costs on a water utility and are used to determine the cost burden on peaking-related facilities.

4. **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.
5. **Administrative Record Preparation and Rate Adoption:** The final step in a rate study is to develop the administrative record in conjunction with the rate adoption process. This report serves as the administrative record for this study. The administrative record documents the study results and presents the methodologies, rationale, justifications, and calculations used to determine the proposed rates. A thorough and methodological administrative record serves two important functions: maintaining defensibility in a stringent legal environment and communicating the rationale for revenue adjustments and proposed rates to customers and key stakeholders.

2.3. Capacity Fees Economic and Legal Framework

The philosophy that utility services should be paid for by those that receive the service is often referred to as “growth-should-pay-for-growth.” The principal is summarized in the American Water Works Association (AWWA) Manual M26: Water Rates and Related Charges:

“The purpose of designing customer-contributed-capital system charges is to prevent or reduce the inequity to existing customers that results when these customers must pay the increase in water rates that are needed to pay for added plant costs for new customers. Contributed capital reduces the need for new outside sources of capital, which ordinarily has been serviced from the revenue stream. Under a system of contributed capital, many water utilities are able to finance required facilities by use of a ‘growth-pays-for-growth’ policy.”

This principle, in general, applies to water, wastewater, and storm drainage systems. In the excerpt above, customer-contributed-capital system charges are equivalent to capacity fees.

2.4. Capacity Fees Legal Framework and California Requirements

In establishing capacity fees, it is important to understand and comply with local laws and regulations governing the establishment, calculation, and implementation of capacity fees. The following sections summarize the regulations applicable to the development of capacity fees for the City.

Capacity fees must be established based on a reasonable relationship to the needs and benefits brought about by the development or expansion. Courts have long used a standard of reasonableness to evaluate the legality of development charges. The basic statutory standards governing capacity fees are embodied by California Government Code Sections 66013, 66016, 66022 and 66023. Government Code Section 66013 contains requirements specific to determining utility development charges:

“Notwithstanding any other provision of law, when a local agency imposes fees for water connections or sewer connections, or imposes capacity charges, those fees or charges shall not exceed the estimated reasonable cost of providing the service for which the fee or charge is imposed, unless a question regarding the amount the fee or charge in excess of the estimated reasonable cost of providing the services or materials is submitted to, and approved by, a popular vote of two-thirds of those electors voting on the issue.”

Section 66013 also includes the following general requirements:

- Local agencies must follow a process set forth in the law, making certain determinations regarding the purpose and use of the charge; they must establish a nexus or relationship between a development project and the public improvement being financed with the charge.
- The capacity charge revenue must be segregated from the General Fund in order to avoid commingling of capacity fees and the General Fund.

2.5. Capacity Fees Methodology

Capacity fees are also commonly known as developer fees, development impact fees, connection fees, tap fees, and system development charges, among others. All are one-time capital charges, assessed against a new development, to recover the proportional share of capacity investment, previously constructed by a utility (or will be constructed), to accommodate growth. Capacity fees are codified in the California Government Code Sections 66000-60025. Capacity fees must reflect the link between the fee imposed on, and the benefit received by, a new connection to the system. The fee charged may not exceed the reasonable share of costs associated with providing the service.

Three different methodologies to calculate capacity fees exist: **Buy-In, Incremental, and Hybrid**; with variations of each dictated by local community and system characteristics, as well as policy objectives. Utilities have broad latitude in the method and approach used to calculate fees provided the fees reflect the benefit of, and do not exceed the costs for, providing service to the connection. These fees are designed to be proportional to the burden placed on the system by new connections. The project team, which includes Raftelis and EOCWD staff, decided to use the buy-in approach given the system still has capacity to meet in-fill demand.

The “Buy-In Method” is based on the premise that new customers are entitled to service at the same price as existing customers. Under this approach, new customers pay only an amount equal to the current system value, either using the original cost, replacement cost, original cost less depreciation, or replacement cost less depreciation as the valuation basis. This net investment, or value of the system, is then divided by the current capacity of the system to determine the Buy-In cost per unit.

For example, if the existing system has 100 units of average use and the new connector uses an equivalent unit, then the new customer would pay 1/100 of the total value of the existing system. By contributing this capacity fee, the new connector has bought into the existing system. The user has effectively acquired a financial position on par with existing customers and will face future capital re-investment on equal financial footing with those customers. This approach is suitable when: (1) agencies have built most of their facilities and only a small portion of future facilities are needed for build-out, (2) agencies do not have a detailed adopted long-term capital improvement plan, or (3) the “build-out” date is so far out in the future that it is difficult to accurately project growth and required facilities with precision.

2.6. Capacity Fees Valuation Methodology

To estimate the asset value of existing facilities, Raftelis recommends the replacement cost less depreciation (RCLD) method. The current value of water facilities is materially affected by the effects of age. All assets have estimated useful lives, which vary by type. For example, pumps may have a 20-year life, buildings 50 years, and pipelines 80 years. Each year an asset is devalued by the fraction of its useful life to original cost. This is referred to as straight line or linear depreciation. At the end of an asset’s useful life, it is worth zero dollars on paper, though it may still be in service. Depreciation accounts for estimated devaluation in system assets caused by wear and tear, decay, inadequacy, and obsolescence. To provide appropriate recognition of the effects of depreciation on existing water and sewer systems, the original cost valuation can be inflated to today’s dollars rather than the value of the dollar when the asset was placed in service. Original cost and depreciation are inflated using historical indices to reflect today’s dollars. Replacement cost depreciation is then subtracted from the replacement cost of the asset to yield replacement cost less depreciation. RCLD allows for an accounting of system assets in present value while also accounting for proportional devaluation via depreciation.

3. Financial Plan Assumptions

3.1. Key Financial Information

During the course of the study, Raftelis and District staff completed a detailed review of projected revenues, operating expenses, and capital expenditures over the study period. The Financial Plan Model is a comprehensive spreadsheet model of the District's revenues, operating and maintenance expenses, capital expenditures, and reserves for the study period (FY 2024 to FY 2028).

This study utilized the following financial documents:

- Operating Budget for Fiscal Year (FY) 2022 and FY 2023
- Reserve Policy provided by District Staff
- Capital Improvement Plan for the study period provided by the District
- Financial Information (e.g., outstanding debt, reserve levels, etc.) as of June 30, 2022 provided by the District

3.2. Inflation

The study period is from Fiscal Year (FY) 2024 to 2028. Various types of assumptions and inputs are incorporated into this study based on discussions and direction from District staff. These include the projected number of accounts and annual growth rates in water consumption for different customer classes, inflation factors, and other assumptions that are incorporated into the Financial Plan. The inflation factor assumptions used for cost escalation are presented in Table 3-1.

Table 3-1: Assumed Cost Escalation Factors

Key Factors	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
General	5.0%	5.0%	5.0%	5.0%	5.0%
Salary & Benefits	4.0%	4.0%	4.0%	4.0%	4.0%
Utilities	3.5%	3.5%	3.5%	3.5%	3.5%
Water Supply Costs					
MWD Volumetric Rate Inflation	4.0%	4.0%	4.0%	4.0%	4.0%
MWD Capacity Charge	3.7%	3.7%	3.7%	3.7%	3.7%
MWD RTS Charge	9.9%	9.9%	9.9%	9.9%	9.9%
MWD Volumetric Rate Inflation	4.0%	4.0%	4.0%	4.0%	4.0%
OCWD Groundwater Rate(1)	4.8%	6.9%	7.3%	5.7%	5.9%
Non-Escalation	0.0%	0.0%	0.0%	0.0%	0.0%
Capital	3.0%	3.0%	3.0%	3.0%	3.0%

(1) Based on \$/AF unit rates provided through FY 2027.

The salary and benefit inflation rate are based on District staff estimates and include increasing health insurance costs. The utilities inflation rate is based on historical average retail electricity price data from the Energy Information Administration for the State of California. The water supply cost inflators are for purchasing water from OCWD and MWDOC and are based on District staff estimates and historical changes. The groundwater rate inflator for OCWD is based on rates provided by OCWD. The Capital

inflation rate is based on the Engineering News Record Construction Cost Index 20-year average for Los Angeles. The escalation factors for **revenue** escalation are presented in Table 3-2.

Table 3-2: Assumed Revenue Escalation Factors

Key Factors	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Other Rev	1.5%	1.5%	1.5%	1.5%	1.5%
Non-Escalation	0.0%	0.0%	0.0%	0.0%	0.0%
Property Tax	1.0%	1.0%	1.0%	1.0%	1.0%
Interest Rates	0.5%	0.5%	0.5%	0.5%	0.5%

A conservative interest rate is used in the study to project interest earnings on reserve funds. The escalation rate for other revenues is applied to Penalty & Other Charges Revenue, Uncollectible Accounts, Rental Revenue, and Miscellaneous Income.

3.3. Projected Growth

The District assumes that there is little-to-no account or usage growth for the study period. Table 3-3 shows the number of Retail Zone connections used in the analysis. Table 3-4 shows the number of Wholesale Zone connections used in the analysis. Table 3-5 shows the number of estimated equivalent dwelling units in the sewer system.

Table 3-3: Number of Retail Zone Connections

Meter Size	Connections
5/8"	9
3/4"	869
1"	290
1.5"	29
2"	6
3"	3
Total	1,206

Table 3-4: Number of Wholesale Zone Connections

Number of Certified Meters	Connections
TUSTIN	14,108
IRWD	436
GSWC	2,622
ORANGE	2,451
EOCWD	1,208
Total	20,825

Table 3-5: Number of Sewer Equivalent Connections

Estimated Equivalent Dwelling Units
28,491

3.4. Reserve Policy

The District currently has an adopted reserve policy for its Wholesale Zone, Retail Zone, and Sewer enterprises (see Appendix B). The operating reserve is currently set to a minimum of 10 months of budgeted operating expenses and a maximum of 12 months of operating expenses. During the course of this study, the District and Raftelis discussed changing the retail operating reserve minimum to 6 months to tie in to the bi-monthly billing period. The model uses a 6-month operating reserve target for retail water financial planning purposes. The capital reserve minimum target is equal to one year's capital spending. The maximum level is 2 times the accumulated depreciation balance. The District also has a rate stabilization reserve equal to 25 percent of commodity or rate revenue for water and \$1,000,000 for sewer.

4. Retail Zone Financial Plan

4.1. Water Revenue Requirements

This section discusses projected revenues, O&M expenses, and revenue adjustments to ensure the fiscal sustainability and solvency of the Retail Zone Enterprise.

4.1.1. Revenues

The District's current Retail Zone rates were last updated in August 2021. The rates consist of three distinct components: a monthly capital project fee, a monthly service charge that varies by meter size, and a uniform commodity rate applied to all usage⁶. Table 4-1 shows the District's current water rates for Retail Zone customers.

Table 4-1: Current Retail Zone Water Rates

	Current (FY 2023)
Effective Date	8/16/2021
Monthly Capital Project Fee (\$/meter)	\$32.52
Effective Monthly Fixed Meter Charge	
5/8"	\$22.50
3/4"	\$33.75
1"	\$56.24
1.5"	\$112.46
2"	\$179.92
3"	\$393.56
Commodity Rate (\$/ccf)	\$5.07

The revenues recovered from the Capital Project Fee are calculated by multiplying the monthly Capital Project Fee by the total amount of connections (shown in Table 3-3) for each month of the bi-monthly billing period. The Monthly Service Charge revenue for each meter is calculated by multiplying the service charge for a meter size with the number of connections for that meter size for each month of the bi-monthly billing period. The commodity rate revenue is calculated by multiplying total use by the commodity rate. The projected and calculated revenues are shown in Table 4-2.

⁶ The commodity rate is shown on a \$/ccf basis. 1 ccf = 100 cubic feet = 748 gallons of water

Table 4-2: Projected Revenue from Current EOCWD Charges

	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Number of Connections (meters)						
5/8"	9	9	9	9	9	9
3/4"	869	869	869	869	869	869
1"	290	290	290	290	290	290
1.5"	29	29	29	29	29	29
2"	6	6	6	6	6	6
3"	3	3	3	3	3	3
Total	1,206	1,206	1,206	1,206	1,206	1,206
Projected Normal Water Sales (ccf)	339,614	339,614	339,614	339,614	339,614	339,614
Calculated Annual Revenues from Current Retail Water Rates						
Fixed Charges (Capital Projects and Service Charges)	\$616,349	\$616,349	\$616,349	\$616,349	\$616,349	\$616,349
Volumetric Charges (Commodity Rates)	\$1,721,843	\$1,721,843	\$1,721,843	\$1,721,843	\$1,721,843	\$1,721,843
Total	\$2,338,192	\$2,338,192	\$2,338,192	\$2,338,192	\$2,338,192	\$2,338,192

In addition to revenues produced by water rates, the Retail Zone receives other revenues from different sources such as interest income, taxes, and rent income. Table 4-3 outlines the other miscellaneous revenues for the District's Retail Zone over the study period.

Table 4-3: Projected Other Revenue

	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Other Operating Revenues						
Penalty & Other Charges	\$9,800	\$9,947	\$10,096	\$10,248	\$10,401	\$10,557
Uncollectible Accounts	(\$6,700)	(\$6,801)	(\$6,903)	(\$7,006)	(\$7,111)	(\$7,218)
Total Other Operating Revenues	\$3,100	\$3,147	\$3,194	\$3,242	\$3,290	\$3,340
Non-Operating Revenues						
Property Taxes	\$515,700	\$520,857	\$526,066	\$531,326	\$536,639	\$542,006
Interest Income	\$3,500	\$16,397	\$13,700	\$16,791	\$16,357	\$16,772
Miscellaneous Income	\$1,000	\$1,015	\$1,030	\$1,046	\$1,061	\$1,077
Total Non-Operating Revenues	\$520,200	\$538,269	\$540,796	\$549,163	\$554,058	\$559,855

4.1.2. O&M Expenses

4.1.2.1. Water Supply Costs

The District has two sources of water supply – (1) local groundwater and (2) treated import water. The groundwater supply is managed and sold by the Orange County Water District (OCWD). The imported supply is managed by the Municipal Water District of Orange County (MWDOC) via the distribution system operated by East Orange County Water District's Wholesale Zone (WZ) enterprise. As managers of the groundwater basin, OCWD sets the limits for the amount of water that can be pumped from the local groundwater basin. This is referred to as the Basin Pumping Percentage (BPP). As a member agency of OCWD, the District has access to this water supply at the limits set by OCWD.

The District is reliant on imported water from MWDOC (who purchases water from the Metropolitan Water District (MWD)) to meet the remaining demand beyond the BPP limit. The District incurs three separate base fees (readiness to serve, capacity charge, and retail charge) from MWDOC as well as the EOCWD Reserve Fund and Readiness-to-Serve Charges assessed by the EOCWD Wholesale Zone.

Based on projections from District staff, the per unit price of water, and expected purchase quantities, Table 4-4 shows the project water purchase costs. The water purchases from OCWD were provided by the District. The water purchases from MWDOC are the total remaining demand after groundwater pumping. Table 4-4 shows the volumetric OCWD and MWDOC water purchase costs.

Table 4-4: Water Supply Cost Projections

Water Sales	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Retail Water Usage (AF)	780	780	780	780	780	780
Water Loss	7%	7%	7%	7%	7%	7%
Total Water Needed (AF)	838	838	838	838	838	838
Water Supply						
OCWD Replenishment Rate Groundwater Production						
Groundwater Use (AF)	0	700	700	700	700	700
Cost \$/AF	\$540	\$566	\$605	\$649	\$686	\$726
PFAS Costs	\$127,000	\$131,445	\$136,046	\$140,807	\$145,735	\$150,836
Groundwater Costs (PFAS)	\$127,000	\$527,645	\$559,546	\$595,107	\$625,935	\$659,368
Purchased Water Costs						
MWD/MWDOC Wholesale Purchased Water						
Water Purchased (AF)	838	138	138	138	138	138
MWDOC Purchased Water (\$/AF)	\$1,162	\$1,208	\$1,256	\$1,307	\$1,359	\$1,413
Subtotal - Purchased Water Cost	\$973,744	\$167,101	\$173,785	\$180,736	\$187,966	\$195,484
MWDOC Retail Charge						
EOCWD Meters	1,206	1,206	1,206	1,206	1,206	1,206
MWDOC Retail Meter Charge per Meter	\$13.75	\$14.30	\$14.87	\$15.47	\$16.09	\$16.73
Total Retail Meter Charge	\$16,583	\$17,246	\$17,936	\$18,653	\$19,399	\$20,175
Total Water Purchased Costs	\$990,326	\$184,346	\$191,720	\$199,389	\$207,365	\$215,659

Table 4-5 adds the remaining fixed charges from MWDOC and MWD.

Table 4-5: Projected Water Supply Costs

	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<i>Operating Expenses</i>	<i>Budgeted</i>	<i>Projected</i>	<i>Projected</i>	<i>Projected</i>	<i>Projected</i>	<i>Projected</i>
Source of Supply						
Water Purchases	\$973,744	\$167,101	\$173,785	\$180,736	\$187,966	\$195,484
MWDOC Retail Service Connection	\$16,583	\$17,246	\$17,936	\$18,653	\$19,399	\$20,175
Fixed MET-MWDOC Capacity Fees	\$26,000	\$26,962	\$27,960	\$28,994	\$30,067	\$31,179
Fixed MET-MWDOC Readiness to Serve	\$12,000	\$13,188	\$14,494	\$15,928	\$17,505	\$19,238
Fixed EOCWD Reserve Fund Charge (Capital)	\$16,600	\$17,762	\$19,005	\$20,336	\$21,759	\$23,282
Fixed EOCWD Readiness to Serve	\$10,700	\$11,449	\$12,250	\$13,108	\$14,026	\$15,007
Groundwater (incl. PFAS Costs)	\$127,000	\$527,645	\$559,546	\$595,107	\$625,935	\$659,368
Replenishment Assessment	\$8,100	\$8,505	\$8,930	\$9,377	\$9,846	\$10,338
Pumping Electricity	\$26,000	\$84,623	\$87,584	\$90,650	\$93,823	\$97,106
Source of Supply Subtotal	\$1,216,726	\$874,480	\$921,489	\$972,889	\$1,020,325	\$1,071,179

4.1.2.2. Water O&M Expenses

The inflation factors from Table 3-1 were used to inflate the District's FY 2023 budget to project future O&M costs for the Retail Zone. Raftelis worked closely with District staff to identify any non-recurring costs and other anticipated expenses for the study period. Table 4-6 summarizes the budgeted and projected O&M expenses for the District's Retail Zone during the study period.

