

Public Hearing  
June 27, 2023

*Comprehensive  
Cost-of-Service Rate Study*



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## Executive Summary

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Rainbow Municipal Water District (District) periodically reviews the financial position of its utilities. This review is essential to determine if adjustments are required to continue meeting operational costs, cover system repairs and replacements, and adequately fund reserves based on Board adopted policies. The most recent updates occurred in 2021 for the water utility and 2018 for the wastewater utility. Due to significant increases in capital expenses and the recent hyper-inflationary climate over the past year, the District anticipated rate increases would be needed. For the water utility, the proposed rates within this report will replace the previously noticed rates for Fiscal Year 2023-24 (FY 2024) through FY 2026. Therefore, the District hired IB Consulting to conduct a comprehensive cost-of-service update to its water and wastewater utilities. This report provides a basis for developing and implementing cost-based utility rates from FY 2024 through FY 2028 (Rate Setting Period) in compliance with California Constitution Article XIII D, section 6 (Proposition 218).

### Water Utility Summary

Updating the long-term financial plan and performing a comprehensive cost-of-service analysis is a prudent business practice to ensure the District can fully fund its utility needs over the Rate Setting Period and beyond. As part of reviewing and updating water rates, the first step is to conduct a thorough review of the utility's financial health at current rates. Based on a financial review of the water utility at current FY 2023 rates the District's is projected to generate positive net income for FY 2024 and FY 2025, but by FY 2026 an operating deficit of almost \$600k is projected, which would grow to approximately \$2.3M by FY 2028. Net operating income is used to fund the District's capital plan and replenish reserves. However, the District's Capital Improvement Plan (CIP) requires \$33.6M in spending over the Rate Setting Period (annual average of \$6.7M), and with limited net income, CIP would need to be deferred. The District has remaining proceeds from a recent wholesale water efficiency loan equal to \$7.6M that will cover approximately half of the planned capital in FY 2024 and FY 2025, but the remaining funding would need to come from annual rate revenue or reserves. FY 2026 through FY 2028 capital needs are approximately \$20M and, without increases to rates, reserves would be depleted by FY 2026. Therefore, the proposed financial plan generates additional rate revenue that is phased in over the Rate Setting Period to operating, capital spending, and maintain healthy reserves.

The District's current water rate structure includes monthly fixed charges that vary by customer class and meter size, and uniform variable rates, in Hundred Cubic Feet (HCF<sup>1</sup>) increments, which differ by customer class (domestic accounts versus agricultural accounts). The rate structure includes eight distinct customer classes, including Single-Family, Multi-Family, Commercial, Institutional, Agricultural with Residence, Agricultural without Residence, Permanent Special Agricultural Water Rate (PSAWR) Domestic, and PSAWR Commercial. Single-Family, Multi-Family, Commercial, and Institutional customers all have the same uniform rate. Agricultural accounts (with and without residences) are charged a lower uniform rate as these accounts recover a greater amount of their costs through higher fixed charges due to the volatility of their usage patterns. PSAWR customers are charged uniform rates that account for credits received from the San Diego County Water Authority (SDCWA), PSAWR customers may receive less water during water shortages and emergencies. Therefore, the SDCWA program exempts PSAWR customers from paying emergency storage and supply reliability fixed charges and receive a commodity credit. PSAWR Domestic received the commodity credit for usage that exceeds what the SDCWA deems to be needed for residential use (22 HCF per month). Therefore, the Tier 2 rate for PSAWR Domestic is solely for tracking the usage that received the commodity credits from the SDCWA. Lastly, the District also has pumping fixed charges and pumping variable

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<sup>1</sup> One HCF equals 748 gallons of water.

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rates to recover the costs associated with pumping water to higher elevations. The pumping fixed charges and variable rates have been recalibrated based on energy costs within the District’s audited financials.

The recommended rates were included within a notice and mailed to each property owner in compliance with Proposition 218. A Public Hearing was held on June 27, 2023 to consider the proposed rates identified in Table 1 through Table 3, which include SDCWA current known charges. Any Incremental increases or decreases in water costs will be passed through to customers when known as allowed by the pass-through provisions of Government Code section 53756.

*Table 1: Proposed Monthly Fixed Charges*

<b>Fixed Charges (\$/Month)</b>					
<b>Meter Size</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
<b>Single-Family, Multi-Family, Commercial, Institutional</b>					
5/8"	\$89.59	\$97.66	\$106.45	\$116.04	\$126.49
≤ 3/4"	\$89.59	\$97.66	\$106.45	\$116.04	\$126.49
1"	\$145.42	\$158.52	\$172.79	\$188.35	\$205.31
1 1/2"	\$285.01	\$310.66	\$338.62	\$369.10	\$402.32
2"	\$452.51	\$493.24	\$537.64	\$586.03	\$638.78
3"	\$982.92	\$1,071.39	\$1,167.82	\$1,272.93	\$1,387.50
4"	\$1,764.59	\$1,923.41	\$2,096.52	\$2,285.21	\$2,490.88
6"	\$3,635.01	\$3,962.16	\$4,318.76	\$4,707.45	\$5,131.13
<b>Agriculture w/ Residence, Agriculture</b>					
5/8"	\$142.17	\$154.97	\$168.92	\$184.13	\$200.71
≤ 3/4"	\$142.17	\$154.97	\$168.92	\$184.13	\$200.71
1"	\$233.06	\$254.04	\$276.91	\$301.84	\$329.01
1 1/2"	\$460.27	\$501.70	\$546.86	\$596.08	\$649.73
2"	\$732.93	\$798.90	\$870.81	\$949.19	\$1,034.62
3"	\$1,596.36	\$1,740.03	\$1,896.64	\$2,067.34	\$2,253.41
4"	\$2,868.77	\$3,126.96	\$3,408.39	\$3,715.15	\$4,049.52
6"	\$5,913.47	\$6,445.69	\$7,025.81	\$7,658.14	\$8,347.38
<b>PSAWR Domestic, PSAWR Commercial</b>					
5/8"	\$127.47	\$138.95	\$151.46	\$165.10	\$179.96
≤ 3/4"	\$127.47	\$138.95	\$151.46	\$165.10	\$179.96
1"	\$208.56	\$227.33	\$247.79	\$270.10	\$294.41
1 1/2"	\$411.27	\$448.29	\$488.64	\$532.62	\$580.56
2"	\$654.53	\$713.45	\$777.67	\$847.67	\$923.97
3"	\$1,424.86	\$1,553.10	\$1,692.88	\$1,845.24	\$2,011.32
4"	\$2,560.07	\$2,790.48	\$3,041.63	\$3,315.38	\$3,613.77
6"	\$5,276.47	\$5,751.36	\$6,268.99	\$6,833.20	\$7,448.19

# Rainbow Municipal Water District – *Comprehensive Cost-of-Service Rate Study*

Table 2: Proposed Variable Rates

Variable Rates (\$/HCF)						
Customer Class	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	
Single-Family	\$5.53	\$6.03	\$6.58	\$7.18	\$7.83	
Multi-Family	\$5.53	\$6.03	\$6.58	\$7.18	\$7.83	
Commercial	\$5.53	\$6.03	\$6.58	\$7.18	\$7.83	
Institutional	\$5.53	\$6.03	\$6.58	\$7.18	\$7.83	
Agriculture w/ Res	\$4.53	\$4.94	\$5.39	\$5.88	\$6.41	
Agriculture	\$4.53	\$4.94	\$5.39	\$5.88	\$6.41	
PSAWR Domestic						
Tier 1	\$4.53	\$4.94	\$5.39	\$5.88	\$6.41	
Tier 2	\$4.00	\$4.36	\$4.76	\$5.19	\$5.66	
PSAWR Commercial	\$4.00	\$4.36	\$4.76	\$5.19	\$5.66	

Table 3: Proposed Pumping Charges and Pumping Rates

Pumping						
Pumping Zone	Zone Description	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Fixed (\$/Month)</b>						
All Zones		\$8.39	\$9.15	\$9.98	\$10.88	\$11.86
<b>Variable (\$/HCF)</b>						
Pump Zone 1	<i>Rainbow Heights</i>	\$2.60	\$2.84	\$3.10	\$3.38	\$3.69
Pump Zone 2	<i>Improvement District U-1</i>	\$1.39	\$1.52	\$1.66	\$1.81	\$1.98
Pump Zone 3	<i>Vallecitos</i>	\$0.26	\$0.29	\$0.32	\$0.35	\$0.39
Pump Zone 4	<i>Northside</i>	\$0.13	\$0.15	\$0.17	\$0.19	\$0.21
Pump Zone 5	<i>Morro Tank</i>	\$0.35	\$0.39	\$0.43	\$0.47	\$0.52
Pump Zone 6	<i>Huntley</i>	\$1.40	\$1.53	\$1.67	\$1.83	\$2.00
Pump Zone 7	<i>Magee Tank</i>	\$0.71	\$0.78	\$0.86	\$0.94	\$1.03

## Wastewater Utility Summary

The District’s wastewater utility is in the process of completing a significant capital replacement project for the Thoroughbred Lane Lift Station and Pipeline Repair. The cost of the project was originally estimated at \$19M and the District’s funding sources included \$10.5M from a Community Facilities District with the remainder covered by rates/reserves. However, the project cost now exceeds \$21.5M, which requires additional contributions from District reserves to complete. The wastewater FY 2023 starting reserves balance (approximately \$1.6M) is not sufficient to cover the difference in project costs. As such, the District requires increases in its wastewater rates and is currently in the process of securing a loan of \$5M to finish the replacement project and cover additional capital needs scheduled over the next couple of years. The proposed financial plan will generate an additional \$13M in rate revenue that is phased in over the Rate Setting Period.

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The recommended rates were included within a notice and mailed to each property owner in compliance with Proposition 218. A Public Hearing on June 27, 2023 will consider the proposed rates identified in Table 4.

*Table 4: Proposed Wastewater Charges*

<b>Wastewater Charges (\$/Month)</b>					
<b>Customer Class</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
	<b>(\$/EDU)</b>	<b>(\$/EDU)</b>	<b>(\$/EDU)</b>	<b>(\$/EDU)</b>	<b>(\$/EDU)</b>
Single-Family	\$66.57	\$75.23	\$85.01	\$96.07	\$108.56
Multi-Family	\$66.57	\$75.23	\$85.01	\$96.07	\$108.56
Residential - WW Only	\$66.57	\$75.23	\$85.01	\$96.07	\$108.56
Commercial	\$66.57	\$75.23	\$85.01	\$96.07	\$108.56
Commercial w/ Irrigation	\$66.57	\$75.23	\$85.01	\$96.07	\$108.56

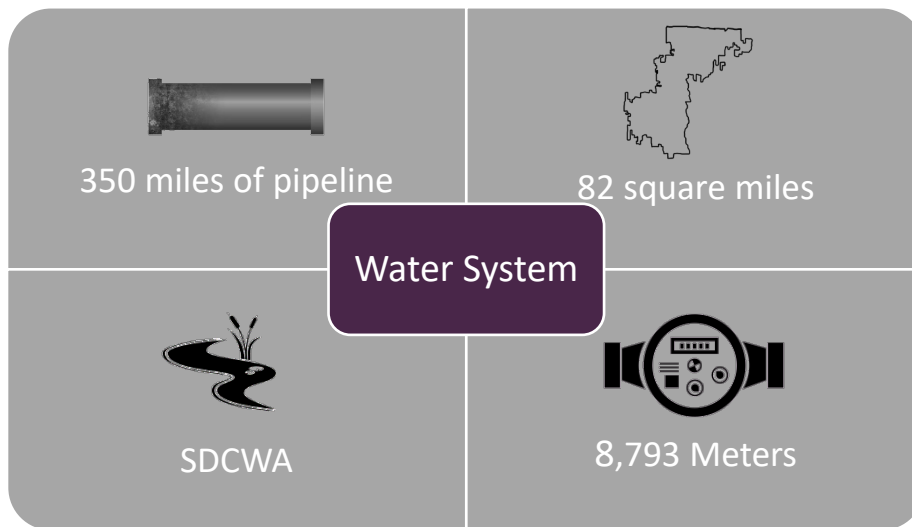


## Water Utility

### Water System

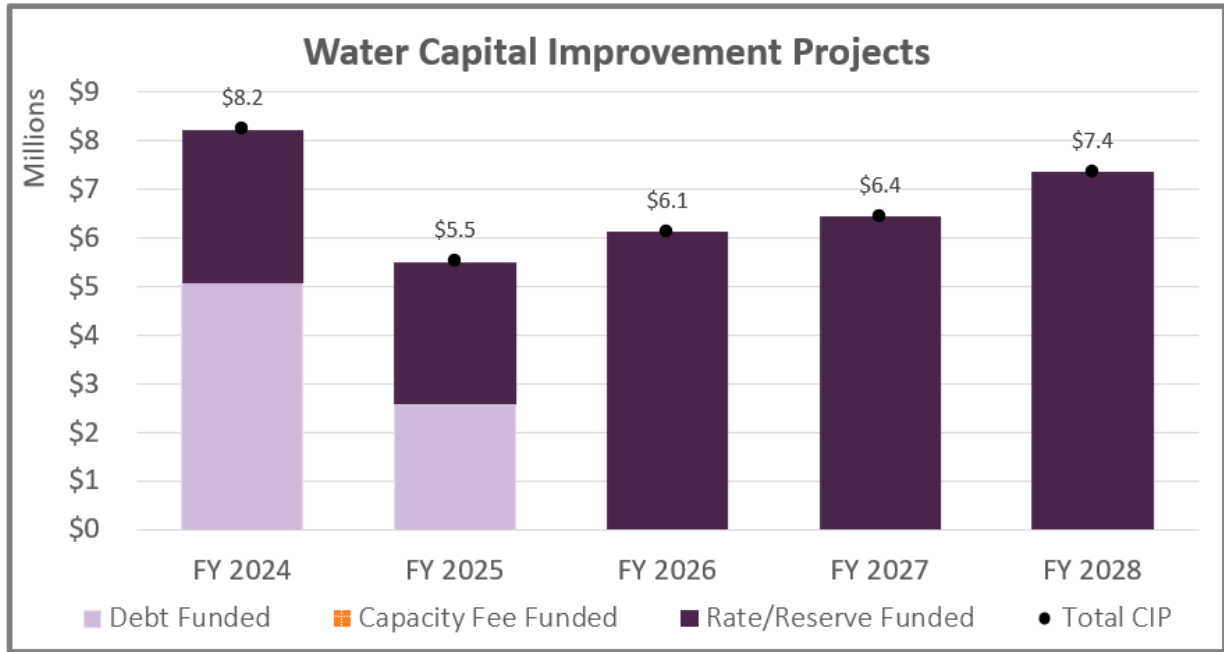
The District provides water to a service area encompassing approximately 82 square miles, located in northern San Diego County and the District has one of the largest agricultural areas in the state. The District is 100% dependent on imported water, currently provided by SDCWA, which purchases the vast majority of its water from Metropolitan Water District of Southern California (MWD). MWD imports water from the Colorado River Aqueduct and Northern California via the State Water Project. The District's water system includes 350 miles of transmission & distribution lines, 13 water tanks, 7 pump stations, and 4 reservoirs.

Figure 1: District Water System



The District's most recent Capital Improvement Plan (CIP) includes approximately \$33.6M in spending over the Rate Setting Period, with almost \$10.4M related to water efficiency projects that may be funded by the recent Wholesale Water Efficiency loan. Figure 2 shows the District's projected capital spending through FY 2028 with funding sources, including remaining proceeds from the loan.

Figure 2: Water Capital Improvement Plan



## Customers

The District currently serves 8,793 active meters, with just over 70% classified as residential (Single-Family and Multi-Family). Table 5 summarizes accounts by meter size and customer class. Customer classes can be separated between Non-Agricultural accounts (Single-Family, Multi-Family, Commercial, and Institutional), and Agricultural accounts (Agriculture w/ Residence, Agriculture, PSAWR Domestic, and PSAWR Commercial). Agricultural customers are charged a higher fixed charge and receive a lower variable rate. In addition, PSAWR customers do not incur certain fixed charges and receive a credit on the variable rates from SDCWA.

Table 5: Water Accounts by Meter Size

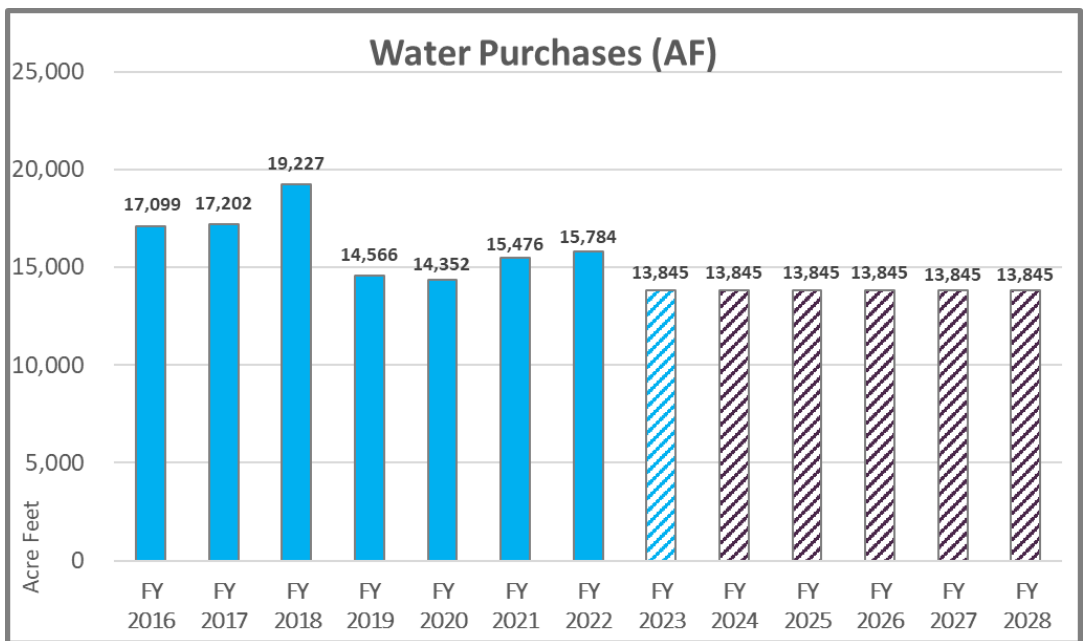
Water Accounts by Customer Class and Meter Size									
Meter Size	Single-Family	Multi-Family	Commercial	Institutional	Agriculture w/ Res	Agriculture	PSAWR Domestic	PSAWR Commercial	Total Accounts
5/8"	234	-	1	-	2	1	-	-	238
3/4"	3,202	39	33	3	170	44	16	4	3,511
1"	2,523	5	105	2	800	236	167	40	3,878
1 1/2"	169	31	56	4	147	104	61	33	605
2"	113	39	55	5	69	117	51	48	497
3"	5	3	6	1	3	16	4	5	43
4"	1	5	4	2	1	6	-	1	20
6"	-	-	-	-	-	1	-	-	1
<b>Total</b>	<b>6,247</b>	<b>122</b>	<b>260</b>	<b>17</b>	<b>1,192</b>	<b>525</b>	<b>299</b>	<b>131</b>	<b>8,793</b>

# Rainbow Municipal Water District – Comprehensive Cost-of-Service Rate Study

Figure 3 shows historical water purchases (blue bars) from FY 2016 and projected water purchases (purple bars) in acre-feet (1 acre-foot = 325,851 gallons) through the Rate Setting Period. Water purchases have drastically changed from year to year primarily due to agricultural use within the District's service area. While residential customers make up nearly 70% of the accounts, agricultural customers usage constitutes 66%-80% of the total water usage. This volatility creates revenue instability in variable revenues collected by the District. The District mitigates this revenue volatility by shifting more cost recovery from Agricultural and PSAWR accounts to their fixed charges. As such, Agricultural and PSAWR fixed charges are more than non-agricultural accounts. Proposed rates will continue this approach to ensure revenue stability.

The projected FY 2024 water purchases reflect 13,845 AF. The study used conservative projections for water purchases given the historic volatility and the District also anticipates land-use conversions from agricultural use to residential developments over the coming years.

Figure 3: Water Purchases



As previously mentioned, the existing rate structure consists of monthly fixed meter charges and variable rates, separated between SDCWA and District charges. Existing metered fixed charges and variable rates are shown in Table 6 and Table 7, respectively, followed by pumping charges in Table 8.

Table 6: FY 2023 Metered Fixed Charges

<b>Fixed Charges (\$/Month)</b>		
<b>Meter Size</b>	<b>SDCWA - Fixed Charge</b>	<b>RMWD Existing Fixed</b>
<b>Single-Family, Multi-Family, Commercial, Institutional</b>		
≤ 3/4"	\$28.19	\$41.01
1"	\$46.98	\$68.34
1 1/2"	\$93.97	\$136.69
2"	\$150.35	\$218.70
3"	\$328.88	\$478.39
4"	\$591.99	\$861.10
6"	\$1,221.56	\$1,776.87
<b>Agriculture w/ Residence, Agriculture</b>		
≤ 3/4"	\$28.19	\$90.73
1"	\$46.98	\$151.20
1 1/2"	\$93.97	\$302.41
2"	\$150.35	\$483.86
3"	\$328.88	\$1,058.42
4"	\$591.99	\$1,905.17
6"	\$1,221.56	\$3,931.29
<b>PSAWR Domestic, PSAWR Commercial</b>		
≤ 3/4"	\$13.51	\$89.90
1"	\$22.52	\$149.83
1 1/2"	\$45.04	\$299.65
2"	\$72.07	\$479.44
3"	\$157.65	\$1,048.78
4"	\$283.77	\$1,887.79
6"	\$585.57	\$3,895.43

Table 7: FY 2023 Variable Rates

Variable Rates (\$/HCF)		
Customer Class	SDCWA Variable Rate	RMWD Variable
Single-Family	\$3.64	\$1.83
Multi-Family	\$3.64	\$1.83
Commercial	\$3.64	\$1.83
Institutional	\$3.64	\$1.83
Agriculture w/ Res	\$3.64	\$0.92
Agriculture	\$3.64	\$0.92
PSAWR Domestic	\$3.11	\$0.90
PSAWR Commercial	\$3.11	\$0.90
Construction	\$3.64	\$0.90

Table 8: FY 2023 Pumping Charges and Pumping Rates

Pumping		
Pumping Zone	Zone Description	Existing
<b>Fixed (\$/Month)</b>		
All Zones		\$7.14
<b>Variable (\$/HCF)</b>		
Pump Zone 1	<i>Rainbow Heights</i>	\$1.02
Pump Zone 2	<i>Improvement District U-1</i>	\$0.63
Pump Zone 3	<i>Vallecitos</i>	\$0.36
Pump Zone 4	<i>Northside</i>	\$0.14
Pump Zone 5	<i>Morro Tank</i>	\$0.19
Pump Zone 6	<i>Huntley</i>	\$0.75
Pump Zone 7	<i>Magee Tank</i>	\$3.31

## Financial Plan Overview – Water Utility

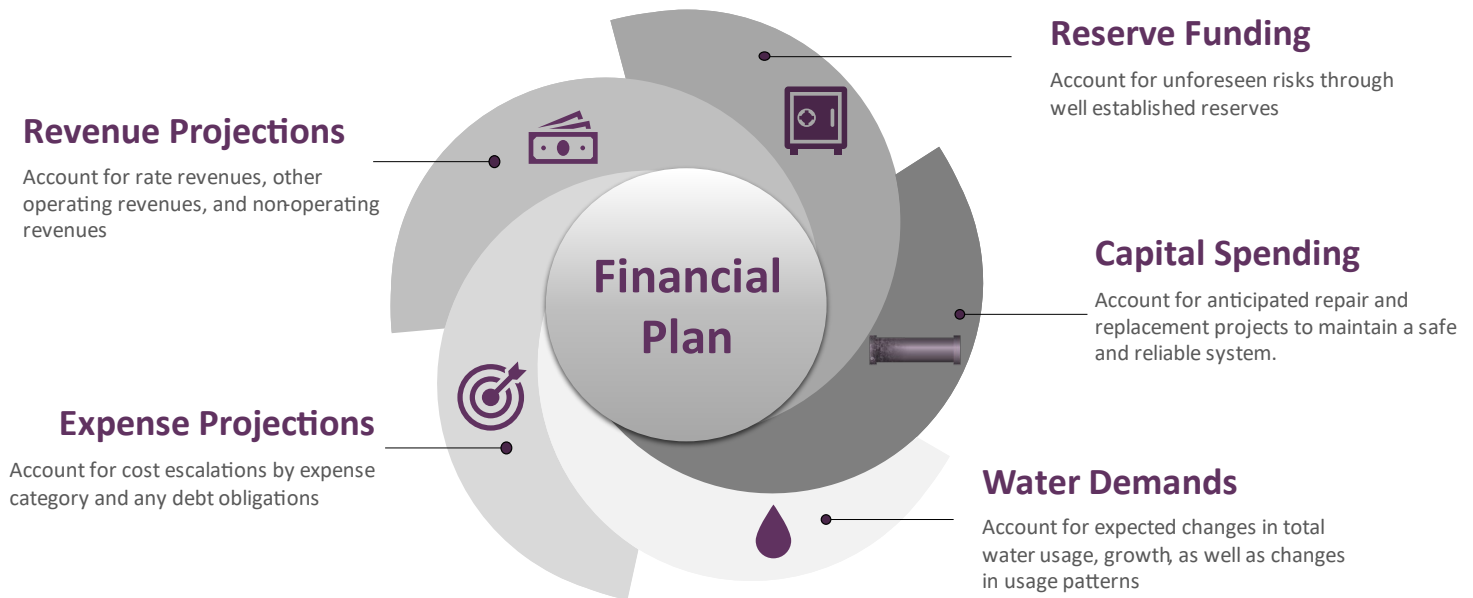
### Financial Planning

Financial planning incorporates numerous considerations, including projecting revenues and forecasting expected costs using various inflationary adjustments. Utilities also need to account for changes in water demand driven by variations in weather, changes to water supplies and water availability, state mandates, growth, and economic factors. In addition, system maintenance and reinvestment, reserves, and debt compliance all influence the revenues needed in future years. Therefore, a comprehensive financial plan reviews the following:

- 1) Historical water sales and consumption patterns to determine an appropriate level of usage for projecting future water demands.
- 2) Operational costs that may change over the planning period because of inflation, unique circumstances of the agency, new expenditures added to meet strategic goals, state mandates, or changes in operations.
- 3) Multi-year system improvement needs, and scheduling based on priority. This review also considers available funding sources to complete projects such as Pay-As-You-Go (PAYGO), grants, loans, and debt financing.
- 4) Reserve funding to meet adopted reserve policies. The goal is to generate adequate cash on hand to mitigate financial risks related to operating cashflow needs, unexpected increases in expenses, shortages in system reinvestment, and mitigating potential system failures.

