



Eastern Municipal Water District

2023 Water and Wastewater
Cost of Service
Rates Study Report

FINAL | April 2023

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Abbreviations

AFY	acre-feet per year
ADD	average day demand
AWWA	American Water Works Association
Carollo	Carollo Engineers
CCF	Hundred cubic feet
COP	Certificates of Participation
CRC	Capacity Reservation Charge
District	Eastern Municipal Water District
DSC	Daily Service Charge
EMS	Equivalent Meter Service
ET	evapotranspiration
FYE	fiscal years ending
MDD	maximum day demand
MGD	million gallons per day
MHD	Max Hour Demand
MMD	maximum month demand
MWD	Metropolitan Water District of Southern California
OPEB	Operating Expenses and Debt Service and Other Obligations
Report	cost of service report
R&R	repair and replacement
RTS	Readiness-to-Serve
Study	Cost of Service Rate Study
SWRCB	State Water Resources Control Board
WCP	Water Supply Reliability Capital Projects Charge
WFP	water filtration plants

Section 1

EXECUTIVE SUMMARY

Eastern Municipal Water District (District) is a California special district that provides water, wastewater, and recycled water service to both retail and wholesale customers in Riverside County. The District retained Carollo Engineers, Inc. (Carollo), an independent rate consultant, to perform a Cost of Service Rate Study (Study) for the District's water and wastewater rates for rates effective January 1, 2024. This cost of service report (Report) summarizes the recommendations from that analysis.

ES.1.1 Study Framework and Methodology

Carollo used a methodology that is guided by California laws and regulations, specifically California Constitution article XIII D, section 6 (commonly referred to as Proposition 218) and its proportionality requirements. Carollo's approach is based on the foundational guidance of this law's language, and from relevant legal precedent. Carollo also developed this analysis with an industry standard rate-setting framework, as outlined in *M1 Manual: Principles of Water Rates, Fees, and Charges, Manual of Water Supply Practices*, published by the American Water Works Association (AWWA). Finally, Carollo tailored its rate-setting approach to the policy guidance of the District and its Board of Directors. The Study used a three-step process outlined below.

ES.1.2 Revenue Requirements and Financial Plan

The financial plan compares the District's forecasted revenues to its forecasted operating and capital reserve costs. This tests the adequacy of existing rates to fund the District's costs of providing service. If a shortfall exists, or other funding goals are not met, additional funding through either rates or additional bond issuances are reviewed and recommended based on strategic goals and funding availability. This establishes the revenue requirements, or the amount of revenue that must be generated through rates. Through its annual budgeting process, the District performs a detailed review of its costs, including operations expenditures, capital needs, and funding requirements. The revenue requirements for the water and wastewater systems were calculated separately.

ES.1.3 Cost of Service

To meet the needs of Proposition 218, the rates for a given service must have a close and reasonable nexus to the proportional cost of providing the associated service. Carollo used the following process to create this nexus:

1. Define functional categories that capture the distinct services that the District provides its customers.
2. Allocate the revenue requirements to these functional categories based on the best available data.
3. Group these functional categories under rate components that create a bridge between the rates and the functional categories.
4. Determine the units of service for each rate component. The units of service represent the estimated number of units that will be billed for that rate component.
5. Calculate a unit cost for each component.

These steps create a link between the costs incurred by the District and the rates charged to its customers.

ES.1.4 Rate Calculation

With the unit costs calculated in the cost of service, the rate calculation is a fairly straightforward process of assigning each rate the unit costs for relevant rate components.

ES.2.1 Recommendations

ES.2.2 Water

ES.2.2.1 Financial Plan and Revenue Requirements

Carollo recommends that the District adjust its revenue requirements over the next five years to keep pace with cost drivers. This adjustment and the resulting cash flow are summarized in Figure ES.1, Figure ES.2, and Table ES.1. An initial 9.0 percent increase in the revenue requirements for fiscal year ending (FYE) 2024 is recommended, followed by 6.4 percent in 2025, and then 7.0 percent for the following three years.

The District has elected to draw down reserves, as shown in Figure ES.2, rather than increase rates to achieve full cost recovery. The reserve balances decline over the next three years, briefly dipping below target in FY 2026/27 but then keeping pace with target in beyond years. If the District wanted to avoid this decline in reserves, rates would need to increase by approximately 19 to 21 percent in FY 2023/24. To balance the long-term financial viability of the District with ratepayer affordability, the District opted to mitigate these increases and draw down reserves.

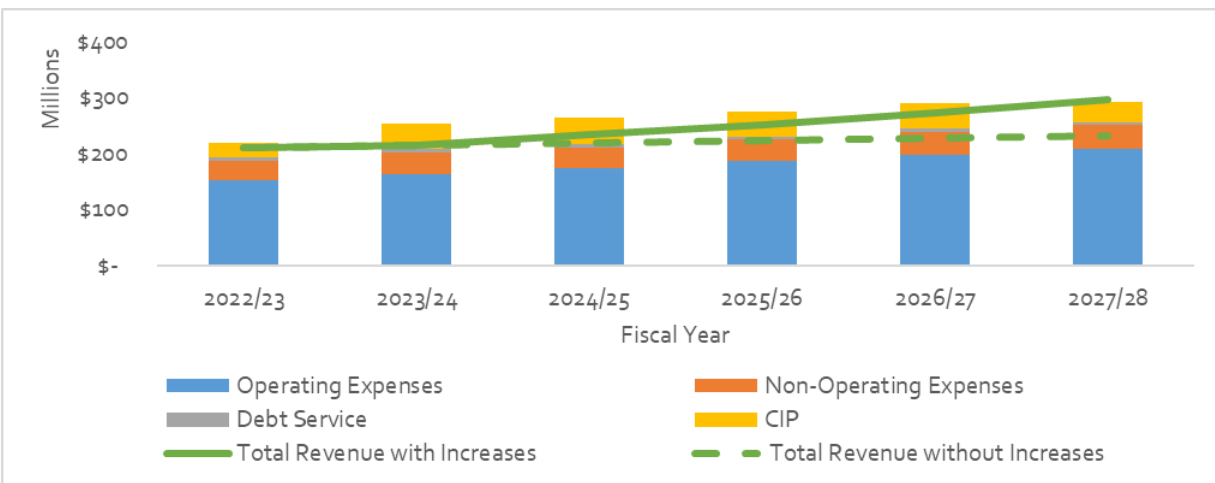


Figure ES.1 Water Cash Flow Projection



Figure ES.2 Projected Water Reserves Balances and Targets

Table ES.1 Water Revenue Requirement Recommendations

	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027	FYE 2028
Revenues						
Operating Revenues	\$175.10	\$178.14	\$181.47	\$185.07	\$189.06	\$193.19
Non-Operating Revenues	\$33.98	\$35.17	\$36.16	\$36.88	\$37.62	\$38.37
Additional Revenue from Annual Adjustments						
FYE 2024 - 9.0% revenue requirement	-	\$16.03	\$16.33	\$16.66	\$17.02	\$17.39
FYE 2025 - 6.4% revenue requirement	-	-	\$12.61	\$12.86	\$13.14	\$13.42
FYE 2026 - 7.0% revenue requirement	-	-	-	\$15.02	\$15.34	\$15.68
FYE 2027 - 7.0% revenue requirement	-	-	-	-	\$16.42	\$16.78
FYE 2028 - 7.0% revenue requirement	-	-	-	-	-	\$17.95
Less: Partial Year Revenue Increase	\$0.00	(\$8.02)	(\$6.31)	(\$7.51)	(\$8.21)	(\$8.98)
Total Revenues	\$209.08	\$221.32	\$240.27	\$258.97	\$280.39	\$303.81
Expenses						
Operating Expenses	\$150.71	\$163.35	\$173.78	\$185.45	\$197.32	\$208.26
Non-Operating Expenses	\$25.16	\$28.08	\$27.57	\$28.95	\$30.40	\$31.61
Debt Service and Other Obligations	\$13.38	\$13.39	\$12.64	\$12.63	\$12.62	\$12.62
Capital Improvements	\$24.56	\$41.51	\$45.33	\$41.76	\$43.07	\$34.72
Total Expenses	\$213.81	\$246.34	\$259.32	\$268.79	\$283.40	\$287.21
Net Operating Income / (Loss) ⁽²⁾	\$11.02	\$9.41	\$17.69	\$24.01	\$32.83	\$44.56
Cash Flow ⁽³⁾	(\$4.73)	(\$25.02)	(\$19.05)	(\$9.82)	(\$3.02)	\$16.59

Notes:

(1) All values in million dollars.

(2) Operating Revenues minus Operating Expenses and Debt Service and Other Obligations (OPEB).

(3) Total Revenues minus Total Expenses.

ES.2.2.2 Rate Recommendations

This Study performed a cost of service allocation of the costs outlined in Table ES.1. This cost of service process creates a nexus between the expenses incurred by the District and the rates charged to customers.

The recommended rates for the next five years based on that cost of service process are outlined in the following sections.

ES.2.2.2.1 Fixed Charges

The District has two fixed service charges for its water customers: a Daily Service Charge (DSC), and a Water Supply Reliability Capital Projects Charge (WCP).

The DSC has two components: an Account Charge that is set for all customers, regardless of water usage or meter size; and a Demand Charge that scales based on meter size. The five-year schedule of proposed DSC is outlined in Table ES.2.

The WCP is similar to the Demand portion of the DSC because it scales based on meter size. The five-year schedule of proposed charges for this rate is shown in Table ES.3.

Both of these charges are shown as daily charges, but the billed amount will need to be rounded up to the nearest cent once the monthly bill is calculated. This is necessary to avoid lost revenue due to rounding off.

Table ES.2 Daily Service Charge Five-Year Schedule

Meter Size	2023	2024	2025	2026	2027	2028
Account Charge						
All Meters	\$0.160	\$0.191	\$0.204	\$0.218	\$0.233	\$0.250
Demand Charge						
5/8"	\$0.340	\$0.365	\$0.388	\$0.416	\$0.445	\$0.477
3/4"	\$0.340	\$0.365	\$0.388	\$0.416	\$0.445	\$0.477
1"	\$0.520	\$0.559	\$0.594	\$0.637	\$0.681	\$0.730
1 1/2"	\$1.720	\$1.847	\$1.963	\$2.105	\$2.252	\$2.414
2"	\$2.760	\$2.963	\$3.150	\$3.377	\$3.613	\$3.873
3"	\$5.520	\$5.926	\$6.300	\$6.754	\$7.225	\$7.745
4"	\$8.630	\$9.265	\$9.849	\$10.560	\$11.296	\$12.108
6"	\$17.260	\$18.530	\$19.697	\$21.119	\$22.591	\$24.215
8"	\$27.620	\$29.651	\$31.520	\$33.794	\$36.150	\$38.750
10"	\$41.430	\$44.477	\$47.279	\$50.691	\$54.225	\$58.124
12"	\$58.250	\$62.534	\$66.474	\$71.271	\$76.239	\$81.722

Table ES.3 Daily Water Supply Reliability Capital Projects Charge Five-Year Schedule

Meter Size	2023	2024	2025	2026	2027	2028
5/8"	\$0.178	\$0.200	\$0.214	\$0.230	\$0.247	\$0.265
3/4"	\$0.178	\$0.200	\$0.214	\$0.230	\$0.247	\$0.265
1"	\$0.273	\$0.306	\$0.328	\$0.352	\$0.378	\$0.406
1 1/2"	\$0.902	\$1.012	\$1.083	\$1.164	\$1.250	\$1.341
2"	\$1.447	\$1.624	\$1.738	\$1.868	\$2.006	\$2.152
3"	\$2.895	\$3.248	\$3.475	\$3.735	\$4.011	\$4.303
4"	\$4.526	\$5.077	\$5.432	\$5.838	\$6.270	\$6.727
6"	\$9.051	\$10.153	\$10.864	\$11.676	\$12.539	\$13.453
8"	\$14.484	\$16.248	\$17.385	\$18.685	\$20.066	\$21.528
10"	\$21.726	\$24.371	\$26.077	\$28.027	\$30.098	\$32.292
12"	\$30.547	\$34.265	\$36.664	\$39.405	\$42.317	\$45.401

ES.2.2.2.2 Volumetric Rates

The District has three classes of rates: Residential Tiered, Non-Residential Tiered, and Non-Residential Non-Tiered, which covers all remaining customers. This Study used a layering approach for calculating the rates for each of these classes, building the rates by combining the unit costs that serve that rate. Every tier receives one supply category from the District’s supply portfolio, a share of infrastructure costs based on the peaking profile, and a share of conservation costs for the higher volume users. The build of this rate is shown in Table ES.4.

Table ES.4 FYE 2024 Rate Calculation

Rate Component	Residential				Non-Residential			
	Tier 1	Tier 2	Tier 3	Tier 4	Tier 1	Tier 2	Tier 3	Non-Tiered
Supply Component								
Local Supply	\$1.11	-	-	-	-	-	-	-
Blended Supply	-	\$3.12	-	-	\$3.12	-	-	\$3.12
Treated Imported Supply	-	-	\$3.44	\$3.44	-	\$3.44	\$3.44	-
MWD Tier 2 Surcharge	-	-	-	\$0.46	-	-	\$0.46	-
Infrastructure Component								
Base	\$0.17	\$0.17	\$0.17	\$0.17	\$0.16	\$0.16	\$0.16	\$0.11
Max Day	-	\$0.62	\$0.62	\$0.62	\$0.62	\$0.62	\$0.62	\$0.37
Max Hour	-	-	\$1.78	\$1.78	-	\$1.46	\$1.46	\$0.00
Other Rate Components								
Conservation	-	-	\$0.71	\$6.48	-	\$1.96	\$7.39	-
Property Tax Reallocation ⁽²⁾	(\$0.003)	(\$0.003)	-	-	-	\$0.27	-	-
FYE 2024 Proposed Rate	\$1.28	\$3.91	\$6.73	\$12.95	\$3.90	\$7.92	\$13.53	\$3.60

Notes:

(1) All rates shown in \$ / CCF and rounded up to the nearest \$0.01.

(2) Applies only to FYE 2024.

The five-year schedules for proposed rates for residential and non-residential are shown in Table ES.5 and Table ES.6.

Table ES.5 Residential Tiered Rate Five-Year Schedule

Rate	2023	2024	2025	2026	2027	2028
Tier 1	\$1.17	\$1.28	\$1.41	\$1.55	\$1.71	\$1.89
Tier 2	\$3.75	\$3.91	\$4.17	\$4.47	\$4.79	\$5.13
Tier 3	\$6.22	\$6.73	\$7.11	\$7.55	\$8.02	\$8.52
Tier 4	\$12.73	\$12.95	\$13.72	\$14.61	\$15.55	\$16.55

Table ES.6 Non-Residential Rate Five-Year Schedule

Rate	2023	2024	2025	2026	2027	2028
Tier 1	\$3.90	\$3.90	\$4.16	\$4.46	\$4.77	\$5.12
Tier 2	\$7.92	\$7.92	\$8.09	\$8.60	\$9.15	\$9.73
Tier 3	\$13.19	\$13.53	\$14.34	\$15.27	\$16.26	\$17.31
Non-Tiered	\$3.32	\$3.60	\$3.84	\$4.11	\$4.40	\$4.72

ES.2.2.3 Bill Impacts

For the typical residential customer that stays within budget, the monthly bill is forecasted to increase 6.5 percent in 2024 and 6.9 percent in 2025. In 2024, the increase is lower than the 9.0 percent total revenue requirement because of shifts in the cost of service distribution.

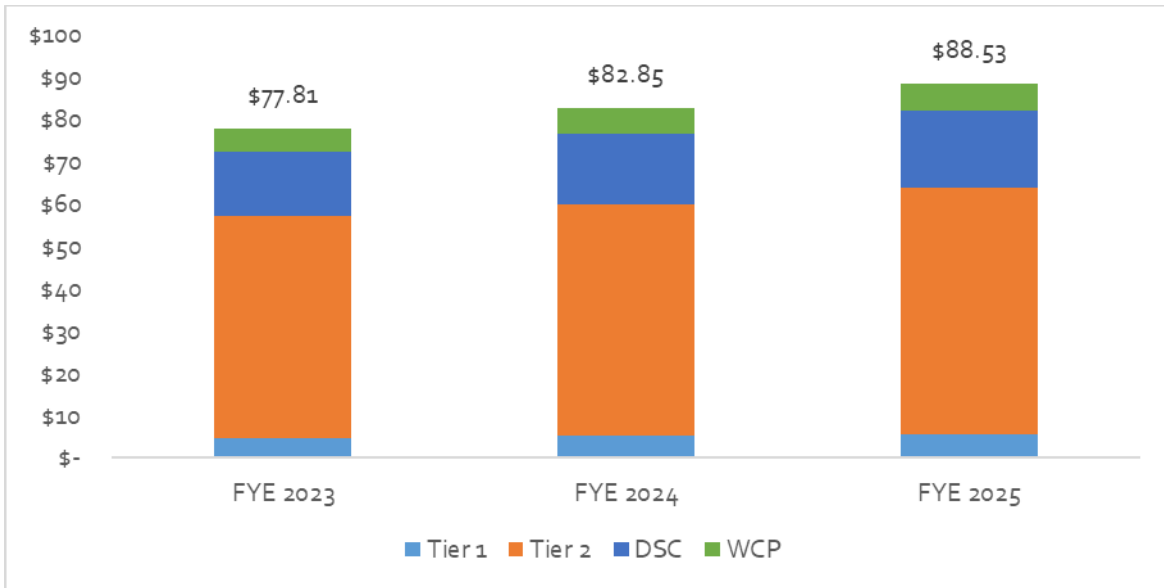


Figure ES.3 Monthly Water Bill Impact for 18 CCF Customer Using 100% of Budget

For a customer that exceeds their monthly budget, the forecasted bill impact is 6.0 percent in 2024 and 6.3 percent in 2025.

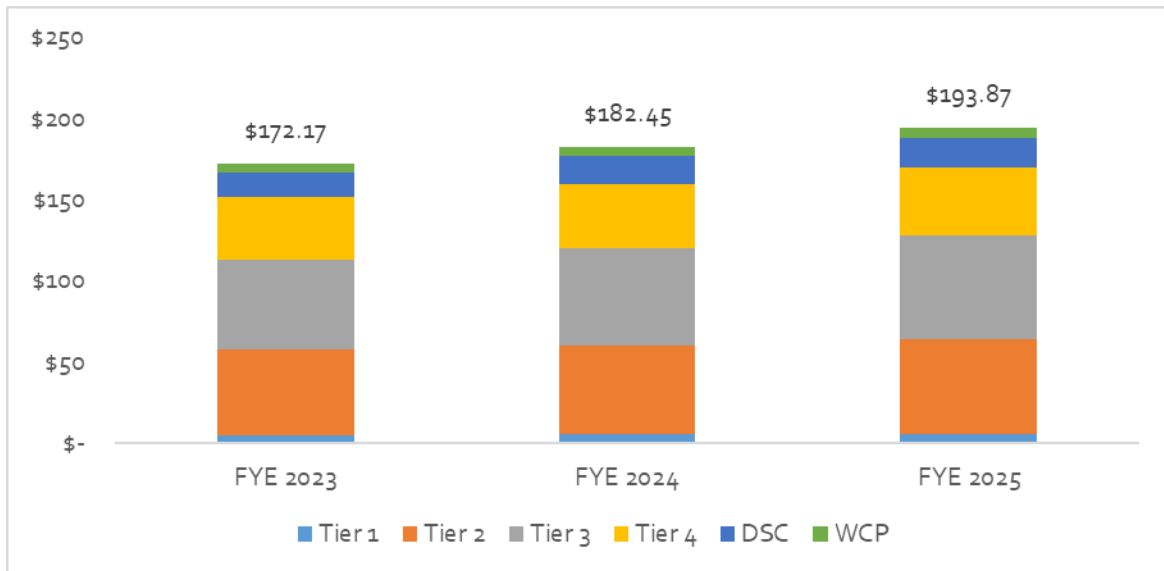


Figure ES.4 Monthly Water Bill Impact for 30 CCF Customer Using 167% of Budget

ES.2.3 Wastewater

ES.2.3.1 Financial Plan and Revenue Requirements

Carollo recommends that the District adjust its revenue requirements over the next five years to keep pace with cost drivers. These adjustments and the resulting cash flow are summarized in Table ES.7, Figure ES.5, and Figure ES.6. An initial 5.0 percent increase in the revenue requirement is recommended for the rates effective on January 1, 2024, followed by 5.5 percent in 2025, 4.5 percent in 2026 and 2027, and 3.5 percent in 2028.