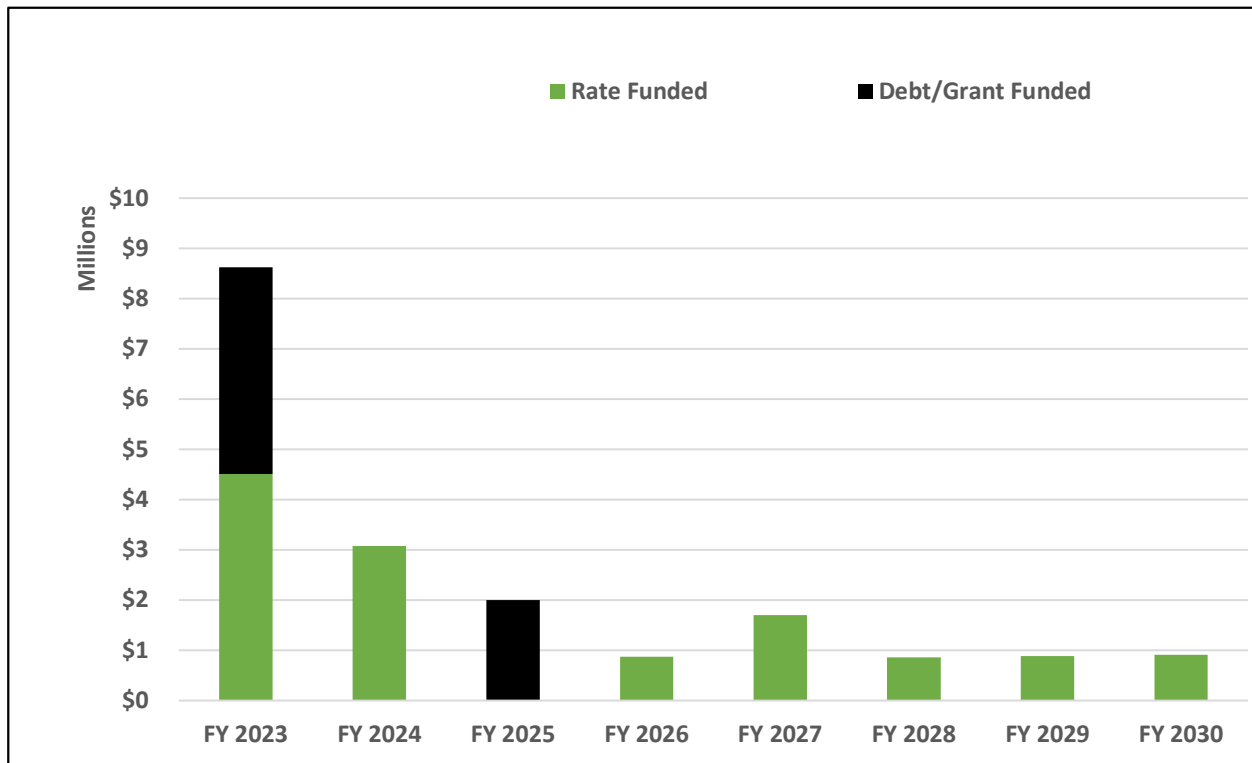
Table 4-6: Budgeted and Projected O&M Expenses

	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Source of Supply Subtotal	\$1,216,726	\$874,480	\$921,489	\$972,889	\$1,020,325	\$1,071,179
Salaries and Benefits Subtotal	\$725,000	\$755,369	\$786,992	\$819,124	\$851,520	\$885,201
Operations & Maintenance Subtotal	\$234,300	\$245,738	\$257,737	\$270,327	\$283,535	\$297,394
General & Administrative Subtotal	\$345,800	\$345,666	\$399,488	\$380,883	\$436,797	\$419,695
Total Operating Expenses	\$2,521,826	\$2,221,253	\$2,365,706	\$2,443,223	\$2,592,178	\$2,673,469
<i>Other Non-Operating Expenses</i>						
Section 115 Pension Trust Contribution	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
Total Non-Operating Expenses	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000

4.1.3. Projected Capital Improvement Projects

Figure 4-1 shows the District's retail zone capital projects. (A full list of projects and costs can be found in the Appendix C). The capital project costs for future years are determined by using the programmed/budgeted costs and inflating the value by the capital cost inflation factor shown in Table 3-1. A portion of FY 2023 capital improvement projects will be covered by the remaining proceeds from previously issued debt service. The District plans to fund 100 percent of the remaining planned capital projects by Pay-as-you-go (PAYGO) from rates and reserves.

Figure 4-1: Projected Retail Zone Capital Expenditures

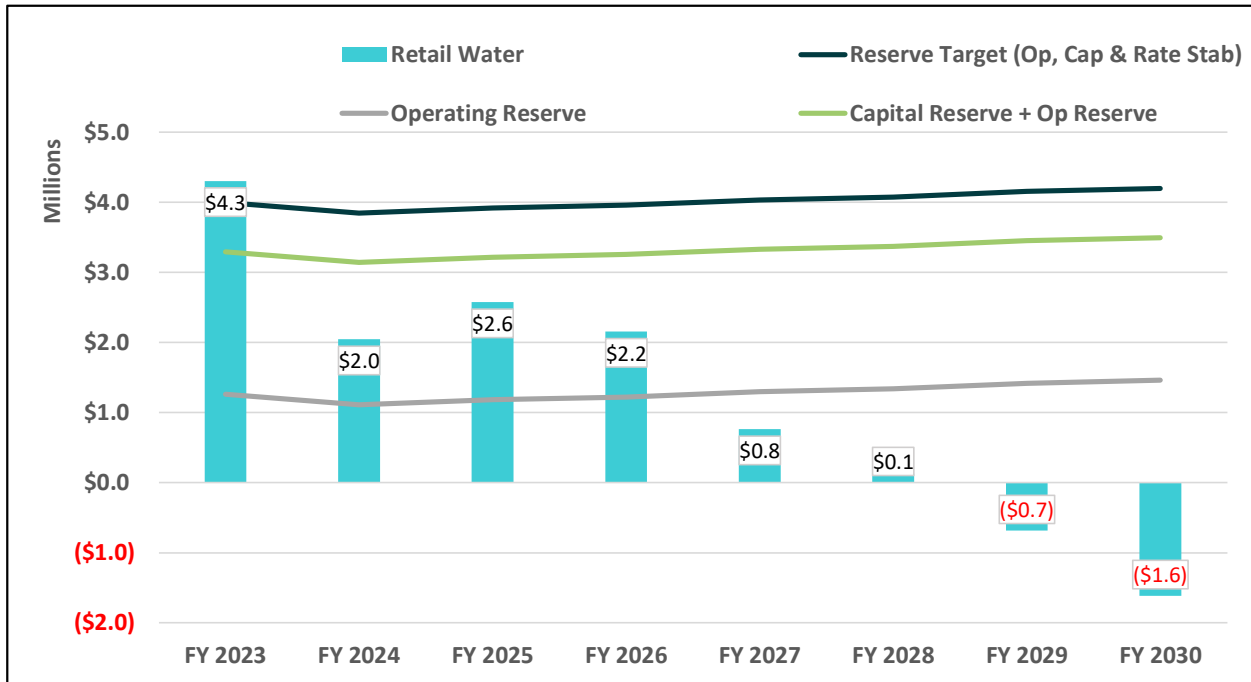


4.2. Retail Zone Financial Plan

4.2.1. Status Quo Financial Plan

Figure 4-2 displays the projected ending balances of the District’s Retail Zone under current rates over the study period. All projections are based upon the District’s current rate structure and do not include rate adjustments. The figure incorporates the data shown in Table 4-2 through Table 4-6 and Figure 4-1. Under the “status-quo” scenario, revenues generated from current rates and other miscellaneous revenues are inadequate to sufficiently recover operating and capital expenses of the utility, as shown by decreasing fund balances. Additionally, the ending balance drops below the total reserve target and the capital and operating reserve targets in FY 2024. By FY 2027, the ending balance is projected to be below the operating reserve target. In short, the District is unable to maintain fiscal sustainability under the current rates.

Figure 4-2: Status Quo Retail Zone Ending Balances (No Revenue Adjustments)



4.2.2. Proposed Financial Plan

Table 4-7 shows the proposed revenue adjustments to meet the target reserve requirement and maintain financial sufficiency.

Table 4-7: Proposed Retail Zone Revenue Adjustments

Fiscal Year	Effective Month	Proposed Revenue Adjustments
2024	Jul	7.5%
2025	Jul	7.5%
2026	Jul	7.5%
2027	Jul	7.5%
2028	Jul	7.5%

Table 4-8 shows the Retail Zone Financial Plan with the proposed revenue adjustments shown above. The District’s reserves are projected to remain above the operating reserve target and begin approaching meeting all targets by the end of the study period.

Table 4-8: Proposed Retail Zone Financial Plan

	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Revenues						
Operating Revenues	\$2,808,821	\$2,808,821	\$2,808,821	\$2,808,821	\$2,808,821	\$2,808,821
Revenue Adjustments	\$0	\$210,662	\$437,123	\$680,569	\$942,273	\$1,223,605
Penalties and Uncollectible Account Fees	\$3,100	\$3,147	\$3,194	\$3,242	\$3,290	\$3,340
Interest Income	\$3,500	\$16,397	\$13,700	\$16,791	\$16,357	\$16,772
Non-Operating Revenues (excluding interest)	\$516,700	\$521,872	\$527,096	\$532,372	\$537,701	\$543,083
Total Revenues	\$3,332,121	\$3,560,898	\$3,789,933	\$4,041,794	\$4,308,442	\$4,595,620
Expenses						
Source of Supply	\$1,216,726	\$874,480	\$921,489	\$972,889	\$1,020,325	\$1,071,179
Salaries & Benefits	\$725,000	\$755,369	\$786,992	\$819,124	\$851,520	\$885,201
Operations & Maintenance	\$234,300	\$245,738	\$257,737	\$270,327	\$283,535	\$297,394
General & Administrative	\$345,800	\$345,666	\$399,488	\$380,883	\$436,797	\$419,695
Total Expenses	\$2,521,826	\$2,221,253	\$2,365,706	\$2,443,223	\$2,592,178	\$2,673,469
Net Income before Debt, ADP, and CIP	\$810,295	\$1,339,646	\$1,424,227	\$1,598,571	\$1,716,264	\$1,922,152
Less: Debt Service	\$258,995	\$259,039	\$406,155	\$406,215	\$406,178	\$406,045
Less: Section 115 Pension Trust Contribution	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
Less: PAYGO (Cash Funded Capital)	\$4,511,735	\$3,077,652	\$0	\$874,114	\$1,701,769	\$858,628
Net Increase / Decrease to Reserves	(\$4,010,435)	(\$2,047,046)	\$968,073	\$268,243	(\$441,683)	\$607,479
Reserves						
Beginning Balance	\$8,313,421	\$4,302,986	\$2,255,940	\$3,224,013	\$3,492,255	\$3,050,573
Ending Balance (with Interest)	\$4,302,986	\$2,255,940	\$3,224,013	\$3,492,255	\$3,050,573	\$3,658,051
Operating Reserve Target	\$1,260,913	\$1,110,626	\$1,182,853	\$1,221,611	\$1,296,089	\$1,336,734
Capital Reserve Target	\$2,033,054	\$2,033,054	\$2,033,054	\$2,033,054	\$2,033,054	\$2,033,054
Rate Stabilization Target	\$702,205	\$702,205	\$702,205	\$702,205	\$702,205	\$702,205
Total Reserve Target	\$3,996,172	\$3,845,886	\$3,918,112	\$3,956,871	\$4,031,348	\$4,071,994

Figure 4-3 and Figure 4-4 show the District’s financial plan and reserve balances in graphical format. The additional years beyond the study period are shown to demonstrate a plan to return to reserve levels that meet or exceed targets.

Figure 4-3: Retail Zone Operating Financial Plan

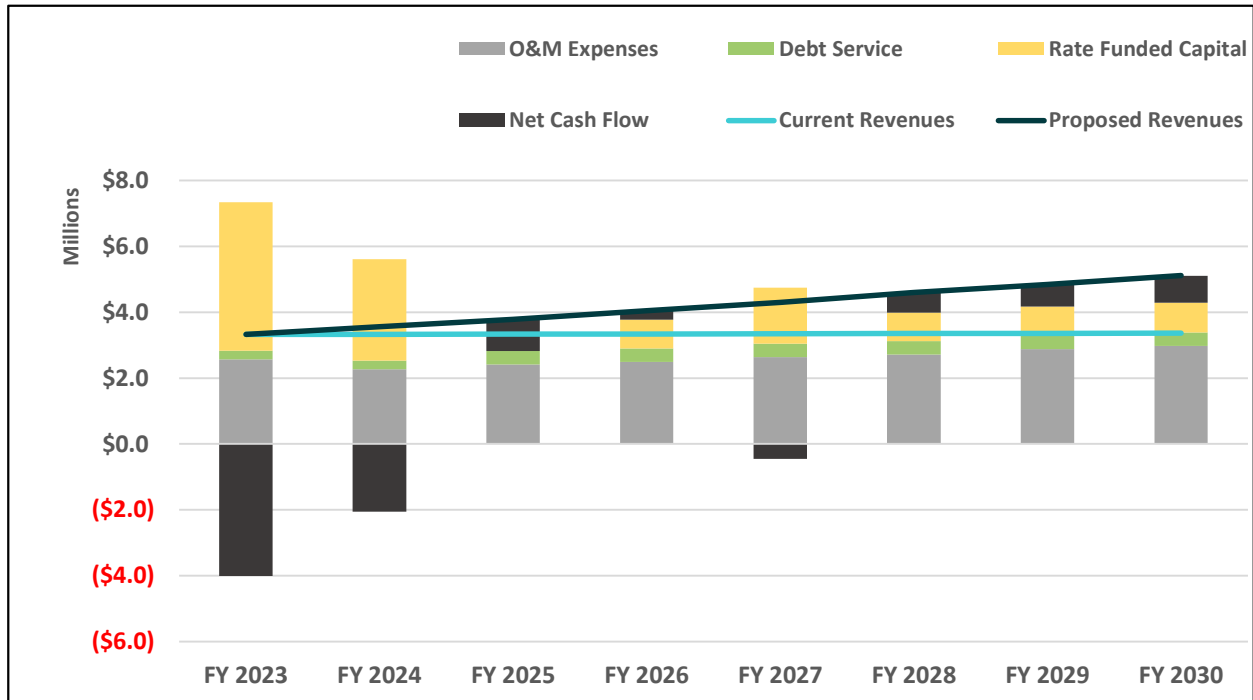
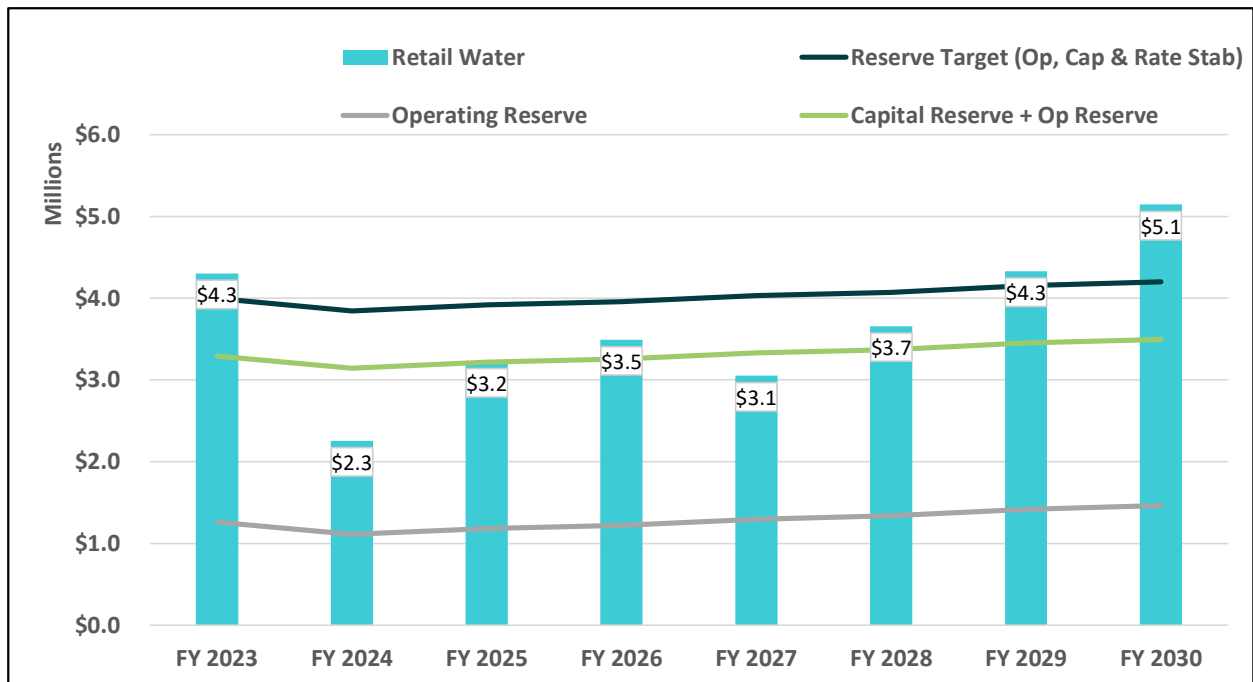


Figure 4-4: Projected Retail Zone Reserve Ending Balances



5. Retail Zone Cost-of-Service and Proposed Water Rates

5.1. Process and Approach

This section describes the methodology of allocating costs equitably to customers. This is intended to ensure that customers pay their fair share, proportional to the cost of serving them.

As stated in the American Water Works Association (AWWA) M1 Manual, “the costs of water rates and charges should be recovered from classes of customers in proportion to the cost of serving those customers.” To develop utility rates that comply with Proposition 218 and industry standards while meeting other emerging goals and objectives of the utility, we follow the cost-of-service methodology discussed below.

5.1.1. Calculate Revenue Requirement

The rate-making process starts by determining the revenue requirement. In this study the “test year” is FY 2024. The revenue requirement should sufficiently fund the utility’s O&M, debt service, capital expenses, and reserve requirements.

5.1.2. Cost-of-Service Analysis

After determining a utility’s revenue requirements, the next step in a cost-of-service analysis is to distribute the annual cost of providing water service among customer classes commensurate with their service requirements. A cost-of-service analysis involves the following:

- Cost functionalization – O&M expenses and capital expenses are categorized by their function in the system. Functions include supply, storage, distribution, customer service, etc.
- Cost component allocation – the functionalized costs are then allocated to cost causation components (water system cost components) based on their burden on the system. The cost components include supply, delivery, extra-capacity, meter, customer, etc. The revenue requirement is allocated accordingly to the cost components and results in the total revenue requirement for each cost component.
- Unit cost development – the revenue requirement for each cost component is divided by the appropriate units-of-service such as total water demand, peak water demands, equivalent meters, number of customers, etc. for each customer class.
- Revenue requirement distribution – the unit costs are utilized to distribute the revenue requirement for each cost component to customer classes and tiers based on their individual service units.

The cost components used in this analysis are:

- **Imported Supply** – the cost of importing water
- **Groundwater Pumping & Treatment** – the cost of pumping and treating water
- **Treatment** – the cost of treating imported water
- **Transmission & Distribution** – the cost associated with pipes, pumps, mains, etc.
- **Distribution storage** – represents the cost associated with storing treated water
- **Customer Service** – represents the costs associated with meter reading, billing and customer and meter service

- **Meter Maintenance** - represents the costs associated with meter maintenance
- **General & Administrative** – general and administrative costs incurred by the District
- **Public Fire** – costs associated with public fire hydrants

Capital costs are all captured within a separate capital cost category to develop the Monthly Fee for Existing Water System Capital Projects.

