

JURUPA COMMUNITY SERVICES DISTRICT

2024 Water and Wastewater Rate Study

Draft Report

February 13th, 2024

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JURUPA COMMUNITY SERVICES DISTRICT 2024 WATER AND WASTEWATER RATE STUDY

DRAFT REPORT

Prepared for:

Jurupa Community Services District
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Jurupa Valley, CA 91752

Prepared by:

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RDN Project Number 359

DRAFT

February 13th, 2024



Steven Popelar

Director of Finance & Administration
Jurupa Community Services District
11201 Harrel Street
Jurupa Valley, CA 91752

Subject: 2024 Water and Wastewater Rate Study

Dear Mr. Popelar,

Robert D. Niehaus, Inc. is pleased to provide this Financial Planning, Revenue Requirements, Cost of Service, and Rate Setting Analysis report to the Jurupa Community Services District. This rate study includes a financial plan to determine the revenue requirements for the next five years and a comprehensive review of the District's current rates based on the cost of service principles. This report outlines the approach, methodology, findings, and recommendations of the study. Each of the components of this study has enhanced the equitability of the rates we propose.

The proposed rates were developed utilizing the District's customer usage data, billing records, accounting, operating and management records, capital plans, and reserve policies. Based on the District provided data, key assumptions were made for the study using appropriate resources and our econometric and financial expertise. We are confident that the rates proposed in this report are cost-based and are fully compliant with Proposition 218 and other legal requirements.

It has been an absolute pleasure and honor to work with your District. We thank you, Ms. Martinez, Ms. Tristan, and Mr. Davis and all staff who helped complete this report.

Respectfully submitted,

A handwritten signature in blue ink that reads "Robert D. Niehaus".

Robert D. Niehaus, Ph.D.

Managing Director/Principal Economist - RDN

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Economics

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EXECUTIVE SUMMARY

1.1 Background

The Jurupa Community Services District (District) provides water, non-potable water, and wastewater collection services to approximately 33,400 customers in Riverside County's Jurupa Valley and Eastvale. The District's primary source of water supply is local groundwater from the Chino Basin aquifer, supplemented by purchased water from the Chino Desalter Authority (CDA or "Desalter") and the Rubidoux Community Services District. In addition, the District provides non-potable irrigation water service to a select group of users. The District currently has 18 potable wells, 6 non-potable wells, 7 booster stations, and 16 reservoirs with 58 million gallons (MG) of storage capacity.

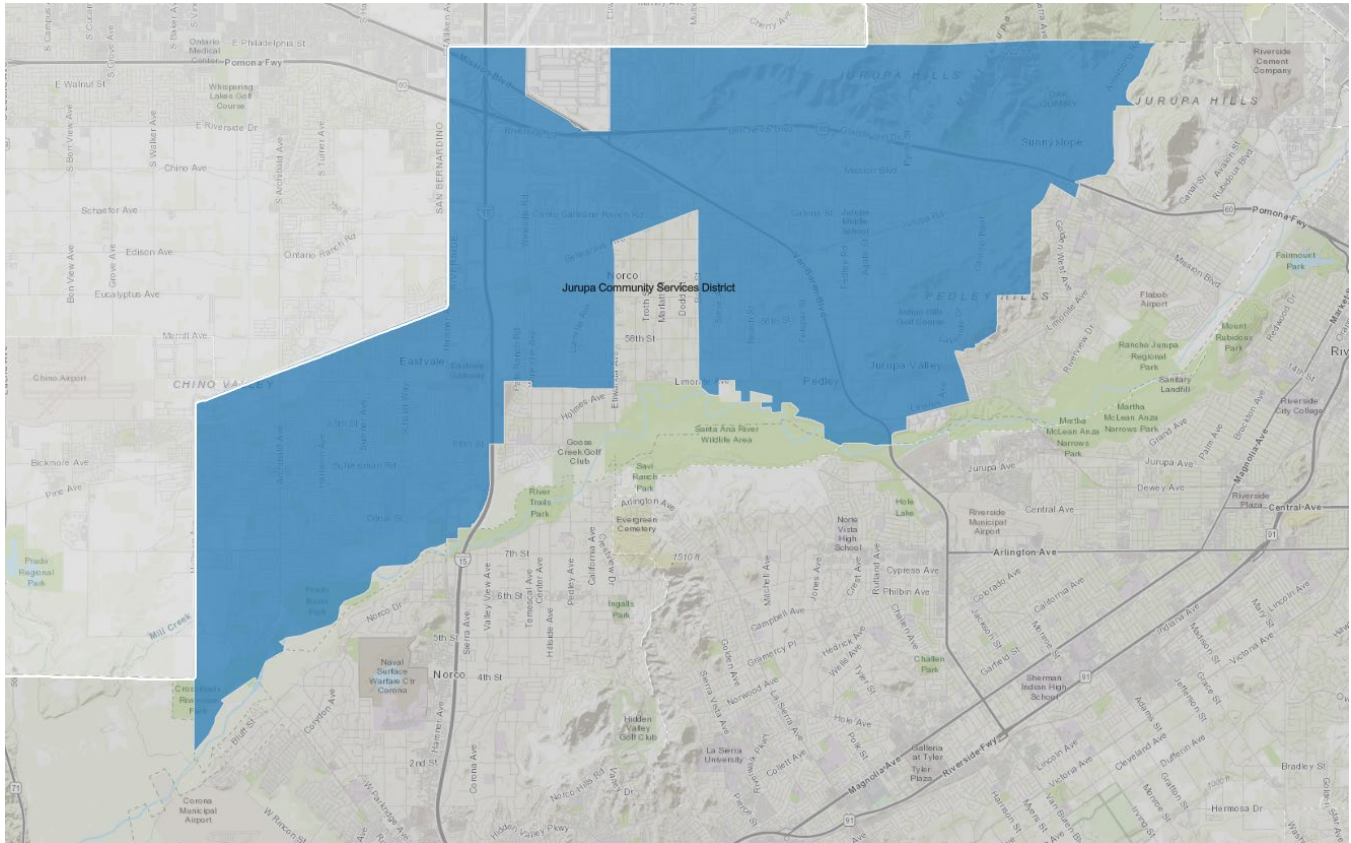
The District charges all water customer classes a monthly fixed meter charge. All classes other than single family residential customers are charged volumetric water rates based on a single block tier. Single family residential customers pay volumetric water rates based on a four tiered inclining block rate.

The District maintains a wastewater collection system with discharges directed and treated at one of three regional treatment plants in which the District has capacity rights. These treatment plants are: the City of Riverside (Riverside), the Western Riverside County Regional Wastewater Authority (WRCRWA), and the Orange County Sanitation District (OCSD) via the Inland Empire Brine Line (IEBL) and Western Municipal Water District (WMWD). The District's collection and trunk wastewater system includes 374 miles of pipe ranging in diameter from 4" to 48".

All non-industrial customers pay a monthly fixed service charge per equivalent dwelling unit (EDU). All non-industrial customers also pay a variable flow charge based on estimated wastewater flow generation, net of estimated irrigation water. While non-industrial customers are primarily served by the Riverside treatment plant or the WRCRWA treatment plant, these customers are not differentiated by treatment facility. Industrial customers, except IEBL customers, all pay the same monthly service charge per EDU as non-industrial customers. In addition, the flow rates for industrial customers who discharge wastewater to the IEBL are different from those who discharge to Riverside or WRCRWA. Customers discharging to Riverside or WRCRWA all pay a variable rate on estimated flow based on water consumption. Customers who discharge into the IEBL pay a share of the District's charges that it must pay to WMWD each year. This percent share is based on water or wastewater meter reading combined with wastewater strength sampling to represent the share of demand on the system.

Figure 1 shows the limits of the District JCSD in Blue.

Figure 1. Jurupa Community Services District Boundary



1.2 Purpose of Study

The purpose of this analysis is to conduct a rate study which evaluates the District's current rates and financial data and propose new rates, if necessary, that meet the District's financial and strategic goals.

The primary objectives of this Study include:

- Projecting revenues and expenses for a ten-year study period
- Proposing five-year revenue adjustments to fund the District's projected financial needs
- Proposing rates which do not overly impact customers
- Producing an administrative record which effectively summarizes all findings
- Supporting the District through the Proposition 218 process as necessary

1.3 Rate Recommendations and Proposed Rates

Water

- Adjusting rates annually by the recommended revenue adjustments of 5.0 percent per year
- Increasing the fixed proportion of rate collection
- Including a rate category for outside of District customers
- Combining all residential customers into single customer class
- Developing a recycled water rate for when the recycled water system comes online
- Proposing passthrough adjustments for when water cost inflation exceeds projections

Wastewater

- Adjusting rates annually by the recommended revenue adjustments of 3.0 percent per year

Current Water Rates

Currently, the District's water customers pay a monthly fixed charge based on the customer's meter size. Additionally, customers with a dedicated private fire connection pay a monthly fee for their fire connection. Customers also pay variable charges based on water use, which is billed per hundred cubic feet (hcf). Single family residential customers currently have a four tiered rate design where higher use level categories are billed at a higher rate based on the increasing cost of water for different water sources. All other customers are billed based on a single use tier, which assumes a blended water portfolio. Non-potable irrigation customers variable rates do not include the cost of treating source water. The current rates as described are displayed in **Table 1** and **Table 2**.

Table 1. Current Fixed Rates

Fixed Charges		
Customer Class	Meter Size	Monthly Fee
All Customers	5/8"	\$43.01
	3/4"	\$43.01
	1"	\$66.30
	1 1/2"	\$124.56
	2"	\$194.47
	3"	\$415.86
	4"	\$742.13
	6"	\$1,522.81
	8"	\$3,270.62
	10"	\$4,901.89
Fire Service	All Meters	\$35.96

Table 2. Current Variable Water Rates

Variable Charges		
Customer Class	Tier - Width	Unit Cost
All Customers	Tier 1 - 12 hcf	\$1.22
	Tier 2 - 8 hcf	\$3.03
	Tier 3 - 10 hcf	\$3.56
	Tier 4 - All Additional hcf	\$3.79
Multi-family Residential	All Use	\$2.22
Non-residential	All Use	\$2.22
Potable Irrigation	All Use	\$2.33
Non-potable Irrigation	All Use	\$1.51
Fire Hydrant	All Use	\$3.79

Proposed Rates

RDN proposes the following rate and revenue adjustments to accomplish the District’s goals of capital and reserve funding as well as maintaining debt service coverage ratios. **Table 3** shows the proposed water revenue adjustments for the five-year rate study period. To maintain the proposed financial plan, the District should raise water revenues by 5.0 percent each year of the study period. Additionally, the District should bill all residential customers based on the four tiered rate structure currently being billed to single family residential customers. Tier widths for each residential customer should be changed to reflect the current water use patterns of the new residential customer class. Furthermore, a new customer class was developed for customers who reside outside of the District’s service area. Out of District customers rely on the most expensive water source, desalter water, to ensure that service is uninterrupted even in times of drought. Out of District customer’s variable rate reflects this reliance on desalter water. The resulting rates form an equitable rate structure which is based on the actual cost to

provide service for each customer. Costs were allocated between all customers during the cost of service analysis. Changes in the District’s available water portfolio have realigned some of the costs for variable water rates. The rates for each meter size represent an equitable portion of the total cost of service for each class allocated the respective meter based on the calculations shown in the **Cost of Service Analysis**. The District will implement the fiscal year rates on January of each fiscal year. The rates which result from these adjustments are shown in **Table 4**.

Table 3. Proposed Revenue Adjustments FY 2024-25 to FY 2028-29

	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Recommended Adjustment	5.0%	5.0%	5.0%	5.0%	5.0%

Table 4. Proposed Rates for CY 2025 to CY 2029

Fixed Charges						
Customer Class	Meter Size	CY 2025	CY 2026	CY 2027	CY 2028	CY 2029
All Customers						
	5/8"	\$48.05	\$50.45	\$52.98	\$55.62	\$58.41
	3/4"	\$48.05	\$50.45	\$52.98	\$55.62	\$58.41
	1"	\$73.72	\$77.41	\$81.28	\$85.34	\$89.61
	1 1/2"	\$137.87	\$144.76	\$152.00	\$159.60	\$167.58
	2"	\$214.86	\$225.60	\$236.88	\$248.73	\$261.16
	3"	\$458.66	\$481.59	\$505.67	\$530.96	\$557.50
	4"	\$817.94	\$858.84	\$901.78	\$946.87	\$994.21
	6"	\$1,677.52	\$1,761.40	\$1,849.47	\$1,941.94	\$2,039.04
	8"	\$3,602.24	\$3,782.35	\$3,971.47	\$4,170.04	\$4,378.55
	10"	\$5,398.77	\$5,668.71	\$5,952.14	\$6,249.75	\$6,562.24
Fire Service	All Meters	\$33.71	\$35.40	\$37.17	\$39.02	\$40.97
Variable Charges						
Customer Class	Tier Width	CY 2025	CY 2026	CY 2027	CY 2028	CY 2029
Residential	per hcf					
Tier 1	0 to 11	\$1.15	\$1.21	\$1.27	\$1.33	\$1.40
Tier 2	12 to 17	\$2.44	\$2.56	\$2.69	\$2.82	\$2.96
Tier 3	18 to 26	\$3.64	\$3.82	\$4.02	\$4.22	\$4.43
Tier 4	27+	\$4.00	\$4.20	\$4.41	\$4.63	\$4.86
Non-residential	all hcf	\$2.12	\$2.23	\$2.34	\$2.45	\$2.58
Potable Irrigation	all hcf	\$2.46	\$2.58	\$2.71	\$2.84	\$2.98
Non-potable Irrigation	all hcf	\$1.50	\$1.58	\$1.65	\$1.74	\$1.82
Fire Hydrant	all hcf	\$4.00	\$4.20	\$4.41	\$4.63	\$4.86
Fire Service						
Out of District	all hcf	\$4.00	\$4.20	\$4.41	\$4.63	\$4.86

Proposed Rates (recycled water)

Recycled water rates were determined by summing the projected fixed and variable costs to produce recycled water when this option becomes available (FY 2026) less the projected revenue which would be collected from fixed charges in FY 2026. The resulting costs were divided by the projected recycled water use that year to determine a unit cost per hcf. **Table 5** shows the proposed recycled water variable rates for FY 2024-25 through FY 2028-29. All use will be billed per hcf at the rate shown.

Table 5. Proposed Recycled Water Rates for CY 2025 to CY 2029

Customer Class	Tier Width	CY 2025	CY 2026	CY 2027	CY 2028	CY 2029
Recycled	all hcf	-	\$2.03	\$2.10	\$2.20	\$2.31

Current Wastewater Rates

Currently, District Wastewater customers pay a fixed rate monthly based on their customer class. Each customer class, residential, institutional, and non-residential, except for IEBL customers, have the same fixed charge per Equivalent Dwelling Unit, \$26.69. An EDU is defined as 220 gallons per day of wastewater. Wastewater customers also pay variable charges based on monthly metered water use. Residential and institutional customers have a cap of 8 hcf per EDU applied to their water use each month. This cap is a proxy for indoor use and accounts for irrigation usage, which needs to be considered to determine the amount of wastewater generated. Anything over the 8 hcf per month cap is assumed to be attributed to outdoor irrigation use. Because most non-residential customers have an irrigation connection in addition to their regular account, non-residential customer’s water use is not capped which results in water use and wastewater generated being equivalent. The current rates as described are displayed in **Table 6** and **Table 7**.

Table 6. Current Fixed Rates

Fixed Charges	
Customer Class	Monthly Fee
Residential	\$26.69
Institutional	\$26.69
Non-Residential	\$26.69

Table 7. Current Variable Rates

Variable Charges		
Customer Class	Tier - Width	Unit Cost
Residential	per hcf up to 8	\$2.46
Institutional	per hcf up to 8	\$2.46
Non-Residential	All Use	\$2.46

Customers who are connected to the Inland Empire Brine Line have a rate structure which is based on the actual costs associated with wastewater treatment and transmission through the IEBL system. The IEBL rate structure was adopted in 2023¹. Monitored customers are billed a monthly fixed charge and variable rates based on their total flow and wastewater strength which are direct passthrough charges from the WMWD. Monitored flow is billed per million gallons (MG) and BOD (Bio-Oxygen Demand) and TSS (Total Suspended Solids) are billed by the pound (lb). Non-monitored customers pay a monthly fixed rate, then a commodity rate per hcf of water use. The Current rates for IEBL customers are shown in **Table 8**.

Table 8. Current IEBL Rates

IEBL Rates	Current Rates
Monitored Customers	\$23.74
Non-Monitored Customers	\$13.63
Treatment/Pipeline Monthly Charge	\$11.41
Non-Monitored Commodity Rate	\$3.10
Monitored WMWD Flow Charge	\$1,138.00
Monitored WMWD BOD Charge	\$0.3707
Monitored WMWD TSS Charge	\$0.5460

Proposed Rates

The recommended wastewater rates maintain the current rate structure and provide a revenue adjustment schedule designed to contribute to District reserves, fund considerable capital expenditure needs, and allow the District to maintain debt service coverage ratios. **Table 9** shows the proposed revenue adjustments for the study period. RDN, working with District staff, determined that an annual increase of 3.0 percent through the study period was necessary to maintain Wastewater fund balances. The resulting rates are shown in **Table 10** and **Table 11**.

Table 9. Proposed Revenue Adjustments FY 2024-25 to FY 2028-29

	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Recommended Adjustment	3.0%	3.0%	3.0%	3.0%	3.0%

¹ Inland Empire Brine Line Rate Design Study. 2023. Raftelis. Jurupa Community Services District.

Table 10. Proposed Fixed Wastewater Rates CY 2025 to CY 2029

Fixed Charges					
Customer Class	CY 2025	CY 2026	CY 2027	CY 2028	CY 2029
Residential	\$26.18	\$26.97	\$27.78	\$28.61	\$29.47
Institutional	\$26.18	\$26.97	\$27.78	\$28.61	\$29.47
Non-Residential	\$26.18	\$26.97	\$27.78	\$28.61	\$29.47

Table 11. Proposed Variable Wastewater Rates CY 2025 to CY 2029

Variable Charges						
Customer Class	Tier - Width	CY 2025	CY 2026	CY 2027	CY 2028	CY 2029
Residential	per hcf up to 8	\$2.70	\$2.78	\$2.86	\$2.95	\$3.04
Institutional	per hcf up to 8	\$2.70	\$2.78	\$2.86	\$2.95	\$3.04
Non-Residential	All Use	\$2.70	\$2.78	\$2.86	\$2.95	\$3.04

IEBL rates designed in the 2023 study and adopted in January 2024 are escalated based on projected expense inflation for each rate category. Administrative costs use the Overall expense escalation factor shown in **Table 13**, whereas the treatment related rates are escalated based on the Wastewater Treatment escalation factor. The proposed IEBL rates for the five year study period are shown in **Table 12**. Note that monitored IEBL customers also have a variable rate, but this rate is a direct passthrough of costs from the treatment facility to JCSD, thus these rates will be determined each year as the WMWD sets its treatment rates.

Table 12. Proposed IEBL Wastewater Rates CY 2025 to CY 2029

IEBL Rates	CY 2025	CY 2026	CY 2027	CY 2028	CY 2029
Monitored Customers	\$25.09	\$26.02	\$26.99	\$28.00	\$29.05
Non-Monitored Customers	\$14.50	\$15.04	\$15.61	\$16.19	\$16.79
Treatment/Pipeline Monthly Charge	\$12.37	\$13.01	\$13.66	\$14.34	\$15.06
Non-Monitored Commodity Rate (hcf)	\$3.25	\$3.42	\$3.59	\$3.77	\$3.95
Monitored WMWD Flow Charge (MG)	Beginning in FY 2024-25, Monitored Variable Charges for Flow , BOD and TSS will be adjusted annually to agree with WMWD Board adopted charges for Flow , BOD and TSS (typically based on fiscal year beginning July).				
Monitored WMWD BOD Charge (lb)					
Monitored WMWD TSS Charge (lb)					

Passthrough Charges

In developing its rates, the District carefully projected changes in costs as part of its Long-Range Financial Plan; however, there are significant uncertainties about the future availability and cost of water supplies and wastewater treatment costs involved. To ensure that there are sufficient revenues to provide safe water and wastewater services to our customers, the District proposes an implementation of a pass-through charge. If water purchase costs from any source increase more than 5.0 percent (or 4.0 percent for water purchased from the Rubidoux Community Services District), a pass-through adjustment will

apply to the Volumetric Charges set forth in the tables included in this report. Additionally, if wastewater treatment cost increases exceed the projected 5.0 percent for wastewater treatment services provided by the City of Riverside or the Western Riverside County Regional Wastewater Authority, or IEBL charges from WMWD, the additional costs will be passed directly through the Wastewater HCF Charge. In no event shall the pass-through charges exceed the estimated costs of providing the water or wastewater service.

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METHODOLOGY

2.1 General Methodology

The water and wastewater rates formulated in this study were developed using principles set forth by the American Water Works Association (AWWA). RDN rate-making practices incorporate methods described in the AWWA Manual 1 (M1)² for Water Systems the WEF Financing and Charges for Wastewater Systems³ wherever possible. **Figure 2** presents the steps taken to develop the District’s proposed rates.

Figure 2. Water and Wastewater Rate Study Process



- **Growth Projection:** project customer growth for the ten-year study period, FY 2023-2024 through FY 2033-34, using the District’s customers’ historical growth data. Forecast revenues for the study period based on the projected customer growth.
- **Financial Planning and Revenue Requirements:** develop a ten-year financial plan based on the projected revenues and annual costs which include both operating and capital expenses. The District’s target reserve level should also be considered as part of the financial planning. Based on the financial planning, revenue requirements are determined for each year of the study period.
- **Cost of Service:** evaluate the customer classifications and allocate costs based on their service requirements.
- **Rate Design:** design rates to equitably recover the rate revenue requirements from each customer.

² Principles of Water Rates, Fees, and Charges, Seventh Edition, Manual of Water Supply Practices, American Water Works Association

³ Financing and Charges for Wastewater Systems, WEF Manual of Practice Number 27, Water Environment Federation

2.2 Legal Considerations

This section of the report describes the legal framework that was considered in the development of the rates to ensure that the calculated cost of service rates provide a fair and equitable allocation of costs to the different customer classes.

California Constitution-Article XIII C (Proposition 26)

The voters in the State approved Proposition 26 on November 2, 2010. Proposition 26 amended Article XIII C of the State Constitution to expand the definition of “tax” to include “any levy, charge, or exaction of any kind imposed by a local government” with listed exceptions. By means of these exceptions, Article XIII C classifies several types of charges, in addition to property-related charges, that are not taxes, such as charges for specific services or benefits, regulatory charges and penalties.

Article XIII C’s definition of “tax” lists the following exceptions: (1) a charge imposed for a specific benefit conferred or privilege granted directly to the payer that is not provided to those not charged, and which does not exceed the reasonable costs to the local government of conferring the benefit or granting the privilege; (2) a charge imposed for a specific government service or product provided directly to the payer that is not provided to those not charged, and which does not exceed the reasonable costs to the local government of providing the service or product; (3) a charge imposed for the reasonable regulatory costs to a local government for issuing licenses and permits, performing investigations, inspections, and audits, enforcing agricultural marketing orders, and the administrative enforcement and adjudication thereof; (4) a charge imposed for entrance to or use of local government property, or the purchase, rental, or lease of local government property; (5) a fine, penalty, or other monetary charge imposed by the judicial branch of government or a local government, as a result of a violation of law; (6) a charge imposed as a condition of property development; and (7) assessments and property-related fees imposed in accordance with the provisions of Article XIII D.

Proposition 26 also provides that the local government bears the burden of proving by a preponderance of the evidence that a levy, charge, or other exaction is not a tax, that the amount is no more than necessary to cover the reasonable costs of the governmental activity, and that the manner in which those costs are allocated to a payer bear a fair or reasonable relationship to the payer’s burdens on, or benefits received from, the governmental activity. Like the proportionality requirements of Article XIII D, assessment of rates under these requirements, if applicable, would be supported by the cost of service approach.

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

In November 1996, California voters passed Proposition 218, the “Right to Vote on Taxes Act.” This constitutional amendment protects taxpayers by limiting the methods by which local governments can create or increase taxes, fees and charges without taxpayer consent. Between 2002 and 2017, California courts have ruled that fees associated with providing water services are “property-related” and thus under the jurisdiction of Prop 218. The principal requirements for fairness of the fees, as they relate to public water service, are as follows: Revenues derived from the fee or charge shall not exceed the funds required to provide the property related service. Revenues derived by the fee or charge shall not be used for any other purpose other than that for which the charge was imposed. The amount of the fee or charge imposed upon any parcel shall not exceed the proportional cost of service attributable to the parcel. Reliance by an agency on any parcel map, including, but not limited to, an assessor’s parcel map, may be considered a significant factor in determining whether a fee or charge is imposed as an incident of property ownership for purposes of this article.

The rates developed in this report use a methodology to establish an equitable system of charges that recovers the cost of providing service and fairly apportion costs to each customer as required by Proposition 218.

2.3 Key Assumptions

A test year, FY 2024-25, was selected for which costs are to be analyzed and rates to be established for this study. The financial plan was built for the next ten years, including the five-year study period FY 2024-25 through FY 2028-29 with a detailed revenue adjustment plan. The District’s fiscal year starts on July 1 and ends on June 30.

Escalation Factors

The financial plan was built based on an assumption in the projected escalation of revenues and expenses associated with both operations and maintenance (O&M) and capital improvement projects (CIPs). Record inflation has caused costs to increase at a historic rate over the last few years. Escalation factors were calculated for 20 independent variables using historical Consumer Price Index (CPI)⁴ data from Los Angeles, CA, between the year 2000 and the most current calendar year, and projections by the California Department of Transportation (CADOT)⁵ and the California Department of Finance (CADO)⁶. Construction costs were determined using a 5-year average building cost index (BCI) for the

⁴ Bureau of Labor Statistics (2023) *Consumer Price Indices 2000-2021 Los Angeles – Long Beach – Anaheim, Not Seasonally Adjusted*.

⁵ California Department of Transportation (2023) *Monthly CPI for transportation, 20 Year Average*.

⁶ California Department of Finance (2023) *Monthly CPI, 20 Year Average*.

Los Angeles area published by Engineering News Record (ENR)⁷. Escalation factors used in this study are shown in **Table 13**. Each water source used in the study has an independent escalation factor based on input provided by District staff. This is also true of wastewater treatment costs. This study assumes that the current record inflation levels will recede and return to more normal levels in future years. The annual inflation for the water utility during the study period averages 4.8 percent per year. The annual inflation for the Wastewater utility averages 4.5 percent per year. Non-recurring expenses (one-time expenses) expenses are not escalated. The Overall escalation factor is based on the Bureau of Labor Statistics All Items Consumer Price Index for the Los Angeles area.

Table 13. Expense Escalation Factors

Category	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Payroll	6.0%	6.0%	6.0%	6.0%	6.0%
Other Employee	6.0%	6.0%	6.0%	6.0%	6.0%
Utilities	4.7%	4.7%	4.7%	4.7%	4.7%
Chemicals	5.3%	5.3%	5.3%	5.3%	5.3%
Water Treatment	5.0%	5.0%	5.0%	5.0%	5.0%
Wastewater Treatment	8.5%	5.2%	5.0%	5.0%	5.0%
Source Water CDA	5.0%	5.0%	5.0%	5.0%	5.0%
Source Water RCSD	4.0%	4.0%	4.0%	4.0%	4.0%
Source Water Wells	5.0%	5.0%	5.0%	5.0%	5.0%
Source Water Etiwanda	5.0%	5.0%	5.0%	5.0%	5.0%
Source Water Western CDA	5.0%	5.0%	5.0%	5.0%	5.0%
Source Water Well 13	5.0%	5.0%	5.0%	5.0%	5.0%
Source Water RTIXP	5.0%	5.0%	5.0%	5.0%	5.0%
City of Riverside WWT	5.0%	5.0%	5.0%	5.0%	5.0%
WRCRWA WWT	5.0%	5.0%	5.0%	5.0%	5.0%
Fuel/Automobile	5.8%	3.5%	3.5%	3.5%	3.5%
Construction	5.6%	5.6%	4.1%	3.9%	3.9%
Insurance	5.0%	5.0%	5.0%	5.0%	5.0%
Overall	4.7%	3.7%	3.7%	3.7%	3.7%
Property Tax	4.1%	4.1%	4.1%	4.1%	4.1%

Customer Growth

All analyses performed during the study were based on an assumption of customer account growth. The analysis assumes that there will be approximately 1.2 percent annual customer growth based on historical growth reported in the United States Census American Community Surveys data. According to District staff, residential customers with a ¾” meter are expected to increase 1.5 percent per year based

⁷ Engineering News Record (2023) *Los Angeles Building Cost Index, Average Annual Change*.

on engineering estimates. Additionally, it was assumed that per account water use would remain stable over the study period.