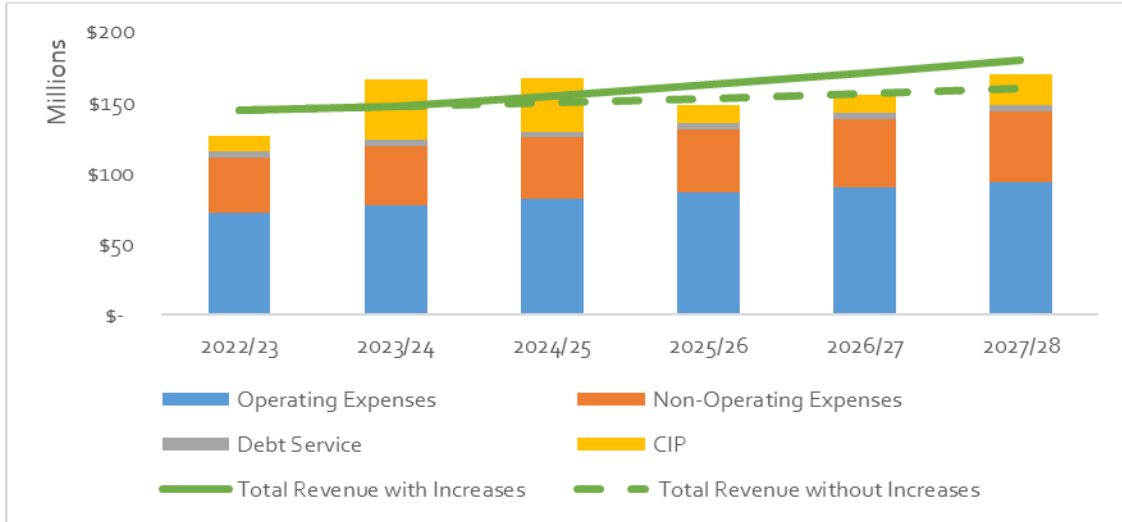


Figure ES.5 Wastewater Cash Flow Projection

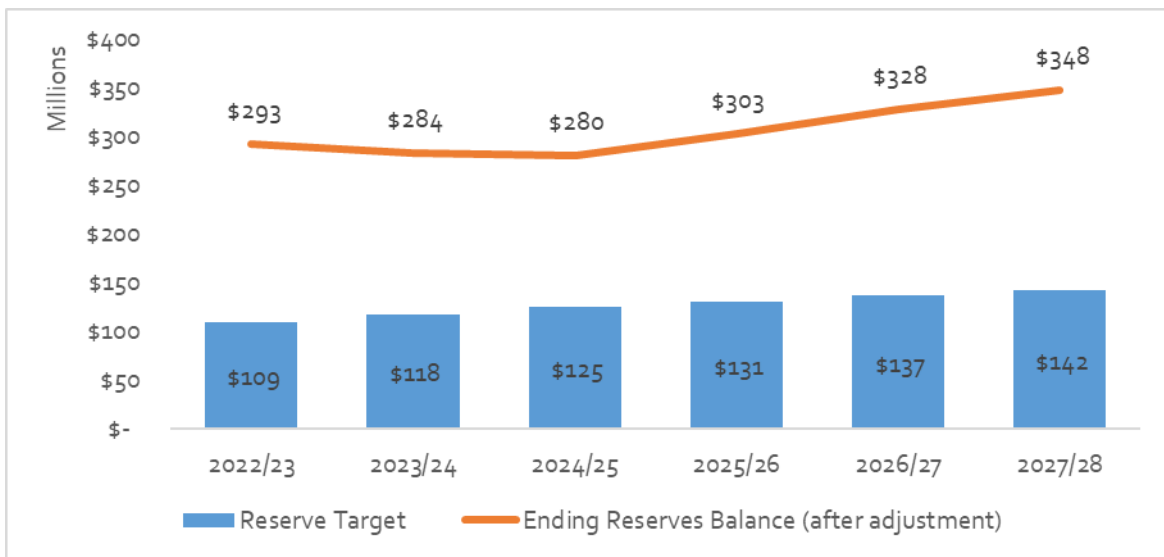


Figure ES.6 Projected Wastewater Reserves Balances and Targets

Table ES.7 Wastewater Revenue Requirement Recommendations

	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027	FYE 2028
Revenues						
Rate Revenues	\$85.75	\$86.61	\$88.18	\$89.88	\$91.76	\$93.70
Other Operating Revenues	\$35.08	\$35.43	\$36.07	\$36.77	\$37.54	\$38.33
Non-Operating Revenues	\$23.86	\$24.81	\$25.56	\$26.32	\$27.11	\$27.93
Additional Revenue from Annual Adjustments						
FYE 2024 - 5.0% revenue requirements	-	\$4.33	\$4.41	\$4.49	\$4.59	\$4.68
FYE 2025 - 5.5% revenue requirements	-	-	\$5.09	\$5.19	\$5.30	\$5.41
FYE 2026 - 4.5% revenue requirements	-	-	-	\$4.48	\$4.57	\$4.67
FYE 2027 - 4.5% revenue requirements	-	-	-	-	\$4.78	\$4.88
FYE 2028 - 3.5% revenue requirements	-	-	-	-	-	\$3.97
Less: Partial Year Revenue Increase	\$0.00	(\$2.17)	(\$2.55)	(\$2.24)	(\$2.39)	(\$1.98)
Total Revenues	\$144.69	\$149.02	\$156.77	\$164.89	\$173.26	\$181.59
Expenses						
Operating Expenses	\$71.50	\$77.22	\$81.85	\$85.94	\$90.24	\$93.85
Non-Operating Expenses	\$33.64	\$35.76	\$37.29	\$39.16	\$41.12	\$42.76
Debt Service and Other Obligations	\$11.95	\$11.93	\$12.03	\$12.03	\$12.03	\$12.03
Capital Improvements	\$10.33	\$40.61	\$35.70	\$11.39	\$12.32	\$20.66
Total Expenses	\$127.42	\$165.53	\$166.88	\$148.53	\$155.71	\$169.30
Net Operating Income / (Loss)⁽²⁾	\$37.38	\$35.05	\$37.33	\$40.59	\$43.87	\$47.78
Cash Flow⁽³⁾	\$17.27	(\$16.51)	(\$10.11)	\$16.36	\$17.55	\$12.29

Notes:

(1) All values in million dollars.

(2) Operating Revenues minus Operating Expenses and Debt Service and Other Obligations (OPEB).

(3) Total Revenues minus Total Expenses.

ES.2.3.2 Rate Recommendations

This Study performed a cost of service allocation of the costs outlined in Table ES.7. This cost of service process creates a nexus between the expenses incurred by the District and the rates charged to customers.

The recommended rates for the next five years based on that cost of service process are outlined in the following sections. The wastewater system has two components: a daily service charge for wastewater service; and a capital charge to support system repair and replacement (R&R) and betterment. Both of these fees are assessed based on the number of Equivalent Dwelling Units for the connection. The daily service charge is further adjusted for residential customers based on occupancy, with smaller households paying a decreased rate and larger ones paying a higher one.

Table ES.8 Wastewater Five-Year DSC

	2023	2024	2025	2026	2027	2028
Daily Charge	\$1.097	\$1.150	\$1.216	\$1.275	\$1.340	\$1.394
Total Per Month (30 days)	\$32.91	\$34.50	\$36.48	\$38.25	\$40.20	\$41.82
Average Monthly Charge (30.4 days per billing cycle)	\$33.35	\$34.96	\$36.97	\$38.76	\$40.74	\$42.38

Table ES.9 Wastewater Five-Year Fixed Charge for Sewer System Capital Projects

	2023	2024	2025	2026	2027	2028
Daily Charge	\$0.120	\$0.141	\$0.149	\$0.156	\$0.164	\$0.171
Total Per Month (30 days)	\$3.60	\$4.23	\$4.47	\$4.68	\$4.92	\$5.13
Average Monthly Charge (30.4 days per billing cycle)	\$3.64	\$4.29	\$4.53	\$4.75	\$4.99	\$5.20

ES.2.3.2.2 Postage Stamp Rate Phase-In

The District’s current rate structure has five different rates for its five service areas. These service area rates were developed at a time when the operations and planning for the District supported these rates. However, the postage rate is recommended going forward to best reflect the wastewater system’s cost of service and operations.

While the postage rate is recommended, Carollo and the District’s staff, management, and Board of Directors developed a phase-in approach that gradually introduces the postage rate over the course of seven years. This analysis considered multiple factors in the phase-in, including cost of service, and revenue impacts and use of reserves to fund any shortfalls that result. The proposed rate phase-in is shown in Table ES.10 for the monthly bill including the capital charge and Table ES.11 for the daily service charge excluding the capital charge.

Table ES.10 Wastewater Postage Stamp Phase-In for Monthly Bill including DSC and Fixed Capital Charge

	2023	2024	2025	2026	2027	2028	2029	2030
SA 31 – Hemet / SJ	\$34.04	\$36.58	\$39.28	\$41.81	\$44.48	\$46.88	\$49.41	\$51.33
SA 32 – Moreno Valley	\$34.65	\$37.16	\$39.83	\$42.30	\$44.94	\$47.28	\$49.72	\$51.33
SA 33 – Sun City	\$35.26	\$37.83	\$40.53	\$42.97	\$45.55	\$47.83	\$50.20	\$51.33
SA 34 – Temecula	\$39.21	\$40.87	\$42.60	\$44.37	\$46.34	\$48.19	\$50.11	\$51.33
SA 35 – Perris	\$44.99	\$45.91	\$46.82	\$47.74	\$48.71	\$49.68	\$50.66	\$51.33
Full Postage Stamp	\$36.99 ⁽¹⁾	\$39.25	\$41.50	\$43.51	\$45.73	\$47.58	\$49.54	\$51.33

Notes:

(1) Postage stamp for 2023 is estimated based on total revenues.

Table ES.11 Wastewater Postage Stamp Phase-In for Daily Service Charge Only

	2023	2024	2025	2026	2027	2028	2029	2030
SA 31 – Hemet / SJ	\$1.000	\$1.062	\$1.143	\$1.219	\$1.299	\$1.371	\$1.447	\$1.504
SA 32 – Moreno Valley	\$1.020	\$1.081	\$1.161	\$1.235	\$1.314	\$1.384	\$1.457	\$1.504
SA 33 – Sun City	\$1.040	\$1.103	\$1.184	\$1.257	\$1.334	\$1.402	\$1.473	\$1.504
SA 34 – Temecula	\$1.170	\$1.203	\$1.252	\$1.303	\$1.360	\$1.414	\$1.470	\$1.504
SA 35 – Perris	\$1.360	\$1.369	\$1.391	\$1.414	\$1.438	\$1.463	\$1.488	\$1.504
Full Postage Stamp	\$1.097 ⁽¹⁾	\$1.150	\$1.216	\$1.275	\$1.340	\$1.394	\$1.451	\$1.504

Notes:

(1) Postage stamp for 2023 is estimated based on total revenues.

ES.2.3.2.2 Block Factor Adjustments

The District currently charges different daily rates for residential customers based on occupancy, with larger households assumed to be discharging greater wastewater flow and thus allocated a greater share of costs. This analysis also reviewed the assumptions behind these factors, looking at the District’s winter water usage because it can serve as a proxy for wastewater return flow. Updates to Blocks 1 and 3 are recommended to bring these factors into closer alignment with winter water usage. The summary statistics and recommendations are shown in Table ES.12.

Table ES.12 Wastewater Residential Block Factor Analysis

Block	Current Block Factor	FYE 2018 - 2021		FYE 2018		Recommended Block Factor
		Median Winter CCF	% of Block 2	Median Winter CCF	% of Block 2	
Block 1	60%	5	71%	5	63%	65%
Block 2	100%	7	100%	8	100%	100%
Block 3	125%	10	143%	11	138%	135%
Block 4	170%	12	171%	14	175%	170%

ES.2.3.3 Bill Impacts

Wastewater bill impacts under the proposed phase-in for 2024 range from less than \$1.00 per Equivalent Dwelling Units (EDU) per month for customers in Perris Valley (\$0.90, or 2 percent increase), up to \$2.52 for customers in Hemet and San Jacinto (7 percent increase).

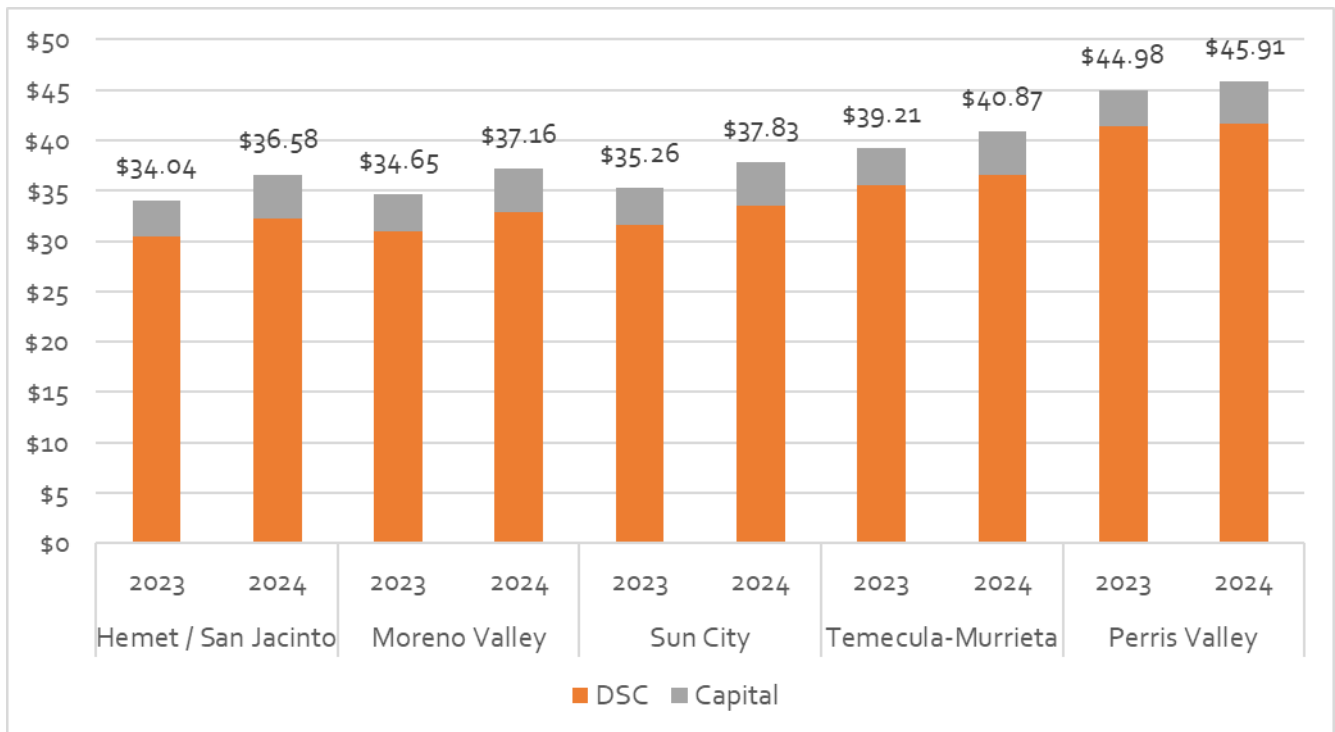


Figure ES.7 Wastewater 2024 Bill Impact by Service Area

PART I – INTRODUCTION

Section 2

BACKGROUND

Eastern Municipal Water District is a California special district that provides water, wastewater, and recycled water services to retail and wholesale customers within Riverside County, California. Founded in 1950, the District supplies retail water service to the cities of Hemet, Menifee, Moreno Valley, Murrieta, Perris, San Jacinto, and Temecula. Already one of the fastest growing regions in California, the District’s service area is projected to continue its steady growth in the coming decades. The District also maintains wholesale water service agreements with City of Nuevo, Perris, and Hemet as well as Lake Hemet Municipal, Rancho California, and Western Municipal Water Districts.

2.1 Purpose

The District retained Carollo to conduct this Study to review the District’s current cost recovery methods for its water and wastewater services. This Report outlines Carollo’s inputs and assumptions, methodology, projections, and recommendations and results. The Report is split into three parts: this introduction, and two sections separately outlining the water and wastewater cost of service and rate results.

2.1.1 Rate-Setting Goals

A rate study can achieve multiple goals and objectives. At times, these goals are complementary, while at other times, they can be competing. Carollo identified the following set of objectives for achieving a successful revenue program:

- Based on a detailed cost of service analysis of each system.
- Developed in accordance with California Proposition 218.
- Equitable across customer classes and users.
- Simultaneously easy for customers to understand, and for the District to administer.
- Built with financial resiliency in mind that accounts for current planning uncertainties.

These objectives balance the legal, operational, and financial considerations that the District must make when setting rates.

2.2 Rate Study Step-by-Step Approach

There are two primary goals for any rate analysis:

- First, assess the adequacy of current revenues, and where necessary, recommend adjustments to meet projected funding needs.
- Second, align costs with revenue sources so that system users support a reasonable and proportionate portion of costs.

In California, water rates must adhere to the cost of service requirements detailed by Proposition 218, which requires that property related fees and charges, including water, sewer, and, in some cases, recycled water rates, do not exceed the reasonable and proportionate cost of providing the service.

To achieve these multi-faceted requirements, Carollo's cost of service approach consists of the progression of three interconnected processes. These three processes, outlined in this section, will form the basis for the rate analyses in this report.

While the process is described in a linear step by step approach, it is more appropriately understood as an iterative process where each component is routinely revisited and adjusted, and the ultimate objective is to balance revenues with costs.

2.2.1 Financial Plan and Revenue Requirement

The methodology that the District applies to establish annual rate revenue needs is consistent with industry standards established by the American Water Works Association (AWWA) *M1 Manual: Principles of Water Rates, Fees, and Charges* (M1 Manual). AWWA is a national industry trade group that makes recommendations on generally accepted practices in the water and sewer industry. The revenue requirements analysis compares the forecasted revenues of the utility to its forecasted operating and capital reserve costs to determine the adequacy of the existing rates to recover the utility's costs.

2.2.2 Cost of Service Allocation

After determining a utility's revenue requirement, the next step in the analysis is to allocate costs to each customer based on system utilization. This process takes each item in the District's budget and organizes items collectively based on what function is served. For example, some cost items support the ability to deliver additional, expensive water, while other costs are incurred to provide customer service or to fund capital replacement. Organizing the budget in terms of end function defines the connection between each budget item and the assessed rates, bridging the cost incurred by the District and the benefit delivered to the customer.

2.2.3 Rate Design & Calculation

The final part of the analysis is the rate design and calculation. The final rate calculation is a manifestation of the nexus between the costs to deliver a specific service and the rates charged to customers for that service. This process connects planned expenditures to the designed rates by establishing rates to match the estimated revenue generation with expenditures. At the end of the cost of service analysis, the District's costs are expressed as a unit cost for each unit of service delivered to a customer. For each rate class, the rate design and calculation combine these unit costs into a rate that can be published and billed.

2.3 Legal Considerations

In the State of California, water and wastewater agencies must establish rates in accordance with the requirements defined by California Constitution Article XIII D, section 6, commonly referred to as Proposition 218. In addition, agencies must also adhere to the requirements of Constitution Article X, Section 2, which mandates that water suppliers work to conserve the water resources of the State of California.

2.3.1 Proposition 218

Proposition 218 was passed by the voters of California in 1996 and requires that property-related rates, fees, and charges do not exceed the proportional cost of providing the service rendered. The principal requirements related to public agency service rates and fees are as follows:

- A property related charge, such as a water service charge, imposed by a public agency on a parcel shall not exceed the costs required to provide the property related service.
- Revenues derived by a charge shall not be used for any purpose other than the outlined services.
- The amount of the charge imposed upon any parcel shall not exceed the proportional cost of service attributable to the parcel.

- No charge may be imposed for a service unless that service is actually used or immediately available to the owner of property.
- A written notice of the proposed charge shall be mailed to the record owner of each parcel at least 45 days prior to a public hearing, when the agency considers all written protests against the charge.

The District conducts periodic cost of service analyses not only to review the rate structure for future and ongoing revenue sufficiency, but also to review compliance with these guidelines from Proposition 218 and identify needed adjustments.

2.3.2 Article X, Section 2

Article X of the California Constitution pertains to the water resources of the state. The text of Article X, Section 2 reads:

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

The District strives to meet this section of the Constitution by taking initiatives that discourage wasteful use of water resources. These actions include a conservation program with full-time staff, financial assistance programs to encourage installation of water-wise appliances and landscape features, and ongoing outreach programs that educate customers and facilitate the efficient use of water within the District's service area.

2.4 Forward-Looking Statement

The calculations and forecasts of this analysis are based upon the reasonable projection of existing service costs, customer demands, system operational needs, existing legal agreements, and other similar data provided by the District, as well as Carollo's best understanding of the District's system. If significant changes occur to any of those or the other factors used in this analysis, the District may need to revisit the analysis. These changes could include unexpected rate increases or supply shortages from imported water suppliers, changes to Proposition 218 case law, or to other legal agreements and adjudications that the District is party to, or new regulatory action by the Governor, legislature, Department of Water Resources, or State Water Resources Control Board.

PART II – WATER

Section 3

WATER FINANCIAL PLAN

The financial plan forms the basis of any rate calculations and recommendations. The rates must generate sufficient revenue to cover the District’s operating, capital, and other expenses.

Carollo developed the following financial plan using a variety of sources provided by the District. This input data was combined with forecast assumptions for cost escalation, water supply production, account growth, and conservation, as well as other factors that impact projected revenues and expenses.

The District’s fiscal year starts on July 1 and ends on June 30 of the following calendar year. This financial plan covers fiscal years ending (FYE) June 30, 2024, through FYE 2028. By contrast, the District updates its rates on January 1 of each calendar year. As a result, all expense planning is based on the fiscal year, while rate revenue will be adjusted for the calendar year and the additional revenue for each fiscal year will only include billing from January through June.

3.1 Financial Plan Assumptions and Inputs

Table 13 outlines the assumptions and inputs used when projecting line items expenses and non-operating revenues. For FYE 2024 and 2025, the District provided its adopted budgets and FYE 2026 through 2028 was forecasted from these budgeted amounts.

Table 13 Cost and Miscellaneous Revenue Forecasting Assumptions

Forecast Factor	FYE 2024	FYE 2025	FYE 2026	FYE 2027	FYE 2028
General Inflation	<i>Budgeted</i>		5.0%	5.0%	4.0%
Chemicals	<i>Budgeted</i>		6.0%	5.0%	5.0%
Energy	<i>Budgeted</i>		6.0%	5.0%	5.0%
Raw Labor	<i>Budgeted</i>		5.0%	3.0%	3.0%
Labor Vacancy	<i>Budgeted</i>		-2.5%	-2.5%	-2.5%
Net Labor	<i>Budgeted</i>		2.4%	0.4%	0.4%
Property Tax	<i>Budgeted</i>		2.0%	2.0%	2.0%
Unfunded Liabilities			<i>Fixed Expense</i>		
MWD CRC	<i>Budgeted</i>		4.0%	9.7%	0.0%
MWD RTS	<i>Budgeted</i>		6.6%	5.1%	3.2%

The District purchases water from Metropolitan Water District of Southern California (MWD), a wholesale agency that provides deliveries from the Colorado River and the State Water Project throughout Southern California. The District purchases three different types of water from MWD:

- Untreated water, which is treated at the District’s Hemet and Perris Water Filtration Plants.

- Tier 1 Treated water, which is fully treated by MWD and delivered via pipeline directly to the District’s distribution system.
- Replenishment water, used for groundwater recharge activities by the District.

MWD recently updated its rates for the next ten years for these three rates, as well as MWD’s Tier 2 Treated water, a higher cost water for higher volume deliveries. Like the District, MWD’s rates are effective on January 1 of each year. For financial planning purposes, deliveries were split for each fiscal year to align with the respective MWD rates for that calendar year.

Table 14 Projected MWD Water Rates (\$ / AF)

Supply Type	CY 2023	CY 2024	CY 2025	CY 2026	CY 2027	CY 2028
Untreated	\$799	\$855	\$903	\$972	\$1,037	\$1,110
Tier 1 Treated	\$1,143	\$1,209	\$1,256	\$1,352	\$1,444	\$1,534
Tier 2 Treated	\$1,185	\$1,418	\$1,455	\$1,554	\$1,642	\$1,729
Replenishment	\$629	\$671	\$709	\$763	\$814	\$871

3.1.1 Existing Rates

3.1.1.1 Volumetric Rates

The District has a budget-based tiered rate structure for all residential customers and a portion of non-residential customers. The District’s tiered rate structure is an increasing block structure where water is charged at increasing average rates for increasing usage. For residential customers, this rate structure has four tiers, while non-residential customers have three tiers. The existing rates (effective January 1, 2023) are shown in Table 15.