The functionalization of costs allows us to better allocate the functionalized costs to the cost causation components. The cost causation components include:

- **Imported Supply** – variable costs associated with importing water supply for all customers
- **Base Delivery** – fixed costs associated with providing service under average conditions
- **Peaking** (maximum day and maximum hour) – costs associated with meeting demand in excess of average use
- **Customer Service and Meter Reading** – costs incurred to provide meter reading, billing, and customer service
- **Meter Maintenance** – costs associated with maintenance of meters and capacity costs
- **General & Admin** – costs that cannot be allocated directly to any one cost causation component
- **Fire** – costs associated with providing fire protection capacity

Peaking costs are divided into maximum day and maximum hour demand. The maximum day demand is the maximum amount of water used in a single day in a year. The maximum hour demand is the maximum use in an hour on the maximum use day. Different facilities, such as distribution and storage facilities (and the O&M costs associated with those facilities), are designed to meet the peaking demands of customers. Therefore, extra capacity⁷ costs include the O&M and capital costs associated with meeting peak customer demand. This method is consistent with the AWWA M1 Manual and is widely used in the water industry to perform cost-of-service analyses.

5.1.3. 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 conservation, affordability for essential needs and revenue stability among other objectives. Rates may also act as a public information tool in communicating these objectives to customers.

5.1.4. Rate Adoption

Rate adoption is the last step of the rate-making process. Raftelis documented the rate study results in this 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.

⁷ The terms extra capacity, peaking and capacity costs are used interchangeably.

5.2. Cost-of-Service Calculations

5.2.1. Revenue Requirement Determination

Table 5-1 shows the revenue required from rates for FY 2024 in line 19. The total revenue requirement shown in Line 8 is equal to the O&M expense, debt service and capital expenses and come from Table 4-6 and Table 4-8. The revenue offsets in lines 10 through 14 come from Table 4-3 and Table 4-8 and reduce the total revenue required from rates. The adjustment for cash is subtracted to account for the withdrawal from reserves to help cover revenue requirements. The revenue required from rates is equal to the revenue requirements (Line 8) less revenue offsets (Line 15) and adjustments (Line 18). The revenue requirement is divided into Operating and Capital components and is allocated to the cost components based on the functionalization of the O&M expenses and capital assets, respectively.

Table 5-1: Annualized Revenue Requirements for FY 2024, Retail Zone

No.	(A)	(B)	(C)	(D)
1	Revenue Requirement			
2	Source of Supply Subtotal	\$874,480	\$0	\$874,480
3	Salaries and Benefits Subtotal	\$755,369	\$0	\$755,369
4	Operations & Maintenance Subtotal	\$245,738	\$0	\$245,738
5	General & Administrative Subtotal	\$345,666	\$0	\$345,666
6	Debt Service (Existing and Proposed)	\$0	\$259,039	\$259,039
7	Rate Funded Capital	\$0	\$3,077,652	\$3,077,652
8	Total - Revenue Requirement	\$2,221,253	\$3,336,691	\$5,557,944
		\$0	\$1	\$1
9	Less: Other Operating Revenue / (Expenses)			
10	Property Taxes	\$191,675	\$329,182	\$520,857
11	Interest Income	\$0	\$16,397	\$16,397
12	Miscellaneous Income	\$1,015	\$0	\$1,015
13	Penalties and Uncollectible Accounts	\$3,147	\$0	\$3,147
14	Section 115 Pension Trust Contribution	(\$50,000)	\$0	(\$50,000)
15	Total - Revenue Offsets	\$145,837	\$345,579	\$491,416
16	Less: Adjustments			
17	Adjustment for Cash Balance	\$0	\$2,047,046	\$2,047,046
18	Total - Adjustments	\$0	\$2,047,046	\$2,047,046
19	Revenue Required from Rates	\$2,075,416	\$944,067	\$3,019,483

5.2.2. Peaking factors

Peaking factors are used to allocate peaking costs, also known as Max Day and Max Hour costs, to customer classes.

Table 5-2 shows the system-wide peaking factors used to derive the cost component allocation bases for Base, Max Day, and Max Hour costs. Base costs represent average daily demand during the year, which is normalized to a factor of 1.00 (Column B, Line 1). The District’s 2019 Water Master plan provided Max Day and Max Hour peaking factors. The system-wide Max Day peaking factor (Column B, Line 3), as provided to

Raftelis, is 2.0 times greater than the average daily demand. The Max Hour peaking factor (Column B, Line 4) is 3.4 times greater than the average demand. The allocation bases (Columns C through E) are calculated using the equations outlined in this section. Columns are represented in these equations as letters and rows are represented as numbers. For example, Column C, Line 2 is shown as C2.

Table 5-2: Water System Peaking Factors

Line No.	Cost Component Allocation Bases (A)	System Wide Peaking Factor (B)	Base (C)	Max Day (D)	Max Hour (E)	Total (F)
1	Base	1.00	100%			100%
2	System Wide Max Month	1.25				
3	Max Day	2.00	50%	50%		100%
4	Max Hour	3.40	29%	29%	41%	100%

The Max Day allocations are calculated as follows:

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

The Max Hour allocations are calculated as follows:

- Base Delivery: $B1 / B4 \times 100\% = C4$
- Max Day: $(B3 - B1) / B4 \times 100\% = D4$
- Max Hour: $(B4 - B3) / B4 \times 100\% = E4$

The system wide max month peaking factor is used to translate bi-monthly-to-average month peaking factors for each customer class into a max day factor for each customer class, as shown in Table 5-3. The bi-monthly peaking factor (Column D) is multiplied by the ratio of the max day factor to the max month factor ($2.0/1.25 = 1.60$) from Table 5-2 to determine the Max Day Capacity Factor (Column E).

Table 5-3: Max Day Capacity Factor

Line No.	Customer Class (A)	Average Bi-Monthly Use (B)	Max Bi-Monthly Use (C)	Bi-monthly Peaking Factor (D)	Max Day Capacity Factor (E)
1	Single Family Residential	52,602	62,655	1.19	1.90
2	Commercial	159	204	1.29	2.05
3	Multifamily (duplex)	1,202	1,680	1.40	2.23
4	Institutional	435	703	1.62	2.58
5	Irrigation	152	193	1.27	2.03
6	Landscape	2,054	2,905	1.41	2.26

5.2.3. Operating and capital allocation

The next step in the cost-of-service analysis is to allocate the functionalized costs to the cost components.

Table 5-4 (on the following page) 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.

Table 5-5 (on the following page) shows the detailed operating costs by cost component based on the corresponding functional allocations by cost component (Table 5-4). O&M expenses are used in the cost-of-service analysis to allocate the operating revenue requirement (Table 5-1, Column B) to the relative share of costs in each water system cost component.

Table 5-4: Allocation of Functions to Cost Components

Line No.	Functions	Allocation Basis	Imported Supply	Base	Max Day	Max Hour	Customer Billing, Service and Meter Reading	Meter Maintenance	Gen & Admin	Public Fire	Sub - Total
1	Imported Supply	Base	100.0%								100.0%
2	Groundwater Pumping & Treatment	Base		100.0%							100.0%
3	Treatment	Max Day		50.0%	50.0%	0.0%					100.0%
4	Trans & Distribution	Max Day		50.0%	50.0%	0.0%					100.0%
5	Distribution Storage	Max Hour		29.4%	29.4%	41.2%					100.0%
6	Customer Billing, Service and Meter Reading	Customer Billing					100.0%				100.0%
7	Meter Maintenance	Meter Service						100.0%			100.0%
8	Gen & Admin	General						100.0%			100.0%
9	Public Fire	Fire								100.0%	100.0%

Table 5-5: Allocation of Operating Expenses to Cost Components

Line No.	Functions	Test Year	Imported Supply	Base	Max Day	Max Hour	Customer Billing, Service and Meter Reading	Meter Maintenance	Gen & Admin	Public Fire	Sub - Total
	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1	Imported Supply	\$224,496	100.0%								100.0%
2	Groundwater Pumping & Treatment	\$701,560		100.0%							100.0%
3	Treatment	\$54,546		50.0%	50.0%	0.0%					100.0%
4	Trans & Distribution	\$467,355		50.0%	50.0%	0.0%					100.0%
5	Distribution Storage	\$85,302		29.4%	29.4%	41.2%					100.0%
6	Customer Billing, Service and Meter Reading	\$108,927					100.0%				100.0%
7	Meter Maintenance	\$81,741						100.0%			100.0%
8	Gen & Admin	\$471,076							100.0%		100.0%
9	Public Fire	\$26,250								100.0%	100.0%
10	Total	\$2,221,253	\$224,496	\$987,599	\$286,039	\$35,124	\$108,927	\$81,741	\$471,076	\$26,250	\$2,221,253
11	O&M Expense Allocation		10%	44%	13%	2%	5%	4%	21%	1%	100%

Table 5-6 summarizes the operating and capital cost allocation percentages for each component. The operating allocation percentages are later applied to the operating revenue requirement. Capital-related costs are all allocated to the capital component.

Table 5-6: Operating and Capital Cost Allocation

Line No.	Cost Component (A)	Operating Allocation (B)	Capital Allocation (C)
1	Imported Supply	10%	
2	Base	44%	
3	Max Day	13%	
4	Max Hour	2%	
5	Customer Billing, Service, and Meter Reading	5%	
6	Meter Maintenance	4%	
7	Gen & Admin	21%	
8	Public Fire	1%	
9	Capital		100.0%
10	Total	100%	100%

5.2.4. Equivalent Meters

Equivalent meter units (EMUs) 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 3/4" meter, which is the most common meter size in the District's water system.

Table 5-7 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 M1 Manual with confirmation by District staff. 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 3/4" meter (Column B, Line 2). Column E shows the estimated equivalent meters based on the capacity ratio. Meter counts (Column D) at each size are multiplied by the capacity ratio (Column C) to arrive at the total number of equivalent meters.

Table 5-7: Equivalent Meter Units, Retail Zone

Line No.	Meter Size - All Customer Classes (A)	Capacity (gpm) (B)	AWWA Ratio (C)	Number of Meters (D)	Equivalent Meters (E)
1	5/8"	20	1.0	9	9
2	3/4"	30	1.0	869	869
3	1"	50	1.7	290	483
4	1.5"	100	3.3	29	97
5	2"	160	5.3	6	32
6	3"	350	11.7	3	35
7	Total			1,206	1,525

5.2.5. Unit Costs of Service

The end goal of a cost-of-service analysis is to distribute the revenue requirement to each customer class. Raftelis calculated unit costs for each cost component by assessing the total water demand, meter count (number of accounts/bills), or equivalent service units. Table 5-8 shows the units of service for each customer class. Average Daily Use (Column C) is the Annual Use (Column B) divided by 365 days per year. The Max Day Capacity Factor (Column D) is the capacity factors derived in Table 5-3. The Max Day Total Capacity (Column E) is the Average Daily Use (Column C) multiplied by the Max Day Capacity Factor (Column D). The Max Hour Capacity Factor (Column G) is the Max Day Capacity Factor (Column D) multiplied by the ratio of the System Peak Hour to the System Max Day from Table 5-2. The Max Day Extra Capacity (Column H) is the difference between the Max Day Total Capacity (Column E) and the Average Daily Use (Column C). The Max Hour Extra Capacity (Column I) is the difference between the Max Hour Total Capacity (Column H) and the Max Day Total Capacity (Column E).

Table 5-8: Units-of-Service

Line No.	Customer Class (A)	Annual Use (hcf) (B)	Average Daily Use (hcf) (C)	Maximum Day Requirements			Maximum Hour Requirements			Number of Equivalent Meters (J)	Number of Accounts (K)	Percent of Total Usage (L)
				Capacity Factor (D)	Total Capacity (hcf/day) (E)	Extra Capacity (hcf/day) (F)	Capacity Factor (G)	Total Capacity (hcf/day) (H)	Extra Capacity (hcf/day) (I)			
1	Single Family Residential	315,610	865	1.90	1,646	781	3.24	2,798	1,152	1,411	1,163	93%
2	Commercial	952	3	2.05	5	3	3.49	9	4	4	2	0%
3	Multifamily (duplex)	7,213	20	2.23	44	24	3.80	75	31	44	27	2%
4	Institutional	2,608	7	2.58	18	11	4.39	31	13	12	1	1%
5	Irrigation	910	2	2.03	5	3	3.46	9	4	3	2	0%
6	Public Fire				2,005	2,005		16,364	14,358			
7	Landscape	12,321	34	2.26	76	43	3.84	130	53	51	11	4%
8	Total	339,614	930	1.93	3,801	2,870		19,416	15,615	1,525	1,206	7%

Table 5-9 shows the operating and capital revenue requirements allocated to the cost components and the unit cost derivation in line 10. The operating expenses are allocated based on the O&M expense allocation (Table 5-5) and is equal to the net operating revenue requirement (Table 5-1, Column B). Capital Expenses (Table 5-1, Column C) are allocated all to capital. Gen and Admin expenses are reallocated to the other cost components in Columns C-H and Column J based on the percentages shown in Line 4.

Line 6 shows the adjusted cost-of-service. Line 8 shows the units-of-service for each cost component, which are pulled from Table 5-8. Line 10 shows the Unit Rate, calculated by dividing the Adjusted Cost-of-Service (Line 7) by units-of-service (Line 8). Customer (Column G) and Meter (Column H) unit costs are also presented on a per bi-monthly and per monthly basis.

Table 5-9: Revenue Requirement Allocation and Unit Cost Derivation

Line No.	Cost-of-Service Allocation	Allocation Basis	Imported Supply	Base	Max Day	Max Hour	Customer Billing, Service and Meter Reading	Meter Maintenance	Gen & Admin	Public Fire	Capital Charge	Sub - Total
	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)
1	Operating Expenses	O&M	\$209,757	\$922,758	\$267,259	\$32,818	\$101,775	\$76,374	\$440,148	\$24,527		\$2,075,416
2	Capital Expenses	Capital	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$944,067	\$944,067
3	Total Cost-of-Service		\$209,757	\$922,758	\$267,259	\$32,818	\$101,775	\$76,374	\$440,148	\$24,527	\$944,067	\$3,019,483
4	% excluding Gen and Admin.		12.8%	56.4%	16.3%	2.0%	6.2%	4.7%		1.5%		
5	Reallocation of Gen & Admin		\$56,458	\$248,369	\$71,935	\$8,833	\$27,394	\$20,557	(\$440,148)	\$6,602		\$0
6	Total Adjusted Cost-of-Service		\$266,215	\$1,171,126	\$339,194	\$41,652	\$129,169	\$96,931	\$0	\$31,128	\$944,067	\$3,019,483
7	Allocation of Revenue Requirements		8.8%	38.8%	11.2%	1.4%	4.3%	3.2%	0.0%	1.0%	31.3%	
8	Units-of-Service		339,614	339,614	2,870	15,615	1,206	1,525		1,525	1,525	
9			hcf	hcf	hcf/day	hcf/day	Bills/Yr	equivalent meters/yr		equivalent meters	equivalent meters	
10	Unit Cost-of-Service		\$0.78	\$3.45	\$118.17	\$2.67	\$107.11	\$63.56		\$20.41	\$619.06	
11							Per Bi-Month	per Bi-Month		per Bi-Month	per Bi-Month	
12							\$17.85	\$10.59		\$3.40	\$103.18	
13							Per Month	Per Month		Per Month	Per Month	
14							\$8.93	\$5.30		\$1.70	\$51.59	

5.3. Proposed Retail Zone Rates and Charges

From the calculations in Table 5-9, the proposed fixed charges are determined for each meter size. Table 5-10 shows the derivation of the monthly Service Charge. The Billing component (Column B) is equal to the unit rate in Column G, Line 14 of Table 5-9. As the cost of issuing a bill does not vary by meter size, it remains constant for all meter sizes. The Meter Capacity component (Column C) is the sum of the Meter Maintenance and Public Fire unit rates shown in Line 14 of Table 5-9. For meters larger than 3/4", this unit rate is multiplied by the meter ratio (Table 5-7, Column C) to derive the meter capacity cost associated with those larger meter sizes. The Monthly Capacity Charge (Column D) includes assignment of 81 percent of the Max Day and Max Hour costs (Table 5-9, Line 6, Columns E and F) to the fixed charge component then divides that amount by the number of equivalent meters (Table 5-8) and by 12 to put on a monthly basis. This unit rate is then multiplied by the meter capacity ratios (Table 5-7, Column C) to determine the monthly charge at each meter size. The Proposed Monthly Service Charge (Column E) is the sum of Columns B, C, and D. The Current Charge is shown in Column F for comparison.

Table 5-10: Monthly Service Charge Derivation

Line No.	Meter Size	Billing \$/bill	Meter Maint. \$/mtr	Monthly Capacity Charge \$/mtr	Proposed Monthly Service Charge \$/bill	Current Charge \$/bill
	(A)	(B)	(C)	(D)	(E)	(F)
1	5/8"	\$8.93	\$7.00	\$16.85	\$32.78	\$22.50
2	3/4"	\$8.93	\$7.00	\$16.85	\$32.78	\$33.75
3	1"	\$8.93	\$11.66	\$28.09	\$48.68	\$56.24
4	1.5"	\$8.93	\$23.33	\$56.18	\$88.43	\$112.46
5	2"	\$8.93	\$37.32	\$89.89	\$136.14	\$179.92
6	3"	\$8.93	\$81.64	\$196.64	\$287.21	\$393.56

The Capital Charge for an equivalent 3/4" meter on an annual basis is shown in Table 5-9, Line 14. This unit rate is then multiplied by the meter capacity ratios (Table 5-7, Column C) to determine the monthly capital charge at each meter size. Table 5-11 presents the proposed monthly Capital Charge.

Table 5-11: Proposed Retail Zone Capital Charge

Proposed	Current
\$51.59	\$32.52
\$51.59	\$32.52
\$85.98	\$32.52
\$171.96	\$32.52
\$275.14	\$32.52
\$601.86	\$32.52

The Uniform Commodity Rate incorporates a base component, an imported supply component and the balance of the peaking costs not captured in the monthly Service Charge, as shown in Table 5-12. The Base and Imported Supply costs match the costs shown in Line 6 of Table 5-9 (Columns D and C, respectively). The Peaking cost (Column C) is 19 percent of the allocated cost shown in Table 5-9, Line 6, Columns E + F. The units for each component are shown in Table 5-12. The sum of Columns E, F and G result in the

proposed total unit rate in Column H. The proposed rate is lower than the current commodity rate due to moving more cost recovery into the fixed charge. This unit rate includes all water purchase costs.

Table 5-12: Proposed Retail Zone Commodity Rate

Base (A)	Imported Supply (B)	Peaking (Max Day and Hour) (C)	Annual Usage (hcf) (D)	Base (\$/ccf) (E)	Peaking (\$/ccf) (F)	Imported Supply (\$/ccf) (G)	Proposed Total (\$/ccf) (H)	Current Commodity Rate (I)
\$1,171,126	\$266,215	\$72,400	339,614	\$3.45	\$0.21	\$0.78	\$4.45	\$5.07

The proposed five-year Retail Zone water rates are shown in Table 5-13. The rates for FY 2024 are derived from the cost-of-service analysis and the proposed revenue adjustments from Table 4-7 are used to determine the proposed Retail Zone water rates and charges for FY 2025 to FY 2028 by escalating the rates shown in FY 2024. The District plans to collect the capital charge via the property tax roll starting in FY 2024.