Water

There are currently approximately 33,436 water meters connected to the District’s water system. At the end of ten years, it was projected that there would be 37,872 meters connected. A total of 2,142 new Water Service connections are projected to join the water system during the 5-year rate setting period, approximately 428 per year. **Figure 3** shows the annual water customer growth for the study period. **Table 14** shows the projected number of meters for all customer classes during the rate setting period.

Figure 3. Annual Water Customer Growth FY 2023-24 to FY 2033-34

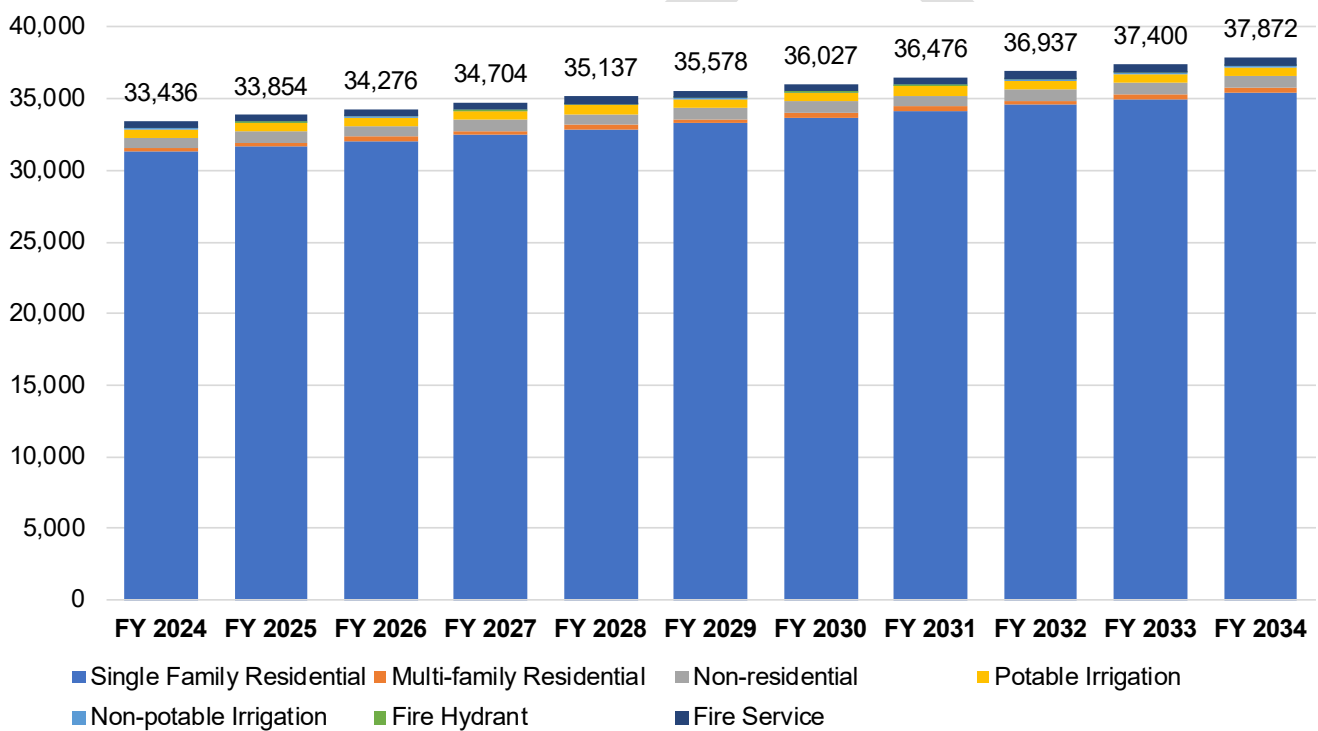


Table 14. Annual Meter Count FY 2023-24 to FY 2028-29

Meters	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
5/8"	3,448	3,447	3,447	3,445	3,444	3,443
3/4"	26,054	26,445	26,841	27,243	27,650	28,065
1"	2,505	2,505	2,506	2,506	2,507	2,507
1 1/2"	347	361	374	388	402	415
2"	495	495	496	497	498	499
3"	84	84	84	84	84	85
4"	25	26	26	27	28	28
6"	460	473	485	497	508	520
8"	12	12	12	12	12	12
10"	6	6	5	5	4	4
Total	33,436	33,854	34,276	34,704	35,137	35,578

Wastewater

During the study period, a total of 2,717 new wastewater EDUs are expected. Growth was projected for wastewater customers based on the 1.2 percent overall annual growth projected for water customer connections. **Figure 4** shows wastewater EDU growth between FY 2023-24 and FY 2033-24. **Table 15** shows the projected number of EDUs from each customer class during the rate setting period.

Figure 4. Annual Wastewater Customer Growth FY 2023-24 to FY 2033-34

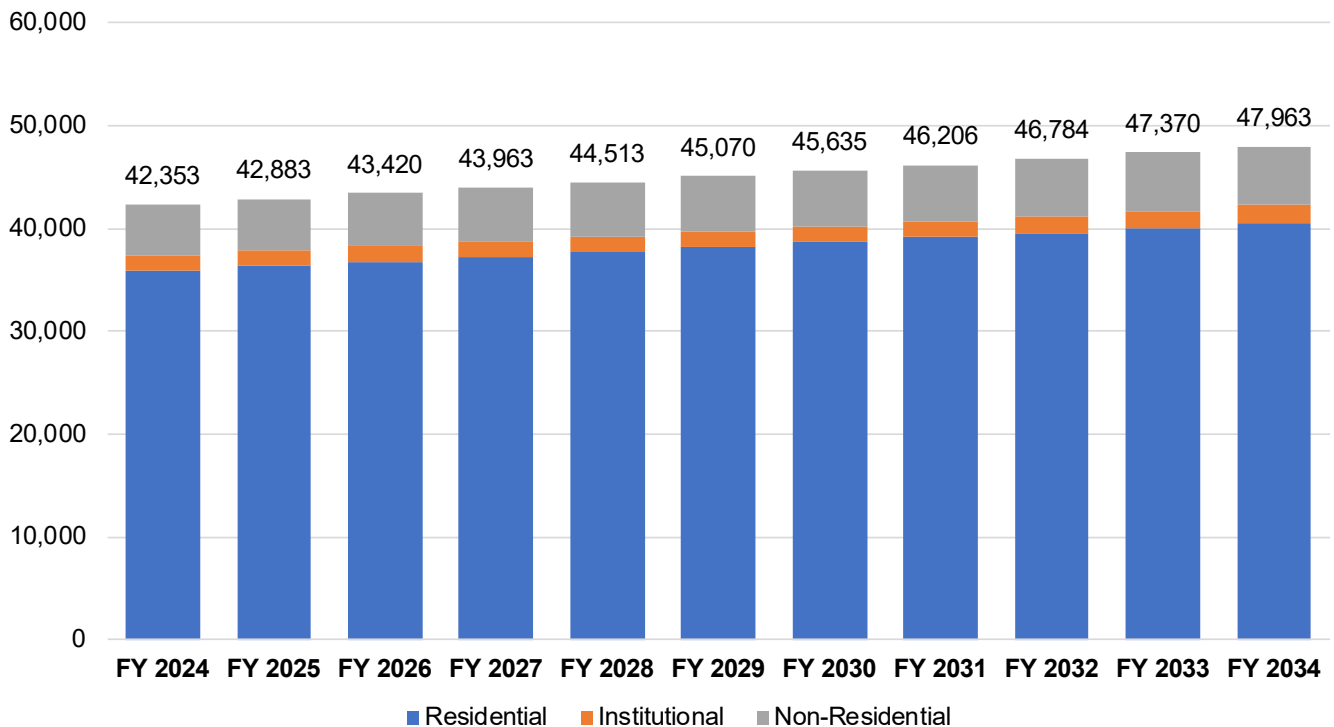


Table 15. Annual EDU Counts, FY 2023-24 to FY 2028-29

Customer Class	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Residential	35,915	36,357	36,805	37,258	37,717	38,182
Institutional	1,463	1,483	1,503	1,524	1,544	1,565
Non-Residential	4,975	5,043	5,111	5,181	5,252	5,323
Total	42,353	42,883	43,420	43,963	44,513	45,070

Reserve Policy

The District’s reserve policy includes four targeted reserves for the water fund and three for the wastewater fund. Additionally, the District maintains a Retiree Health Benefits Reserve (RHBR) of \$1 million which is split between the water, wastewater, and parks funds. The proposed financial plan includes one change to the District’s overall reserve policy, removing the \$1 million Retiree Health Benefits Reserve (“RHBR”. District staff determined that the RHBR was no longer necessary because the Board adopted a separate OPEB Funding policy designed to appropriate funds to pay the annual retiree health insurance premiums and established a yearly payment plan to reduce/eliminate the unfunded OPEB liability. All other policies will remain the same. The total water fund reserve target for FY 2024-25 is \$30.9 million. The total wastewater fund reserve target for FY 2024-25 is \$20.7 million. **Table 16** and **Table 17** show the reserve targets for the water and wastewater utilities for FY 2024-25, respectively, as well as the reserve policy for each individual reserve.

Table 16. Water Reserve Policies and FY 2024-25 target⁸

Reserve	Policy	FY 2025 Target
Bond Reserve	Total annual bond payment	\$1,710,421
Operating Reserve	4 months operating expenses	\$14,673,408
Capital Replacement Fund	Average 5 year capital	\$10,074,142
Rate Stabilization Fund	10% of annual operating expenses	\$4,402,022
Total Reserve FY 2025 Target		\$30,859,994

Table 17. Wastewater Reserve Policies and FY 2024-25 target

Reserve	Policy	FY 2025 Target
Bond Reserve	Total annual bond payment	\$2,704,851
Operating Reserve	4 months operating expenses	\$6,513,957
Capital Replacement Fund	Average 5 year capital	\$11,437,720
Total Reserve FY 2025 Target		\$20,656,528

⁸ Reserve Policies taken from 2023-2024 & 2024-2025 Jurupa Community Services District Operating & Capital Budget Financial Structure, Process & Policy, pgs. 41-43.

Equivalent Meter Size

When designing fixed monthly water service charges, the potential demand or capacity requirements placed on the water system can be measured by the size of installed meters which receive services from the system. The safe operating flow (or capacity) of a particular size of the meter is essentially the limiting factor in terms of the demand that can be exerted on the water system through the meter. The ratio of the safe operating capacity of various sizes of meters relative to the capacity of a base meter may be used to determine appropriate charges for the larger meter sizes⁹. The District considers all meters ¾" and below as the base meter capacity. The capacity ratio is calculated using the meter capacities in gallons per minute (gpm) provided in the AWWA M1 for meters larger than ¾ inch. **Table 18** shows the equivalent meter ratios used in this study.

Table 18. AWWA Equivalent Meter Ratios

Meter Size	Meter Ratio
5/8"	1.00
3/4"	1.00
1"	1.67
1 1/2"	3.33
2"	5.33
3"	11.67
4"	21.00
6"	43.33
8"	93.33
10"	140.00

Debt Service Coverage Ratios

The District's debt covenants require a certain ratio of net revenue in excess of operating expenses. Debt service coverage ratios are one of the main financial plan drivers of the initial revenue adjustment. When calculating debt service coverage requirements, the District must maintain a net revenue of 120 percent, or a 1.20 debt service coverage ratio (DSCR) to avoid facing technical default.

Cost Allocation Plan

A key part of the rate study process is evaluating the District's Central Services cost allocation. The District's current central services budget was used to allocate costs in **Table 19** through **Table 24**. RDN reviewed the current cost allocation model and found that it is robust and effectively allocates costs between the Water, Wastewater, and Parks Divisions. RDN offered a few minor adjustments to the model

⁹ From "Principles of Water Rates, Fees, and Charges" by American Water Works Association, 2017, Seventh Edition, Appendix B, p. 385.

to increase the overall precision. **Table 19** shows the District’s current cost allocation percentages based on the cost drivers.

Table 19. Current Cost Allocation Percentages by Cost Driver¹⁰

Driver	FY 2023-24			
	Water	Sewer	Parks	Total
Full Time Employees	51.98%	14.33%	33.69%	100.00%
Salaries	50.10%	19.23%	30.67%	100.00%
Customer Bills	51.26%	48.74%	0.00%	100.00%
CIP Value	76.38%	23.62%	0.00%	100.00%
Revenues	54.24%	28.62%	17.14%	100.00%
Expenses	52.16%	26.75%	21.08%	99.99%
Vehicle Value	49.79%	38.10%	12.11%	100.00%
User Charge Revenue	61.49%	33.21%	5.29%	99.99%
Revenue -W/S Only	65.64%	34.36%	0.00%	100.00%
Water Only	100.00%	0.00%	0.00%	100.00%

Table 20 shows the proposed cost allocation cost drivers. Newly proposed categories are shown in red. Percentages are slightly different in each category because they are based on projections contained in RDN’s financial model. For example, there has been a slight shift in the operating revenues and expenses for each utility since the previous allocation plan was completed, numbers which were further refined through the study process.

Table 20. Proposed Cost Allocation Percentages by Cost Driver¹¹

Driver	FY 2023-24			
	Water	Sewer	Parks	Total
Full Time Employees	51.95%	14.37%	33.68%	100.00%
Salaries	48.55%	15.30%	36.15%	100.00%
Customer Bills	51.35%	48.65%	0.00%	100.00%
CIP Value	76.78%	23.22%	0.00%	100.00%
Revenues	57.28%	28.71%	14.01%	100.00%
Expenses	54.28%	26.89%	18.83%	100.00%
Vehicle Value	52.56%	35.74%	11.70%	100.00%
User Charge Revenue	63.82%	31.87%	4.31%	100.00%
Revenue -W/S Only	66.69%	33.31%	0.00%	100.00%
Water Only	100.00%	0.00%	0.00%	100.00%
Total Assets	46.24%	38.98%	14.78%	100.00%
Water/Sewer Assets	54.26%	45.74%	0.00%	100.00%
Devises	43.28%	23.38%	33.33%	100.00%

¹⁰ Based on District’s current cost allocation model

¹¹ All values derived from District provided financial data including: billing records, budget, capital plan, and asset values

The current cost drivers for each department and program are shown in **Table 21**. The current cost allocation based on the current cost drivers are shown in **Table 22**.

Table 21. Current Central Services Cost Drivers

Department	Cost Driver
Board GM Services	User Charge Revenue
Finance and Administration	User Charge Revenue
Information Technology	User Charge Revenue
Record Retention	User Charge Revenue
Human Resources	Full Time Employees
Customer Service	Customer Bills
Engineering	CIP Value
Program	Cost Driver
Safety	User Charge Revenue
Fleet Maintenance	Vehicle Value
Community Affairs	User Charge Revenue
Legislative Affairs	User Charge Revenue
Facilities Maintenance	Revenue - W/S Only
Conservation	Water Only
Planning	Revenue - W/S Only
SCADA Maintenance	Revenue - W/S Only

Table 22. Current Central Services Cost Allocation

Department	Water	Sewer	Parks	Total
Board GM Services	\$912,550	\$471,509	\$66,737	\$1,450,795
Finance and Administration	\$1,910,608	\$988,205	\$140,283	\$3,039,095
Information Technology	\$1,332,694	\$692,317	\$65,461	\$2,090,472
Record Retention	\$203,357	\$105,296	\$14,995	\$323,648
Human Resources	\$441,997	\$125,396	\$321,937	\$889,330
Customer Service	\$1,817,017	\$1,728,779	\$0	\$3,545,796
Engineering	\$1,764,347	\$545,022	\$0	\$2,309,368
Program	Water	Sewer	Parks	Total
Safety	\$285,275	\$154,003	\$24,584	\$463,862
Fleet Maintenance	\$475,463	\$363,760	\$115,527	\$954,750
Community Affairs	\$549,006	\$296,374	\$47,313	\$892,694
Legislative Affairs	\$165,084	\$89,119	\$14,227	\$268,430
Facilities Maintenance	\$947,162	\$496,664	\$0	\$1,443,826
Conservation	\$753,262	\$0	\$0	\$753,262
Planning	\$1,035,824	\$543,176	\$0	\$1,579,000
SCADA Maintenance	\$561,937	\$294,675	\$0	\$856,612
Total	\$13,155,583	\$6,894,293	\$811,064	\$20,860,940
	63.1%	33.0%	3.9%	

The proposed cost drivers for each department and program are shown in **Table 23**. The proposed cost allocation based on the proposed cost drivers are shown in **Table 24**. Under the proposed plan, there is a slight shift of costs from the Water and Parks Division to the Wastewater Division. The changes shown

include shifting the cost category of Facilities Maintenance and SCADA Maintenance from the “Revenue-W/S Only” to being based on current asset values as asset values were determined to be a better rationale for allocating facilities and SCADA based costs.

Table 23. Proposed Central Services Cost Drivers

Department	Cost Driver
Board GM Services	User Charge Revenue
Finance and Administration	User Charge Revenue
Information Technology	User Charge Revenue
Record Retention	User Charge Revenue
Human Resources	Full Time Employees
Customer Service	Customer Bills
Engineering	CIP Value
Program	Cost Driver
Safety	User Charge Revenue
Fleet Maintenance	Vehicle Value
Community Affairs	User Charge Revenue
Legislative Affairs	User Charge Revenue
Facilities Maintenance	Water/Sewer Assets
Conservation	Water Only
Planning	Revenue - W/S Only
SCADA Maintenance	Water/Sewer Assets

Table 24. Proposed Central Services Cost Allocation

Department	Water	Sewer	Parks	Total
Board GM Services	\$925,863	\$462,432	\$62,500	\$1,450,795
Finance and Administration	\$1,939,479	\$968,693	\$130,923	\$3,039,095
Information Technology	\$1,334,090	\$666,326	\$90,057	\$2,090,472
Record Retention	\$206,545	\$103,161	\$13,943	\$323,648
Human Resources	\$462,013	\$127,830	\$299,487	\$889,330
Customer Service	\$1,820,652	\$1,725,144	\$0	\$3,545,796
Engineering	\$1,777,470	\$531,899	\$0	\$2,309,368
Program	Water	Sewer	Parks	Total
Safety	\$296,025	\$147,853	\$19,983	\$463,861
Fleet Maintenance	\$501,772	\$341,229	\$111,748	\$954,750
Community Affairs	\$569,696	\$284,541	\$38,457	\$892,694
Legislative Affairs	\$171,306	\$85,560	\$11,564	\$268,430
Facilities Maintenance	\$783,397	\$660,429	\$0	\$1,443,826
Conservation	\$753,262	\$0	\$0	\$753,262
Planning	\$1,053,045	\$525,955	\$0	\$1,579,000
SCADA Maintenance	\$464,784	\$391,828	\$0	\$856,612
Total	\$13,059,400	\$7,022,880	\$778,661	\$20,860,940
	62.6%	33.7%	3.7%	

WATER UTILITY

3.1 Financial Plan

RDN built a 10-year financial model for the water utility to meet the District’s long-term financial goals.

Demand Projections

Using historical billing records, RDN first derived aggregate usage levels to project water demand. Next, we calculated per account water usage for each customer by dividing the aggregate usage by the number of accounts. RDN assumed constant per account usage over the study period. This assumption was introduced to ensure that forecasted deviation in the wake of the Covid-19 pandemic is conservative. Finally, the forecast number of accounts and per-account usage were multiplied to estimate aggregate use by customer class. **Figure 5** shows the District’s total water demand projected for the next ten years.

Figure 5. Annual Aggregate Water Use, FY 2023-24 to FY 2033-24

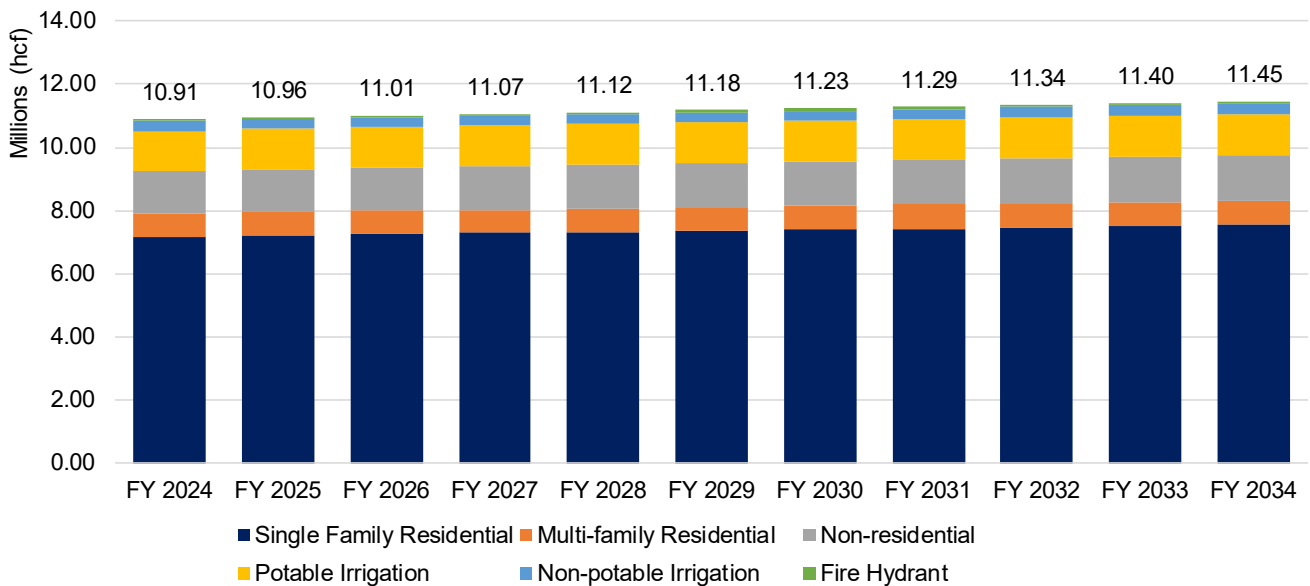


Table 25 show the annual water use projection by customer class for the rate setting period.

Table 25. Annual Water Use by Customer Class, FY 2023-24 to FY 2028-29¹²

Customer Class	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Single Family Residential	7,180,060	7,215,960	7,252,040	7,288,300	7,324,742	7,361,366
Multi-family Residential	728,334	731,976	735,636	739,314	743,011	746,726
Non-residential	1,359,516	1,366,313	1,373,145	1,380,011	1,386,911	1,393,845
Potable Irrigation	1,259,227	1,265,523	1,271,851	1,278,210	1,284,601	1,291,024
Non-potable Irrigation	308,126	309,667	311,215	312,771	314,335	315,907
Fire Hydrant	70,189	69,057	69,057	69,057	67,925	67,925
Total	10,905,453	10,958,497	11,012,944	11,067,664	11,121,525	11,176,793

Revenues

Based on the account growth and water demand projections, RDN forecasts revenues generated from customer rates using the current water rates for the study period, which total approximately \$44.3 to \$46.5 million annually. Other operating income and non-operating revenue are estimated to provide supplemental revenue each year. The significant fluctuation in non-operating revenues occurs due the allocation of \$15 million in settlement revenue in FY 2024-25 and FY 2025-26 as well as an increase in property tax revenue of approximately \$3.0 million a year to account for water R&R activities in the Jurupa Valley region of the service area. **Table 26** shows the projected non-operating revenue for the water utility by source for FY 2023-24 to FY 2028-29.

Table 26. Annual Non-Operating Revenue by Source, FY 2023-24 to FY 2028-29

Non-Operating Revenue	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Tax Income	\$0	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000
Interest Income	\$1,552,508	\$1,583,558	\$1,615,229	\$1,647,534	\$1,680,485	\$1,714,094
Settlement Income	\$0	\$8,000,000	\$7,000,000	\$0	\$0	\$0
Other Non-Operating	\$133,781	\$138,086	\$142,530	\$147,116	\$151,850	\$156,737
Total	\$1,686,289	\$12,721,644	\$11,757,759	\$4,794,650	\$4,832,335	\$4,870,831

The system’s total revenue for the study period is estimated to be approximately \$47.1 to \$60.1 million annually under the status quo rate schedule. **Table 27** shows the projected revenue flow for the study period (FY 2023-24 – FY 2028-29) without any revenue adjustments, projections are based on water use and customer growth projections as well as other operating and non-operating revenue estimates provided by District staff.

¹² Use projections derived from historical monthly customer billing records and trends in water use

Table 27. Water Utility Operating Forecast, FY 2024 to FY 2028

	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Revenue from Rates						
Fixed Charges	\$20,502,747	\$21,061,728	\$21,252,719	\$21,514,677	\$21,685,078	\$21,948,392
Variable Charges	\$23,838,199	\$24,099,790	\$24,220,289	\$24,341,390	\$24,463,097	\$24,585,413
Rate Revenue Total	\$44,340,946	\$45,161,517	\$45,473,008	\$45,856,067	\$46,148,175	\$46,533,805
Other Operating Revenues	\$1,100,000	\$2,196,740	\$2,284,479	\$2,379,238	\$2,481,577	\$2,592,103
Non-operating Revenues*	\$1,686,289	\$12,721,644	\$11,757,759	\$4,794,650	\$4,832,335	\$4,870,831
Total	\$47,127,235	\$60,079,902	\$59,515,246	\$53,029,955	\$53,462,087	\$53,996,739

*The significant fluctuation in non-operating revenues occurs due the allocation of \$15 million in settlement revenue in FY 2024-25 and FY 2025-26 as well as an increase in property tax revenue of approximately \$3.0 million a year to account for water R&R activities in the Jurupa Valley region of the service area.

Operating and Maintenance (O&M) Expense

The water utility’s operating budget includes \$43.8 million in operating expenses for FY 2023-24. Operating expenses are only expected to increase approximately 0.6 percent in FY 2025 due to a change in water purchase costs because the District will no longer be purchasing Western CDA water. By the end of the five year rate setting period, total operating expenses are expected to reach \$56.4 million. Annual overall inflation for operating expenses for the ten year financial planning period is expected to average around 4.8 percent per year. The increase of water purchase costs in FY 2028-29 occurs because this is the projected completion year for the Etiwanda Pipeline, which will provide an additional water source. According to District staff, The Etiwanda pipeline is designed to provide an additional source water from MWD water via Rancho Cucamonga treatment desalter and ground water wells north of the District. This is designed for water source reliability and to provide additional future water supply for ultimate master plan build-out projections. It could offset less expensive water in the short term. **Table 28** shows projected operating expenses for the rate setting period by budget category.

Table 28. Operating Expenses by Expense Category, FY 2023-24 to FY 2028-29¹³

Expense Category	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Central Services Overhead	\$13,059,400	\$13,669,274	\$14,179,548	\$14,708,870	\$15,257,952	\$15,827,532
Water Administration	\$3,865,072	\$5,863,725	\$6,148,784	\$6,448,431	\$6,763,420	\$7,094,546
Water Purchases	\$18,211,786	\$15,403,485	\$16,159,107	\$16,951,927	\$17,783,783	\$22,485,837
Source of Supply	\$3,694,671	\$3,882,255	\$4,072,507	\$4,271,721	\$4,480,979	\$4,700,885
Pumping	\$597,839	\$628,826	\$660,626	\$694,072	\$729,250	\$766,253
Treatment	\$1,843,882	\$1,931,345	\$2,022,413	\$2,118,450	\$2,219,730	\$2,326,545
Transmission and Distribution	\$2,503,831	\$2,641,314	\$2,780,267	\$2,926,843	\$3,081,470	\$3,244,601
Total Operating	\$43,776,482	\$44,020,224	\$46,023,252	\$48,120,313	\$50,316,584	\$56,446,198

¹³ District staff provided current year operating expenses by category, projections are based on individual line-item inflationary factors shown in Table 13

Other Obligations

Other obligations included in the financial plan are capital improvement projects funded by PAYGO (Pay As You Go), debt service obligations, and reserve contributions made from rates.