Table 15 Current Volumetric Rates (\$ / CCF)

Rate	Residential	Non-Residential
Tier 1	\$1.17	N/A
Tier 2	\$3.75	\$3.90
Tier 3	\$6.22	\$7.92
Tier 4	\$12.73	\$13.19
Non-Tiered	N/A	\$3.32

Residential

For residential customers, the budget is based on the estimated indoor and outdoor water usage needs. The indoor allocation is a calculated amount of 55 gallons per person per day for each household. This is based on the latest guidance from California State Water Resources Control Board (SWRCB), as well as long-term data analysis of the District’s customer usage patterns. Recently passed legislation (Senate Bill 1157) is expected to reduce this indoor guidance down further over the next decade; however, no changes to the indoor allocation are included in this analysis until more guidance is provided by SWRCB and the District’s conservation staff can analyze the impacts.

For residential outdoor budget allocations, the District uses a formula that combines:

- Measured evapotranspiration (ET) for Riverside County. ET is an estimate of the amount of rainfall, measured in inches, which is needed to support turf grass.
- Conservation factors to adjust for landscaping efficiency and a drought-tolerant landscape.
- Conversion factors that translate ET measured in inches to hundred cubic feet (CCF).

Together, the indoor and outdoor allocations form the basis of a residence’s monthly budget. The budget is then billed at each tier based on the percentages shown in Table 16.

Tiers 1 and 2 cover the entire budget. The first 20 percent of each household’s budget is billed at Tier 1. This aligns with the amount of local water supply available. This local water supply is the District’s lowest cost source of supply, and the District reserves this supply for the most essential water use—water used for health and human safety. The District estimates that 19,400 acre-feet per year (AFY) is available from this source. This is approximately 20 percent of the total residential budgeted water. As a result, this water supply forms the basis of the rate for the first 20 percent of each individual budget.

Table 16 Allocation of Residential Budget to Tiers

Percent of Budget	Tier
0% - 20%	Tier 1
21% - 100%	Tier 2
100% - 150%	Tier 3
> 150%	Tier 4

Non-Residential

The District began converting its non-residential customers to a budget-based tiered rate structure in 2017. Because water usage varies considerably for non-residential customers, even within the same usage class, the District assigns each budget individually for non-residential customers, based on domestic and landscaping water needs. Customers that have not been converted to a tiered rate are still charged a uniform rate where each unit of water is sold at the same rate.

3.1.1.2 Fixed Charges

In addition to the tiered volumetric rates, the District has three fixed charges. The Account and Demand Charges are combined in the DSC. The Account portion of the DSC is the same for all customers, regardless of meter size or usage, while the Demand portion scales based on meter size. This scaling is calculated using Equivalent Meter Service (EMS), which is the ratio of a given meter size’s safe maximum operating capacity, as measured by the District, to the capacity for a standard 5/8-inch meter.

In addition to the DSC, the District also charges a fixed Water Supply Reliability Capital Projects Charge (WCP) to support its capital projects for R&R and system betterment. This charge also scales based on EMS. The daily fixed charges for 2023 are shown in Table 17.

Table 17 Current Fixed Rates (\$ / Day)

Meter Size	EMS	Account	Demand	WCP
5/8"	1.0	\$0.16	\$0.34	\$0.18
3/4"	1.0	\$0.16	\$0.34	\$0.18
1"	1.5	\$0.16	\$0.52	\$0.27
1-1/2"	5.1	\$0.16	\$1.72	\$0.90
2"	8.1	\$0.16	\$2.76	\$1.45
3"	16.2	\$0.16	\$5.52	\$2.89
4"	25.4	\$0.16	\$8.63	\$4.53
6"	50.8	\$0.16	\$17.26	\$9.05
8"	81.2	\$0.16	\$27.62	\$14.48

Meter Size	EMS	Account	Demand	WCP
10"	121.9	\$0.16	\$41.43	\$21.73
12"	171.3	\$0.16	\$58.25	\$30.55

3.1.2 Projected Water Sales and Bills

3.1.2.1 Planning Assumptions

Carollo worked with the District to forecast water sales and bills for the next five years. The assumptions used for the rate base forecast are shown in Table 18. The District is projecting average growth of 1.9 percent annually over the next five years. Per capita water usage is expected to decline by 0.2 percent each year, in line with long-term conservation trends. Combined, those two factors result in a Districtwide water sales average growth rate of 1.7 percent over the next five years.

Table 18 Rate Base Growth Assumptions

Rate Class	FYE 2024	FYE 2025	FYE 2026	FYE 2027	FYE 2028
New Accounts	1.7%	1.8%	1.9%	2.1%	2.1%
Per Capita Conservation	-0.2%	-0.2%	-0.2%	-0.2%	-0.2%
Total Water Sales Change	1.5%	1.6%	1.7%	1.9%	1.9%

3.1.2.2 Projected Water Sales

Carollo analyzed the District's billing records for the last several years and developed a five-year forecast of water sales based on the baseline sales and the growth assumptions discussed above. The resulting forecast of water sales by tier is shown in Table 19. This forecast accounts for potential changes in demand due to the volatility in water supply in California over the last decade. While California is currently experiencing an abnormally wet winter as of March 2023, it is highly probably probable that California will experience one or several abnormally dry winters within the next five years, increasing the need for conservation. Furthermore, the wet winter can actually drive down water sales, due to a diminished need for supplemental irrigation. These factors have been incorporated in this forecast, with usage forecasted to decrease.

Table 19 Projected Water Sales by Class and Tier (AFY)

Rate Class	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027	FYE 2028
Residential Tiered						
Tier 1	18,520	17,800	18,087	18,398	18,745	19,104
Tier 2	36,500	37,041	37,639	38,285	39,008	39,754
Tier 3	3,691	4,177	4,244	4,317	4,399	4,483
Tier 4	1,406	1,070	1,087	1,106	1,127	1,148
Non-Residential Tiered						
Tier 1	7,967	7,967	8,096	8,235	8,390	8,551
Tier 2	788	788	800	814	830	845
Tier 3	610	610	620	631	643	655
Non-Tiered						
Retail	11,701	11,869	12,060	12,267	12,499	12,738
Wholesale	4,118	4,179	4,246	4,319	4,401	4,485
Total	91,040	88,029	89,449	90,985	92,704	94,477

3.1.2.3 Projected Bills and EMS

The projected number of accounts and EMS and projected bills are shown in Table 20 and Table 21, respectively. These forecasts take the District's baseline number of bills at each meter size and escalates using the growth factors shown above.

Table 20 Projected Number of Accounts and EMS

	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027	FYE 2028
Accounts	155,743	158,370	161,247	164,346	167,786	171,337
EMS	204,628	208,080	211,860	215,931	220,451	225,117

Table 21 Projected Number of Bills by Meter Size

Meter Size	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027	FYE 2028
5/8"	1,535,500	1,561,403	1,589,770	1,620,317	1,654,235	1,689,248
3/4"	11,843	12,043	12,262	12,498	12,759	13,029
1"	270,888	275,458	280,463	285,852	291,835	298,012
1-1/2"	19,300	19,626	19,982	20,366	20,792	21,233
2"	25,405	25,833	26,303	26,808	27,369	27,948
3"	2,278	2,316	2,358	2,404	2,454	2,506
4"	2,081	2,116	2,154	2,196	2,242	2,289
6"	1,052	1,070	1,089	1,110	1,133	1,157
8"	542	551	561	572	584	596
10"	23	23	24	24	25	25
Total Bills	1,868,913	1,900,440	1,934,966	1,972,146	2,013,429	2,056,004

3.1.3 Projected Water Production

The projected water production by source is shown in Table 22.

Table 22 Projected Water Production by Source (AFY)

Source of Supply	FYE 2024	FYE 2025	FYE 2026	FYE 2027	FYE 2028
Groundwater Supply	14,000	14,000	14,000	14,000	14,000
Perris II	5,400	5,400	5,400	5,401	5,402
Perris I & Menifee	8,600	8,600	8,600	8,601	8,602
Untreated MWD + WFPs	25,700	25,700	25,700	25,700	25,700
MWD Tier 1	43,523	44,217	44,923	45,640	46,368
Total	96,539	97,223	97,917	98,625	99,344
Total, Net of Non-Revenue Water ⁽¹⁾	88,029	88,647	89,276	89,916	90,566

Notes:

(1) Estimated 8 to 11 percent non-revenue water.

3.2 Financial Position

Carollo used three financial tests when analyzing the financial position for the District's water system. These three tests are shown in Figure 8.

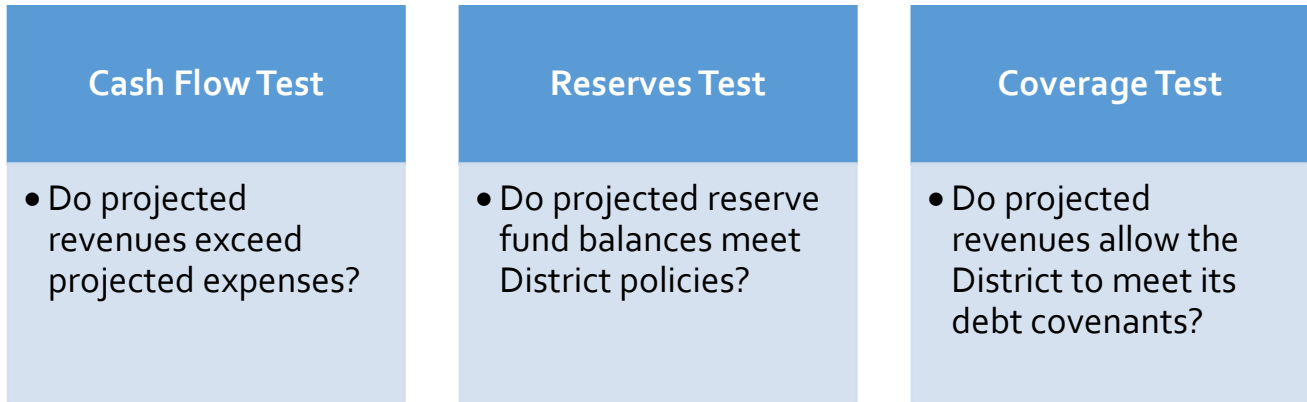


Figure 8 Financial Plan Tests

These three tests are viewed together to assess the financial viability of the rate plan. Positive cash flows support debt coverage and build reserves. Negative cash flows can be planned for, provided that reserves can support the shortfall while maintaining target balances over the long-term.

The water cash flow and reserves tests provide guidance but are not strict requirements, providing the District some flexibility to meet these tests over time. This allows the District to balance funding needs with revenue requirement increases. The coverage test is typically a combined test between both the water and sewer enterprises when those revenues are available to repay all debt, but this analysis looked at each individual system.

Table 23 below shows the five-year forecast of all water revenues before the revenue requirement is adjusted. Table 24 shows the five-year forecast of all water expenses. These forecasts were developed using the assumptions and inputs discussed above.

Table 23 Projected Baseline Water Revenues

	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027	FYE 2028
Fixed Charges						
DSC	\$33.10	\$33.65	\$34.27	\$34.92	\$35.66	\$36.41
WCP	\$11.37	\$11.56	\$11.77	\$12.00	\$12.25	\$12.51
Total Fixed Revenue	\$44.46	\$45.21	\$46.04	\$46.92	\$47.90	\$48.92
Volumetric Rate Revenue						
Residential						
Tier 1	\$9.32	\$9.47	\$9.65	\$9.83	\$10.04	\$10.25
Tier 2	\$58.83	\$59.82	\$60.91	\$62.08	\$63.38	\$64.72
Tier 3	\$9.86	\$10.02	\$10.20	\$10.40	\$10.62	\$10.84
Tier 4	\$7.68	\$7.81	\$7.95	\$8.11	\$8.28	\$8.45
Non-Residential						
Tier 1	\$13.34	\$13.57	\$13.82	\$14.08	\$14.38	\$14.68
Tier 2	\$2.68	\$2.72	\$2.77	\$2.83	\$2.89	\$2.95
Tier 3	\$3.46	\$3.51	\$3.58	\$3.65	\$3.72	\$3.80
Non-Tiered	\$26.30	\$26.83	\$27.41	\$28.05	\$28.76	\$29.49
Total Volumetric	\$131.46	\$133.76	\$136.29	\$139.02	\$142.05	\$145.18
Bad Debt	(\$0.83)	(\$0.84)	(\$0.85)	(\$0.87)	(\$0.89)	(\$0.91)
Total Operating Revenue	\$175.10	\$178.14	\$181.47	\$185.07	\$189.06	\$193.19
Non-Operating Revenue						
Property Tax & Standby	\$32.08	\$33.23	\$34.18	\$34.87	\$35.56	\$36.27
Other Income & Grants	\$1.90	\$1.94	\$1.98	\$2.01	\$2.06	\$2.10
Total Non-Operating Revenue	\$33.98	\$35.17	\$36.16	\$36.88	\$37.62	\$38.37
Total Baseline Revenue	\$209.08	\$213.31	\$217.63	\$221.95	\$226.68	\$231.56

Notes:

(1) All values in million dollars.

Table 24 Projected Water Expenses

	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027	FYE 2028
Operating Expenses						
Desalter Plants	\$6.39	\$7.35	\$7.79	\$8.23	\$8.62	\$8.98
Filtration Plants	\$4.51	\$5.19	\$5.58	\$5.84	\$6.05	\$6.26
Other Operating Expenses	\$62.52	\$68.89	\$72.89	\$76.53	\$80.36	\$83.57
Water Purchases	\$77.28	\$81.93	\$87.52	\$94.84	\$102.29	\$109.45
Total - Operating Expenses	\$150.71	\$163.35	\$173.78	\$185.45	\$197.32	\$208.26
Non-Operating Expenses						
Miscellaneous Expense	\$2.17	\$2.34	\$2.49	\$2.61	\$2.74	\$2.85
Special Projects & Studies Allocated to Services	\$5.75	\$6.21	\$6.59	\$6.92	\$7.26	\$7.55
Unallocated Services	\$11.64	\$12.57	\$13.33	\$13.99	\$14.69	\$15.28
OFA	\$5.60	\$6.95	\$5.17	\$5.43	\$5.70	\$5.93
Total - Non-Operating Expenses	\$25.16	\$28.08	\$27.57	\$28.95	\$30.40	\$31.61
Debt Service and Other Obligations						
COP/Bonds	\$4.67	\$4.68	\$3.93	\$3.92	\$3.91	\$3.91
SRF Loan	\$2.10	\$2.10	\$2.10	\$2.10	\$2.10	\$2.10
Unfunded Liabilities (OPEB/Pensions)	\$6.60	\$6.60	\$6.60	\$6.60	\$6.60	\$6.60
Total - Debt Service	\$13.38	\$13.39	\$12.64	\$12.63	\$12.62	\$12.62
Capital						
Betterment	\$12.08	\$23.16	\$25.84	\$25.67	\$25.11	\$22.11
R&R	\$12.48	\$18.35	\$19.49	\$16.09	\$17.95	\$12.61
Total - Capital	\$24.56	\$41.51	\$45.33	\$41.76	\$43.07	\$34.72
Total Expenses	\$213.81	\$246.34	\$259.32	\$268.79	\$283.40	\$287.21

Notes:

(1) All values in million dollars.

3.2.1 Recommended Revenue Requirements

The Annual Revenue Requirement is the amount of revenue that needs to be generated by the rates. This is the target for the following steps when calculating rates. The Annual Revenue Requirement is the sum of:

1. Total expenses.
2. Non-operating revenues (as an offset against expenses).
3. Planned additions to or use of reserves.

The District's current revenues are not sufficient to fully meet the revenue requirements and additional revenue is recommended to support the District's water operations and capital activities. Because of significant cost escalation over the last two years in effectively all cost centers, the District's expenses have increased substantially. Projected FYE 2023 actuals for operating expenses are already higher than the original budgeted amounts for FYE 2023, and budgeted operating expenses for FYE 2024 are another 8 percent higher. As a result, the rate revenue should increase to keep pace with expenses.

Working with District management, Carollo developed a financial plan to help the water system maintain sufficient cash flow and reserves. This financial plan combines revenue requirement increases with planned use of reserves. For FYE 2024, a 9.0 percent increase to the revenue requirement is recommended, followed by 6.4 percent in FYE 2025. After this, annual revenue requirement increases of 7.0 percent have been modeled. This is due to uncertainty regarding how soon cost escalation will return to historical norms (approximately 3 to 4 percent). As a result, higher revenue requirements are recommended for planning purposes.

Aside from expenses and offsetting revenues, any planned use of or additions to reserves needs to be included in the revenue requirement. In the first three years of the financial plan, the District is planning to draw down reserves. This reduces the revenue requirement each year. In the last two years, the District will begin building reserves again, resulting in an increase in the revenue requirement.

Table 25 Projected Water Rate Revenue Requirements

	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027	FYE 2028
Total Expenses	\$213.81	\$246.34	\$259.32	\$268.79	\$283.40	\$287.21
Non-Operating Revenues	(\$33.98)	(\$35.17)	(\$36.16)	(\$36.88)	(\$37.62)	(\$38.37)
Additions to / (Use of) Reserves	(\$4.73)	(\$17.00)	(\$12.75)	(\$2.31)	\$5.19	\$25.57
Annual Rate Revenue Requirement	\$175.10	\$194.17	\$210.42	\$229.60	\$250.98	\$274.41
Projected Baseline Rate Revenue	\$175.10	\$178.14	\$181.47	\$185.07	\$189.06	\$193.19
Additional Rate Revenue Needed	\$0.00	\$16.03	\$28.94	\$44.54	\$61.92	\$81.22

Notes:

(1) All values in million dollars.

The following tables show the impact of the proposed revenue requirement on the District's financial position. Table 27 shows the cash flow forecast including the proposed revenue requirement. This table shows the annual revenue requirement for each year, plus prior year increases escalated for system growth. This table also shows the lost revenue due to the mid-year rate adjustment. Because the District updates its rates on January 1 of each year, approximately half of the additional rate revenue from the increase is not collected in that fiscal year, which ends on June 30. The revenue requirement needs to include this lost revenue when calculating rates however, because excluding it would result in rates that do not generate sufficient revenue to achieve the intended financial plan.

Therefore, this missed revenue is included in the revenue requirement so that it can be collected in the following fiscal year, and the shortfall is included in the Planned Additions to / (Use of) Reserves line item in Table 25.

It is important to note that for FYE 2024, while the revenue requirement should increase by 9.0 percent, not all rates will increase by 9.0 percent. Some rates will increase by more, while some increase by less. This is in large part due to the fact that this Study also includes a cost of service analysis. California Proposition 218 requires that all water rates cannot exceed the proportional cost of service to provide that service. Every utility must periodically evaluate its rates to confirm that they do not exceed the cost of service. This process is achieved through a full cost of service cost allocation where the District's expenses are ultimately tied to each rate. As a result, some rate components will increase more or less than the whole. Once this cost of service update is completed in the first year though, all rates will increase at the same percentage as the annual revenue requirements in subsequent years.

Table 28 shows the forecasted reserve balances along with the reserve fund targets. The reserve fund targets are set according to District financial policies. Table 29 shows the projected water system debt coverage, which is projected to cover the debt coverage target of 1.50x in all years with the proposed revenue requirement.

Table 26 Five-Year Revenue Requirement Increases

Fiscal Year	Revenue Requirement Increase
FYE 2024	9.0%
FYE 2025	6.4%
FYE 2026	7.0%
FYE 2027	7.0%
FYE 2028	7.0%

Table 27 Projected Water Cash Flow with Revenue Requirement Increases

	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027	FYE 2028
Revenues						
Operating Revenues	\$175.10	\$178.14	\$181.47	\$185.07	\$189.06	\$193.19
Non-Operating Revenues	\$33.98	\$35.17	\$36.16	\$36.88	\$37.62	\$38.37
Additional Revenue from Annual Adjustments						
FYE 2024 - 9.0% revenue requirements increase	-	\$16.03	\$16.33	\$16.66	\$17.02	\$17.39
FYE 2025 - 6.4% revenue requirements increase	-	-	\$12.61	\$12.86	\$13.14	\$13.42
FYE 2026 - 7.0% revenue requirements increase	-	-	-	\$15.02	\$15.34	\$15.68
FYE 2027 - 7.0% revenue requirements increase	-	-	-	-	\$16.42	\$16.78
FYE 2028 - 7.0% revenue requirements increase	-	-	-	-	-	\$17.95
Less: Partial Year Revenue ⁽²⁾	\$0.00	(\$8.02)	(\$6.31)	(\$7.51)	(\$8.21)	(\$8.98)
Total Revenues	\$209.08	\$221.32	\$240.27	\$258.97	\$280.39	\$303.81
Expenses						
Operating Expenses	\$150.71	\$163.35	\$173.78	\$185.45	\$197.32	\$208.26
Non-Operating Expenses	\$25.16	\$28.08	\$27.57	\$28.95	\$30.40	\$31.61
Debt Service and Other Obligations	\$13.38	\$13.39	\$12.64	\$12.63	\$12.62	\$12.62
Capital Improvements	\$24.56	\$41.51	\$45.33	\$41.76	\$43.07	\$34.72
Total Expenses	\$213.81	\$246.34	\$259.32	\$268.79	\$283.40	\$287.21
Net Operating Income / (Loss) ⁽³⁾	\$11.02	\$9.41	\$17.69	\$24.01	\$32.83	\$44.56
Cash Flow ⁽⁴⁾	(\$4.73)	(\$25.02)	(\$19.05)	(\$9.82)	(\$3.02)	\$16.59

Notes:

- (1) All values in million dollars.
- (2) The District's fiscal year begins on July 1, but rate increases are implemented on January 1 each year, resulting in approximately six months each fiscal year before a rate increase takes effect. The rates need to be calculated based on a full year target, but this lost revenue needs to be included in the financial plan.
- (3) Operating Revenues minus Operating Expenses and Debt Service and Other Obligations (OPEB).
- (4) Total Revenues minus Total Expenses.

Table 28 Projected Water Reserve Fund Forecast after Revenue Requirement Increases

	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027	FYE 2028
Reserve Fund Sources / (Uses)						
Beginning Balance	\$183.80	\$182.72	\$162.27	\$147.28	\$141.14	\$141.65
Cash Flow	(\$4.73)	(\$25.02)	(\$19.05)	(\$9.82)	(\$3.02)	\$16.59
Interest Income	\$3.65	\$4.57	\$4.06	\$3.68	\$3.53	\$3.54
Ending Balance	\$182.72	\$162.27	\$147.28	\$141.14	\$141.65	\$161.79
Reserve Targets						
Operating	\$37.16	\$40.28	\$42.85	\$45.73	\$48.65	\$51.35
Rate Stabilization	\$12.56	\$13.61	\$14.48	\$15.45	\$16.44	\$17.36
R&R	\$38.59	\$41.68	\$44.18	\$46.39	\$48.71	\$50.66
Betterment	\$18.78	\$20.28	\$21.50	\$22.57	\$23.70	\$24.65
Research & Development	\$1.16	\$1.25	\$1.33	\$1.40	\$1.47	\$1.53
Equipment Replacement	\$1.16	\$1.25	\$1.33	\$1.40	\$1.47	\$1.53
Annual Operating Debt Service Reserve	\$6.77	\$6.79	\$6.03	\$6.03	\$6.02	\$6.01
General Liability & Litigation Reserve	\$0.77	\$0.84	\$0.89	\$0.93	\$0.98	\$1.02
Workers' Compensation Reserve	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Total Reserve Fund Target	\$116.96	\$125.99	\$132.59	\$139.89	\$147.43	\$154.09
Fund Surplus / (Deficit)	\$65.76	\$36.28	\$14.69	\$1.25	(\$5.78)	\$7.70

Notes:

(1) All values in million dollars.