Figure 4 illustrates the key elements when developing a long-term financial plan.

*Figure 4: Water Financial Plan Key Elements*



## Financial Planning Assumptions

Developing a long-term financial plan requires an understanding of the District’s financial position by evaluating existing revenue streams, ongoing expenses, how those expenses will change over time, existing debt requirements, and reserve policies. With these considerations, certain assumptions are required for projecting revenues, expenses, and expected ending fund balances. Through discussions with staff and their understanding of historical budget data and future obligations, Table 9 identifies assumptions used for forecasting revenues. For forecasting revenues, our analysis assumes no growth in accounts as a conservative assumption so projected revenues do not rely on growth to occur. The number of accounts by meter size and customer class can be found in Table 5 and was held constant through the Rate Setting Period. Table 10 provides details on the number of accounts by pumping zone. Table 11 identifies projected usage by customer class. Table 12 identifies the amount of projected usage through each elevation zone. As shown in both the usage tables, the financial plan does not account for any changes in demand. The District anticipates agriculture in the service area will continue to decline as the cost of water continues to increase, making growing crops increasingly difficult. The timing and magnitude of this transition is uncertain and therefore the financial plan used a wet year as the basis for projections and held it constant for the Rate Setting Period

Table 9: Water Assumptions for Forecasting Revenues

Revenue Forecasting					
Key Assumptions	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Revenue Escalation</b>					
Non-Rate Revenues	0.0%	0.0%	0.0%	0.0%	0.0%
Reserve Interest	1.5%	1.5%	1.5%	1.5%	1.5%
<b>Account Growth</b>	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Water Sales</b>					
Customer Usage (AF)	12,738	12,738	12,738	12,738	12,738
Customer Usage (HCF)	5,548,472	5,548,472	5,548,472	5,548,472	5,548,472

Table 10: Water Accounts by Pumping Zone - FY 2024 through FY 2028

Accounts by Pumping Zone						
Pumping Zone		FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Pump Zone 1	Rainbow Heights	181	181	181	181	181
Pump Zone 2	Improvement District U-1	111	111	111	111	111
Pump Zone 3	Vallecitos	60	60	60	60	60
Pump Zone 4	Northside	430	430	430	430	430
Pump Zone 5	Morro Tank	349	349	349	349	349
Pump Zone 6	Huntley	152	152	152	152	152
Pump Zone 7	Magee Tank	59	59	59	59	59
<b>Total Pumping Zone Meters</b>		<b>1,342</b>	<b>1,342</b>	<b>1,342</b>	<b>1,342</b>	<b>1,342</b>

# Rainbow Municipal Water District – *Comprehensive Cost-of-Service Rate Study*

Table 11: Projected Consumption (HCF) – FY 2024 through FY 2028

Projected Consumption (HCF)					
Customer Class	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Single-Family	1,521,953	1,521,953	1,521,953	1,521,953	1,521,953
Multi-Family	130,046	130,046	130,046	130,046	130,046
Commercial	362,543	362,543	362,543	362,543	362,543
Institutional	26,318	26,318	26,318	26,318	26,318
Agriculture w/ Res	918,501	918,501	918,501	918,501	918,501
Agriculture	1,243,086	1,243,086	1,243,086	1,243,086	1,243,086
PSAWR Domestic	721,309	721,309	721,309	721,309	721,309
PSAWR Commercial	604,716	604,716	604,716	604,716	604,716
Construction	20,000	20,000	20,000	20,000	20,000
<b>Total Consumption (HCF)</b>	<b>5,548,472</b>	<b>5,548,472</b>	<b>5,548,472</b>	<b>5,548,472</b>	<b>5,548,472</b>

Table 12: Projected Pumping Consumption (HCF) – FY 2024 through FY 2028

Projected Zone Consumption (HCF)						
Pumping Zone		FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Pump Zone 1	<i>Rainbow Heights</i>	183,452	183,452	183,452	183,452	183,452
Pump Zone 2	<i>Improvement District U-1</i>	38,945	38,945	38,945	38,945	38,945
Pump Zone 3	<i>Vallecitos</i>	67,006	67,006	67,006	67,006	67,006
Pump Zone 4	<i>Northside</i>	363,390	363,390	363,390	363,390	363,390
Pump Zone 5	<i>Morro Tank</i>	128,436	128,436	128,436	128,436	128,436
Pump Zone 6	<i>Huntley</i>	131,538	131,538	131,538	131,538	131,538
Pump Zone 7	<i>Magee Tank</i>	12,127	12,127	12,127	12,127	12,127
<b>Total Consumption by Zone (HCF)</b>		<b>924,894</b>	<b>924,894</b>	<b>924,894</b>	<b>924,894</b>	<b>924,894</b>

Table 13 identifies assumptions used for forecasting increases in expenses over the Rate Setting Period. Purchased water costs are held constant and any increases will be captured through the pass-through provisions of Government Code section 53756.



Table 13: Water Assumptions for Forecasting Expenses<sup>2</sup>

Expenditure Forecasting						
Key Assumptions	Source:	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Expenditure Escalation						
Benefits		3.00%	3.00%	3.00%	3.00%	3.00%
Capital Construction	ENR 20-City	7.20%	7.20%	3.93%	3.93%	3.93%
Energy Costs		5.00%	5.00%	5.00%	5.00%	5.00%
General Costs	CPI - SD (CA DIR)	7.71%	7.71%	4.03%	4.03%	4.03%
Retirement		5.00%	5.00%	5.00%	5.00%	5.00%
Salaries		6.00%	6.00%	6.00%	6.00%	6.00%
Purchased Water	SDCWA	Pass-Through	Pass-Through	Pass-Through	Pass-Through	Pass-Through

## Current Financial Position

### Revenues

Based on the forecasting assumptions, fixed meter revenues were calculated using account data by meter size (Table 5) multiplied by existing fixed meter charges (Table 6) times the number of billing periods<sup>3</sup>. Similarly, fixed pumping revenues were calculated using pumping zone accounts (Table 10) multiplied by pumping zone fixed charges (Table 8). Variable revenues were calculated using existing variable rates (Table 7) and variable pumping zone rates (Table 8) and projected total water sales by customer class (Table 11) and projected usage by pumping zone (Table 12). Table 14 shows the calculated rate revenues through the Rate Setting Period. Table 15 summarizes calculated rate revenues and other non-rate revenues available through the Rate Setting Period with future projections rounded to the nearest thousands.

<sup>2</sup> Capital Construction inflation and General Costs for FY 2024 and FY 2025 were increased to 7.20% and 7.71%, respectively to account for the most recent annual increase due to inflation. Outer years reduce to 3.93% and 4.03%, reflecting the 5-year average of the Engineer’s News Record – CCI index and the SD Consumer Price Index, respectively.

<sup>3</sup> The District bills customers on a monthly basis; therefore, there are 12 billing periods during the fiscal year.

# Rainbow Municipal Water District – Comprehensive Cost-of-Service Rate Study

Table 14: Water Calculated Rate Revenues

Calculated Revenue					
Fixed Revenue	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>RMWD O&amp;M Fixed Charge</b>					
Single-Family	\$4,372,787	\$4,372,787	\$4,372,787	\$4,372,787	\$4,372,787
Multi-Family	\$245,381	\$245,381	\$245,381	\$245,381	\$245,381
Commercial	\$414,815	\$414,815	\$414,815	\$414,815	\$414,815
Institutional	\$49,207	\$49,207	\$49,207	\$49,207	\$49,207
Agriculture w/ Res	\$2,633,839	\$2,633,839	\$2,633,839	\$2,633,839	\$2,633,839
Agriculture	\$1,921,504	\$1,921,504	\$1,921,504	\$1,921,504	\$1,921,504
PSAWR Domestic	\$880,623	\$880,623	\$880,623	\$880,623	\$880,623
PSAWR Commercial	\$556,633	\$556,633	\$556,633	\$556,633	\$556,633
<b>Total RMWD O&amp;M Fixed Charge</b>	<b>\$11,074,789</b>	<b>\$11,074,789</b>	<b>\$11,074,789</b>	<b>\$11,074,789</b>	<b>\$11,074,789</b>
<b>SDCWA Fixed Charge</b>					
Single-Family	\$3,005,979	\$3,005,979	\$3,005,979	\$3,005,979	\$3,005,979
Multi-Family	\$168,691	\$168,691	\$168,691	\$168,691	\$168,691
Commercial	\$285,170	\$285,170	\$285,170	\$285,170	\$285,170
Institutional	\$33,828	\$33,828	\$33,828	\$33,828	\$33,828
Agriculture w/ Res	\$818,389	\$818,389	\$818,389	\$818,389	\$818,389
Agriculture	\$597,063	\$597,063	\$597,063	\$597,063	\$597,063
PSAWR Domestic	\$132,367	\$132,367	\$132,367	\$132,367	\$132,367
PSAWR Commercial	\$83,670	\$83,670	\$83,670	\$83,670	\$83,670
<b>Total SDCWA Fixed Charge</b>	<b>\$5,125,158</b>	<b>\$5,125,158</b>	<b>\$5,125,158</b>	<b>\$5,125,158</b>	<b>\$5,125,158</b>
<b>Total Fixed Pumping Charge</b>	<b>\$114,983</b>	<b>\$114,983</b>	<b>\$114,983</b>	<b>\$114,983</b>	<b>\$114,983</b>
Variable Revenue	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>RMWD Variable Rate Revenue</b>					
Single-Family	\$2,785,174	\$2,785,174	\$2,785,174	\$2,785,174	\$2,785,174
Multi-Family	\$237,984	\$237,984	\$237,984	\$237,984	\$237,984
Commercial	\$663,454	\$663,454	\$663,454	\$663,454	\$663,454
Institutional	\$48,162	\$48,162	\$48,162	\$48,162	\$48,162
Agriculture w/ Res	\$845,021	\$845,021	\$845,021	\$845,021	\$845,021
Agriculture	\$1,143,639	\$1,143,639	\$1,143,639	\$1,143,639	\$1,143,639
PSAWR Domestic	\$649,178	\$649,178	\$649,178	\$649,178	\$649,178
PSAWR Commercial	\$544,244	\$544,244	\$544,244	\$544,244	\$544,244
Construction	\$36,600	\$36,600	\$36,600	\$36,600	\$36,600
<b>Total RMWD Variable Rate Revenue</b>	<b>\$6,953,456</b>	<b>\$6,953,456</b>	<b>\$6,953,456</b>	<b>\$6,953,456</b>	<b>\$6,953,456</b>
<b>SDCWA Variable Rate Revenue</b>					
Single-Family	\$5,539,909	\$5,539,909	\$5,539,909	\$5,539,909	\$5,539,909
Multi-Family	\$473,367	\$473,367	\$473,367	\$473,367	\$473,367
Commercial	\$1,319,657	\$1,319,657	\$1,319,657	\$1,319,657	\$1,319,657
Institutional	\$95,798	\$95,798	\$95,798	\$95,798	\$95,798
Agriculture w/ Res	\$3,343,344	\$3,343,344	\$3,343,344	\$3,343,344	\$3,343,344
Agriculture	\$4,524,833	\$4,524,833	\$4,524,833	\$4,524,833	\$4,524,833
PSAWR Domestic	\$2,243,271	\$2,243,271	\$2,243,271	\$2,243,271	\$2,243,271
PSAWR Commercial	\$1,880,667	\$1,880,667	\$1,880,667	\$1,880,667	\$1,880,667
Construction	\$72,800	\$72,800	\$72,800	\$72,800	\$72,800
<b>Total SDCWA Variable Rate Revenue</b>	<b>\$19,493,645</b>	<b>\$19,493,645</b>	<b>\$19,493,645</b>	<b>\$19,493,645</b>	<b>\$19,493,645</b>
<b>Pumping - Variable</b>					
Pump Zone 1	<i>Rainbow Heights</i>	\$187,121	\$187,121	\$187,121	\$187,121
Pump Zone 2	<i>Improvement District U-1</i>	\$24,535	\$24,535	\$24,535	\$24,535
Pump Zone 3	<i>Vallecitos</i>	\$24,122	\$24,122	\$24,122	\$24,122
Pump Zone 4	<i>Northside</i>	\$50,875	\$50,875	\$50,875	\$50,875
Pump Zone 5	<i>Marra Tank</i>	\$24,403	\$24,403	\$24,403	\$24,403
Pump Zone 6	<i>Huntley</i>	\$98,654	\$98,654	\$98,654	\$98,654
Pump Zone 7	<i>Magee Tank</i>	\$40,140	\$40,140	\$40,140	\$40,140
<b>Total Variable Pumping Revenue</b>		<b>\$449,850</b>	<b>\$449,850</b>	<b>\$449,850</b>	<b>\$449,850</b>
<b>Total Rate Revenue</b>		<b>\$43,211,881</b>	<b>\$43,211,881</b>	<b>\$43,211,881</b>	<b>\$43,211,881</b>

# Rainbow Municipal Water District – Comprehensive Cost-of-Service Rate Study

Table 15: Water Projected Revenues

<b>Projected Water Revenues</b>					
<b>Revenue Summary</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
<b>Rate Revenues</b>					
<i>RMWD Rate Revenues</i>					
RMWD O&M Fixed Charge	\$11,075,000	\$11,075,000	\$11,075,000	\$11,075,000	\$11,075,000
RMWD Variable Rate Revenue	\$6,953,000	\$6,953,000	\$6,953,000	\$6,953,000	\$6,953,000
Pumping Revenue (Fixed + Variable)	\$565,000	\$565,000	\$565,000	\$565,000	\$565,000
<b>Subtotal RMWD Rate Revenues</b>	<b>\$18,593,000</b>	<b>\$18,593,000</b>	<b>\$18,593,000</b>	<b>\$18,593,000</b>	<b>\$18,593,000</b>
<i>SDCWA Pass-through Revenues</i>					
SDCWA Fixed Charge	\$5,125,000	\$5,125,000	\$5,125,000	\$5,125,000	\$5,125,000
SDCWA Variable Rate Revenue	\$19,494,000	\$19,494,000	\$19,494,000	\$19,494,000	\$19,494,000
<b>Subtotal SDCWA Pass-through Revenues</b>	<b>\$24,619,000</b>	<b>\$24,619,000</b>	<b>\$24,619,000</b>	<b>\$24,619,000</b>	<b>\$24,619,000</b>
<b>Subtotal Rate Revenues</b>	<b>\$43,212,000</b>	<b>\$43,212,000</b>	<b>\$43,212,000</b>	<b>\$43,212,000</b>	<b>\$43,212,000</b>
<b>Operating Revenues</b>					
Readiness-To-Serve Revenue	\$295,000	\$295,000	\$295,000	\$295,000	\$295,000
Unlock Fees	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
RP Charges	\$246,000	\$246,000	\$246,000	\$246,000	\$246,000
Inspections	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
Install-Hydrant	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000
Miscellaneous	\$7,000	\$7,000	\$7,000	\$7,000	\$7,000
New Meter/Install Parts	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000
Notice Delivery Revenue	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
<b>Subtotal Operating Revenues</b>	<b>\$620,000</b>	<b>\$620,000</b>	<b>\$620,000</b>	<b>\$620,000</b>	<b>\$620,000</b>
<b>Non-Operating Revenues</b>					
NSF Fees	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000
Recycling Revenue	\$8,000	\$8,000	\$8,000	\$8,000	\$8,000
Miscellaneous Revenue	\$95,000	\$95,000	\$95,000	\$95,000	\$95,000
Interest Revenues	\$59,000	\$103,000	\$131,000	\$154,000	\$247,000
Property Tax Revenue	\$650,000	\$650,000	\$650,000	\$650,000	\$650,000
<b>Subtotal Non-Operating Revenues</b>	<b>\$815,000</b>	<b>\$859,000</b>	<b>\$887,000</b>	<b>\$910,000</b>	<b>\$1,003,000</b>
<b>Other Revenues</b>					
Penalty Charges	\$405,000	\$405,000	\$405,000	\$405,000	\$405,000
Plan Check Rev.	\$81,000	\$81,000	\$81,000	\$81,000	\$81,000
Miscellaneous Revenue	\$61,000	\$61,000	\$61,000	\$61,000	\$61,000
Misc. Revenue - Eng. Services	\$4,000	\$4,000	\$4,000	\$4,000	\$4,000
<b>Subtotal Other Revenues</b>	<b>\$551,000</b>	<b>\$551,000</b>	<b>\$551,000</b>	<b>\$551,000</b>	<b>\$551,000</b>
<b>Total Revenues</b>	<b>\$45,198,000</b>	<b>\$45,242,000</b>	<b>\$45,270,000</b>	<b>\$45,293,000</b>	<b>\$45,386,000</b>

# Rainbow Municipal Water District – Comprehensive Cost-of-Service Rate Study

## Expenses

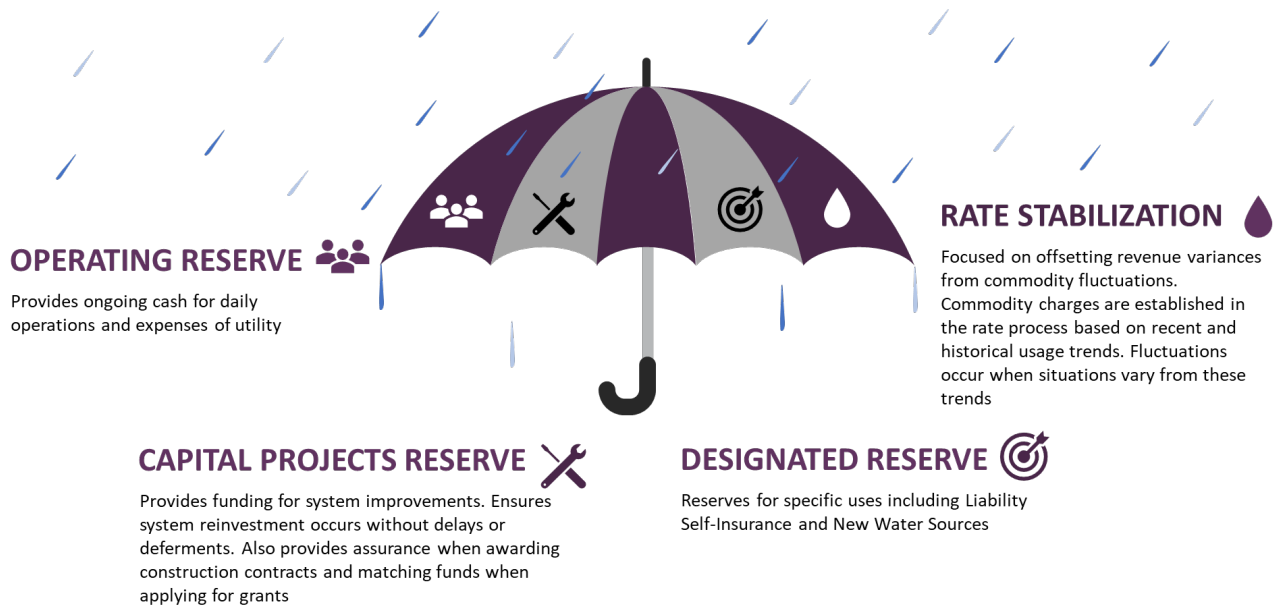
The FY 2023 adopted budget was used as the utility’s baseline Operational & Maintenance (O&M) expenses and adjusted in subsequent years based on the escalation factors shown in Table 13. Table 16 provides projected O&M expenses through the Rate Setting Period with projections rounded to the nearest thousands. Each expense category includes detailed line-item expenditures that we discussed with staff to determine the appropriate escalation factor for forecasting how costs will increase over time.

Table 16: Water Projected O&M Expenses

Projected Operating & Maintenance Expenses					
O&M Summary	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Purchased Water Costs</b>					
<i>Fixed Purchased Water Costs</i>					
MWD Readiness-to-Serve Charge	\$457,000	\$457,000	\$457,000	\$457,000	\$457,000
MWD Capacity Charge	\$327,000	\$327,000	\$327,000	\$327,000	\$327,000
Supply Reliability Charge	\$1,041,000	\$1,041,000	\$1,041,000	\$1,041,000	\$1,041,000
Customer Service Charge	\$1,040,000	\$1,040,000	\$1,040,000	\$1,040,000	\$1,040,000
Emergency Storage Charge	\$1,517,000	\$1,517,000	\$1,517,000	\$1,517,000	\$1,517,000
Infrastructure Access Charge	\$761,000	\$761,000	\$761,000	\$761,000	\$761,000
<b>Subtotal Fixed Purchased Water Costs</b>	<b>\$5,143,000</b>	<b>\$5,143,000</b>	<b>\$5,143,000</b>	<b>\$5,143,000</b>	<b>\$5,143,000</b>
<i>Variable Purchased Water Costs</i>					
Purchased Water (Variable Costs)	\$20,467,000	\$20,467,000	\$20,467,000	\$20,467,000	\$20,467,000
PSAWR Credit/Discount	(\$659,000)	(\$659,000)	(\$659,000)	(\$659,000)	(\$659,000)
<b>Subtotal Variable Purchased Water Costs</b>	<b>\$19,808,000</b>	<b>\$19,808,000</b>	<b>\$19,808,000</b>	<b>\$19,808,000</b>	<b>\$19,808,000</b>
<b>Total Purchased Water Costs</b>	<b>\$24,951,000</b>	<b>\$24,951,000</b>	<b>\$24,951,000</b>	<b>\$24,951,000</b>	<b>\$24,951,000</b>
<b>Operating Expenses</b>					
<i>Operating and Maintenance</i>					
Administration	\$1,726,000	\$1,832,000	\$1,930,000	\$2,033,000	\$2,142,000
Board of Directors	\$44,000	\$46,000	\$48,000	\$50,000	\$52,000
Customer Service	\$511,000	\$541,000	\$567,000	\$596,000	\$625,000
Distribution / Capital Construction	\$2,426,000	\$2,579,000	\$2,699,000	\$2,825,000	\$2,957,000
Engineering	\$983,000	\$1,039,000	\$1,095,000	\$1,155,000	\$1,218,000
Finance	\$1,001,000	\$1,058,000	\$1,112,000	\$1,169,000	\$1,230,000
Fleet/Garage	\$544,000	\$578,000	\$605,000	\$633,000	\$663,000
General Fund Expense	\$561,000	\$604,000	\$629,000	\$654,000	\$680,000
Human Resources	\$384,000	\$407,000	\$428,000	\$449,000	\$472,000
Information Technology	\$1,385,000	\$1,476,000	\$1,545,000	\$1,618,000	\$1,694,000
Meters	\$1,091,000	\$1,156,000	\$1,211,000	\$1,269,000	\$1,331,000
Operations	\$3,163,000	\$3,369,000	\$3,522,000	\$3,681,000	\$3,848,000
Risk Management	\$817,000	\$877,000	\$914,000	\$953,000	\$994,000
Valve Maintenance	\$389,000	\$411,000	\$432,000	\$453,000	\$476,000
<b>Subtotal Operating and Maintenance</b>	<b>\$15,025,000</b>	<b>\$15,973,000</b>	<b>\$16,737,000</b>	<b>\$17,538,000</b>	<b>\$18,382,000</b>
<i>Pumping Costs</i>					
Pumping Operations	\$135,000	\$145,000	\$151,000	\$158,000	\$165,000
Pumping Energy	\$830,000	\$871,000	\$915,000	\$961,000	\$1,009,000
<b>Subtotal Pumping Costs</b>	<b>\$965,000</b>	<b>\$1,016,000</b>	<b>\$1,066,000</b>	<b>\$1,119,000</b>	<b>\$1,174,000</b>
<b>Total Operating Expenses</b>	<b>\$15,990,000</b>	<b>\$16,989,000</b>	<b>\$17,803,000</b>	<b>\$18,657,000</b>	<b>\$19,556,000</b>
<b>Debt Service</b>					
Existing Debt	\$3,077,000	\$3,077,000	\$3,077,000	\$3,076,000	\$3,076,000
<b>Subtotal Debt Service</b>	<b>\$3,077,000</b>	<b>\$3,077,000</b>	<b>\$3,077,000</b>	<b>\$3,076,000</b>	<b>\$3,076,000</b>
<b>Total Expenses</b>	<b>\$44,018,000</b>	<b>\$45,017,000</b>	<b>\$45,831,000</b>	<b>\$46,684,000</b>	<b>\$47,583,000</b>

## Reserves

Figure 5: Water Utility Reserves



Established reserves include Operating Reserve, Capital Project Reserve, Rate Stabilization Reserve, and two Designated Reserves. These reserves help mitigate risks to the utility by ensuring sufficient cash is on hand for daily operations and to fund annual system improvements. Most recently, reserves have been used to cover increased costs in capital projects due to hyper-inflation over the past year. In addition, these reserves may be used to help smooth rates and mitigate rate spikes due to emergencies. The most recently adopted reserve policies identify the function of each reserve. Table 17 summarizes the minimum requirements and the ideal funding targets of each reserve. In addition, the District has a separate account for capacity fees from new connections that funds a portion of capital projects.