Capital Improvement Projects

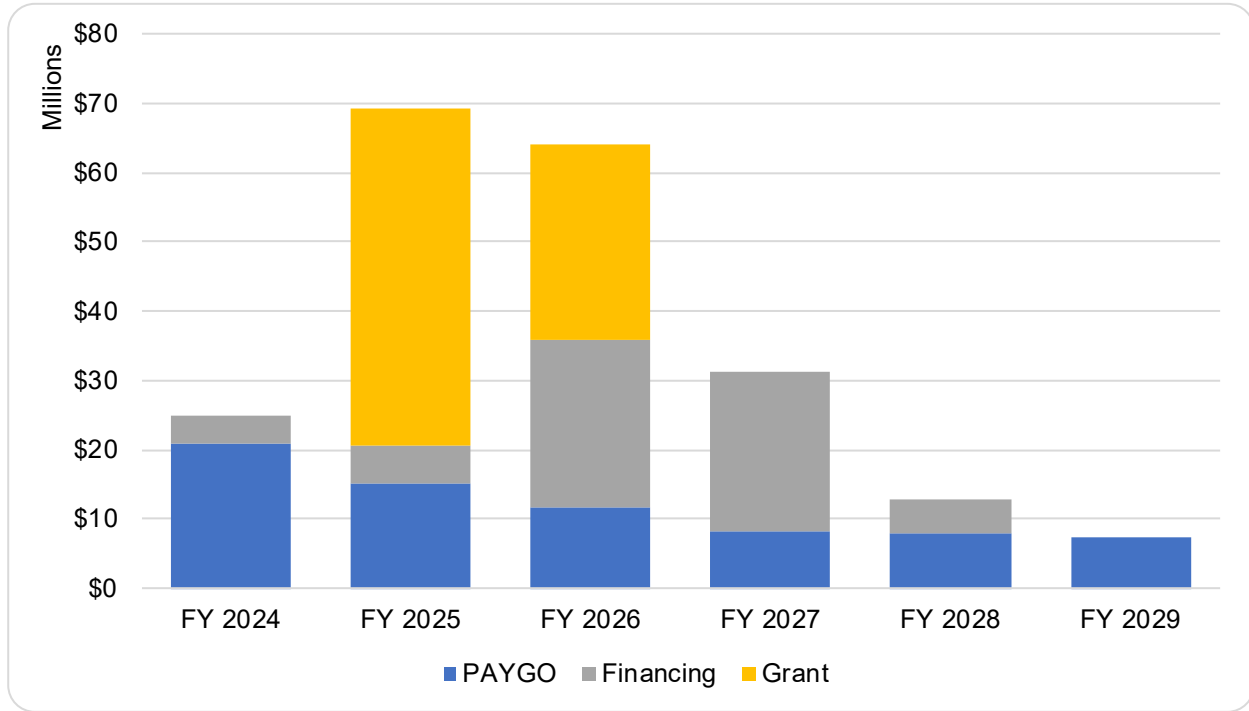
The District plans to spend an average of \$37.0 million a year on water rate related capital expenditures during the rate setting period. An additional \$16.6 million on average per year in water capital expenditures will be funded by capacity fees. During the 5-year rate setting period, District staff indicated that there are sufficient capacity fee revenues to fund capacity fee related capital projects, so they are not included in the rate analysis. **Table 29** shows the rate related capital expenditure by expenditure type. The District will use a variety of funding sources including grants, financing, and customer rates to accomplish the proposed capital plan. **Figure 6** shows the rate study capital plan by funding source, only PAYGO funded expenditure will impact customer rates.

Table 29. Rate Study CIP Expenses by Expense Type, FY 2023-24 to FY 2028-29¹⁴

CIP Type	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Mains	\$6,160,000	\$4,023,000	\$3,973,000	\$1,900,000	\$1,900,000	\$2,374,000
Distribution	\$2,717,741	\$2,338,694	\$1,865,779	\$1,681,113	\$1,698,293	\$1,729,779
General	\$7,998,596	\$5,555,014	\$4,938,790	\$3,842,500	\$3,548,750	\$3,079,000
Meters	\$432,000	\$5,837,000	\$837,000	\$837,000	\$837,000	\$0
Source Water	\$5,838,000	\$49,300,000	\$52,400,000	\$23,000,000	\$5,000,000	\$75,000
Reservoir	\$1,922,000	\$2,300,000	\$200,000	\$0	\$0	\$0
Total Rate CIP	\$25,068,337	\$69,353,708	\$64,214,569	\$31,260,613	\$12,984,043	\$7,257,779

¹⁴ District's 10-year CIP budget was used for project cost, project type, and funding source

Figure 6. Rate Study CIP Expenses by Funding Source, FY 2023-24 to FY 2028-29



Debt Service and Coverage Ratios

The District’s debt service schedule totals between \$1.7 million and \$4.0 million a year during the study period. Current debt obligations include the Series B loan and the 2020 Rate Refunding Bond (RRB). Additionally, the District plans to issue two State Revolving Fund (SRF) Loans in FY 2026-27 and FY 2027-28 to fund growth related (capacity fee) capital projects. **Table 30** shows the annual debt service payments which are allocated to the water fund.

Table 30. Water Fund Debt Service Payments, FY 2023-24 to FY 2028-29¹⁵

Debt Obligation	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Series B	\$1,619,368	\$1,843,636	\$1,838,501	\$1,825,763	\$1,810,656	\$1,854,508
2020 RRB	\$538,400	\$295,400	\$296,800	\$297,800	\$293,500	\$293,900
2027 SRF	\$0	\$0	\$0	\$166,742	\$166,742	\$166,742
2028 SRF	\$0	\$0	\$0	\$0	\$2,108,598	\$2,108,598
Refund on COP BABS	(\$437,108)	(\$428,615)	(\$417,019)	(\$404,563)	(\$391,326)	(\$376,095)
Total Debt Service	\$1,720,660	\$1,710,421	\$1,718,283	\$1,885,742	\$3,988,170	\$4,047,653

The two SRF loans will be paid by capacity fees, but the annual payments are included in debt service coverage ratio calculations. **Table 31** shows the DSCR under the current finances detailed in the previous tables. To Derive the DSCR, net revenue is divided by the total debt service in each year.

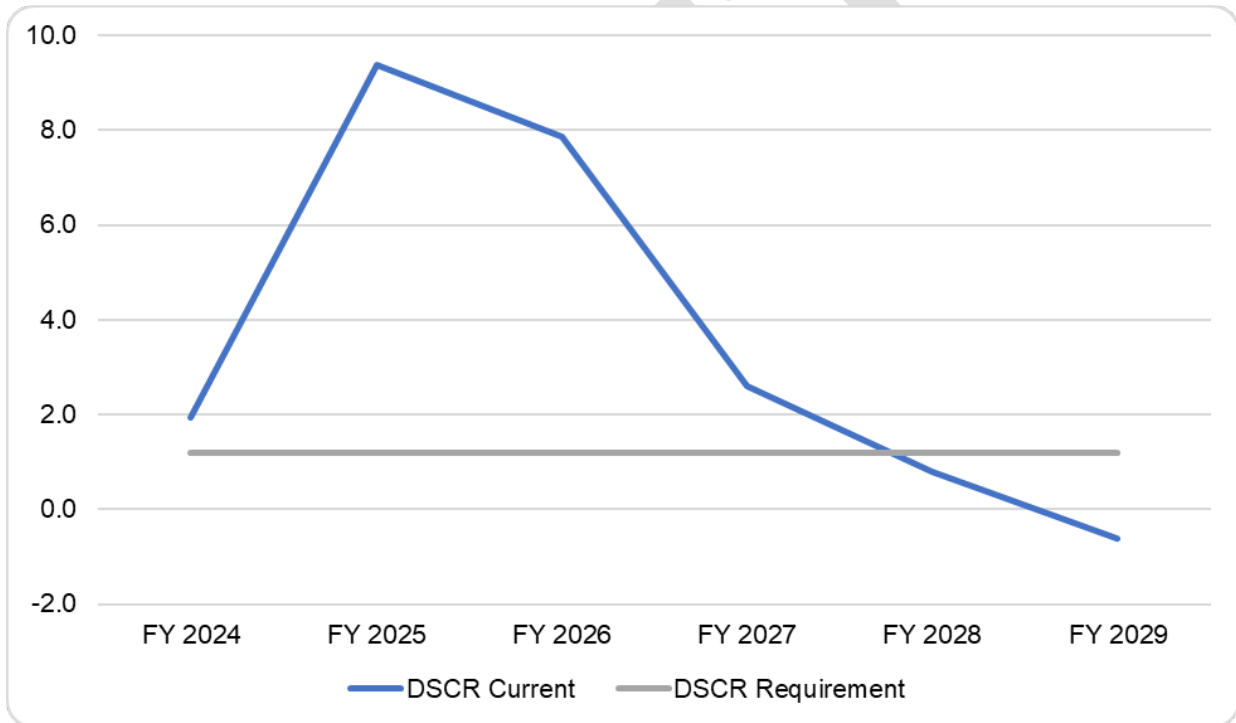
¹⁵ District staff provided details of all current and planned debt service obligations

Table 31. Water Debt Service Coverage Ratio Calculation, FY 2023-24 to FY 2028-29

Category	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Total Revenue	\$47,127,235	\$60,079,902	\$59,515,246	\$53,029,955	\$53,462,087	\$53,996,739
Operating Expense	\$43,776,482	\$44,020,224	\$46,023,252	\$48,120,313	\$50,316,584	\$56,446,198
Net Revenue	\$3,350,753	\$16,059,678	\$13,491,994	\$4,909,642	\$3,145,502	(\$2,449,460)
Debt Service Total	\$1,720,660	\$1,710,421	\$1,718,283	\$1,885,742	\$3,988,170	\$4,047,653
DSCR	1.95	9.39	7.85	2.60	0.79	-0.61

Under the current rates, the District will be in technical default beginning in FY 2027-28 as net revenues are not 120 percent greater than debt service payments. **Figure 7** shows the projected debt service coverage ratios based on the current financial plan.

Figure 7. Debt Service Coverage Ratio Under Current Rates, FY 2023-24 to FY 2028-29



Reserves

The District must maintain an appropriate reserve balance to ensure the day-to-day operation will continue during emergencies and guarantee the future stability of the system. The District’s financial goal is to build an appropriate level of cash reserves for each reserve fund included in the financial plan of this Study. Reserve targets for the water utility are described below:

- **Bond Reserve:** the total of one year’s worth of bond payments
- **Operating Reserve:** four months of operating expenses
- **Capital Replacement Fund:** average of five years upcoming capital expenditures

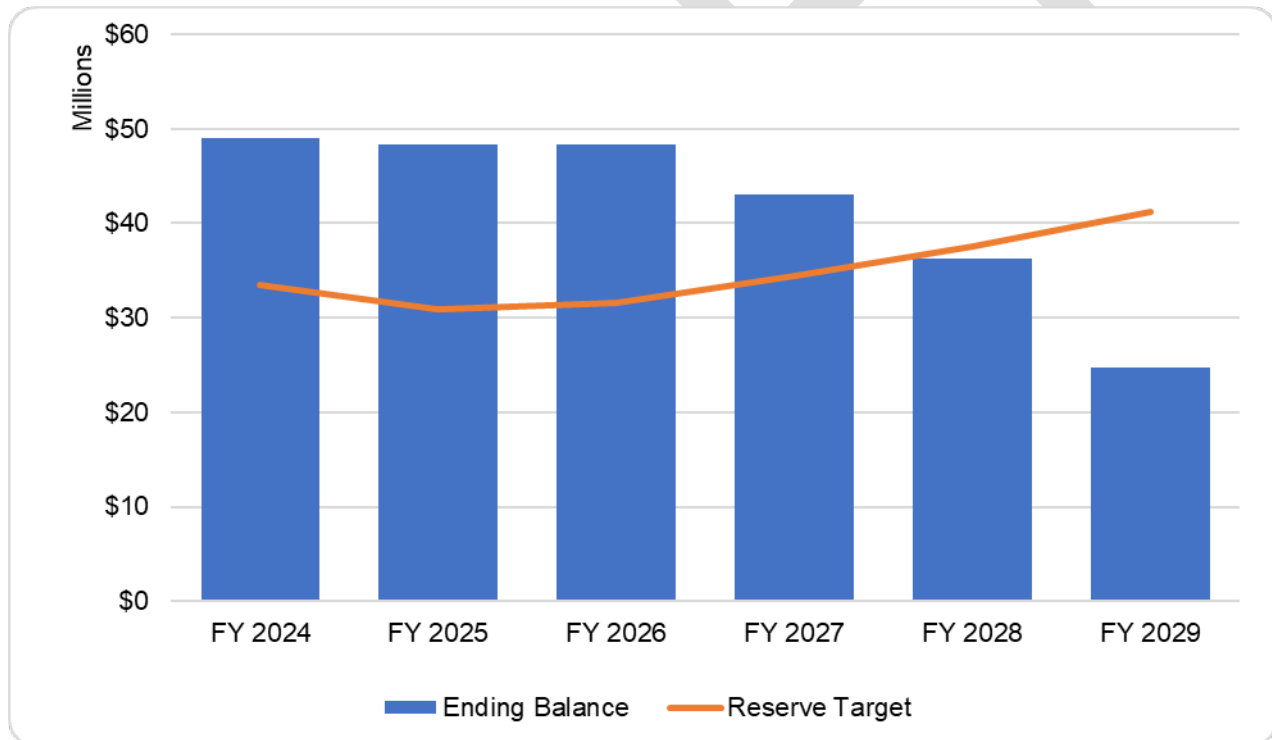
- **Rate Stabilization Fund:** 10 percent of one year of operating expenses

Reserve targets at the end of the study period reach \$41.2 million which does not include the Retiree Health Benefits Reserve Fund. **Table 32** shows the District’s reserve targets for FY 2023-24 through FY 2028-29 based on the current reserve policy. **Figure 8** displays the resulting cash balances versus the reserve target under the current rates. Reserve targets based on reserve policy shown in **Table 16** and operating, capital, and debt service totals shown in **Tables 28, 29, and 30**, respectively

Table 32. Water Reserve Targets, FY 2023-24 to FY 2028-29

Reserve Fund	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Bond Reserve	\$1,720,660	\$1,710,421	\$1,718,283	\$1,885,742	\$1,879,572	\$1,939,055
Operating Reserve	\$14,592,161	\$14,673,408	\$15,341,084	\$16,040,104	\$16,772,195	\$18,815,399
Capital Replacement Fund	\$12,796,254	\$10,074,142	\$9,910,235	\$11,744,076	\$13,814,588	\$14,773,494
Rate Stabilization Fund	\$4,377,648	\$4,402,022	\$4,602,325	\$4,812,031	\$5,031,658	\$5,644,620
Total	\$33,486,723	\$30,859,994	\$31,571,927	\$34,481,953	\$37,498,013	\$41,172,568

Figure 8. Water Cash Balances and Reserve Target With Current Rates, FY 2023-24 to FY 2028-29



Financial Plan

Based on the projected total revenue and necessary costs to be recovered during the study period, RDN built a financial plan that will generate sufficient revenues for the day-to-day operation and annual PAYGO and make appropriate contributions to reserves. The District currently has a projected ending cash balance of \$49.0 million in FY 2024. **Table 33** shows the status quo water pro forma with no revenue

adjustments and the resulting ending balances based on the revenues and expenses outlined in this section.

Table 33. Status Quo Financial Pro Forma for Jurupa Community Services District Water System, FY 2023-24 to FY 2028-29

Rate Increase	0.0%		0.0%		0.0%	
Rate Month Implemented						
	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Cash Position Opening Balance	\$ 68,268,410	\$ 49,030,166	\$ 48,325,715	\$ 48,284,857	\$ 43,048,145	\$ 36,330,032
Revenues						
Current Water Rate Revenue	\$ 44,340,946	\$ 45,161,517	\$ 45,473,008	\$ 45,856,067	\$ 46,148,175	\$ 46,533,805
Additional Water Rate Revenue	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Operating Revenue	\$ 1,100,000	\$ 2,196,740	\$ 2,284,479	\$ 2,379,238	\$ 2,481,577	\$ 2,592,103
Non-Operating Revenue	\$ 1,686,289	\$ 12,721,644	\$ 11,757,759	\$ 4,794,650	\$ 4,832,335	\$ 4,870,831
Total Revenues	\$ 47,127,235	\$ 60,079,902	\$ 59,515,246	\$ 53,029,955	\$ 53,462,087	\$ 53,996,739
Operating Expenses	\$ 43,776,482	\$ 44,020,224	\$ 46,023,252	\$ 48,120,313	\$ 50,316,584	\$ 56,446,198
Net Operating Revenues	\$ 3,350,753	\$ 16,059,678	\$ 13,491,994	\$ 4,909,642	\$ 3,145,502	\$ (2,449,460)
Current Rate Funded Debt Service	\$ 1,720,660	\$ 1,710,421	\$ 1,718,283	\$ 1,885,742	\$ 1,879,572	\$ 1,939,055
New Debt Service	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Rate Funded Debt Service	\$ 1,720,660	\$ 1,710,421	\$ 1,718,283	\$ 1,885,742	\$ 1,879,572	\$ 1,939,055
Total Operating and Debt Service	\$ 45,497,142	\$ 45,730,645	\$ 47,741,535	\$ 50,006,055	\$ 52,196,156	\$ 58,385,253
Total Operating and Debt Net Revenues	\$ 1,630,093	\$ 14,349,257	\$ 11,773,711	\$ 3,023,901	\$ 1,265,930	\$ (4,388,515)
Capital Expenditure	\$ 43,104,374	\$ 89,421,180	\$ 83,296,007	\$ 45,874,819	\$ 23,957,148	\$ 33,403,459
Debt Proceeds Current	\$ 4,200,000	\$ 5,500,000	\$ 24,175,000	\$ 23,000,000	\$ 5,000,000	\$ -
Capacity Fee	\$ 18,036,037	\$ 20,067,472	\$ 19,081,438	\$ 14,614,206	\$ 10,973,105	\$ 26,145,680
Grants	\$ -	\$ 48,800,000	\$ 28,225,000	\$ -	\$ -	\$ -
Cash	\$ 20,868,337	\$ 15,053,708	\$ 11,814,569	\$ 8,260,613	\$ 7,984,043	\$ 7,257,779
Net Income	\$ (19,238,244)	\$ (704,451)	\$ (40,857)	\$ (5,236,712)	\$ (6,718,113)	\$ (11,646,293)
Ending Balance	\$49,030,166	\$48,325,715	\$48,284,857	\$43,048,145	\$36,330,032	\$24,683,738
Reserve Target	\$34,112,745	\$31,486,015	\$32,197,949	\$35,107,975	\$38,124,035	\$41,798,590

Table 34 shows the proposed water pro forma for the study period with the recommended revenue adjustments per year. All revenue adjustments will occur in January of the Fiscal Year.

Table 34. Proposed Financial Pro Forma for Jurupa Community Services District Water System, FY 2023-24 to FY 2028-29

Rate Increase	5.0%		5.0%		5.0%	
Rate Month Implemented	January	January	January	January	January	January
	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Cash Position Opening Balance	\$ 68,268,410	\$ 49,030,166	\$ 49,454,753	\$ 52,881,212	\$ 53,608,654	\$ 55,500,204
Revenues						
Current Water Rate Revenue	\$ 44,340,946	\$ 45,161,517	\$ 45,473,008	\$ 45,856,067	\$ 46,148,175	\$ 46,533,805
Additional Water Rate Revenue	\$ -	\$ 1,129,038	\$ 3,467,317	\$ 5,964,155	\$ 8,609,663	\$ 11,442,379
Other Operating Revenue	\$ 1,100,000	\$ 2,196,740	\$ 2,284,479	\$ 2,379,238	\$ 2,481,577	\$ 2,592,103
Non-Operating Revenue	\$ 1,686,289	\$ 12,721,644	\$ 11,757,759	\$ 4,794,650	\$ 4,832,335	\$ 4,870,831
Total Revenues	\$ 47,127,235	\$ 61,208,940	\$ 62,982,563	\$ 58,994,110	\$ 62,071,750	\$ 65,439,118
Operating Expenses	\$ 43,776,482	\$ 44,020,224	\$ 46,023,252	\$ 48,120,313	\$ 50,316,584	\$ 56,446,198
Net Operating Revenues	\$ 3,350,753	\$ 17,188,716	\$ 16,959,311	\$ 10,873,797	\$ 11,755,166	\$ 8,992,919
Current Rate Funded Debt Service	\$ 1,720,660	\$ 1,710,421	\$ 1,718,283	\$ 1,885,742	\$ 1,879,572	\$ 1,939,055
New Debt Service	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Debt Service	\$ 1,720,660	\$ 1,710,421	\$ 1,718,283	\$ 1,885,742	\$ 1,879,572	\$ 1,939,055
Total Operating and Debt Service	\$ 45,497,142	\$ 45,730,645	\$ 47,741,535	\$ 50,006,055	\$ 52,196,156	\$ 58,385,253
Net Revenues	\$ 1,630,093	\$ 15,478,295	\$ 15,241,028	\$ 8,988,055	\$ 9,875,593	\$ 7,053,864
Capital Expenditure	\$ 43,104,374	\$ 89,421,180	\$ 83,296,007	\$ 45,874,819	\$ 23,957,148	\$ 33,403,459
Debt Proceeds Current	\$ 4,200,000	\$ 5,500,000	\$ 24,175,000	\$ 23,000,000	\$ 5,000,000	\$ -
Capacity Fee	\$ 18,036,037	\$ 20,067,472	\$ 19,081,438	\$ 14,614,206	\$ 10,973,105	\$ 26,145,680
Grants	\$ -	\$ 48,800,000	\$ 28,225,000	\$ -	\$ -	\$ -
Cash	\$ 20,868,337	\$ 15,053,708	\$ 11,814,569	\$ 8,260,613	\$ 7,984,043	\$ 7,257,779
Net Income	\$ (19,238,244)	\$ 424,587	\$ 3,426,459	\$ 727,442	\$ 1,891,550	\$ (203,915)
Ending Balance	\$49,030,166	\$ 49,454,753	\$52,881,212	\$53,608,654	\$55,500,204	\$55,296,290
Reserve Target	\$33,486,723.14	\$30,859,993.77	\$31,571,927.07	\$34,481,953.14	\$37,498,013.09	\$41,172,567.89

Revenue Requirements

Table 35 displays the water utility’s revenue requirements for FY 2024-25 through FY 2028-29. The total expense for each year is offset by other operating revenues and non-operating revenues to compute a pure portion of revenue requirements that need to be recovered from customers’ rates. RDN proposes annual revenue adjustments of 5.0 percent FY 2024-25 through FY 2028-29 to reach the financial goals set by the District.

*Table 35. Revenue Requirements for Jurupa Community Services District Water Utility, FY 2024-25 –
FY 2028-29*

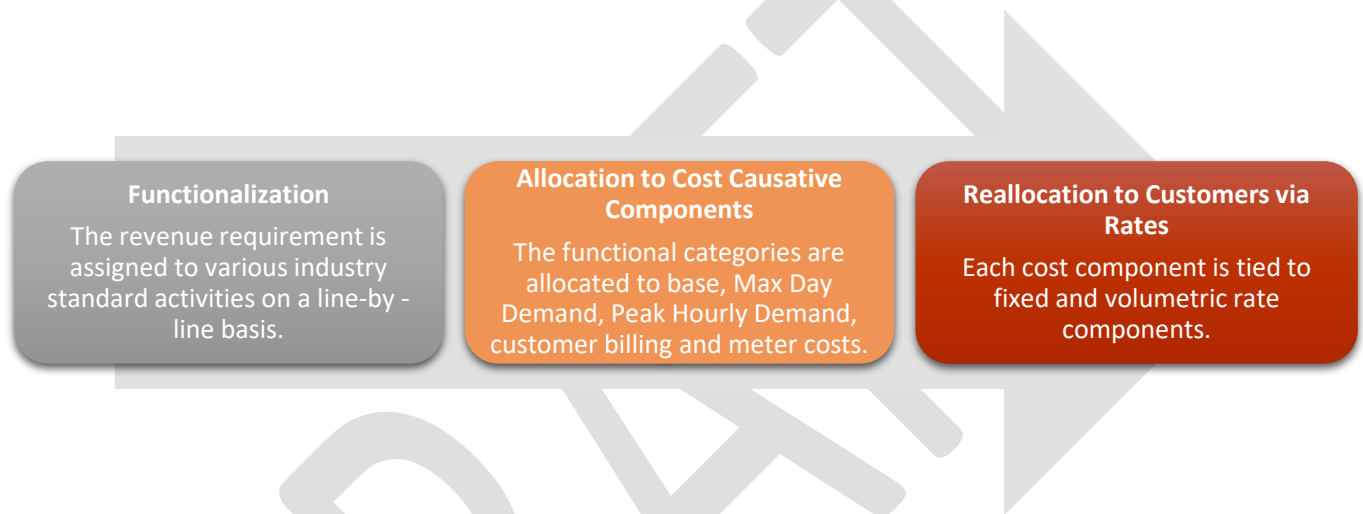
Revenue Requirements	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
O&M Expenses	\$44,020,224	\$46,023,252	\$48,120,313	\$50,316,584	\$56,446,198
Debt Service	\$1,710,421	\$1,718,283	\$1,885,742	\$1,879,572	\$1,939,055
Capital Expenditures	\$15,053,708	\$11,814,569	\$8,260,613	\$7,984,043	\$7,257,779
Total Expenses	\$60,784,353	\$59,556,103	\$58,266,668	\$60,180,200	\$65,643,032
Other Operating Revenue	(\$2,196,740)	(\$2,284,479)	(\$2,379,238)	(\$2,481,577)	(\$2,592,103)
Non-Operating Revenue	(\$12,721,644)	(\$11,757,759)	(\$4,794,650)	(\$4,832,335)	(\$4,870,831)
Net Balance From Operations	\$424,587	\$3,426,459	\$727,442	\$1,891,550	(\$203,915)
Rate Revenue Requirement	\$46,290,555	\$48,940,325	\$51,820,222	\$54,757,838	\$57,976,184

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3.2 Cost of Service Analysis

The purpose of a Cost of Service (COS) analysis is to allocate costs among customers commensurate with their service requirements. RDN employed the “base-extra capacity” cost-of-service method promulgated in AWWA’s M1, whereby costs are first allocated to individual functions, which are typical industry standard activities, then the costs of each function are distributed to appropriate cost causative components, which are defined by the cost driving elements. The results of the COS form a reasonable, equitable, basis for designing rates. **Figure 9** displays a typical flow of a process for the COS analysis.

Figure 9. A Typical Flow for Cost of Service Analysis Process



Functionalization of Costs

Operating and capital costs are functionalized based on operating categories used in the District’s budget and input from District staff with expertise on the system and utility industry knowledge. The functionalization of capital expenses is based on total water asset values, which represents a better overall estimate of systemwide needs versus just one year of capital expenses. The functions of the water system for both operating and capital expenses include:

- Water Supply – costs associated water procurement and purchases
- Groundwater – costs associated with groundwater procurement
- Pumping – costs associated with general pumping and energy use
- Storage – costs associated with water storage for distribution
- Treatment – costs associated with treating water
- Transmission and Distribution – costs associated with transmitting and distributing water to customers
- Hydrants – costs associated with the maintenance of fire hydrants

- Customer – costs associated with customer service and billing related tasks
- Meter – costs associated with the reading and maintenance of meters
- Conservation – costs associated with the District’s conservation programs
- Non-potable – costs associated with non-potable water production
- Administrative and General – costs associated with administrative and general functions

Costs were functionalized based on industry standard budget determinations and input from staff. In addition to the budget standard categories, all electricity costs were allocated to the pumping function, all chemical costs were allocated to the treatment function, and all reservoir related expenses were allocated to the storage function. **Table 36** shows the amount and percentage of test year operating expenses allocated to each function. District assets are categorized based on function as described in the District’s audited financial statements. **Table 37** shows the amount and percentage of the District’s fixed assets allocated to each function. Total assets were used as a proxy for the allocation of non-operating expenses because they represent the long-term investment in the system made by the District. A single year of non-operating expenses typically does not reflect an adequate ratio of overall system values.