Table 5-13: Proposed 5-Year Retail Zone Water Rates and Charges

Proposed Rates	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Effective Date	Current Rate	Jul 2023	Jul 2024	Jul 2025	Jul 2026	Jul 2027
Revenue Adjustment		COS	7.5%	7.5%	7.5%	7.5%
Meter Size Fixed Charge						
5/8"	\$22.50	\$32.78	\$35.24	\$37.88	\$40.72	\$43.77
3/4"	\$33.75	\$32.78	\$35.24	\$37.88	\$40.72	\$43.77
1"	\$56.24	\$48.68	\$52.33	\$56.26	\$60.48	\$65.01
1.5"	\$112.46	\$88.43	\$95.07	\$102.20	\$109.86	\$118.10
2"	\$179.92	\$136.14	\$146.35	\$157.33	\$169.13	\$181.81
3"	\$393.56	\$287.21	\$308.75	\$331.90	\$356.80	\$383.56
Commodity Rate (\$/ccf)	\$5.07	\$4.45	\$4.78	\$5.14	\$5.52	\$5.94
Capital Charge						
All Accounts	\$32.52					
5/8"		\$51.59	\$55.46	\$59.62	\$64.09	\$68.89
3/4"		\$51.59	\$55.46	\$59.62	\$64.09	\$68.89
1"		\$85.98	\$92.43	\$99.36	\$106.81	\$114.82
1.5"		\$171.96	\$184.86	\$198.72	\$213.63	\$229.65
2"		\$275.14	\$295.77	\$317.96	\$341.80	\$367.44
3"		\$601.86	\$647.00	\$695.53	\$747.69	\$803.77

6. Wholesale Zone Financial Plan

6.1. Water Revenue Requirement

Like the Retail Zone, the Wholesale Zone's Financial Plan involves an analysis of annual operating revenues under the status quo, operation and maintenance (O&M) expenses, and reserve requirements. This report section discusses the financial plan required to ensure the fiscal sustainability of the Wholesale Zone enterprise.

6.1.1. Wholesale Zone Revenues

The District's current Wholesale Zone rates were last updated in January 2021. The rates consist of two components: a yearly readiness to serve meter fee of \$8.50 per meter per year and a yearly capital improvement charge meter fee of \$16.00. The projected and calculated revenues under these existing rates are shown in Table 6-1.

Table 6-1: Projected Revenues from Current EOCWD Charges

Number of Certified Meters	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
TUSTIN	14,108	14,108	14,108	14,108	14,108	14,108
IRWD	436	436	436	436	436	436
GSWC	2,622	2,622	2,622	2,622	2,622	2,622
ORANGE	2,451	2,451	2,451	2,451	2,451	2,451
EOCWD	1,208	1,208	1,208	1,208	1,208	1,208
Total	20,825	20,825	20,825	20,825	20,825	20,825
Calculated Annual Revenues from Wholesale Zone Sales						
Readiness to Serve	\$177,013	\$177,013	\$177,013	\$177,013	\$177,013	\$177,013
Capital Improvement Charge	\$333,200	\$333,200	\$333,200	\$333,200	\$333,200	\$333,200
Total	\$510,213	\$510,213	\$510,213	\$510,213	\$510,213	\$510,213

In addition to revenues produced by water rates, the Wholesale Zone receives other revenues from different sources such as interest income, taxes, and rental income. Table 6-2 outlines the other non-operating revenues for the District's Wholesale Zone over the study period.

Table 6-2: Projected Other Revenue, Wholesale Zone

Non-Operating Revenue Categories	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Property Taxes	\$1,004,100	\$1,014,141	\$1,024,282	\$1,034,525	\$1,044,870	\$1,055,319
Rental Revenue	\$156,000	\$158,340	\$160,715	\$163,126	\$165,573	\$168,056
Interest Income	\$47,100	\$31,096	\$29,667	\$29,063	\$29,218	\$27,396
Miscellaneous Income	\$10,000	\$10,150	\$10,302	\$10,457	\$10,614	\$10,773
Total Non-Operating Revenues	\$1,217,200	\$1,213,727	\$1,224,966	\$1,237,171	\$1,250,275	\$1,261,544

6.1.2. Wholesale Zone O&M Expenses

6.1.2.1. Water Supply Costs

The District purchases water from the Municipal Water District of Orange County (MWD OC). This water is distributed via the system operated by East Orange County Water District's Wholesale Zone (WZ) enterprise.

The District incurs fixed charges (including a retail meter charge) and a volumetric charge that are passed onto its wholesale agency customers from MWDOC as shown in Table 6-3. This table also shows an estimated decrease in the amount of groundwater pumping starting in FY 2025.

Table 6-3: Passthrough MWDOC Water Supply Cost Projections

	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Water Sales						
OC-43	170	170	274	274	274	274
OC-48	433	433	514	514	514	514
OC-70	3,545	3,545	2,712	2,712	2,712	2,712
MWDOC Effective Rate, \$/AF	\$1,162	\$1,208	\$1,256	\$1,307	\$1,359	\$1,413
Passthrough Water Costs						
OC-43	\$197,576	\$205,479	\$344,714	\$358,502	\$372,842	\$387,756
OC-48	\$503,407	\$523,543	\$645,526	\$671,347	\$698,201	\$726,129
OC-70	\$4,118,084	\$4,282,807	\$3,406,843	\$3,543,117	\$3,684,841	\$3,832,235
Total Volumetric Charges	\$4,819,066	\$5,011,829	\$4,397,083	\$4,572,966	\$4,755,885	\$4,946,120
MWDOC Retail Meter Charge, \$/mtr/yr	\$13.75	\$14.30	\$14.87	\$15.47	\$16.09	\$16.73
Meters	20,825	20,825	20,825	20,825	20,825	20,825
MWDOC Retail Meter Charge	\$286,344	\$297,798	\$309,709	\$322,098	\$334,982	\$348,381
Fixed MWDOC Charges						
MET-MWDOC readiness to serve charges	\$125,300	\$137,705	\$151,337	\$166,320	\$182,786	\$200,881
MET-MWDOC capacity charges	\$153,900	\$159,594	\$165,499	\$171,623	\$177,973	\$184,558
MWDOC Choice	\$2,400	\$2,489	\$2,581	\$2,676	\$2,775	\$2,878
MWDOC retail meter charge	\$286,344	\$297,798	\$309,709	\$322,098	\$334,982	\$348,381
Total Fixed MWDOC Charges	\$567,944	\$597,585	\$629,127	\$662,717	\$698,515	\$736,698
Total MWDOC Charges	\$5,387,010	\$5,609,414	\$5,026,210	\$5,235,683	\$5,454,400	\$5,682,818

6.1.2.2. Wholesale Zone Water O&M Expenses

The inflation factors from Table 3-1 were assigned to each line item of the District’s FY 2023 budget to determine future O&M costs for the Wholesale Zone. Raftelis worked closely with District staff to identify any non-recurring costs and other anticipated expenses for the study period. The District will continue to pass through wholesale water purchase costs to its retail customers to recover the increases in water supply costs. Table 6-4 summarizes the budgeted and projected O&M expenses for the District’s Wholesale Zone during the study period.

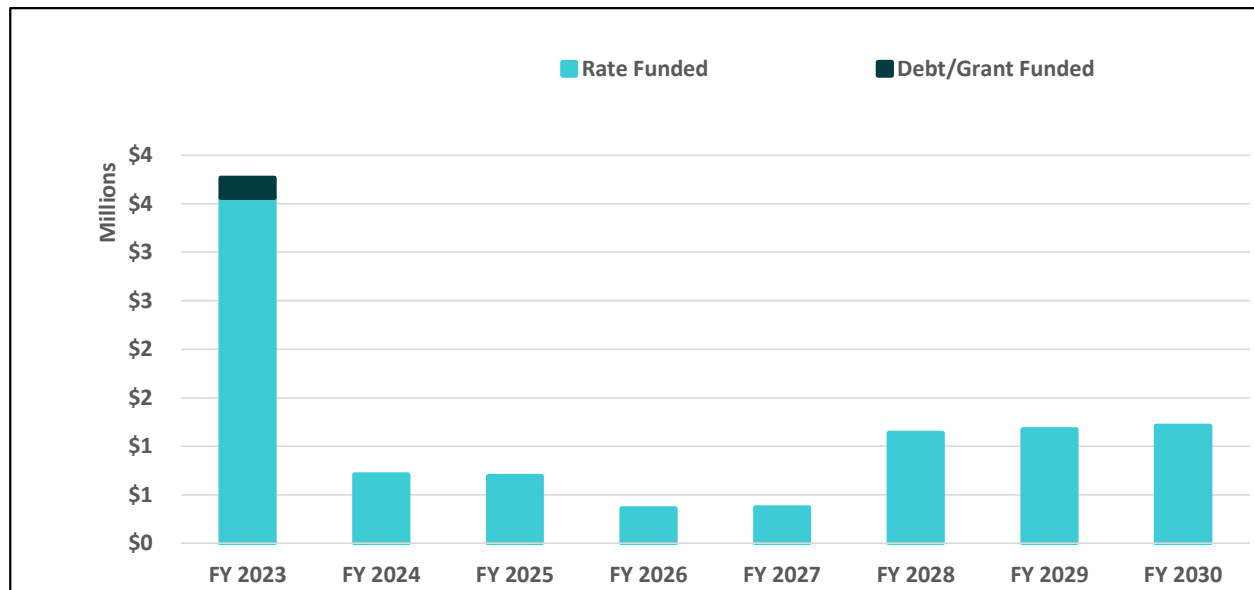
Table 6-4: Budgeted and Projected O&M Costs, Wholesale Zone

Line Items	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<i>Operating Expenses</i>	<i>Budgeted</i>	<i>Projected</i>	<i>Projected</i>	<i>Projected</i>	<i>Projected</i>	<i>Projected</i>
Source of Supply						
Source of Supply (Passthrough) Subtotal	\$5,387,010	\$5,609,414	\$5,026,210	\$5,235,683	\$5,454,400	\$5,682,818
Salaries and Benefits Subtotal	\$519,600	\$541,753	\$564,831	\$588,076	\$611,231	\$635,301
Operations & Maintenance Subtotal	\$410,100	\$429,986	\$450,844	\$472,722	\$495,671	\$519,744
General & Administrative Subtotal	\$318,800	\$290,543	\$369,723	\$320,113	\$403,986	\$352,699
Total Operating Expenses	\$6,635,510	\$6,871,695	\$6,411,608	\$6,616,594	\$6,965,288	\$7,190,562
Non - Passthrough Expenses Subtotal	\$1,248,500	\$1,262,281	\$1,385,398	\$1,380,911	\$1,510,887	\$1,507,744
<i>Other Non-Operating Expenses</i>						
Section 115 Pension Trust Contribution	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
Total Non-Operating Expenses	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
Total Operating & Non-Operating Expenses	\$6,685,510	\$6,921,695	\$6,461,608	\$6,666,594	\$7,015,288	\$7,240,562

6.1.3. Projected Capital Improvement Projects

Figure 6-1 shows the annual capital expenditures for FY 2023 – FY 2030 that the District has either budgeted for or projected for the Wholesale Zone. (A full list of projects and costs can be found in the Appendix D). The capital costs for future years is determined by using the programmed/budgeted costs and inflating the value by the capital cost inflation factor shown in Table 3-1. The District plans to use a mix of debt and cash to fund its planned capital improvement program as shown in Figure 6-1.

Figure 6-1: Projected Wholesale Zone Capital Expenditures

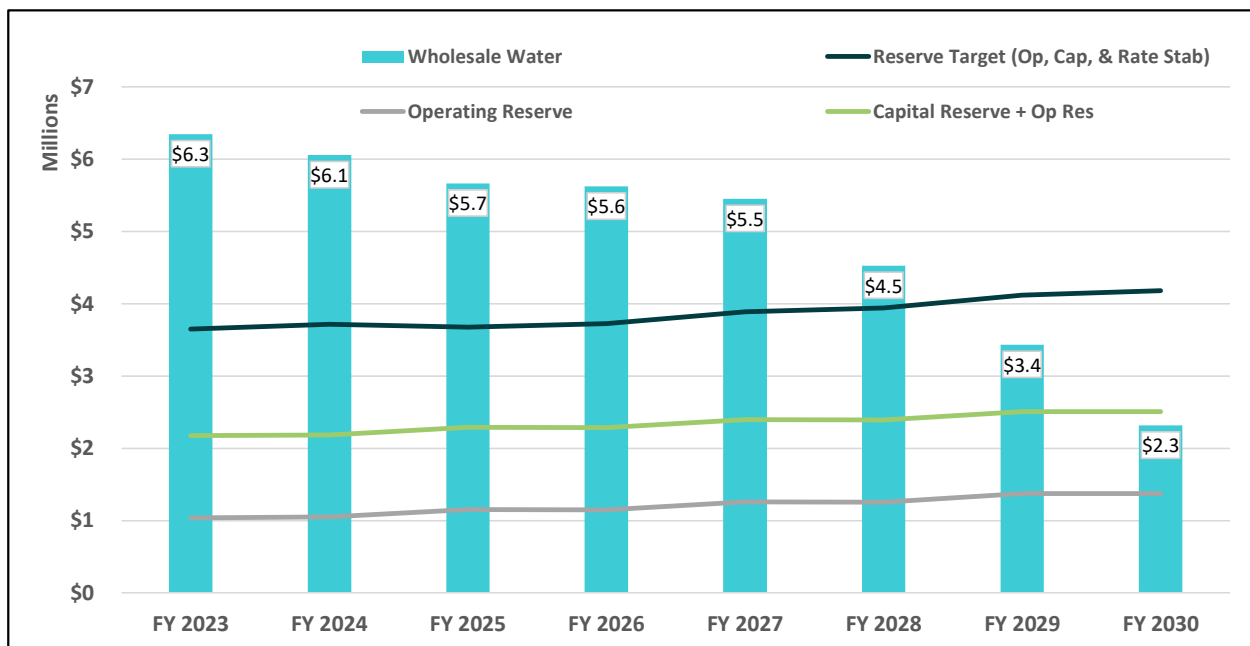


6.2. Wholesale Zone Financial Plan

6.2.1. Status Quo Wholesale Zone Financial Plan

Figure 6-2 displays the projected ending balances of the District’s Wholesale Zone under current rates over the study period. All projections shown in the figure are based upon the District’s current rate structure and do not include rate adjustments. The figure incorporates the data shown in Table 6-1 through Table 6-4 and Figure 6-1. Under the “status-quo” scenario, revenues generated from current rates and other miscellaneous revenues are inadequate to sufficiently recover operating and capital expenses of the utility beyond the current rate-setting period. If rates are not adjusted now, future rate adjustments may need to be in the double-digits to bring the ending balance back to targeted reserve levels.

Figure 6-2: Status Quo Wholesale Zone Ending Balances (No Revenue Adjustments)



6.2.2. Proposed Wholesale Zone Financial Plan

The District passes through wholesale water purchase costs from MWDOC and the MWD. The District imposes two charges; a Ready to Serve Charge and a Capital Charge. The revenue adjustments for the Wholesale Zone apply to these two charges and are shown in Table 6-5. The revenue adjustments are to meet the target reserve requirement and maintain financial sufficiency for its expenses and other funding obligations.

Table 6-5: Proposed Wholesale Zone Revenue Adjustments

Fiscal Year	Effective Month	Proposed Revenue Adjustments
2024	Jul	7.0%
2025	Jul	7.0%
2026	Jul	7.0%
2027	Jul	7.0%
2028	Jul	7.0%

Table 6-6 shows the Financial Plan for the Wholesale Zone with the proposed revenue adjustments shown above, as well as the pass-through water supply costs shown in the Source of Supply line. By implementing the proposed revenue adjustments, the District will draw less from its reserves and still be above its reserve target by the end of FY 2028.

Table 6-6: Wholesale Zone Proposed Financial Plan

	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Revenues						
Operating Revenues	\$510,213	\$510,213	\$510,213	\$510,213	\$510,213	\$510,213
Source of Supply (Passthrough Charges)	\$5,387,010	\$5,609,414	\$5,026,210	\$5,235,683	\$5,454,400	\$5,682,818
Revenue Adjustments	\$0	\$35,715	\$73,930	\$114,820	\$158,572	\$205,387
Interest Income	\$47,100	\$31,096	\$29,667	\$29,063	\$29,218	\$27,396
Non-Operating Revenues (excluding interest)	\$1,170,100	\$1,182,631	\$1,195,300	\$1,208,108	\$1,221,057	\$1,234,148
Total Revenues	\$7,114,422	\$7,369,068	\$6,835,319	\$7,097,886	\$7,373,459	\$7,659,962
Expenses						
Source of Supply	\$5,387,010	\$5,609,414	\$5,026,210	\$5,235,683	\$5,454,400	\$5,682,818
Salaries & Benefits	\$519,600	\$541,753	\$564,831	\$588,076	\$611,231	\$635,301
Operations & Maintenance	\$410,100	\$429,986	\$450,844	\$472,722	\$495,671	\$519,744
General & Administrative	\$318,800	\$290,543	\$369,723	\$320,113	\$403,986	\$352,699
Total Expenses	\$6,635,510	\$6,871,695	\$6,411,608	\$6,616,594	\$6,965,288	\$7,190,562
Net Income before Debt, ADP, and CIP	\$478,913	\$497,373	\$423,711	\$481,292	\$408,172	\$469,400
Less: Debt Service	\$0	\$0	\$0	\$0	\$0	\$0
Less: Section 115 Pension Trust Contribution	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
Less: CalPERS Additional Discretionary Payments	\$0	\$0	\$0	\$0	\$0	\$0
Less: PAYGO (Cash Funded Capital)	\$3,565,173	\$704,698	\$688,065	\$358,414	\$369,167	\$1,137,104
Net Increase / Decrease to Reserves	(\$3,136,261)	(\$257,326)	(\$314,354)	\$72,877	(\$10,995)	(\$717,703)
Reserves						
Beginning Balance	\$9,484,100	\$6,347,839	\$6,090,514	\$5,776,160	\$5,849,037	\$5,838,042
Ending Balance (with Interest)	\$6,347,839	\$6,090,514	\$5,776,160	\$5,849,037	\$5,838,042	\$5,120,338
Operating Reserve Target	\$1,040,417	\$1,051,901	\$1,154,498	\$1,150,759	\$1,259,073	\$1,256,453
Capital Reserve Target	\$1,137,104	\$1,137,104	\$1,137,104	\$1,137,104	\$1,137,104	\$1,137,104
Rate Stabilization Target	\$1,474,306	\$1,529,907	\$1,384,106	\$1,436,474	\$1,491,153	\$1,548,258
Total Reserve Target	\$3,651,826	\$3,718,911	\$3,675,707	\$3,724,337	\$3,887,330	\$3,941,814

The operating financial plan, which incorporates both the District’s current and proposed revenues, is shown graphically in for Figure 6-3 FY 2023 to FY 2030.