Table 17: Water Reserve Requirements and Targets

Reserve	Minimum Requirement	Reserve Target
Operating	60 days of operating costs	90 days of operating costs
Capital Projects	1-year of CIP based on 5-year average	2-years of CIP based on 5-year average
Rate Stabilization	5% of rate revenue	10% of rate revenue
Liability Self-Insurance	Fixed amount of \$100,000	N/A
New Source Water	N/A	N/A

The estimated projected ending reserve balance for June 30, 2023, equals approximately \$5.8M.

# Rainbow Municipal Water District – Comprehensive Cost-of-Service Rate Study

## Financial Outlook at Existing Rates

Calculating revenue using existing rates and projecting expenses helps determine the current financial health of the utility. Revenues from existing rates can cover operating expenses through FY 2025. However, without adjustments, the District will experience an operating deficit and depleted reserves by the end of FY 2026. The planned CIP averages \$6.7M annually. Therefore, scheduled capital projects would need to be deferred. Table 18 forecasts existing revenues and expenses through the Rate Setting Period. Table 19 identifies reserve transfers and reserves activity, with projected FY 2024 starting reserve balances shown for each reserve.

Table 18: Water Financial Plan at Existing Rates

Financial Plan at Existing Rates					
Revenue	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Rate Revenues</b>					
RMWD O&M Fixed Charge	\$11,075,000	\$11,075,000	\$11,075,000	\$11,075,000	\$11,075,000
RMWD Variable Rate Revenue	\$6,953,000	\$6,953,000	\$6,953,000	\$6,953,000	\$6,953,000
Pumping Revenue (Fixed + Variable) <b>Table 15</b>	\$565,000	\$565,000	\$565,000	\$565,000	\$565,000
SDCWA Fixed Charge	\$5,125,000	\$5,125,000	\$5,125,000	\$5,125,000	\$5,125,000
SDCWA Variable Rate Revenue	\$19,494,000	\$19,494,000	\$19,494,000	\$19,494,000	\$19,494,000
<b>Total Rate Revenues</b>	<b>\$43,212,000</b>	<b>\$43,212,000</b>	<b>\$43,212,000</b>	<b>\$43,212,000</b>	<b>\$43,212,000</b>
<b>Operating Revenues</b>					
Readiness-To-Serve Revenue	\$295,000	\$295,000	\$295,000	\$295,000	\$295,000
Unlock Fees	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
RP Charges	\$246,000	\$246,000	\$246,000	\$246,000	\$246,000
Inspections <b>Table 15</b>	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
Install-Hydrant	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000
Miscellaneous	\$7,000	\$7,000	\$7,000	\$7,000	\$7,000
New Meter/Install Parts	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000
Notice Delivery Revenue	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
<b>Subtotal Operating Revenues</b>	<b>\$620,000</b>	<b>\$620,000</b>	<b>\$620,000</b>	<b>\$620,000</b>	<b>\$620,000</b>
<b>Non-Operating Revenues</b>					
NSF Fees	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000
Recycling Revenue	\$8,000	\$8,000	\$8,000	\$8,000	\$8,000
Miscellaneous Revenue <b>Table 15</b>	\$95,000	\$95,000	\$95,000	\$95,000	\$95,000
Interest Revenues	\$59,000	\$86,000	\$96,000	\$93,000	\$78,000
Property Tax Revenue	\$650,000	\$650,000	\$650,000	\$650,000	\$650,000
<b>Subtotal Non-Operating Revenues</b>	<b>\$815,000</b>	<b>\$842,000</b>	<b>\$852,000</b>	<b>\$849,000</b>	<b>\$834,000</b>
<b>Other Revenues</b>					
Penalty Charges	\$405,000	\$405,000	\$405,000	\$405,000	\$405,000
Plan Check Rev. <b>Table 15</b>	\$81,000	\$81,000	\$81,000	\$81,000	\$81,000
Miscellaneous Revenue	\$61,000	\$61,000	\$61,000	\$61,000	\$61,000
Misc. Revenue - Eng. Services	\$4,000	\$4,000	\$4,000	\$4,000	\$4,000
<b>Subtotal Other Revenues</b>	<b>\$551,000</b>	<b>\$551,000</b>	<b>\$551,000</b>	<b>\$551,000</b>	<b>\$551,000</b>
<b>Total Revenues</b>	<b>\$45,198,000</b>	<b>\$45,225,000</b>	<b>\$45,235,000</b>	<b>\$45,232,000</b>	<b>\$45,217,000</b>

# Rainbow Municipal Water District – Comprehensive Cost-of-Service Rate Study

<b>Financial Plan (continued)</b>						
<b>O&amp;M Expenditures</b>		<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
<b>Purchased Water Costs</b>						
<i>Fixed Purchased Water Costs</i>						
MWD Readiness-to-Serve Charge		\$457,000	\$457,000	\$457,000	\$457,000	\$457,000
MWD Capacity Charge		\$327,000	\$327,000	\$327,000	\$327,000	\$327,000
Supply Reliability Charge	<b>Table 16</b>	\$1,041,000	\$1,041,000	\$1,041,000	\$1,041,000	\$1,041,000
Customer Service Charge		\$1,040,000	\$1,040,000	\$1,040,000	\$1,040,000	\$1,040,000
Emergency Storage Charge		\$1,517,000	\$1,517,000	\$1,517,000	\$1,517,000	\$1,517,000
Infrastructure Access Charge		\$761,000	\$761,000	\$761,000	\$761,000	\$761,000
<b>Subtotal Fixed Purchased Water Costs</b>		<b>\$5,143,000</b>	<b>\$5,143,000</b>	<b>\$5,143,000</b>	<b>\$5,143,000</b>	<b>\$5,143,000</b>
<i>Variable Purchased Water Costs</i>						
Purchased Water (Variable Costs)	<b>Table 16</b>	\$20,467,000	\$20,467,000	\$20,467,000	\$20,467,000	\$20,467,000
PSAWR Credit/Discount		(\$659,000)	(\$659,000)	(\$659,000)	(\$659,000)	(\$659,000)
<b>Subtotal Variable Purchased Water Costs</b>		<b>\$19,808,000</b>	<b>\$19,808,000</b>	<b>\$19,808,000</b>	<b>\$19,808,000</b>	<b>\$19,808,000</b>
<b>Total Purchased Water Costs</b>		<b>\$24,951,000</b>	<b>\$24,951,000</b>	<b>\$24,951,000</b>	<b>\$24,951,000</b>	<b>\$24,951,000</b>
<b>Operating Expenses</b>						
<i>Operating and Maintenance</i>						
Administration		\$1,726,000	\$1,832,000	\$1,930,000	\$2,033,000	\$2,142,000
Board of Directors		\$44,000	\$46,000	\$48,000	\$50,000	\$52,000
Customer Service		\$511,000	\$541,000	\$567,000	\$596,000	\$625,000
Distribution / Capital Construction		\$2,426,000	\$2,579,000	\$2,699,000	\$2,825,000	\$2,957,000
Engineering		\$983,000	\$1,039,000	\$1,095,000	\$1,155,000	\$1,218,000
Finance		\$1,001,000	\$1,058,000	\$1,112,000	\$1,169,000	\$1,230,000
Fleet/Garage	<b>Table 16</b>	\$544,000	\$578,000	\$605,000	\$633,000	\$663,000
General Fund Expense		\$561,000	\$604,000	\$629,000	\$654,000	\$680,000
Human Resources		\$384,000	\$407,000	\$428,000	\$449,000	\$472,000
Information Technology		\$1,385,000	\$1,476,000	\$1,545,000	\$1,618,000	\$1,694,000
Meters		\$1,091,000	\$1,156,000	\$1,211,000	\$1,269,000	\$1,331,000
Operations		\$3,163,000	\$3,369,000	\$3,522,000	\$3,681,000	\$3,848,000
Risk Management		\$817,000	\$877,000	\$914,000	\$953,000	\$994,000
Valve Maintenance		\$389,000	\$411,000	\$432,000	\$453,000	\$476,000
<b>Subtotal Operating and Maintenance</b>		<b>\$15,025,000</b>	<b>\$15,973,000</b>	<b>\$16,737,000</b>	<b>\$17,538,000</b>	<b>\$18,382,000</b>
<i>Pumping Costs</i>						
Pumping Operations	<b>Table 16</b>	\$135,000	\$145,000	\$151,000	\$158,000	\$165,000
Pumping Energy		\$830,000	\$871,000	\$915,000	\$961,000	\$1,009,000
<b>Subtotal Pumping Costs</b>		<b>\$965,000</b>	<b>\$1,016,000</b>	<b>\$1,066,000</b>	<b>\$1,119,000</b>	<b>\$1,174,000</b>
<b>Total Operating Expenses</b>		<b>\$15,990,000</b>	<b>\$16,989,000</b>	<b>\$17,803,000</b>	<b>\$18,657,000</b>	<b>\$19,556,000</b>
<b>Debt Service</b>						
Existing Debt	<b>Table 16</b>	\$3,077,000	\$3,077,000	\$3,077,000	\$3,076,000	\$3,076,000
<b>Subtotal Debt Service</b>		<b>\$3,077,000</b>	<b>\$3,077,000</b>	<b>\$3,077,000</b>	<b>\$3,076,000</b>	<b>\$3,076,000</b>
<b>Total Expenses</b>		<b>\$44,018,000</b>	<b>\$45,017,000</b>	<b>\$45,831,000</b>	<b>\$46,684,000</b>	<b>\$47,583,000</b>
<b>Net Cashflow</b> (Revenue - Expenses)		<b>\$1,180,000</b>	<b>\$208,000</b>	<b>(\$596,000)</b>	<b>(\$1,452,000)</b>	<b>(\$2,366,000)</b>

# Rainbow Municipal Water District – Comprehensive Cost-of-Service Rate Study

Table 19: Water – Transfers and Reserve Activity at Existing Rates

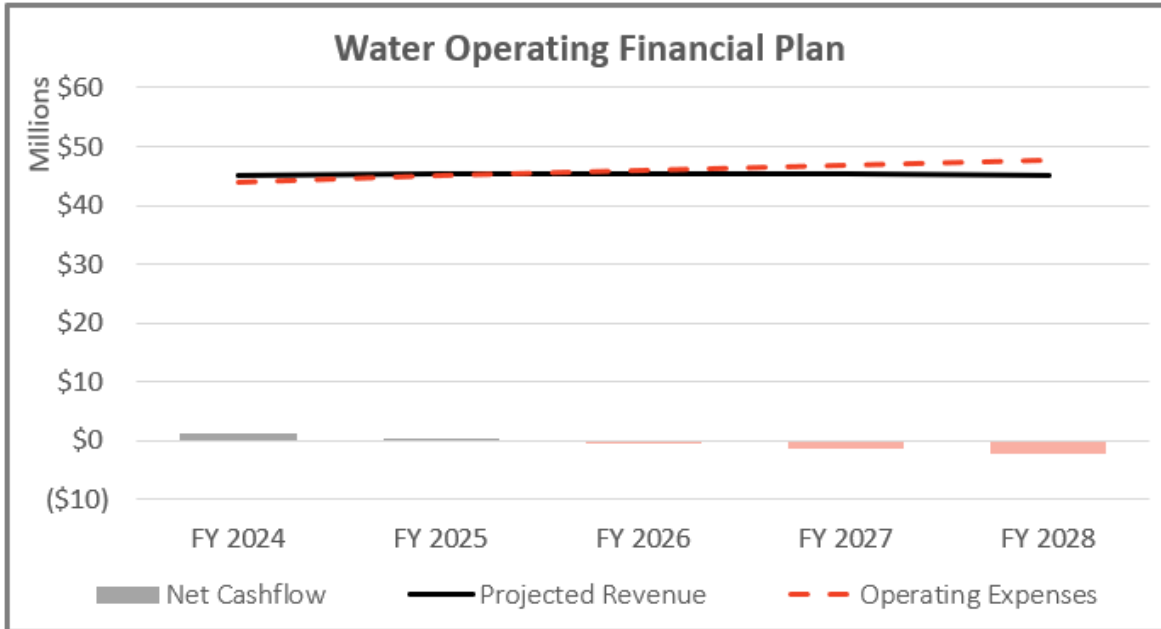
<b>Water Reserve Activity</b>					
<b>Operating Fund</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
Beginning Balance	\$3,705,993	\$4,885,993	\$5,093,993	\$4,497,993	\$3,045,993
Transfers (Net Cashflow)	\$1,180,000	\$208,000	(\$596,000)	(\$1,452,000)	(\$2,366,000)
<b>Ending Balance</b>	<b>\$4,885,993</b>	<b>\$5,093,993</b>	<b>\$4,497,993</b>	<b>\$3,045,993</b>	<b>\$679,993</b>
<b>Liability Self-Insurance</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
Beginning Balance	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
<b>Ending Balance</b>	<b>\$100,000</b>	<b>\$100,000</b>	<b>\$100,000</b>	<b>\$100,000</b>	<b>\$100,000</b>
<b>Water Capital Reserve</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
Beginning Balance	\$679,429	(\$2,473,439)	(\$5,403,046)	(\$11,525,442)	(\$17,962,351)
Plus:					
Wholesale Water Efficiency Loan Proceeds	\$5,075,000	\$2,581,090	\$0	\$0	\$0
Less:					
CIP	(\$8,227,868)	(\$5,510,697)	(\$6,122,396)	(\$6,436,909)	(\$7,354,597)
Subtotal Water Capital Reserve	(\$2,473,439)	(\$5,403,046)	(\$11,525,442)	(\$17,962,351)	(\$25,316,948)
Interest Earnings	\$0	\$0	\$0	\$0	\$0
<b>Ending Balance</b>	<b>(\$2,473,439)</b>	<b>(\$5,403,046)</b>	<b>(\$11,525,442)</b>	<b>(\$17,962,351)</b>	<b>(\$25,316,948)</b>
<b>Rate Stabilization Reserve</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
Beginning Balance	\$0	\$0	\$0	\$0	\$0
<b>Ending Balance</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>New Water Resources</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
Beginning Balance	\$1,322,262	\$1,322,262	\$1,322,262	\$1,322,262	\$1,322,262
<b>Ending Balance</b>	<b>\$1,322,262</b>	<b>\$1,322,262</b>	<b>\$1,322,262</b>	<b>\$1,322,262</b>	<b>\$1,322,262</b>
<b>Total Reserves - Ending Balance</b>	<b>\$3,834,816</b>	<b>\$1,113,209</b>	<b>(\$5,605,187)</b>	<b>(\$13,494,096)</b>	<b>(\$23,214,693)</b>



# Rainbow Municipal Water District – Comprehensive Cost-of-Service Rate Study

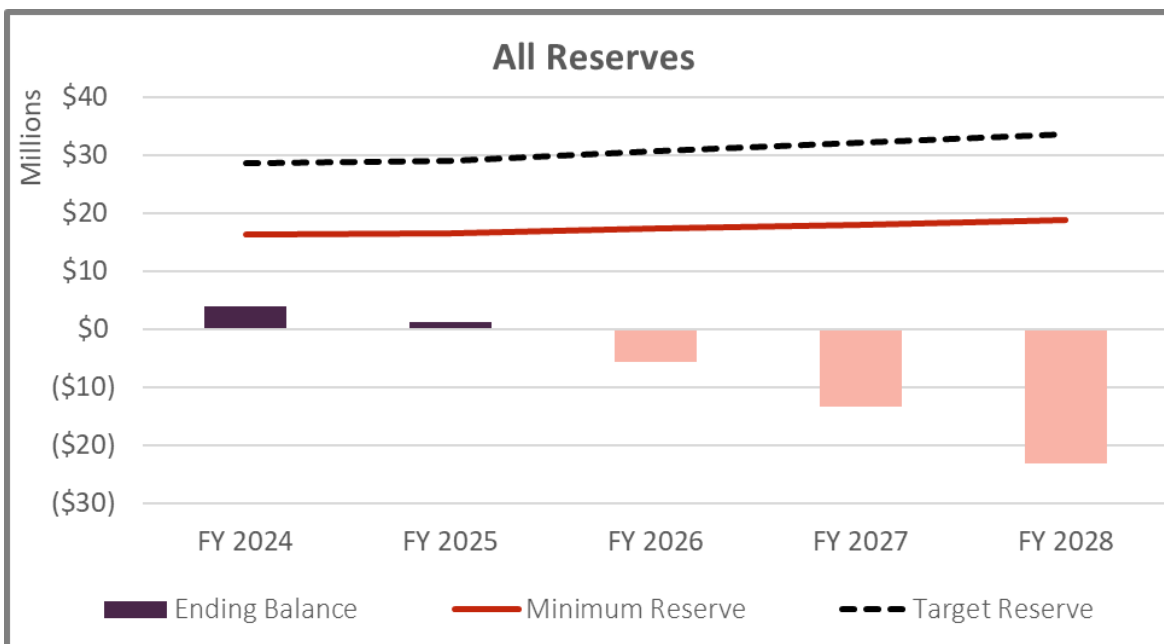
Figure 6 illustrates the operating position of the utility, where O&M expenses are identified with the dashed red trendline, and the horizontal black trendline shows total revenues at existing rates. The bars represent net operating income used to fund capital and build-up reserves.

Figure 6: Water – Current Operating Financial Position



With capital spending exceeding \$33.6M over the Rate Setting Period, as shown in Figure 2, reserves would need to cover capital expenses to ensure capital projects continue to move forward as the District only has \$7.6M in remaining loan proceeds. Figure 7 reflects the projected ending balances of reserves after operating and capital projects are funded. By the end of FY 2024, reserves are below the minimum reserve requirements and projected to be depleted by FY 2026.

Figure 7: Water – Projected Ending Reserves at Existing Rates



## Proposed Financial Plan – Water Utility

From our review of the utility's financial outlook at existing rates, a proposed financial plan is developed to fund the multi-year revenue requirements. The proposed financial plan generates positive net operating income each year to go towards capital spending and satisfy reserve requirements. Table 20 forecasts projected revenues, **with annual revenue adjustments**, and expenses through FY 2028.

Table 21 identifies the projected FY 2024 total starting reserve balances, activity within each reserve (including net income transfer from Table 20, transfers between reserves, and annual CIP), and projected ending balances for each fiscal year of the Rate Setting Period.

Table 20: Water – Proposed Financial Plan

Proposed Financial Plan						
Revenue		FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Rate Revenues</b>						
RMWD O&M Fixed Charge		\$11,075,000	\$11,075,000	\$11,075,000	\$11,075,000	\$11,075,000
RMWD Variable Rate Revenue		\$6,953,000	\$6,953,000	\$6,953,000	\$6,953,000	\$6,953,000
Pumping Revenue (Fixed + Variable)	Table 15	\$565,000	\$565,000	\$565,000	\$565,000	\$565,000
SDCWA Fixed Charge		\$5,125,000	\$5,125,000	\$5,125,000	\$5,125,000	\$5,125,000
SDCWA Variable Rate Revenue		\$19,494,000	\$19,494,000	\$19,494,000	\$19,494,000	\$19,494,000
<b>Total Rate Revenues</b>		<b>\$43,212,000</b>	<b>\$43,212,000</b>	<b>\$43,212,000</b>	<b>\$43,212,000</b>	<b>\$43,212,000</b>
<b>Additional Revenue (from revenue adjustments):</b>						
	<b>Fiscal Year</b>	<b>Revenue Adjustment</b>				
	FY 2024	9.0%	\$3,889,000	\$3,889,000	\$3,889,000	\$3,889,000
	FY 2025	9.0%		\$4,239,000	\$4,239,000	\$4,239,000
	FY 2026	9.0%			\$4,620,000	\$4,620,000
	FY 2027	9.0%				\$5,036,000
	FY 2028	9.0%				
<b>Total Additional Revenue</b>			<b>\$3,889,000</b>	<b>\$8,128,000</b>	<b>\$12,748,000</b>	<b>\$17,784,000</b>
<b>Subtotal Projected Rate Revenue</b>			<b>\$47,101,000</b>	<b>\$51,340,000</b>	<b>\$55,960,000</b>	<b>\$60,996,000</b>
<b>Operating Revenues</b>						
Readiness-To-Serve Revenue		\$295,000	\$295,000	\$295,000	\$295,000	\$295,000
Unlock Fees		\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
RP Charges		\$246,000	\$246,000	\$246,000	\$246,000	\$246,000
Inspections	Table 15	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
Install-Hydrant		\$2,000	\$2,000	\$2,000	\$2,000	\$2,000
Miscellaneous		\$7,000	\$7,000	\$7,000	\$7,000	\$7,000
New Meter/Install Parts		\$40,000	\$40,000	\$40,000	\$40,000	\$40,000
Notice Delivery Revenue		\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
<b>Subtotal Operating Revenues</b>		<b>\$620,000</b>	<b>\$620,000</b>	<b>\$620,000</b>	<b>\$620,000</b>	<b>\$620,000</b>
<b>Non-Operating Revenues</b>						
NSF Fees		\$3,000	\$3,000	\$3,000	\$3,000	\$3,000
Recycling Revenue		\$8,000	\$8,000	\$8,000	\$8,000	\$8,000
Miscellaneous Revenue	Table 15	\$95,000	\$95,000	\$95,000	\$95,000	\$95,000
Interest Revenues		\$59,000	\$103,000	\$131,000	\$154,000	\$247,000
Property Tax Revenue		\$650,000	\$650,000	\$650,000	\$650,000	\$650,000
<b>Subtotal Non-Operating Revenues</b>		<b>\$815,000</b>	<b>\$859,000</b>	<b>\$887,000</b>	<b>\$910,000</b>	<b>\$1,003,000</b>
<b>Other Revenues</b>						
Penalty Charges		\$405,000	\$405,000	\$405,000	\$405,000	\$405,000
Plan Check Rev.	Table 15	\$81,000	\$81,000	\$81,000	\$81,000	\$81,000
Miscellaneous Revenue		\$61,000	\$61,000	\$61,000	\$61,000	\$61,000
Misc. Revenue - Eng. Services		\$4,000	\$4,000	\$4,000	\$4,000	\$4,000
<b>Subtotal Other Revenues</b>		<b>\$551,000</b>	<b>\$551,000</b>	<b>\$551,000</b>	<b>\$551,000</b>	<b>\$551,000</b>
<b>Total Revenues</b>		<b>\$49,087,000</b>	<b>\$53,370,000</b>	<b>\$58,018,000</b>	<b>\$63,077,000</b>	<b>\$68,659,000</b>