Table 36. Percentage of Operating Costs Allocated to Standard Functions

O&M Expense		
Category	Allocation	Percent
Total O&M	\$44,020,224	100.0%
Water Supply	\$17,590,642	40.0%
Groundwater	\$3,708,749	8.4%
Storage	\$32,732	0.1%
Transmission and Distribution	\$3,100,865	7.0%
Pumping	\$2,401,476	5.5%
Treatment	\$1,955,469	4.4%
Meters	\$809,622	1.8%
Hydrants	\$5,234	0.0%
Customer	\$1,793,588	4.1%
Conservation	\$753,262	1.7%
Non-Potable	\$192,207	0.4%
Administrative and General	\$11,676,379	26.5%

Table 37. Percentage of Non-operating Costs Allocated to Standard Functions

Non-Operating Expense		
Category	Allocation	Percent
Total Assets	\$227,230,650	100.0%
Water Supply	\$333,589	0.1%
Groundwater	\$17,834,883	7.8%
Storage	\$16,473,353	7.2%
Transmission and Distribution	\$147,281,603	64.8%
Pumping	\$1,819,430	0.8%
Treatment	\$1,434,382	0.6%
Meters	\$0	0.0%
Hydrants	\$734,345	0.3%
Customer	\$303,876	0.1%
Conservation	\$0	0.0%
Non-Potable	\$0	0.0%
Administrative and General	\$41,015,189	18.1%

A COS analysis considers both the average quantity of water consumed (base costs) and the peak rate at which it is consumed (peaking or capacity costs as identified by maximum day and maximum hour demands). Peaking costs are costs that are incurred during peak times of consumption. There are additional costs associated with designing, constructing, operating, and maintaining facilities to meet peak demands. These peak demand costs should be allocated to those customers whose water usage patterns generate additional costs for the utility. In other words, not all customer classes and not all customers share the same responsibility for peaking related costs. For the system to provide adequate service to its customers at all times, it must be capable of meeting not only the annual volume requirements, but also the peak demand - the maximum rate at which water is consumed. Therefore, the capacities of the various facilities must meet the maximum coincidental demand of all customers.

Each water service facility within the system has an underlying average demand, exerted by the customers for whom the base cost component applies. For those facilities designed solely to meet average daily demand, 100% of the cost should go to the base cost component. Extra capacity requirements associated with demand in excess of average use consist of Max Day Demand (MDD) and Peak Hourly Demand (PHD). Base demand and MDD demand were calculated based on historical customer usage for the most recent year that data was fully available, FY 2022-23. Base demand was calculated as the total demand divided by the number of days in a year. Max Day Demand was calculated by taking the highest use month, September, and dividing that by the number of days in the month, 30. Based on the MDD factor, RDN estimated the average hourly flow during the max day by multiplying it by a peaking factor of 1.5 (the lowest factor recommended by the State Board's Division of Drinking

Water¹⁶) to compute a PHD factor. Functions that require capacity to perform at base and MDD levels were allocated based on the ratio of base demand compared to MDD, or 62.1 percent and 37.9 percent, respectively. Additionally, the costs associated with the functions which require extra capacity service requirements were distributed to the base, MDD, and PHD cost components at 51.8 percent, 31.6 percent, and 16.7 percent, respectively. **Table 38** shows the systemwide peaking factors based on customer use patterns as described.

Table 38. System-Wide Peaking Factors

	Factor	Base	Max Day	Max Hour
Use		26,899	43,315	64,972
Base	1.00	100.0%		
Max Day	1.61	62.1%	37.9%	
Max Hour	2.42	41.4%	25.3%	33.3%
Average Max Day/Max Hour		51.8%	31.6%	16.7%

The cost causative components include:

- **Source of Supply** – water purchase costs, groundwater procurement, pumping costs, etc.
- **Base** – delivering water to customers under average demand conditions
- **Maximum Day Demand (MDD)** – the costs of delivering water to customers on the day with the highest demand
- **Peaking Hourly Demand (PHD)** – the costs of delivering water to customers on the hour with the highest demand on highest day
- **Meters** – the costs of servicing and reading meters
- **Fire Protection Service** – the costs of providing water service for public and private fire protection services
- **Customer Service** – billing and other customer service-related costs
- **Conservation** – the cost to administer the District’s conservation program
- **Non-potable** – the cost of groundwater that does not get treated

Water supply and pumping costs are allocated 100 percent to the Supply component as they relate to purchasing water from other agencies as well as distribution system and elevation pumping. Groundwater costs are allocated to supply and non-potable components as they relate to producing groundwater from the basin for potable and non-potable use. The allocation basis of groundwater is determined based on the demand for potable and non-potable water, respectively. Estimates were not available on the storage or transmission/distribution capacity reserved for fire protection out of the total system storage and transmission/distribution capacity, thus storage costs incorporate the fire protection allocation for storage,

¹⁶ California Public Utilities Commission. Standard Practice for Determination of Water Supply Requirements, Standard Practice U-22. San Francisco. 2000

5.0 percent, a conservative estimate which was corroborated by District staff. The remaining costs (total allocation less fire protection allocation) are proportionally allocated between Base and Max Day based on the maximum day allocation. These costs are allocated based on fire protection and maximum day because they are constructed to meet maximum day demands plus fire protection.

Transmission and distribution costs incorporate the fire protection allocation for transmission and distribution of 5.0 percent, confirmed by District staff. The remaining costs (total allocation less fire protection allocation) are proportionally allocated between Base, Max Day, and Peak Hour based on the Average Max Day/Peak Hour costs. These costs are allocated based on fire protection and the average maximum day and maximum hour because transmission infrastructure is constructed to meet maximum day demand and distribution pipelines are constructed to meet maximum hour demand plus fire flow.

Treatment related costs are allocated using the maximum day allocation as treatment facilities are constructed to meet maximum day demand. Administrative and general costs are allocated to cost components based on the percentage of the functions allocated to the other cost categories.

The result of the COS analysis determines how the total revenue requirements should be allocated to each of the cost components, which are categorized and grouped based on the similar cost driving elements. **Table 39** through **Table 42** show the percent and total value of functionalized operating costs and assets allocated to the cost causative components. Asset values provide a more stable estimate of overall capital needs and thus, the allocation used is based on asset values. The percentage of system assets under each cost component is then applied to the non-operating revenue requirements for the test year.

Table 39. Percent of Operating Function Categories Allocated to Cost Components

Category	O&M Expense									
	Total Allocation	Source of Supply	Base	MDD	PHD	Meters	Fire Protection	Customer Service	Conservation	Non-Potable
Water Supply	\$17,590,642	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Groundwater	\$3,708,749	97.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.8%
Storage	\$32,732	0.0%	59.0%	36.0%	0.0%	0.0%	5.0%	0.0%	0.0%	0.0%
Transmission and Distribution	\$3,100,865	0.0%	49.2%	30.0%	15.8%	0.0%	5.0%	0.0%	0.0%	0.0%
Pumping	\$2,401,476	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Treatment	\$1,955,469	0.0%	62.1%	37.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Meters	\$809,622	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%
Hydrants	\$5,234	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
Customer	\$1,793,588	0.0%	0.0%	0.0%	0.0%	30.0%	0.0%	70.0%	0.0%	0.0%
Conservation	\$753,262	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%
Non-Potable	\$192,207	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Administrative and General	\$11,676,379	0.0%	22.3%	13.6%	0.0%	24.3%	0.1%	22.7%	13.6%	3.5%

Table 40. Total of Operating Functional Categories Allocated to Cost Components

Category	O&M Expense									
	Total Allocation	Source of Supply	Base	MDD	PHD	Meters	Fire Protection	Customer Service	Conservation	Non-Potable
Water Supply	\$17,590,642	\$17,590,642	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Groundwater	\$3,708,749	\$3,604,904	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$103,845
Storage	\$32,732	\$0	\$19,311	\$11,784	\$0	\$0	\$1,637	\$0	\$0	\$0
Transmission and Distribution	\$3,100,865	\$0	\$1,524,516	\$930,335	\$490,970	\$0	\$155,043	\$0	\$0	\$0
Pumping	\$2,401,476	\$2,401,476	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Treatment	\$1,955,469	\$0	\$1,214,389	\$741,080	\$0	\$0	\$0	\$0	\$0	\$0
Meters	\$809,622	\$0	\$0	\$0	\$0	\$809,622	\$0	\$0	\$0	\$0
Hydrants	\$5,234	\$0	\$0	\$0	\$0	\$0	\$5,234	\$0	\$0	\$0
Customer	\$1,793,588	\$0	\$0	\$0	\$0	\$538,076	\$0	\$1,255,512	\$0	\$0
Conservation	\$753,262	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$753,262	\$0
Non-Potable	\$192,207	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$192,207
Administrative and General	\$11,676,379	\$0	\$2,599,216	\$1,586,169	\$0	\$2,839,392	\$14,474	\$2,645,170	\$1,587,007	\$404,951
Percent of Operating	100%	53.6%	12.2%	7.4%	1.1%	9.5%	0.4%	8.9%	5.3%	1.6%

Table 41. Percent of Non-Operating Function Categories Allocated to Cost Components

Non-Operating Expense										
Category	Total Allocation	Source of Supply	Base	MDD	PHD	Meters	Fire Protection	Customer Service	Conservation	Non-Potable
Water Supply	\$333,589	97.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%
Groundwater	\$17,834,883	97.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%
Storage	\$16,473,353	0.0%	59.0%	36.0%	0.0%	0.0%	5.0%	0.0%	0.0%	0.0%
Transmission and Distribution	\$147,281,603	0.0%	49.2%	30.0%	15.8%	0.0%	5.0%	0.0%	0.0%	0.0%
Pumping	\$1,819,430	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Treatment	\$1,434,382	0.0%	62.1%	37.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Meters	\$0	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%
Hydrants	\$734,345	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
Customer	\$303,876	0.0%	0.0%	0.0%	0.0%	30.0%	0.0%	70.0%	0.0%	0.0%
Conservation	\$0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%
Non-Potable	\$0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Administrative and General	\$41,015,189	0.0%	56.0%	34.2%	0.0%	0.5%	8.2%	1.1%	0.0%	0.0%

Table 42. Total of Non-Operating Functional Categories Allocated to Cost Components

Non-Operating Expense										
Category	Total Allocation	Source of Supply	Base	MDD	PHD	Meters	Fire Protection	Customer Service	Conservation	Non-Potable
Water Supply	\$333,589	\$323,581	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$10,008
Groundwater	\$17,834,883	\$17,299,837	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$535,046
Storage	\$16,473,353	\$0	\$9,718,798	\$5,930,887	\$0	\$0	\$823,668	\$0	\$0	\$0
Transmission and Distribution	\$147,281,603	\$0	\$72,409,876	\$44,188,060	\$23,319,587	\$0	\$7,364,080	\$0	\$0	\$0
Pumping	\$1,819,430	\$1,819,430	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Treatment	\$1,434,382	\$0	\$890,783	\$543,599	\$0	\$0	\$0	\$0	\$0	\$0
Meters	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Hydrants	\$734,345	\$0	\$0	\$0	\$0	\$0	\$734,345	\$0	\$0	\$0
Customer	\$303,876	\$0	\$0	\$0	\$0	\$91,163	\$0	\$212,713	\$0	\$0
Conservation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Non-Potable	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Administrative and General	\$41,015,189	\$0	\$22,968,171	\$14,016,305	\$0	\$197,354	\$3,372,867	\$460,493	\$0	\$0
Percent of Non-Operating	100%	8.6%	46.6%	28.5%	10.3%	0.1%	5.4%	0.3%	0.0%	0.2%

The non-operating expenses for the test year are made up of debt service payments and capital expenditures totaling approximately \$16.8 million. Those costs are distributed to the cost components based on the final percentages shown in **Table 42**, above, which are based on the total asset values of water assets owned by the District. Water asset values represent the long-term investment in the District’s water system and are proxy value for how a single year of non-operating expenses should be allocated. Asset values do not significantly fluctuate year over year as annual capital expenditures do, which ensures that cost categories are accurately represented. Operating allocations are based on the actual projected test year expenses and the total for each cost component reflect the percentages in **Table**

40. **Table 43** shows the projected test year expenses allocated to each cost component based on the percentages in **Table 40** and **Table 42**.

Table 43. Operating and Non-Operating Cost Allocation to Cost Components

Cost Component	Operating percentage	Operating Costs	Non-Operating Percentage	Non-Operating Costs
Total	100%	\$44,020,224	100.0%	\$16,764,129
Source of Supply	53.6%	\$23,597,022	8.6%	\$1,434,412
Base	12.2%	\$5,357,432	46.6%	\$7,819,325
MDD	7.4%	\$3,269,368	28.5%	\$4,771,736
PHD	1.1%	\$490,970	10.3%	\$1,720,422
Meters	9.5%	\$4,187,091	0.1%	\$21,286
Fire Protection	0.4%	\$176,388	5.4%	\$907,071
Customer Service	8.9%	\$3,900,682	0.3%	\$49,666
Conservation	5.3%	\$2,340,269	0.0%	\$0
Non-Potable	1.6%	\$701,003	0.2%	\$40,212

Table 44 shows the cost allocation by cost causative components under the proposed financial plan before adjustments. Revenue offsets made up of non-operating revenues for FY 2024-24 shown in **Table 26** will be used to offset purchased water costs in the rate design section. Other operating revenues are allocated to each cost component based on the overall cost allocation percentages shown in the “percent of total” row.

Table 44. Rate Revenue Requirements for Test Year, FY 2024-25

Category	Total	Source of Supply	Base	MDD	PHD	Meters	Fire Protection	Customer Service	Conservation	Non-Potable	Revenue Offset
O&M Revenue Requirements	\$44,020,224	\$23,597,022	\$5,357,432	\$3,269,368	\$490,970	\$4,187,091	\$176,388	\$3,900,682	\$2,340,269	\$701,003	\$0
Non-Operating Revenue Requirements	\$16,764,129	\$1,434,412	\$7,819,325	\$4,771,736	\$1,720,422	\$21,286	\$907,071	\$49,666	\$0	\$40,212	\$0
Total	\$60,784,353	\$25,031,434	\$13,176,757	\$8,041,104	\$2,211,392	\$4,208,376	\$1,083,458	\$3,950,348	\$2,340,269	\$741,215	\$0
Percent of Total		41.2%	21.7%	13.2%	3.6%	6.9%	1.8%	6.5%	3.9%	1.2%	\$0
Other Operating Revenue	(\$2,196,740)	(\$904,633)	(\$476,207)	(\$290,605)	(\$79,919)	(\$152,090)	(\$39,156)	(\$142,765)	(\$84,577)	(\$26,787)	\$0
Non-Operating Revenue	(\$12,721,644)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$12,721,644)
Net Balance From Operations	\$424,587	\$174,848	\$92,041	\$56,168	\$15,447	\$29,396	\$7,568	\$27,594	\$16,347	\$5,177	\$0
Total	\$46,290,555	\$24,301,649	\$12,792,592	\$7,806,667	\$2,146,919	\$4,085,682	\$1,051,870	\$3,835,176	\$2,272,039	\$719,605	(\$12,721,644)

Water systems provide two types of fire protection: public fire protection for firefighting, which is generally visible as hydrants on a street, and private fire protection which provides fire flow to building and other structure sprinkler systems for fire suppression within private improvements. To determine the share of total fire costs responsible to each, fire service must additionally allocated between private and public fire connections. There are a total of 448 private fire connections which are equal to 446 equivalent fire meters. Total public fire connections are equal to 5,532 equivalent meters. The allocation of fire costs is based on the ratio of equivalent fire meters, 92.5 percent for public fire and 7.5 percent for private fire. **Table 45** shows the percentage of fire costs allocated to each customer class based on the number of equivalent meters. Public fire costs are reallocated to the meter component of the cost allocation.

Table 45. Allocation of Fire Costs

Customer Class	Equivalent Meters	Percent	Total Fire Allocation	Allocation by Class
Private Fire	446	7.5%		\$78,477
Public Fire	5,532	92.5%		\$973,394
Total Fire	5,978		\$1,051,870	

Because they are a function of system capacity, base and peak costs are also reallocated to the meter component at a rate of 65.0 percent for base and 60.5 percent for the peak costs which will help stabilize revenues by increasing the fixed revenue collection. Utilities invest in, and continuously maintain, facilities to provide capacity to meet all levels of water consumption, including average and peak demand. These costs must be recovered regardless of the amount of water used during a given period. Thus, peaking costs, along with base delivery costs and fixed water system costs to meet average demand, are generally considered as fixed water system costs. To balance between affordability and revenue stability, it is a common practice that a portion of the base costs and/or peaking costs are recovered in the monthly service charge, along with customer-related costs and meter-related costs. This allocation allows the District to maintain an overall fixed rate revenue percentage of 50.4 percent of the total revenues, which was a target level for increasing rate stability. **Table 46** shows the total cost allocation by cost category that will be used to allocate costs to each customer class.

Table 46. Final Cost of Service Allocations with all Adjustments

Category	Total	Source of Supply	Base	MDD	PHD	Meters	Fire Protection	Customer Service	Conservation	Non-Potable	Revenue Offset
O&M Revenue Requirements	\$44,020,224	\$23,597,022	\$5,357,432	\$3,269,368	\$490,970	\$4,187,091	\$176,388	\$3,900,682	\$2,340,269	\$701,003	\$0
Non-Operating Revenue Requirements	\$16,764,129	\$1,434,412	\$7,819,325	\$4,771,736	\$1,720,422	\$21,286	\$907,071	\$49,666	\$0	\$40,212	\$0
Total	\$60,784,353	\$25,031,434	\$13,176,757	\$8,041,104	\$2,211,392	\$4,208,376	\$1,083,458	\$3,950,348	\$2,340,269	\$741,215	\$0
Percent of Total		41.2%	21.7%	13.2%	3.6%	6.9%	1.8%	6.5%	3.9%	1.2%	\$0
Other Operating Revenue	(\$2,196,740)	(\$904,633)	(\$476,207)	(\$290,605)	(\$79,919)	(\$152,090)	(\$39,156)	(\$142,765)	(\$84,577)	(\$26,787)	\$0
Non-Operating Revenue	(\$12,721,644)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$12,721,644)
Net Balance From Operations	\$424,587	\$174,848	\$92,041	\$56,168	\$15,447	\$29,396	\$7,568	\$27,594	\$16,347	\$5,177	\$0
Total	\$46,290,555	\$24,301,649	\$12,792,592	\$7,806,667	\$2,146,919	\$4,085,682	\$1,051,870	\$3,835,176	\$2,272,039	\$719,605	(\$12,721,644)
Adjustments											
Re-Allocation of Public Fire	\$0	\$0	\$0	\$0	\$0	\$973,394	(\$973,394)	\$0	\$0	\$0	\$0
Re-Allocation of Peaking and Base	\$0	\$0	(\$8,315,185)	(\$4,723,034)	(\$1,298,886)	\$14,337,105	\$0	\$0	\$0	\$0	\$0
Final Cost Allocation	\$46,290,555	\$24,301,648	\$4,477,407	\$3,083,634	\$848,033	\$19,396,180	\$78,477	\$3,835,176	\$2,272,039	\$719,605	(\$12,721,644)



Allocation to Units

The final step of the COS analysis is to allocate the cost causative components back to the customers. In order to perform this, unit values were determined for each cost component. **Table 49** shows the number of systemwide units under each category. Equivalent meters are determined by multiplying the total meters by their equivalent meter value. **Table 47** shows the meters currently connected to the water system and the number of equivalent meters based on AWWA meter equivalency factors.

Table 47. Total Non-fire Equivalent Meters Used for Cost Allocation

Meter Size	Number of Meters	Equivalence Factor	Total Equivalent Meters
5/8"	3,448	1.00	3,448
3/4"	26,052	1.00	26,052
1"	2,505	1.67	4,175
1 1/2"	347	3.33	1,157
2"	495	5.33	2,640
3"	84	11.67	980
4"	25	21.00	525
6"	14	43.33	607
8"	12	93.33	1,120
10"	6	140.00	840
Total	33,020		41,543

All use categories (Water Use, Max Month, Average Day, Max Day, and Peak Hourly) were calculated based on actual (billed) customer use and are expressed in hcf. As previously described, average day demand constitutes the entire year of use divided by the number of days in a year. Max day demand takes the use during the highest use month (September) and divides that by the number of days in the month (30). Peak hourly demand is estimated by taking the difference between average day and max day demand and multiplying the result by a factor of 1.5. This results in the total capacity, with extra capacity calculated by subtracting the average daily use from the total capacity for either max day or max hour. **Table 48** shows the water use values used to calculate units for the cost of service allocation.

Table 48. Total Use and Peak Values used for Cost Allocation

Customer Class	Annual Use (hcf)	Daily Potable Use	Max Day			Peak Hour		
			Capacity Factor	Total Capacity	Extra Capacity	Capacity Factor	Total Capacity	Extra Capacity
Residential	7,031,792	19,318						
Tier 1	3,862,983	10,613	1.13	11,997	1,384	1.70	17,995	5,998
Tier 2	1,007,146	2,767	1.58	4,359	1,593	2.36	6,539	2,180
Tier 3	851,696	2,340	1.97	4,601	2,261	2.95	6,902	2,301
Tier 4	1,309,967	3,599	2.56	9,220	5,621	3.84	13,830	4,610
Non-Residential	1,168,887	3,211	1.42	4,566	1,355	2.13	6,849	2,283
Potable Irrigation	1,056,700	2,903	1.98	5,746	2,843	2.97	8,619	2,873
Non-Potable Irrigation	-	-						
Fire Hydrant	96,302	265	2.04	539	275	3.06	809	270
Out of District	134,030	368	1.58	584	215	2.38	875	292
Private Fire								
Total	9,487,711	26,065		41,612	15,547		62,418	20,806

The number of bills in one year (the number of accounts multiplied by 12) serves as the basis for distributing billing and customer service costs associated with meter reading, customer billing and collection, and other customer services costs. The number of equivalent meters is used to distribute meter related service costs.

Table 49. Cost of Service Units

Unit	Count of Units
Customers	33,436
EMs	41,543
Potable Water Use	9,487,711
Non-Potable Use	280,582
Total Water Use	9,768,293
Max Month Potable	1,248,358
Average Day Potable	26,065
Max Day Extra Potable	15,547
Peak Hourly Extra Potable	20,806

Table 50 shows the total cost allocation by cost component divided by the corresponding unit values to develop a unit cost for each.

Table 50. Rate Revenue Requirements Divided by the Corresponding Units

	Source of Supply	Base	MDD	PHD
Rate Revenue Requirement	\$24,301,648	\$4,477,407	\$3,083,634	\$848,033
Units	9,487,711	9,487,711	15,547	20,806
Unit Cost	\$2.56	\$0.47	\$198.35	\$40.76

	Meters	Customer Service	Conservation
Rate Revenue Requirement	\$19,396,180	\$3,835,176	\$2,272,039
Units	41,543	401,232	9,768,293
Unit Cost	\$466.89	\$9.56	\$0.23

Allocation to Customer Classes

The District currently maintains seven distinct customer classes. RDN recommends combining all residential customers into a single customer class to increase equity for residential customers. Additionally, we recommend billing customers who are outside of the District’s service area a special rate which takes into account the extra purchased water the District needs to service these customers. The total units of service by customer class are shown in **Table 51**. **Table 52** shows the cost of service allocated to each customer class based on the units of service. **Table 53** shows the total cost allocation by customer class based on the cost of service analysis. The total rate revenue requirements which need to be recovered from customer rates is also shown, this amount is the cost of service allocation reduced by the non-operating revenues which are applied directly to the variable rates. The total revenue requirements reflect the final cost allocation in **Table 46**.

Table 51. Unit of Service by Customer Class

Customer Class	Source of Supply	Base	MDD	PHD	Meters	Customer Service	Conservation
Total Units	9,487,711	9,487,711	15,547	20,806	41,543	401,232	9,768,293
Residential	7,031,792	7,031,792	10,859	15,089	34,498	378,888	7,031,792
Tier 1	3,862,983	3,862,983	1,384	5,998	-	-	-
Tier 2	1,007,146	1,007,146	1,593	2,180	-	-	-
Tier 3	851,696	851,696	2,261	2,301	-	-	-
Tier 4	1,309,967	1,309,967	5,621	4,610	-	-	-
Non-Residential	1,168,887	1,168,887	1,355	2,283	4,195	8,808	1,168,887
Potable Irrigation	1,056,700	1,056,700	2,843	2,873	2,173	6,996	1,056,700
Non-Potable Irrigation	-	-	-	-	204	408	280,582
Fire Hydrant	96,302	96,302	275	270	380	744	96,302
Out of District	134,030	134,030	215	292	93	12	134,030
Private Fire	-	-	-	-	-	5,376	-

Table 52. Cost of Service by Customer Class

Customer Class	Source of Supply	Base	MDD	PHD	Meters	Customer Service	Conservation	Fire Protection	Non-Potable
Unit Cost	\$2.56	\$0.47	\$193.35	\$40.76	\$466.89	\$9.56	\$0.23	\$78,477.00	\$719,605.00
Residential	\$18,011,103	\$3,318,418	\$2,153,863	\$615,000	\$16,106,948	\$3,621,601	\$1,635,548	\$0	\$0
Tier 1	\$9,894,574	\$1,823,005	\$274,538	\$244,488	\$0	\$0	\$0	\$0	\$0
Tier 2	\$2,579,685	\$475,289	\$315,875	\$88,843	\$0	\$0	\$0	\$0	\$0
Tier 3	\$2,181,518	\$401,929	\$448,527	\$93,770	\$0	\$0	\$0	\$0	\$0
Tier 4	\$3,355,325	\$618,195	\$1,114,923	\$187,898	\$0	\$0	\$0	\$0	\$0
Non-Residential	\$2,993,966	\$551,617	\$268,706	\$93,052	\$1,958,601	\$84,191	\$271,875	\$0	\$0
Potable Irrigation	\$2,706,612	\$498,674	\$563,838	\$117,096	\$1,014,552	\$66,871	\$245,781	\$0	\$0
Non-Potable Irrigation	\$0	\$0	\$0	\$0	\$95,087	\$3,900	\$65,261	\$0	\$719,605
Fire Hydrant	\$246,666	\$45,447	\$54,525	\$10,994	\$177,417	\$7,112	\$22,399	\$0	\$0
Out of District	\$343,302	\$63,251	\$42,701	\$11,891	\$43,575	\$115	\$31,174	\$0	\$0
Private Fire	\$0	\$0	\$0	\$0	\$0	\$51,387	\$0	\$78,477	\$0
Total	\$24,301,648	\$4,477,407	\$3,083,634	\$848,033	\$19,396,180	\$3,835,176	\$2,272,039	\$78,477	\$719,605

Table 53. Total Cost Allocation by Customer Class and Revenue Requirements with Offset for Variable Rates Removed

Customer Class	Total Cost
Residential	\$45,462,481
Tier 1	
Tier 2	
Tier 3	
Tier 4	
Non-Residential	\$6,222,009
Potable Irrigation	\$5,213,424
Non-Potable Irrigation	\$883,853
Fire Hydrant	\$564,560
Out of District	\$536,009
Private Fire	\$129,864
Total COS	\$59,012,200
Revenue Offset	-\$12,721,644
Revenue Requirement	\$46,290,555

3.3 Water Rate Design

RDN proposes the following adjustments to customer water rate structures:

- Adjusting rates annually by the recommended revenue adjustments of 5.0 percent per year
- Increasing the fixed proportion of rate collection
- Including a rate category for outside of District customers
- Combining all residential customers into a single customer class
- Developing a recycled water rate for when the recycled water system comes online
- Proposing passthrough adjustments for when water cost inflation exceeds projections

The water rates have two components: 1) a fixed monthly service charge and 2) volumetric rates. Customers must pay the fixed charge regardless of the water use. In addition, the customers pay volumetric rates based on the volume of water use.