Table 29 Projected Water Debt Coverage

	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027	FYE 2028
Operating Revenues	\$209.08	\$221.32	\$240.27	\$258.97	\$280.39	\$303.81
Financial Participation Charge Revenues	\$21.29	\$23.46	\$24.39	\$25.61	\$26.89	\$27.96
Less: Operating Expenses	(\$178.89)	(\$195.17)	(\$204.13)	(\$217.32)	(\$230.78)	(\$243.07)
Less: Unfunded Liabilities (OPEB/Pensions)	(\$6.60)	(\$6.60)	(\$6.60)	(\$6.60)	(\$6.60)	(\$6.60)
Net Revenues Available for Debt Coverage	\$44.88	\$43.00	\$53.92	\$60.66	\$69.89	\$82.10
Debt - Rate-Funded	\$6.77	\$6.79	\$6.03	\$6.03	\$6.02	\$6.01
Debt - FPC-Funded	\$9.04	\$9.07	\$11.47	\$11.47	\$11.47	\$11.45
Total Debt	\$15.81	\$15.86	\$17.50	\$17.50	\$17.49	\$17.46
Debt Coverage Ratio	2.84x	2.71x	3.08x	3.47x	4.00x	4.70x

Section 4

WATER COST OF SERVICE

After the revenue requirements are established as outlined in the preceding chapter, they must be allocated to rate components in a manner that allows the District to recover costs fairly and proportionately. The cost of service analysis accomplishes this task.

4.1 Overview of Cost of Service Methodology

This cost of service analysis follows an industry standard methodology for allocating costs first to system functions, and then rate components. These rate components are added together to calculate the various rates and charges for service.

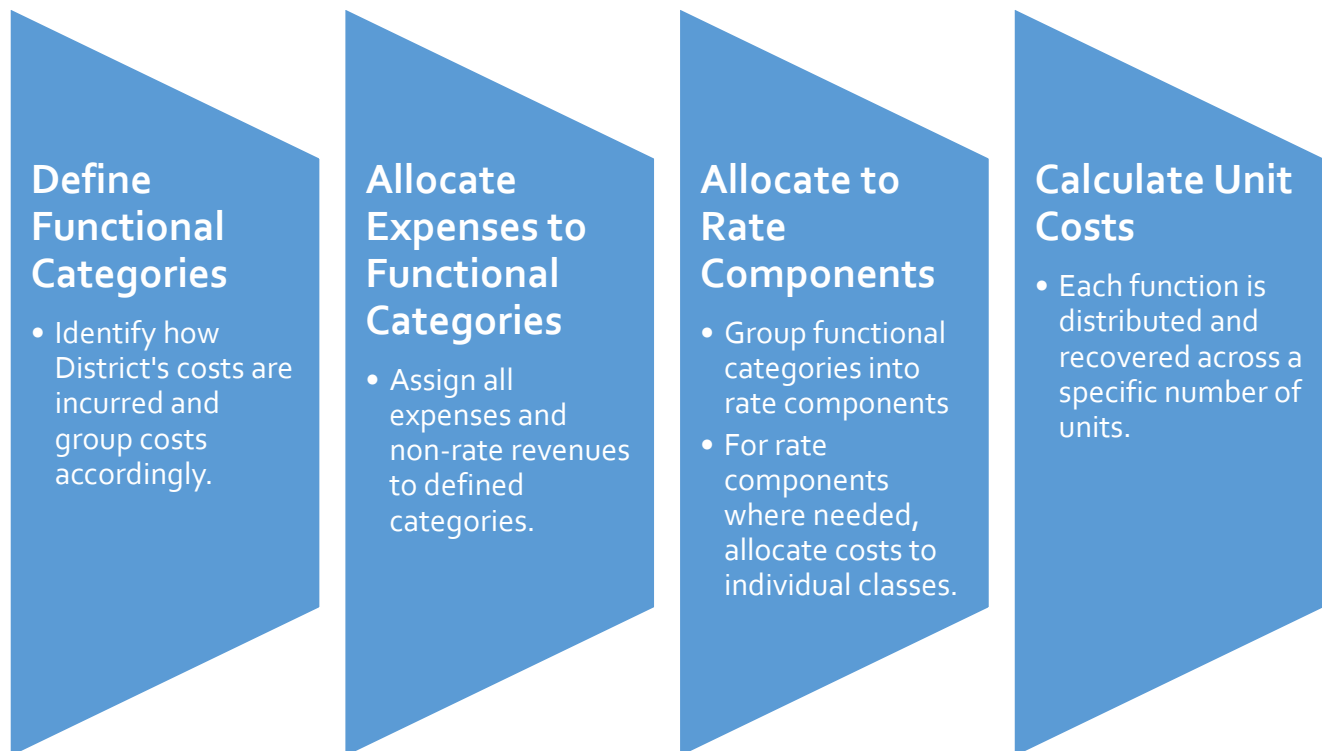


Figure 9 Cost of Service Conceptual Approach

The section outlines how the revenue requirements calculated in the previous section are ultimately recovered through cost of service-based rates.

4.2 Legal and Policy Guidance

All water rates in California must meet the requirements outlined in the California State Constitution, Article XIII D, Section 6, otherwise known as Proposition 218. While this Report does not constitute a legal opinion or make assurances regarding the legality or compliance of rates, the cost of service methodology used and rates recommended in this Report are developed based on the guidance from recent legal decisions, specifically the following fundamental principles:

- Rates must be based on and cannot exceed the proportional cost of providing service.
- Tiered pricing is an acceptable methodology under Proposition 218, as indicated by the Court of Appeals in *Capistrano Taxpayers Association v. City of San Juan Capistrano*.
- Increasing block rates that pass incrementally higher costs of expensive water onto incrementally higher demand users is an acceptable methodology of proportionately allocating the costs of service under Proposition 218, provided that these rates are tied to the “true cost of water,” again, as indicated by the Court of Appeals in *Capistrano Taxpayers Association v. City of San Juan Capistrano*.

While Proposition 218 is the ultimate test for rates in California, industry guidance and commonly accepted rate-setting practices can serve as a template for achieving cost-based rates. The *AWWA M1 Manual: Principles of Water Rates, Fees, and Charges* outlines the two most widely used methods for allocation of functionalized costs to cost components:

- **Base-Extra Capacity Method**, where costs are allocated among: (1) a base category to provide baseline water service or average day demand; (2) an extra capacity category to provide peak demand service, often split into maximum day and maximum hour components; (3) a customer category to provide services that do not vary with water usage, such as customer service and billing; and (4) direct fire protection.
- **Commodity-Demand Method**, where costs are allocated among: (1) a commodity category for costs that are directly driven by demand; (2) a demand category for building and maintaining peak system capacity; (3) a customer category to provide services that do not vary with water usage, such as customer service and billing; and (4) direct fire protection.

Both methodologies recognize that cost of service “depends not only on the total volume of water used, but also on the rate of use, or peak demand requirements.”¹ Costs incurred by the District are not incurred uniformly, or simply based on the total volume of water used. The cost of service changes based on when water is used. Both methodologies account for this by including an extra capacity or demand category, to cover costs associated with capacity that is not used consistently and that impacts operating costs and capital asset related costs to accommodate peak flows.

For this analysis, the Commodity-Demand and Base-Extra Capacity methodologies were both used to best reflect the District’s costs and operations. Specifically, the Commodity portion was used to allocate the District’s supply costs to each unit of water, while the Base-Extra Capacity methodology was used to allocate the costs of infrastructure. The following sections discuss how costs are allocated to the system’s functions, cost components, and customer classes using this methodology.

¹ American Water Works Association, *M1 Manual: Principles of Water Rates, Fees, and Charges*, 7th Ed. (2017), p. 61.

4.3 Defining Functional Categories

Because the District's operations and activities cover a broad array of functions, the District's budget and expenses must be grouped into functional categories that can ultimately be collected by the rates. To facilitate the cost of service process and support the proportionality requirements Proposition 218, these functional categories must be defined in a way that creates a nexus between the costs incurred by the District and the rates that the District charges its customers.

That starts by defining the functional categories. The categories must be defined with the final rates in mind, but must be dictated by the operations, maintenance, and capital activities of the District. Carollo and the District outlined the following functional categories to create the link between expenses and customer rates.

- **Customer Service** – Fixed costs related to billing, customer service, account management, and other functions that do not vary based on water usage or meter size.
- **Water Supply and Reliability Capital** – Capital costs associated with system betterment, repair and replacement, and other system maintenance.
- **Meter Service** – Fixed costs related to capacity maintenance and meter service.
- **Groundwater Supply** – All costs related to production of the District's local groundwater supplies.
- **Desalter** – Costs related to the desalter treatment program at the District's three desalter treatment facilities (Perris I and Menifee, which are grouped, and Perris II). In the cost allocation, these costs are split across those two groupings in line with production volumes from each.
- **Untreated MWD and WFPs** – Costs related to purchasing untreated imported water from Metropolitan Water District of Southern California (MWD). This also includes costs associated with the District's two water filtration plants (Hemet and Perris WFP)
- **MWD Tier 1** – Water purchase costs for treated imported water from MWD.
- **Other MWD Costs** – All other MWD related costs, specifically the Readiness-to-Serve (RTS) and Capacity Reservation Charge (CRC).
- **Source of Supply** – Costs associated with developing the District's entire source of supply. These costs are often not specific to one source of supply and benefit multiple sources.
- **Base / Max Day / Max Hour** – Much of the District's pumping, storage, and distribution infrastructure is designed to meet peak conditions. The Base / Max Day / Max Hour approach is method of quantifying the allocation of different peaking conditions. More discussion on this methodology will follow in this section.
- **Direct Fire Protection** – The District has some customers that have an additional fire meter (also referred to as a "detector check" in the District's rate code). These customers are allocated a share of customer service and billing costs for the billing procedures and a portion of the Base / Max Day / Max Hour in alignment with their reserved capacity based on EMS.
- **Conservation** – Costs associated with the District's conservation and water efficiency programs.
- **As All Others** – Also referred to as "General," this category serves to reallocate all other costs that cannot be directly allocated to the other categories. When an expense category touches on multiple categories and cannot reasonably be allocated, this category is used. It takes the results of all other categories and uses that allocation as a proxy for these costs.

4.4 Allocate Expenses to Functional Categories

With the functional categories defined, the annual revenue requirements for a given year are apportioned to each cost component. Each of the cost centers is functionalized based on which functional category (or categories) it supports.

4.4.1 Water Operations

4.4.1.1 Desalter Plants

The District maintains three desalter plants: Perris I, Menifee, and Perris II. The Perris I and Menifee cost centers are typically grouped together by the District for cost tracking and budgeting and will be grouped in this analysis as well.

Some cost centers are allocated directly to either Perris I & Menifee or Perris II. Cost centers that broadly support desalter operations and are not associated with a specific plant are allocated based on the projected share of production from each plant, which is projected to be 8,600 acre-feet per year (AFY) (61 percent) from Perris I and Menifee and 5,400 AFY (39 percent) from Perris II.

4.4.1.2 Filtration Plants

The District buys untreated water from MWD and treats it at its two water filtration plants (WFP) located in Perris and Hemet. All costs associated with these two WFPs are tracked together under the functional category of Untreated MWD supply.

4.4.2 Other Operating Expenses

4.4.2.1 Base / Max Day / Max Hour Allocation Factors

The District designs its facilities to meet peak demand periods. If facilities were designed only to meet the average, then the District would not be able to meet its peak demand periods. This results in much of the District's capacity remaining unused for much of the year. While demands spike significantly at 7am on a July weekday, they are considerably lower at 1am in January. The costs associated with maintaining this capacity remain however and must be recovered from customers in a fair and reasonable manner.

The M1 Manual provides a template for allocating out these peak capacity costs. This process takes data from three different system demand scenarios: Average Day Demand (ADD); Max Day Demand (MDD), as measured by the greatest 24-hour systemwide demand period; and Max Hour Demand (MHD).

MHD can be difficult to gather data for, due to different pumping zones that may not align with timing. In this study, District staff instructed Carollo to assume that the MHD condition would be twice that of MDD. The District has reported that MHD is two times the MDD.

This process ultimately yields three different allocation percentages: Base, Max Day, and Max Hour. The District's water system is built to meet the peak demand scenario, which is represented in this analysis by Max Day Demand. However, this capacity is not used at all times. Therefore, a portion of this capacity is built to serve average, or Base, demands, and a portion on top of that is built to meet peak demands, represented by Max Day and then Max Hour. The proportion of Max Hour Demand built to serve each of the three scenarios provides the allocation factors.

The District's ADD is approximately 63.5 million gallons per day (MGD), based on FYE 2021 billing data, which was the last full year of continuous billing data available. The MDD period average for the last five years is 124.6 MGD, from July 7, 2021. Finally, the MHD scenario over a full 24 hours is 249.2 MGD, based on the District's planning assumption estimate of 2x MDD.

For the Base / Max Day allocation factor, 52 percent of costs are allocated to Base, while 48 percent of costs are allocated to Max Day. ADD is assumed to be approximately 65.3 MGD, while MDD is assumed to be 124.6 MGD. Under the MDD scenario, 52 percent is Base capacity ($65.3 \text{ MGD} \div 124.6 \text{ MGD} = 0.524$) and the extra 59.3 MGD to meet Max Day is 48 percent ($59.3 \text{ MGD} \div 124.6 \text{ MGD} = 0.486$).

For Base / Max Day / Max Hour, 26 percent of costs are allocated to Base, 24 percent to Max Day, and the remaining 50 percent to Max Hour. The 65.3 MGD for Base is now 26 percent of the MHD scenario of 249.2 MGD ($65.3 \text{ MGD} \div 249.2 \text{ MGD} = 0.262$). The next 59.3 MGD to meet Max Day is now 24 percent of the MHD scenario ($59.3 \text{ MGD} \div 249.2 \text{ MGD} = 0.238$). The remaining 124.6 MGD of capacity to meet max hour makes up the remaining 50 percent ($124.6 \text{ MGD} \div 249.2 \text{ MGD} = 0.5$).

The full results are shown in Table 30 and Table 31.

Table 30 Base / Max Day Allocation Factor Calculation

Demand Condition	24-Hour Demand
Average Day Demand	65.3 MGD
Max Day Demand	124.62 MGD
MDD Extra Capacity above ADD	59.31 MGD
Percent of Capacity to Base	52.4%
Percent of Capacity to Max Day	48.6%

Table 31 Base / Max Day / Max Hour Allocation Factor Calculation

Demand Condition	24-Hour Demand
Average Day Demand	65.3 MGD
MDD Extra Capacity above ADD	59.31 MGD
Max Hour Demand	249.23 MGD
MHD Extra Capacity Above MHD	124.62 MGD
Percent of Capacity to Base	26.2%
Percent of Capacity to Max Day	23.8%
Percent of Capacity to Max Hour	50.0%

4.4.2.2 Distribution and Storage

Distribution and Storage related costs are allocated using the Base / Max Day / Max Hour criteria. These facilities are both sized and operated to meet the MHD scenario, and thus, the costs are spread across all three conditions.

4.4.2.3 Pumping

Pumping costs are allocated entirely to Max Day. Base is not included because groundwater supply does not require additional pumping due to the pressure provided into the distribution system at the wells. As a result, allocating pumping costs to Base would result in allocating the cost of pumping twice: once when it's allocated to groundwater, and again in the pumping line item. To avoid this, pumping costs are only collected via Max Day. Pumping infrastructure is not associated with Max Hour because from both a design and operational perspective, it does not contribute to meeting the District's Max Hour demand. Storage and Distribution primarily meet Max Hour needs.

4.4.2.4 Meters

All meter related costs are allocated to Meter Services, and then split between Domestic and Direct Fire Protection based on the share of total EMS, which was 6 percent for Direct Fire. The remaining 94 percent was allocated to all other Domestic customers.

4.4.2.5 Wells and Groundwater

Costs categorized by the District as related to Wells are split between Groundwater and the Desalters based on production volumes. Groundwater cost items are fully allocated to the Groundwater supply functional category.

4.4.2.6 Allocated Support

The District's Allocated Support costs were individually categorized by the District and spread across the Customer Service (35 percent), Meter Service (10 percent), Source of Supply (5 percent), Conservation (9 percent), and Base / Max Day / Max Hour (7 percent, split in line with Table 31). The remaining 34 percent is reallocated to As All Others. These percentages were calculated based on the share of the Allocated Support budget that benefits each area. The Customer Service portion is split between Domestic and Direct Fire Protection customers based on the number of bills for each class (0.4 percent for Direct Fire, with the remainder allocated to Domestic).

4.4.2.7 Replenishment

Groundwater replenishment operating costs were allocated to Source of Supply because of the long-term water supply reliability that this activity provides. Because this water is not used today and may become blended with other supplies in the future, this cost supports the future sustainability of the District's entire water supply portfolio.

4.4.2.8 Other Expenses

General and Administrative, Operations Supervision, and Pipeline Locating, System Maps & Records were allocated to As All Others because they could not be directly allocated to a functional category.

4.4.3 Water Purchases

Untreated and treated MWD purchases were each allocated directly to individual functional categories. The Capacity Reservation Charge, Readiness-to-Serve Charge, and the Standby and Tunnel Seepage Credits were allocated to a single category that will be spread across all units of MWD water supply in the rate calculation process. Settlement water was allocated to Source of Supply due to its support for long-term supply reliability, and for the same purpose as Replenishment in the preceding section.

4.4.4 Non-Operating Expenses

Most non-operating expenses were allocated to As All Others. Special Projects and Studies was the one exception. These projects typically support multiple functions. District staff provided a multi-year allocation of these projects across functional categories, which was then averaged for the rate forecasting period, with costs allocated to Groundwater Supply (20 percent), Desalters (5 percent), Source of Supply (18 percent), and Conservation (57 percent).

4.4.5 Debt Service and Capital Improvement Costs

Debt Service was allocated completely to Meter Service (67 percent) and Water Supply / Reliability (33 percent). Because debt service was used to fund the repair, replacement, and betterment of capacity and reliability, these costs are allocated to these two functional categories.

Planned R&R costs were allocated mostly to the Meter Service (35 percent) and Water Supply / Reliability (35 percent), with the remaining 30 percent allocated to As All Others. Additional unplanned R&R was allocated entirely to the Water Supply / Reliability. Thirty percent of System Betterment projects were allocated to Base / Max Day, with the remaining 70 percent split between Meter Service and Water Supply / Reliability.

4.4.6 Expenses Allocated As All Others

Some cost centers support many categories and cannot easily or precisely be allocated. Therefore, these cost centers are allocated to what is called "As All Others." At the end of the functionalization, these costs are reallocated as all other costs are allocated. For example, if 10 percent of the allocated costs were allocated to Customer Service, then 10 percent of these As All Others costs would be allocated to Customer Service.

This is particularly useful for categories where tracking the individual functions is prohibitively difficult. Cost centers such as IT, General Manager, and fleet vehicles are difficult to link to functional categories and are well-served with this approach.

In addition to the specific cost centers described in the preceding subsections, Unfunded Liabilities and non-rate revenues were allocated to As All Others.

4.4.7 Functional Allocation Results

Table 32 Water Functional Allocation Summary Results

Functional Category	FYE 2024 Allocation	Share of Allocation
Customer Service	\$11.06	5.7%
Water Supply / Reliability	\$16.25	8.4%
Meter Service	\$27.71	14.3%
Groundwater Supply	\$4.36	2.2%
Perris II	\$3.12	1.6%
Perris I & Menifee	\$7.26	3.7%
Untreated MWD + WFPs	\$27.74	14.3%
MWD Tier 1	\$53.64	27.6%
MWD	\$3.23	1.7%
Source of Supply	\$5.54	2.9%
Base	\$5.93	3.1%
Max Day	\$16.71	8.6%
Max Hour	\$4.77	2.5%
Direct Fire	\$0.57	0.3%
Conservation	\$6.27	3.2%
Total	\$194.17	100.0%

4.5 Allocate to Rate Components

4.5.1 Fixed Charge Components

The District has two fixed charges: the DSC and the Water Supply Reliability Capital Projects Charge (WCP). The DSC is a combination of the Customer Service (referred to as the Account Charge in the District's rate structure) and Meter Service (referred to as the Demand Charge) functional categories, while the WCP is associated with all costs allocated to that functional category.

The Direct Fire functional category is also allocated to its own rate component in this step. The rate calculation for those customers is part of a separate analysis and not contained in this report, but to complete the cost of service, this functional category needed to be allocated out of the revenue requirement.

Table 33 Allocation of Fixed Charge Rate Components

	Daily Service Charge	Water Supply Reliability Capital Projects Charge	Direct Fire Protection
Customer Service	\$11.06	-	-
Meter Service	\$27.71	-	-
Water Supply / Reliability	-	\$16.25	-
Direct Fire Protection	-	-	\$0.57
Total	\$38.77	\$16.25	\$0.57

4.5.2 Supply Components

The District's sources of supply are grouped into three different rate components. The three components are summarized below. Table 34 outlines the projected FYE 2024 production by source, grouped by rate component, while

Table 35 outlines the projected FYE 2024 allocated cost by source, again grouped by rate component.

Table 35 also allocates the Other MWD costs (CRC, RTS, and seepage and standby credits) to the supply rate components, with 89 and 11 percent allocated to the Blended and Treated Imported supply rate components, respectively, based on each component's respective share of total MWD purchases.²

4.5.2.1 Local Supply

Groundwater and Perris II Desalter supplies are grouped in the Local Supply rate component. Combined, the District produces approximately 19,400 AFY from these sources. These sources are reserved for Residential Tier 1 usage. This portion of the supply portfolio is the District's lowest cost source and has been reserved for domestic health and human safety purposes, for which Residential Tier 1 is designed to provide service.

Local supply is allocated 20 percent of the costs in the Source of Supply functional category as well, proportional to the total demand in this rate component. No MWD costs are allocated to Local Supply.

² The District is projected to purchase 62,338 AF of MWD treated and untreated water. Blended Supply is allocated approximately 55,693 AFY, or 89 percent, of this, while Treated Imported is allocated 6,645 AF, or 11 percent.