# Rainbow Municipal Water District – Comprehensive Cost-of-Service Rate Study

<b>Proposed Financial Plan (continued)</b>						
<b>O&amp;M Expenditures</b>		<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
<b>Purchased Water Costs</b>						
<i>Fixed Purchased Water Costs</i>						
MWD Readiness-to-Serve Charge		\$457,000	\$457,000	\$457,000	\$457,000	\$457,000
MWD Capacity Charge		\$327,000	\$327,000	\$327,000	\$327,000	\$327,000
Supply Reliability Charge	<b>Table 16</b>	\$1,041,000	\$1,041,000	\$1,041,000	\$1,041,000	\$1,041,000
Customer Service Charge		\$1,040,000	\$1,040,000	\$1,040,000	\$1,040,000	\$1,040,000
Emergency Storage Charge		\$1,517,000	\$1,517,000	\$1,517,000	\$1,517,000	\$1,517,000
Infrastructure Access Charge		\$761,000	\$761,000	\$761,000	\$761,000	\$761,000
<b>Subtotal Fixed Purchased Water Costs</b>		<b>\$5,143,000</b>	<b>\$5,143,000</b>	<b>\$5,143,000</b>	<b>\$5,143,000</b>	<b>\$5,143,000</b>
<i>Variable Purchased Water Costs</i>						
Purchased Water (Variable Costs)	<b>Table 16</b>	\$20,467,000	\$20,467,000	\$20,467,000	\$20,467,000	\$20,467,000
PSAWR Credit/Discount		(\$659,000)	(\$659,000)	(\$659,000)	(\$659,000)	(\$659,000)
<b>Subtotal Variable Purchased Water Costs</b>		<b>\$19,808,000</b>	<b>\$19,808,000</b>	<b>\$19,808,000</b>	<b>\$19,808,000</b>	<b>\$19,808,000</b>
<b>Total Purchased Water Costs</b>		<b>\$24,951,000</b>	<b>\$24,951,000</b>	<b>\$24,951,000</b>	<b>\$24,951,000</b>	<b>\$24,951,000</b>
<b>Operating Expenses</b>						
<i>Operating and Maintenance</i>						
Administration		\$1,726,000	\$1,832,000	\$1,930,000	\$2,033,000	\$2,142,000
Board of Directors		\$44,000	\$46,000	\$48,000	\$50,000	\$52,000
Customer Service		\$511,000	\$541,000	\$567,000	\$596,000	\$625,000
Distribution / Capital Construction		\$2,426,000	\$2,579,000	\$2,699,000	\$2,825,000	\$2,957,000
Engineering		\$983,000	\$1,039,000	\$1,095,000	\$1,155,000	\$1,218,000
Finance		\$1,001,000	\$1,058,000	\$1,112,000	\$1,169,000	\$1,230,000
Fleet/Garage	<b>Table 16</b>	\$544,000	\$578,000	\$605,000	\$633,000	\$663,000
General Fund Expense		\$561,000	\$604,000	\$629,000	\$654,000	\$680,000
Human Resources		\$384,000	\$407,000	\$428,000	\$449,000	\$472,000
Information Technology		\$1,385,000	\$1,476,000	\$1,545,000	\$1,618,000	\$1,694,000
Meters		\$1,091,000	\$1,156,000	\$1,211,000	\$1,269,000	\$1,331,000
Operations		\$3,163,000	\$3,369,000	\$3,522,000	\$3,681,000	\$3,848,000
Risk Management		\$817,000	\$877,000	\$914,000	\$953,000	\$994,000
Valve Maintenance		\$389,000	\$411,000	\$432,000	\$453,000	\$476,000
<b>Subtotal Operating and Maintenance</b>		<b>\$15,025,000</b>	<b>\$15,973,000</b>	<b>\$16,737,000</b>	<b>\$17,538,000</b>	<b>\$18,382,000</b>
<i>Pumping Costs</i>						
Pumping Operations	<b>Table 16</b>	\$135,000	\$145,000	\$151,000	\$158,000	\$165,000
Pumping Energy		\$830,000	\$871,000	\$915,000	\$961,000	\$1,009,000
<b>Subtotal Pumping Costs</b>		<b>\$965,000</b>	<b>\$1,016,000</b>	<b>\$1,066,000</b>	<b>\$1,119,000</b>	<b>\$1,174,000</b>
<b>Total Operating Expenses</b>		<b>\$15,990,000</b>	<b>\$16,989,000</b>	<b>\$17,803,000</b>	<b>\$18,657,000</b>	<b>\$19,556,000</b>
<b>Debt Service</b>						
Existing Debt	<b>Table 16</b>	\$3,077,000	\$3,077,000	\$3,077,000	\$3,076,000	\$3,076,000
<b>Subtotal Debt Service</b>		<b>\$3,077,000</b>	<b>\$3,077,000</b>	<b>\$3,077,000</b>	<b>\$3,076,000</b>	<b>\$3,076,000</b>
<b>Total Expenses</b>		<b>\$44,018,000</b>	<b>\$45,017,000</b>	<b>\$45,831,000</b>	<b>\$46,684,000</b>	<b>\$47,583,000</b>
<b>Net Cashflow (Revenue - Expenses)</b>		<b>\$5,069,000</b>	<b>\$8,353,000</b>	<b>\$12,187,000</b>	<b>\$16,393,000</b>	<b>\$21,076,000</b>

# Rainbow Municipal Water District – Comprehensive Cost-of-Service Rate Study

Table 21: Water – Reserves Activity through FY 2028

<b>Water Reserve Activity</b>					
<b>Operating Fund</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
Beginning Balance	\$3,705,993	\$7,235,836	\$7,400,055	\$7,544,917	\$16,714,114
Transfers (Net Cashflow)	\$5,069,000	\$8,353,000	\$12,187,000	\$16,393,000	\$21,076,000
Intermediate Balance	\$8,774,993	\$15,588,836	\$19,587,055	\$23,937,917	\$37,790,114
Transfers to Water Capital Reserve	(\$1,539,157)	(\$8,188,781)	(\$9,244,138)	(\$6,972,003)	(\$7,870,731)
Transfers to Rate Stabilization Reserve	\$0	\$0	(\$2,798,000)	(\$251,800)	(\$274,450)
<b>Ending Balance</b>	<b>\$7,235,836</b>	<b>\$7,400,055</b>	<b>\$7,544,917</b>	<b>\$16,714,114</b>	<b>\$29,644,934</b>
<b>Liability Self-Insurance</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
Beginning Balance	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
<b>Ending Balance</b>	<b>\$100,000</b>	<b>\$100,000</b>	<b>\$100,000</b>	<b>\$100,000</b>	<b>\$100,000</b>
<b>Water Capital Reserve</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
Beginning Balance	\$679,429	(\$934,282)	\$4,350,322	\$7,560,731	\$8,213,249
Plus:					
Transfers from/(to) Operating Fund	\$1,539,157	\$8,188,781	\$9,244,138	\$6,972,003	\$7,870,731
Wholesale Water Efficiency Loan Proceeds	\$5,075,000	\$2,581,090	\$0	\$0	\$0
Less:					
CIP	(\$8,227,868)	(\$5,510,697)	(\$6,122,396)	(\$6,436,909)	(\$7,354,597)
Subtotal Water Capital Reserve	(\$934,282)	\$4,324,892	\$7,472,063	\$8,095,825	\$8,729,383
Interest Earnings	\$0	\$25,430	\$88,668	\$117,424	\$127,070
<b>Ending Balance</b>	<b>(\$934,282)</b>	<b>\$4,350,322</b>	<b>\$7,560,731</b>	<b>\$8,213,249</b>	<b>\$8,856,453</b>
<b>Rate Stabilization Reserve</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
Beginning Balance	\$0	\$0	\$0	\$2,798,000	\$3,049,800
Transfers from Operating Fund	\$0	\$0	\$2,798,000	\$251,800	\$274,450
<b>Ending Balance</b>	<b>\$0</b>	<b>\$0</b>	<b>\$2,798,000</b>	<b>\$3,049,800</b>	<b>\$3,324,250</b>
<b>New Water Resources</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
Beginning Balance	\$1,322,262	\$1,322,262	\$1,322,262	\$1,322,262	\$1,322,262
<b>Ending Balance</b>	<b>\$1,322,262</b>	<b>\$1,322,262</b>	<b>\$1,322,262</b>	<b>\$1,322,262</b>	<b>\$1,322,262</b>
<b>Total Reserves - Ending Balance</b>	<b>\$7,723,816</b>	<b>\$13,172,639</b>	<b>\$19,325,910</b>	<b>\$29,399,425</b>	<b>\$43,247,898</b>

Figure 8 identifies the operating position based on the proposed financial plan and Figure 9 shows the capital plan with funding sources. Figure 10 identifies the ending reserve balances for reserves after funding capital. The proposed financial plan takes a measured approach and rebuilds reserves over the Rate Setting Period. It is recommended to meet or exceed the target reserve by FY 2028 to help mitigate uncertainty related to the potential disconnect from SDCWA, anticipated cutbacks in agriculture water usage, and future capital costs.

Figure 8: Water Proposed Operating Position

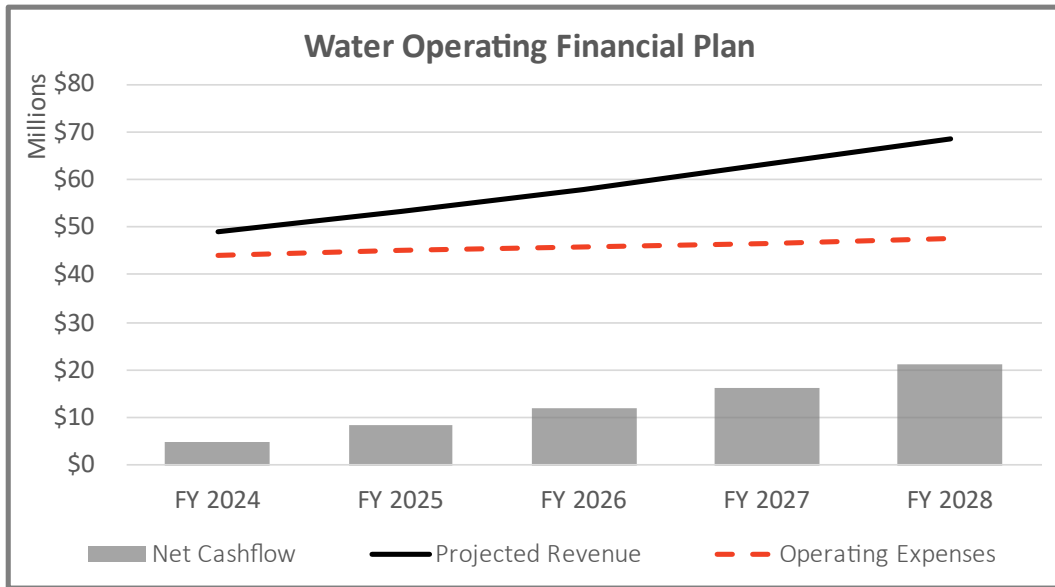


Figure 9: Water Capital Improvement Plan with Funding Sources

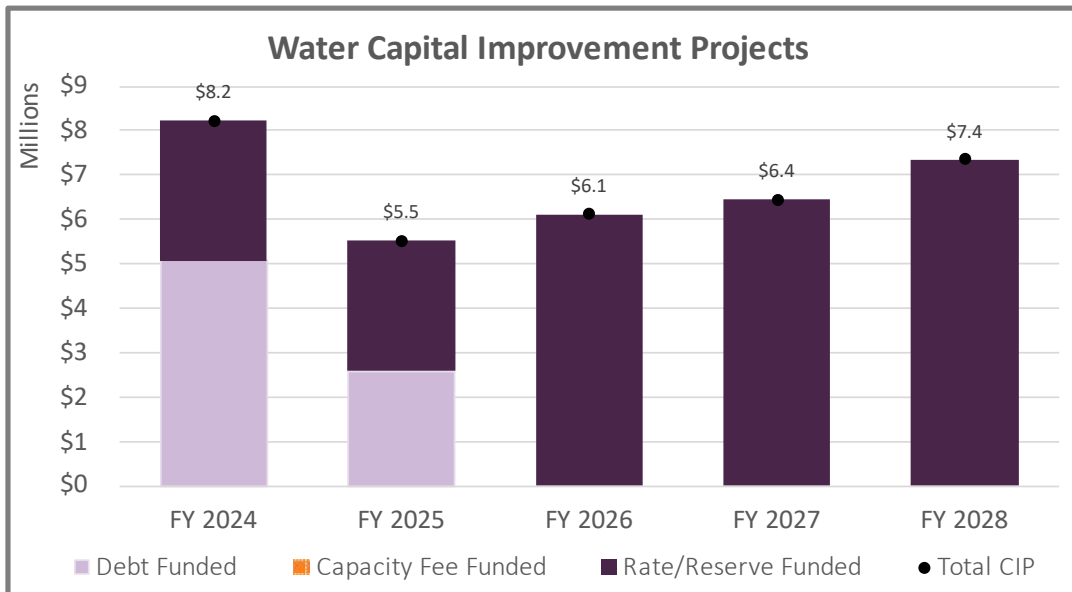
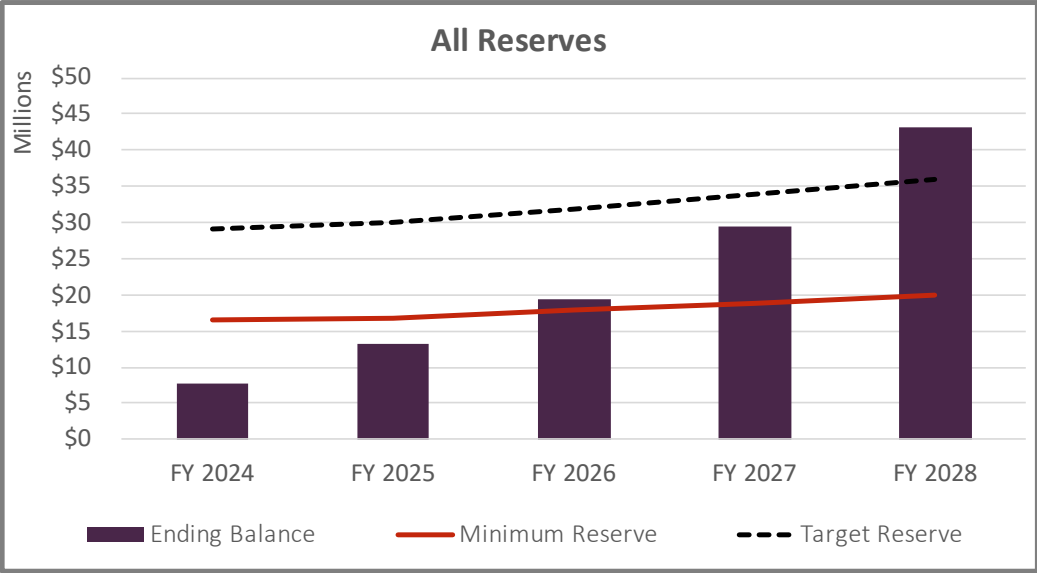


Figure 10: Water Proposed Ending Reserves



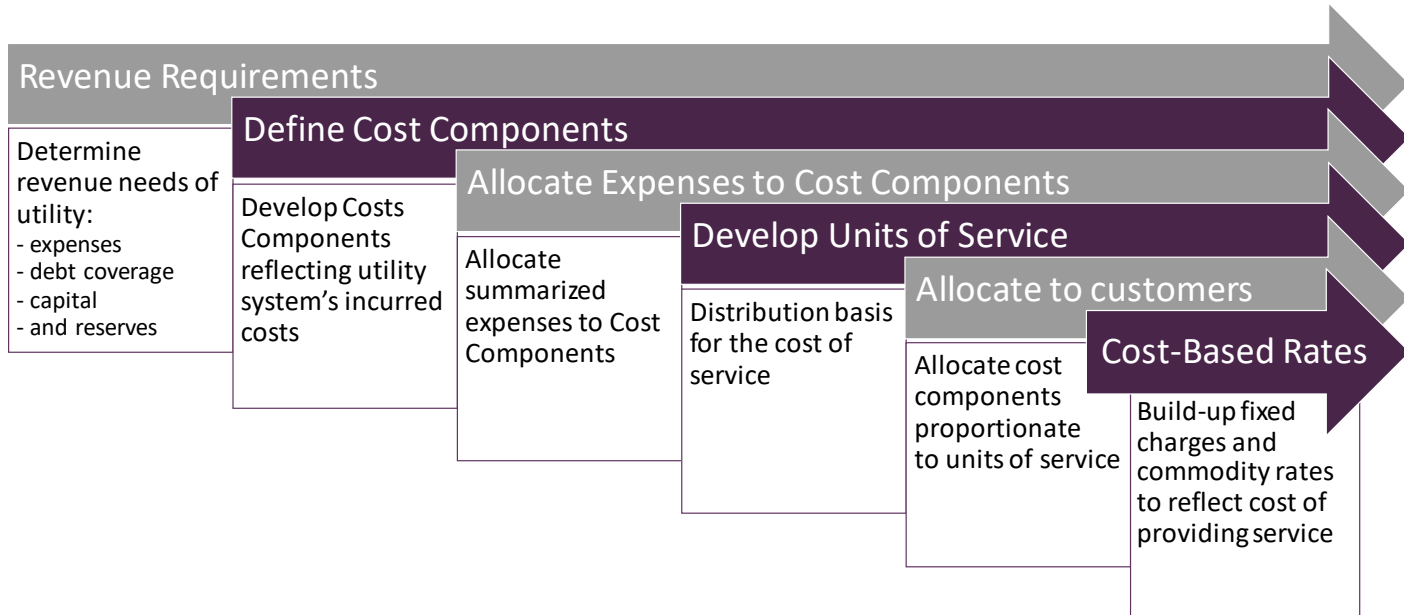
## Cost of Service Analysis – Water Utility

### Cost of Service Process

The next step in developing rates is to perform a cost-of-service analysis. This step develops proposed water rates that are cost-based and equitable. Meeting the requirements of Proposition 218 is of paramount importance in developing utility rates. Proposition 218 does not provide a particular methodology for establishing cost-based rates. This study and analysis herein allocates costs proportionately to each parcel served by the District and derives water rates that adhere to the cost-of-service provisions of Proposition 218.

It is important to understand **how** costs are incurred to determine the most appropriate way to recover them. The following graphic summarizes the cost-of-service process. This process allocates costs incurred to customer classes and tiers based on their proportional share. As a result, the proposed rates are cost-based and reflect the costs incurred to deliver water service to all customers.

Figure 11: Cost of Service Process



### Revenue Requirements

With FY 2024 as the first year of the proposed rate schedule, revenue requirements are determined for FY 2024 and used for the cost-of-service. Revenue requirements include Purchased Water Costs, O&M expenses, available revenue offsets from other revenues, and reserve funding. Funding capital projects and replenishing reserves to meet or exceed the minimum reserve requirement is achieved over the Rate Setting Period. Purchased water rates from SDCWA are held constant during the Rate Setting Period. Any incremental increases in purchased water costs from SDCWA will be in addition to what is shown in the following table and captured through pass through adjustments. The results of the financial plan analysis are summarized in Table 22 and represent the revenue required from rates over the Rate Setting Period.

# Rainbow Municipal Water District – Comprehensive Cost-of-Service Rate Study

Table 22: Water Revenue Requirements

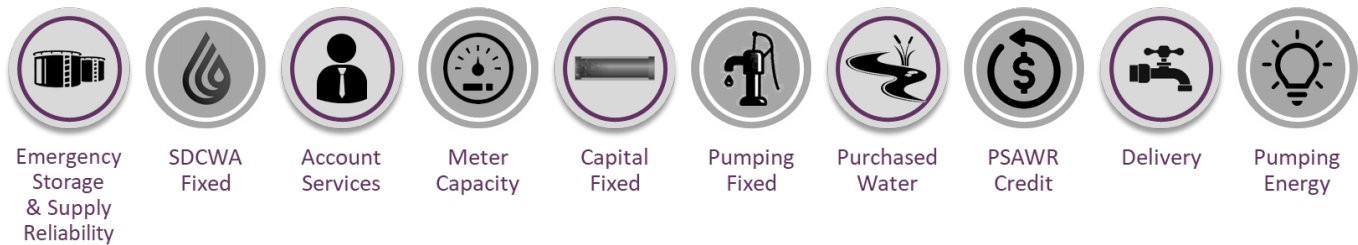
Revenue Requirements					
	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Purchased Water Costs</b>					
<i>Fixed Purchased Water Costs</i>					
MWD Readiness-to-Serve Charge	\$457,000	\$457,000	\$457,000	\$457,000	\$457,000
MWD Capacity Charge	\$327,000	\$327,000	\$327,000	\$327,000	\$327,000
Supply Reliability Charge	\$1,041,000	\$1,041,000	\$1,041,000	\$1,041,000	\$1,041,000
Customer Service Charge	\$1,040,000	\$1,040,000	\$1,040,000	\$1,040,000	\$1,040,000
Emergency Storage Charge	\$1,517,000	\$1,517,000	\$1,517,000	\$1,517,000	\$1,517,000
Infrastructure Access Charge	\$761,000	\$761,000	\$761,000	\$761,000	\$761,000
<b>Total Fixed Purchased Water Costs</b>	<b>\$5,143,000</b>	<b>\$5,143,000</b>	<b>\$5,143,000</b>	<b>\$5,143,000</b>	<b>\$5,143,000</b>
<i>Variable Purchased Water Costs</i>					
Purchased Water (Variable Costs)	\$20,467,000	\$20,467,000	\$20,467,000	\$20,467,000	\$20,467,000
PSAWR Credit/Discount	(\$659,000)	(\$659,000)	(\$659,000)	(\$659,000)	(\$659,000)
<b>Total Variable Purchased Water Costs</b>	<b>\$19,808,000</b>	<b>\$19,808,000</b>	<b>\$19,808,000</b>	<b>\$19,808,000</b>	<b>\$19,808,000</b>
<b>Total Purchased Water Costs</b>	<b>\$24,951,000</b>	<b>\$24,951,000</b>	<b>\$24,951,000</b>	<b>\$24,951,000</b>	<b>\$24,951,000</b>
<b>Operating and Maintenance</b>					
Administration	\$1,726,000	\$1,832,000	\$1,930,000	\$2,033,000	\$2,142,000
Board of Directors	\$44,000	\$46,000	\$48,000	\$50,000	\$52,000
Customer Service	\$511,000	\$541,000	\$567,000	\$596,000	\$625,000
Distribution / Capital Construction	\$2,426,000	\$2,579,000	\$2,699,000	\$2,825,000	\$2,957,000
Engineering	\$983,000	\$1,039,000	\$1,095,000	\$1,155,000	\$1,218,000
Finance	\$1,001,000	\$1,058,000	\$1,112,000	\$1,169,000	\$1,230,000
Fleet/Garage	\$544,000	\$578,000	\$605,000	\$633,000	\$663,000
General Fund Expense	\$561,000	\$604,000	\$629,000	\$654,000	\$680,000
Human Resources	\$384,000	\$407,000	\$428,000	\$449,000	\$472,000
Information Technology	\$1,385,000	\$1,476,000	\$1,545,000	\$1,618,000	\$1,694,000
Meters	\$1,091,000	\$1,156,000	\$1,211,000	\$1,269,000	\$1,331,000
Operations	\$3,163,000	\$3,369,000	\$3,522,000	\$3,681,000	\$3,848,000
Risk Management	\$817,000	\$877,000	\$914,000	\$953,000	\$994,000
Valve Maintenance	\$389,000	\$411,000	\$432,000	\$453,000	\$476,000
<b>Total Operating and Maintenance</b>	<b>\$15,025,000</b>	<b>\$15,973,000</b>	<b>\$16,737,000</b>	<b>\$17,538,000</b>	<b>\$18,382,000</b>
<b>Pumping Costs</b>					
Pumping Operations	\$135,000	\$145,000	\$151,000	\$158,000	\$165,000
Pumping Energy	\$830,000	\$871,000	\$915,000	\$961,000	\$1,009,000
<b>Total Pumping Costs</b>	<b>\$965,000</b>	<b>\$1,016,000</b>	<b>\$1,066,000</b>	<b>\$1,119,000</b>	<b>\$1,174,000</b>
<b>Debt Service</b>					
Existing Debt	\$3,077,000	\$3,077,000	\$3,077,000	\$3,076,000	\$3,076,000
<b>Total Debt Service</b>	<b>\$3,077,000</b>	<b>\$3,077,000</b>	<b>\$3,077,000</b>	<b>\$3,076,000</b>	<b>\$3,076,000</b>
<b>Other Funding</b>					
<i>Revenue Offsets</i>					
Operating Revenues	(\$620,000)	(\$620,000)	(\$620,000)	(\$620,000)	(\$620,000)
Non-Operating Revenues	(\$815,000)	(\$859,000)	(\$887,000)	(\$910,000)	(\$1,003,000)
Other Revenues	(\$551,000)	(\$551,000)	(\$551,000)	(\$551,000)	(\$551,000)
<b>Total Revenue Offsets</b>	<b>(\$1,986,000)</b>	<b>(\$2,030,000)</b>	<b>(\$2,058,000)</b>	<b>(\$2,081,000)</b>	<b>(\$2,174,000)</b>
<i>Adjustments</i>					
Reserve Funding	\$5,069,000	\$8,353,000	\$12,187,000	\$16,393,000	\$21,076,000
<b>Total Adjustments</b>	<b>\$5,069,000</b>	<b>\$8,353,000</b>	<b>\$12,187,000</b>	<b>\$16,393,000</b>	<b>\$21,076,000</b>
<b>Total Other Funding</b>	<b>\$3,083,000</b>	<b>\$6,323,000</b>	<b>\$10,129,000</b>	<b>\$14,312,000</b>	<b>\$18,902,000</b>
<b>Revenue Required from Rates</b>	<b>\$47,101,000</b>	<b>\$51,340,000</b>	<b>\$55,960,000</b>	<b>\$60,996,000</b>	<b>\$66,485,000</b>



## Define Cost Components

The utility incurs costs to accommodate total water demand throughout the year, including water supply costs, treatment, operating expenses, and pumping. Therefore, to determine the most appropriate way to recover the utility's expenses, cost components are identified to allocate expenses based on how they are incurred. The cost components shown in Figure 12 reflect the cost components used for this study.

Figure 12: Cost Components



Emergency Storage & Supply Reliability – Fixed monthly water supply costs associated with Emergency Storage and Supply Reliability that are incurred by the District from SDCWA. These two fixed components are separated out from other SDCWA fixed charges because PSAWR customers do not pay these fixed costs.

SDCWA Fixed – Fixed monthly water supply costs incurred by the District from SDCWA, including MWD Capacity, Customer Service, Infrastructure Access, and MWD Readiness-to-Serve.

Account Services – Fixed expenses that do not necessarily fluctuate based on usage or meter size.

Meter Capacity – Expenses associated with operating and maintaining the system, planning, customer services, support services, reserves, and overhead.

Capital Fixed – Expenses associated with debt and reserves related to system capital.

Pumping Fixed – Fixed expenses associated with the District Pumping division, including staffing, equipment & building maintenance, and supplies.

Purchased Water – Water supply costs from the purchase of treated water from SDCWA.

PSAWR Credit – Credits from SDCWA for usage associated with PSAWR customers.

Delivery – Expenses associated with distribution, engineering, fleet, operating, valves, safety, and reserve funding.

Pumping Energy – Energy costs incurred to pump water to higher elevations.

# Rainbow Municipal Water District – Comprehensive Cost-of-Service Rate Study

## Allocate Expenses to Cost Components

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

Table 23 summarizes the percent allocation of purchased water costs from SDCWA to the cost components, and Table 24 uses the percent allocations in Table 23 to allocate expenses in dollars to each cost component.