1. **Fixed monthly service charge:** the rates are established based on the size of the meter at the property receiving water service and are calculated to recover a portion of the District’s fixed costs, such as water facilities repairs and replacements, meter reading, and customer service.
2. **Variable rates:** the rates are calculated based on the cost of water supplies, the cost of managing the District’s water resources at regular and peak use and distributing water throughout the

system to customers. The remaining fixed costs that are not recovered via fixed charges are also recovered from variable charges. The rates are billed per hundred cubic feet.

Together, the two components (fixed and variable) are calculated to recover the proportionate cost of providing water service attributable to each customer. **Table 54** shows the costs which are allocated to either fixed or variable rates. The revenue offset is made up of non-operating revenues which will be collected in the test year and primarily includes property tax revenue and settlement income.

Table 54. Allocation of Fixed and Variable Costs¹⁷

Unit of Service	Fixed	Variable
Source of Supply	\$0	\$24,301,648
Base	\$0	\$4,477,407
MDD	\$0	\$3,083,634
PHD	\$0	\$848,033
Meters	\$19,396,180	\$0
Private Fire	\$78,477	\$0
Customer Service	\$3,835,176	\$0
Conservation	\$0	\$2,272,039
Non-Potable	\$0	\$719,605
Revenue Offset	\$0	-\$12,721,644

Monthly Fixed Charge

All meter costs are divided by the number of equivalent meters using the AWWA ratio discussed in the Key Assumptions section to compute the unit cost for each cost component. Customer service costs are simply divided by the number of bills since the service requirements of this cost type are the same regardless of the meter size installed on a property. **Table 55** shows the total costs allocated to each cost category for the two customer classes, the number of units for the category, and the cost for a year and a month of service for each cost unit. The resulting monthly unit costs are used to calculate the fixed customer rates.

Table 55. Fixed Cost Components Divided by Number of Units

	Cost	Unit	Cost per Unit	Cost per month
Meter	\$19,396,180	41,989	\$461.93	\$38.49
Service	\$3,783,790	32,988	\$114.70	\$9.56

Table 56 shows the monthly fixed charge calculation by meter size for water service customer connections.

¹⁷ Revenue offsets are the direct use of non-operating revenues shown in table 26 to offset variable rates

Table 56. Monthly Water Service Fixed Charge Calculation

Meter Size	Meter Charge	Meter Ratio	Total Meter	Customer service	Monthly Rate
5/8"	\$38.49 x	1.00	\$38.49 +	\$9.56 =	\$48.05
3/4"	\$38.49 x	1.00	\$38.49 +	\$9.56 =	\$48.05
1"	\$38.49 x	1.67	\$64.16 +	\$9.56 =	\$73.72
1 1/2"	\$38.49 x	3.33	\$128.31 +	\$9.56 =	\$137.87
2"	\$38.49 x	5.33	\$205.30 +	\$9.56 =	\$214.86
3"	\$38.49 x	11.67	\$449.10 +	\$9.56 =	\$458.66
4"	\$38.49 x	21.00	\$808.38 +	\$9.56 =	\$817.94
6"	\$38.49 x	43.33	\$1,667.96 +	\$9.56 =	\$1,677.52
8"	\$38.49 x	93.33	\$3,592.68 +	\$9.56 =	\$3,602.24
10"	\$38.49 x	140.00	\$5,389.21 +	\$9.56 =	\$5,398.77
Private Fire	\$24.16 x	1.00	\$24.16 +	\$9.56 =	\$33.71

The proposed monthly fixed charge for the base equivalent meter (5/8 inch and 3/4-inch) is \$48.05 per month.

The proposed five-year monthly fixed charges for all water customers are shown in **Table 57**:

Table 57. Proposed 5-year Fixed Charge Schedule

Fixed Charges						
Customer Class	Meter Size	CY 2025	CY 2026	CY 2027	CY 2028	CY 2029
All Customers						
	5/8"	\$48.05	\$50.45	\$52.98	\$55.62	\$58.41
	3/4"	\$48.05	\$50.45	\$52.98	\$55.62	\$58.41
	1"	\$73.72	\$77.41	\$81.28	\$85.34	\$89.61
	1 1/2"	\$137.87	\$144.76	\$152.00	\$159.60	\$167.58
	2"	\$214.86	\$225.60	\$236.88	\$248.73	\$261.16
	3"	\$458.66	\$481.59	\$505.67	\$530.96	\$557.50
	4"	\$817.94	\$858.84	\$901.78	\$946.87	\$994.21
	6"	\$1,677.52	\$1,761.40	\$1,849.47	\$1,941.94	\$2,039.04
	8"	\$3,602.24	\$3,782.35	\$3,971.47	\$4,170.04	\$4,378.55
	10"	\$5,398.77	\$5,668.71	\$5,952.14	\$6,249.75	\$6,562.24
Fire Service	All Meters	\$33.71	\$35.40	\$37.17	\$39.02	\$40.97

Potable Variable Water Rates

Variable rates are designed based on variable costs such as water purchases, conservation, treatment, and base and peak delivery costs. The current rate structure was generally maintained to mitigate rate impacts, except where multi-family residential customers and out of district customers changed to increase customer equity. Under the proposed rates, multi-family residential customers will have a four-tiered rate structure which puts them on equal footing with single-family residential customers. New tier

break points were calculated based on the combined use of all residential customers. Tier widths will be multiplied by the number of units in a multi-family residential development to determine the total water use allocation for that customer. Variable rates are made up of a number of cost components, all derived individually for each customer class: Water Supply, Base Costs, Peaking Costs, and Conservation Costs. Water supply costs are offset by the District’s non-operating revenues.

Water Supply

The District has a variety of water supply sources. The Chino Basin Desalter Authority (CDA, Desalter), Rubidoux Community Services District (Rubidoux, RCSD), and local groundwater are the District’s current water sources. Current supplies also include the Western CDA which the District will discontinue using. Future supplies will come from the Etiwanda Wells which will come online in FY 2028-29. The District currently uses approximately 11 million hcf of water annually, approximately 25,000 acre feet (AF). Different water sources have different costs to acquire. It is assumed that the District will use cheaper water sources before more expensive ones. The most expensive water by AF is CDA or Desalter water, which has a cost of \$1,284 per AF. Rubidoux water costs approximately \$662 per AF. The District’s cheapest water source is groundwater, which is approximately \$171 per acre foot. The District’s available supply and costs are shown in **Table 58**. Additional supply costs identified in the cost of service analysis are included in each source based on the percent of the total purchase costs. The unit cost for each water source is developed by dividing the total supply cost by the total available supply.

Table 58. Available Water Supply and Costs¹⁸

	Groundwater	Rubidoux	Desalter
Direct Purchase	\$3,708,749	\$1,455,300	\$13,948,185
Percent	19.4%	7.6%	73.0%
Total Supply Cost	\$4,715,761	\$1,850,448	\$17,735,440
Available Supply	5,074,875	1,054,034	5,149,258
Unit Cost	\$0.93	\$1.76	\$3.44

Residential use patterns are shown in **Table 59**. Tier definitions in **Table 60** were developed by reviewing residential use patterns to include winter average use for the first tier, annual average use for the second tier, and peak summer use to develop the upper range for tier 3.

¹⁸ Projected water supply costs and projected availability were provided by District engineering staff

Table 59. Residential Water Use Patterns and Tier Definitions

	Summer						Winter					
	July	August	September	October	November	December	January	February	March	April	May	June
Residential	878,765	721,098	905,318	665,052	510,634	620,238	397,352	343,622	385,270	429,264	485,503	689,676
Units	35,958	35,958	35,958	35,958	35,958	35,958	35,958	35,958	35,958	35,958	35,958	35,958
Per Unit	24.44	20.05	25.18	18.50	14.20	17.25	11.05	9.56	10.71	11.94	13.50	19.18
Average Winter							10.44					
Average Annual	16.30											
Peak Summer	25.18											

Table 60. Residential Tier Definitions

Residential Tiers	
Tier	Description
Tier 1	0 to 11
Tier 2	12 to 17
Tier 3	18 to 26
Tier 4	27+

Because there is not enough groundwater to supply the whole District, cost by water source is blended based on each customer class. Additionally, service is provided to customers outside of the District’s service area because the District has access to an available supply of purchased water which exceeds the use of regular potable customers. The District has elected to provide service to these customers with available purchased water, despite not being part of the regular service area. The unit cost of water for Out of District customers reflects the extraneous use of available Desalter water. All other customers have a blend of all available water sources as shown in **Table 61**, except for fire hydrant customers which are temporary connections to the water system. Variable rates for temporary water connections are based on the peak use values of these customers, which accounts for the sporadic nature of these connections being not included in supply projections. Hydrant water rates are calculated using the peak values of residential tier 4 water rates. For residential customers, each inclining tier of water maximizes the cheapest available water supply source. The supply of available blended water (groundwater and RCSD water) is spent in the first two tiers, keeping the price lower for lower water use. Once blended water is no longer available, the upper two tiers are based on the supply cost of Desalter water only.

Table 61. Water Source Unit Cost by Customer Class and Tier and Proposed Revenue Offset

Customer Class	Blended	Desalter	Total Cost	Unit Cost	Total with offset	Unit Cost with Offset
Residential	4,200,104	3,323,965	\$16,868,441	\$2.24	\$8,291,642	\$1.10
Tier 1	3,972,559	0	\$4,501,520	\$1.13	\$2,212,711	\$0.56
Tier 2	227,544	1,087,309	\$4,218,866	\$3.21	\$2,073,774	\$1.58
Tier 3	0	975,218	\$3,552,684	\$3.64	\$1,746,313	\$1.79
Tier 4	0	1,261,438	\$4,595,371	\$3.64	\$2,258,844	\$1.79
Non-Residential	740,650	622,264	\$3,106,155	\$2.28	\$1,526,823	\$1.12
Potable Irrigation	686,014	576,361	\$2,877,021	\$2.28	\$1,414,193	\$1.12
Fire Hydrant	0	69,623	\$253,635	\$3.64	\$124,673	\$1.79
Out of Distict	0	135,166	\$492,405	\$3.64	\$242,041	\$1.79
Total Units	5,794,632	4,868,412	\$24,301,648	\$2.28	\$11,945,417	
Unit Cost Adjustment	\$1.13	\$3.64				
Revenue Offset		-\$12,356,231				
Total Cost	\$6,566,208	\$17,735,440				
Less Offset	-\$3,338,604	-\$9,017,627				
Unit Cost Adjustment	-\$0.58	-\$1.85				
Adjusted Unit Cost	\$0.56	\$1.79				

The District is projecting significant non-operating revenues as described in the financial planning section, these are used to offset variable rates based on the total cost of each water source. The unit cost with offset is used in the final variable rate calculation.

Base

Base costs are divided by total water use to determine the unit cost shown in **Table 62**. The base unit cost is applied to all water use.

Table 62. Base Unit Cost by Customer Class

Customer Class	Base Cost	Use	Unit Cost
Residential	\$3,318,418	÷ 7,031,792	= \$0.47
Tier 1	\$1,823,005	÷ 3,862,983	= \$0.47
Tier 2	\$475,289	÷ 1,007,146	= \$0.47
Tier 3	\$401,929	÷ 851,696	= \$0.47
Tier 4	\$618,195	÷ 1,309,967	= \$0.47
Non-Residential	\$551,617	÷ 1,168,887	= \$0.47
Potable Irrigation	\$498,674	÷ 1,056,700	= \$0.47
Out of District	\$63,251	÷ 134,030	= \$0.47

Peaking

Peaking costs, the sum of MDD and PHD costs allocated to each customer class and tier as shown in **Table 52**, are divided by total water use in each category to determine the unit cost shown in **Table 63**. The corresponding peaking unit cost is applied to all water use based on tier and customer class.

Table 63. Peaking Unit Cost by Customer Class

Customer Class	Peaking Cost	Use	Unit Cost
Residential	\$2,768,862	÷ 7,031,792	= \$0.39
Tier 1	\$519,026	÷ 3,862,983	= \$0.13
Tier 2	\$404,718	÷ 1,007,146	= \$0.40
Tier 3	\$542,296	÷ 851,696	= \$0.64
Tier 4	\$1,302,822	÷ 1,309,967	= \$0.99
Non-Residential	\$361,758	÷ 1,168,887	= \$0.31
Potable Irrigation	\$680,934	÷ 1,056,700	= \$0.64
Out of District	\$54,592	÷ 134,030	= \$0.49

Conservation

Conservation costs are divided by total water use to determine the unit cost shown in **Table 64**. Residential customers will pay all conservation costs in the upper two tiers. The corresponding conservation cost is applied to all water use based on tier and customer class.

Table 64. Conservation Unit Cost by Customer Class

Customer Class	Conservation Cost	Use	Unit Cost
Residential	\$1,635,548	÷ 7,031,792	= \$0.23
Tier 1	\$0	÷ 3,862,983	= \$0.00
Tier 2	\$0	÷ 1,007,146	= \$0.00
Tier 3	\$644,406	÷ 851,696	= \$0.76
Tier 4	\$991,141	÷ 1,309,967	= \$0.76
Non-Residential	\$271,875	÷ 1,168,887	= \$0.23
Potable Irrigation	\$245,781	÷ 1,056,700	= \$0.23
Out of District	\$31,174	÷ 134,030	= \$0.23

Table 65 shows the calculation used to determine the variable rates for each tier and customer class. Supply costs are added to peaking, conservation, and base costs to calculate the variable rates.

Table 65. Variable Rate Calculation

Customer Class	Supply	Peaking	Conservation	Base	Variable Rate
Residential					
Tier 1	\$0.56 +	\$0.13 +	\$0.00 +	\$0.46 =	\$1.15
Tier 2	\$1.58 +	\$0.40 +	\$0.00 +	\$0.46 =	\$2.44
Tier 3	\$1.79 +	\$0.64 +	\$0.76 +	\$0.46 =	\$3.64
Tier 4	\$1.79 +	\$0.99 +	\$0.76 +	\$0.46 =	\$4.00
Non-Residential	\$1.12 +	\$0.31 +	\$0.23 +	\$0.46 =	\$2.12
Potable Irrigation	\$1.12 +	\$0.64 +	\$0.23 +	\$0.46 =	\$2.46
Out of District	\$1.79 +	\$0.41 +	\$0.23 +	\$0.46 =	\$2.89

Non-potable Variable Water Rates

Non-potable water rates were determined by calculating the amount of revenue which will be collected based on fixed charges as the meter rates are the same for each customer class. The total fixed component is subtracted from the total revenue requirement then divided the projected non-potable water use. **Table 66** and **Table 67** show the calculations used to calculate non-potable water rates.

Table 66. Fixed Revenue Calculation for Non-Potable Customers

Non-Potable Meters	Count		Rate		Months		Total
5/8"	0	x	\$48.05	x	12	=	\$0.00
3/4"	3	x	\$48.05	x	12	=	\$1,729.80
1"	16	x	\$73.72	x	12	=	\$14,154.24
1 1/2"	2	x	\$137.87	x	12	=	\$3,308.88
2"	9	x	\$214.86	x	12	=	\$23,204.88
3"	1	x	\$458.66	x	12	=	\$5,503.92
4"	1	x	\$817.94	x	12	=	\$9,815.28
6"	2	x	\$1,677.52	x	12	=	\$40,260.48
8"	0	x	\$3,602.24	x	12	=	\$0.00
10"	0	x	\$5,398.77	x	12	=	\$0.00
Total Fixed							\$97,977.48

Table 67. Variable Rate Calculation for Non-Potable Customers

Non Potable Rates				
Revenue Requirement	Fixed Component Collected	Remaining Costs	Use	Variable Rate
\$518,439.77 -	\$97,976.96 =	\$420,462.81 ÷	280,582 =	\$1.50

Recycled Variable Water Rates

Recycled water rates were calculated in the same way as non-potable water rates; however, the cost to provide recycled water service was estimated by District staff for FY 2025-26. The total revenue requirements for recycled water include pipeline O&M, pipeline R&R, pump station O&M, inspection and testing O&M, recycled water operations, O&M overhead, and SRF debt service. The total cost to provide recycled water service in FY 2026 is \$923,227. RDN calculated the amount of revenue which will be collected based on fixed charges in FY 2025-26 as the meter rates are the same for each customer class. The total fixed component is subtracted from the total revenue requirement then divided by the projected recycled water use. **Table 68** and **Table 69** show the calculations used to calculate recycled water rates.

Table 68. Fixed Revenue Calculation for Recycled Customers

Recycled Meters	Count		Rate		Months		Total
5/8"	0	x	\$50.45	x	12	=	\$0.00
3/4"	6	x	\$50.45	x	12	=	\$3,632.58
1"	22	x	\$77.41	x	12	=	\$20,435.18
1 1/2"	29	x	\$144.76	x	12	=	\$50,377.70
2"	24	x	\$225.60	x	12	=	\$64,973.66
3"	5	x	\$481.59	x	12	=	\$28,895.58
4"	2	x	\$858.84	x	12	=	\$20,612.09
6"	1	x	\$1,761.40	x	12	=	\$21,136.75
8"	1	x	\$3,782.35	x	12	=	\$45,388.22
10"	0	x	\$0.00	x	12	=	\$0.00
Total Fixed							\$255,451.77

Table 69. Recycled Water Rate Calculation (FY 2025-26)

Recycled Water Rates				
Revenue Requirements	Fixed Component Collected	Remaining Costs	Use	Variable Rate
\$923,226.53	- \$255,451.77	= \$667,774.76	÷ 329,203	= \$2.03

In future years, the rates will be escalated by the revenue adjustments and the five year rate schedule is shown in **Table 70**. Each adjustment will occur in January, midway through the fiscal year.

Table 70. Proposed 5-Year Variable Rate Schedule

Variable Charges						
Customer Class	Tier Width	CY 2025	CY 2026	CY 2027	CY 2028	CY 2029
Residential	per hcf					
Tier 1	0 to 11	\$1.15	\$1.21	\$1.27	\$1.33	\$1.40
Tier 2	12 to 17	\$2.44	\$2.56	\$2.69	\$2.82	\$2.96
Tier 3	18 to 26	\$3.64	\$3.82	\$4.02	\$4.22	\$4.43
Tier 4	27+	\$4.00	\$4.20	\$4.41	\$4.63	\$4.86
Non-residential	all hcf	\$2.12	\$2.23	\$2.34	\$2.45	\$2.58
Potable Irrigation	all hcf	\$2.46	\$2.58	\$2.71	\$2.84	\$2.98
Non-potable Irrigation	all hcf	\$1.50	\$1.58	\$1.65	\$1.74	\$1.82
Fire Hydrant	all hcf	\$4.00	\$4.20	\$4.41	\$4.63	\$4.86
Fire Service						
Out of District	all hcf	\$2.89	\$3.03	\$3.19	\$3.34	\$3.51

Note: that fire hydrant rates reflect the peaking and source water cost of peak water use, residential tier 4

Passthrough Adjustments

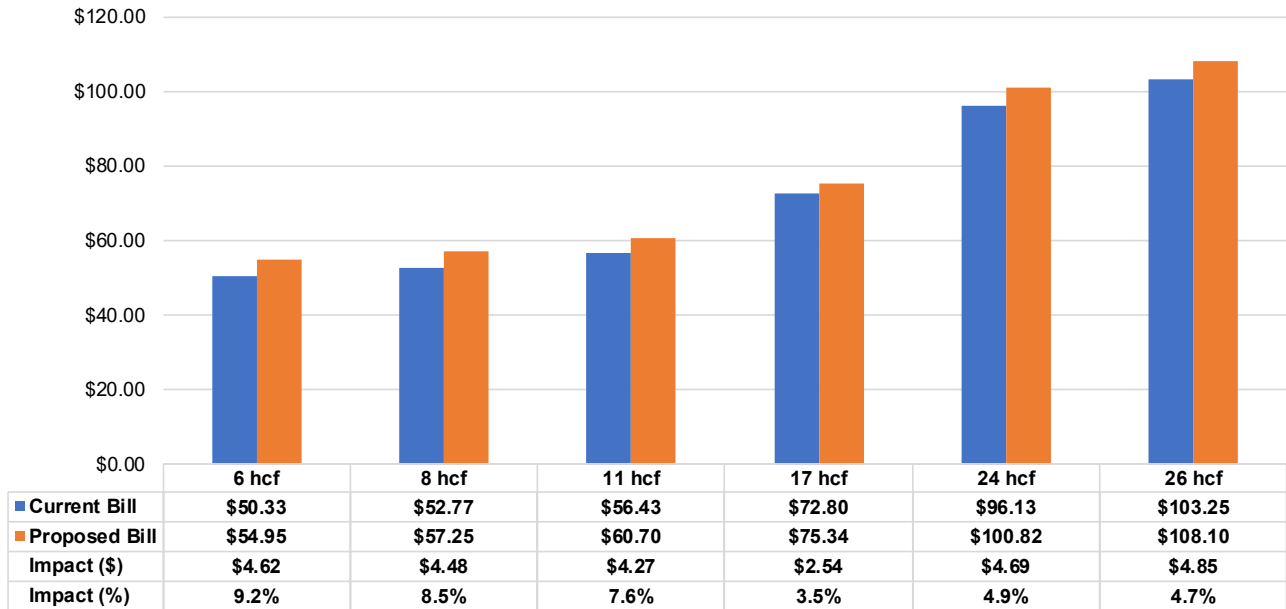
In developing its rates, the District carefully projected changes in costs as part of its Long-Range Financial Plan; however, there are significant uncertainties about the future availability and cost of water supply costs involved. To ensure that there are sufficient revenues to provide safe water and wastewater services to our customers, the District proposes an implementation of a pass-through charge. If water purchase costs from any source increase more than 5.0 percent (or 4.0 percent for water purchased from the Rubidoux Community Services District), a pass-through adjustment will apply to the Volumetric Charges set forth in the tables included in this report. In no event shall the pass-through charges exceed the estimated costs of providing the water service.

3.4 Bill Impact Analysis

This analysis compares customers' bills under current and proposed rates. **Figure 10** shows the dollar change in the bill based on ¾" meter single family residential customers, use at selected usage points. The District's average ¾" residential customer uses water for 17 hcf monthly. Additionally, the peak month average use for a ¾" residential customer is under 26 hcf per billing period.

Figure 10. Single Family Customer Impact by Usage for ¾” Meter

Single Family Residential Water Rate Impacts



DRAFT

WASTEWATER UTILITY

4.1 Financial Plan

RDN built a 10-year financial model for the Jurupa Community Services District’s wastewater system to meet the system’s long-term financial goals. The detailed rate analysis was performed for the first five years.

Revenues

RDN conducted a revenue analysis using the current wastewater rates. The District currently collects fixed and variable revenues from all customers. Fixed and variable revenue forecasts are based on customer growth assumptions described in the Methodology Section. **Table 71** shows the projected number of EDUs and billed sewer flow for FY 2023-24 to FY 2028-29.

Table 71. Wastewater Customer Growth in EDUs and Corresponding Sewer flow in hcf, FY 2023-24 to FY 2028-29

Customer Class	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Residential						
EDU	35,915	36,357	36,805	37,258	37,717	38,182
Flow (hcf)	2,677,062	2,710,032	2,743,409	2,777,197	2,811,400	2,846,025
Institutional						
EDU	1,463	1,483	1,503	1,524	1,544	1,565
Flow (hcf)	7,150	7,247	7,346	7,446	7,548	7,651
Non-Residential						
EDU	4,975	5,043	5,111	5,181	5,252	5,323
Flow (hcf)	985,282	998,705	1,012,312	1,026,104	1,040,083	1,054,253

The revenue analysis also includes other operating and non-operating revenues such as interest income and miscellaneous revenue. These revenues are used to offset the revenue requirements that need to be recovered from customers’ rates. This projection was created under the status quo rates and does not include proposed revenue adjustments. **Table 72** shows the projected wastewater system revenues by category.

Table 72. Wastewater System Revenue Forecast, FY 2024 to FY 2028

	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Revenue from Rates						
Fixed Revenue	\$13,303,077	\$13,734,579	\$13,906,467	\$14,080,509	\$14,256,732	\$14,435,164
Variable Revenue	\$8,843,481	\$9,141,324	\$9,257,145	\$9,374,436	\$9,493,217	\$9,613,505
Rate Revenue Total	\$22,146,558	\$22,875,903	\$23,163,612	\$23,454,945	\$23,749,949	\$24,048,669
Other Operating Revenues	\$375,037	\$401,042	\$414,763	\$428,995	\$443,759	\$459,074
Non-operating Revenues	\$8,601,224	\$5,805,479	\$6,016,186	\$6,233,548	\$6,457,779	\$6,689,096
Total	\$31,122,819	\$29,082,425	\$29,594,560	\$30,117,489	\$30,651,487	\$31,196,840

Operating and Maintenance (O&M) Expense

The itemized O&M expenses were carefully reviewed by the District and forecast for the study period using escalation factors discussed in the Key Assumptions section. **Table 73** shows the District’s projected O&M expenses for the wastewater utility during the study period. O&M Expenses are expected to increase by 4.5 percent on average annually. Note that IEBL expenses and revenues are excluded from the financial planning as these will be directly recovered from IEBL rates; however, they are shown in **Table 73** as a reference for the Cost of Service analysis.

Table 73. Wastewater System O&M Expense Forecast, FY 2023-24 to FY 2028-29

Expense Category	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Central Services Overhead	\$7,022,880	\$7,350,848	\$7,625,256	\$7,909,906	\$8,205,183	\$8,511,483
Wastewater Admin	\$786,912	\$831,859	\$877,723	\$926,188	\$977,404	\$1,031,531
Wastewater Collection	\$2,392,391	\$2,518,170	\$2,646,917	\$2,782,763	\$2,926,107	\$3,077,371
Wastewater Treatment	\$8,569,976	\$8,998,475	\$9,448,399	\$9,920,818	\$10,416,859	\$10,937,702
Source Control	\$769,713	\$809,048	\$848,681	\$890,517	\$934,681	\$981,307
IEBL	\$2,608,874	\$2,765,264	\$2,893,415	\$3,026,679	\$3,166,180	\$3,312,215
Total Operating	\$22,150,745	\$23,273,663	\$24,340,390	\$25,456,871	\$26,626,415	\$27,851,609

Other Obligations

Other obligations included in the financial plan are capital improvement projects funded by PAYGO (Pay As You Go), debt service obligations, and reserve contributions made from rates.