Figure 6-3: Wholesale Zone Operating Financial Plan

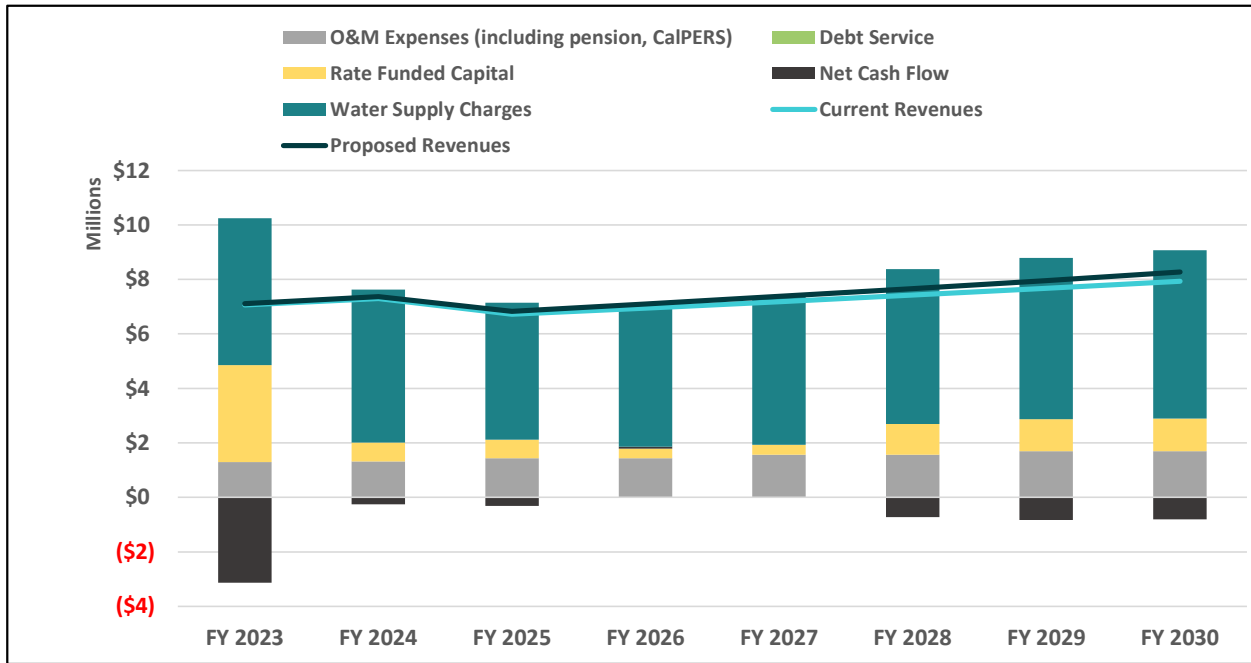
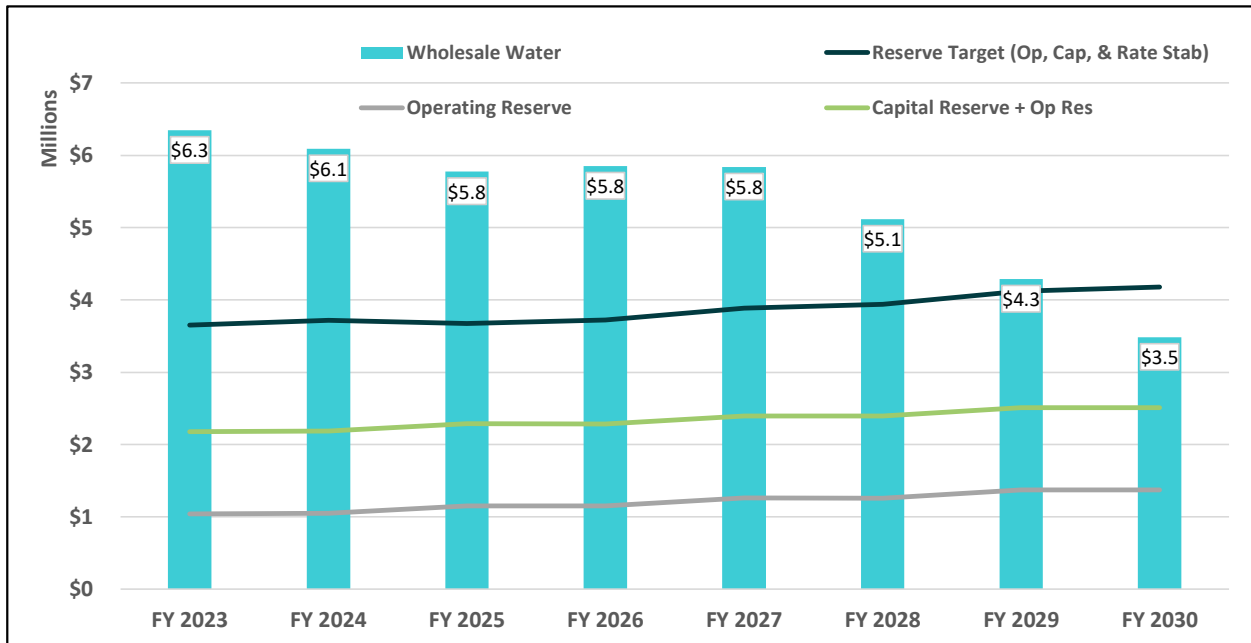


Figure 6-4 graphically depicts the District’s reserve ending balances with the proposed revenue adjustments as well as the pass-through water supply costs after funding projected operational and capital expenditures for FY 2023 to FY 2030.

Figure 6-4: Projected Wholesale Zone Reserve Ending Balances



7. Wholesale Zone Cost-of-Service and Proposed Rates

Similar to the Retail Zone, the Wholesale Zone's rate-making process starts by determining the revenue requirement with a "test year" of FY 2024. The revenue requirement should sufficiently fund the utility's O&M, debt service, capital expenses, and reserve requirements. The annual cost of providing water service is then distributed among EOCWD's five service areas based on a per meter and a per equivalent meter basis.

7.1. Cost-of-Service Calculations

7.1.1. Revenue Requirement Determination

Table 7-1 shows the annual revenue requirement from rates in line 20 for FY 2024. The revenue requirements shown in Line 7 are equal to the O&M expense, debt service and capital expenses and come from Table 6-4 and Table 6-6. The other operating revenue comes from Table 6-2 and Table 6-4⁸ and reduces the total revenue required from rates. The adjustment for cash is subtracted to account for the withdrawal from reserves to help cover revenue requirements. The revenue required from rates is equal to the revenue requirements (Line 7) less revenue offsets (Line 160) and adjustments (Line 19). The revenue requirement is divided between Operating, which is recovered through the Readiness to Serve charge and Capital, which is recovered through the Replacement Reserve charge.

⁸ The sum of Line 18 and Line 19 total the Source of Supply (Passthrough Charges) of Table 6-4.

Table 7-1: Annualized Revenue Requirements for FY 2024, Wholesale Zone

Line No.	Wholesale Zone Revenue Requirements (A)	Operating (B)	Capital (C)	Total (D)
1	Revenue Requirement			
2	Source of Supply	5,609,414	0	5,609,414
3	Source of Supply (Passthrough) Subtotal	541,753	0	541,753
4	Salaries and Benefits Subtotal	429,986	0	429,986
5	Operations & Maintenance Subtotal	290,543	0	290,543
6	Rate Funded Capital	0	704,698	704,698
7	Total - Revenue Requirement	6,871,695	704,698	7,576,394
		1	0	1
8	Less: Other Operating Revenue / (Expense)			
9	Property Taxes	887,373	126,768	1,014,141
10	Rental Revenue	158,340	0	158,340
11	Interest Income	31,096	0	31,096
12	Miscellaneous Income	10,150	0	10,150
13	Volumetric Passthrough Expense	5,011,829	0	5,011,829
14	Fixed Charge Passthrough Expense	597,585	0	597,585
15	Section 115 Pension Trust Contribution	(50,000)	0	(50,000)
16	Total - Revenue Offsets	6,646,373	126,768	6,773,141
17	Less: Adjustments			
18	Adjustment for Cash Balance	0	257,326	257,326
19	Total - Adjustments	0	257,326	257,326
20	Revenue Required from Rates	225,322	320,605	545,927

7.1.2. Equivalent Meters

As with the Retail Zone, equivalent meters are used to equitably allocate 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 units-of-service. 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 based on the maximum safe operating flow rates in gallons per minute (gpm). The base meter used in the study is the 3/4" meter.

Table 7-2 shows the meter capacity (Column I) and capacity ratio (Column J) for each meter size. The Total Meters (Column H) are multiplied by the ratios to determine the Equivalent Meters (Column K) at each size. Line 10 shows the total number of meters and the total equivalent meters.

Table 7-2: Equivalent Meter Units, Wholesale Zone

Line No.	Meter Size (A)	TUSTIN (B)	IRWD (C)	GSWC (E)	ORANGE (F)	EOCWD (G)	Total Meters (H)	Capacity (gpm) (I)	AWWA Ratio (J)	Equivalent Meters (K)
1	5/8"	10,019	68	159	0	9	10,255	20	1.0	10,255
2	3/4"	0	6	44	1,418	867	2,335	30	1.0	2,335
3	1"	3,181	234	2,162	870	295	6,742	50	1.7	11,237
4	1.5"	372	122	94	60	29	677	100	3.3	2,257
5	2"	409	5	132	103	6	655	160	5.3	3,493
6	3"	41	0	30	0	2	73	350	11.7	852
7	4"	62	1	1	0	0	64	630	21.0	1,344
8	6"	23	0	0	0	0	23	1,600	53.3	1,227
9	8"	1	0	0	0	0	1	2,800	93.3	93
10	Total	14,108	436	2,622	2,451	1,208	20,825			33,092

7.1.3. Unit Cost Derivation

The units-of-service for the Wholesale Zone rates are the number of meters and equivalent meters shown in Table 7-2. These values are applied to the revenue requirements to determine the unit costs-of-service. Table 7-3 shows the derivation of the unit costs-of-service for the Readiness to Serve charge and the Replacement Reserve charge. The Readiness to Service charge shown in Line 11, Column B is the Operating Revenue Requirement in Line 8, Column B divided by the number of meters (Line 6, Column B). The Replacement Reserve charge shown in Line 11, Column C is the Capital Revenue Requirement in Line 8, Column C divided by the number of equivalent meters (Line 6, Column C). Raftelis has proposed that the Replacement Reserve charge be changed to an equivalent meter basis since capital costs and water system design is proportional to flow, and meter size is proportional to potential flow.

Table 7-3: Units-of-Service and Unit Costs-of-Service

Line No.	Service Area (A)	Meters (B)	Equivalent Meters (C)
1	TUSTIN	14,108	21,842
2	IRWD	436	918
3	GSWC	2,622	5,195
4	ORANGE	2,451	3,617
5	EOCWD	1,208	1,520
6	Total	20,825	33,092
7		Operating	Capital
8	Total Revenue Required	\$225,322	\$320,605
9		Ready to Serve Charge	Replacement Reserve
10		<i>\$/meter</i>	<i>\$/equivalent meter</i>
11	Line 8 / Line 6	\$10.82	\$9.69
12	Current Charge	\$8.50	\$16.00

7.2. Proposed Wholesale Zone Charges

From the calculations in Table 7-3, the proposed charges are determined for the study period and shown in Table 7-4. The rates for FY 2024 are set by the cost-of-service analysis. Subsequent year (FY 2025 to FY 2028) rates are calculated by increasing the FY 2024 rates by the proposed revenue adjustments from Table 6-5 as shown in Table 7-4.

Table 7-4: Proposed 5-Year Wholesale Zone Water Rates and Charges

Proposed Rates	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Effective Date	Current Rate	Jul 2023	Jul 2024	Jul 2025	Jul 2026	Jul 2027
Revenue Adjustment						
Readiness to Serve Charge		COS	7.0%	7.0%	7.0%	7.0%
Replacement Reserve Fund Charge		COS	7.0%	7.0%	7.0%	7.0%
Readiness to Serve Charge						
Annual Charge, \$/meter	\$8.50	\$10.82	\$11.58	\$12.39	\$13.25	\$14.18
Replacement Reserve Fund Charge						
Meter Size						
5/8-Inch	\$16.00	\$9.69	\$10.37	\$11.09	\$11.87	\$12.70
3/4-Inch	\$16.00	\$9.69	\$10.37	\$11.09	\$11.87	\$12.70
1-Inch	\$16.00	\$16.15	\$17.28	\$18.49	\$19.78	\$21.17
1-1/2-Inch	\$16.00	\$32.29	\$34.55	\$36.97	\$39.56	\$42.33
2-Inch	\$16.00	\$51.67	\$55.29	\$59.16	\$63.30	\$67.73
3-Inch	\$16.00	\$113.03	\$120.94	\$129.41	\$138.47	\$148.16
4-Inch	\$16.00	\$203.45	\$217.69	\$232.93	\$249.24	\$266.68
6-Inch	\$16.00	\$516.70	\$552.87	\$591.57	\$632.98	\$677.29
8-Inch	\$16.00	\$904.23	\$967.53	\$1,035.26	\$1,107.72	\$1,185.26

8. Sewer Enterprise Financial Plan

8.1. Sewer Revenue Requirement

This section of the report provides a discussion of the financial plan required to ensure the fiscal sustainability and solvency of the Sewer enterprise.

8.1.1. Sewer Zone Revenues

The District’s current Sewer rates were last updated in August 1, 2016. The residential rates consist of a single flat, annual charge per residential customer. The single-family rate also represents the minimum charge any customer will be billed. Non-residential customers are charged based on a property use classification factor applied to the single-family charge, which determines a unit cost per 1,000 square feet (sq. ft.) or unit. This schedule is shown in Appendix A.

Table 8-1: Current Sewer Rates

Customer	Annual Charge
Single Family	\$108.00
Multi Family	\$75.60/Dwelling unit

The projected and calculated revenues under these existing rates are shown in Table 8-2, and as with the Retail and Wholesale Zones, no dwelling unit growth is presumed to occur during the study period. Also shown are other revenues from different sources such as interest income and taxes.

Table 8-2: Projected Revenues from Current EOCWD Sewer Charges and Other Revenues

Revenue Categories	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Rate Revenue Under Existing Rates	\$3,181,900	\$3,181,900	\$3,181,900	\$3,181,900	\$3,181,900	\$3,181,900
Other Revenue						
Sewer Permits & FOG Renewals	\$47,600	\$48,314	\$49,039	\$49,774	\$50,521	\$51,279
Interest Income(1)	\$264,200	\$36,659	\$34,914	\$39,082	\$40,085	\$37,714
Property Taxes	\$405,700	\$409,757	\$413,855	\$417,993	\$422,173	\$426,395
Miscellaneous Income	\$21,000	\$21,315	\$21,635	\$21,959	\$22,289	\$22,623
Total Revenues	\$3,920,400	\$3,697,945	\$3,701,342	\$3,710,708	\$3,716,968	\$3,719,910

(1) Based on including revenue adjustments.

8.1.2. Sewer O&M Expenses

The inflation factors from Table 3-1 were assigned to each line item of the District’s FY 2023 budget to determine future O&M costs for the Sewer enterprise. Raftelis worked closely with District staff to identify any non-recurring costs and other anticipated expenses for the study period. Table 8-3 summarizes the budgeted and projected O&M expenses for the District’s Sewer enterprise during the study period.

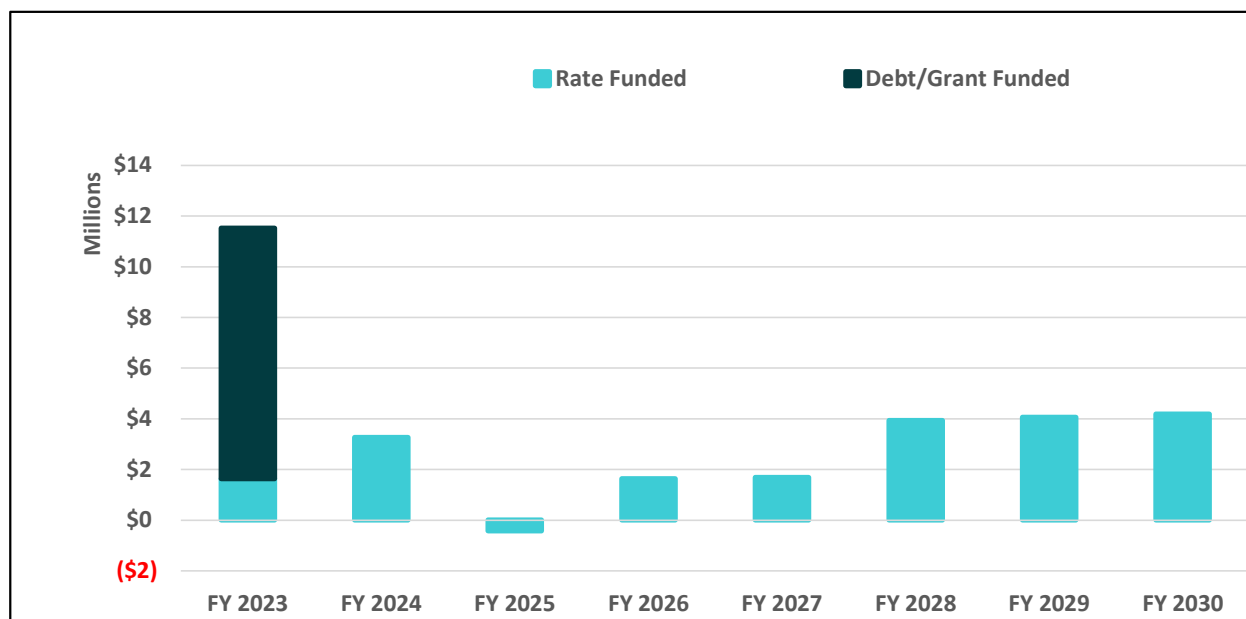
Table 8-3: Budgeted and Projected O&M Costs, Sewer

Line Items	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<i>Operating Expenses</i>	<i>Budgeted</i>	<i>Projected</i>	<i>Projected</i>	<i>Projected</i>	<i>Projected</i>	<i>Projected</i>
Salaries and Benefits Subtotal	\$1,346,700	\$1,401,937	\$1,459,422	\$1,518,451	\$1,578,821	\$1,641,594
Operations & Maintenance Subtotal	\$307,200	\$322,301	\$338,147	\$354,776	\$372,227	\$390,541
General & Administrative Subtotal	\$357,200	\$330,938	\$412,216	\$364,810	\$451,001	\$402,151
Total Operating Expenses	\$2,011,100	\$2,055,175	\$2,209,785	\$2,238,038	\$2,402,049	\$2,434,286
<i>Other Non-Operating Expenses</i>						
Section 115 Pension Trust Contribution	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
Total Non-Operating Expenses	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
Total Operating & Non-Operating Expenses	\$2,061,100	\$2,105,175	\$2,259,785	\$2,288,038	\$2,452,049	\$2,484,286

8.1.3. Projected Capital Improvements, Sewer

Figure 8-1 shows the annual budgeted and projected capital expenditures for FY 2023 – FY 2030 for the Sewer enterprise. (A full list of projects and costs can be found in the Appendix E). The capital costs for future years are determined by using the programmed/budgeted costs and inflating by the capital cost inflation factor shown in Table 3-1. The District plans to use cash and reserves to fund its planned capital improvement program.