Table 23: SDCWA Expense Allocation to Cost Components (%)

Purchased Water Costs	Methodology / Allocation Basis	Emergency Storage & Supply Reliability	SDCWA Fixed	Purchased Water	PSAWR Credit	Total
<b>Fixed Purchased Water Costs</b>						
MWD Readiness-to-Serve Charge	Specific	0.0%	100.0%	0.0%	0.0%	100.0%
MWD Capacity Charge	Specific	0.0%	100.0%	0.0%	0.0%	100.0%
Supply Reliability Charge	Specific	100.0%	0.0%	0.0%	0.0%	100.0%
Customer Service Charge	Specific	0.0%	100.0%	0.0%	0.0%	100.0%
Emergency Storage Charge	Specific	100.0%	0.0%	0.0%	0.0%	100.0%
Infrastructure Access Charge	Specific	0.0%	100.0%	0.0%	0.0%	100.0%
<b>Variable Purchased Water Costs</b>						
Purchased Water (Variable Costs)	Specific	0.0%	0.0%	100.0%	0.0%	100.0%
PSAWR Credit/Discount	Specific	0.0%	0.0%	0.0%	100.0%	100.0%

Table 24: SDCWA Expense Allocation to Cost Components (\$)

Purchased Water Costs	Methodology / Allocation Basis	Emergency Storage & Supply Reliability	SDCWA Fixed	Purchased Water	PSAWR Credit	Total
<b>Fixed Purchased Water Costs</b>						
MWD Readiness-to-Serve Charge	Specific	\$0	\$457,000	\$0	\$0	\$457,000
MWD Capacity Charge	Specific	\$0	\$327,000	\$0	\$0	\$327,000
Supply Reliability Charge	Specific	\$1,041,000	\$0	\$0	\$0	\$1,041,000
Customer Service Charge	Specific	\$0	\$1,040,000	\$0	\$0	\$1,040,000
Emergency Storage Charge	Specific	\$1,517,000	\$0	\$0	\$0	\$1,517,000
Infrastructure Access Charge	Specific	\$0	\$761,000	\$0	\$0	\$761,000
<b>Variable Purchased Water Costs</b>						
Purchased Water (Variable Costs)	Specific	\$0	\$0	\$20,467,000	\$0	\$20,467,000
PSAWR Credit/Discount	Specific	\$0	\$0	\$0	(\$659,000)	(\$659,000)
<b>Total Allocation (\$)</b>		<b>\$2,558,000</b>	<b>\$2,585,000</b>	<b>\$20,467,000</b>	<b>(\$659,000)</b>	<b>\$24,951,000</b>

Table 25 summarizes the percent allocation of O&M Revenue Requirements to the cost components, and Table 26 uses the percent allocations in Table 25 to allocate O&M expenses in dollars to each cost component.

# Rainbow Municipal Water District – Comprehensive Cost-of-Service Rate Study

Table 25: Water O&M Expenses Allocation to Cost Components (%)

Operating and Maintenance	Methodology / Allocation Basis	Account Services	Meter Capacity	Capital Fixed	Delivery	Total
Administration	Fixed Demand	0.0%	100.0%	0.0%	0.0%	100.0%
Board of Directors	Fixed Demand	0.0%	100.0%	0.0%	0.0%	100.0%
Customer Service	Fixed Demand	100.0%	0.0%	0.0%	0.0%	100.0%
Distribution / Capital Construction	Average Demand	0.0%	0.0%	0.0%	100.0%	100.0%
Engineering	Average Demand	0.0%	0.0%	0.0%	100.0%	100.0%
Finance	Fixed Demand	0.0%	100.0%	0.0%	0.0%	100.0%
Fleet/Garage	Average Demand	0.0%	0.0%	0.0%	100.0%	100.0%
General Fund Expense	Fixed Demand	0.0%	100.0%	0.0%	0.0%	100.0%
Human Resources	Fixed Demand	0.0%	100.0%	0.0%	0.0%	100.0%
Information Technology	Fixed Demand	0.0%	100.0%	0.0%	0.0%	100.0%
Meters	Fixed Demand	0.0%	100.0%	0.0%	0.0%	100.0%
Operations	Average Demand	0.0%	0.0%	0.0%	100.0%	100.0%
Risk Management	Average Demand	0.0%	0.0%	0.0%	100.0%	100.0%
Valve Maintenance	Average Demand	0.0%	0.0%	0.0%	100.0%	100.0%

Table 26: Water O&M Expenses Allocation to Cost Components (\$)

Operating and Maintenance	Methodology / Allocation Basis	Account Services	Meter Capacity	Capital Fixed	Delivery	Total
Administration	Fixed Demand	\$0	\$1,726,000	\$0	\$0	\$1,726,000
Board of Directors	Fixed Demand	\$0	\$44,000	\$0	\$0	\$44,000
Customer Service	Fixed Demand	\$511,000	\$0	\$0	\$0	\$511,000
Distribution / Capital Construction	Average Demand	\$0	\$0	\$0	\$2,426,000	\$2,426,000
Engineering	Average Demand	\$0	\$0	\$0	\$983,000	\$983,000
Finance	Fixed Demand	\$0	\$1,001,000	\$0	\$0	\$1,001,000
Fleet/Garage	Average Demand	\$0	\$0	\$0	\$544,000	\$544,000
General Fund Expense	Fixed Demand	\$0	\$561,000	\$0	\$0	\$561,000
Human Resources	Fixed Demand	\$0	\$384,000	\$0	\$0	\$384,000
Information Technology	Fixed Demand	\$0	\$1,385,000	\$0	\$0	\$1,385,000
Meters	Fixed Demand	\$0	\$1,091,000	\$0	\$0	\$1,091,000
Operations	Average Demand	\$0	\$0	\$0	\$3,163,000	\$3,163,000
Risk Management	Average Demand	\$0	\$0	\$0	\$817,000	\$817,000
Valve Maintenance	Average Demand	\$0	\$0	\$0	\$389,000	\$389,000
<b>Total Allocation (\$)</b>		<b>\$511,000</b>	<b>\$6,192,000</b>	<b>\$0</b>	<b>\$8,322,000</b>	<b>\$15,025,000</b>
<b>Operating and Maintenance Allocation (%)</b>		<b>3.4%</b>	<b>41.2%</b>	<b>0.0%</b>	<b>55.4%</b>	<b>100.0%</b>

Table 27 summarizes the percent allocation of Pumping expenses to the cost components, and Table 28 uses the percent allocations in Table 27 to allocate Pumping expenses in dollars to each cost component.

# Rainbow Municipal Water District – Comprehensive Cost-of-Service Rate Study

Table 27: Pumping Expense Allocation to Cost Components (%)

Pumping Costs	Methodology / Allocation Basis	Pumping Fixed	Pumping Energy	Total
Pumping Operations	Specific	100.0%	0.0%	100.0%
Pumping Energy	Specific	0.0%	100.0%	100.0%

Table 28: Pumping Expense Allocation to Cost Components (\$)

Pumping Costs	Methodology / Allocation Basis	Pumping Fixed	Pumping Energy	Total
Pumping Operations	Specific	\$135,000	\$0	\$135,000
Pumping Energy	Specific	\$0	\$830,000	\$830,000
<b>Total Allocation (\$)</b>		<b>\$135,000</b>	<b>\$830,000</b>	<b>\$965,000</b>

Table 29 summarizes the percent allocation of Debt to the cost components, and Table 30 uses the percent allocations in Table 29 to allocate Debt in dollars to each cost component. Annual debt payments are allocated 100% to Capital Fixed since debt is a secured obligation of the District that must be paid and is typically used to finance capital projects.

Table 29: Water Debt Allocation to Cost Components (%)

Debt Service	Methodology / Allocation Basis	Account Services	Meter Capacity	Capital Fixed	Delivery	Total
Existing Debt	Specific	0.0%	0.0%	100.0%	0.0%	100.0%

Table 30: Water Debt Allocation to Cost Components (\$)

Debt Service	Methodology / Allocation Basis	Account Services	Meter Capacity	Capital Fixed	Delivery	Total
Existing Debt	Specific	\$0	\$0	\$3,077,000	\$0	\$3,077,000
<b>Total Allocation (\$)</b>		<b>\$0</b>	<b>\$0</b>	<b>\$3,077,000</b>	<b>\$0</b>	<b>\$3,077,000</b>

# Rainbow Municipal Water District – Comprehensive Cost-of-Service Rate Study

Other Funding includes other operating revenues, non-operating revenues, and reserve funding. Other Funding was allocated to the cost components based on O&M percentages derived in Table 26 to maintain proportionality in how expenses were allocated to each cost component. Table 31 summarizes the percent allocation of Other Funding to the cost components, and Table 32 uses the percent allocations in Table 31 to allocate revenue offsets and expenses in dollars to each cost component.

Table 31: Water Other Funding Allocation to Cost Components (%)

Other Funding	Methodology / Allocation Basis	Account Services	Meter Capacity	Capital Fixed	Delivery	Total
<i>Revenue Offsets</i>						
Operating Revenues	O&M Allocation	3.4%	41.2%	0.0%	55.4%	100.0%
Non-Operating Revenues	O&M Allocation	3.4%	41.2%	0.0%	55.4%	100.0%
Other Revenues	O&M Allocation	3.4%	41.2%	0.0%	55.4%	100.0%
<i>Adjustments</i>						
Reserve Funding	O&M Allocation	3.4%	41.2%	0.0%	55.4%	100.0%

Table 32: Water Other Funding Allocation to Cost Components (\$)

Other Funding	Methodology / Allocation Basis	Account Services	Meter Capacity	Capital Fixed	Delivery	Total
<i>Revenue Offsets</i>						
Operating Revenues	O&M Allocation	(\$21,086)	(\$255,510)	\$0	(\$343,404)	(\$620,000)
Non-Operating Revenues	O&M Allocation	(\$27,718)	(\$335,872)	\$0	(\$451,410)	(\$815,000)
Other Revenues	O&M Allocation	(\$18,740)	(\$227,074)	\$0	(\$305,186)	(\$551,000)
<i>Adjustments</i>						
Reserve Funding	O&M Allocation	\$172,397	\$2,089,002	\$0	\$2,807,602	\$5,069,000
<b>Total Allocation (\$)</b>		<b>\$104,853</b>	<b>\$1,270,545</b>	<b>\$0</b>	<b>\$1,707,602</b>	<b>\$3,083,000</b>

Table 33 summarizes the FY 2024 total revenue requirement derived in Table 22 by cost component.

Table 33: FY 2024 Cost-of-Service Requirements by Cost Component

Revenue Requirement	Fixed Components						Variable Components				Total
	Emergency Storage & Supply Reliability	SDCWA Fixed	Account Services	Meter Capacity	Capital Fixed	Pumping Fixed	Purchased Water	PSAWR Credit	Delivery	Pumping Energy	
Purchased Water Costs	\$2,558,000	\$2,585,000	\$0	\$0	\$0	\$0	\$20,467,000	(\$659,000)	\$0	\$0	\$24,951,000
Operating and Maintenance	\$0	\$0	\$511,000	\$6,192,000	\$0	\$0	\$0	\$0	\$8,322,000	\$0	\$15,025,000
Pumping Costs	\$0	\$0	\$0	\$0	\$0	\$135,000	\$0	\$0	\$0	\$830,000	\$965,000
Debt Service	\$0	\$0	\$0	\$0	\$3,077,000	\$0	\$0	\$0	\$0	\$0	\$3,077,000
Other Funding	\$0	\$0	\$104,853	\$1,270,545	\$0	\$0	\$0	\$0	\$1,707,602	\$0	\$3,083,000
<b>COS Requirements</b>	<b>\$2,558,000</b>	<b>\$2,585,000</b>	<b>\$615,853</b>	<b>\$7,462,545</b>	<b>\$3,077,000</b>	<b>\$135,000</b>	<b>\$20,467,000</b>	<b>(\$659,000)</b>	<b>\$10,029,602</b>	<b>\$830,000</b>	<b>\$47,101,000</b>

## Rate Design – Water Utility

### Develop Units of Service

Unit rates for each cost component are derived by spreading the corresponding revenue requirements over appropriate units of service (distribution basis). This approach provides a clear connection between costs incurred and the proportionate share attributable to each customer class tier, and customer account. When designing rates, the most critical component is to connect costs to the proposed rates, resulting in a rate structure that is cost-based and in compliance with Proposition 218. The previous section summarized costs by expense category and then allocated to cost components based on how each cost is incurred. The next step in designing rates is to allocate each cost component to customers in relation to their use of the system and facilities. The method of apportionment considers each customer's share of system costs and is reflected by the units of service used to equitably distribute the cost components to each customer account. The distribution basis varies by cost component and includes total accounts, Meter Equivalents (MEs), which reflect demand placed on the system based on meter size, total water usage, and total usage within pumping zones. Table 34 identifies the number of accounts by customer class and meter size.

Table 34: FY 2024 Total Accounts

Water Accounts by Customer Class and Meter Size										
Line #	Meter Size	Single-Family	Multi-Family	Commercial	Institutional	Agriculture w/ Res	Agriculture	PSAWR Domestic	PSAWR Commercial	Total Accounts
1	5/8"	234	-	1	-	2	1	-	-	238
2	3/4"	3,202	39	33	3	170	44	16	4	3,511
3	1"	2,523	5	105	2	800	236	167	40	3,878
4	1 1/2"	169	31	56	4	147	104	61	33	605
5	2"	113	39	55	5	69	117	51	48	497
6	3"	5	3	6	1	3	16	4	5	43
7	4"	1	5	4	2	1	6	-	1	20
8	6"	-	-	-	-	-	1	-	-	1
9	Total	6,247	122	260	17	1,192	525	299	131	8,793
10	<b>Annual Units (line 9 x 12 bills)</b>	<b>74,964</b>	<b>1,464</b>	<b>3,120</b>	<b>204</b>	<b>14,304</b>	<b>6,300</b>	<b>3,588</b>	<b>1,572</b>	<b>105,516</b>

In Table 35 each meter size was assigned an equivalency factor using the flow characteristics of a 3/4" meter. Based on the District's meter inventory, the safe maximum operating flow capacity for these meter types, as identified in the AWWA M1 Manual, 6<sup>th</sup> Edition, Table B-2, were used for determining meter equivalencies. The safe maximum operating flow capacity for each meter was divided by the 3/4" meters' safe operating flow capacity of 30 gallons per minute (gpm) to determine the equivalent meter ratio. In other words, the calculations convert all larger sized meters to an equivalent number of 3/4" meters based on the safe operating flow capacity of 30 gpm. The Capacity Ratios provide an equivalency to the base 3/4" based on flow and correlates to the capacity that each meter brought into the system at point of connection. Total MEs are determined by multiplying the number of meters by the Capacity Ratio (rounded to a whole number), and then multiplying the result by the billing periods in a year (12 billing periods)<sup>4</sup>. Table 34 and Table 35 provides the number of accounts within each customer class by meter size and meter equivalents, respectively.

<sup>4</sup> The District bills customers on a monthly basis; therefore, there are 12 billing periods during the fiscal year.

# Rainbow Municipal Water District – Comprehensive Cost-of-Service Rate Study

Table 35: FY 2024 Total Meter Equivalents

Water Meter Equivalents by Customer Class and Meter Size												
Line #	Meter Size	AWWA Capacity	AWWA Capacity Ratio	Single-Family	Multi-Family	Commercial	Institutional	Agriculture w/ Res	Agriculture	PSAWR Domestic	PSAWR Commercial	Total Equivalent Units
1	5/8"	30	1.00	234	0	1	0	2	1	0	0	238
2	3/4"	30	1.00	3,202	39	33	3	170	44	16	4	3,511
3	1"	50	1.67	4,205	8	175	3	1,333	393	278	67	6,462
4	1 1/2"	100	3.33	563	103	187	13	490	347	203	110	2,016
5	2"	160	5.33	603	208	293	27	368	624	272	256	2,651
6	3"	350	11.67	58	35	70	12	35	187	47	58	502
7	4"	630	21.00	21	105	84	42	21	126	-	21	420
8	6"	1,300	43.33	-	-	-	-	-	43	-	-	43
9	Total			8,886	498	843	100	2,419	1,765	816	516	15,843
10	Annual Units (line 9 x 12 bills)			106,632	5,976	10,116	1,200	29,028	21,180	9,792	6,192	190,116

Table 36 summarizes the annual units of service related to All Accounts (line 10 of Table 34) and Total MEs (line 10 of Table 35). Table 36 also separately identifies the annual meter equivalents for Non-PSAWR and Agricultural and PSAWR accounts, which are needed for the allocation of certain cost-of-service components.

Table 36: FY 2024 Accounts and Meter Equivalents Summary

Annual Fixed Units of Service Summary					
Customer Class	All Account	Accounts less PSAWR	Total MEs	Non-PSAWR MEs	Agricultural & PSAWR MEs
Single-Family	74,964	74,964	106,632	106,632	0
Multi-Family	1,464	1,464	5,976	5,976	0
Commercial	3,120	3,120	10,116	10,116	0
Institutional	204	204	1,200	1,200	0
Agriculture w/ Res	14,304	14,304	29,028	29,028	29,028
Agriculture	6,300	6,300	21,180	21,180	21,180
PSAWR Domestic	3,588	0	9,792	0	9,792
PSAWR Commercial	1,572	0	6,192	0	6,192
<b>Annual Fixed Units</b>	<b>105,516</b>	<b>100,356</b>	<b>190,116</b>	<b>174,132</b>	<b>66,192</b>

Table 37 summarizes the FY 2024 projected usage broken out by customer class. PSAWR customers do not receive the commodity credit for domestic usage (22 HCF per month) as determined by SDCWA. Therefore, the table also summarizes the PSAWR Usage less Domestic. The annual number of PSAWR Domestic customers from Table 34 was multiplied by 22 HCF to determine the usage that would not receive the credit. This usage was subtracted from the PSAWR Domestic usage to arrive at the usage shown in the table. Table 38 summarizes the number of pumping accounts and usage within each pumping zone.

# Rainbow Municipal Water District – Comprehensive Cost-of-Service Rate Study

Table 37: FY 2024 Projected Usage

Projected Usage (HCF)		
Customer Class	All Usage (HCF)	PSAWR Usage less Domestic (HCF)
Single-Family	1,521,953	-
Multi-Family	130,046	-
Commercial	362,543	-
Institutional	26,318	-
Agriculture w/ Res	918,501	-
Agriculture	1,243,086	-
PSAWR Domestic	721,309	642,373
PSAWR Commercial	604,716	604,716
<b>Total</b>	<b>5,528,472</b>	<b>1,247,089</b>

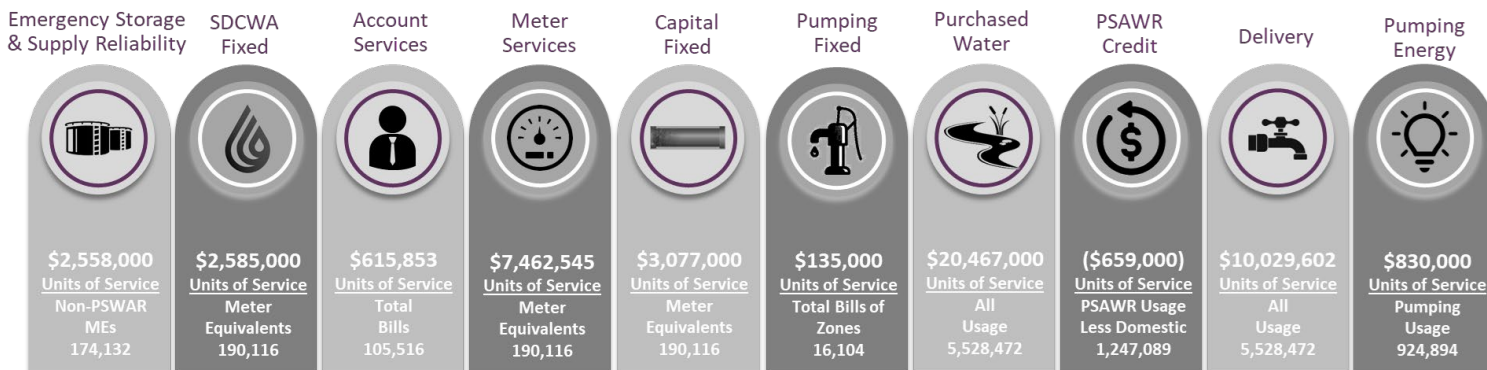
Table 38: FY 2024 Projected Pumping Zone Accounts & Usage

Pumping Zone Summary				
Line #	Pump Zones	Zone Description	Pumping Accounts	Pumping Usage (HCF)
1	Pump Zone 1	<i>Rainbow Heights</i>	181	183,452
2	Pump Zone 2	<i>Improvement District U-1</i>	111	38,945
3	Pump Zone 3	<i>Vallecitos</i>	60	67,006
4	Pump Zone 4	<i>Northside</i>	430	363,390
5	Pump Zone 5	<i>Morro Tank</i>	349	128,436
6	Pump Zone 6	<i>Huntley</i>	152	131,538
7	Pump Zone 7	<i>Magee Tank</i>	59	12,127
8	<b>Total</b>		<b>1,342</b>	<b>924,894</b>
9	Annual Units (Line 8 x 12 bills)		<b>16,104</b>	

Using the units of service identified in Table 36 through Table 38, the distribution basis can be identified for each cost component. Figure 13 identifies the total revenue requirements by cost component from Table 33 and the corresponding units of service.



Figure 13: Water Distribution Basis and Units of Service by Cost Component



Using the FY 2024 revenue requirements, the cost of service allocates expenses to customers based on the service demands that each place on the system (cost causation). This cost causation approach ensures that each customer proportionately shares in the financial obligation of the utility. For each cost component’s unit rate computations, unit rates were rounded up to the nearest penny.

## Fixed Cost Recovery

### Emergency Storage and Supply Reliability

SDCWA Fixed costs include six separate charges to its member agencies, including MWD Capacity, Customer Service, Infrastructure Access, Emergency Storage, Supply Reliability, and MWD Readiness-to-Serve. The SDCWA PSAWR program allows eligible agricultural customers to participate and receive a lower level of water service during water shortages or emergencies. In exchange, PSAWR customers are exempt from paying Emergency Storage and Supply Reliability fixed charges. Therefore, the SDCWA’s Emergency Storage and Supply Reliability charges incurred by the District are only spread over meter equivalents of Non-PSAWR accounts. Table 39 apportions the revenue requirement for Emergency Storage and Supply Reliability based on meter size as represented by total Non-PSAWR MEs (from Table 36).

# Rainbow Municipal Water District – Comprehensive Cost-of-Service Rate Study

*Table 39: FY 2024 Emergency and Reliability Monthly Unit Rate*

Emergency Storage & Supply Reliability Component Unit Rate	
Revenue Requirement	\$2,558,000
÷ Non-PSAWR MEs	174,132
<b>Monthly Unit Rate</b>	<b>\$14.70</b>

Customer Class	Non-PSAWR MEs	% Allocation	Revenue Requirement
Single-Family	106,632	61.2%	\$1,566,425
Multi-Family	5,976	3.4%	\$87,787
Commercial	10,116	5.8%	\$148,604
Institutional	1,200	0.7%	\$17,628
Agriculture w/ Res	29,028	16.7%	\$426,421
Agriculture	21,180	12.2%	\$311,134
PSAWR Domestic	0	0.0%	\$0
PSAWR Commercial	0	0.0%	\$0
<b>Total</b>	<b>174,132</b>	<b>100.0%</b>	<b>\$2,558,000</b>

## SDCWA Fixed

The remaining SDCWA fixed charges of MWD Capacity, Customer Service, Infrastructure Access, and MWD Readiness-to-Serve (SDCWA Fixed) are incurred by the District based on the total number of accounts and meter equivalents regardless of the total amount of water used. Therefore, these fixed costs are spread to all customers based on meter size. The revenue requirement for SDCWA Fixed is apportioned based on meter size as represented by Total MEs as shown in Table 40.

*Table 40: FY 2024 SDCWA Fixed Monthly Unit Rate*

SDCWA Fixed Component Unit Rate	
Revenue Requirement	\$2,585,000
÷ Total MEs	190,116
<b>Monthly Unit Rate</b>	<b>\$13.60</b>

Customer Class	Total MEs	% Allocation	Revenue Requirement
Single-Family	106,632	56.1%	\$1,449,871
Multi-Family	5,976	3.1%	\$81,255
Commercial	10,116	5.3%	\$137,547
Institutional	1,200	0.6%	\$16,316
Agriculture w/ Res	29,028	15.3%	\$394,693
Agriculture	21,180	11.1%	\$287,984
PSAWR Domestic	9,792	5.2%	\$133,141
PSAWR Commercial	6,192	3.3%	\$84,192
<b>Total</b>	<b>190,116</b>	<b>100.0%</b>	<b>\$2,585,000</b>

# Rainbow Municipal Water District – *Comprehensive Cost-of-Service Rate Study*

## Account Services

Each customer incurs Account Services costs regardless of the type of land use, meter size, or total amount of water used. These costs should be spread equally across all accounts. This is achieved by multiplying the total accounts by the 12 billing periods over the fiscal year. Therefore, the revenue requirement for Account Services is apportioned based on the All Accounts to determine the monthly unit cost-of-service shown in Table 41.