Capital Improvement Projects

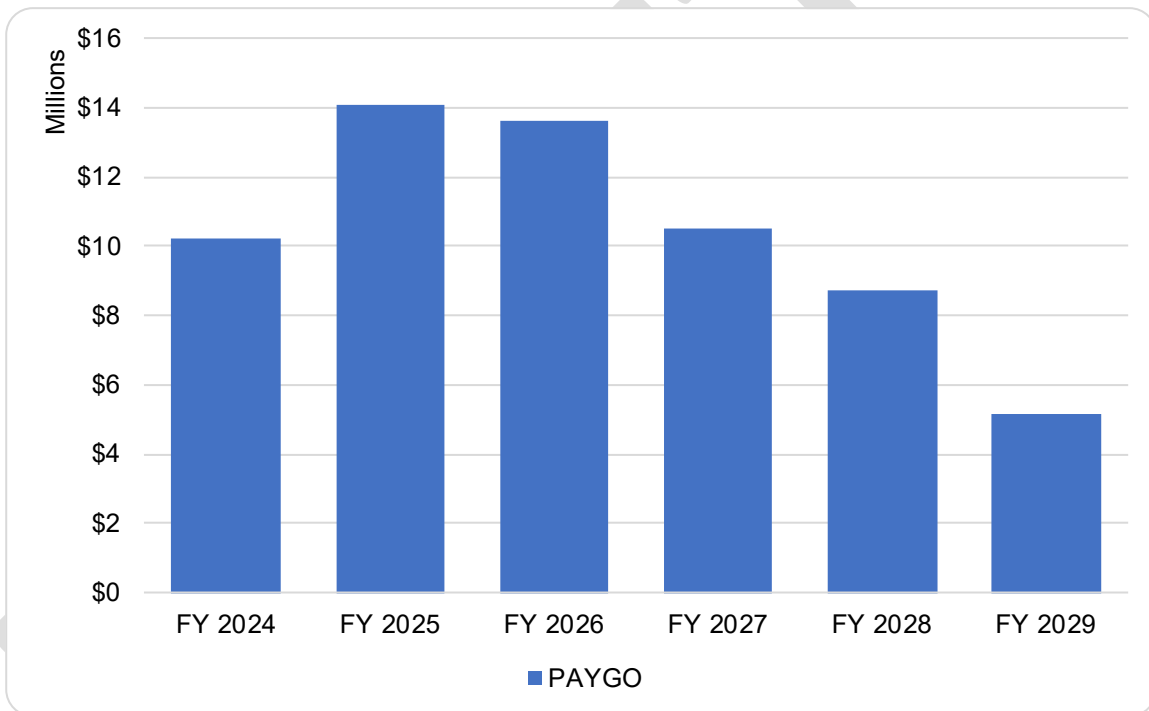
The District plans to spend an average of \$10.4 million a year on wastewater rate related capital expenditures during the rate setting period. An additional \$6.6 million on average per year in wastewater capital expenditures will be funded by capacity fees. During the 5-year rate setting period, District staff indicated that there are sufficient capacity fee revenues to fund capacity fee related capital projects, so they are not included in the rate analysis. **Table 74** shows the rate related capital expenditure by expenditure type. The District plans to use customer rates to accomplish the proposed capital plan.

Figure 11 shows the rate study capital plan by funding source, only PAYGO funded expenditure will impact customer rates.

Table 74. Rate Study Wastewater CIP Expenses by Expense Type, FY 2023-24 to FY 2028-29

CIP Type	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
General	\$5,063,600	\$4,083,400	\$5,370,600	\$2,200,200	\$2,183,600	\$2,081,000
Sewer Line	\$4,264,000	\$8,143,000	\$5,760,000	\$4,500,000	\$4,500,000	\$0
Trunk	\$45,000	\$492,000	\$0	\$0	\$0	\$0
Lift Stations	\$305,000	\$797,000	\$1,933,000	\$3,213,000	\$1,432,000	\$2,500,000
Plant	\$564,800	\$572,000	\$580,400	\$588,800	\$597,200	\$606,800
Total Rate CIP	\$10,242,400	\$14,087,400	\$13,644,000	\$10,502,000	\$8,712,800	\$5,187,800

Figure 11. Rate Study Wastewater CIP Expenses by Funding Source, FY 2023-24 to FY 2028-29



Debt Service and Coverage Ratios

The District’s wastewater debt service schedule totals \$4.8 million a year during the study period. Current debt obligations include the Series B loan, the 2020 Rate Refunding Bond (RRB), the Western Municipal Water District bond, and WRCRWA SRF loan. The WRCRWA SRF is currently being paid by capacity fee revenues. **Table 75** shows the annual debt service payments which are allocated to the wastewater fund.

Table 75. Wastewater Fund Debt Service Payments, FY 2023-24 to FY 2028-29

Debt Obligation	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Series B	\$2,182,757	\$2,724,938	\$2,701,576	\$2,674,130	\$2,657,263	\$2,625,977
2020 RRB	\$595,200	\$592,800	\$35,900	\$39,800	\$38,600	\$37,400
WMWD	\$508,187	\$515,859	\$503,371	\$510,386	\$516,746	\$522,447
WRCRWA SRF	\$2,064,704	\$2,064,704	\$2,064,704	\$2,064,704	\$2,064,704	\$2,064,704
Refund on COP BABS	(\$592,530)	(\$586,566)	(\$572,438)	(\$551,532)	(\$529,278)	(\$505,566)
Total Debt Service	\$4,758,318	\$5,311,736	\$4,733,113	\$4,737,488	\$4,748,034	\$4,744,962

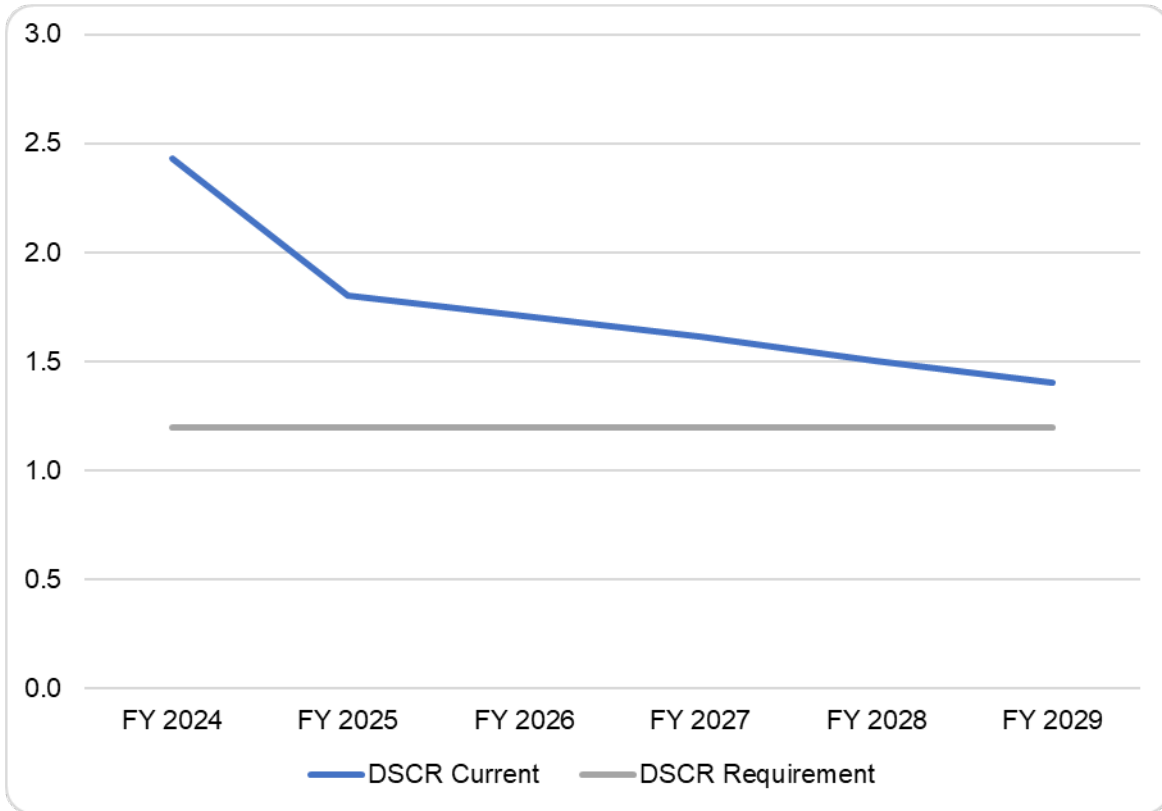
The SRF loan will be paid by capacity fees, but the annual payments are included in debt service coverage ratio (DCSR) calculations. **Table 76** shows the DSCR under the current finances. To Derive the DSCR, net revenue is divided by the total debt service in each year.

Table 76. Wastewater Debt Service Coverage Ratio Calculation, FY 2023-24 to FY 2028-29

Category	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Total Revenue	\$31,122,819	\$29,082,425	\$29,594,560	\$30,117,489	\$30,651,487	\$31,196,840
Operating Expense	\$19,541,872	\$20,508,399	\$21,446,975	\$22,430,192	\$23,460,234	\$24,539,394
Net Revenue	\$11,580,947	\$8,574,026	\$8,147,585	\$7,687,296	\$7,191,252	\$6,657,446
Debt Service Total	\$4,758,318	\$5,311,736	\$4,733,113	\$4,737,488	\$4,748,034	\$4,744,962
DSCR	2.43	1.61	1.72	1.62	1.51	1.40

Under the current rates, the District is able to maintain sufficient debt service coverage ratios for the wastewater utility. **Figure 12** shows the projected debt service coverage ratios based on the current financial plan.

Figure 12. Debt Service Coverage Ratio Under Current Rates, FY 2023-24 to FY 2028-29



Reserves

The District must maintain an appropriate reserve balance to ensure the day-to-day operation will continue during emergencies and guarantee the future stability of the system. The District's financial goal is to build an appropriate level of cash reserves for each reserve fund included in the financial plan of this Study. Reserve targets for the water utility are described below:

- **Bond Reserve:** the total of one year's worth of bond payments
- **Operating Reserve:** four months of operating expenses
- **Capital Replacement Fund:** average of five years upcoming capital expenditures

Reserve targets at the end of the study period reach \$25.3 million which does not include the Retiree Health Benefits Reserve Fund. **Table 77** shows the District's reserve targets for FY 2023-24 through FY 2028-29 based on the current reserve policy. **Figure 13** displays the resulting cash balances versus the reserve target under the current rates.

Table 77. Wastewater Reserve Targets, FY 2023-24 to FY 2028-29

Reserve Fund	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Bond Reserve	\$2,704,851	\$2,691,771	\$2,700,230	\$2,700,197	\$2,711,544	\$2,689,768
Operating Reserve	\$6,513,957	\$6,836,133	\$7,148,992	\$7,476,731	\$7,820,078	\$8,179,798
Capital Replacement Fund	\$11,437,720	\$10,426,800	\$9,822,000	\$9,885,000	\$11,096,920	\$14,415,640
Total	\$20,656,528	\$19,954,704	\$19,671,222	\$20,061,928	\$21,628,542	\$25,285,205

Figure 13. Wastewater Cash Balances and Reserve Target With Current Rates, FY 2023-24 to FY 2028-29



Financial Plan

Based on the projected total revenue and necessary costs to be recovered during the study period, RDN built a financial plan that will generate sufficient revenues for the day-to-day operation and annual PAYGO and make appropriate contributions to reserves. The District currently has a projected ending cash balance of \$51.0 million in FY 2023-24. **Table 78** shows the status quo wastewater pro forma with no revenue adjustments and the resulting ending balances.

Table 78. Status Quo Financial Pro Forma for Jurupa Community Services District Wastewater System, FY 2023-24 to FY 2028-29

Rate Increase	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Rate Month Implemented						
	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Cash Position Opening Balance	\$ 52,316,990	\$ 50,950,686	\$ 42,745,541	\$ 34,548,896	\$ 29,033,995	\$ 24,800,903
Revenues						
Current Sewer Rate Revenue	\$ 22,146,558	\$ 22,875,903	\$ 23,163,612	\$ 23,454,945	\$ 23,749,949	\$ 24,048,669
Additional Sewer Rate Revenue	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Operating Revenue	\$ 375,037	\$ 401,042	\$ 414,763	\$ 428,995	\$ 443,759	\$ 459,074
Non-Operating Revenue	\$ 8,601,224	\$ 5,805,479	\$ 6,016,186	\$ 6,233,548	\$ 6,457,779	\$ 6,689,096
Total Revenues	\$ 31,122,819	\$ 29,082,425	\$ 29,594,560	\$ 30,117,489	\$ 30,651,487	\$ 31,196,840
Operating Expenses	\$ 19,541,872	\$ 20,508,399	\$ 21,446,975	\$ 22,430,192	\$ 23,460,234	\$ 24,539,394
Net Operating Revenue	\$ 11,580,947	\$ 8,574,026	\$ 8,147,585	\$ 7,687,296	\$ 7,191,252	\$ 6,657,446
Current Debt Service	\$ 2,704,851	\$ 2,691,771	\$ 2,700,230	\$ 2,700,197	\$ 2,711,544	\$ 2,689,768
Proposed Debt Service	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Operating and Debt Service	\$ 22,246,722	\$ 23,200,170	\$ 24,147,205	\$ 25,130,390	\$ 26,171,778	\$ 27,229,161
Net Revenues Before CIP	\$ 8,876,096	\$ 5,882,255	\$ 5,447,355	\$ 4,987,099	\$ 4,479,709	\$ 3,967,678
Capital Expenditure	\$ 13,895,550	\$ 20,928,450	\$ 19,088,600	\$ 16,192,700	\$ 17,876,100	\$ 10,793,500
Debt Proposed	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Debt New	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capacity Fee	\$ 3,653,150	\$ 6,841,050	\$ 5,444,600	\$ 5,690,700	\$ 9,163,300	\$ 5,605,700
Grants	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Cash	\$ 10,242,400	\$ 14,087,400	\$ 13,644,000	\$ 10,502,000	\$ 8,712,800	\$ 5,187,800
Net Income	\$ (1,366,304)	\$ (8,205,145)	\$ (8,196,645)	\$ (5,514,901)	\$ (4,233,091)	\$ (1,220,122)
Ending Balance	\$ 50,950,686	\$ 42,745,541	\$ 34,548,896	\$ 29,033,995	\$ 24,800,903	\$ 23,580,782
Reserve Target	\$20,656,528	\$19,954,704	\$19,671,222	\$20,061,928	\$21,628,542	\$25,285,205

Table 79 shows the proposed wastewater pro forma for the study period with the recommended revenue adjustments per year. All revenue adjustments will occur in January, midyear in each Fiscal Year.

Table 79. Proposed Financial Pro Forma for Jurupa Community Services District Wastewater System, FY 2023-24 to FY 2028-29

Rate Increase	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Rate Month Implemented		January	January	January	January	January
	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Cash Position Opening Balance	\$ 52,316,990	\$ 50,950,686	\$ 43,088,680	\$ 35,944,821	\$ 32,231,576	\$ 30,590,029
Revenues						
Sewer Rate Revenue	\$ 22,146,558	\$ 22,875,903	\$ 23,163,612	\$ 23,454,945	\$ 23,749,949	\$ 24,048,669
Additional Sewer Rate Revenue	\$ -	\$ 343,139	\$ 1,052,786	\$ 1,801,656	\$ 2,591,545	\$ 3,424,325
Other Operating Revenue	\$ 375,037	\$ 401,042	\$ 414,763	\$ 428,995	\$ 443,759	\$ 459,074
Non-Operating Revenue	\$ 8,601,224	\$ 5,805,479	\$ 6,016,186	\$ 6,233,548	\$ 6,457,779	\$ 6,689,096
Total Revenues	\$ 31,122,819	\$ 29,425,563	\$ 30,647,346	\$ 31,919,145	\$ 33,243,031	\$ 34,621,164
Operating Expenses	\$ 19,541,872	\$ 20,508,399	\$ 21,446,975	\$ 22,430,192	\$ 23,460,234	\$ 24,539,394
Net Operating Revenue	\$ 11,580,947	\$ 8,917,164	\$ 9,200,371	\$ 9,488,953	\$ 9,782,797	\$ 10,081,771
Current Debt Service	\$ 2,704,851	\$ 2,691,771	\$ 2,700,230	\$ 2,700,197	\$ 2,711,544	\$ 2,689,768
Proposed Debt Service	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Operating and Debt Service	\$ 22,246,722	\$ 23,200,170	\$ 24,147,205	\$ 25,130,390	\$ 26,171,778	\$ 27,229,161
Net Revenues Before CIP	\$ 8,876,096	\$ 6,225,393	\$ 6,500,141	\$ 6,788,755	\$ 7,071,253	\$ 7,392,003
Capital Expenditure	\$ 13,895,550	\$ 20,928,450	\$ 19,088,600	\$ 16,192,700	\$ 17,876,100	\$ 10,793,500
Debt Proceeds Proposed	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Debt Proceeds New	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capacity Fee	\$ 3,653,150	\$ 6,841,050	\$ 5,444,600	\$ 5,690,700	\$ 9,163,300	\$ 5,605,700
Grants	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Cash	\$ 10,242,400	\$ 14,087,400	\$ 13,644,000	\$ 10,502,000	\$ 8,712,800	\$ 5,187,800
Net Income	\$ (1,366,304)	\$ (7,862,007)	\$ (7,143,859)	\$ (3,713,245)	\$ (1,641,547)	\$ 2,204,203
Ending Balance	\$ 50,950,686	\$ 43,088,680	\$ 35,944,821	\$ 32,231,576	\$ 30,590,029	\$ 32,794,232
Reserve Target	\$20,656,528	\$19,954,704	\$19,671,222	\$20,061,928	\$21,628,542	\$25,285,205

Revenue Requirements

Table 80 displays the wastewater utility’s revenue requirements for FY 2024-25 through FY 2028-29. The total expense for each year is offset by other operating revenues and non-operating revenues to compute a pure portion of revenue requirements that need to be recovered from customers’ rates. RDN proposes annual revenue adjustments of 3.0 percent each year for FY 2024-25 through FY 2028-29 to reach the financial goals set by the District.

Table 80. Revenue Requirements for Jurupa Community Services District Water Utility, Non-IEBL FY 2024-25 – FY 2028-29

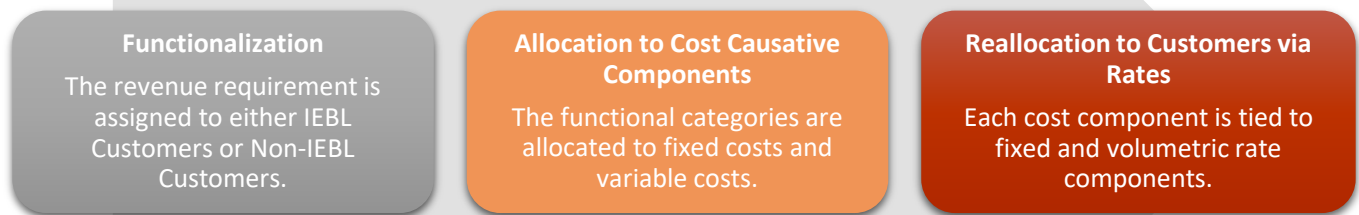
Revenue Requirements	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
O&M Expenses	\$20,508,399	\$21,446,975	\$22,430,192	\$23,460,234	\$24,539,394
Debt Service	\$2,691,771	\$2,700,230	\$2,700,197	\$2,711,544	\$2,689,768
Capital Expenditures (PAYGO)	\$14,087,400	\$13,644,000	\$10,502,000	\$8,712,800	\$5,187,800
Total Expenses	\$37,287,570	\$37,791,205	\$35,632,390	\$34,884,578	\$32,416,961
Other Operating Revenue	(\$401,042)	(\$414,763)	(\$428,995)	(\$443,759)	(\$459,074)
Non-Operating Revenue	(\$5,805,479)	(\$6,016,186)	(\$6,233,548)	(\$6,457,779)	(\$6,689,096)
Net Balance From Operations	(\$7,862,007)	(\$7,143,859)	(\$3,713,245)	(\$1,641,547)	\$2,204,203
Rate Revenue Requirement	\$23,219,042	\$24,216,398	\$25,256,601	\$26,341,493	\$27,472,994

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4.2 Cost of Service Analysis

In the same way as the water system's Cost of Service analysis was performed, a wastewater system's COS analysis also utilizes a three-step approach to allocate costs proportionally among different customer classes. These steps include 1) functionalization of costs, 2) cost classification, and 3) cost allocation to customers. Provided below is a detailed discussion of the wastewater COS analysis conducted for the District, and the specific steps taken for the analysis.

Figure 14. A Typical Flow for Cost of Service Analysis Process



Functionalization of Costs

To allocate the cost of service among the different customer classes, costs first must be allocated to the appropriate wastewater parameters. The following sections describe the allocation of the operating and capital costs of service to the appropriate parameters of the wastewater system.

The total cost of wastewater service is analyzed by system function in order to equitably distribute costs of service to the various classes of customers. For this analysis, wastewater utility costs of service are developed consistent with the guidelines for allocating costs detailed in the Water Environment Federation (WEF) Manual of Practice No. 27, Financing and Charges for Wastewater Systems.

A cost of service analysis distributes the revenue requirements (costs) to each customer class. After determining the revenue requirements, the next step is to functionalize the O&M costs based on the District's O&M classification:

- **Non-IEBL O&M** – includes all costs associated with treating and operating and maintaining the wastewater collection system for non-IEBL customers
- **IEBL O&M** - includes all costs associated with treating and operating and maintaining the wastewater collection system for IEBL customers

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

- **Fixed costs** - are those costs that do not change with respect to the amount of wastewater flow generated (in hcf) or the strength of the wastewater (the amount of organic compounds or suspended solids in wastewater). An example of fixed costs would be administrative costs.
- **Variable costs** - are those costs that are dependent upon the amount of wastewater flow and strength. An example of variable costs would be chemical costs associated with treating wastewater.

Once this process was complete, and the customer classes were identified, the unit cost of these classified costs were calculated and further allocated to different customer classes using the unit of services specific to the class. **Table 81** through **Table 85** show the steps taken to functionalize and allocate the District’s costs to each customer class. IEBL costs are directly allocated to IEBL customers and the proposed rates are based on the District’s 2023 rate study.

Table 81. Percent of O&M Functional Categories Allocated to IEBL an Non-IEBL Customers

O&M Expense		
Category	Allocation	Percent
IEBL	\$2,765,264	11.9%
Non-IEBL	\$20,508,399	88.1%
Total O&M	\$23,273,663	100.0%

Table 82. Percent of O&M Functional Categories Allocated to Cost Components

O&M Expense		
Category	Fixed	Variable
Non-IEBL	57.3%	42.7%

Table 83. Total of Operating Functional Categories Allocated to Cost Components

O&M Expense		
Category	Fixed	Variable
Non-IEBL	\$11,751,074	\$8,757,325

Table 84. Percent of Non-operating Functional Categories Allocated to Cost Components

Non-operating Expense		
Category	Fixed	Variable
Non-IEBL	57.3%	42.7%

Table 85. Total of Non-operating Functional Categories Allocated to Cost Components

Non-operating Expense		
Category	Fixed	Variable
Non-IEBL	\$9,614,465	\$7,164,706

Table 86 displays the functionalized O&M costs and non-operating costs allocated to cost causative components for the wastewater system. The non-operating expenses for the test year are made up of planned PAYGO capital expenditures and debt service payments. Those costs are distributed to the cost components based on the final percentages shown **Table 85**, above. Operating allocations are based on the actual projected test year expense and the total for each cost component reflect the percentages in **Table 82**.

Table 86. Revenue Requirement Cost Allocation by Cost Component

Cost Allocation Summary	Total	Fixed	Variable
O&M Revenue Requirements	\$20,508,399	\$11,751,313	\$8,757,086
Non-Operating Revenue Requirements	\$16,779,171	\$9,614,465	\$7,164,706
	\$37,287,570	\$21,365,778	\$15,921,792
		57%	43%
Other Operating Revenue	(\$401,042)	(\$229,797)	(\$171,245)
Non-Operating Revenue	(\$5,805,479)	(\$3,326,540)	(\$2,478,940)
Net Balance From Operations	(\$7,862,007)	(\$4,504,930)	(\$3,357,077)
Rate Revenue Requirement	\$23,219,042	\$13,304,511	\$9,914,531

Allocation to Units

In developing equitable rate structures, revenue requirements are allocated to residential, institutional, and non-residential customers commensurate with customer demand and services rendered. First an overall number of units was determined for each cost component (**Table 88**). RDN completed a wastewater mass balance and water consumption analysis. The results of this analysis determined that the current flow caps for residential customers and institutional customer EDUs reflect an appropriate estimate of total wastewater generated by those classes. Additionally, the sum of billed wastewater flow reflects the total wastewater flows reported by the Riverside and WRCRWA treatment plant to the District. **Table 87** shows the total wastewater flow to the treatment plants in million gallons (MG) for fiscal year 2022-23 in Line A. Line D is the remaining unaccounted sewer flow when non-residential and institutional use is subtracted. Line F shows the estimated per account annual use which is calculated by dividing Line D by Line E. Line G shows the actual billed residential sewer use per account annually. The result is a less than 2.3 percent difference between reported sewer flows and actual billed wastewater flows, which is likely a result of inflow to the system.

Table 87. Total Plant Sewer Flows and Estimated Versus Actual Billed Sewer Flow for Residential Customers¹⁹

Category	Riverside and WRCRWA	Unit
A Total Plant FY 2023	2,791.06	MG
B Non-Res Water Use	736.99	MG
C Institutional (8 hcf cap)	5.35	MG
D Unaccounted Use	2,048.72	MG
E Residential Accounts	35,915	
F Per Account Annual Estimate	0.057	MG
G Actual Per Account Use (8 hcf cap)	0.056	MG

The end goal of a cost of service analysis is to proportionately distribute the revenue requirements to each user class. First, a cost allocation basis must be determined. To do so, billed wastewater generation for each user class is estimated based on the projected billed water use for FY 2024-25. Residential customers have a cap of 8 hcf per EDU applied to their water use each month which the District confirmed as reasonable. This cap is a proxy for indoor use and accounts for irrigation usage, which needs to be considered to determine the amount of wastewater generated. Anything over the 8 hcf per month cap is assumed to be attributed to outdoor irrigation use. Non-residential customers water use is not capped which resulting in water use and wastewater generated being equivalent. The service category represents the number of EDUs times 12 to determine the total billable units.

Table 88. Cost of Service Units of Service

Customer Class	Customers	Volume Units	Service Units
Residential	35,915	2,677,062	430,980
Institutional	1,463	7,150	17,556
Non-Residential	4,975	985,282	59,700
Total	42,353	3,669,494	508,236

Costs allocated to each cost component were divided by the number of units to determine a unit cost (**Table 89**). Finally, the costs were allocated to each customer class based on the number of applicable units which were directly related to that customer class (**Table 90**). The final cost allocations are used to determine rates.

¹⁹ Flow rates provided by District staff based on reporting from the City of Riverside and WRCRWA treatment plants

Table 89. Cost of Service Unit Cost

	Fixed	Variable
Rate Revenue Requirement	\$13,304,511	\$9,914,531
Units	508,236	3,669,494
Unit Cost	\$26.18	\$2.70

Table 90. Cost of Service Allocation by Customer Class

Customer Class	Total	Fixed	Variable
Residential	\$18,515,216	\$11,282,117	\$7,233,099
Institutional	\$478,896	\$459,578	\$19,318
Non-Residential	\$4,224,929	\$1,562,816	\$2,662,113

4.3 Rate Design

The District’s wastewater rates are comprised of a monthly service charge and variable charges based on water use. The fixed service charge is applied to each EDU. Total costs allocated by category to each customer class are divided the units of service in that category. **Table 91** shows the calculation used to determine wastewater rates for each customer class.

Table 91. Wastewater Rate Calculation

Customer Class	Fixed Costs	Units	Fixed Charge
Residential	\$11,282,117 ÷	430,980 =	\$26.18
Institutional	\$459,578 ÷	17,556 =	\$26.18
Non-Residential	\$1,562,816 ÷	59,700 =	\$26.18
Customer Class	Variable Costs	Units	Variable Charge
Residential	\$7,233,099 ÷	2,677,062 =	\$2.70
Institutional	\$19,318 ÷	7,150 =	\$2.70
Non-Residential	\$2,662,113 ÷	985,282 =	\$2.70

Wastewater Rates

In future years, the rates will be escalated by the revenue adjustments and the five year rate schedule is shown in **Table 92** and **Table 93**. Each adjustment will occur in January, midway through the fiscal year.