4.5.2.2 Blended Supply

The District’s blended supply serves its Residential Tier 2, Non-Residential Tier 1, and Non-Residential Non-Tiered demand. This supply is a combination of Perris I and Menifee Desalter supplies, and Untreated MWD purchases and treatment at the Hemet and Perris Water Filtration Plants. The remaining demand in these rate classes is served by MWD Tier 1 Treated purchases.³ Treated MWD costs will be split in the next section when unit costs are calculated.

Blended supply is allocated 72 percent of the costs in the Source of Supply functional category, proportional to the total demand in this rate component. Blended supply is also allocated 89 percent of Other MWD costs, specifically the CRC, RTS, and seepage and standby credits, based on the share of total MWD water purchases allocated to that rate component.

4.5.2.3 Treated Imported Supply

All remaining usage (Residential Tiers 3 and 4 and Non-Residential Tiers 2 and 3) is served through MWD Tier 1 Treated purchases. In addition, Residential Tier 4 and Non-Residential Tier 3 are allocated the cost differential between MWD Tier 1 and Tier 2 Treated purchases.

This supply rate component is allocated 8 percent of the costs in the Source of Supply functional category, proportional to the total demand in this rate component. Treated imported supply is also allocated 11 percent of Other MWD costs, specifically the CRC, RTS, and seepage and standby credits, based on the share of total MWD water purchases allocated to that rate component.

Table 34 Allocation of Supply Categories to Rate Components

	Local Supply (AFY)	Blended Supply (AFY)	Treated Imported Supply (AFY)	Total Supply (AFY)
Groundwater Supply	12,845	-	-	12,845
Perris II	4,955	-	-	4,955
Perris I & Menifee	-	7,891	-	7,891
Untreated MWD + WFPs	-	23,580	-	23,580
MWD Tier I	-	32,401	6,357	38,758
Total	17,800	63,872	6,357	88,029

Table 35 Allocation of Supply Costs to Rate Components

	Local Supply	Blended Supply	Treated Imported Supply	FYE 2024 Cost
Groundwater Supply	\$4.36	-	-	\$4.36
Perris II	\$3.12	-	-	\$3.12
Perris I & Menifee	-	\$7.26	-	\$7.26
Untreated MWD + WFPs	-	\$27.74	-	\$27.74
MWD Tier I	-	\$44.45	\$9.20	\$53.64

³ MWD has two tiers of treated water supplies: Tier 1 and Tier 2. This differs from the District’s tiered rates, despite the same name.

	Local Supply	Blended Supply	Treated Imported Supply	FYE 2024 Cost
Other MWD	-	\$2.89	\$0.34	\$3.23
Source of Supply	\$1.12	\$4.00	\$0.42	\$5.54
Total Allocated Cost	\$8.60	\$86.34	\$9.96	\$104.90

Notes:

(1) Millions of dollars.

4.5.3 Infrastructure Components

The Base / Max Day / Max Hour functional categories are allocated to each rate class. Each of these three functional categories is assigned to a rate class using a different allocation factor.

- **Base** is allocated to each rate class based on that class’s share of the total ADD.
- **Max Day** is allocated to each rate class by first calculating the incremental extra capacity needed above ADD to meet MDD, and then each rate class receives its share based on its contribution to that extra capacity.
- **Max Hour** is allocated like Max Day but uses incremental extra capacity for MHD on top of the MDD capacity need.

The ADD, MDD, and MHD for each rate class are outlined in this section. Once allocated to each rate class, each component will then be allocated to individual tiers in the next section.

4.5.3.1 Base

Base cost allocations to each class are made in line with their average daily usage. Using FYE 2021 billing data, the estimated ADD for each class is shown in Table 36. The Base costs are then allocated to each class in line with their share of the ADD volume.

Table 36 Base Allocation to Rate Classes

	Residential Tiered	Non-Residential Tiered	Non-Residential Non-Tiered	Total
ADD (MGD)	49.0	7.2	9.1	65.3
Share of ADD	75%	11%	14%	0%
FYE 2024 Base Cost ⁽¹⁾	\$4.45	\$0.65	\$0.83	\$5.93

Notes:

(1) Millions of dollars.

4.5.3.2 Max Day

Max Day Demand (MDD) must be calculated using a combination of systemwide production and rate class billing datasets. Carollo used the non-coincidental peaking methodology outlined in the *M1 Manual*. In this methodology, the annual max month demand for each class is gathered, rather than determining the systemwide max month and then using the corresponding demand from that month for each class (otherwise known as coincidental peak). Non-coincidental peak is preferable because it represents the peak demand that the class is capable of putting on the system. The system is designed to meet the non-coincidental demand, rather than the coincidental demand.

The first step is to collect the individual maximum month demand (MMD) for each class, using the same FYE 2021 billing data used in the Base allocation above. This MMD is then converted to MDD using the systemwide ratio between MDD and MMD. Retail MMD for FYE 2021 was 88.2 MGD on a 24-hour basis. This was calculated based on the District's retail billing data for FYE 2021. The retail MDD was 106.9 MGD, which is 1.21 times the MMD. This ratio was used to convert each class's MMD to MDD.

To allocate to each class, the extra capacity needed on top of ADD to meet the class MDD is calculated, and then converted to a share of the total MDD extra capacity. The results are shown in Table 37.

Table 37 Max Day Allocation to Rate Classes

Class	Residential Tiered	Non-Residential Tiered	Non-Residential Non-Tiered	Total
Average Day Demand (MGD)	49.0	7.2	9.1	65.3
Max Month Demand (Average MGD) ⁽¹⁾	64.1	11.1	13.0	88.2
Systemwide MDD / MMD ⁽²⁾	1.21x	1.21x	1.21x	
Calculated MDD ⁽³⁾	77.7	13.5	15.8	106.9
MDD Extra Capacity ⁽⁴⁾	28.6	6.3	6.7	41.6
Share of Max Day Extra Capacity	69%	15%	16%	100%
FYE 2024 Max Day Cost ⁽⁵⁾	\$11.50	\$2.53	\$2.68	\$16.71

Notes:

- (1) Based on the non-coincidental max month for each class, which was August 2020 for both Tiered classes and December 2020 for Non-Tiered.
- (2) Max Day Demand of 106.9 MGD divided by Max Month Demand of 88.2 MGD equals 1.21.
- (3) Max month demand multiplied by systemwide max day / max month ratio.
- (4) Calculated MDD minus ADD.
- (5) Millions of dollars; Equal to MDD share multiplied by allocated costs in Table 32.

4.5.3.3 Max Hour

The Max Hour allocation follows the same process and calculation as the Max Day allocation, but starts with MDD instead of MMD, and instead of a systemwide ratio, it uses the District's estimated MHD ratio for each class. For the tiered classes, the District calculates MHD using an estimate of 2.00 times MDD.

For the non-tiered classes, this ratio is 1.00. Over the last several years, the District has moved its non-residential customers with higher peaking demands, specifically those with landscaping needs, onto the tiered rate structure. As a result, the remaining non-tiered non-residential customers are not assumed to have a need for max hour capacity beyond their max day capacity needs, because these remaining non-tiered customers have usage that does not align with the District's max hour capacity needs.

The results are in Table 38.

Table 38 Max Hour Allocation to Rate Classes

Class	Residential Tiered	Non-Residential Tiered	Non-Residential Non-Tiered	Total
Max Day Demand (MGD)	77.7	13.5	15.8	106.9
Max Hour / Max Day Ratio ⁽¹⁾	2.00x	2.00x	1.00x	
Calculated MHD ⁽²⁾	155.3	26.9	15.8	198.0
MHD Extra Capacity ⁽³⁾	77.7	13.5	0.0	91.1
Share of Max Hour Extra Capacity	85%	15%	0%	100%
FYE 2024 Max Day Cost ⁽⁴⁾	\$4.06	\$0.70	\$0.00	\$4.77

Notes:

- (1) Based on District planning estimates.
(2) Max day demand multiplied by max hour / max day ratio.
(3) MHD minus MDD.
(4) Millions of dollars; Equal to MHD share multiplied by allocated costs in Table 32.

4.5.4 Conservation

The Conservation category is split between Inefficient (Residential Tier 3 and Non-Residential Tier 2) and Wasteful (Residential Tier 4 and Non-Residential Tier 3) rate components. This is split 30 percent to the Inefficient category and the remaining 70 percent to the Wasteful category. Each of these categories is further split between Residential and Non-Residential based on the share of Max Day (69 percent for Residential, and the remaining 31 percent to Non-Residential).

This allocation of conservation costs reflects the District's practices that target larger volume users, under the policy that the more wasteful the use of water, the more it contributes to the need for conservation and the more likely the District's conservation efforts are to reduce it.

Table 39 Allocation of Conservation to Rate Components

Rate Component	Share of Conservation	FYE 2024 Cost ⁽¹⁾	Residential Share ⁽²⁾	Non-Residential Share ⁽¹⁾
Inefficient	30%	\$1.88	\$1.29	\$0.59
Wasteful	70%	\$4.39	\$3.02	\$1.37
Total	100%	\$6.27	\$4.31	\$1.95

Notes:

- (1) Millions of dollars.
(2) Allocated based on share of MDD from Table 37 (69 percent) with the remainder allocated to Non-Residential.

4.6 Calculate Unit Costs

The Unit Costs form the basis of the rates in the next section of this report. The Unit Costs are calculated through a three step process:

1. Assign function costs to the rate component (completed in the preceding section).
2. Determine what units of service will be used to assess customers for this rate component. For instance, supply components are charged for each hundred CCF.
3. Divide the allocated costs by the units of service.

4.6.1 Fixed Charge Components

The units of service for the Customer Service rate component are the number of bills that are processed and delivered. Because the District uses a daily rate for this rate component, but bills on a monthly basis, the number of monthly bills must be converted to a daily unit. This is calculated by multiplying the number of bills in

Table 21 by the average number of days in a billing cycle, which is 30.4 days.⁴

For Meter Service and Water Supply Reliability Capital Projects Charge rate components, the same process of converting a monthly figure to a daily figure is used, but instead of bills, it is the number of billed EMS. Each meter size is weighted based on an EMS ratio that the District has estimated based on the relative capacity for that meter compared to a standard residential meter based on the safe maximum operating flow rate for each meter type. This allows the District to calculate how much capacity each meter has the potential to use in the system. The EMS ratios are presented in Table 20.

The units of service shown in Table 40.

Table 40 Fixed Charge Units of Service

	Customer Service	Meter Service	Water Supply Reliability Capital Projects Charge
FYE 2024 Allocated Costs (millions)	\$11.06	\$27.71	\$16.25
Units of Service	Accounts Served per Day	EMS Served per Day	EMS Served per Day
Units	57,773,363	75,907,596	75,907,596
FYE 2024 Unit Cost (\$ / Day) ⁽¹⁾	\$0.191	\$0.365	\$0.214

Notes:

(1) Rounded to the nearest \$0.001.

4.6.2 Supply Rate Components

The units of service for the three different supply components are the respective number of units sold in the applicable tiers. Those units are summarized in Table 42.

Table 41 Supply Units of Service

Rate Class	Local Supply	Blended Supply	Treated Imported Supply
Residential			
Tier 1	7,753,655	-	-
Tier 2	-	16,135,145	-
Tier 3	-	-	1,819,538
Tier 4	-	-	466,027
Non-Residential			
Tier 1	-	3,595,930	-
Tier 2	-	-	298,540

⁴ 365 days in one year divided by 12 monthly billing cycles equals approximately 30.4 days per billing cycle.

Rate Class	Local Supply	Blended Supply	Treated Imported Supply
Tier 3	-		185,040
Non-Tiered	-	8,091,557	
Total	7,753,655	27,822,632	2,769,145

Notes:

(1) All figures in CCF.

Taking the allocated costs from

Table 35 and dividing them by the respective units of service, Table 42 shows the unit cost for each supply rate component.

Table 42 Supply Unit Cost Calculation

	Local Supply	Blended Supply	Treated Imported Supply
FYE 2024 Allocated Costs (millions)	\$8.60	\$86.77	\$9.53
Units of Service (CCF)	7,753,655	27,822,632	2,769,145
Unit Cost (\$ / CCF)	\$1.11	\$3.12	\$3.44

4.6.3 Infrastructure Rate Components

Similar to the supply units of service, the Base, Max Day, and Max Hour rate components are assigned units of service based on the projected sales by tier. These tiers are assigned each rate component in Table 43.

All retail units of water sold are assigned the Base infrastructure costs. Residential Tiers 2, 3, and 4 and all Non-Residential are allocated Max Day. Residential Tiers 3 and 4 and all Non-Residential usage is assigned Max Hour.

All customers benefit from the Base infrastructure costs. Tier 1 Residential only receives Base because this tier is primarily intended to serve health and human safety. Above Tier 1 Residential, all tiers receive an allocation of Max Day because all non-essential water usage has a peaking profile. Max Hour is allocated to upper tiers because these tiers go above their allocated budgets. The District’s customer budgets are intended to reflect the design capacity of the system. When customers exceed their budget, the District must ensure that sufficient capacity is available to meet this usage.

For the units of service for the Non-Residential Non-Tiered class, a lower demand estimate was used. This class has rather volatile usage. From FYE 2018 to 2021, this class has ranged from a low 10,659 AFY to a high of 20,188 AFY. Furthermore, the costs allocated to the infrastructure rate component are largely fixed in nature, meaning that any shortfall in revenues results in unfunded expenditures. This is in contrast to the MWD purchases where a demand decrease typically corresponds to an expenditure decrease.

As a result, the calculation of unit costs for infrastructure used a different figure for 2024 for the Non-Residential Non-Tiered class, using 18,576 AFY for supply rate components and 16,845 AFY for infrastructure rate components.

Table 43 Base / Max Day / Max Hour Units of Service

Rate Class	Base	Max Day	Max Hour
Residential			
Tier 1	7,753,655	-	-
Tier 2	16,135,145	16,135,145	-
Tier 3	1,819,538	1,819,538	1,819,538
Tier 4	466,027	466,027	466,027
Non-Residential			
Tier 1	3,595,930	3,595,930	-
Tier 2	298,540	298,540	298,540
Tier 3	185,040	185,040	185,040
Non-Tiered	7,337,533	7,337,533	7,337,533
Total	37,591,409	29,837,754	10,106,678

Notes:

(1) All figures in CCF.

The unit cost calculation using the above usage by tier is shown for Residential, Non- Residential Tiered, and Non- Residential Non-Tiered in Table 44, Table 45, and Table 46, respectively.

Table 44 Residential Tiered Infrastructure Unit Cost Calculation

	Base	Max Day	Max Hour
FYE 2024 Allocated Costs (millions)	\$4.45	\$11.50	\$4.06
Units of Service (CCF)	26,174,365	18,420,710	2,285,565
Unit Cost (\$ / CCF)	\$0.17	\$0.62	\$1.78

Table 45 Non-Residential Tiered Infrastructure Unit Cost Calculation

	Base	Max Day	Max Hour
FYE 2024 Allocated Costs (millions)	\$0.6502	\$2.53	\$0.70
Units of Service (CCF)	4,079,511	4,079,511	483,580
Unit Cost (\$ / CCF)	\$0.16	\$0.62	\$1.46

Table 46 Non-Residential Non-Tiered Infrastructure Unit Cost Calculation

	Base	Max Day	Max Hour
FYE 2024 Allocated Costs (millions)	\$0.83	\$2.68	\$0.00
Units of Service (CCF)	7,337,533	7,337,533	7,337,533
Unit Cost (\$ / CCF)	\$0.11	\$0.37	\$0.00

4.6.4 Conservation

Conservation is first split between Residential and Non-Residential based on the share of Max Day. This allocates conservation costs in alignment with peaking behavior for the class. This is approximately 69 percent for Residential and the remaining 31 percent is allocated to Non-Residential. The unit cost calculation is shown in Table 47 and Table 48.

Table 47 Residential Conservation Unit Cost Calculation

Rate Component	Inefficient	Wasteful
FYE 2024 Allocated Costs (millions)	\$1.29	\$3.02
Units of Service (CCF)	1,819,538	466,027
Unit Cost (\$ / CCF)	\$0.71	\$6.48

Notes:

(2) All figures in CCF.

Table 48 Non-Residential Conservation Unit Cost Calculation

Rate Component	Inefficient	Wasteful
FYE 2024 Allocated Costs (millions)	\$0.59	\$1.37
Units of Service (CCF)	298,540	188,025
Unit Cost (\$ / CCF)	\$1.96	\$7.28

Section 5

WATER RATE DESIGN

5.1 Fixed Charge Calculation

5.1.1 Daily Service Charge

The DSC is the combination of the Account and Demand unit costs. The Account charge is the same for all accounts regardless of meter size or usage. The Demand charge scales based on the meter size, using equivalent meter service ratios defined in the preceding section. Table 49 shows the daily rates for the next five years for both components. Both rates are rounded to three decimal places.

Table 50 shows the monthly charge when both rates are combined for a 30-day billing cycle and then rounded up to the nearest cent (two decimal places).

Table 49 Daily Service Charge Five-Year Schedule

Meter Size	2023	2024	2025	2026	2027	2028
Account Charge						
All Meters	\$0.160	\$0.191	\$0.204	\$0.218	\$0.233	\$0.250
Demand Charge						
5/8"	\$0.340	\$0.365	\$0.388	\$0.416	\$0.445	\$0.477
3/4"	\$0.340	\$0.365	\$0.388	\$0.416	\$0.445	\$0.477
1"	\$0.520	\$0.559	\$0.594	\$0.637	\$0.681	\$0.730
1 1/2"	\$1.720	\$1.847	\$1.963	\$2.105	\$2.252	\$2.414
2"	\$2.760	\$2.963	\$3.150	\$3.377	\$3.613	\$3.873
3"	\$5.520	\$5.926	\$6.300	\$6.754	\$7.225	\$7.745
4"	\$8.630	\$9.265	\$9.849	\$10.560	\$11.296	\$12.108
6"	\$17.260	\$18.530	\$19.697	\$21.119	\$22.591	\$24.215
8"	\$27.620	\$29.651	\$31.520	\$33.794	\$36.150	\$38.750
10"	\$41.430	\$44.477	\$47.279	\$50.691	\$54.225	\$58.124
12"	\$58.250	\$62.534	\$66.474	\$71.271	\$76.239	\$81.722

Table 50 Monthly Service Charge Five-Year Schedule

Meter Size	2023	2024	2025	2026	2027	2028
5/8"	\$15.00	\$16.68	\$17.76	\$19.02	\$20.34	\$21.81
3/4"	\$15.00	\$16.68	\$17.76	\$19.02	\$20.34	\$21.81
1"	\$20.40	\$22.50	\$23.94	\$25.65	\$27.42	\$29.40
1 1/2"	\$56.40	\$61.14	\$65.01	\$69.69	\$74.55	\$79.92
2"	\$87.60	\$94.62	\$100.62	\$107.85	\$115.38	\$123.69
3"	\$170.40	\$183.51	\$195.12	\$209.16	\$223.74	\$239.85
4"	\$263.70	\$283.68	\$301.59	\$323.34	\$345.87	\$370.74
6"	\$522.60	\$561.63	\$597.03	\$640.11	\$684.72	\$733.95
8"	\$833.40	\$895.26	\$951.72	\$1,020.36	\$1,091.49	\$1,170.00
10"	\$1,247.70	\$1,340.04	\$1,424.49	\$1,527.27	\$1,633.74	\$1,751.22
12"	\$1,752.30	\$1,881.73	\$2,000.33	\$2,144.66	\$2,294.16	\$2,459.14

Notes:

(1) Includes both Account and Demand Charges. Based on 30 day monthly billing cycle. Rounded up to the nearest \$0.01.

5.1.2 Water Supply Reliability Capital Projects Charge

The Water Supply Reliability Capital Projects Charge (WCP) is scaled based on meter size. The five-year rates are shown in Table 51 for the daily rate and Table 52 for the monthly charge based on an average length billing cycle. Because the WCP is intended to support both planned capital projects included in the budget, as well as building reserves to fund unplanned but necessary projects, the District has elected to phase-in the increase in this rate, limiting the 2024 rate to \$0.20 per EMS per day.

Similar to the DSC, the daily rates are shown rounded up to three decimal places, while the monthly rates are rounded up to the nearest cent (two decimal places).

Table 51 Daily WCP Five-Year Schedule

Meter Size	2023	2024	2025	2026	2027	2028
5/8"	\$0.178	\$0.200	\$0.214	\$0.230	\$0.247	\$0.265
3/4"	\$0.178	\$0.200	\$0.214	\$0.230	\$0.247	\$0.265
1"	\$0.273	\$0.306	\$0.328	\$0.352	\$0.378	\$0.406
1 1/2"	\$0.902	\$1.012	\$1.083	\$1.164	\$1.250	\$1.341
2"	\$1.447	\$1.624	\$1.738	\$1.868	\$2.006	\$2.152
3"	\$2.895	\$3.248	\$3.475	\$3.735	\$4.011	\$4.303
4"	\$4.526	\$5.077	\$5.432	\$5.838	\$6.270	\$6.727
6"	\$9.051	\$10.153	\$10.864	\$11.676	\$12.539	\$13.453
8"	\$14.484	\$16.248	\$17.385	\$18.685	\$20.066	\$21.528
10"	\$21.726	\$24.371	\$26.077	\$28.027	\$30.098	\$32.292
12"	\$30.547	\$34.265	\$36.664	\$39.405	\$42.317	\$45.401

Table 52 Monthly WCP Five-Year Schedule

Meter Size	2023	2024	2025	2026	2027	2028
5/8"	\$5.35	\$6.00	\$6.42	\$6.90	\$7.41	\$7.95
3/4"	\$5.35	\$6.00	\$6.42	\$6.90	\$7.41	\$7.95
1"	\$8.19	\$9.18	\$9.84	\$10.56	\$11.34	\$12.18
1 1/2"	\$27.06	\$30.36	\$32.49	\$34.92	\$37.50	\$40.23
2"	\$43.43	\$48.72	\$52.14	\$56.04	\$60.18	\$64.56
3"	\$86.85	\$97.44	\$104.25	\$112.05	\$120.33	\$129.09
4"	\$135.78	\$152.31	\$162.96	\$175.14	\$188.10	\$201.81
6"	\$271.55	\$304.59	\$325.92	\$350.28	\$376.17	\$403.59
8"	\$434.53	\$487.44	\$521.55	\$560.55	\$601.98	\$645.84
10"	\$651.80	\$731.13	\$782.31	\$840.81	\$902.94	\$968.76
12"	\$916.41	\$1,027.95	\$1,099.92	\$1,182.15	\$1,269.51	\$1,362.03

Notes:

(1) Based on 30-day monthly billing cycle. Rounded up to the nearest \$0.01.

5.2 Volumetric Rate Calculation

The volumetric rates are the combination of the unit costs calculated in the previous section for each of the respective rate components under each tier.