*Table 41: FY 2024 Account Services Monthly Unit Rate*

Account Services Component Unit Rate	
Revenue Requirement	\$615,853
÷ All Account	105,516
<b>Monthly Unit Rate</b>	<b>\$5.84</b>

Customer Class	All Account	% Allocation	Revenue Requirement
Single-Family	74,964	71.0%	\$437,534
Multi-Family	1,464	1.4%	\$8,545
Commercial	3,120	3.0%	\$18,210
Institutional	204	0.2%	\$1,191
Agriculture w/ Res	14,304	13.6%	\$83,486
Agriculture	6,300	6.0%	\$36,770
PSAWR Domestic	3,588	3.4%	\$20,942
PSAWR Commercial	1,572	1.5%	\$9,175
<b>Total</b>	<b>105,516</b>	<b>100.0%</b>	<b>\$615,853</b>

## Meter Capacity

The Meter Capacity includes system-wide operating, system maintenance, planning, meter services, support services, reserves, and overhead. The revenue requirement for Meter Capacity is apportioned based on meter size. Larger-sized meters can generate a greater demand on the system from the amount of water flow that may pass through the meter in gpm. The revenue requirement for Meter Capacity is apportioned to meter size as represented by Total MEs as shown in Table 42.

# Rainbow Municipal Water District – Comprehensive Cost-of-Service Rate Study

Table 42: FY 2024 Meter Capacity Monthly Unit Rate

Meter Capacity Component Unit Rate	
Revenue Requirement	\$7,462,545
÷ Total MEs	190,116
<b>Monthly Unit Rate</b>	<b>\$39.26</b>

Customer Class	Total MEs	% Allocation	Revenue Requirement
Single-Family	106,632	56.1%	\$4,185,582
Multi-Family	5,976	3.1%	\$234,573
Commercial	10,116	5.3%	\$397,079
Institutional	1,200	0.6%	\$47,103
Agriculture w/ Res	29,028	15.3%	\$1,139,424
Agriculture	21,180	11.1%	\$831,370
PSAWR Domestic	9,792	5.2%	\$384,361
PSAWR Commercial	6,192	3.3%	\$243,052
<b>Total</b>	<b>190,116</b>	<b>100.0%</b>	<b>\$7,462,545</b>

## Capital Fixed

The Capital Fixed component includes expenses associated with debt. Debt payment obligations are secured by District rate revenues. Therefore, 100% of the annual debt is part of the total monthly fixed charge. The revenue requirement for Capital Fixed is apportioned based on meter size to reflect the system capacity taken by each connection. The District’s system is configured to accommodate and serve all meter sizes and demands. Therefore, the revenue requirement for Capital Fixed is apportioned to meter size as represented by Total MEs as shown in Table 43.

Table 43: FY 2024 Capital Fixed Monthly Unit Rate

Capital Fixed Component Unit Rate	
Revenue Requirement	\$3,077,000
÷ Total MEs	190,116
<b>Monthly Unit Rate</b>	<b>\$16.19</b>

Customer Class	Total MEs	% Allocation	Revenue Requirement
Single-Family	106,632	56.1%	\$1,725,824
Multi-Family	5,976	3.1%	\$96,721
Commercial	10,116	5.3%	\$163,726
Institutional	1,200	0.6%	\$19,422
Agriculture w/ Res	29,028	15.3%	\$469,814
Agriculture	21,180	11.1%	\$342,795
PSAWR Domestic	9,792	5.2%	\$158,482
PSAWR Commercial	6,192	3.3%	\$100,217
<b>Total</b>	<b>190,116</b>	<b>100.0%</b>	<b>\$3,077,000</b>

# Rainbow Municipal Water District – Comprehensive Cost-of-Service Rate Study

## Pumping Fixed

The Pumping Fixed component includes expenses associated with the District Pumping division, including staffing, equipment & building maintenance, and supplies that do not vary by usage. Therefore, the revenue requirement for Pumping Fixed is apportioned to all accounts within the seven pumping zones as represented by Annual Pumping Accounts (Table 38, Line 9) as shown in Table 44.

*Table 44: FY 2024 Pumping Fixed Monthly Unit Rate*

Pumping Fixed Component Unit Rate	
Revenue Requirement	\$135,000
÷ Pumping Accounts	16,104
<b>Monthly Unit Rate</b>	<b>\$8.39</b>

Pumping Zone	Pumping Accounts	% Allocation	Revenue Requirement
Pump Zone 1	2,172	13.5%	\$18,208
Pump Zone 2	1,332	8.3%	\$11,166
Pump Zone 3	720	4.5%	\$6,036
Pump Zone 4	5,160	32.0%	\$43,256
Pump Zone 5	4,188	26.0%	\$35,108
Pump Zone 6	1,824	11.3%	\$15,291
Pump Zone 7	708	4.4%	\$5,935
<b>Total</b>	<b>16,104</b>	<b>100.0%</b>	<b>\$135,000</b>

## Variable Cost Recovery

The remaining cost components of Purchased Water, PSAWR Credit, Delivery, and Pumping Energy make up the proposed variable rates. Proposed variable rates for each customer class are uniform.

Each customer classes variable rates are uniform and vary between non-agricultural accounts, agricultural accounts, and PSAWR accounts. Non-agricultural accounts include Single-Family, Multi-Family, Commercial, and Institutional. Agricultural and PSAWR customers' water usage may vary drastically from year-to-year based on weather, crop type, and total crop area. With agriculture's inherent usage volatility, the District is susceptible to revenue instability from their Agricultural and PSAWR customer classes. To combat this risk in revenue recovery, a portion of the variable costs allocated to these customer classes are shifted from variable recovery to fixed recovery and included as part of their monthly fixed charges. This shift in cost recovery causes higher monthly fixed charges and a lower variable rate for Agricultural and PSAWR customers. However, the total revenue requirements allocated to these customer classes do not change and maintains their proportionate cost of service. PSAWR customers also receive a variable credit from the SDCWA as part of the PSAWR program (PSAWR Credit). This PSAWR Credit is applied to their variable rates.

# Rainbow Municipal Water District – *Comprehensive Cost-of-Service Rate Study*

## Purchased Water

Purchased Water is the treated water from SDCWA. Table 45 allocates the revenue requirement of Purchased Water to each customer class based on projected usage for FY 2024, identified in Table 37, which results in the same unit rate per HCF, where one HCF is equivalent to 748 gallons of water.

*Table 45: FY 2024 Purchased Water Allocation to Customer Classes and Unit Rate*

Purchased Water Component Unit Rate	
Revenue Requirement	\$20,467,000
÷ All Usage	5,528,472
<b>Unit Rate</b>	<b>\$3.71</b>

Customer Class	All Usage (HCF)	% Allocation	Revenue Requirement
Single-Family	1,521,953	27.5%	\$5,634,434
Multi-Family	130,046	2.4%	\$481,444
Commercial	362,543	6.6%	\$1,342,173
Institutional	26,318	0.5%	\$97,432
Agriculture w/ Res	918,501	16.6%	\$3,400,390
Agriculture	1,243,086	22.5%	\$4,602,039
PSAWR Domestic	721,309	13.0%	\$2,670,364
PSAWR Commercial	604,716	10.9%	\$2,238,724
<b>Total</b>	<b>5,528,472</b>	<b>100.0%</b>	<b>\$20,467,000</b>

## PSAWR Credit

PSAWR customers receive a credit from SCDWA based on total water usage from these customers. This credit is only applied to PSAWR non-domestic water usage, which correlates to usage over 22 HCF (Table 37). Table 46 derives the unit rate for the PSAWR Credit per HCF.

# Rainbow Municipal Water District – Comprehensive Cost-of-Service Rate Study

Table 46: FY 2024 PSAWR Credit Allocation to Customer Classes and Unit Rate

PSAWR Credit Component Unit Rate	
Revenue Requirement	(\$659,000)
÷ PSAWR Usage less Domestic	1,247,089
<b>Unit Rate</b>	<b>(\$0.53)</b>

Customer Class	PSAWR Usage less Domestic (HCF)	% Allocation	Revenue Requirement	Unit Rate (HCF)
Single-Family	0	0.0%	\$0	\$0.00
Multi-Family	0	0.0%	\$0	\$0.00
Commercial	0	0.0%	\$0	\$0.00
Institutional	0	0.0%	\$0	\$0.00
Agriculture w/ Res	0	0.0%	\$0	\$0.00
Agriculture	0	0.0%	\$0	\$0.00
PSAWR Domestic	642,373	51.5%	(\$339,450)	(\$0.53)
PSAWR Commercial	604,716	48.5%	(\$319,550)	(\$0.53)
<b>Total</b>	<b>1,247,089</b>	<b>100.0%</b>	<b>(\$659,000)</b>	

## Delivery

Conveyance costs are incurred based on the total volume of water produced and delivered to customers throughout the year. Therefore, the revenue requirement for Delivery is apportioned based on projected total water usage. Table 47 shows the total cost allocated to each customer class and corresponding unit rate. Agricultural and PSAWR Delivery components are reapportioned between fixed and variable within the next section, *but the total revenue recovery from these customer classes does not change.*

Table 47: FY 2024 Delivery Allocation to Customer Classes and Unit Rate

Delivery Component Unit Rate	
Revenue Requirement	\$10,029,602
÷ All Usage	5,528,472
<b>Unit Rate</b>	<b>\$1.82</b>

Customer Class	All Usage (HCF)	% Allocation	Revenue Requirement	Unit Rate (HCF)
Single-Family	1,521,953	27.5%	\$2,761,085	\$1.82
Multi-Family	130,046	2.4%	\$235,926	\$1.82
Commercial	362,543	6.6%	\$657,716	\$1.82
Institutional	26,318	0.5%	\$47,745	\$1.82
Agriculture w/ Res	918,501	16.6%	\$1,666,319	Reapportioned
Agriculture	1,243,086	22.5%	\$2,255,173	Reapportioned
PSAWR Domestic	721,309	13.0%	\$1,308,579	Reapportioned
PSAWR Commercial	604,716	10.9%	\$1,097,059	Reapportioned
<b>Total</b>	<b>5,528,472</b>	<b>100.0%</b>	<b>\$10,029,602</b>	

## Pumping Energy

Pumping Energy costs are associated with pumping water to higher elevations within the District's service area. FY 2022 actual SDG&E costs for each pumping zone were used for allocating the projected FY 2024 revenue requirement. The revenue requirements for each pumping zone are then divided by the pumping zone's usage to derive updated unit rates. Table 48 derives the unit rate per HCF for each Pumping Zone.

# Rainbow Municipal Water District – Comprehensive Cost-of-Service Rate Study

Table 48: FY 2024 Power Allocation to Pumping Zones and Unit Rate

Pumping Energy Component Unit Rate	
Revenue Requirement	\$830,000
÷ Pumping Usage	924,894
<b>Unit Rate</b>	<b>Futher Allocated</b>

Pumping Zone	Zone Description	Pumping Usage [A]	SDG&E FY 2022 Costs [B]	% Allocation [C] = B as %	Revenue Requirement [D] = RR x C	Unit Rate [E] = D ÷ A
Pump Zone 1	Rainbow Heights	183,452	\$418,508	57.3%	\$475,599	\$2.60
Pump Zone 2	Improvement District U-1	38,945	\$47,569	6.5%	\$54,058	\$1.39
Pump Zone 3	Vallecitos	67,006	\$15,064	2.1%	\$17,119	\$0.26
Pump Zone 4	Northside	363,390	\$40,968	5.6%	\$46,557	\$0.13
Pump Zone 5	Morro Tank	128,436	\$38,801	5.3%	\$44,094	\$0.35
Pump Zone 6	Huntley	131,538	\$161,891	22.2%	\$183,975	\$1.40
Pump Zone 7	Magee Tank	12,127	\$7,567	1.0%	\$8,599	\$0.71
<b>Total</b>		<b>924,894</b>	<b>\$730,367</b>	<b>100.0%</b>	<b>\$830,000</b>	

## Reapportionment of Agricultural Delivery Cost to Fixed

With all the revenue requirements fully allocated to customer classes and corresponding accounts, each customer class is recovering its proportionate share based on the cost of providing service. As such, reapportioning a percentage of Agricultural and PSAWR Delivery costs to those customer’s fixed charges does not change the amount of total cost recovered from Agricultural customers. The reapportionment is driven by District policy to mitigate revenue volatility within its agricultural classes. Based on discussions with District staff, 55% of Delivery will be recovered as a fixed component and spread over Agricultural and PSAWR MEs (Table 36). Table 49 identifies the Delivery amount reapportioned to fixed and derives the net Delivery unit rate per HCF. Table 50 derives the Delivery fixed component that will be added to the fixed charges calculated within the Rate Design.

Table 49: Reapportionment of Delivery to Fixed and Delivery Unit Rate

Customer Class	Projected Usage [A]	Delivery Revenue Requirement [B] = Table 47	\$ to Fixed Recovery [C] = B x 55%	Remaining Delivery Requirement [D] = B - C	Delivery Unit Rate [E] = D ÷ A
Agriculture w/ Res	918,501	\$1,666,319	\$916,476	\$749,844	\$0.82
Agriculture	1,243,086	\$2,255,173	\$1,240,345	\$1,014,828	\$0.82
PSAWR Domestic	721,309	\$1,308,579	\$719,718	\$588,861	\$0.82
PSAWR Commercial	604,716	\$1,097,059	\$603,383	\$493,677	\$0.82
<b>Total</b>	<b>3,487,612</b>	<b>\$6,327,130</b>	<b>\$3,479,922</b>	<b>\$2,847,209</b>	

Table 50: FY 2024 Agricultural and PSAWR Delivery Fixed Unit Rate

<b>Agriculture Delivery Fixed Component</b>	
Revenue Requirement	\$3,479,922
÷ Agriculture MEs	66,192
<b>Monthly Unit Rate</b>	<b>\$52.58</b>



## FY 2024 Water Cost-of-Service Rates

### Proposed FY 2024 Monthly Fixed Charges

Table 51 reflects the combined charges of the District's proposed FY 2024 fixed charge by meter size for each customer class.

Table 51: FY 2024 Monthly Water Fixed Charges by Customer Class and Meter Size

Fixed Charges (\$/Month)								
Meter Size	AWWA Capacity Ratio	Emergency Storage & Supply Reliability	SDCWA Fixed	Account Services	Meter Capacity	Capital Fixed	Agriculture Delivery Fixed Component	Proposed Fixed Charge
	[A]	[B] = A x \$14.70	[C] = A x \$13.60	[D] = \$5.84	[E] = A x \$39.26	[F] = A x \$16.19	[G] = A x \$52.58	[H] = A+B+C+D+E+F+G
<b>Single-Family, Multi-Family, Commercial, Institutional</b>								
≤ 3/4"	1.00	\$14.70	\$13.60	\$5.84	\$39.26	\$16.19	N/A	\$89.59
1"	1.67	\$24.50	\$22.67	\$5.84	\$65.43	\$26.98	N/A	\$145.42
1 1/2"	3.33	\$49.00	\$45.33	\$5.84	\$130.87	\$53.97	N/A	\$285.01
2"	5.33	\$78.40	\$72.53	\$5.84	\$209.39	\$86.35	N/A	\$452.51
3"	11.67	\$171.50	\$158.67	\$5.84	\$458.03	\$188.88	N/A	\$982.92
4"	21.00	\$308.70	\$285.60	\$5.84	\$824.46	\$339.99	N/A	\$1,764.59
6"	43.33	\$637.00	\$589.33	\$5.84	\$1,701.27	\$701.57	N/A	\$3,635.01
<b>Agriculture w/ Residence, Agriculture</b>								
≤ 3/4"	1.00	\$14.70	\$13.60	\$5.84	\$39.26	\$16.19	\$52.58	\$142.17
1"	1.67	\$24.50	\$22.67	\$5.84	\$65.43	\$26.98	\$87.63	\$233.06
1 1/2"	3.33	\$49.00	\$45.33	\$5.84	\$130.87	\$53.97	\$175.27	\$460.27
2"	5.33	\$78.40	\$72.53	\$5.84	\$209.39	\$86.35	\$280.43	\$732.93
3"	11.67	\$171.50	\$158.67	\$5.84	\$458.03	\$188.88	\$613.43	\$1,596.36
4"	21.00	\$308.70	\$285.60	\$5.84	\$824.46	\$339.99	\$1,104.18	\$2,868.77
6"	43.33	\$637.00	\$589.33	\$5.84	\$1,701.27	\$701.57	\$2,278.47	\$5,913.47
<b>PSAWR Domestic, PSAWR Commercial</b>								
≤ 3/4"	1.00	N/A	\$13.60	\$5.84	\$39.26	\$16.19	\$52.58	\$127.47
1"	1.67	N/A	\$22.67	\$5.84	\$65.43	\$26.98	\$87.63	\$208.56
1 1/2"	3.33	N/A	\$45.33	\$5.84	\$130.87	\$53.97	\$175.27	\$411.27
2"	5.33	N/A	\$72.53	\$5.84	\$209.39	\$86.35	\$280.43	\$654.53
3"	11.67	N/A	\$158.67	\$5.84	\$458.03	\$188.88	\$613.43	\$1,424.86
4"	21.00	N/A	\$285.60	\$5.84	\$824.46	\$339.99	\$1,104.18	\$2,560.07
6"	43.33	N/A	\$589.33	\$5.84	\$1,701.27	\$701.57	\$2,278.47	\$5,276.47

# Rainbow Municipal Water District – Comprehensive Cost-of-Service Rate Study

## Proposed FY 2024 Variable Rates

Table 52 provides the combined charges of the District's proposed FY 2024 variable rates for each customer class.

Table 52: FY 2024 Variable Water Rates by Customer Class per HCF

Variable Rates (\$/HCF)				
Customer Class	Purchased Water [A]	PSAWR Credit [B]	Delivery [C]	Proposed Variable Rate [D] = A+B+C
Single-Family	\$3.71	-	\$1.82	\$5.53
Multi-Family	\$3.71	-	\$1.82	\$5.53
Commercial	\$3.71	-	\$1.82	\$5.53
Institutional	\$3.71	-	\$1.82	\$5.53
Agriculture w/ Res	\$3.71	-	\$0.82	\$4.53
Agriculture	\$3.71	-	\$0.82	\$4.53
PSAWR Domestic				
Tier 1	\$3.71	-	\$0.82	\$4.53
Tier 2	\$3.71	(\$0.53)	\$0.82	\$4.00
PSAWR Commercial	\$3.71	(\$0.53)	\$0.82	\$4.00

## Proposed FY 2024 Pumping Charges and Pumping Rates

Table 53 provides the FY 2024 pumping fixed charges and pumping rates.

Table 53: FY 2024 Proposed Water Pumping Charges and Pumping Rates

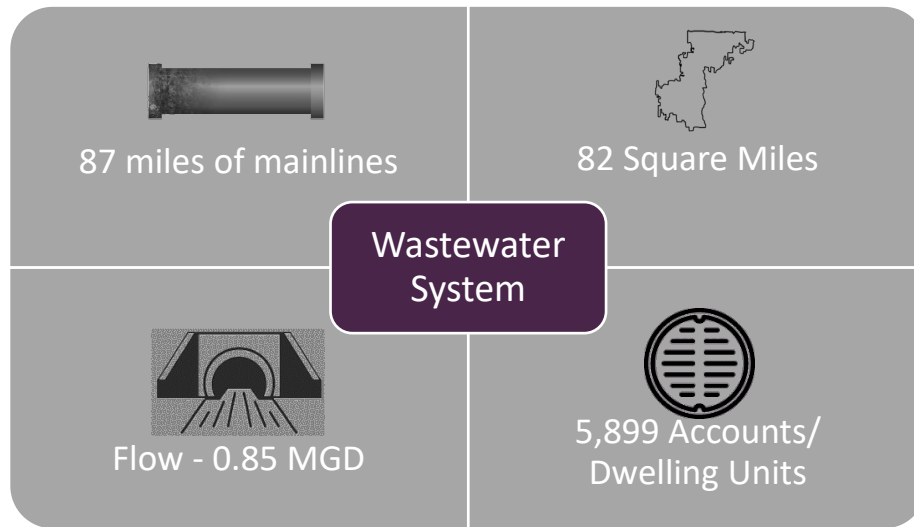
Pumping Zone Charges		
Pumping Zone	Zone Description	Proposed Pump Charges & Rates
<b>Fixed (\$/Month)</b>		
All Zones		\$8.39
<b>Variable (\$/HCF)</b>		
Pump Zone 1	Rainbow Heights	\$2.60
Pump Zone 2	improvement District	\$1.39
Pump Zone 3	Vallecitos	\$0.26
Pump Zone 4	Northside	\$0.13
Pump Zone 5	Morro Tank	\$0.35
Pump Zone 6	Huntley	\$1.40
Pump Zone 7	Magee Tank	\$0.71

## Wastewater Utility

### Wastewater System

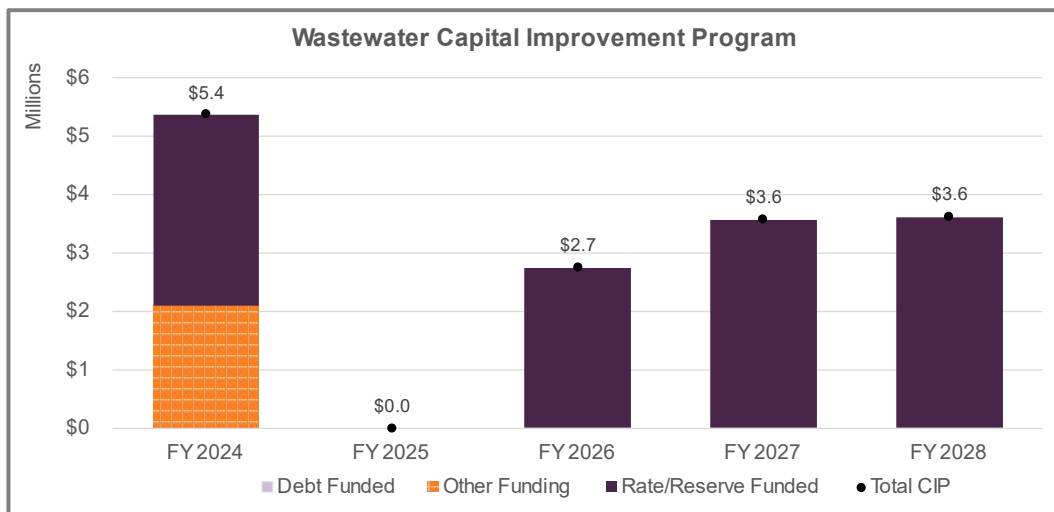
The District owns and operates a wastewater collection system and conveys its wastewater influent to Oceanside for treatment and discharge.

Figure 14: Wastewater System



The District has a significant amount of capital needs over the Rate Setting Period, including the completion of the Thoroughbred Lane Lift Station and Pipeline Repair project that started in FY 2023 for a total cost exceeding \$16.5M. The remaining amount to complete the project in FY 2024 is estimated at \$5M. In addition, the total amount of capital spending planned during the Rate Setting Period equals approximately \$15.3M. Figure 15 shows the District’s CIP through FY 2028 with current funding sources.

Figure 15: Wastewater Capital Improvement Plan



## Customers

The District charges its wastewater user fees on an Equivalent Dwelling Unit (EDU) basis, where 1 EDU represents one single-family residential unit. EDUs are then assigned to other non-residential accounts based on the demand the account places on the system in relation to a single-family residence. At the start of FY 2023, the District had 5,899 active EDUs, which includes total residential dwelling units and commercial accounts. Table 54 provides a summary of billable units by customer class.

Table 54: Wastewater Accounts and EDUs by Customer Class

Account Information				
Customer Class	Accounts	EDU's	Annual Bills	Annual EDU's
	[A]	[B]	[C] = A x 12	[D] = B x 12
Single-Family	3,109	3,554	37,308	42,648
Multi-Family	102	1,860	1,224	22,320
Res - WW Only	6	7	72	84
Commercial	24	175	288	2,100
Commercial w/ Irrigation	19	303	228	3,636
<b>Total</b>	<b>3,260</b>	<b>5,899</b>	<b>39,120</b>	<b>70,788</b>

The current wastewater rate structure consists of monthly fixed charges per EDU, which includes accounts and additional dwelling units. The rates are shown in Table 55.

Table 55: Existing Wastewater Monthly Fixed Charges

Wastewater Charges (\$/Month/EDU)	
Customer Class	Existing Charges (\$/EDU)
Single-Family	\$55.07
Multi-Family	\$40.51
Residential - WW Only	\$54.40
Commercial	\$40.51
Commercial w/ Irrigation	\$40.51

## Financial Plan Overview - Wastewater Utility

### Financial Planning Assumptions

Developing a long-term financial plan requires understanding the utility's financial position by evaluating existing revenue streams, ongoing expenses, how those expenses will change over time, new strategic objectives, and reserve policies. These considerations require certain assumptions for projecting revenues, expenses, and expected ending fund balances. Table 56 identifies assumptions used for forecasting revenues and Table 57 identifies assumptions used for forecasting increases in expenses through the Rate Setting Period.

Table 56: Wastewater Assumptions for Forecasting Revenues

Revenue Forecasting					
Key Assumptions	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Revenue Escalation					
Non-Rate Revenues	2.0%	2.0%	2.0%	2.0%	2.0%
Reserve Interest	1.5%	1.5%	1.5%	1.5%	1.5%
Account Growth	0.0%	0.0%	0.0%	0.0%	0.0%
Customer EDU's	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Single-Family	3,554	3,554	3,554	3,554	3,554
Multi-Family	1,860	1,860	1,860	1,860	1,860
Res - WW Only	7	7	7	7	7
Commercial	175	175	175	175	175
Commercial w/ Irrigation	303	303	303	303	303
<b>Total Customer EDU's</b>	<b>5,899</b>	<b>5,899</b>	<b>5,899</b>	<b>5,899</b>	<b>5,899</b>

Table 57: Wastewater Assumptions for Forecasting Expense Requirements<sup>5</sup>

Expenditure Forecasting						
Key Assumptions	Source:	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Expenditure Escalation						
Benefits		3.00%	3.00%	3.00%	3.00%	3.00%
Capital	ENR 20-City	7.20%	7.20%	3.93%	3.93%	3.93%
Energy Costs		5.00%	5.00%	5.00%	5.00%	5.00%
General Costs	CPI - SD (CA DIR)	7.71%	7.71%	4.03%	4.03%	4.03%
Retirement		5.00%	5.00%	5.00%	5.00%	5.00%
Salaries		6.00%	6.00%	6.00%	6.00%	6.00%
Treatment		6.00%	6.00%	6.00%	6.00%	6.00%

<sup>5</sup> Capital Construction inflation and General Costs for FY 2024 and FY 2025 were increased to 7.20% and 7.71%, respectively to account for the most recent annual increase due to inflation. Outer years reduce to 3.93% and 4.03%, reflecting the 5-year average of the Engineer's News Record – CCI index and the SD Consumer Price Index, respectively.