Table 92. Proposed Fixed Wastewater Rates CY 2025 to CY 2029

Customer Class	Fixed Charges				
	CY 2025	CY 2026	CY 2027	CY 2028	CY 2029
Residential	\$26.18	\$26.97	\$27.78	\$28.61	\$29.47
Institutional	\$26.18	\$26.97	\$27.78	\$28.61	\$29.47
Non-Residential	\$26.18	\$26.97	\$27.78	\$28.61	\$29.47

Table 93. Proposed Variable Wastewater Rates CY 2025 to CY 2029

Variable Charges						
Customer Class	Tier - Width	CY 2025	CY 2026	CY 2027	CY 2028	CY 2029
Residential	per hcf up to 8	\$2.70	\$2.78	\$2.86	\$2.95	\$3.04
Institutional	per hcf up to 8	\$2.70	\$2.78	\$2.86	\$2.95	\$3.04
Non-Residential	All Use	\$2.70	\$2.78	\$2.86	\$2.95	\$3.04

Inland Empire Brine Line Rates

The IEBL is a pipeline constructed to transport high-saline wastewater from the Inland Empire to Orange County for treatment at OCSD’s wastewater treatment plant and disposal in the Pacific Ocean. JCSD currently serves approximately 135 wastewater customer accounts that are connected to the IEBL system. JCSD’s IEBL customers can currently be classified within one of two main categories:

- **Monitored IEBL Customers:** Customers with wastewater discharges that are periodically sampled by JCSD staff to measure customer-specific strength loadings for BOD and TSS.
- **Non-Monitored IEBL Customers:** Customers with wastewater discharges that are not sampled by JCSD staff to measure customer-specific strength loadings for BOD and TSS.

At present, approximately 15 IEBL customer accounts are monitored, and 120 accounts are non-monitored. Proposed IEBL Fixed Monthly Service Charges are calculated per EDU. The number of EDUs for IEBL customers are determined by taking each customer’s average daily wastewater flows in gallons per day (gpd) and dividing by 220 gpd. The number of EDUs can therefore fluctuate as each customer’s average daily flow value is updated. IEBL rates designed in the 2023 study and adopted by JCSD in December 2023 are escalated based on projected expense inflation for each rate category. Administrative costs use the Overall expense escalation factor shown in **Table 13**, whereas the treatment related rates are escalated based on the Wastewater Treatment escalation factor. **Table 94** shows the expenses and calculations used to determine IEBL rates for FY 2024-25 through FY 2028-29. The FY 2023-24 costs, rates, and customer counts are taken directly from the 2023 Inland Empire Brine Line Rate Design Study. Escalation factors are based on input from District staff.

Table 94. Inland Empire Brine Line Cost Escalation and Rate Calculation

	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2025 Escalation
A Collections IEBL	\$133,620.00	\$139,860.05	\$145,081.03	\$150,496.90	\$156,114.95	\$161,942.73	4.67%
B Source Control IEBL	\$344,405.00	\$360,488.71	\$373,945.76	\$387,905.15	\$402,385.65	\$417,406.71	4.67%
C Wastewater Administration	\$6,815,738.00	\$7,350,848.42	\$7,625,255.59	\$7,909,906.38	\$8,205,183.19	\$8,511,482.67	7.85%
D Admin to IEBL (C*0.05)	\$340,786.90	\$367,542.42	\$381,262.78	\$395,495.32	\$410,259.16	\$425,574.13	
E Source Control to Monitored (D*0.75)	\$258,303.75	\$270,366.54	\$280,459.32	\$290,928.86	\$301,789.24	\$313,055.03	
F Source Control to Non-Monitored (D*0.25)	\$86,101.25	\$90,122.18	\$93,486.44	\$96,976.29	\$100,596.41	\$104,351.68	
Unit Costs							Units
G Collections -IEBL (A/3,812/12)	\$2.92	\$3.06	\$3.17	\$3.29	\$3.41	\$3.54	3812
H Source Control IEBL (monitored) (B/1,610/12)	\$13.37	\$13.99	\$14.52	\$15.06	\$15.62	\$16.20	1610
I Source Control IEBL (non-Monitored) (C/2,202/12)	\$3.26	\$3.41	\$3.54	\$3.67	\$3.81	\$3.95	2202
J Wastewater Administration (D/3,812/12)	\$7.45	\$8.03	\$8.33	\$8.65	\$8.97	\$9.30	3812
Fixed Charges							
Monitored Customers (G+H+I)	\$23.74	\$25.09	\$26.02	\$26.99	\$28.00	\$29.05	
Non-Monitored Customers (G+I+J)	\$13.63	\$14.50	\$15.04	\$15.61	\$16.19	\$16.79	
Treatment/Pipeline Monthly Charge							FY 2025 Escalation
K WMWD Fixed Treatment & Pipeline Charges	\$42,401.00	\$46,005.09	\$48,378.95	\$50,797.89	\$53,337.79	\$56,004.68	8.50%
L MWWD Minimum Flow Charges	\$1,103.00	\$1,158.15	\$1,216.06	\$1,276.86	\$1,340.70	\$1,407.74	5.00%
M Total EDUs	3,812.00	3,812.00	3,812.00	3,812.00	3,812.00	3,812.00	
((K+L)/3,812)	\$11.41	\$12.37	\$13.01	\$13.66	\$14.34	\$15.06	
Non-Monitored Commodity Rate							FY 2025 Escalation
N Flow Charge per Million Gallons	\$1,138.00	\$1,194.90	\$1,254.65	\$1,317.38	\$1,383.25	\$1,452.41	5.00%
O BOD Charge per Pounds	\$0.3707	\$0.3892	\$0.4087	\$0.4291	\$0.4506	\$0.4731	5.00%
P TSS Charge per Pounds	\$0.5460	\$0.5733	\$0.6020	\$0.6321	\$0.6637	\$0.6968	5.00%
Q Flow Component per HCF (N/1,000,000/*748)	\$0.851	\$0.894	\$0.938	\$0.985	\$1.035	\$1.086	
R BOD Component per HCF (O*301*8.3454/1,000,000*748)	\$0.697	\$0.731	\$0.768	\$0.806	\$0.847	\$0.889	
S TSS Component per HCF (P*455*8.3454/1,000,000*748)	\$1.551	\$1.628	\$1.710	\$1.795	\$1.885	\$1.979	
Non-Monitored Commodity Rate (Q+R+S)	\$3.10	\$3.25	\$3.42	\$3.59	\$3.77	\$3.95	

The proposed IEBL rates for the five year study period are shown in **Table 95**. Monitored customers are billed a monthly fixed charge and variable rates based on their total flow and wastewater strength which are direct passthrough charges from the WMWD. Monitored flow is billed per million gallons (MG) and BOD (Bio-Oxygen Demand) and TSS (Total Suspended Solids) are billed by the pound (lb). Non-monitored customers pay a monthly fixed rate, then a commodity rate per hcf of water use. Note that monitored IEBL customers also have a variable rate, but this rate is a direct passthrough of costs from the treatment facility to JCSD, thus these rates will be determined each year as the WMWD sets its treatment rates.

Table 95. Proposed IEBL Wastewater Rates CY 2025 to CY 2029

IEBL Rates	CY 2025	CY 2026	CY 2027	CY 2028	CY 2029
Monitored Customers	\$25.09	\$26.02	\$26.99	\$28.00	\$29.05
Non-Monitored Customers	\$14.50	\$15.04	\$15.61	\$16.19	\$16.79
Treatment/Pipeline Monthly Charge	\$12.37	\$13.01	\$13.66	\$14.34	\$15.06
Non-Monitored Commodity Rate (hcf)	\$3.25	\$3.42	\$3.59	\$3.77	\$3.95
Monitored WMWD Flow Charge (MG)	Beginning in FY 2024-25, Monitored Variable Charges for Flow ,				
Monitored WMWD BOD Charge (lb)	BOD and TSS will be adjusted annually to agree with WMWD				
Monitored WMWD TSS Charge (lb)	Board adopted charges for Flow , BOD and TSS (typically based on fiscal year beginning July).				

4.4 Bill Impacts

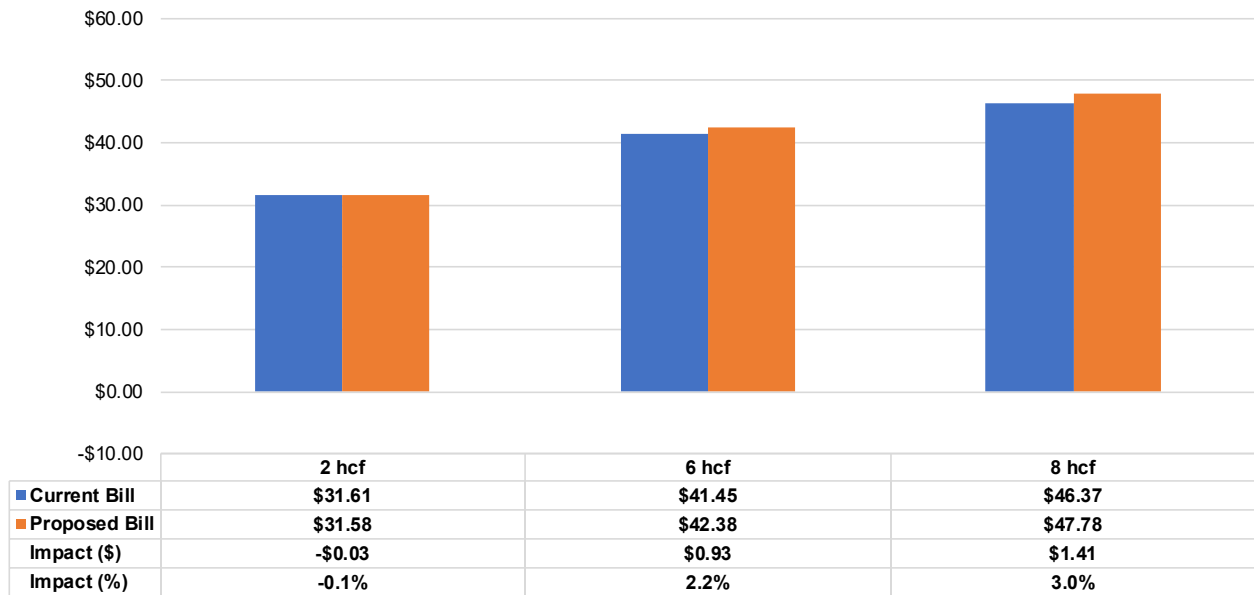
RDN performed an extensive bill impact analysis to find the optimal rates with the least impact across all customers. Note that the bill impact shown below only reflects the test year rates.

Residential Customers Bill Impact

This analysis compares customer’s bill under current and proposed rates. **Figure 15** shows the dollar change in the bill based on the Wastewater customer’s usage. All customers are billed a fixed charge regardless of the flow. Residential and institutional customers pay a variable charge capped at 8 hcf per month.

Figure 15. Wastewater Rate Impacts Current Versus Proposed Rates

Single Family Residential Sewer Rate Impacts



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CONCLUSION

5.1 Summary of Recommendations and Financial Results

Recommendations:

Water

- Adjusting rates annually by the recommended revenue adjustments of 5.0 percent per year
- Increasing the fixed proportion of rate collection
- Including a rate category for Outside of District customers
- Combining all residential customers into single customer class
- Developing a recycled water rate for when the recycled water system comes online
- Proposing passthrough adjustments for when water cost inflation exceeds projections

Wastewater

- Adjusting rates annually by the recommended revenue adjustments of 3.0 percent per year

The following figures summarize the recommendations of this report:

Figure 16 shows the status quo water financial plan used for this study.

Figure 16. Rate Study Water Status Quo Financial Plan

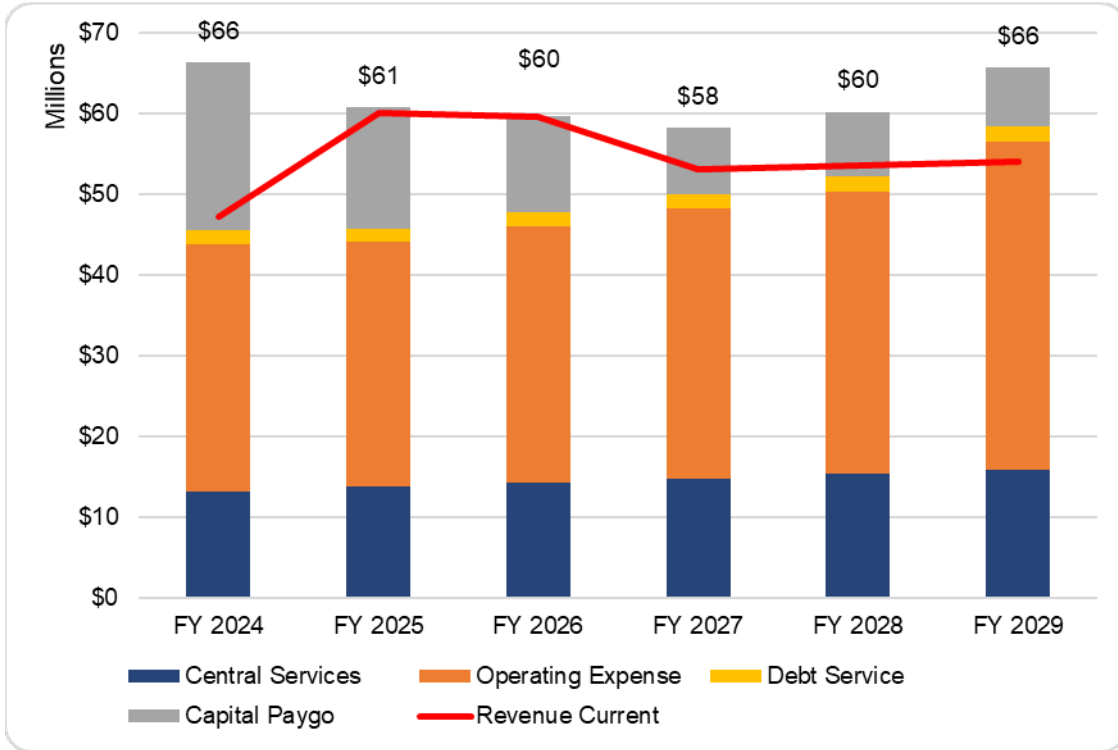


Figure 17 shows the District's water utility ending cash balances with no adjustments to the revenue requirements.

Figure 17. Ending Water Cash Balances with No Revenue Adjustment

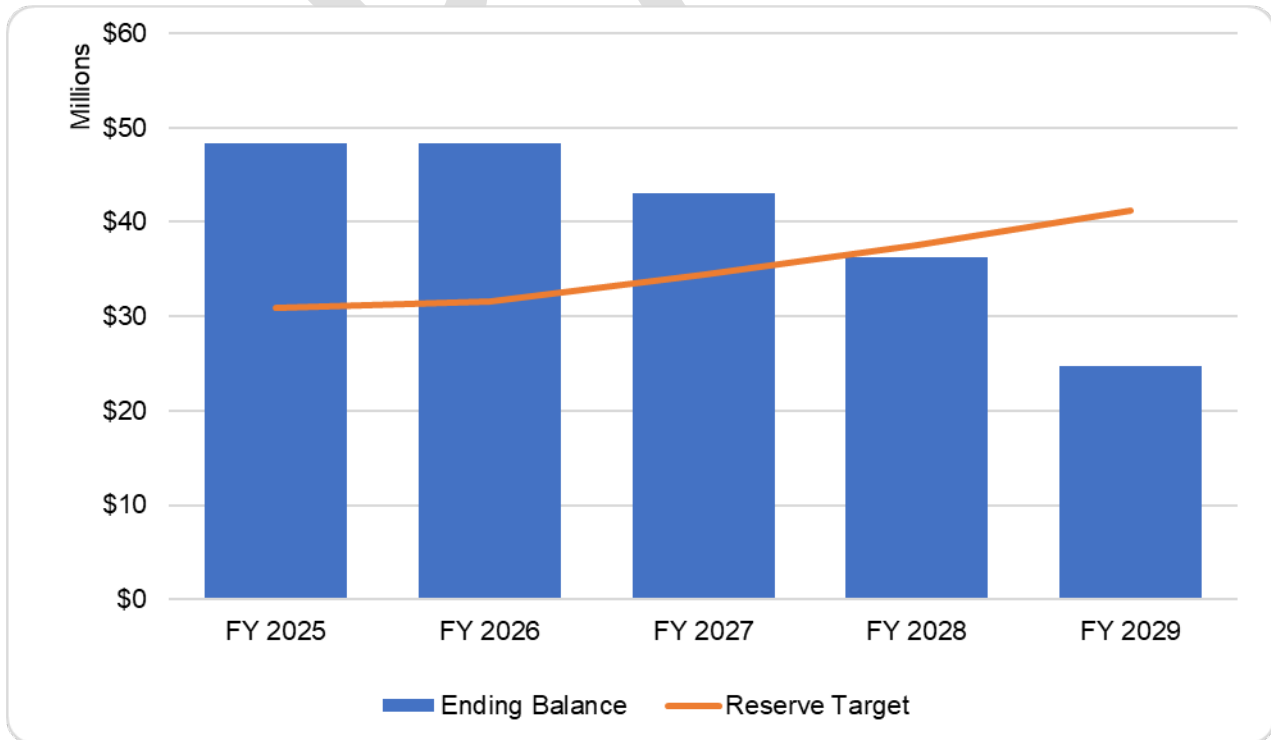


Figure 18 shows the recommended annual water revenue adjustments for each year of the rate setting period.

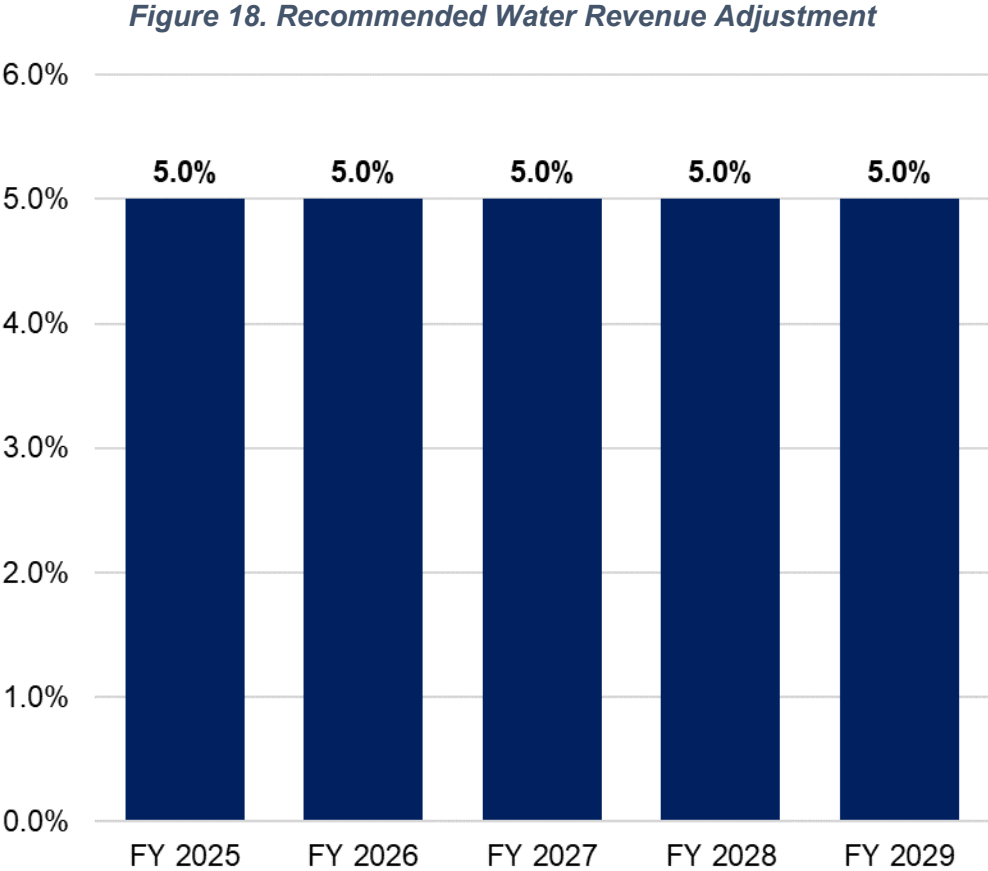


Figure 19 shows the proposed financial plan with revenue adjustments used for this study.

Figure 19. Recommended Rate Study Adjusted Water Financial Plan

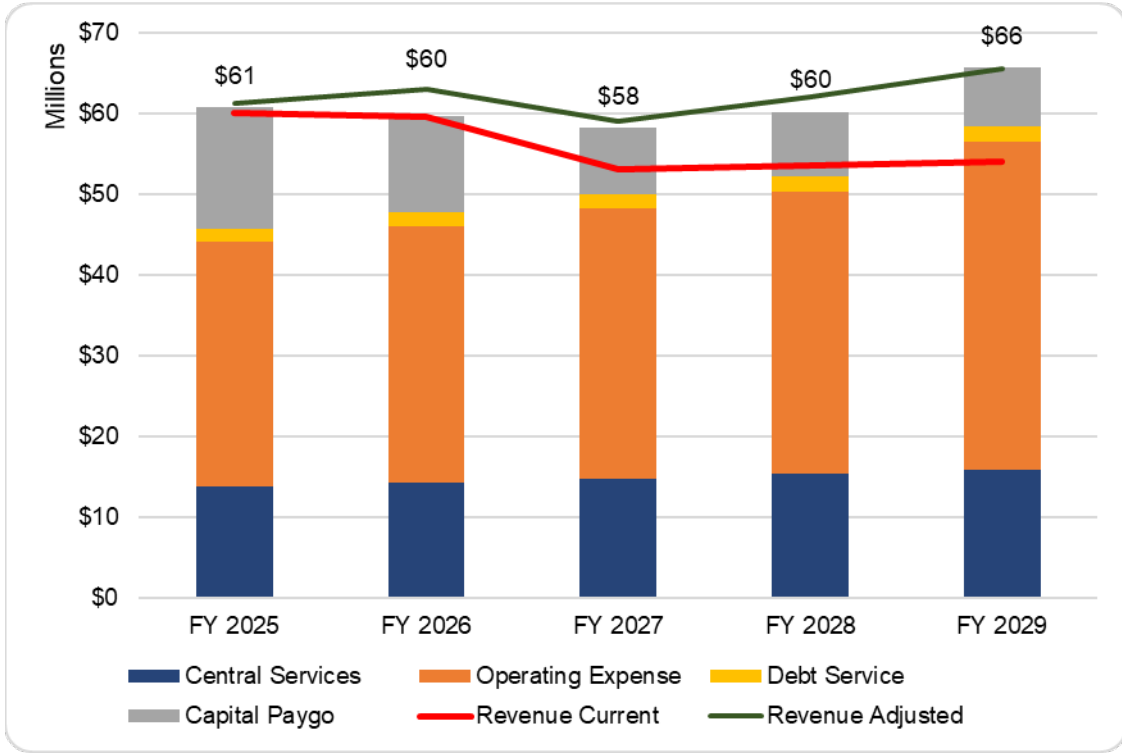


Table 96 shows the proposed fixed rates and variable rates based on the proposed revenue adjustments and cost of service analysis for each year of the rate setting period, respectively.

Table 96. Proposed Fixed and Variable Rates Based on the Proposed Revenue Adjustment

Fixed Charges						
Customer Class	Meter Size	CY 2025	CY 2026	CY 2027	CY 2028	CY 2029
All Customers						
	5/8"	\$48.05	\$50.45	\$52.98	\$55.62	\$58.41
	3/4"	\$48.05	\$50.45	\$52.98	\$55.62	\$58.41
	1"	\$73.72	\$77.41	\$81.28	\$85.34	\$89.61
	1 1/2"	\$137.87	\$144.76	\$152.00	\$159.60	\$167.58
	2"	\$214.86	\$225.60	\$236.88	\$248.73	\$261.16
	3"	\$458.66	\$481.59	\$505.67	\$530.96	\$557.50
	4"	\$817.94	\$858.84	\$901.78	\$946.87	\$994.21
	6"	\$1,677.52	\$1,761.40	\$1,849.47	\$1,941.94	\$2,039.04
	8"	\$3,602.24	\$3,782.35	\$3,971.47	\$4,170.04	\$4,378.55
	10"	\$5,398.77	\$5,668.71	\$5,952.14	\$6,249.75	\$6,562.24
Fire Service	All Meters	\$33.71	\$35.40	\$37.17	\$39.02	\$40.97
Variable Charges						
Customer Class	Tier Width	CY 2025	CY 2026	CY 2027	CY 2028	CY 2029
Residential	per hcf					
Tier 1	0 to 11	\$1.15	\$1.21	\$1.27	\$1.33	\$1.40
Tier 2	12 to 17	\$2.44	\$2.56	\$2.69	\$2.82	\$2.96
Tier 3	18 to 26	\$3.64	\$3.82	\$4.02	\$4.22	\$4.43
Tier 4	27+	\$4.00	\$4.20	\$4.41	\$4.63	\$4.86
Non-residential	all hcf	\$2.12	\$2.23	\$2.34	\$2.45	\$2.58
Potable Irrigation	all hcf	\$2.46	\$2.58	\$2.71	\$2.84	\$2.98
Non-potable Irrigation	all hcf	\$1.50	\$1.58	\$1.65	\$1.74	\$1.82
Fire Hydrant	all hcf	\$4.00	\$4.20	\$4.41	\$4.63	\$4.86
Fire Service						
Out of District	all hcf	\$2.89	\$3.03	\$3.19	\$3.34	\$3.51
Customer Class	Tier Width	CY 2025	CY 2026	CY 2027	CY 2028	CY 2029
Recycled	all hcf	-	\$2.03	\$2.10	\$2.20	\$2.31

Figure 20 shows the District's ending cash balances after revenue and rate adjustments are made.

Figure 20. Recommended Ending Water Cash Balances with Revenue Adjustment

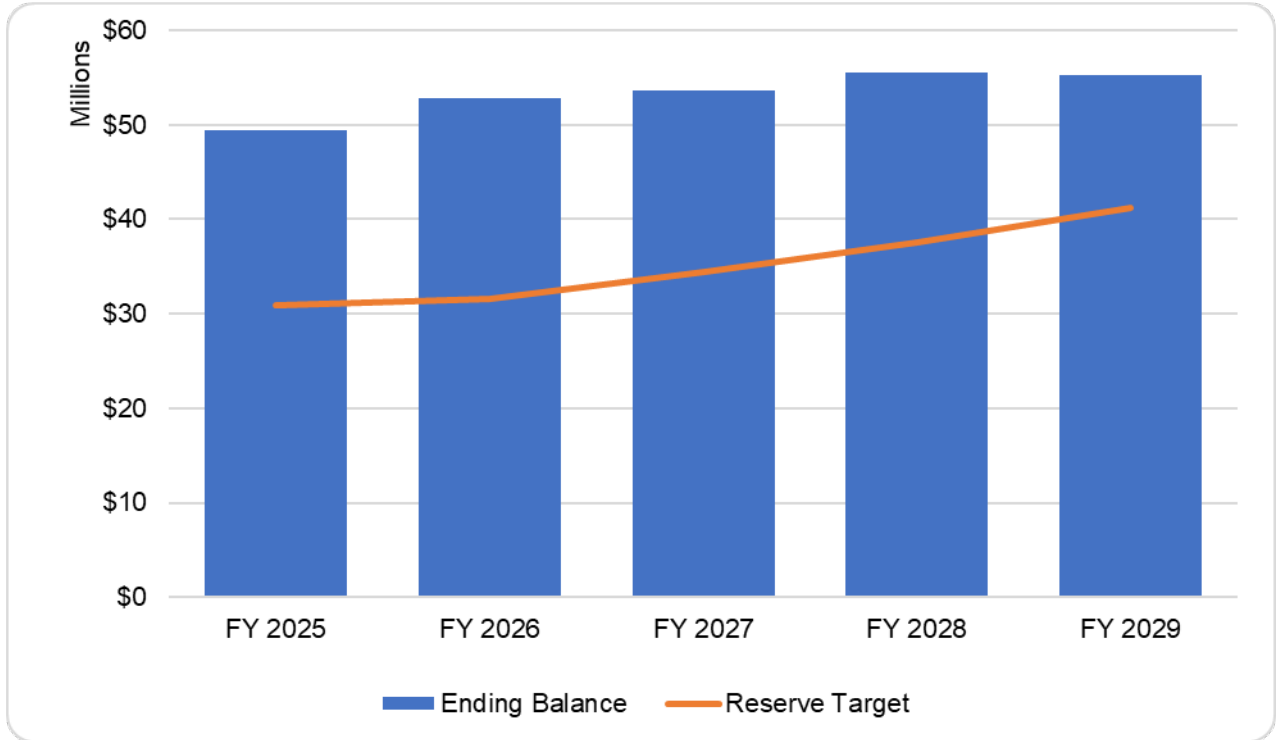


Figure 21 shows the status quo wastewater financial plan used for this study.