Figure 8-1: Projected Sewer Capital Expenditures

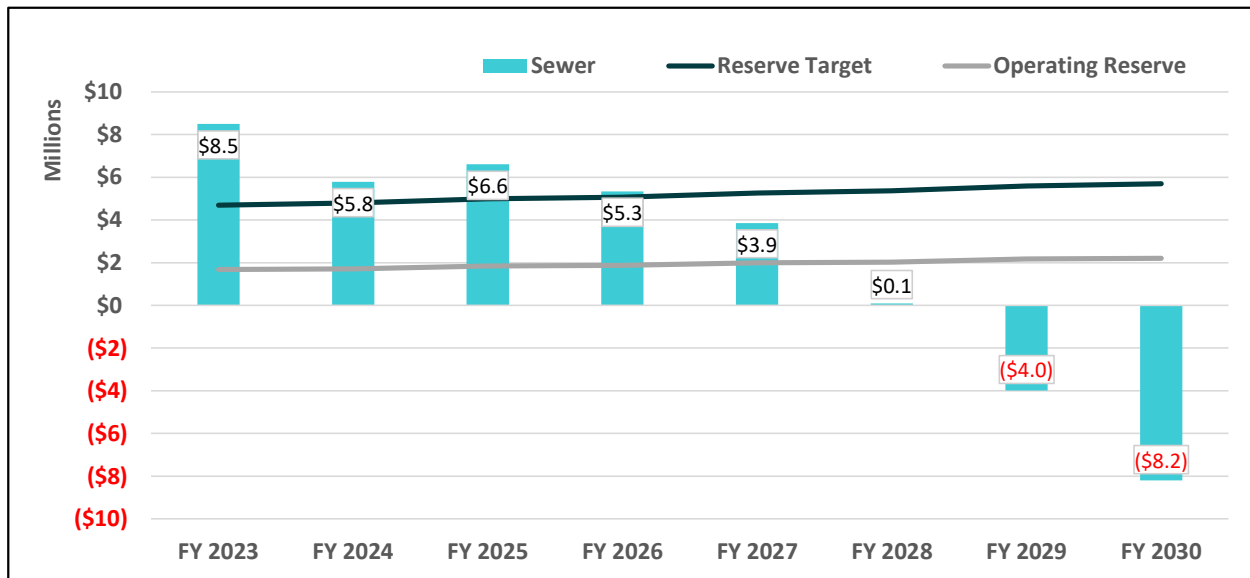


8.2. Sewer Financial Plans

8.2.1. Status Quo Sewer Financial Plan

Figure 8-2 displays the Sewer enterprise’s projected ending fund balances under current rates over the rate-setting period. All projections are based upon the District’s current rate structure and do not include any rate adjustments. The table incorporates the data shown in Table 8-1 through Table 8-3 and Figure 8-1.

Figure 8-2: Status Quo Wholesale Zone Ending Fund Balances (No Revenue Adjustments)



Under the “status-quo” scenario, revenues generated from current rates and other miscellaneous revenues are inadequate to sufficiently recover operating and capital expenses of the utility as shown by the erosion of the fund balance. Additionally, the fund is almost run to \$0 in FY 2028.

8.2.2. Proposed Sewer Financial Plan

The Sewer enterprise needs additional revenue adjustments, as shown in Table 8-4, to meet the target reserve requirements and maintain financial sufficiency for its expenses and other funding obligations. Sewer rates have not been adjusted since 2016, when they were reduced by half from then current levels.

Table 8-4: Proposed Sewer Revenue Adjustments

Fiscal Year	Effective Month	Proposed Revenue Adjustments
2024	Jul	12.0%
2025	Jul	12.0%
2026	Jul	12.0%
2027	Jul	12.0%
2028	Jul	12.0%

Table 8-5 shows the Financial Plan for the Sewer enterprise with the proposed revenue adjustments shown above. By implementing the proposed revenue adjustments, the District will still need to draw upon its reserves, but will be able to meet target reserve levels in all years.

Table 8-5: Wholesale Zone Proposed Financial Plan

	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Revenues						
Operating Revenues	\$3,181,900	\$3,181,900	\$3,181,900	\$3,181,900	\$3,181,900	\$3,181,900
Revenue Adjustments	\$0	\$381,828	\$809,475	\$1,288,440	\$1,824,881	\$2,425,695
Sewer Permits & FOG Renewals	\$47,600	\$48,314	\$49,039	\$49,774	\$50,521	\$51,279
Interest Income	\$264,200	\$36,659	\$34,914	\$39,082	\$40,085	\$37,714
Non-Operating Revenues (excluding interest)	\$426,700	\$431,072	\$435,489	\$439,952	\$444,462	\$449,018
Total Revenues	\$3,920,400	\$4,079,773	\$4,510,817	\$4,999,149	\$5,541,849	\$6,145,605
Expenses						
Salaries & Benefits	\$1,346,700	\$1,401,937	\$1,459,422	\$1,518,451	\$1,578,821	\$1,641,594
Operations & Maintenance	\$307,200	\$322,301	\$338,147	\$354,776	\$372,227	\$390,541
General & Administrative	\$357,200	\$330,938	\$412,216	\$364,810	\$451,001	\$402,151
Total Expenses	\$2,011,100	\$2,055,175	\$2,209,785	\$2,238,038	\$2,402,049	\$2,434,286
Net Income before Debt, ADP, and CIP	\$1,909,300	\$2,024,597	\$2,301,032	\$2,761,111	\$3,139,800	\$3,711,319
Less: Debt Service	\$1,035,981	\$1,036,157	\$1,035,965	\$1,036,205	\$1,036,058	\$1,035,526
Less: Section 115 Pension Trust Contribution	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
Less: PAYGO (Cash Funded Capital)	\$1,627,508	\$3,267,999	(\$416,432)	\$1,639,091	\$1,688,263	\$3,939,847
Net Increase / Decrease to Reserves	(\$804,189)	(\$2,329,559)	\$1,631,499	\$35,816	\$365,478	(\$1,314,054)
Reserves						
Beginning Balance	\$9,300,700	\$8,496,511	\$6,166,952	\$7,798,451	\$7,834,267	\$8,199,745
Ending Balance (with Interest)	\$8,496,511	\$6,166,952	\$7,798,451	\$7,834,267	\$8,199,745	\$6,885,691
Operating Reserve Target	\$1,675,917	\$1,712,646	\$1,841,487	\$1,865,032	\$2,001,707	\$2,028,572
Capital Reserve Target	\$2,020,124	\$2,080,728	\$2,143,150	\$2,207,445	\$2,273,668	\$2,341,878
Rate Stabilization Target	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000
Total Reserve Target	\$4,696,041	\$4,793,374	\$4,984,638	\$5,072,476	\$5,275,375	\$5,370,450

The operating financial plan, which incorporates both the District’s current and proposed revenues, is shown graphically in Figure 8-3 for FY 2023 to FY 2030.

Figure 8-3: Sewer Operating Financial Plan

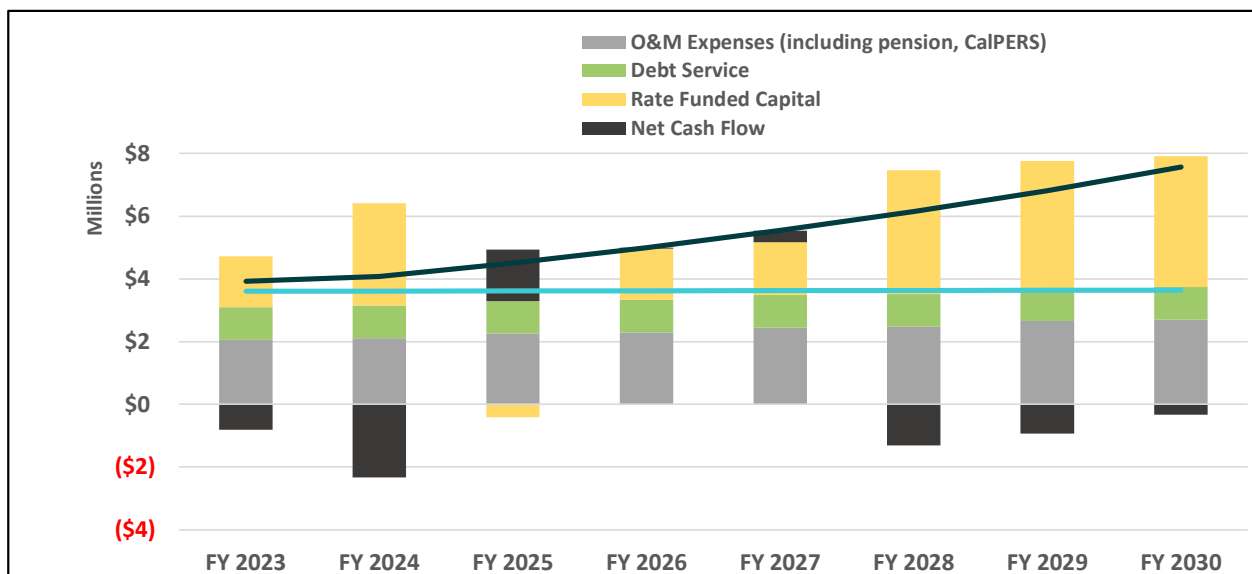
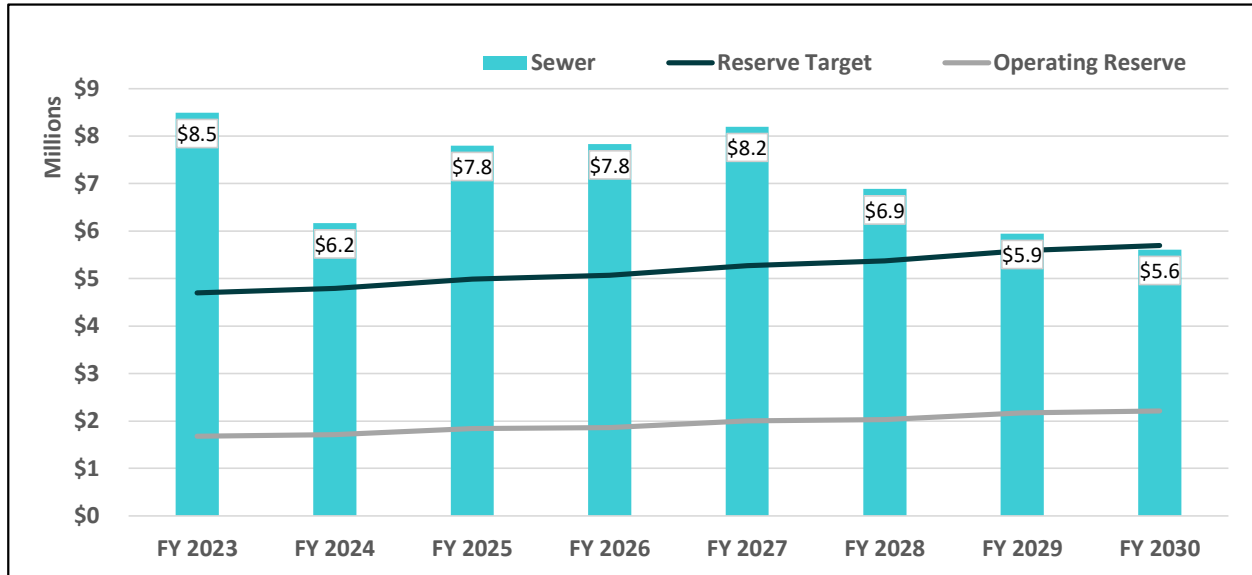


Figure 8-4 graphically depicts the District’s reserve ending balances with the proposed revenue adjustments after funding projected operational and capital expenditures for FY 2023 to FY 2030.

Figure 8-4: Projected Sewer Reserve Ending Balances



8.3. Proposed Sewer Rates

This study maintains the prior rate structure, which is based on the flow estimates from each customer class. Therefore, the charges shown in Table 8-6 for FY 2024 are the current rates multiplied by the annual revenue adjustment. The charges for FY 2025 through FY 2028 are the prior year’s charges multiplied by the annual revenue adjustment. The property use classification class multipliers would stay the same as shown in Appendix A.

Table 8-6: Current and Proposed Sewer Rates

Proposed Rates	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Effective Date	Current Rate	Jul 2023	Jul 2024	Jul 2025	Jul 2026	Jul 2027
Adjustment (%)	0.0%	12.0%	12.0%	12.0%	12.0%	12.0%
Single-Family	\$108.00	\$120.96	\$135.48	\$151.73	\$169.94	\$190.33
Multi-Family	\$75.60	\$84.67	\$94.83	\$106.21	\$118.96	\$133.23

9. Customer Impact Analysis

The proposed revenue adjustments are different from customer bill impacts.

9.1. Retail Water Bill Impacts

Table 9-1 depicts the monetary impact to a typical single-family residential retail water customer with a 3/4-inch meter and for a 1” meter and for a non-residential retail water customer with a 3/4" meter under the proposed rate structure shown in Table 5-13 (for FY 2024 rates). Since the District issues bi-monthly bills, the impact is shown on a bi-monthly basis.

Table 9-1: Sample Bi-Monthly Retail Water Bills Comparison, FY 2024

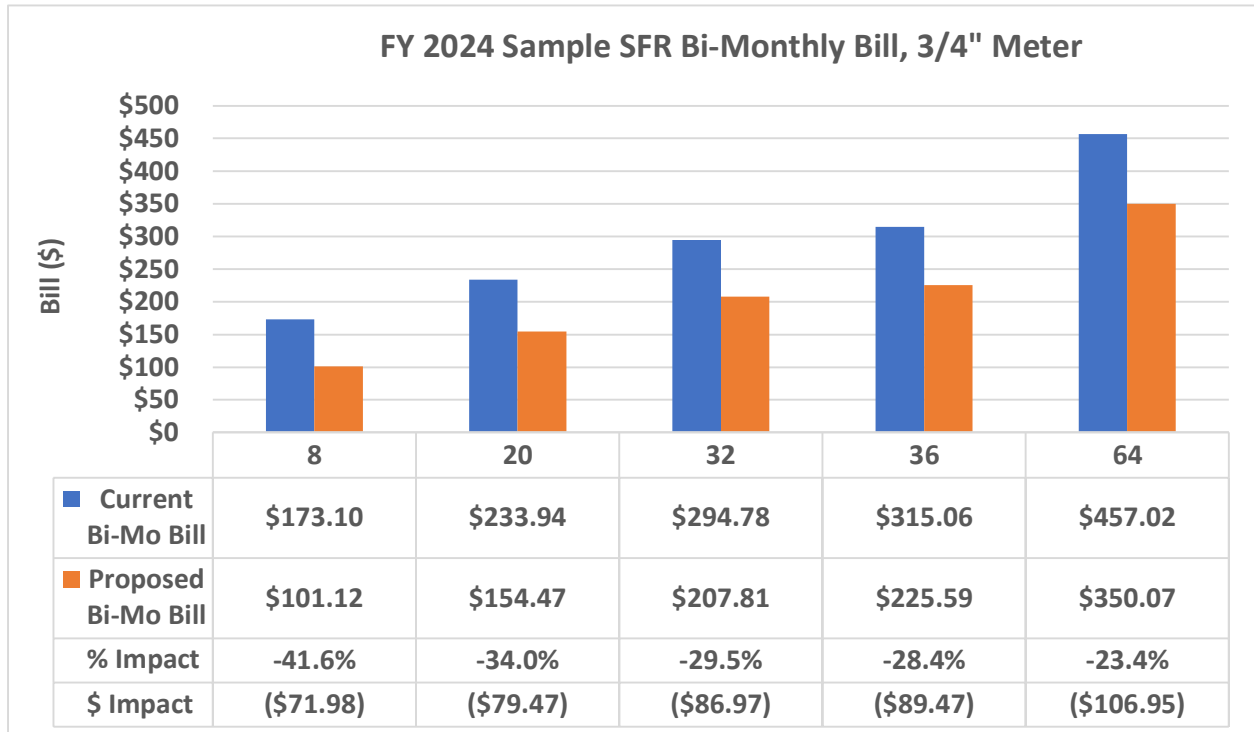
Line No.	Single Family Residential 3/4"	Usage (ccf)	Current Bi-Mo Bill	Proposed Bi-Mo Bill	Annual Impact	Bi-Monthly Bill Impact (%)	Bi-Monthly Bill Impact (\$)	% Bills At or Below
	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)
1	<i>Low Volume</i>	8	173.10	\$204.30	\$187.18	18.0%	\$31.20	13%
2		20	233.94	\$257.64	\$142.21	10.1%	\$23.70	31%
3	<i>Median Bi-Mon</i>	32	294.78	\$310.99	\$97.25	5.5%	\$16.21	49%
4		36	315.06	\$328.77	\$82.26	4.4%	\$13.71	55%
5	<i>Double Median</i>	64	457.02	\$453.24	-\$22.66	-0.8%	(\$3.78)	82%

Line No.	Single Family Residential 1"	Usage (ccf)	Current Bi-Mo Bill	Proposed Bi-Mo Bill	Annual Impact	Bi-Monthly Bill Impact (%)	Bi-Monthly Bill Impact (\$)	% Bills At or Below
	(A)	(B)	(C)	(D)	(H)	(E)	(F)	(G)
6	<i>Low Volume</i>	8	218.08	\$204.30	-\$82.70	-6.3%	(\$13.78)	10%
7		20	278.92	\$257.64	-\$127.67	-7.6%	(\$21.28)	23%
8	<i>Median Bi-Mon</i>	45	405.67	\$368.78	-\$221.35	-9.1%	(\$36.89)	58%
9		36	360.04	\$328.77	-\$187.62	-8.7%	(\$31.27)	46%
10	<i>Double Median</i>	64	502	\$453.24	-\$292.54	-9.7%	(\$48.76)	73%

Line No.	Non-SFR 3/4"	Usage (ccf)	Current Bi-Mo Bill	Proposed Bi-Mo Bill	Annual Impact	Bi-Monthly Bill Impact (%)	Bi-Monthly Bill Impact (\$)	% Bills At or Below
	(A)	(B)	(C)	(D)	(H)	(E)	(F)	(G)
11	<i>Low Volume</i>	12	193.38	\$222.08	\$172.19	14.8%	\$28.70	9%
12		24	254.22	\$275.42	\$127.23	8.3%	\$21.20	18%
13	<i>Median Bi-Mon</i>	36	315.06	\$328.77	\$82.26	4.4%	\$13.71	49%
14		60	436.74	\$435.46	-\$7.67	-0.3%	(\$1.28)	84%
15	<i>Double Median</i>	72	497.58	\$488.81	-\$52.64	-1.8%	(\$8.77)	91%

Figure 9-1 shows a graphical comparison of FY 2024 single family retail bills based on a 3/4” meter for different bi-monthly usage. The capital charge will be collected on the property tax rolls.

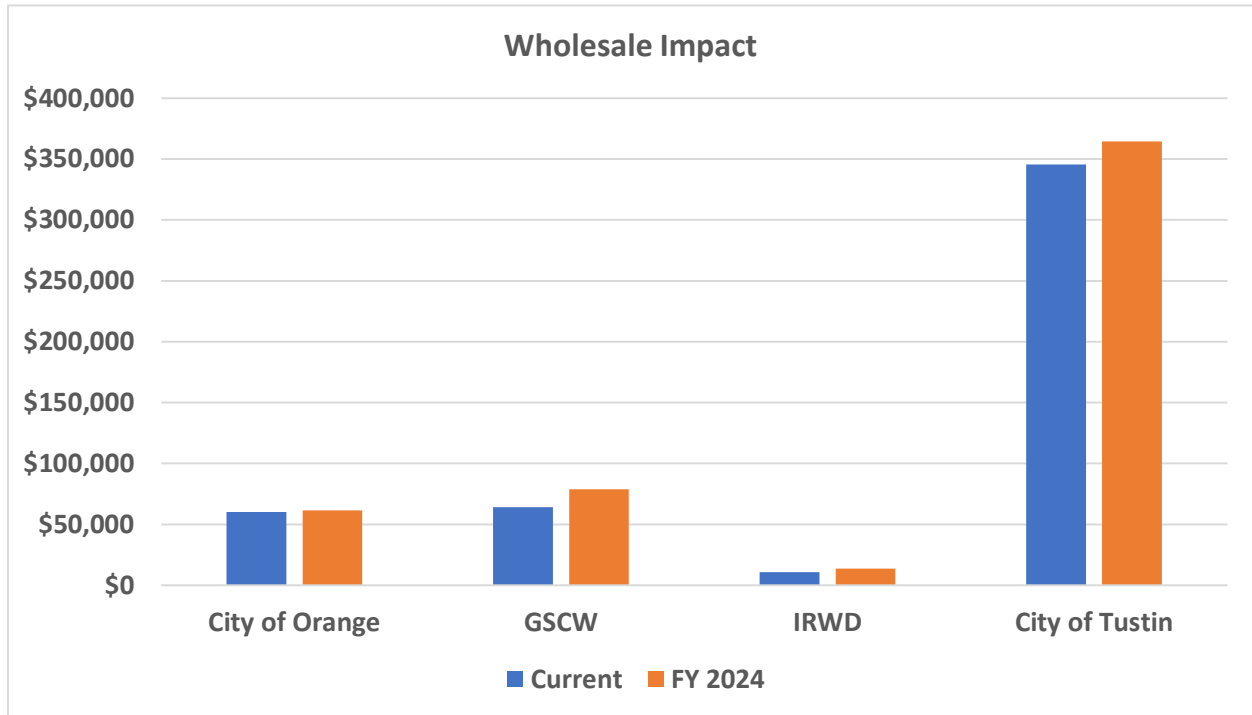
Figure 9-1: Sample Single Family Residential Bill Comparison, FY 2024



9.2. Wholesale Bill Impacts

The proposed wholesale water bills include a change from the annual capital improvement charge from being a flat per meter charge to a meter-size based charge. Figure 9-2 presents a comparison of FY 2024 total bills based on proposed rates compared to current rates.