# Rainbow Municipal Water District – Comprehensive Cost-of-Service Rate Study

## Current Financial Position

### Revenues

Based on the forecasting assumptions, revenues were calculated using EDUs (Table 56) and existing wastewater rates (Table 55). Table 58 shows the calculated revenues through the Rate Setting Period. Table 59 summarizes calculated rate revenues (rounded to thousands) and other non-rate revenues available through the Rate Setting Period.

Table 58: Wastewater Calculated Rate Revenues

Calculated Rate Revenue					
Fixed Revenues	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Single-Family	\$2,348,625	\$2,348,625	\$2,348,625	\$2,348,625	\$2,348,625
Multi-Family	\$904,183	\$904,183	\$904,183	\$904,183	\$904,183
Res - WW Only	\$4,570	\$4,570	\$4,570	\$4,570	\$4,570
Commercial	\$85,071	\$85,071	\$85,071	\$85,071	\$85,071
Commercial w/ Irrigation	\$147,294	\$147,294	\$147,294	\$147,294	\$147,294
<b>Total Fixed Charges</b>	<b>\$3,489,744</b>	<b>\$3,489,744</b>	<b>\$3,489,744</b>	<b>\$3,489,744</b>	<b>\$3,489,744</b>

Table 59: Wastewater Projected Revenues

Projected Wastewater Revenues					
Revenue Summary	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>District Rate Revenue</b>					
Fixed Charges	\$3,490,000	\$3,490,000	\$3,490,000	\$3,490,000	\$3,490,000
Subtotal District Rate Revenue	\$3,490,000	\$3,490,000	\$3,490,000	\$3,490,000	\$3,490,000
<b>Operating Revenues</b>					
Sewer Letter Fee	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
Plan Check/Inspection Fees	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
Misc Revenue	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
Subtotal Operating Revenues	\$11,000	\$11,000	\$11,000	\$11,000	\$11,000
<b>Other Revenues</b>					
Property Tax	\$56,000	\$57,000	\$58,000	\$60,000	\$61,000
Subtotal Other Revenues	\$56,000	\$57,000	\$58,000	\$60,000	\$61,000
<b>Total Revenues</b>	<b>\$3,557,000</b>	<b>\$3,558,000</b>	<b>\$3,559,000</b>	<b>\$3,561,000</b>	<b>\$3,562,000</b>

# Rainbow Municipal Water District – Comprehensive Cost-of-Service Rate Study

## Expenses

The FY 2023 budget was used as the utility's baseline expenses and adjusted over the Rate Setting Period based on the escalation factors shown in Table 57. Table 60 provides projected O&M expenses through the Rate Setting Period (rounded to thousands). Each expense category includes detailed line-item expenditures that were discussed with staff to determine the appropriate escalation factor to use for forecasting how costs will increase over time.

Table 60: Wastewater Projected O&M Expenses

<b>Projected Operating &amp; Maintenance Expenses</b>					
<b>O&amp;M Summary</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
<b>Treatment Expenses</b>					
Treatment	\$1,590,000	\$1,686,000	\$1,787,000	\$1,894,000	\$2,008,000
<b>Subtotal Treatment Expenses</b>	<b>\$1,590,000</b>	<b>\$1,686,000</b>	<b>\$1,787,000</b>	<b>\$1,894,000</b>	<b>\$2,008,000</b>
<b>District Operating Expenses</b>					
Payroll Expense	\$716,000	\$754,000	\$795,000	\$837,000	\$883,000
Maintenance & Supply	\$570,000	\$610,000	\$635,000	\$661,000	\$689,000
Overhead	\$1,375,000	\$1,455,000	\$1,540,000	\$1,630,000	\$1,725,000
Finance and Customer Service	\$329,000	\$349,000	\$370,000	\$392,000	\$416,000
Placeholder	\$0	\$0	\$0	\$0	\$0
<b>District Operating Expenses</b>	<b>\$2,990,000</b>	<b>\$3,168,000</b>	<b>\$3,340,000</b>	<b>\$3,520,000</b>	<b>\$3,713,000</b>
<b>Total Expenses</b>	<b>\$4,580,000</b>	<b>\$4,854,000</b>	<b>\$5,127,000</b>	<b>\$5,414,000</b>	<b>\$5,721,000</b>

## Reserves

The wastewater utility reserves include Operating and Capital Projects. Similar to the water utility, these reserves help mitigate risks to the utility by ensuring sufficient cash is on hand for daily operations and to fund annual system improvements, including unforeseen system failures. Table 61 summarizes the minimum reserve requirements and the ideal funding targets of each reserve.

*Table 61: Wastewater Reserve Requirements and Targets*

Reserve	Minimum Requirement	Reserve Target
Operating	60 days of operating costs	90 days of operating costs
Capital Projects	1-year of CIP based on 5-year average	2-years of CIP based on 5-year average

The reserve balance as of July 1, 2022, equaled approximately \$1.6M.

## Financial Outlook at Existing Rates

Calculating revenue using existing rates and projecting expenses helps determine the current financial health of the utility. Revenue from current rates is not sufficient to cover operating expenses and is projected to generate an operating deficit of \$1M for FY 2024, which is projected to increase to \$2.1M by FY 2028. As such, there is currently no annual funding available for capital spending and the District would need to use reserves to cover the operating deficit. Table 62 forecasts existing revenues and expenses through the Rate Setting Period. Table 63 identifies reserve transfers and reserve activity, with projected FY 2024 starting reserve balances shown for each reserve.



# Rainbow Municipal Water District – Comprehensive Cost-of-Service Rate Study

Table 62: Wastewater Financial Plan at Existing Rates

<b>Wastewater Financial Plan at Existing Rates</b>						
Revenue		FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>District Rate Revenue</b>						
Fixed Charges	<b>Table 58</b>	\$3,490,000	\$3,490,000	\$3,490,000	\$3,490,000	\$3,490,000
<b>Total District Rate Revenue</b>		<b>\$3,490,000</b>	<b>\$3,490,000</b>	<b>\$3,490,000</b>	<b>\$3,490,000</b>	<b>\$3,490,000</b>
<b>Operating Revenues</b>						
Sewer Letter Fee		\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
Plan Check/Inspection Fees	<b>Table 58</b>	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
Misc Revenue		\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
<b>Subtotal Operating Revenues</b>		<b>\$11,000</b>	<b>\$11,000</b>	<b>\$11,000</b>	<b>\$11,000</b>	<b>\$11,000</b>
<b>Other Revenues</b>						
Property Tax	<b>Table 58</b>	\$56,000	\$57,000	\$58,000	\$60,000	\$61,000
<b>Subtotal Other Revenues</b>		<b>\$56,000</b>	<b>\$57,000</b>	<b>\$58,000</b>	<b>\$60,000</b>	<b>\$61,000</b>
<b>Total Revenues</b>		<b>\$3,557,000</b>	<b>\$3,558,000</b>	<b>\$3,559,000</b>	<b>\$3,561,000</b>	<b>\$3,562,000</b>
<b>O&amp;M Expenses</b>						
		FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Treatment Expenses</b>						
Treatment	<b>Table 59</b>	\$1,590,000	\$1,686,000	\$1,787,000	\$1,894,000	\$2,008,000
<b>Subtotal Treatment Expenses</b>		<b>\$1,590,000</b>	<b>\$1,686,000</b>	<b>\$1,787,000</b>	<b>\$1,894,000</b>	<b>\$2,008,000</b>
<b>District Operating Expenses</b>						
Payroll Expense		\$716,000	\$754,000	\$795,000	\$837,000	\$883,000
Maintenance & Supply	<b>Table 59</b>	\$570,000	\$610,000	\$635,000	\$661,000	\$689,000
Overhead		\$1,375,000	\$1,455,000	\$1,540,000	\$1,630,000	\$1,725,000
Finance and Customer Service		\$329,000	\$349,000	\$370,000	\$392,000	\$416,000
<b>District Operating Expenses</b>		<b>\$2,990,000</b>	<b>\$3,168,000</b>	<b>\$3,340,000</b>	<b>\$3,520,000</b>	<b>\$3,713,000</b>
<b>Debt Service</b>						
New/Proposed Debt		\$0	\$0	\$0	\$0	\$0
<b>Subtotal Debt Service</b>		<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>Total Expenses</b>		<b>\$4,580,000</b>	<b>\$4,854,000</b>	<b>\$5,127,000</b>	<b>\$5,414,000</b>	<b>\$5,721,000</b>
<b>Net Cashflow (Revenue - Expenses)</b>		<b>(\$1,023,000)</b>	<b>(\$1,296,000)</b>	<b>(\$1,568,000)</b>	<b>(\$1,853,000)</b>	<b>(\$2,159,000)</b>

# Rainbow Municipal Water District – Comprehensive Cost-of-Service Rate Study

Table 63: Wastewater – Transfers and Reserve Activity at Existing Rates

<b>Wastewater Reserve Activity</b>					
<b>Operating Fund</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
Beginning Balance	\$229,626	(\$793,374)	(\$2,089,374)	(\$3,657,374)	(\$5,510,374)
Transfers (Net Cashflow)	(\$1,023,000)	(\$1,296,000)	(\$1,568,000)	(\$1,853,000)	(\$2,159,000)
<b>Ending Balance</b>	<b>(\$793,374)</b>	<b>(\$2,089,374)</b>	<b>(\$3,657,374)</b>	<b>(\$5,510,374)</b>	<b>(\$7,669,374)</b>

<b>Capital (R&amp;R &amp; Exp)</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
Beginning Balance	\$2,739,622	(\$2,620,553)	(\$2,620,553)	(\$5,367,822)	(\$8,936,985)
Less:					
CIP	(\$5,360,175)	\$0	(\$2,747,268)	(\$3,569,164)	(\$3,612,784)
Subtotal Capital (R&R & Exp)	(\$2,620,553)	(\$2,620,553)	(\$5,367,822)	(\$8,936,985)	(\$12,549,770)
Interest Earnings	\$0	\$0	\$0	\$0	\$0
<b>Ending Balance</b>	<b>(\$2,620,553)</b>	<b>(\$2,620,553)</b>	<b>(\$5,367,822)</b>	<b>(\$8,936,985)</b>	<b>(\$12,549,770)</b>

<b>Total Reserves - Ending Balance</b>	<b>(\$3,413,927)</b>	<b>(\$4,709,927)</b>	<b>(\$9,025,196)</b>	<b>(\$14,447,359)</b>	<b>(\$20,219,144)</b>
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Figure 16 illustrates the operating position of the utility, where O&M expenses are identified with the dashed red trendline, and the horizontal black trendline shows total revenues at existing rates. The bars represent the amount of net operating income available. Figure 17 reflects the projected ending balances of reserves after funding operating and capital projects through the Rate Setting Period.

Figure 16: Wastewater Current Operating Financial Position

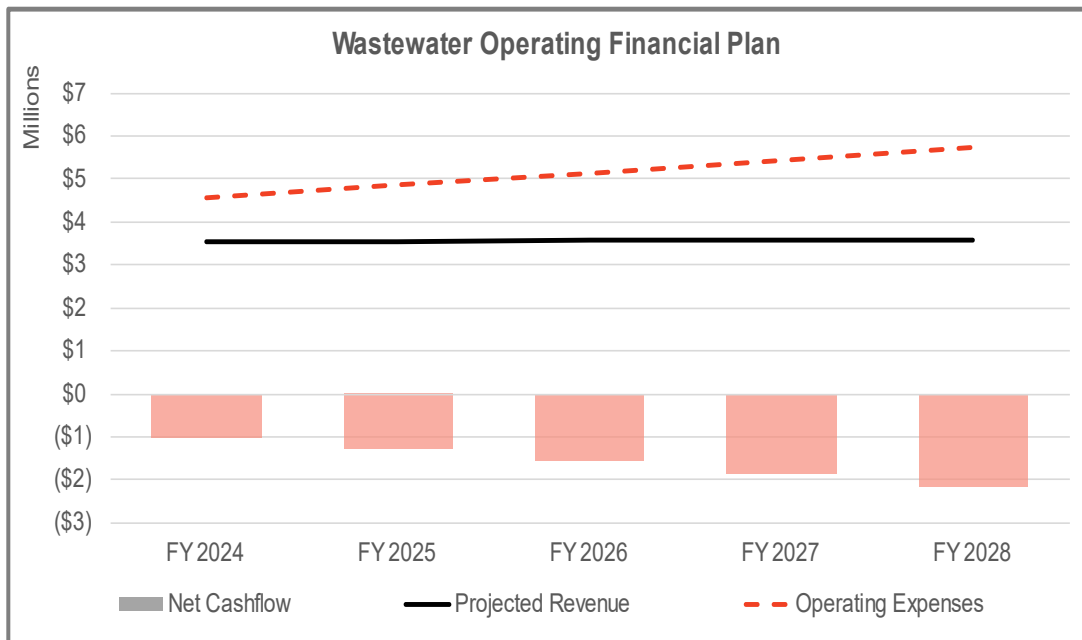
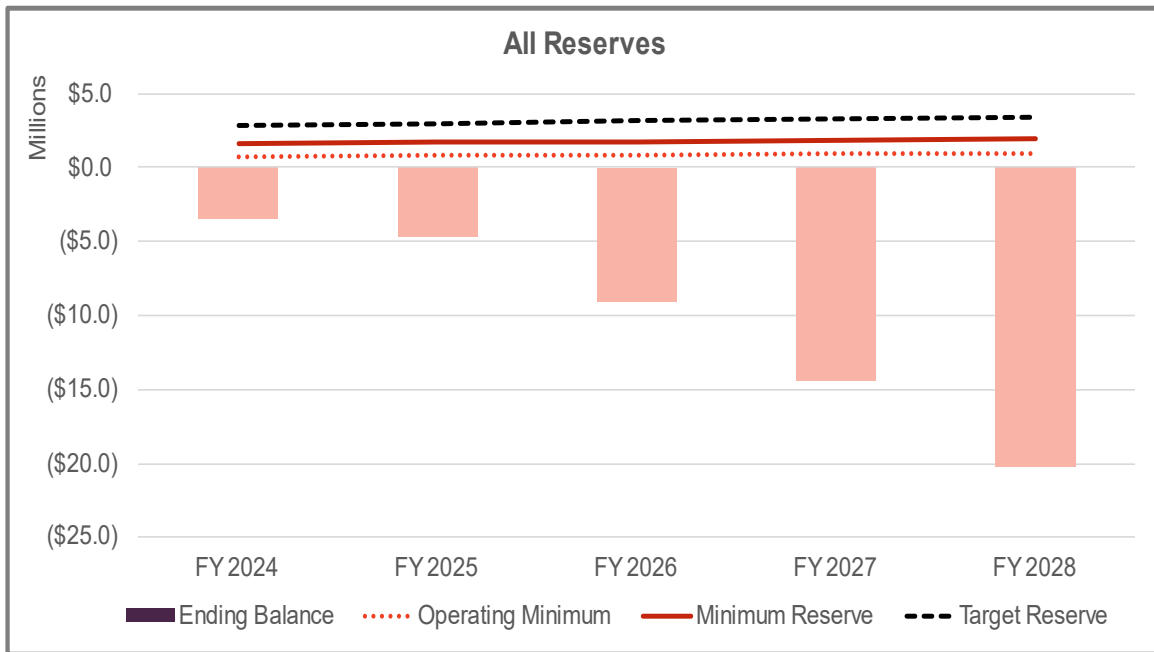


Figure 17: Wastewater Projected Ending Reserves at Existing Rates



## Proposed Financial Plan – Wastewater Utility

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From the financial outlook at existing rates, a proposed financial plan can be developed to adequately fund the multi-year revenue requirements, while meeting reserve requirements. The proposed financial plan generates approximately \$13.1M in additional revenue over the Rate Setting Period. The additional revenue will consistently generate a positive net operating position commencing in FY 2027 to go towards capital spending and building up reserves. In the interim, the District expects to secure a \$5M loan in FY 2024 to cover its capital needs as rate revenue increases are phased in over the next 5 years. In addition, a proposed debt issue of \$9.5M is anticipated in FY 2026, which would be secured by the proposed rates. ***However, if the District does not secure the \$5M loan, current planned capital projects could not be funded and the proposed rates, herein, would not be sufficient on their own to cover the CIP through PAYGO.***

Table 64 forecasts projected revenues, with annual revenue adjustments, and expenses through FY 2028. Table 65 identifies the projected FY 2024 total starting reserve balances, activity within each reserve (including net income transfer from Table 64, transfers between reserves, and annual CIP), and projected ending balances for each fiscal year of the Rate Setting Period.

# Rainbow Municipal Water District – Comprehensive Cost-of-Service Rate Study

Table 64: Proposed Wastewater Financial Plan

<b>Wastewater Financial Plan at Existing Rates</b>						
Revenue		FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>District Rate Revenue</b>						
Fixed Charges	Table 58	\$3,490,000	\$3,490,000	\$3,490,000	\$3,490,000	\$3,490,000
<b>Total District Rate Revenue</b>		<b>\$3,490,000</b>	<b>\$3,490,000</b>	<b>\$3,490,000</b>	<b>\$3,490,000</b>	<b>\$3,490,000</b>
<b>Additional Revenue (from revenue adjustments):</b>						
Fiscal Year	Revenue Adjustment					
FY 2024	35.0%	\$1,221,000	\$1,221,000	\$1,221,000	\$1,221,000	\$1,221,000
FY 2025	13.0%		\$612,000	\$612,000	\$612,000	\$612,000
FY 2026	13.0%			\$691,000	\$691,000	\$691,000
FY 2027	13.0%				\$781,000	\$781,000
FY 2028	13.0%					\$883,000
<b>Total Additional Revenue</b>		<b>\$1,221,000</b>	<b>\$1,833,000</b>	<b>\$2,524,000</b>	<b>\$3,305,000</b>	<b>\$4,188,000</b>
<b>Total Projected Rate Revenues</b>		<b>\$4,711,000</b>	<b>\$5,323,000</b>	<b>\$6,014,000</b>	<b>\$6,795,000</b>	<b>\$7,678,000</b>
<b>Operating Revenues</b>						
Sewer-Oak Crest Service Charges		\$0	\$0	\$0	\$0	\$0
Sewer Letter Fee	Table 58	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
Plan Check/Inspection Fees		\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
Misc Revenue		\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
<b>Subtotal Operating Revenues</b>		<b>\$11,000</b>	<b>\$11,000</b>	<b>\$11,000</b>	<b>\$11,000</b>	<b>\$11,000</b>
<b>Other Revenues</b>						
Property Tax	Table 58	\$56,000	\$57,000	\$58,000	\$60,000	\$61,000
<b>Subtotal Other Revenues</b>		<b>\$56,000</b>	<b>\$57,000</b>	<b>\$58,000</b>	<b>\$60,000</b>	<b>\$61,000</b>
<b>Total Revenues</b>		<b>\$4,778,000</b>	<b>\$5,391,000</b>	<b>\$6,083,000</b>	<b>\$6,866,000</b>	<b>\$7,750,000</b>
<b>O&amp;M Expenses</b>		FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Treatment Expenses</b>						
Treatment	Table 59	\$1,590,000	\$1,686,000	\$1,787,000	\$1,894,000	\$2,008,000
<b>Subtotal Treatment Expenses</b>		<b>\$1,590,000</b>	<b>\$1,686,000</b>	<b>\$1,787,000</b>	<b>\$1,894,000</b>	<b>\$2,008,000</b>
<b>District Operating Expenses</b>						
Payroll Expense		\$716,000	\$754,000	\$795,000	\$837,000	\$883,000
Maintenance & Supply	Table 59	\$570,000	\$610,000	\$635,000	\$661,000	\$689,000
Overhead		\$1,375,000	\$1,455,000	\$1,540,000	\$1,630,000	\$1,725,000
Finance and Customer Service		\$329,000	\$349,000	\$370,000	\$392,000	\$416,000
<b>District Operating Expenses</b>		<b>\$2,990,000</b>	<b>\$3,168,000</b>	<b>\$3,340,000</b>	<b>\$3,520,000</b>	<b>\$3,713,000</b>
<b>Debt Service</b>						
New/Proposed Debt		\$369,610	\$369,610	\$1,071,870	\$1,071,870	\$1,071,870
<b>Subtotal Debt Service</b>		<b>\$369,610</b>	<b>\$369,610</b>	<b>\$1,071,870</b>	<b>\$1,071,870</b>	<b>\$1,071,870</b>
<b>Total Expenses</b>		<b>\$4,949,610</b>	<b>\$5,223,610</b>	<b>\$6,198,870</b>	<b>\$6,485,870</b>	<b>\$6,792,870</b>
<b>Net Cashflow (Revenue - Expenses)</b>		<b>(\$171,610)</b>	<b>\$167,390</b>	<b>(\$115,870)</b>	<b>\$380,130</b>	<b>\$957,130</b>

# Rainbow Municipal Water District – Comprehensive Cost-of-Service Rate Study

Table 65: Wastewater – Reserves Activity through FY 2028

Wastewater Reserve Activity					
Operating Fund	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Beginning Balance	\$229,626	\$58,016	\$225,405	\$109,535	\$489,665
Transfers (Net Cashflow)	(\$171,610)	\$167,390	(\$115,870)	\$380,130	\$957,130
Transfers to Capital (R&R & Exp)	\$0	\$0	\$0	\$0	(\$330,158)
<b>Ending Balance</b>	<b>\$58,016</b>	<b>\$225,405</b>	<b>\$109,535</b>	<b>\$489,665</b>	<b>\$1,116,636</b>
Capital (R&R & Exp)	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Beginning Balance	\$2,739,622	\$2,417,840	\$2,454,108	\$9,294,296	\$5,837,778
Plus:					
Transfers from Operating Fund	\$0	\$0	\$0	\$0	\$330,158
New Debt Proceeds	\$5,000,000	\$0	\$9,500,000	\$0	\$0
Less:					
CIP	(\$5,360,175)	\$0	(\$2,747,268)	(\$3,569,164)	(\$3,612,784)
Subtotal Capital (R&R & Exp)	\$2,379,447	\$2,417,840	\$9,206,839	\$5,725,132	\$2,555,152
Interest Earnings	\$38,393	\$36,268	\$87,457	\$112,646	\$62,947
<b>Ending Balance</b>	<b>\$2,417,840</b>	<b>\$2,454,108</b>	<b>\$9,294,296</b>	<b>\$5,837,778</b>	<b>\$2,618,099</b>
<b>Total Reserves - Ending Balance</b>	<b>\$2,475,855</b>	<b>\$2,679,513</b>	<b>\$9,403,831</b>	<b>\$6,327,443</b>	<b>\$3,734,735</b>

The operating position based on the proposed financial plan is identified in Figure 18. Figure 19 shows the capital plan with funding sources. Figure 20 identifies the ending reserve balances after funding capital expenses.