Figure 21. Rate Study Wastewater Status Quo Financial Plan

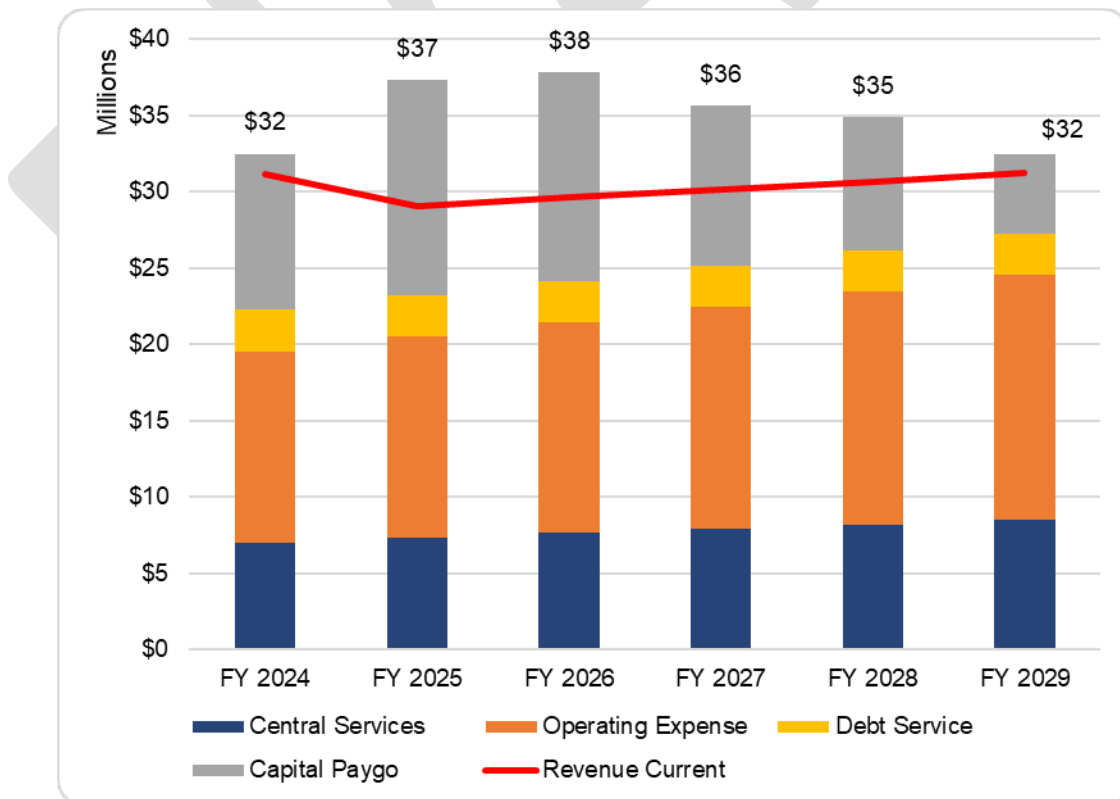


Figure 22 shows the District's wastewater utility ending cash balances with no adjustments to the revenue requirements.

Figure 22. Ending Wastewater Cash Balances with No Revenue Adjustment



Figure 23 shows the recommended annual Wastewater revenue adjustments for each year of the rate setting period.

Figure 23. Recommended Wastewater Revenue Adjustment

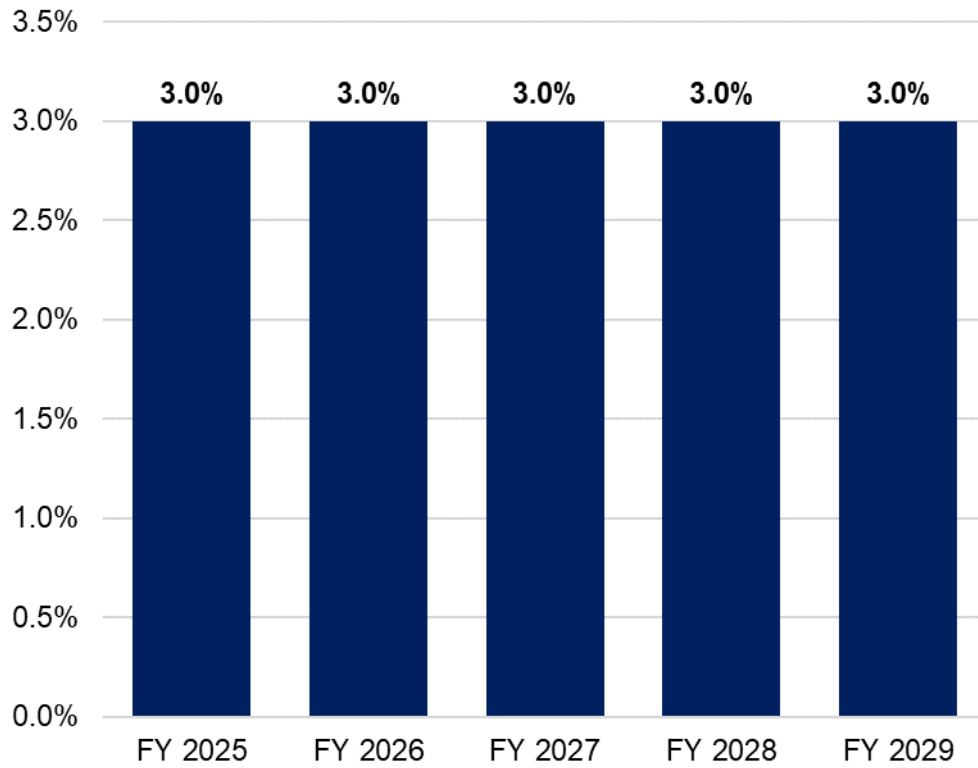


Figure 24 shows the proposed financial plan with revenue adjustments used for this study.

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Figure 24. Rate Study Adjusted Wastewater Financial Plan

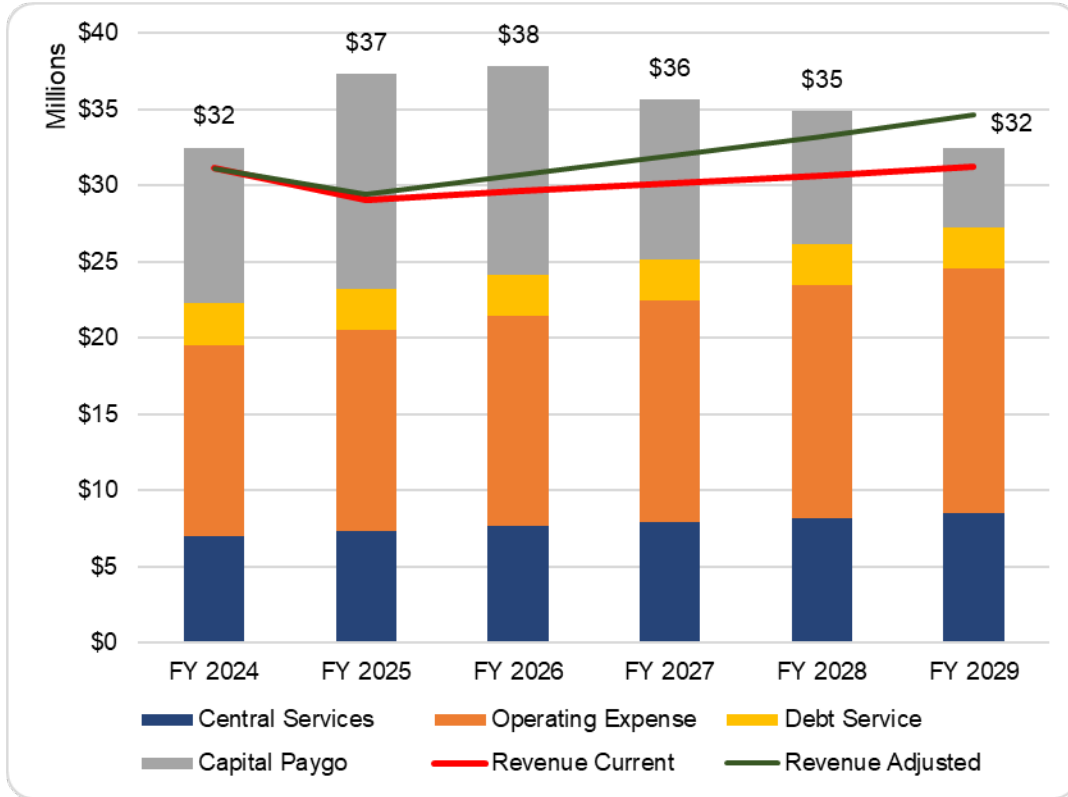


Table 97 show the current and resulting Wastewater rates based on the proposed revenue adjustments and cost of service analysis for each year of the rate setting period, respectively.

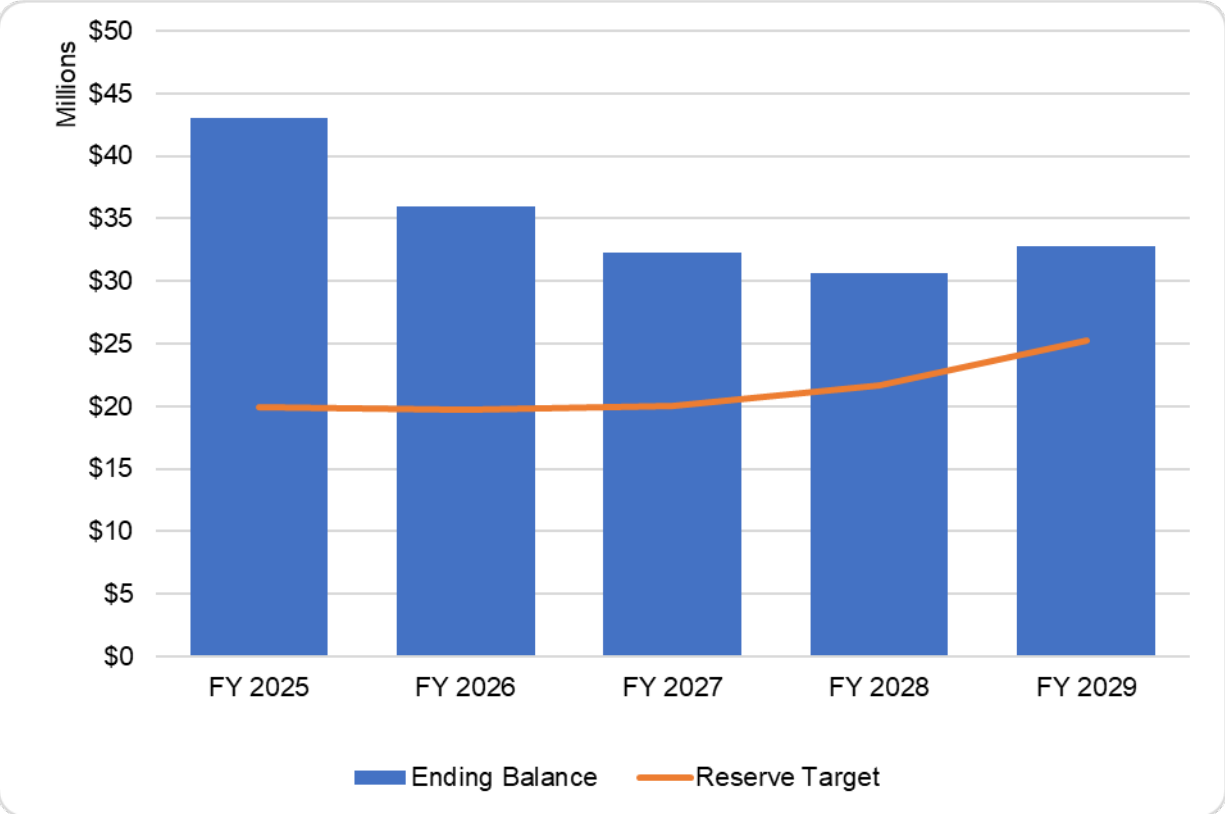
Table 97. Proposed Wastewater Rates Based on the Proposed Revenue Adjustment

Fixed Charges						
Customer Class		CY 2025	CY 2026	CY 2027	CY 2028	CY 2029
Residential		\$26.18	\$26.97	\$27.78	\$28.61	\$29.47
Institutional		\$26.18	\$26.97	\$27.78	\$28.61	\$29.47
Non-Residential		\$26.18	\$26.97	\$27.78	\$28.61	\$29.47

Variable Charges						
Customer Class	Tier - Width	CY 2025	CY 2026	CY 2027	CY 2028	CY 2029
Residential	per hcf up to 8	\$2.70	\$2.78	\$2.86	\$2.95	\$3.04
Institutional	per hcf up to 8	\$2.70	\$2.78	\$2.86	\$2.95	\$3.04
Non-Residential	All Use	\$2.70	\$2.78	\$2.86	\$2.95	\$3.04

Figure 25 shows the District’s ending cash balances after revenue and rate adjustments are made.

Figure 25. Recommended Ending Wastewater Cash Balances with Revenue Adjustment



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5.2 Rate Impacts and Comparison

Figure 26 through Figure 28 show combined test year rate impacts water and Wastewater utilities on different customer classes.

Figure 26. Single Family Residential Combined Impacts for Water and Wastewater

Single Family Residential Combined Impacts, 3/4" Meter

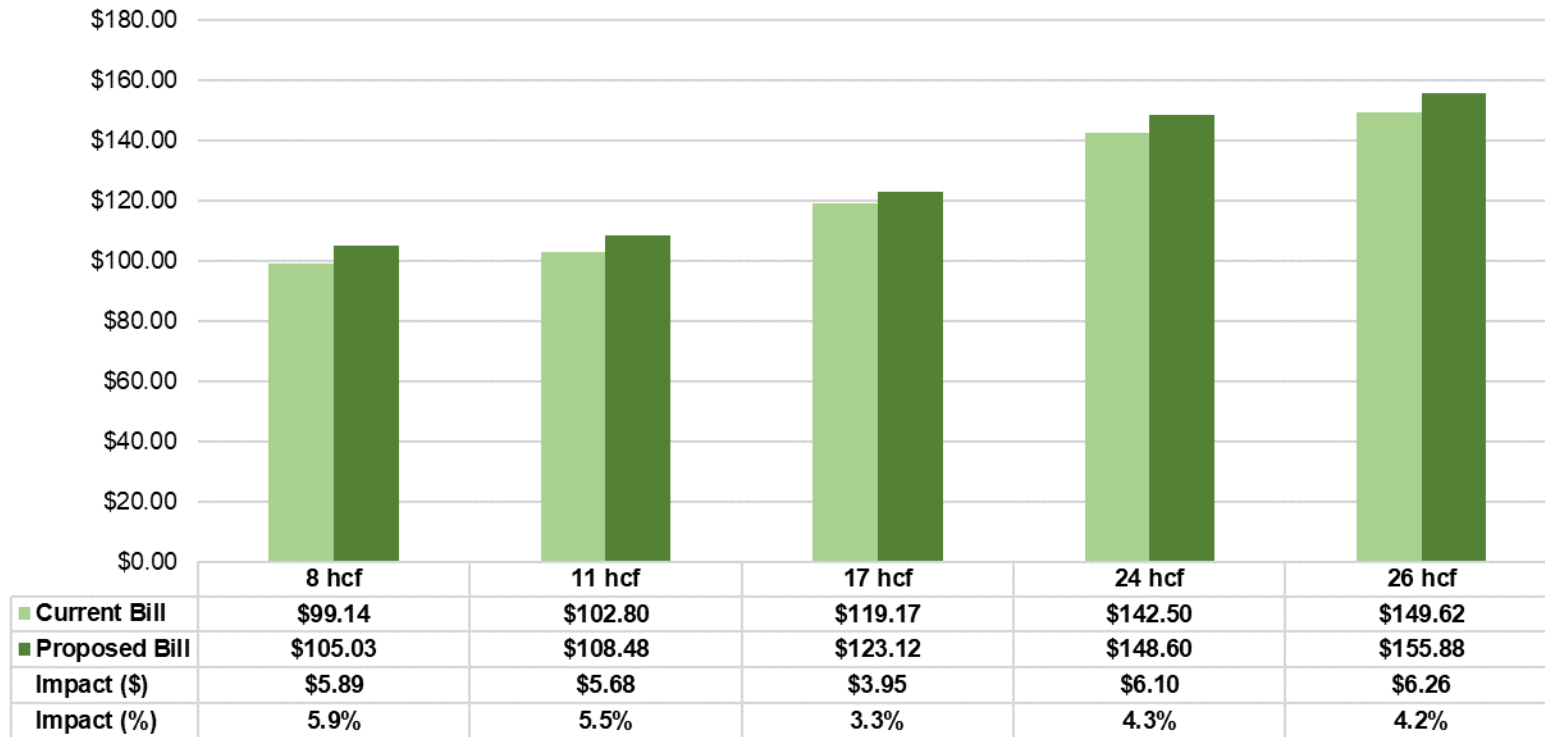
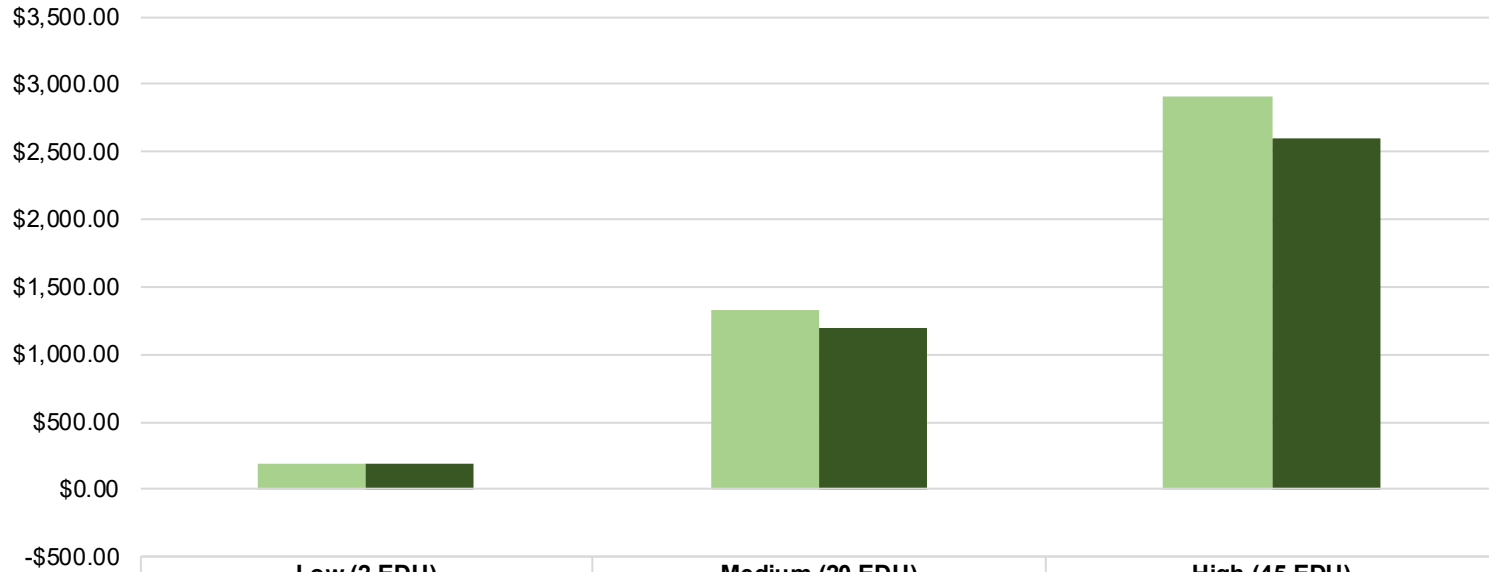


Figure 27. Multi-Family Residential Combined Impacts for Water and Wastewater

Multi-Family Residential Combined Impacts, 1" Meter



	Low (2 EDU)	Medium (20 EDU)	High (45 EDU)
■ Current Bill	\$194.56	\$1,325.50	\$2,905.35
■ Proposed Bill	\$187.68	\$1,194.07	\$2,599.32
Impact (\$)	-\$6.88	-\$131.43	-\$306.03
Impact (%)	-3.5%	-9.9%	-10.5%

Figure 28. Non-Residential (Commercial) Combined Impacts for Water and Wastewater

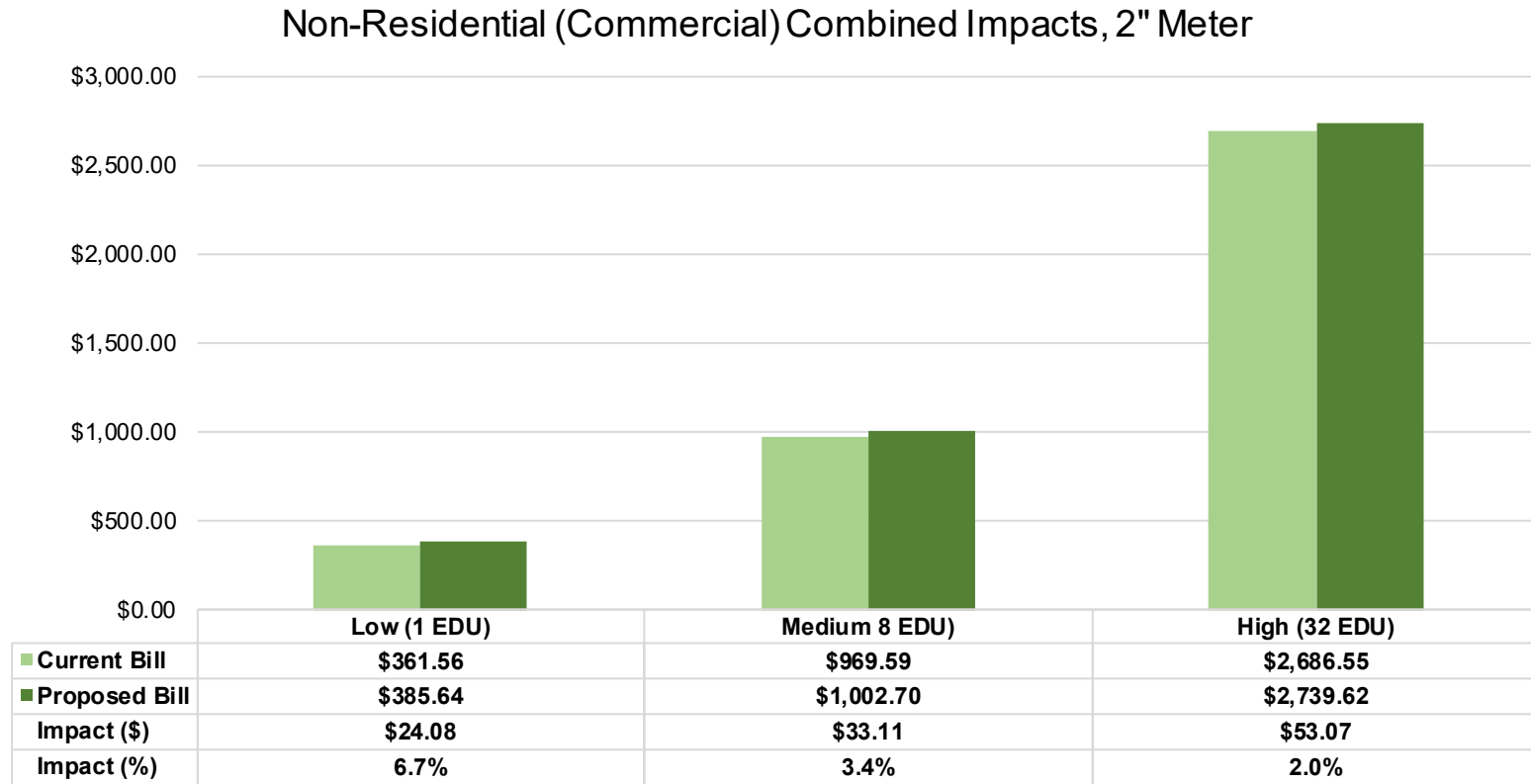
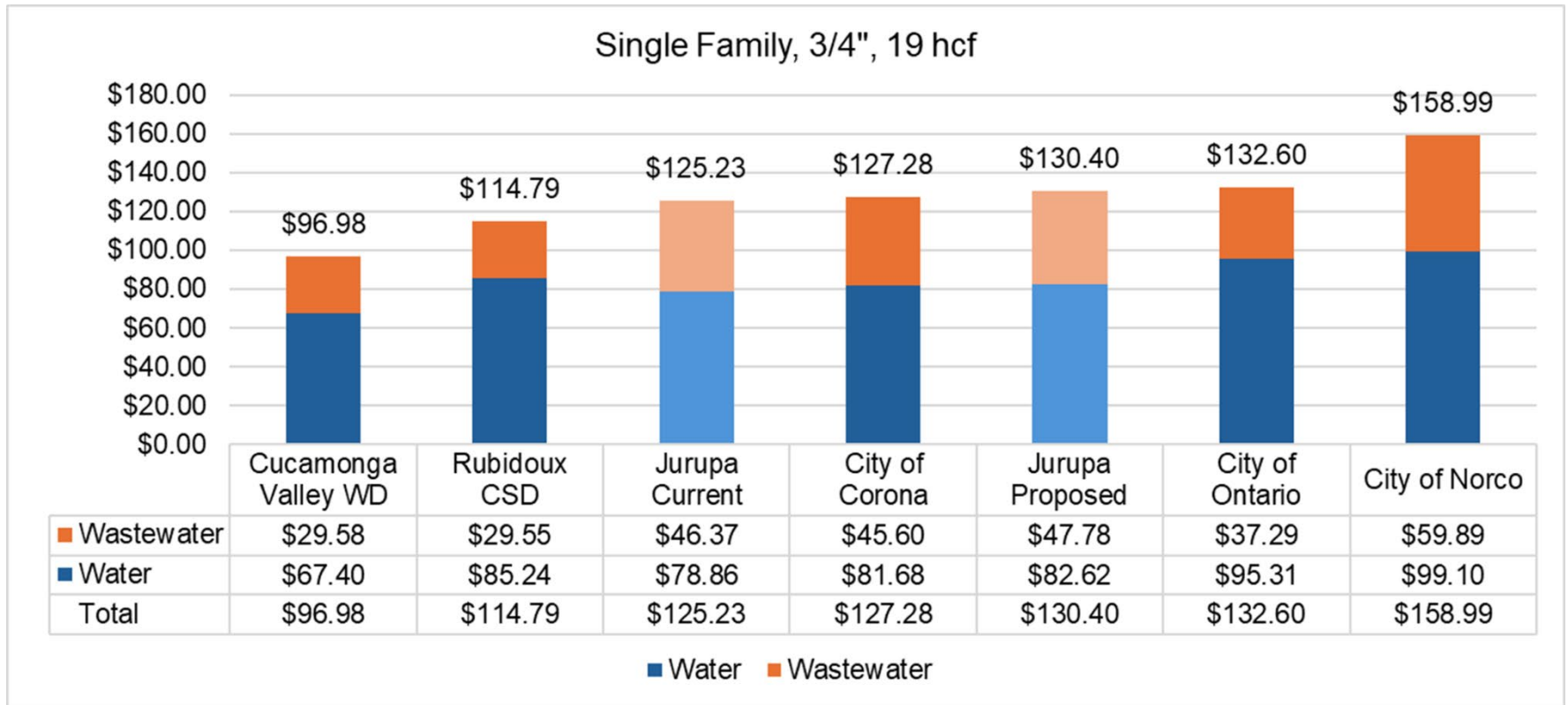


Figure 29 shows a comparison of the District’s current and proposed combined water and wastewater rates for a single family residential customer who uses 19 hcf per month. 19 hcf represents the average monthly water use for a single family residential customer. Note that the City of Corona uses a water budget rate structure, so the standard residential customer assumes 4 persons per household with a 4,000 square foot lot.

Figure 29. Neighboring Agencies Combined Bill Comparison



APPENDIX

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