5.2.1 Property Tax Revenue Reallocation

The District collects property tax revenue from across its service area. This revenue can be reallocated to offset specific rates. For FYE 2024, the District has elected to do a one-time reallocation of property tax revenue from Non-Residential Tier 2 to prevent this rate from decreasing, while other customer classes pay increased rates. The current rate is \$7.92 per CCF, while the 2024 rate would decrease to \$7.60 per CCF based on the current cost of service. Because this rate is forecasted to increase to \$8.04 per CCF in 2025, the District has elected to reduce the property tax revenue allocation to this rate on a one-year basis.

For this reallocation, a portion of property tax revenues that offsets Conservation costs has been reallocated away from Non-Residential Tier 2. This requires determining how much of the property tax revenue offsets the conservation portion of the Non-Residential Tier 2 rate using the following steps:

1. Determine the amount of property tax revenue allocated to Conservation across all classes, as shown in Table 32. For FYE 2024, that is 3.2 percent.
2. Determine the share of that revenue allocated to Non-Residential Tiered. Conservation was split between Residential and Non-Residential using the share of Max Day, which is 31.2 percent, as shown in Table 39.
3. Determine the share of that revenue allocated to Non-Residential Tier 2. Because 30 percent of all Conservation costs are allocated to the Inefficient rate component, which is then allocated to Non-Residential Tier 2, that percentage is used for the property tax revenue.

Multiplying each of these percentages and then multiplying by the projected FYE 2024 property tax revenue (\$33.23 million) yields the amount of Conservation costs that are offset by that revenue source. Table 53 outlines each of these steps.

Table 53 Allocation of Property Tax to Base / Max Day / Max Hour

	FYE 2024 Amount
FYE 2024 Revenue Requirements Allocation ⁽¹⁾	3.2%
FYE 2024 Property Tax Revenue Allocation (millions) ⁽²⁾	\$1.07
Share to Non-Residential Tiered ⁽³⁾	31.2%
Allocation of Property Tax Revenue to Non-Residential	\$334,465
Share to Non-Residential Tier 2 ⁽⁴⁾	30.0%
Total Property Tax Allocation to Non-Residential Tier 2	\$100,340

Notes:

(1) From Table 32.

(2) FYE 2024 projected property tax revenue is \$33.23 million as shown in Table 23.

(3) From Table 37, using the portion of Max Day not allocated to Residential.

(4) From Table 39, using the Inefficient allocation.

This calculation shows that as much as \$100,340 of property tax revenue that is currently reducing the Non-Residential Tier 2 rate via Conservation costs can be reallocated to other rates. To keep the Non-Residential Tier 2 rate from decreasing for 2024, \$80,000 of that \$100,340 will be reallocated and applied as an offset for residential rates for customers within budget. This equates to an additional \$0.27 per CCF for Non-Residential Tier 2 and a reduction of \$0.003 per CCF for Residential Tiers 1 and 2. The remaining \$20,340 in property tax revenue will remain as an offset for Non-Residential Tier 2 Conservation costs. The calculation is shown in Table 54.

Table 54 Property Tax Reallocation Unit Cost

	Non-Residential Tier 2	Residential Tier 1 and Tier 2
Property Tax Reallocation / (Offset)	\$80,000	(\$80,000)
Units (CCF)	298,540	23,888,800
Unit Cost (\$ / CCF)	\$0.27	(\$0.003)

5.2.2 Residential Rate Calculation

The District plans to purchase water at MWD Tier 1 rates. However, usage in Residential Tier 4 and Non-Residential Tier 3 exceeds the District's long-term water supply plan at the MWD Tier 1 level. Therefore, the additional cost associated with MWD Tier 2 is allocated to these rates to develop reserves to pay for this supply in the future. For 2024, this incremental amount is \$0.46 per CCF.⁵

Table 55 Residential Tiered Rate Calculation

Rate Component	Tier 1	Tier 2	Tier 3	Tier 4
Local Supply	\$1.11	-	-	-
Blended Supply	-	\$3.12	-	-
Treated Imported Supply	-	-	\$3.44	\$3.44
MWD Treated Tier 2 Surcharge	-	-	-	\$0.46
Base	\$0.17	\$0.17	\$0.17	\$0.17

⁵ The MWD Tier 1 rate is \$1,256 per AF, and the Tier 2 rate is \$1,455 per AF. The difference is \$199 per AF, or \$0.46 per CCF

Rate Component	Tier 1	Tier 2	Tier 3	Tier 4
Max Day	-	\$0.62	\$0.62	\$0.62
Max Hour	-	-	\$1.78	\$1.78
Conservation	-	-	\$0.71	\$6.48
Additional Property Tax Allocation / (Offset)	(\$0.003)	(\$0.003)	-	-
Total ⁽²⁾	\$1.28	\$3.91	\$6.73	\$12.95

Notes:

(1) All rates shown in \$ / CCF

(2) Rounded up to the nearest \$0.01.

Table 56 Residential Tiered Rate Five-Year Schedule

Rate	2023	2024	2025	2026	2027	2028
Tier 1	\$1.17	\$1.28	\$1.41	\$1.55	\$1.71	\$1.89
Tier 2	\$3.75	\$3.91	\$4.17	\$4.47	\$4.79	\$5.13
Tier 3	\$6.22	\$6.73	\$7.11	\$7.55	\$8.02	\$8.52
Tier 4	\$12.73	\$12.95	\$13.72	\$14.61	\$15.55	\$16.55

5.2.3 Non-Residential Rate Calculation

Table 57 Non-Residential Rate Calculation

Rate Component	Tier 1	Tier 2	Tier 3	Non-Tiered
Local Supply	-	-	-	-
Blended Supply	\$3.12	-	-	\$3.12
Treated Imported Supply	-	\$3.44	\$3.44	-
MWD Treated Tier 2 Surcharge	-	-	\$0.46	-
Base	\$0.16	\$0.16	\$0.16	\$0.11
Max Day	\$0.62	\$0.62	\$0.62	\$0.37
Max Hour	-	\$1.46	\$1.46	\$0.00
Conservation	-	\$1.96	\$7.39	-
Additional Property Tax Allocation / (Offset)	-	\$0.27	-	-
Total	\$3.90	\$7.92	\$13.53	\$3.60

Notes:

(1) All rates shown in \$ / CCF and rounded up to the nearest \$0.01.

Table 58 shows the five-year forecast of proposed rates for Non-Residential. The property tax revenue reallocation discussed above only applies to 2024, and then the Tier 2 rate continues its original forecast for 2025 and beyond.

Table 58 Non-Residential Rate Five-Year Schedule

Rate	2023	2024	2025	2026	2027	2028
Tier 1	\$3.90	\$3.90	\$4.16	\$4.46	\$4.77	\$5.12
Tier 2	\$7.92	\$7.92	\$8.09	\$8.60	\$9.15	\$9.73
Tier 3	\$13.19	\$13.53	\$14.34	\$15.27	\$16.26	\$17.31
Non-Tiered	\$3.32	\$3.60	\$3.84	\$4.11	\$4.40	\$4.72

5.2.4 Bill Impacts

For the typical residential customer that stays within budget, the monthly bill is forecasted to increase 6.5 percent in 2024 and 6.9 percent in 2025. In 2024, the increase is lower than the 9.0 percent revenue requirement because of shifts in the cost of service distribution.

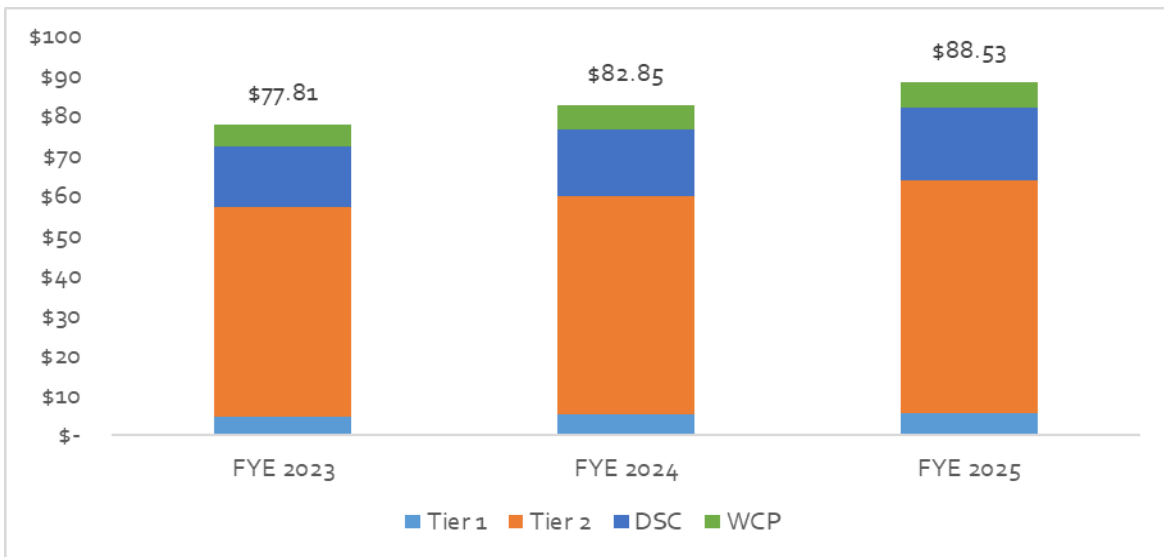


Figure 10 Monthly Water Bill Impact for 18 CCF Customer Using 100% of Budget

For a customer that exceeds their monthly budget, the forecasted bill impact is 6.0 percent in 2024 and 6.3 percent in 2025.

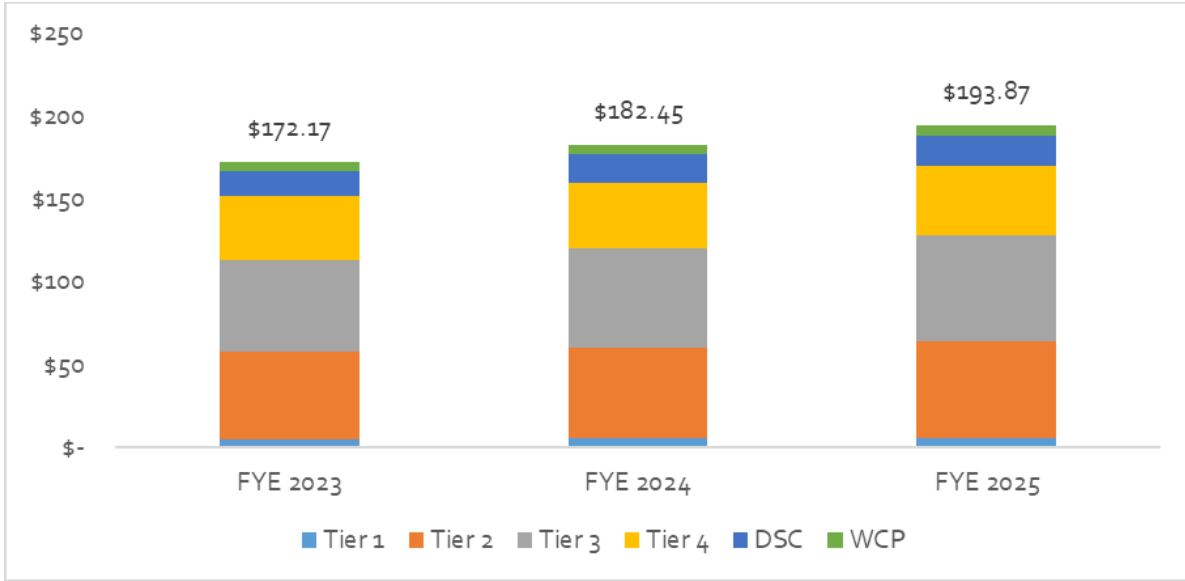


Figure 11 Monthly Water Bill Impact for 30 CCF Customer Using 167% of Budget

PART III – WASTEWATER

Section 6

WASTEWATER FINANCIAL PLAN

The financial plan forms the basis of any rate calculations and recommendations. The rates must generate sufficient revenue to cover the District’s operating, capital, and other expenses.

Carollo developed the following financial plan using a variety of sources provided by the District. This input data was combined with forecast assumptions for cost escalation, account growth, and capital investments, as well as other factors that impact projected revenues and expenses.

The District’s fiscal year starts on July 1 and ends on June 30 of the following calendar year. This financial plan covers FYE June 30, 2024, through FYE 2028. By contrast, the District updates its rates on January 1 of each calendar year. As a result, all expense planning is based on the fiscal year, while rate revenue will be adjusted for the calendar year and the additional revenue for each fiscal year will only include billing from January through June.

6.1 Financial Plan Assumptions and Inputs

Table 59 outlines the assumptions and inputs used when projecting line items expenses and non-operating revenues. For FYE 2024 and 2025, the District provided its adopted budgets and FYE 2026 through 2028 were forecasted from those budgeted amounts.

Table 59 Cost and Miscellaneous Revenue Forecasting Assumptions

Forecast Factor	FYE 2024	FYE 2025	FYE 2026	FYE 2027	FYE 2028
General Inflation	<i>Budgeted</i>	<i>Budgeted</i>	5.0%	5.0%	4.0%
Chemicals	<i>Budgeted</i>	<i>Budgeted</i>	6.0%	5.0%	5.0%
Energy	<i>Budgeted</i>	<i>Budgeted</i>	6.0%	5.0%	5.0%
Raw Labor	<i>Budgeted</i>	<i>Budgeted</i>	5.0%	3.0%	3.0%
Labor Vacancy	<i>Budgeted</i>	<i>Budgeted</i>	-2.5%	-2.5%	-2.5%
Net Labor	<i>Budgeted</i>	<i>Budgeted</i>	2.4%	0.4%	0.4%
Property Tax	2.0%	2.0%	2.0%	2.0%	2.0%
Unfunded Liabilities	0.0%	0.0%	0.0%	0.0%	0.0%

6.1.1 Existing Rates

The District’s current wastewater rate structure charges each customer a fixed daily service charge. The daily service charge is calculated based on the number of EDU assessed for that service connection. An EDU is intended to represent the typical flow from an average single family residential connection, in both volume and loadings. At the start of service, the District assigns an EDU number to each connection based on the expected volume of and treatment constituents contained within its wastewater discharge. Treatment constituents are the contaminants and pollutants contained in wastewater that the District must treat before it is discharged.

The District estimates the monthly wastewater flow for each customer, calculates the loadings—the total pounds of treatment constituents contained within the wastewater flow—and then assigns an EDU figure to the account.

Within the residential portion of the wastewater rate structure, the District also adjusts the wastewater charge based on occupancy. When a single family residence connects, it is typically assigned to Block 2, which is assumed to have 3 to 4 persons per household. This aligns with the District’s indoor water budget rate calculations. Some customers however have a smaller or larger household and request variances on their indoor water budgets. When this occurs, the wastewater block is updated as well. The wastewater bill is then adjusted based on this occupancy, under the assumption that the wastewater discharge decreases or increases accordingly.

The blocks and the adjustment factors are shown in Table 60, while the current rates for each block across the five service areas are shown in Table 61. The current number of EDU in each block, by service area, are shown in Table 62.

Table 60 Wastewater Block Factors

Block	Occupancy	Block Factor
Block 1	1 – 2 people	60%
Block 2	3 – 4 people	100%
Block 3	5 – 6 people	125%
Block 4	7 people or more	170%
No Block	N/A	100%

Table 61 Current Wastewater Daily Service Charges per EDU

	Block 1	Block 2	Block 3	Block 4	No Block
SA 31 – Hemet / SJ	\$0.60	\$1.00	\$1.25	\$1.70	\$1.00
SA 32 – Moreno Valley	\$0.61	\$1.02	\$1.28	\$1.73	\$1.02
SA 33 – Sun City	\$0.62	\$1.04	\$1.30	\$1.77	\$1.04
SA 34 – Temecula	\$0.70	\$1.17	\$1.46	\$1.99	\$1.17
SA 35 – Perris	\$0.82	\$1.36	\$1.70	\$2.31	\$1.36

Table 62 Current Number of EDU and Block-Factor Adjusted Equivalent Dwelling Units

	Block 1	Block 2	Block 3	Block 4	No Block	Total
SA 31 – Hemet / SJ	88,593	138,181	47,626	17,407	43,942	335,750
SA 32 – Moreno Valley	118,173	325,666	146,941	58,927	90,461	740,169
SA 33 – Sun City	125,204	203,375	72,498	21,740	36,312	459,129
SA 34 – Temecula	65,494	205,190	86,259	22,457	76,123	455,522
SA 35 – Perris	38,050	125,405	68,207	25,787	56,824	314,273
Total EDU	435,514	997,816	421,531	146,318	303,663	2,304,842
Total Adjusted for Block Factors	261,308	997,816	526,914	248,741	303,663	2,338,442

The annual projected number of EDU, both unweighted and weighted for block factors, for the next five years is shown in the table below, along with the annual growth assumption.

Table 63 Current Number of EDU and Block-Factor Adjusted EDU

	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027	FYE 2028
Annual Growth Rate		1.56%	1.56%	1.56%	1.56%	1.56%
Total EDU	2,269,525	2,304,842	2,340,709	2,377,133	2,414,124	2,451,691
Total EDU Adjusted for Block Factor	2,302,611	2,338,442	2,374,831	2,411,787	2,449,318	2,487,432

6.2 Financial Position

Carollo used three financial tests when analyzing the financial position for the District’s wastewater system. These three tests are shown in Figure 12.

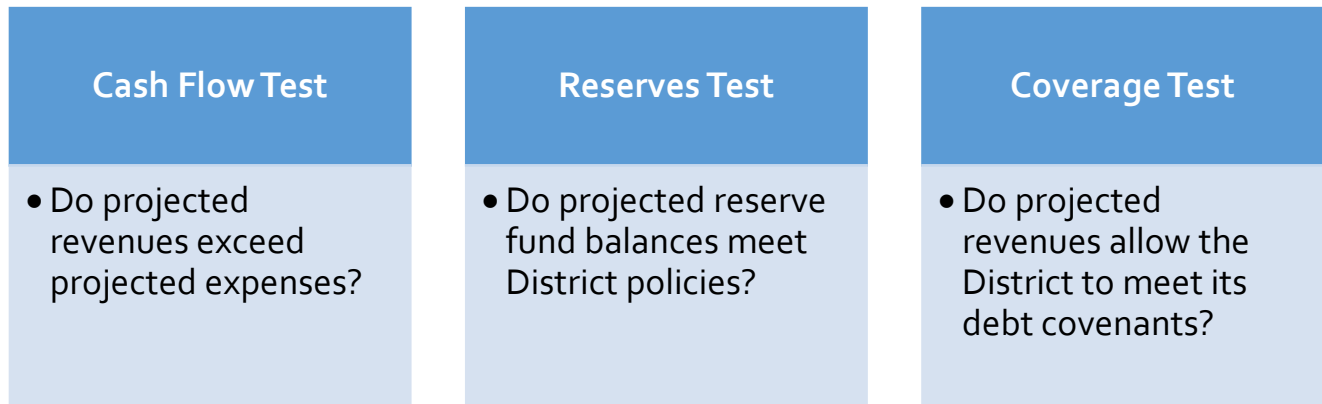


Figure 12 Financial Plan Tests

These three tests are viewed together to assess the financial viability of the rate plan. Positive cash flows support debt coverage and build reserves. Negative cash flows can be planned for, provided that reserves can support the shortfall while maintaining target balances over the long-term.

The coverage test is a combined test between both the water and sewer enterprises and is included in a separate section. The wastewater cash flow and reserves tests provide guidance but are not strict requirements, providing the District some flexibility to meet these tests over time. This allows the District to balance funding needs with revenue requirement increases.

Table 64 shows the five-year forecast of revenues before any revenue requirement adjustments are implemented. Table 65 shows the five-year forecast of wastewater expenses. These forecasts were developed using the assumptions and inputs discussed above.

Table 64 Projected Baseline Wastewater Revenues

	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027	FYE 2028
Operating Revenues						
Wastewater Service	\$75.50	\$76.25	\$77.64	\$79.13	\$80.78	\$82.49
Fixed Charge for Sewer System Capital Projects	\$10.25	\$10.36	\$10.55	\$10.75	\$10.97	\$11.21
Outside Wastewater Collections	\$33.97	\$34.31	\$34.93	\$35.60	\$36.34	\$37.11
Dump Station	\$1.11	\$1.12	\$1.14	\$1.17	\$1.19	\$1.22
Total Operating Revenue	\$120.83	\$122.04	\$124.25	\$126.64	\$129.29	\$132.03
Non-Operating Revenue						
Property Tax & Standby	\$22.53	\$23.43	\$24.13	\$24.85	\$25.60	\$26.37
Other Income/Grants	\$1.33	\$1.39	\$1.43	\$1.47	\$1.51	\$1.56
Total Non-Operating Revenue	\$23.86	\$24.81	\$25.56	\$26.32	\$27.11	\$27.93
Total Baseline Revenue	\$144.69	\$146.85	\$149.81	\$152.97	\$156.41	\$159.96

Notes:

(1) All values in million dollars.

Table 65 Projected Wastewater Expenses

	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027	FYE 2028
Operating Expenses						
Recycled Water Interfund Allocation	\$3.19	\$3.45	\$3.66	\$3.84	\$4.03	\$4.19
Sewer Collection System	\$1.52	\$1.64	\$1.74	\$1.83	\$1.92	\$1.99
Sewer Transmission System	\$0.44	\$0.48	\$0.50	\$0.53	\$0.56	\$0.58
Sewer Lift Station Facilities	\$4.46	\$4.81	\$5.10	\$5.36	\$5.63	\$5.85
Sewer Treatment Facilities	\$34.52	\$37.29	\$39.52	\$41.50	\$43.57	\$45.32
Sewer Solid Waste Disposal	\$3.02	\$3.26	\$3.45	\$3.63	\$3.81	\$3.96
Allocated Support	\$14.06	\$15.19	\$16.10	\$16.90	\$17.75	\$18.46
G&A	\$9.22	\$9.96	\$10.56	\$11.08	\$11.64	\$12.10
Other Admin	\$1.06	\$1.15	\$1.22	\$1.28	\$1.34	\$1.40
Total - Operating Expenses	\$71.50	\$77.22	\$81.85	\$85.94	\$90.24	\$93.85
Non-Operating Expenses						
Miscellaneous Expense	\$1.07	\$1.16	\$1.23	\$1.29	\$1.35	\$1.41
Special Projects & Studies Allocated to Svcs	\$0.36	\$0.38	\$0.41	\$0.43	\$0.45	\$0.47
Unallocated Support	\$21.63	\$23.36	\$24.76	\$25.99	\$27.29	\$28.39
OFA	\$10.59	\$10.86	\$10.90	\$11.45	\$12.02	\$12.50
Total - Non-Operating Expenses	\$33.64	\$35.76	\$37.29	\$39.16	\$41.12	\$42.76

	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027	FYE 2028
Debt Service and Other Obligations						
COP/Bonds	\$2.53	\$2.52	\$2.61	\$2.61	\$2.61	\$2.61
SRF Loan	\$1.88	\$1.88	\$1.88	\$1.88	\$1.88	\$1.88
Unfunded Liabilities (OPEB/Pensions)	\$7.54	\$7.54	\$7.54	\$7.54	\$7.54	\$7.54
Total - Debt Service and Other Obligations	\$11.95	\$11.93	\$12.03	\$12.03	\$12.03	\$12.03
Capital						
Betterment	\$2.71	\$12.91	\$11.71	\$3.01	\$2.71	\$7.99
R&R	\$7.62	\$27.71	\$23.99	\$8.38	\$9.62	\$12.67
Total - Capital	\$10.33	\$40.61	\$35.70	\$11.39	\$12.32	\$20.66
Total Expenses	\$127.42	\$165.53	\$166.88	\$148.53	\$155.71	\$169.30

Notes:

(1) All values in million dollars.