Figure 9-2: Sample Wholesale Water Bill Impact by Wholesale Community, FY 2024



9.3. Sewer Customer Bill Impacts

Table 9-2 presents a comparison of sample annual sewer bills for residential customers between the current rates and proposed rates.

Table 9-2: Sample Residential Sewer Bills Comparison, FY 2023

Use Code	Land Use Type	Number of Units	Current	FY2024	Annual Impact	Annual Impact
2	One Residence	1	\$108.00	\$120.96	\$12.96	12%
12	4 units only	4	\$302.40	\$338.69	\$36.29	12%
15	26-40 units	32	\$2,419.20	\$2,709.50	\$290.30	12%

Table 9-3 shows bill impacts for a variety of common non-residential properties give an average square footage for the property type based on billing records.

Table 9-3: Sample Non-Residential Sewer Bills Comparison, FY 2024

Use Code	Land Use Type	Avg. Sqft.	Current	FY2024	Annual Impact	Annual Impact
50	Single Medical bldgs to 3 stories	4,120	\$525,053	\$588,059	\$63,006	12%
65	Single Office bldgs to 3 stories	9,882	\$426,902	\$478,131	\$51,228	12%
90	High Demand Center	18,009	\$2,898,008	\$3,245,769	\$347,761	12%
107	Light Industrial - Single Tenant	37,865	\$1,226,826	\$1,374,045	\$147,219	12%
110	Warehouse-Single Tenant	26,439	\$314,095	\$351,787	\$37,691	12%
111	Warehouse-Mult Tenant	7,043	\$83,671	\$93,711	\$10,041	12%
118	Govt use	257	\$21,927	\$24,559	\$2,631	12%

10. Capacity Fees

This section discusses the review and development of updated water and sewer capacity fees for the District.

10.1. Methodology

In California, the basic statutory standards governing water and sewer connection, or capacity, fees are embodied in Government Code Sections 66013 et seq. (The Mitigation Fee Act). An important requirement in designing connection fees is enumerated in Government Code 66013, which requires that connection fees must be based on an estimate of the reasonable cost of providing capacity. Thus, the primary objectives of establishing full cost recovery connection fees are to achieve equity in distributing costs and to provide a mechanism by which new users can pay for the cost of the facilities required to serve them, without burdening existing users. In short, the goal of full cost recovery connection fees is to ensure that growth pays its own way.

Several methods exist to calculate development impact fees. Three main computational approaches are discussed below.

10.1.1. Equity Buy-in Method

The buy-in concept is based on the premise that new users buy into the system and achieve a financial position that is on par with other existing users of the system. In publicly owned systems, most of the assets used to provide service are paid for by users through a system of rates, charges and taxes. In service areas that experience growth in customers and in quantity of service provided, it is generally true that facilities used by previous customers now serve existing customers. Thus, it is the existing customers who have made the “up-front” investment in the existing system capacity including the unused or “surplus” capacity that is available to serve newly connecting customers.

To foster equity between existing and new users, the new users pay for the cost or value associated with equity of the existing user. If the existing system has 100 units of use and the new user requires one unit of use, then the new user would pay for 1/100 of the value of the existing system. This approach is termed the “equity buy-in” method because by paying for the required capacity, the new user buys into the existing system and thereby achieves financial parity with other existing users. Together, the new and existing users will face future capital challenges on equal footing since equivalent investments have been made. This method is applicable in situations where the existing system has adequate surplus capacity and does not require major upgrades or improvements.

10.1.2. Incremental Cost Method

The incremental method is based on the premise that new development (new users) should pay for the additional capacity and expansions necessary to serve the new development. This method is typically used where there is little or no capacity available to accommodate growth and expansion is needed to service the new development. Under the incremental method, growth-related capital improvements are allocated to new development based on their estimated usage or capacity requirements, irrespective of the value of past investments made by existing customers.

For instance, if it costs X dollars (\$X) to provide 100 additional EDUs of capacity for average usage and a new connector uses one of those equivalent units, then the new user would pay $\$X/100$ to connect to the system. In other words, new customers pay the incremental cost of capacity. As with the equity buy-in approach, new connectors will effectively acquire a financial position that is on par with existing customers. Use of this method is generally considered to be most appropriate when a significant portion of the capacity required to serve new customers must be provided by the construction of new facilities.

10.1.3. Hybrid

The hybrid approach is typically used where some capacity is available to serve new growth but additional expansion is still necessary to accommodate new development. Under the hybrid approach the capacity fee is based on the summation of the existing capacity and any necessary expansions. In utilizing this methodology, it is important that system capacity costs are not double counted when combining costs of the existing system with future costs from the capital improvement program. Capital costs associated with repair and replacement of the existing system should not be included in the calculation, unless specific existing facilities that will be replaced through the capital improvement program can be isolated and removed from the existing asset inventory and cost basis. In this case, the rehabilitative costs of the capital projects essentially replace the cost of the relevant existing assets in the existing cost basis. Capital improvements that expand system capacity to serve future customers may be included proportionally to the percentage of the cost specifically required for expansion of the system.

10.1.4. Proposed Approach

The approach used in determining capacity fees needs to reflect the system characteristics in addition to meeting regulatory requirements and policy considerations. In determining the District's capacity fees, we recommend the equity buy-in method for the retail water, wholesale water, and sewer systems.

For the equity buy-in approach, we used the replacement cost less depreciation (RCLD) method to determine the value of the system. This method considers the cost to build new facilities but recognizes that capacity available in existing facilities is not new and is adjusted for depreciation.

10.2. Water

10.2.1. Retail Capacity Fee

To determine the retail water system capacity cost (fee), Raftelis calculated the replacement cost (RC) of the backbone system as of December 2021 by inflating historical costs using the annual average ENR 20-City Construction Cost Index (CCI) for Los Angeles. To recognize that the system is not new, Raftelis subtracted the accumulated depreciation of those assets from the replacement cost to determine the value of the system, the RCLD. The RCLD of the system for the mid-point of FY 2022 is shown in Line 2 of Table 10-1.

When new users join the system, they will benefit from the District's cash reserves and be responsible for debt payments. We therefore add cash reserves (Line 4) and subtract the principal (Line 3) still owed on the District's outstanding bonds and loans.

Once the value of the system is determined (Line 5), we divide by the number of existing equivalent retail meters (Line 6) to determine the capacity fee. The resultant fee for an equivalent 3/4-inch meter is shown in Table 10-1, Line 7. For comparison, the current rate is shown in Line 8.

Table 10-2 presents the existing and proposed capacity fees for new retail water customers. The same equivalent meter capacity ratios used in Table 5-7 are used for this calculation.

Table 10-1: Retail Water Capacity Fee Calculation

Line No.	Line Item	Equity Buy-In
1		<u>RCLD-Total</u>
2	Total Backbone System Value	\$7,938,878
3	Less Outstanding Debt Principal	\$4,035,600
4	Cash on Hand	\$8,313,421
5	FY 2022 System Value	\$12,216,699
6	Number of Equivalent Meters (EM)	1,525
7	Capacity Fee for 5/8" Meter (1 EM)	\$8,011
8	Current Fee	\$6,103

Table 10-2: Proposed and Existing Retail Water Capacity Fees

Line No.	By Meter Size	EM Capacity Ratio	Proposed Fees	Existing Fees	Percent Difference
1	5/8"	1.0	\$8,011	\$6,103	31.3%
2	3/4"	1.0	\$8,011	\$6,103	31.3%
3	1"	1.7	\$13,352	\$10,171	31.3%
4	1 1/2"	3.3	\$26,703	\$20,342	31.3%
5	2"	5.3	\$42,725	\$32,547	31.3%
6	3"	11.7	\$93,462	\$71,196	31.3%

10.2.2. Wholesale Capacity Fee

The wholesale backbone system capacity cost was calculated in the same manner as the retail water backbone cost. The wholesale backbone system RCLD for the mid-point of FY 2022 is shown in Line 2 of Table 10-3.

When new users join the system, they will benefit from the District’s cash reserves and be responsible for debt payments. We therefore add cash reserves (Line 4) and subtract the principal (Line 3) still owed on the District’s outstanding bonds and loans.

Once the value of the system is determined (Line 5), we divide by the number of existing equivalent retail meters (Line 6) to determine the capacity fee. The resulting fee for an equivalent 3/4-inch meter is shown in Table 10-3, Line 7. For comparison, the current rate is shown in Line 8.

Table 10-4 presents the existing and proposed capacity fees for new wholesale water customers. The same equivalent meter capacity ratios used in Table 5-7 are used for this calculation.

Table 10-3: Wholesale Water Capacity Fee Calculation

Line No.	Line Item	Equity Buy-in
1		<u>RCLD-Total</u>
2	Total Backbone System Value	\$26,222,202
3	Less Outstanding Debt Principal	\$0
4	Add Cash on Hand	\$9,484,100
5	FY 2022 System Value	\$35,706,302
6	Number of Equivalent Meters (EM)	33,092
7	5/8" Meter Capacity Fee (line 5 / line 6)	\$1,079
8	Current Fee	\$952

Table 10-4: Proposed and Existing Wholesale Water Capacity Fees

Line No.	By Meter Size	EM Capacity Ratio	Proposed Fees	Existing Fees	Percent Difference
1	5/8"	1.0	\$1,079	\$952	13.3%
2	3/4"	1.0	\$1,079	\$952	13.3%
3	1"	1.7	\$1,798	\$1,586	13.4%
4	1 1/2"	3.3	\$3,597	\$3,173	13.4%
5	2"	5.3	\$5,755	\$5,076	13.4%
6	3"	11.7	\$12,588	\$11,103	13.4%
7	4"	21.0	\$22,659	\$19,986	13.4%
8	6"	53.3	\$57,547	\$50,856	13.2%
9	8"	93.3	\$100,707	\$88,828	13.4%
10	10"	140.0	\$151,060	\$133,243	13.4%

10.3. Sewer

The sewer backbone system capacity cost was calculated in the same manner as the retail water backbone cost. The sewer backbone system RCLD for the mid-point of FY 2022 is shown in Line 2 of Table 10-5.

When new users join the system, they will benefit from the District’s cash reserves and be responsible for debt payments. We therefore add cash reserves (Line 4) and subtract the principal (Line 3) still owed on the District’s outstanding bonds and loans.

Once the value of the system is determined (Line 5), we divide by the number of existing equivalent dwelling units (Line 6), as provided by the District, to determine the capacity fee. The result fee for an equivalent dwelling unit is shown in Table 10-5, Line 7.

Table 10-6 presents the existing and proposed capacity fees for new sewer customers. The District has added or upgrade a significant amount of assets since the last capacity fee study was conducted.

Table 10-5: Sewer Capacity Fee Calculation

Line No.	Line Items	Equity Buy-In
1		<u>RCLD-Total</u>
2	Total Backbone System Value	\$308,790,469
3	Less Outstanding Debt Principal	\$16,142,400
4	Cash on Hand	\$9,300,700
5	FY 2022 System Value	\$301,948,769
6	Total Estimated Equivalent EDUs	28,491
7	Buy-in Unit Charge per EDU	\$10,598

Table 10-6: Proposed and Existing Sewer Capacity Fees

Line No.	Proposed and Existing Sewer Capacity Fee	
1	Proposed Sewer Capacity Fee (per EDU)	\$10,598
2	Old 2020 Sewer Capacity Fee (per EDU)	\$2,469
3	% Difference	329%

APPENDIX A:

Non-Residential Sewer Rates



Table A-1: Non-Residential Property Type Multiplier and Unit Rates

Accessor Use Code	Customer Type	Multiplier	per 1,000 sqft or Unit
1	Vacant Land Parcel	0%	\$0.00
2	One Residence	100%	\$108.00
3	Two or More SFR	70%	\$75.60
4	Misc. Improvement	71%	\$76.68
5	Common Area Parcel	0%	\$0.00
6	"Hold" parcel	0%	\$0.00
7	Mobile Home	50%	\$54.00
8	Equiv to Vacant	0%	\$0.00
10	Duplex Only	70%	\$75.60
11	Triplex Only	70%	\$75.60
12	4 units only	70%	\$75.60
13	5 to 6 units	70%	\$75.60
14	17 to 25 units	70%	\$75.60
15	26-40 units	70%	\$75.60
16	41-99 units	70%	\$75.60
17	100+ units	70%	\$75.60
18	A Mix of Forms	70%	\$75.60
19	SFR with 1 or 2 Rentals	71%	\$76.68
20	Amusement Parks	138%	\$149.04
21	Auto Dealership	39%	\$42.12
22	Auto Repair Shop	39%	\$42.12
23	Auto Service	39%	\$42.12
24	Used Car Lot	39%	\$42.12
26	Airport and Related	56%	\$60.48
28	Bowling Alleys	71%	\$76.68
29	Conventional Car Wash	1425%	\$1,539.00
30	Coin Operated Car Wash	252%	\$272.16
32	Cemetery & Related	56%	\$60.48
33	Church Buildings	20%	\$21.60
34	Dormitory	99%	\$106.92
35	Entertainment Center	138%	\$149.04
36	Financial Buildings	39%	\$42.12
37	Fraternal bldgs	49%	\$52.92
38	Funeral Home	56%	\$60.48
39	Golf Course	39%	\$42.12
40	Health Club	33%	\$35.64
42	Hospital	100%	\$108.00
43	Hoteumotel	109%	\$117.72
44	Lumber/Const. Material Yard	18%	\$19.44

Accessor Use Code	Customer Type	Multiplier	per 1,000 sqft or Unit
45	Marinas	56%	\$60.48
47	Supermarket	84%	\$90.72
48	Convenience Market	44%	\$47.52
50	Single Medical bldgs to 3 stories	118%	\$127.44
51	Small Medical Center	118%	\$127.44
52	Medical Center Complex	118%	\$127.44
53	High Rise Medical	118%	\$127.44
54	Converted Residence to Medical	118%	\$127.44
55	Mobile Home Park	52%	\$56.16
56	Hoteumotel	109%	\$117.72
57	Motorcycle/Small Vehile bldg	39%	\$42.12
58	Nurseries (plants)	9%	\$9.72
60	Nursing Home	103%	\$111.24
61	Convalescent Hospital	99%	\$106.92
62	Converted Res. used as Nursing	103%	\$111.24
63	Low Rise Retirement bldg	108%	\$116.64
64	High Rise Retirement bld	108%	\$116.64
65	Single Office bldgs to 3 stories	40%	\$43.20
66	Small Office Center	40%	\$43.20
67	Office Complex	40%	\$43.20
68	High Rise Office	39%	\$42.12
69	Converted Res. to Office	40%	\$43.20
71	Parking Garage	18%	\$19.44
72	Paved Parking Lot	18%	\$19.44
73	Recreation	138%	\$149.04
74	Recreation Vehicle Park	23%	\$24.84
76	Restaurant - Low Demand	212%	\$228.96
77	Restaurant - Coffee Shop	424%	\$457.92
78	Restaurant - Dinner House	424%	\$457.92
79	Restaurant - Conversion from SFR	424%	\$457.92
81	Pre-schools, Nursery, or Care	80%	\$86.40
82	Private Schools	80%	\$86.40
83	Auto Service Station	39%	\$42.12
84	Marine Service Station	39%	\$42.12
85	Combined: Serv stn/Restaurant	42%	\$45.36
86	Comb: Servie st/Convenience mkt	39%	\$42.12
88	Low Demand Center	36%	\$38.88
89	Avg Demand Center	92%	\$99.36
90	High Demand Center	149%	\$160.92
92	Skating Rinks	71%	\$76.68
94	Department Store	22%	\$23.76
95	Discount Store	22%	\$23.76
96	Unattached Single Store	22%	\$23.76
97	Strip Store	22%	\$23.76

Accessor Use Code	Customer Type	Multiplier	per 1,000 sqft or Unit
98	Store with Offices or Living Qrts.	80%	\$86.40
99	Store w/Office Upstairs	80%	\$86.40
100	Drive-in Theater	9%	\$9.72
101	Unattached Theatre	49%	\$52.92
103	Chemical Tank and Bulk Storage	100%	\$108.00
104	Food Processing Plant	100%	\$108.00
105	Cold Storage Plant	100%	\$108.00
106	Factory	100%	\$108.00
107	Light Industrial - Single Tenant	30%	\$32.40
108	Light Industrial - Multi Tenant	30%	\$32.40
109	Research and Dev.	30%	\$32.40
110	Warehouse-Single Tenant	11%	\$11.88
111	Warehouse-Mult Tenant	11%	\$11.88
112	Steel Building	5%	\$5.40
113	Mini-Warehouse	5%	\$5.40
114	Industrial Park	30%	\$32.40
115	Recreation Vehical Storage	11%	\$11.88
116	Truck Terminal	11%	\$11.88
118	Govt use	79%	\$85.32
119	Public Utility	100%	\$108.00
120	Water Mutual or Company	100%	\$108.00
121	Parcel of Minimal or No Value	0%	\$0.00
122	Subsurface Parcels	0%	\$0.00
124	OIU Mineral Rights	0%	\$0.00
125	Mineral Rights eq.	0%	\$0.00
126	Vacant Common Area-Imp Alloc	0%	\$0.00
201	Home Owners Exmption Addition	0%	\$0.00
223	Laundromat	1563%	\$1,688.04
224	Nightclub	146%	\$157.68
225	USPO	28%	\$30.24
666	Unassigned Vacant	0%	\$0.00
777	Septic Tank Property	0%	\$0.00
888	Conversion-Composite Prop	100%	\$108.00

APPENDIX B:

Current Adopted Reserve Policy



RESOLUTION NO. 732

**RESOLUTION OF THE BOARD OF DIRECTORS OF
THE EAST ORANGE COUNTY WATER DISTRICT
APPROVING RESERVE FUNDS POLICY**

WHEREAS, key elements of prudent financial planning and fiscal responsibility are to ensure that sufficient funding is available for current operating, capital and debt service cost needs and to anticipate and prepare for future funding requirements as well as for unforeseen disasters and other unforeseen events; and

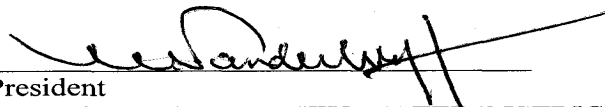
WHEREAS, the East Orange County Water District desires to set forth a policy for maintaining reserve funds within each of the District's separate enterprise funds (including the Wholesale System and Retail Zone operating funds and replacements and capital improvements funds and the wholesale emergency/contingency/reserve fund maintained within such enterprise funds) and within such other enterprise funds as the District may establish and maintain from time to time;

NOW, THEREFORE, the Board of Directors of the East Orange County Water District DOES HEREBY RESOLVE, DETERMINE AND ORDER as follows:

Section 1. The Reserve Funds Policy of the East Orange County Water District is hereby approved in the form presented to the Board of Directors by the Treasurer. This policy shall remain in effect until it is amended or superseded by a subsequently adopted policy.