Figure 18: Wastewater Proposed Operating Position

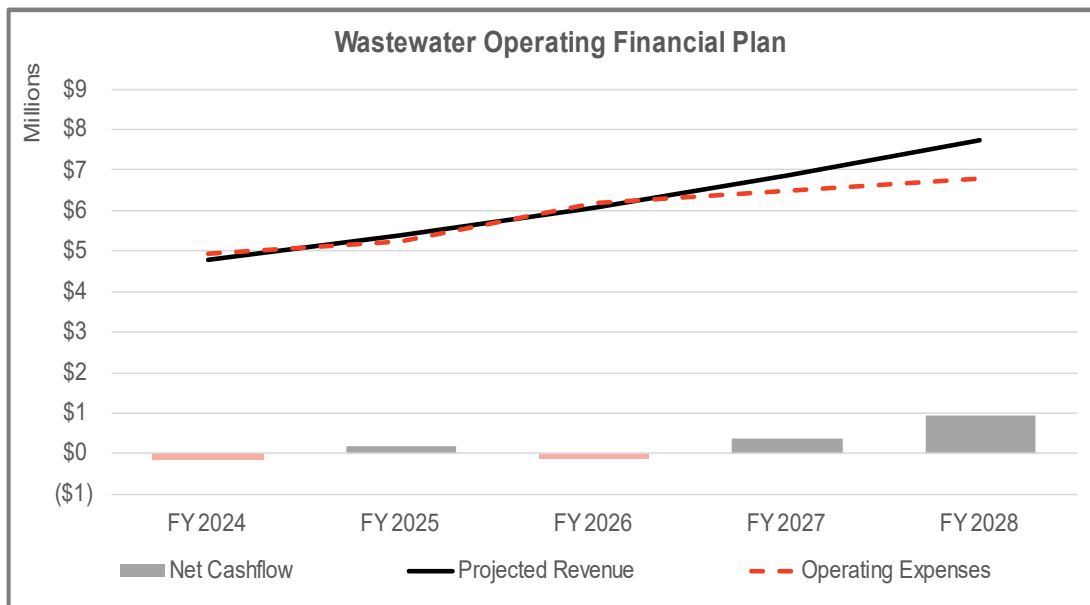


Figure 19: Wastewater Capital Improvement Plan with Funding Sources

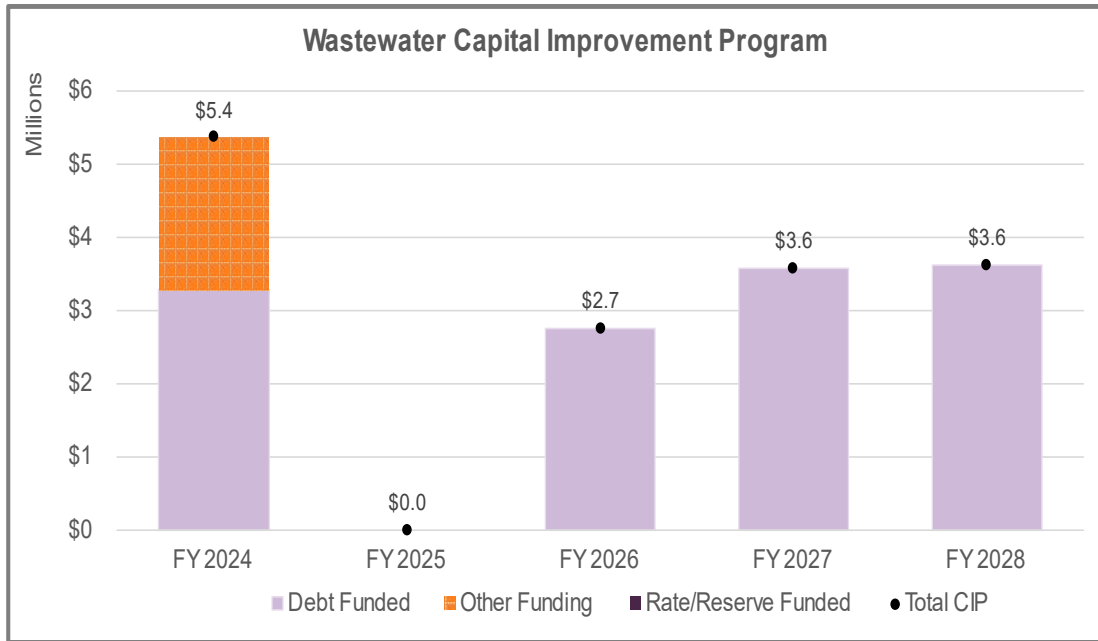
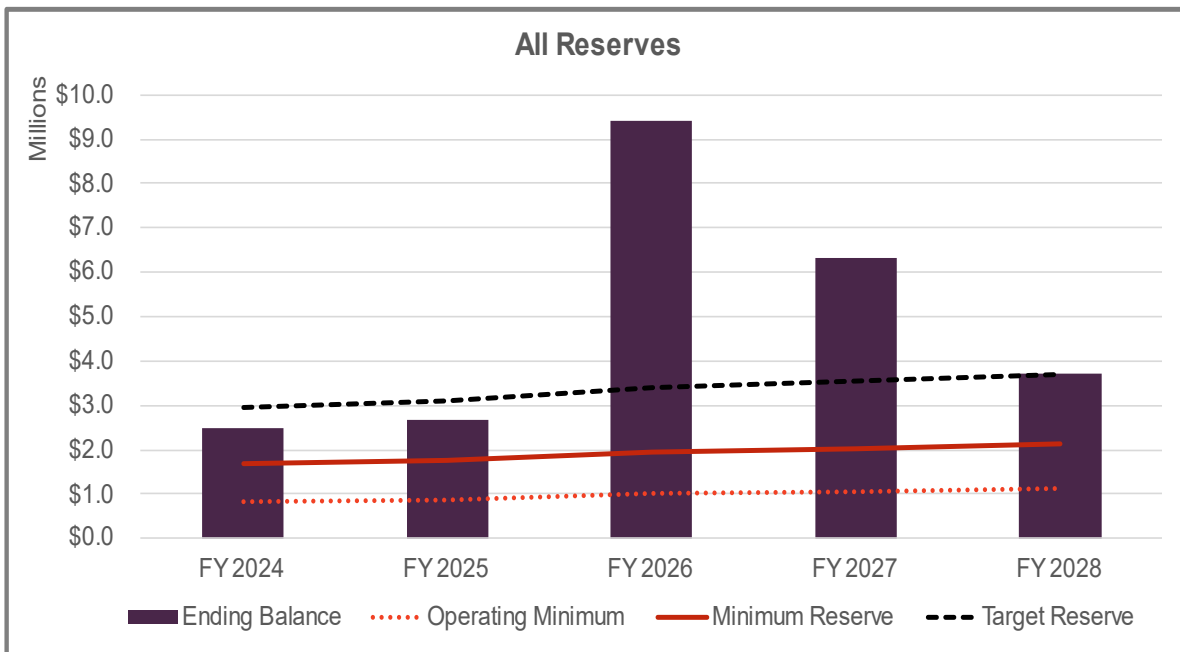


Figure 20: Wastewater Proposed Ending Reserves



## Cost of Service Analysis – Wastewater Utility

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### Cost of Service Process

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

### Revenue Requirements

FY 2024 revenue requirements were used for the cost-of-service analysis. Revenue requirements include O&M expenses, treatment expenses, available revenue offsets, non-rate revenues, and reserve funding. The proposed revenue adjustments and corresponding rates accumulate the necessary funding over the Rate Setting Period to fund O&M, capital projects, and meet minimum reserve requirements. The results of the financial plan analysis are summarized in Table 66 and represent the revenue required from rates over the Rate Setting Period.



# Rainbow Municipal Water District – *Comprehensive Cost-of-Service Rate Study*

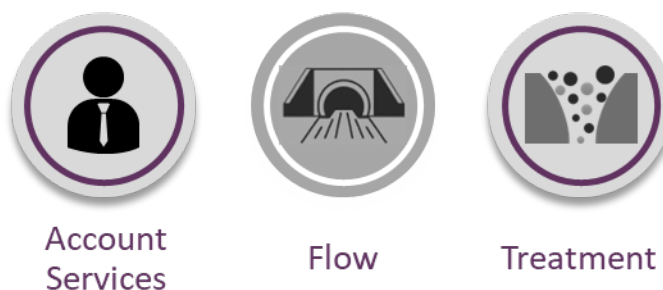
Table 66: Wastewater Revenue Requirements

Revenue Requirements					
	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Treatment Expenses</b>					
Treatment	\$1,590,000	\$1,686,000	\$1,787,000	\$1,894,000	\$2,008,000
<b>Total Treatment Expenses</b>	<b>\$1,590,000</b>	<b>\$1,686,000</b>	<b>\$1,787,000</b>	<b>\$1,894,000</b>	<b>\$2,008,000</b>
<b>District Operating Expenses</b>					
Payroll Expense	\$716,000	\$754,000	\$795,000	\$837,000	\$883,000
Maintenance & Supply	\$570,000	\$610,000	\$635,000	\$661,000	\$689,000
Overhead	\$1,375,000	\$1,455,000	\$1,540,000	\$1,630,000	\$1,725,000
Finance and Customer Service	\$329,000	\$349,000	\$370,000	\$392,000	\$416,000
<b>Total District Operating Expenses</b>	<b>\$2,990,000</b>	<b>\$3,168,000</b>	<b>\$3,340,000</b>	<b>\$3,520,000</b>	<b>\$3,713,000</b>
<b>Debt Service</b>					
New/Proposed Debt	\$369,610	\$369,610	\$1,071,870	\$1,071,870	\$1,071,870
<b>Total Debt Service</b>	<b>\$369,610</b>	<b>\$369,610</b>	<b>\$1,071,870</b>	<b>\$1,071,870</b>	<b>\$1,071,870</b>
<b>Other Funding</b>					
<i>Revenue Offsets</i>					
Sewer Letter Fee	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)
Plan Check/Inspection Fees	(\$5,000)	(\$5,000)	(\$5,000)	(\$5,000)	(\$5,000)
Misc Revenue	(\$5,000)	(\$5,000)	(\$5,000)	(\$5,000)	(\$5,000)
Other Revenues	(\$56,000)	(\$57,000)	(\$58,000)	(\$60,000)	(\$61,000)
<i>Subtotal Revenue Offsets</i>	<i>(\$67,000)</i>	<i>(\$68,000)</i>	<i>(\$69,000)</i>	<i>(\$71,000)</i>	<i>(\$72,000)</i>
<i>Adjustments</i>					
CIP / Reserve Funding	(\$171,610)	\$167,390	(\$115,870)	\$380,130	\$957,130
<i>Subtotal Adjustments</i>	<i>(\$171,610)</i>	<i>\$167,390</i>	<i>(\$115,870)</i>	<i>\$380,130</i>	<i>\$957,130</i>
<b>Total Other Funding</b>	<b>(\$238,610)</b>	<b>\$99,390</b>	<b>(\$184,870)</b>	<b>\$309,130</b>	<b>\$885,130</b>
<b>Revenue Required from Rates</b>	<b>\$4,711,000</b>	<b>\$5,323,000</b>	<b>\$6,014,000</b>	<b>\$6,795,000</b>	<b>\$7,678,000</b>

## Define Cost Components

The District's wastewater cost-of-service requirements were allocated to cost components and then to customer classes to develop cost-based rates in compliance with Proposition 218. The utility incurs costs to collect total flow from its customer classes and conveys it to Oceanside for treatment and discharge. Therefore, to determine the most appropriate way to recover the utility's expenses, cost components are identified and used to allocate expenses based on how they are incurred. Using this allocation approach, revenue requirements are allocated to the three cost components of Account Services, Collection, and Treatment, as shown in Figure 21, to derive monthly unit rates per EDU and corresponding monthly fixed charges.

Figure 21: Wastewater Cost Components



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

*Flow* – Expenses associated with the collection system.

*Treatment* – Expenses incurred at the San Luis Rey Treatment Plant and billed to the District by the City of Oceanside.

## Allocate Expenses to Cost Components

The distribution of expenses to the cost components should be straightforward to ensure the method of apportionment is **understandable** and easily **correlates to how expenses are incurred**.

Table 67 identifies the treatment expenses incurred by the District and how it is allocated to the cost components. Table 68 uses the percent allocations in Table 67 to allocate expenses in dollars to each cost component. Treatment expenses are referred to as direct pass-through charges because it has its own corresponding cost component, and they are not adjusted by revenue offsets or reserve funding. Any annual increases in treatment expenses will be captured through the pass-through provisions of Government Code section 53756.

# Rainbow Municipal Water District – Comprehensive Cost-of-Service Rate Study

Table 67: Wastewater Treatment Expense Allocation to Cost Components (%)

Treatment Expenses	Methodology / Allocation Basis	Account Services	Collection	Treatment	Total
Treatment	Treatment	0.0%	0.0%	100.0%	100%

Table 68: Wastewater Treatment Expense Allocation to Cost Components (\$)

Treatment Expenses	Methodology / Allocation Basis	Account Services	Collection	Treatment	Total
Treatment	Treatment	\$0	\$0	\$1,590,000	\$1,590,000
<b>Total Treatment Allocation (\$)</b>		<b>\$0</b>	<b>\$0</b>	<b>\$1,590,000</b>	<b>\$1,590,000</b>

Table 69 summarizes the percent allocation of Operating expenses to the cost components. Payroll Expenses and Maintenance & Supply are associated with the operating and maintaining the collection system and were allocated to the cost component of Collection. Overhead and Finance and Customer Service are services provided to every active account and allocated to Account Services. Table 70 uses the percent allocations in Table 69 to allocate expenses in dollars to each cost component.

Table 69: Wastewater O&M Expense Allocation to Cost Components (%)

District Operating Expenses	Methodology / Allocation Basis	Account Services	Collection	Treatment	Total
Payroll Expense	Collection	0.0%	100.0%	0.0%	100%
Maintenance & Supply	Collection	0.0%	100.0%	0.0%	100%
Overhead	Specific	100.0%	0.0%	0.0%	100%
Finance and Customer Service	Specific	100.0%	0.0%	0.0%	100%

Table 70: Wastewater O&M Expense Allocation to Cost Components (\$)

District Operating Expenses	Methodology / Allocation Basis	Account Services	Collection	Treatment	Total
Payroll Expense	Collection	\$0	\$716,000	\$0	\$716,000
Maintenance & Supply	Collection	\$0	\$570,000	\$0	\$570,000
Overhead	Specific	\$1,375,000	\$0	\$0	\$1,375,000
Finance and Customer Service	Specific	\$329,000	\$0	\$0	\$329,000
<b>Total O&amp;M Allocation (\$)</b>		<b>\$1,704,000</b>	<b>\$1,286,000</b>	<b>\$0</b>	<b>\$2,990,000</b>
<b>O&amp;M Allocation (%)</b>		<b>57.0%</b>	<b>43.0%</b>	<b>0.0%</b>	<b>100.0%</b>

# Rainbow Municipal Water District – *Comprehensive Cost-of-Service Rate Study*

The District's proposed debt is associated with funding improvements to the collection system. Therefore, 100% of the debt was allocated to the cost component of Collection. Table 71 identifies the percent allocation of the debt expense to the cost components, and Table 72 reflects the debt expense in dollars.

*Table 71: Wastewater Debt Allocation to Cost Components (%)*

Debt Service	Methodology / Allocation Basis	Account Services	Collection	Treatment	Total
New/Proposed Debt	Collection	0.0%	100.0%	0.0%	100%

*Table 72: Wastewater Debt Allocation to Cost Components (\$)*

Debt Service	Methodology / Allocation Basis	Account Services	Collection	Treatment	Total
New/Proposed Debt	Collection	\$0	\$369,610	\$0	\$369,610
<b>Total Debt Service Allocation (\$)</b>		<b>\$0</b>	<b>\$369,610</b>	<b>\$0</b>	<b>\$369,610</b>

# Rainbow Municipal Water District – Comprehensive Cost-of-Service Rate Study

Other Funding includes revenue offsets and reserve funding. All line items under "Other Funding" are allocated based on O&M percentages derived in Table 70 to allocate each line item to the cost components proportionately. Table 73 summarizes the percent allocation to the cost components, and Table 74 uses the percent allocations in Table 73 to Other Funding in dollars to each cost component. Table 75 summarizes the FY 2024 revenue requirement derived in Table 66 by cost component.

Table 73: Wastewater Other Funding to Cost Components (%)

Other Funding	Methodology / Allocation Basis	Account Services	Collection	Treatment	Total
<i>Revenue Offsets</i>					
Sewer Letter Fee	O&M Allocation	57.0%	43.0%	0.0%	100%
Plan Check/Inspection Fees	O&M Allocation	57.0%	43.0%	0.0%	100%
Misc Revenue	O&M Allocation	57.0%	43.0%	0.0%	100%
Other Revenues	O&M Allocation	57.0%	43.0%	0.0%	100%
<i>Adjustments</i>					
CIP / Reserve Funding	O&M Allocation	57.0%	43.0%	0.0%	100%

Table 74: Wastewater Other Funding to Cost Components (\$)

Other Funding	Methodology / Allocation Basis	Account Services	Collection	Treatment	Total
<i>Revenue Offsets</i>					
Sewer Letter Fee	O&M Allocation	(\$570)	(\$430)	\$0	(\$1,000)
Plan Check/Inspection Fees	O&M Allocation	(\$2,849)	(\$2,151)	\$0	(\$5,000)
Misc Revenue	O&M Allocation	(\$2,849)	(\$2,151)	\$0	(\$5,000)
Other Revenues	O&M Allocation	(\$31,914)	(\$24,086)	\$0	(\$56,000)
<i>Adjustments</i>					
CIP / Reserve Funding	O&M Allocation	(\$97,801)	(\$73,810)	\$0	(\$171,610)
<b>Total Other Funding Allocation (\$)</b>		<b>(\$135,984)</b>	<b>(\$102,626)</b>	<b>\$0</b>	<b>(\$238,610)</b>

Table 75: FY 2024 Wastewater Cost-of-Service Requirements by Cost Component

Revenue Requirement	Account Services	Collection	Treatment	Total
Treatment Expenses	\$0	\$0	\$1,590,000	\$1,590,000
District Operating Expenses	\$1,704,000	\$1,286,000	\$0	\$2,990,000
Debt Service	\$0	\$369,610	\$0	\$369,610
Other Funding	(\$135,984)	(\$102,626)	\$0	(\$238,610)
<b>COS Requirement</b>	<b>\$1,568,016</b>	<b>\$1,552,984</b>	<b>\$1,590,000</b>	<b>\$4,711,000</b>

## Rate Design – Wastewater Utility

### Develop Units of Service

Unit rates per EDU are derived by spreading the revenue requirements, by cost component, over total EDUs. This approach provides a clear connection between the costs incurred and the total customer demands served in EDUs, resulting in a cost-based rate structure in compliance with Proposition 218. The previous section summarized costs by expense category and then allocated to cost components based on how each cost is incurred. The next step is to derive rates in relation to their use of the system and facilities. The method of apportionment considers each customer's share of system costs and is reflected by the EDUs assigned to each account. Table 76 derives the proposed FY 2024 wastewater rates per EDU by dividing the revenue requirements in Table 75 by the annual EDUs (Table 56 times 12 billing periods).

*Table 76: FY 2024 Wastewater Monthly Fixed Charge per EDU*

FY 2024 Proposed Fixed Charge per EDU				
Revenue Requirement	Account Services [A]	Collection [B]	Treatment [C]	Total Monthly Charge [D] = A + B + C
Revenue Requirement	\$1,568,016	\$1,552,984	\$1,590,000	
÷ Annual EDU's	70,788	70,788	70,788	
<b>Unit Rate per EDU</b>	<b>\$22.16</b>	<b>\$21.94</b>	<b>\$22.47</b>	<b>\$66.57</b>

## Cost-Based Rates Summary

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### Cost-of-Service and Rate Summary

The comprehensive cost-of-service analysis and rate development meet the requirements of Proposition 218 and identify the cost components that make up the proposed water and wastewater charges. Proposition 218 requires the following conditions:

1. An agency cannot collect revenue beyond what is necessary to provide service.

*The long-term financial plan identifies the District's revenue requirements, including operating expenses, capital improvement program, debt, and reserves. Projected revenues do not exceed the cost of providing service.*

2. Revenues derived by the charge shall not be used for any other purpose other than that for which the charge was imposed.

*The District's water and wastewater utilities are set up as a business enterprise to track revenues and expenses and do not fund other services outside of those necessary for the provision of water and wastewater.*

3. The amount of the fee may not exceed the proportional cost of service for the parcel.

*The comprehensive cost-of-service analysis, updated water fixed charges and variable rates, and wastewater EDU charges reflect each customer's proportionate share of water and wastewater costs. Through this update, each account is paying its proportionate share of the cost providing service to the parcel.*

4. No charge may be imposed for a service unless that service is actually used or immediately available to the owner of property.

*The proposed fixed charges and variable rates connect directly to the District's budget for each utility and projected future revenue requirements of the water and wastewater utilities, which are recovered equitably from all active accounts receiving service.*

5. A written notice of the proposed charge shall be mailed to the record owner of each parcel at least 45 days prior to the public hearing.

*Notices were mailed to each affected parcel at least 45 days prior to the June 27, 2023, Public Hearing.*

## Rate Schedules – Water and Wastewater

### Water

Table 77 through Table 79 provide the five-year water rate schedule over the Rate Setting Period for monthly fixed charges, variable rates, and fixed / variable pumping rates, respectively. For FY 2025 through FY 2028, the revenue adjustments are applied across the board to the cost-of-service rates derived for FY 2024 as account growth and usage characteristics are projected to remain constant for financial planning.

*Table 77: Proposed Monthly Water Fixed Charges (FY 2024 – FY 2028)*

Proposed Revenue Adjustments					
	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Revenue Adjustment		9.0%	9.0%	9.0%	9.0%
Fixed Charges (\$/Month)					
Single-Family, Multi-Family, Commercial, Institutional					
Meter Size	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
5/8"	\$89.59	\$97.66	\$106.45	\$116.04	\$126.49
≤ 3/4"	\$89.59	\$97.66	\$106.45	\$116.04	\$126.49
1"	\$145.42	\$158.52	\$172.79	\$188.35	\$205.31
1 1/2"	\$285.01	\$310.66	\$338.62	\$369.10	\$402.32
2"	\$452.51	\$493.24	\$537.64	\$586.03	\$638.78
3"	\$982.92	\$1,071.39	\$1,167.82	\$1,272.93	\$1,387.50
4"	\$1,764.59	\$1,923.41	\$2,096.52	\$2,285.21	\$2,490.88
6"	\$3,635.01	\$3,962.16	\$4,318.76	\$4,707.45	\$5,131.13
Agriculture w/ Residence, Agriculture					
Meter Size	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
5/8"	\$142.17	\$154.97	\$168.92	\$184.13	\$200.71
≤ 3/4"	\$142.17	\$154.97	\$168.92	\$184.13	\$200.71
1"	\$233.06	\$254.04	\$276.91	\$301.84	\$329.01
1 1/2"	\$460.27	\$501.70	\$546.86	\$596.08	\$649.73
2"	\$732.93	\$798.90	\$870.81	\$949.19	\$1,034.62
3"	\$1,596.36	\$1,740.03	\$1,896.64	\$2,067.34	\$2,253.41
4"	\$2,868.77	\$3,126.96	\$3,408.39	\$3,715.15	\$4,049.52
6"	\$5,913.47	\$6,445.69	\$7,025.81	\$7,658.14	\$8,347.38
PSAWR Domestic, PSAWR Commercial					
Meter Size	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
5/8"	\$127.47	\$138.95	\$151.46	\$165.10	\$179.96
≤ 3/4"	\$127.47	\$138.95	\$151.46	\$165.10	\$179.96
1"	\$208.56	\$227.33	\$247.79	\$270.10	\$294.41
1 1/2"	\$411.27	\$448.29	\$488.64	\$532.62	\$580.56
2"	\$654.53	\$713.45	\$777.67	\$847.67	\$923.97
3"	\$1,424.86	\$1,553.10	\$1,692.88	\$1,845.24	\$2,011.32
4"	\$2,560.07	\$2,790.48	\$3,041.63	\$3,315.38	\$3,613.77
6"	\$5,276.47	\$5,751.36	\$6,268.99	\$6,833.20	\$7,448.19



# Rainbow Municipal Water District – Comprehensive Cost-of-Service Rate Study

Table 78: Proposed Variable Water Rates per HCF (FY 2024 – FY 2028)

Variable Rates (\$/HCF)					
Customer Class	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Single-Family	\$5.53	\$6.03	\$6.58	\$7.18	\$7.83
Multi-Family	\$5.53	\$6.03	\$6.58	\$7.18	\$7.83
Commercial	\$5.53	\$6.03	\$6.58	\$7.18	\$7.83
Institutional	\$5.53	\$6.03	\$6.58	\$7.18	\$7.83
Agriculture w/ Res	\$4.53	\$4.94	\$5.39	\$5.88	\$6.41
Agriculture	\$4.53	\$4.94	\$5.39	\$5.88	\$6.41
PSAWR Domestic					
Tier 1	\$4.53	\$4.94	\$5.39	\$5.88	\$6.41
Tier 2	\$4.00	\$4.36	\$4.76	\$5.19	\$5.66
PSAWR Commercial	\$4.00	\$4.36	\$4.76	\$5.19	\$5.66

Table 79: Proposed Pumping Water Rates per HCF (FY 2024 – FY 2028)

Pumping						
Pumping Zone	Zone Description	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Fixed (\$/Month)</b>						
All Zones		\$8.39	\$9.15	\$9.98	\$10.88	\$11.86
<b>Variable (\$/HCF)</b>						
Pump Zone 1	<i>Rainbow Heights</i>	\$2.60	\$2.84	\$3.10	\$3.38	\$3.69
Pump Zone 2	<i>Improvement District U-1</i>	\$1.39	\$1.52	\$1.66	\$1.81	\$1.98
Pump Zone 3	<i>Vallecitos</i>	\$0.26	\$0.29	\$0.32	\$0.35	\$0.39
Pump Zone 4	<i>Northside</i>	\$0.13	\$0.15	\$0.17	\$0.19	\$0.21
Pump Zone 5	<i>Morro Tank</i>	\$0.35	\$0.39	\$0.43	\$0.47	\$0.52
Pump Zone 6	<i>Huntley</i>	\$1.40	\$1.53	\$1.67	\$1.83	\$2.00
Pump Zone 7	<i>Magee Tank</i>	\$0.71	\$0.78	\$0.86	\$0.94	\$1.03

## Wastewater

Table 80 provides the five-year wastewater rate schedule over the Rate Setting Period for monthly fixed charges per EDU. For FY 2025 through FY 2028, the revenue adjustments are applied across the board to the cost-of-service rates derived for FY 2024 as account growth and usage characteristics are projected to remain constant for financial planning.

Table 80: Proposed Monthly Wastewater Charges per EDU (FY 2024 – FY 2028)

Proposed Revenue Adjustments					
Revenue Adjustment		13.0%	13.0%	13.0%	13.0%
Customer Class	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Single-Family	\$66.57	\$75.23	\$85.01	\$96.07	\$108.56
Multi-Family	\$66.57	\$75.23	\$85.01	\$96.07	\$108.56
Residential - WW Only	\$66.57	\$75.23	\$85.01	\$96.07	\$108.56
Commercial	\$66.57	\$75.23	\$85.01	\$96.07	\$108.56
Commercial w/ Irrigation	\$66.57	\$75.23	\$85.01	\$96.07	\$108.56