6.2.1 Recommended Revenue Requirements

The Annual Revenue Requirement is the amount of revenue that needs to be generated by the rates. This is the target for the following steps when calculating rates. The Annual Revenue Requirement is the sum of:

1. Total expenses.
2. Non-operating revenues (as an offset against expenses).
3. Planned additions to or use of reserves.

The District's current revenues are not sufficient to fully meet the revenue requirements and additional revenue is recommended to support the District's water operations and capital activities. Because of significant cost escalation over the last two years in effectively all cost centers, the District's expenses have increased substantially. Projected FYE 2023 actuals for operating expenses are already higher than the original budgeted amounts for FYE 2023, and budgeted operating expenses for FYE 2024 are another 8 percent higher. As a result, the rate revenue should increase to keep pace with expenses.

Working with District management, Carollo developed the following annual revenue requirements to help the wastewater system maintain optimal funding levels. A 5.0 percent revenue requirement increase is recommended for FYE 2024, followed by 5.5 percent in FYE 2025. After this, the annual revenue requirement adjustments gradually return to the long-term average inflation rate, dropping to 4.5 percent for two years and then to 3.5 percent.

Aside from expenses and offsetting revenues, any planned use of or additions to reserves needs to be included in the revenue requirement. In the first two years of the financial plan, the District is planning to draw down reserves. This reduces the revenue requirement each year. In the following three years, the District will begin building reserves again, resulting in an increase in the revenue requirement.

Table 66 Projected Wastewater Rate Revenue Requirements

	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027	FYE 2028
Total Expenses	\$127.42	\$165.53	\$166.88	\$148.53	\$155.71	\$169.30
Non-Operating Revenues	(\$23.86)	(\$24.81)	(\$25.56)	(\$26.32)	(\$27.11)	(\$27.93)
Other Rate Revenues	(\$35.08)	(\$35.43)	(\$36.07)	(\$36.77)	(\$37.54)	(\$38.33)
Additions to / (Use of) Reserves	\$17.27	(\$14.35)	(\$7.57)	\$18.60	\$19.94	\$14.27
Annual Rate Revenue Requirement	\$85.75	\$90.94	\$97.68	\$104.04	\$111.00	\$117.32
Projected Baseline Rate Revenue	\$85.75	\$86.61	\$88.18	\$89.88	\$91.76	\$93.70
Additional Rate Revenue Needed	-	\$4.33	\$9.50	\$14.16	\$19.24	\$23.62

Notes:

(1) All values in million dollars.

The District's current revenues are not sufficient to fully satisfy the cash flow test in the next two years. There are sufficient reserves to maintain cash flows during shortfalls, however additional revenue is recommended to support the District's debt service coverage and to keep pace with cost drivers. Like the water system, significant cost escalation over the last two years, in effectively all cost centers, has substantially increased the District's expenses. Budgeted operating expenses for FYE 2024 are 8 percent higher than projected FYE 2023 actuals. As a result, the revenue requirements should increase to keep pace with expenses.

Table 67 Five-Year Revenue Requirement Increases

Fiscal Year	Revenue Requirement Increase
FYE 2024	5.0%
FYE 2025	5.5%
FYE 2026	4.5%
FYE 2027	4.5%
FYE 2028	3.5%

It is important to note that for FYE 2024, not all rates will increase by 5.0 percent this Study also including a cost of service analysis. California Proposition 218 requires that no wastewater rates can exceed the proportional cost of service to provide that service. Every utility must periodically evaluate its rates to confirm that they do not exceed the cost of service. This process is achieved through a full cost of service cost allocation where the District's expenses are ultimately tied to each rate. As a result, some rate components will increase more or less than the whole. As a result of the cost of service analysis, and particularly the phase-in of postage stamp rates, some rates will increase by more than the revenue requirement increases shown in Table 67, while some will increase by less. The cost of service analysis is fully detailed in subsequent sections of the report.

Table 64 below shows the five-year forecast of all wastewater revenues before any revenue requirement adjustments. Table 65 shows the five-year forecast of all wastewater expenses. Table 68 shows the cash flow forecast including the proposed revenue requirements. Table 69 shows the forecasted reserve balances along with the reserve fund targets. The reserve fund targets are set according to District financial policies. Table 70 shows the projected debt coverage, which is forecasted to meet the target of 1.50x following the proposed revenue requirements.

Table 68 Projected Wastewater Cash Flow with Revenue Requirement Increases

	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027	FYE 2028
Revenues						
Rate Revenues	\$85.75	\$86.61	\$88.18	\$89.88	\$91.76	\$93.70
Other Operating Revenues	\$35.08	\$35.43	\$36.07	\$36.77	\$37.54	\$38.33
Non-Operating Revenues	\$23.86	\$24.81	\$25.56	\$26.32	\$27.11	\$27.93
Additional Revenue from Annual Adjustments						
FYE 2024 - 5.0% revenue requirements increase	-	\$4.33	\$4.41	\$4.49	\$4.59	\$4.68
FYE 2025 - 5.5% revenue requirements increase	-	-	\$5.09	\$5.19	\$5.30	\$5.41
FYE 2026 - 4.5% revenue requirements increase	-	-	-	\$4.48	\$4.57	\$4.67
FYE 2027 - 4.5% revenue requirements increase	-	-	-	-	\$4.78	\$4.88
FYE 2028 - 3.5% revenue requirements increase	-	-	-	-	-	\$3.97
Less: Partial Year Revenue Increase	\$0.00	(\$1.87)	(\$2.19)	(\$1.93)	(\$2.06)	(\$1.71)
Total Revenues	\$144.69	\$149.31	\$157.12	\$165.20	\$173.59	\$181.86
Expenses						
Operating Expenses	\$71.50	\$77.22	\$81.85	\$85.94	\$90.24	\$93.85
Non-Operating Expenses	\$33.64	\$35.76	\$37.29	\$39.16	\$41.12	\$42.76
Debt Service and Other Obligations	\$11.95	\$11.93	\$12.03	\$12.03	\$12.03	\$12.03
Capital Improvements	\$10.33	\$40.61	\$35.70	\$11.39	\$12.32	\$20.66
Total Expenses	\$127.42	\$165.53	\$166.88	\$148.53	\$155.71	\$169.30
Net Operating Income / (Loss) ⁽²⁾	\$37.38	\$35.35	\$37.68	\$40.90	\$44.20	\$48.06
Cash Flow ⁽³⁾	\$17.27	(\$16.21)	(\$9.76)	\$16.67	\$17.88	\$12.56
Annual Revenue Requirement ⁽⁴⁾	\$85.75	\$90.94	\$97.68	\$104.04	\$111.00	\$117.32

Notes:

(1) All values in million dollars.

(2) Operating Revenues minus Operating Expenses and Debt Service and Other Obligations (OPEB).

(3) Total Revenues minus Total Expenses.

Table 69 Projected Wastewater Reserve Fund Forecast after Revenue Requirement Increases

	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027	FYE 2028
Reserve Fund Sources / (Uses)						
Beginning Balance	\$273.03	\$292.86	\$283.96	\$280.63	\$303.44	\$328.07
Cash Flow	\$17.27	(\$16.21)	(\$9.76)	\$16.67	\$17.88	\$12.56
Interest Income	\$2.56	\$7.32	\$7.10	\$7.02	\$7.59	\$8.20
Phase-In Reserve Drawdown	\$0.00	\$0.00	(\$0.67)	(\$0.87)	(\$0.83)	(\$0.79)
Ending Balance	\$292.86	\$283.96	\$280.63	\$303.44	\$328.07	\$348.04
Reserve Targets						
Operating	\$17.63	\$19.04	\$20.18	\$21.19	\$22.25	\$23.14
Rate Stabilization	\$5.96	\$6.43	\$6.82	\$7.16	\$7.52	\$7.82
R&R	\$48.91	\$52.82	\$55.99	\$58.79	\$61.73	\$64.20
Betterment	\$27.89	\$30.13	\$31.93	\$33.53	\$35.21	\$36.61
Research & Development	\$1.73	\$1.86	\$1.98	\$2.07	\$2.18	\$2.27
Equipment Replacement	\$1.73	\$1.86	\$1.98	\$2.07	\$2.18	\$2.27
Annual Operating Debt Service Reserve	\$4.41	\$4.40	\$4.50	\$4.50	\$4.50	\$4.49
General Liability & Litigation Reserve	\$1.15	\$1.24	\$1.32	\$1.38	\$1.45	\$1.51
Workers' Compensation Reserve	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Total Reserve Fund Target	\$109.41	\$117.79	\$124.69	\$130.70	\$137.01	\$142.31
Fund Surplus / (Deficit)						
	\$183.45	\$166.17	\$155.93	\$172.74	\$191.06	\$205.73

Notes:

(1) All values in million dollars.

Table 70 Projected Wastewater Debt Coverage

	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027	FYE 2028
Operating Revenues	\$144.69	\$149.02	\$156.77	\$164.89	\$173.26	\$181.59
Financial Participation Charge Revenues	\$29.47	\$39.78	\$41.36	\$43.43	\$45.60	\$47.42
Less: Operating Expenses	(\$110.84)	(\$118.83)	(\$125.02)	(\$131.27)	(\$137.83)	(\$143.34)
Less: Unfunded Liabilities (OPEB/Pensions)	(\$7.54)	(\$7.54)	(\$7.54)	(\$7.54)	(\$7.54)	(\$7.54)
Net Revenues Available for Debt Coverage	\$55.78	\$62.43	\$65.57	\$69.51	\$73.49	\$78.13
Debt - Rate-Funded	\$4.41	\$4.40	\$4.50	\$4.50	\$4.50	\$4.49
Debt - FPC-Funded	\$37.07	\$36.80	\$35.00	\$35.01	\$35.02	\$35.03
Total Debt	\$41.49	\$41.20	\$39.50	\$39.50	\$39.52	\$39.53
Debt Coverage Ratio	1.34x	1.52x	1.66x	1.76x	1.86x	1.98x

Section 7

WASTEWATER COST OF SERVICE

After the revenue requirements are established as outlined in the preceding chapter, they must be allocated to rate components in a manner that allows the District to recover costs fairly and proportionately. The cost of service analysis accomplishes this task.

Prior to this Study, the District maintained five different service area rates for wastewater service. When the District was developing and building throughout the 20th Century, the separate service areas reflected the operational and capital practices of the District. The five separate services area rates were intended to capture the distinct cost differences for collection and treatment across the service areas.

However, as the wastewater system has expanded, these systems have become more unified. The District currently operates as one integrated wastewater system rather than five separate ones. As a result, the rate structure and the underlying cost of service should be updated to better capture the costs of these operations.

7.1 Overview of Cost of Service Methodology

This cost of service analysis used the following methodology to create a nexus between costs and the rates and fees the District charges for wastewater service. The methodology includes three main steps. First, functional categories are defined. The functional categories should represent the primary services for which the District will charge its customers. Second, costs from the District's budget are allocated to these functional categories. Finally, the functional categories are distributed across the units of service to calculate unit costs that can be passed-on to a customer.

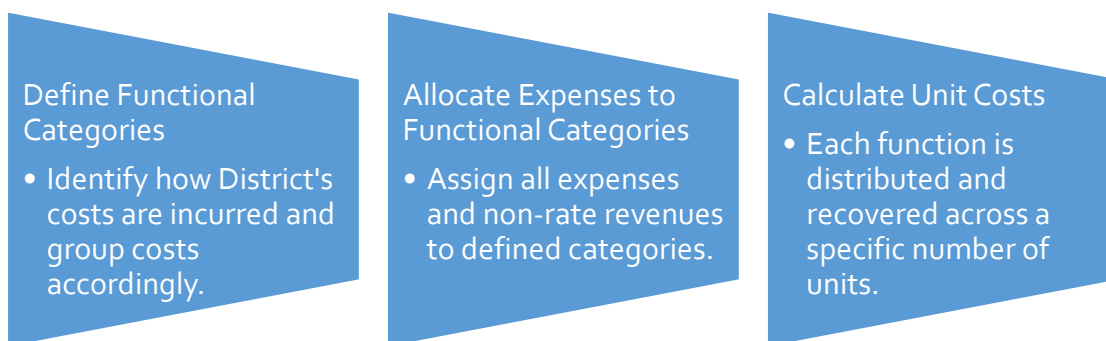


Figure 13 Wastewater Cost of Service Approach

7.2 Defining Functional Categories

The wastewater system has five primary functional categories.

- **Customer Service** – Costs associated with billing, customer service, and other administrative tasks.

- **Treatment** – Costs associated with primary, secondary, and some tertiary treatment at the District’s wastewater treatment plants.
- **Collection** – The District’s collection system, often referred to as “small pipes,” is the local system of collection pipes that convey wastewater from the customers’ lower laterals.
- **Transmission** – The transmission system consists of transmission mains, interceptors, and other larger pipes that take wastewater flow from the collection system and convey it to the treatment plants. This also includes any lift stations that boost wastewater flow uphill.
- **Capital** – Support for the District’s ongoing R&R and system betterment projects.
- **As All Others** – Also referred to as “General,” this category serves to reallocate all other costs that cannot be directly allocated to the other categories. When an expense category touches on multiple categories and cannot reasonably be allocated, this category is used. It takes the results of all other categories and uses that allocation as a proxy for these costs.

7.3 Allocate Expenses to Functional Categories

The District’s wastewater budget is assembled in a way that allows direct allocation of most expenses to the functional categories, with some exceptions outlined below. The full cost allocation for FYE 2024 budgeted expenses is shown in the appendix.

7.3.1 Operating Expenses

7.3.1.1 Allocated Support

The District’s Allocated Support costs were individually categorized by the District and spread across the Customer Service (24 percent), Treatment (30 percent), and Collection (6 percent). The remaining 41 percent is reallocated to As All Others. These percentages were calculated based on the share of the Allocated Support budget that benefits each area.

7.3.1.2 Administrative Costs

The District’s General and Administrative and Other Admin cost centers were allocated to As All Others. These cost centers are shared across the District and allocating to the five functional categories is best accomplished through As All Others.

7.3.2 Non-Operating Expenses and Offsetting Revenues

All Non-Operating Expenses and Offsetting Revenues were allocated to As All Others for the same rationale as Administrative Costs. These cost centers benefit all functional categories and cannot be reasonably quantified by category.

7.3.3 Debt Service and Other Commitments

The District’s Certificates of Participation (COP) and other revenue bonds, and the District’s unfunded liabilities (OPEB and pension contributions) were allocated to As All Others. The proceeds from the COP and bonds benefited multiple areas of the system, and with subsequent bond refundings, the exact spend could not be assigned.

The District’s Clean Water State Revolving Fund debt service was allocated 100 percent to treatment because the proceeds were directly and completely used to fund treatment facilities.

7.3.4 Capital

System betterment was split between the Capital (63 percent), Treatment (22 percent), and Transmission (15 percent) categories. The Capital component was set at 63 percent and the remaining 37 percent was split between transmission and treatment based on the share of system asset value. R&R was allocated to As All Others.

7.3.5 Functional Allocation Results

A summary of the functional allocation results is shown in Table 71, while the detailed cost allocation by cost center is included in the appendix of this report.

Table 71 Wastewater Functional Allocation Summary Results

Functional Category	FYE 2024 Allocation	Share of Allocation
Customer Service	\$4.37	4.8%
Treatment	\$64.92	71.4%
Collection	\$3.04	3.3%
Transmission	\$8.79	9.7%
Capital	\$9.83	10.8%
Total Revenue Requirement	\$90.94	

7.4 Calculate Unit Costs

To calculate the unit cost for each of the five functional categories, this analysis first determined the units of service for each category using the following steps:

1. Determine the total number of billed EDU that receive each functional category as a service. The total EDU for FYE 2024 is shown in Table 72. Some rate codes do not receive customer service and/or collection service from the District and the total number of EDU must be reduced for these categories. The full list of rate codes and the corresponding services provided is included in the appendix.
2. Weight each residential EDU based on its block factor. This is also shown in Table 72. The capital category is not weighted because it is the same charge regardless of block factor.
3. Convert the billed EDU, which is a monthly figure, to a daily figure by multiplying by the average billing cycle length (30.4 days).
4. Calculate the unit cost dividing the allocated costs by the units of service.

Table 72 Wastewater Units of Service

Functional Category	SA 31 Hemet / SJ	SA 32 Moreno Valley	SA 33 Sun City	SA 34 Temecula	SA 35 Perris	Total Monthly Weighted EDU	Total Daily Weighted EDU
Customer Service	168.3k	770.9k	442.4k	466.6k	318.8k	2,167.1k	65,879.0k
Treatment	324.4k	770.9k	442.4k	466.6k	334.2k	2,338.4k	71,088.6k
Collection	168.3k	770.9k	442.4k	466.6k	318.8k	2,167.1k	65,879.0k
Transmission	324.4k	770.9k	442.4k	466.6k	334.2k	2,338.4k	71,088.6k
Capital	335.7k	740.2k	459.1k	455.5k	314.3k	2,304.8k	70,067.2k

Table 73 Wastewater Unit Cost Calculation

Functional Category	FYE 2024 Allocation (\$M)	Units of Service	Unit Cost (\$ / Day / EDU)
Customer Service	\$4.37	65,879,036	\$0.066
Treatment	\$64.92	71,088,642	\$0.913
Collection	\$3.04	65,879,036	\$0.046
Transmission	\$8.79	71,088,642	\$0.124
Capital	\$9.83	70,067,202	\$0.141
Total	\$90.94		\$1.291

Section 8

WASTEWATER RATE DESIGN

8.1 Full Postage Stamp Rate

For the full postage stamp rate, the wastewater rate design is equal to the unit cost calculated in the preceding section. The District currently charges two separate rates for wastewater service: a DSC and a fixed capital charge. The DSC is different for each service area, while the fixed capital charge is the same for all customers. This analysis proposes transitioning from these five DSC rates to a single postage stamp rate. This initial section outlines the calculation of a single postage rate, while the District and Carollo prepared a phase-in approach for this transition that follows this calculation.

8.1.1 Daily Service Charge

The DSC is equal to the sum of the non-capital unit costs rounded up to the nearest penny to avoid lost revenue and then multiplied by the number of days in the billing cycle. This calculation is shown in Table 74.

Table 74 Wastewater DSC Calculation

Rate Component	Unit Cost per EDU per Day
Customer Service	\$0.0663
Treatment	\$0.9132
Collection	\$0.0461
Transmission	\$0.1237
Total DSC	\$1.1493
Total Rounded DSC	\$1.15

The five-year rate schedule and the monthly rates are shown in Table 75. This table shows a postage stamp rate for 2023. This rate is estimated based on the total rate revenue collected by the District divided by the total number of EDUs served. The District does not currently have a postage stamp DSC for 2023.

Table 75 Wastewater Five-Year DSC

	2023	2024	2025	2026	2027	2028
Daily Charge	\$1.097	\$1.150	\$1.216	\$1.275	\$1.340	\$1.394
Total Per Month (30 days)	\$32.91	\$34.50	\$36.48	\$38.25	\$40.20	\$41.82
Average Monthly Charge (30.4 days per billing cycle)	\$33.35	\$34.96	\$36.97	\$38.76	\$40.74	\$42.38

8.1.2 Fixed Charge for Sewer System Capital Projects

The fixed capital charge is assessed to all customers based on the number of EDUs. The calculation is similar to the DSC; however, because the capital charge is applied separately from the DSC and is rounded up on the monthly bill, the daily rate for the capital charge is not rounded up.

Table 76 Wastewater Five-Year Fixed Charge for Sewer System Capital Projects

	2023	2024	2025	2026	2027	2028
Daily Charge	\$0.120	\$0.141	\$0.149	\$0.156	\$0.164	\$0.171
Total Per Month (30 days)	\$3.60	\$4.23	\$4.47	\$4.68	\$4.92	\$5.13
Average Monthly Charge (30.4 days per billing cycle)	\$3.64	\$4.29	\$4.53	\$4.75	\$4.99	\$5.20

8.2 Special Rate Topics

8.2.1 Postage Stamp Rate Phase-In

The District’s current rate structure has five different rates for its five service areas. These service area rates were developed at a time when the operations and planning for the District supported these rates. However, the postage stamp rate is recommended going forward for several reasons. First, it is recommended given the interconnectivity of the District’s treatment, collection, and transmission systems. The District now has the ability to transfer wastewater flow across service areas to a considerable extent, something that was not feasible until relatively recently. Second, the District’s administration and customer service are shared across the service area and the postage stamp rate would better capture the shared costs for these services. Finally, the District’s recycled water program is supported by treated wastewater effluent, which is not restricted to a service area. Transitioning to a postage stamp rate would reflect this practice as well.

The five different rates differ substantially at this time though, presenting a challenge to the District. The postage stamp rate is recommended, but the District would like to avoid “rate shock” by increasing any customer’s rates by an unreasonable amount in any one year. For example, customers in Hemet and San Jacinto are currently paying \$1.00 per EDU per day for 2023. Implementing the postage stamp rate immediately would increase the rates for these customers by 15 percent. The District’s Board of Directors as well as its executive management would like to avoid this type of increase, especially given the other cost escalation drivers in 2023 that are impacting the District and its customers.

Carollo and the District’s staff, management, and Board of Directors developed a phase-in approach that gradually introduces the postage stamp rate over the course of seven years. This analysis considered multiple factors in the phase-in, including cost of service, and revenue impacts and use of reserves to fund any shortfalls that result. The proposed rate phase-in is shown in Table 77 for the monthly bill including the capital charge and Table 78 for just the daily service charge.