Section 2. The District's Accountant and other staff of the District are hereby authorized and directed to take steps to implement the directives as set forth in the Policy and make reports to the Board of Directors as described therein.

ADOPTED, SIGNED AND APPROVED this 27th day of February, 2014.



President
EAST ORANGE COUNTY WATER DISTRICT
and of the Board of Directors
thereof



Secretary
EAST ORANGE COUNTY WATER DISTRICT
and of the Board of Directors
thereof

STATE OF CALIFORNIA)
) ss
COUNTY OF ORANGE)


I, JOAN C. ARNESON, Secretary of the Board of Directors of the EAST ORANGE COUNTY WATER DISTRICT, do hereby certify that the foregoing Resolution No. 732 was duly adopted by the Board of Directors of said District at an adjourned Regular Meeting of said District held on February 27, 2014, and that it was so adopted by the following vote:

AYES: BELL, DAVERT, DULEBOHN, EVERETT, VANDERWERFF

NOES: NONE

ABSENT: NONE

ABSTAIN: NONE



Secretary
EAST ORANGE COUNTY WATER DISTRICT
and of the Board of Directors
thereof

East Orange County Water District Reserve Funds Policy

PURPOSE

A key element of prudent financial planning is to ensure that sufficient funding is available for current operating, capital and debt service cost needs. An additional critical element of fiscal responsibility is to anticipate and prepare for future funding requirements as well as for unforeseen disasters and other unforeseen events. The East Orange County Water District (District) will at all times strive to have sufficient funding available to meet its operating, capital, and debt service cost obligations. Reserve funds will be accumulated and maintained in a manner, which allows the District to fund costs consistent with long range financial and capital planning, avoiding significant rate fluctuations due to changes in cash flow requirements. Reserve funds will also include an emergency reserve position that may be utilized to fund unexpected disasters or unanticipated major failures. The Board of Directors will annually review the level of reserve funds maintained, including as provided in Resolution No. 595 (restating policy concerning maintenance and use of emergency/contingency/reserve ("ECR") fund and establishing replacements and capital improvements ("RCI") fund – wholesale system) and Resolution No. 596 (designating capital projects fund as replacements and capital improvements ("RCI") fund – retail zone, and restating policy concerning maintenance and use thereof) (the "Reserve Fund Resolutions").

The District shall maintain reserve funds within each of the separate enterprise funds (including the Wholesale System and Retail Zone operating funds and RCI funds and the Wholesale ECR Fund maintained within such enterprise funds) and within such other enterprise funds as the District may establish and maintain from time to time (ref. Resolution No. 669). This policy establishes the level of reserves necessary for maintaining the District's credit worthiness and for adequately providing for:

- Funding infrastructure replacement.
- Economic uncertainties and other financial hardships.
- Loss of significant revenue sources such as property tax receipts or connection fees.
- Local disasters or catastrophic events.
- Future debt or capital obligations.
- Cash flow requirements.
- Unfunded mandates including costly regulatory requirements.
- Projects or programs, including litigation, that the Board has determined to be of significant benefit to the majority of the customers of the District.

DEFINITIONS:

Restricted Reserves: Restrictions on their use are imposed by an outside source such as creditors, grantors, contributors, or laws or regulations of other governments.

Unrestricted Reserves: Have no externally imposed use restriction. The use of Unrestricted Reserve funds is at the discretion of the Board of Directors. There are two categories of Unrestricted Reserves - Designated and Undesignated. At the District, all Unrestricted Reserves are Designated Reserves.

Designated Reserves: Set-aside for a specific purpose, which is, determined by the Board of Directors. The Board of Directors also has the authority to redirect the use of these reserve funds as needs of the District change. These reserves have various names (e.g., Operating Reserve, Capital Reserve, etc.) to indicate the subgroup use for the specific reserve fund.

Capital Reserve Fund Charge (Wholesale): a fee or charge, which may from time to time be levied by the Board of Directors relative to wholesale water sales, connections, or otherwise in the wholesale system pursuant to Resolution No. 595, to provide funds necessary to contribute such amounts to the wholesale RCI, ECR or reserves within the wholesale enterprise funds as the Board may deem reasonable and proper.

Capital Projects Fee (Retail): The monthly fee, referred to in the schedule of rates as the "Monthly Fee for Existing Water System Capital Projects" or similar term, levied for the cost of repairing, rehabilitating, replacing and/or improving capital facilities in the Retail Zone water system.

POLICY

Operating Reserves

Operating reserves are used to fund ongoing cash flow needs of the agency. Due to the large variability in the month-to-month cash flow needs due to the seasonal demand for water, the minimum amount of operating reserves will equal ten (10) months of budgeted operating expenses. The maximum amount of operating reserves will equal twelve (12) months of operating expenses.

Capital Reserves

Capital reserves will be accumulated to fund infrastructure projects and will be an integral part of the District's capital plan documented in its Five-Year Capital Improvement Program, Ten-Year Forecast and Reserve Fund Resolutions. A key objective for accumulating capital reserves is to minimize external borrowing and interest expense. The minimum amount of capital reserves will equal one year's capital spending. The maximum amount of capital reserves will equal two times the accumulated depreciation balance.

It is the practice of the District, in regards to capital expenditures, to follow a "pay as you go (PAYGO)" philosophy. That is, capital expenditures are funded out of the current year collections of the Capital Reserve Fund Charge and/or Capital Projects Fee for all funds. To the extent that the current year's Capital Replacement/Reserve Fees plus capital reserves in a fund are insufficient to cover the District's Five-Year Capital Improvement Program, then the District will investigate alternative funding or rate adjustments.

The appropriate Capital Reserve Fund balances will be determined as follows:

1. Funds available from Capital Replacement Fees will be projected for five- and ten-year periods.
2. Capital expenditures will be projected for five- and ten-year periods.
3. The Capital Reserve will be the difference between the funds available (Item 1) and the funds required (Item 2), but no less than two times the accumulated depreciation balance.

Advances from any enterprise funds Capital Reserves may be made to meet expenses in another enterprise funds upon the determination of the Board of Directors of the need for the advance and satisfactory assurance of repayment, and upon such terms for repayment as the Board shall establish.

Self-Insurance and Litigation Reserves

The District is self-insured up to \$25,000 for each claim and maintains pooled property and liability insurance through the Association of California Water Agencies for claims up to \$2,000,000. Additionally, periodically the District may have extraordinary litigation expenses that exceed annual operating budget expenses. The minimum self-insurance and litigation reserve will equal \$500,000; the maximum self-insurance and litigation reserve will total \$5,000,000.

PROCEDURE FOR USING RESERVE FUNDS

Operating and Self-Insurance and Litigation Reserves

Operating and self-insurance reserves can be used at any time to meet cash flow requirements of District operations. Authority to use the funds will be consistent with the District's Purchasing Policy.

Capital Reserves

The Board of Directors will authorize use of capital reserves during the budget process. Capital reserves are also available for unplanned (unbudgeted) capital replacement. Authorization for the use of capital reserves for unplanned capital replacement will be consistent with the District's Purchasing Policy.

PROCEDURE FOR MONITORING RESERVE LEVELS

The Accountant shall perform a reserve analysis to be submitted to the Board of Directors upon the occurrence of the following events:

- Board of Directors' deliberation of the annual budget;
- Board of Directors' deliberation of a service charge rate increase;
- Upon renewal of the self-insurance excess insurance coverage; or,
- When a major change in conditions threatens the reserve levels established within this policy.

If the analysis indicates projected or actual reserve levels falling 10% below or above the levels outlined in this policy, at least one of the following actions shall be included with the analysis:

- An explanation of why the reserve levels are not at the targeted level, and/ or
- An identified course of action to bring reserve levels within the minimum and maximum levels prescribed.

APPENDIX C:

Detailed Retail Zone Capital Improvement Projects



Proj. No.	Project	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
21-01	VP Reservoir Replacement	\$200,000	\$1,000,000	\$0	\$0	\$0	\$0	\$0	\$0
21-02	RZ Valve Replacements	\$100,000	\$80,000	\$80,000	\$80,000	\$80,000	\$0	\$0	\$0
21-03	System Relocations / Pipeline Replacement	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$0	\$0	\$0
21-04	Barrett Reservoir Booster Pump Station Replacement	\$1,500,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
21-05	PFAS Treatment Facility	\$30,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
21-06	VanderWerff Well	\$3,860,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
21-08	Via Aventura 4" Replacement			\$100,000	\$0	\$0	\$0	\$0	\$0
21-09	Springwood Drive Pipeline Improvement	\$0	\$100,000	\$400,000	\$0	\$0	\$0	\$0	\$0
21-11	Brae Glen Pipeline Rehabilitation and Valve Replacement	\$350,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
21-12	Crawford Canyon Rd. 8" and 6" pipe replacement	\$0	\$0		\$200,000	\$550,000	\$0	\$0	\$0
21-28	Sedaru Upgrades	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
21-29	AWIA Project	\$33,333	\$0	\$0	\$0	\$0	\$0	\$0	\$0
21-30	UWMP Update	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
21-31	Retail Water Loss Control Program						\$0	\$0	\$0
21-45	SCADA System Improvements	\$264,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
21-49	Trailer Mounted Transfer Pump	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
22-01	Financial Software and Implementation	\$37,333	\$0	\$0	\$0	\$0	\$0	\$0	\$0
22-18	Orange Knoll PRV Station	\$130,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
22-20	Truck mounted vacuum	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
22-22	Abandon Pipe from El Roy Dr to Willis Lane	\$0	\$0	\$0	\$0	\$100,000	\$0	\$0	\$0
22-23	Skid Steer Tractor	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
22-25	RZ Master Plan Update	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
22-27	Connection to Los Timbres	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
22-28	East Well Pump and Motor	\$150,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
22-29	East Well Electrical	\$100,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
22-30	View Ridge New Valve	\$10,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
22-31	Barrett and Hinton Service Relocations	\$30,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
22-33	District Headquarters	\$326,012	\$326,012	\$170,768	\$0	\$0	\$0	\$0	\$0
22-35	Transfer Water Services to 12" Main, Abandon 4" Main - Fowler / Hewes	\$0	\$0	\$0	\$0	\$100,000	\$0	\$0	\$0
22-36	Replace 4" Pipe on Hewes Ave.	\$0	\$0	\$0	\$750,000	\$0	\$0	\$0	\$0
22-39	Barrett Lane CMLMC Steel Pipe Replacement	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
22-40	Circula Panorama Pipeline Replacement / Conversion	\$1,000,000	\$1,000,000	\$0	\$0	\$0	\$0	\$0	\$0
22-41	Deleted	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
22-42	Replace 600' of 4" pipe on Kiersey Place	\$0	\$0	\$100,000	\$250,000		\$0	\$0	\$0
22-43	Replace 500' of 4" CMLMC pipe and install PRV Station to Zone III	\$50,000	\$250,000	\$0			\$0	\$0	\$0
22-44	Replace 500' of 4" CMLMC Steel Pipe along Smiley Dr.	\$0	\$0	\$0	\$200,000	\$550,000	\$0	\$0	\$0
22-45	Hydrant Replacements	\$60,000	\$32,000	\$32,000	\$32,000	\$32,000	\$0	\$0	\$0
22-48	Service Lateral Replacement	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000	\$0	\$0	\$0
22-50	Emergency Connection Modifications	\$0	\$50,000	\$0	\$0	\$0	\$0	\$0	\$0
23-01	Dump truck for field ops	\$33,333	\$0	\$0	\$0	\$0	\$0	\$0	\$0
23-01	RZ Update Water Specifications	\$50,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
23-02	RZ Abandon West Well	\$150,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
23-06	WZ RZ SCADA Phase 3	\$0	\$0	\$66,000	\$0	\$0	\$0	\$0	\$0
23-08	Skid Steer Trailer	\$15,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
23-09	RZ Update Water Atlas	\$10,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
23-10	RZ Barrett Reservoir Exterior Coating	\$30,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	RZ Daniger Pump Station upgrades	\$0	\$50,000	\$0	\$0	\$0	\$0	\$0	\$0
	Future Projects	\$0	\$0	\$0	\$0	\$0	\$740,660	\$740,660	\$740,660
	Total Retail - Uninflated	\$8,619,012	\$2,988,012	\$1,048,768	\$1,612,000	\$1,512,000	\$740,660		
	Total Retail - Inflated	\$8,619,012	\$3,077,652	\$1,112,638	\$1,761,476	\$1,701,769	\$858,628	\$884,387	\$910,918

APPENDIX D:

**Detailed Wholesale Zone
Capital Improvement Projects**



Proj. No.	Project	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
21-02	WZ Valve Replacements	\$75,000	\$50,000	\$50,000	\$50,000	\$50,000	\$0	\$0	\$0
21-03	System Relocations / Pipeline Replacement	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$0	\$0	\$0
21-28	Sedaru Upgrades	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
21-29	AWIA Project	\$33,333	\$0	\$0	\$0	\$0	\$0	\$0	\$0
21-30	UWMP Update	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
21-38	Newport Reservoir Roof Repair and Recoating	\$700,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
21-43	Walnut Vault Replacement	\$700,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
21-45	SCADA System Improvements	\$536,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
21-46	Hazard Mitigation Plan	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
21-50	SAC Pipeline Repairs	\$10,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
21-51	6MG Reservoir Geotechnical Evaluation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
22-01	Financial Software and Implementation	\$37,333	\$0	\$0	\$0	\$0	\$0	\$0	\$0
22-02	Fire Hydrant(s) on Handy Creek Road	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
22-12	Asphalt Repair at 6 MG Reservoir site	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
22-13	Asphalt Repair and seal at Andres Reservoir	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
22-14	Asphalt repair and seal at Newport Reservoir	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
22-15	Wharf head replacement - Rocking Horse Ridge	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
22-16	Pedestal Replacement at Chandler Ranch Turnout	\$10,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
22-17	Hydrant relocation at Jamboree	\$100,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
22-20	Truck mounted vacuum	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
22-21	OC70 Spare Pump	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
22-23	Skid Steer Tractor	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
22-24	WZ Master Plan Update	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
22-33	District Headquarters	\$356,173	\$356,173	\$186,567	\$0	\$0	\$0	\$0	\$0
22-34	6MG Reservoir Replacement	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$0	\$0	\$0
22-45	Hydrant Replacements	\$15,000	\$8,000	\$8,000	\$8,000	\$8,000	\$0	\$0	\$0
22-46	Easement Clearing Newport Reservoir	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$0	\$0	\$0
22-48	Service Lateral Replacement	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$0	\$0	\$0
22-49	Newport Reservoir Pumpstation Hydraulic Modeling	\$40,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
22-51	Wholesale Reservoir Backup Generators	\$50,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
23-01	Dump truck for field ops	\$33,333	\$0	\$0	\$0	\$0	\$0	\$0	\$0
23-03	WZ Cathodic Protection Improvements	\$190,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
23-05	WZ Demo Treatment Plant and new storage at 6M site	\$300,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
23-06	WZ RZ SCADA Phase 3	\$0	\$0	\$134,000	\$0	\$0	\$0	\$0	\$0
23-07	WZ 6M Reservoir - Pipeline and Vault Improvements	\$300,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
23-08	Skid Steer Trailer	\$9,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Future Projects	\$0	\$0	\$0	\$0	\$0	\$980,876	\$980,876	\$980,876
	Total - Uninflated	\$3,765,173	\$684,173	\$648,567	\$328,000	\$328,000	\$980,876	\$980,876	\$980,876
	Total - Inflated	\$3,765,173	\$704,698	\$688,065	\$358,414	\$369,167	\$1,137,104	\$1,171,217	\$1,206,353

APPENDIX E:

**Detailed Sewer Capital
Improvement Projects**



Proj. No.	Project	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
21-03	System Relocations / Pipeline Replacement	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000	\$0	\$0	\$0
21-13	CIPP	\$300,000	\$200,000	\$200,000	\$200,000	\$200,000	\$0	\$0	\$0
21-14	Sewer Replacement	\$150,000	\$100,000	\$100,000	\$100,000	\$100,000	\$0	\$0	\$0
21-17	Manhole Rehabilitation/Replacement	\$125,000	\$100,000	\$100,000	\$100,000	\$100,000	\$0	\$0	\$0
21-18	Manhole Additions, Raising, Frames & Covers	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$0	\$0	\$0
21-19	Septic System Conversions	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
21-20	Browning Rehabilitation	\$9,000,000	\$1,000,000	\$0	\$0	\$0	\$0	\$0	\$0
21-21	Backwater Valve Program	\$20,000	\$15,000	\$10,000	\$10,000	\$10,000	\$0	\$0	\$0
21-24	Forklift	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
21-25	Arrow Board	\$10,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
21-26	Smart Covers	\$12,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0
21-28	Sedaru Upgrades	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
21-29	AWIA Project	\$33,333	\$0	\$0	\$0	\$0	\$0	\$0	\$0
21-30	UWMP Update	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
21-34	Truck for Field Ops	\$35,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
21-45	SCADA System Improvements	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
22-01	Financial Software and Implementation	\$37,333	\$0	\$0	\$0	\$0	\$0	\$0	\$0
22-05	CCTV Truck	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
22-07	Confined Space Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
22-08	Bypass Pump	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
22-20	Truck mounted vacuum	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
22-23	Skid Steer Tractor	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
22-26	Update Sewer Standards	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
22-33	District Headquarters	\$1,417,815	\$1,417,815	\$742,665	\$0	\$0	\$0	\$0	\$0
22-38	Sewer Push Camera	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
22-45	Hydrant Replacements	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
22-48	Service Lateral Replacement	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
22-52	Rate Study	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
23-01	Dump truck for field ops	\$33,333	\$0	\$0	\$0	\$0	\$0	\$0	\$0
23-06	WZ RZ SCADA Phase 3	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
23-08	Skid Steer Trailer	\$6,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Sewer CIP Placeholder	\$0	\$0	\$0	\$750,000	\$750,000	\$0	\$0	\$0
	Future Projects	\$0	\$0	\$0	\$0	\$0	\$3,398,547	\$3,398,547	\$3,398,547
Total - Uninflated		\$11,520,315	\$3,172,815	\$1,492,665	\$1,500,000	\$1,500,000	\$3,398,547	\$3,398,547	\$3,398,547
Total - Inflated		\$11,520,315	\$3,267,999	\$1,583,568	\$1,639,091	\$1,688,263	\$3,939,847	\$4,058,043	\$4,179,784