Table 77 Wastewater Postage Stamp Phase-In for Monthly Bill including DSC and Fixed Capital Charge

	2023	2024	2025	2026	2027	2028	2029	2030
SA 31 – Hemet / SJ	\$34.04	\$36.58	\$39.28	\$41.81	\$44.48	\$46.88	\$49.41	\$51.33
SA 32 – Moreno Valley	\$34.65	\$37.16	\$39.83	\$42.30	\$44.94	\$47.28	\$49.72	\$51.33
SA 33 – Sun City	\$35.26	\$37.83	\$40.53	\$42.97	\$45.55	\$47.83	\$50.20	\$51.33
SA 34 – Temecula	\$39.21	\$40.87	\$42.60	\$44.37	\$46.34	\$48.19	\$50.11	\$51.33
SA 35 – Perris	\$44.99	\$45.91	\$46.82	\$47.74	\$48.71	\$49.68	\$50.66	\$51.33
Full Postage Stamp	\$36.99	\$39.25	\$41.50	\$43.51	\$45.73	\$47.58	\$49.54	\$51.33

Table 78 Wastewater Postage Stamp Phase-In for Daily Service Charge Only

	2023	2024	2025	2026	2027	2028	2029	2030
SA 31 – Hemet / SJ	\$1.000	\$1.062	\$1.143	\$1.219	\$1.299	\$1.371	\$1.447	\$1.504
SA 32 – Moreno Valley	\$1.020	\$1.081	\$1.161	\$1.235	\$1.314	\$1.384	\$1.457	\$1.504
SA 33 – Sun City	\$1.040	\$1.103	\$1.184	\$1.257	\$1.334	\$1.402	\$1.473	\$1.504
SA 34 – Temecula	\$1.170	\$1.203	\$1.252	\$1.303	\$1.360	\$1.414	\$1.470	\$1.504
SA 35 – Perris	\$1.360	\$1.369	\$1.391	\$1.414	\$1.438	\$1.463	\$1.488	\$1.504
Full Postage Stamp	\$1.097	\$1.150	\$1.216	\$1.275	\$1.340	\$1.394	\$1.451	\$1.504

8.2.2 Block Factor Changes

Because metering is not possible for wastewater billing, the District, like many wastewater agencies, needs to use estimates based on the best available data to approximate wastewater flow from customers. For residential customers, the District uses four blocks with block factors to account for occupancy and lower corresponding assumed wastewater flow.

The District periodically reviews the assumptions behind these block factors. The best available data for this analysis is winter water usage. Winter water usage is typically lower than summer because there is less landscape irrigation, less consumptive use, and thus a greater correlation between wastewater flow and water demand.

This analysis collected water usage data for the winter billing months (December through March) for FYE 2018 through 2021 and calculated the median usage for each block. These years were an ideal sample because they represent a variety of environmental conditions, specifically both wet and dry winters, as well as the years during the COVID-19 pandemic when usage patterns for residential users changed substantially. The analysis also focused specifically on the FYE 2018 winter because it was a winter with exceedingly high precipitation, which may supply the lowest winter water usage and the best proxy for wastewater return flow.

Ratios for each block were calculated, comparing that blocks median usage with the median usage for Block 2, which is the baseline user group.

The summary statistics of this analysis are shown in Table 79. This analysis recommends that Block 1 increase from 60 percent to 65 percent. Over the course of the years included in the analysis, its median winter water usage was always greater than its current 60 percent. Given that the FYE 2018 median was 63 percent and the median from 2018 to 2021 was 71 percent, 65 percent is recommended to achieve a midpoint between these two figures.

Similarly, this analysis recommends increasing Block 3 to 135 percent for similar reasons. The median for the full dataset was 143 percent, and the FYE 2018 median was 138 percent. The recommendation of 135 percent is lower than these figures to gradually implement the update. The District should reassess this data over the next several years and increase further if the trend continues.

No change to Block 4 is recommended.

Table 79 Wastewater Residential Block Factor Analysis

Block	Current Block Factor	FYE 2018 - 2021		FYE 2018		Recommended Block Factor
		Median Winter CCF	% of Block 2	Median Winter CCF	% of Block 2	
Block 1	60%	5	71%	5	63%	65%
Block 2	100%	7	100%	8	100%	100%
Block 3	125%	10	143%	11	138%	135%
Block 4	170%	12	171%	14	175%	170%

8.2.3 Bill Impacts

The bill impacts under the proposed phase-in for 2024 range from less than \$1.00 per EDU per month for customers in Perris Valley (\$0.93, or 2 percent increase), up to \$2.54 for customers in Hemet and San Jacinto (7 percent increase).



Figure 14 Wastewater 2024 Bill Impact by Service Area

Appendix A

WATER DETAILED FUNCTION ALLOCATION

Expense Category	Allocation Factor	Test Year	Fixed Charges			Supply						Infrastructure / Capacity			Peaking		As All Others	
		FYE 2024	Customer Service	Water Supply / Reliability	Meters	Groundwater Supply	Perris II	Perris I & Menifee	Untreated MWD + WFPs	MWD Tier 1	MWD	Source of Supply	Base	Max Day	Max Hour	Private Fire		Conservation
Water Operations																		
Desalter Plants																		
Brine Line	Desalters	\$ 6K					39%	61%										
Brine Transfer Station	Desalters	664K					39%	61%										
Desalter Admin Building	Desalters	97K					39%	61%										
Desalter Summary Center	Desalters	143K					39%	61%										
Iron & Manganese Removal Facility	Desalters	286K					39%	61%										
Menifee Desalter	Perris I & Menifee	1,839K						100%										
Perris I Desalter	Perris I & Menifee	2,826K						100%										
Perris II Desalter	Perris II	2,591K					100%											
Perris II Desalter - LRP Credit	Perris II	(1,102K)					100%											
Total - Water Operations		\$ 7,351K	\$ -	\$ -	\$ -	\$ -	\$ 1,951K	\$ 5,400K	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Filtration Plants																		
Perris Water Filtration Plant	Untreated MWD + WFPs	\$ 3,420K							100%									
Hemet Water Filtration Plant	Untreated MWD + WFPs	1,766K							100%									
TVRI Connection	Untreated MWD + WFPs	-							100%									
Total - Filtration Plants		\$ 5,185K	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,185K	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Operating Expenses																		
Allocated Support	Allocated Support w/ Distr to B/MD/MH	\$ 31,722K	35%		10%							5%	2%	2%	3%	0.4%	9%	34%
General & Admin	As All Others	5,988K																100%
Distribution	Base / Max Day / Max Hour	6,997K										25%	22%	47%	6%			
Meters	Meter Service	3,332K			100%													
Groundwater	Groundwater Supply	375K				100%												
Operations Supervision	As All Others	763K																100%
Pipeline Locating, System Maps & Records	As All Others	1,889K																100%
Pumping	Max Day Only	11,323K											100%					
Storage	Base / Max Day / Max Hour	809K										25%	22%	47%	6%			
Replenishment	Source of Supply	262K									100%							
Wells	Groundwater Pumping	5,431K				50%	19%	31%										
Total - Other Operating Expenses		\$ 68,890K	\$ 11,059K	\$ -	\$ 6,487K	\$ 3,091K	\$ 1,047K	\$ 1,668K	\$ -	\$ -	\$ -	\$ 1,952K	\$ 2,499K	\$ 13,592K	\$ 4,769K	\$ 572K	\$ 2,724K	\$ 19,429K

Expense Category	Allocation Factor	Test Year	Fixed Charges			Supply						Infrastructure / Capacity			Peaking		As All Others	
		FYE 2024	Customer Service	Water Supply / Reliability	Meters	Groundwater Supply	Perris II	Perris I & Menifee	Untreated MWD + WFPs	MWD Tier 1	MWD	Source of Supply	Base	Max Day	Max Hour	Private Fire		Conservation
Capital																		
Betterment R&R	Reliability/Meters/Base/Max Day	\$ 23,164K		23%	47%							15%	13%					2%
R&R	R&R	15,500K		38%	38%													25%
Unplanned R&R	Capital Charge	2,850K		100%														
Total - Capital		\$ 41,513K	\$ -	\$ 14,013K	\$ 16,676K	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,432K	\$ 3,117K	\$ -	\$ -	\$ -	\$ -	\$ 4,275K
Total Expenses		\$ 246,339K	\$ 11,059K	\$ 16,254K	\$ 27,712K	\$ 4,357K	\$ 3,120K	\$ 7,263K	\$ 27,737K	\$ 53,642K	\$ 3,235K	\$ 5,540K	\$ 5,931K	\$ 16,709K	\$ 4,769K	\$ 572K	\$ 6,268K	\$ 52,172K
Offsetting Revenues																		
Property Tax & Standby	As All Others	\$ (33,231K)																100%
Other Income/Grants	As All Others	(1,937K)																100%
Partial Year Increase Revenue																		
Loss from Reserves	As All Others	8,016K																100%
Total Additions / (Deductions) from Reserves	As All Others	(25,016K)																100%
Total - Offsetting Revenues		\$ (52,166K)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (52,166K)
Total Revenue Requirements		\$ 194,172K	\$ 11,059K	\$ 16,254K	\$ 27,712K	\$ 4,357K	\$ 3,120K	\$ 7,263K	\$ 27,737K	\$ 53,642K	\$ 3,235K	\$ 5,540K	\$ 5,931K	\$ 16,709K	\$ 4,769K	\$ 572K	\$ 6,268K	\$ 5K
Subtotal Allocation			5.70%	8.37%	14.27%	2.24%	1.61%	3.74%	14.28%	27.63%	1.67%	2.85%	3.05%	8.61%	2.46%	0.29%	3.23%	
Reallocation of As All Others		\$ 194,172K	\$ 11,060K	\$ 16,254K	\$ 27,713K	\$ 4,357K	\$ 3,120K	\$ 7,263K	\$ 27,737K	\$ 53,643K	\$ 3,235K	\$ 5,540K	\$ 5,931K	\$ 16,710K	\$ 4,769K	\$ 572K	\$ 6,268K	
Final Cost Allocation			5.70%	8.37%	14.27%	2.24%	1.61%	3.74%	14.28%	27.63%	1.67%	2.85%	3.05%	8.61%	2.46%	0.29%	3.23%	

Appendix B

WASTEWATER DETAILED FUNCTIONAL ALLOCATION

Expense Category	FYE 2024	Customer Service	Treatment	Collection	Transmission	Capital	As All Others
<u>Operating Expenses</u>							
Recycled Water Interfund Allocation	\$ 3,448K		100%				
Sewer Collection System	1,641K			100%			
Sewer Transmission System	476K				100%		
Sewer Lift Station Facilities	4,814K				100%		
Sewer Treatment Facilities	37,286K		100%				
Sewer Solid Waste Disposal	3,259K		100%				
Allocated Support	15,185K	24%	30%	6%			41%
G&A	9,958K						100%
Other Admin	1,149K						100%
Total - Operating Expenses	\$ 77,217K	\$ 3,583K	\$ 48,518K	\$ 2,492K	\$ 5,291K	\$ -	\$ 17,335K
<u>Non-Operating Expenses</u>							
Miscellaneous Expense	\$ 1,157K						100%
Special Projects & Studies Allocated to Svcs	384K						100%
Unallocated Services	23,356K						100%
OFA - Sewer O&M	4,524K						100%
OFA - District O&M	6,341K						100%
OFA - IT Infrastructure	-						100%
Total - Non-Operating Expenses	\$ 35,762K	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 35,762K
<u>Debt Service & Other Commitments</u>							
COP/Bonds	\$ 2,515K						100%
SRF Loan	1,884K		100%				
Unfunded Liabilities (OPEB/Pensions)	7,535K						100%
Total - Debt Service & Other Commitments	\$ 11,934K	\$ -	\$ 1,884K	\$ -	\$ -	\$ -	\$ 10,050K

Expense Category	FYE 2024	Customer Service	Treatment	Collection	Transmission	Capital	As All Others
Capital							
Betterment	\$ 12,908K		22%		15%	63%	0%
R&R	27,707K						100%
Additional R&R	-					100%	
Total - Capital	\$ 40,615K	\$ -	\$ 2,860K	\$ -	\$ 1,919K	\$ 8,067K	\$ 27,768K
Total Expenses	\$ 165,528K	\$ 3,583K	\$ 53,262K	\$ 2,492K	\$ 7,210K	\$ 8,067K	\$ 90,915K
Offsetting Revenues							
Property Tax & Standby	\$ (23,427K)						100%
Other Income/Grants	(1,386K)						100%
Outside Wastewater Collections	(34,305K)						100%
Dump Station	(1,124K)						100%
Partial Year Increase Revenue Loss	2,165K	0%	0%	0%	0%	0%	100%
Total Additions / (Deductions) from Reserves	(16,513K)	0%	0%	0%	0%	0%	100%
Total - Offsetting Revenues	\$ (74,589K)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (74,589K)
Total Revenue Requirements	\$ 90,939K	\$ 3,583K	\$ 53,262K	\$ 2,492K	\$ 7,210K	\$ 8,067K	\$ 16,326K
Subtotal Allocation		5%	71%	3%	10%	11%	
Reallocated of As All Others	\$ 90,939K	\$ 4,367K	\$ 64,916K	\$ 3,037K	\$ 8,787K	\$ 9,833K	
Final Cost Allocation		4.80%	71.38%	3.34%	9.66%	10.81%	

Appendix C

WASTEWATER EDU COUNTS

FYE 2024 Block Factor Adj EDU Count by Functional Category Benefit Received

Rate Code	Service Area	Customer Service?	Treatment?	Collection?	Transmission?	Capital?	Block Number	Block Factor	FYE 2024 EDU	Customer Service	Treatment	Collection	Transmission	Capital
Sewer EDU														
SA 31 - Hemet / San Jacinto														
S101	SA 31 - Hemet / San Jacinto	Yes	Yes	Yes	Yes	Yes	1	60%	44,092	26,455	26,455	26,455	26,455	26,455
S101	SA 31 - Hemet / San Jacinto	Yes	Yes	Yes	Yes	Yes	2	100%	72,423	72,423	72,423	72,423	72,423	72,423
S101	SA 31 - Hemet / San Jacinto	Yes	Yes	Yes	Yes	Yes	3	125%	21,331	26,664	26,664	26,664	26,664	26,664
S101	SA 31 - Hemet / San Jacinto	Yes	Yes	Yes	Yes	Yes	4	170%	7,073	12,024	12,024	12,024	12,024	12,024
S101	SA 31 - Hemet / San Jacinto	Yes	Yes	Yes	Yes	Yes	N	100%	30,783	30,783	30,783	30,783	30,783	
S102	SA 31 - Hemet / San Jacinto	No	Yes	No	Yes	Yes	1	60%	44,501	-	26,701	-	26,701	26,701
S102	SA 31 - Hemet / San Jacinto	No	Yes	No	Yes	Yes	2	100%	65,758	-	65,758	-	65,758	65,758
S102	SA 31 - Hemet / San Jacinto	No	Yes	No	Yes	Yes	3	125%	26,294	-	32,868	-	32,868	32,868
S102	SA 31 - Hemet / San Jacinto	No	Yes	No	Yes	Yes	4	170%	10,334	-	17,569	-	17,569	17,569
S102	SA 31 - Hemet / San Jacinto	No	Yes	No	Yes	Yes	N	100%	13,160	-	13,160	-	13,160	13,160
Total - SA 31 - Hemet / San Jacinto									335,750	168,349	324,404	168,349	324,404	324,404
SA 32 - Moreno Valley Area														
S201	SA 32 - Moreno Valley Area	Yes	Yes	Yes	Yes	Yes	1	60%	118,173	70,904	70,904	70,904	70,904	70,904
S201	SA 32 - Moreno Valley Area	Yes	Yes	Yes	Yes	Yes	2	100%	325,666	325,666	325,666	325,666	325,666	325,666
S201	SA 32 - Moreno Valley Area	Yes	Yes	Yes	Yes	Yes	3	125%	146,941	183,677	183,677	183,677	183,677	183,677
S201	SA 32 - Moreno Valley Area	Yes	Yes	Yes	Yes	Yes	4	170%	58,927	100,176	100,176	100,176	100,176	
S201	SA 32 - Moreno Valley Area	Yes	Yes	Yes	Yes	Yes	N	100%	90,461	90,461	90,461	90,461	90,461	
Total - SA 32 - Moreno Valley Area									740,169	770,884	770,884	770,884	770,884	770,884
SA 33 - Sun City Area														
S301	SA 33 - Sun City Area	Yes	Yes	Yes	Yes	Yes	1	60%	54,435	32,661	32,661	32,661	32,661	32,661
S301	SA 33 - Sun City Area	Yes	Yes	Yes	Yes	Yes	2	100%	79,984	79,984	79,984	79,984	79,984	
S301	SA 33 - Sun City Area	Yes	Yes	Yes	Yes	Yes	3	125%	17,625	22,031	22,031	22,031	22,031	
S301	SA 33 - Sun City Area	Yes	Yes	Yes	Yes	Yes	4	170%	4,319	7,342	7,342	7,342	7,342	
S301	SA 33 - Sun City Area	Yes	Yes	Yes	Yes	Yes	N	100%	12,464	12,464	12,464	12,464	12,464	
S302	SA 33 - Sun City Area	Yes	Yes	Yes	Yes	Yes	1	60%	70,769	42,461	42,461	42,461	42,461	
S302	SA 33 - Sun City Area	Yes	Yes	Yes	Yes	Yes	2	100%	123,390	123,390	123,390	123,390	123,390	
S302	SA 33 - Sun City Area	Yes	Yes	Yes	Yes	Yes	3	125%	54,873	68,591	68,591	68,591	68,591	
S302	SA 33 - Sun City Area	Yes	Yes	Yes	Yes	Yes	4	170%	17,421	29,616	29,616	29,616	29,616	
S302	SA 33 - Sun City Area	Yes	Yes	Yes	Yes	Yes	N	100%	23,848	23,848	23,848	23,848	23,848	
Total - SA 33 - Sun City Area									459,129	442,390	442,390	442,390	442,390	442,390
SA 34 - Temecula-Murrieta Area														
S401	SA 34 - Temecula-Murrieta Area: Yes	Yes	Yes	Yes	Yes	Yes	1	60%	65,494	39,296	39,296	39,296	39,296	39,296
S401	SA 34 - Temecula-Murrieta Area: Yes	Yes	Yes	Yes	Yes	Yes	2	100%	205,190	205,190	205,190	205,190	205,190	
S401	SA 34 - Temecula-Murrieta Area: Yes	Yes	Yes	Yes	Yes	Yes	3	125%	86,259	107,824	107,824	107,824	107,824	
S401	SA 34 - Temecula-Murrieta Area: Yes	Yes	Yes	Yes	Yes	Yes	4	170%	22,457	38,177	38,177	38,177	38,177	
S401	SA 34 - Temecula-Murrieta Area: Yes	Yes	Yes	Yes	Yes	Yes	N	100%	76,123	76,123	76,123	76,123	76,123	
Total - SA 34 - Temecula-Murrieta Area									455,522	466,609	466,609	466,609	466,609	466,609
SA 35 - Perris Valley Area														
S501	SA 35 - Perris Valley Area	Yes	Yes	Yes	Yes	Yes	1	60%	6,597	3,958	3,958	3,958	3,958	3,958
S501	SA 35 - Perris Valley Area	Yes	Yes	Yes	Yes	Yes	2	100%	37,322	37,322	37,322	37,322	37,322	
S501	SA 35 - Perris Valley Area	Yes	Yes	Yes	Yes	Yes	3	125%	18,683	23,354	23,354	23,354	23,354	
S501	SA 35 - Perris Valley Area	Yes	Yes	Yes	Yes	Yes	4	170%	6,676	11,348	11,348	11,348	11,348	
S501	SA 35 - Perris Valley Area	Yes	Yes	Yes	Yes	Yes	N	100%	4,039	4,039	4,039	4,039	4,039	
S502	SA 35 - Perris Valley Area	No	Yes	No	Yes	Yes	1	60%	5,423	-	3,254	-	3,254	
S502	SA 35 - Perris Valley Area	No	Yes	No	Yes	Yes	2	100%	4,468	-	4,468	-	4,468	
S502	SA 35 - Perris Valley Area	No	Yes	No	Yes	Yes	3	125%	4,215	-	5,269	-	5,269	
S502	SA 35 - Perris Valley Area	No	Yes	No	Yes	Yes	4	170%	880	-	1,496	-	1,496	
S502	SA 35 - Perris Valley Area	No	Yes	No	Yes	Yes	N	100%	827	-	827	-	827	
S503	SA 35 - Perris Valley Area	Yes	Yes	Yes	Yes	Yes	1	60%	25,785	15,471	15,471	15,471	15,471	
S503	SA 35 - Perris Valley Area	Yes	Yes	Yes	Yes	Yes	2	100%	79,530	79,530	79,530	79,530	79,530	
S503	SA 35 - Perris Valley Area	Yes	Yes	Yes	Yes	Yes	3	125%	44,536	55,671	55,671	55,671	55,671	
S503	SA 35 - Perris Valley Area	Yes	Yes	Yes	Yes	Yes	4	170%	18,017	30,629	30,629	30,629	30,629	
S503	SA 35 - Perris Valley Area	Yes	Yes	Yes	Yes	Yes	N	100%	48,677	48,677	48,677	48,677	48,677	
S504	SA 35 - Perris Valley Area	Yes	Yes	Yes	Yes	Yes	1	60%	245	147	147	147	147	

FYE 2024 Block Factor Adj EDU Count by Functional Category Benefit Received

Rate Code	Service Area	Customer Service?	Treatment?	Collection?	Transmission?	Capital?	Block Number	Block Factor	FYE 2024 EDU	Customer Service	Treatment	Collection	Transmission	Capital
Sewer EDU														
S504	SA 35 - Perris Valley Area	Yes	Yes	Yes	Yes	Yes	2	100%	4,085	4,085	4,085	4,085	4,085	4,085
S504	SA 35 - Perris Valley Area	Yes	Yes	Yes	Yes	Yes	3	125%	773	966	966	966	966	966
S504	SA 35 - Perris Valley Area	Yes	Yes	Yes	Yes	Yes	4	170%	214	365	365	365	365	365
S504	SA 35 - Perris Valley Area	Yes	Yes	Yes	Yes	Yes	N	100%	2,650	2,650	2,650	2,650	2,650	2,650
S505	SA 35 - Perris Valley Area	Yes	Yes	Yes	Yes	Yes	1	60%	-	-	-	-	-	-
S505	SA 35 - Perris Valley Area	Yes	Yes	Yes	Yes	Yes	2	100%	-	-	-	-	-	-
S505	SA 35 - Perris Valley Area	Yes	Yes	Yes	Yes	Yes	3	125%	-	-	-	-	-	-
S505	SA 35 - Perris Valley Area	Yes	Yes	Yes	Yes	Yes	4	170%	-	-	-	-	-	-
S505	SA 35 - Perris Valley Area	Yes	Yes	Yes	Yes	Yes	N	100%	631	631	631	631	631	631
Total - SA 35 - Perris Valley Area									314,273	318,842	334,155	318,842	334,155	334,155
Total									2,310,202	2,167,074	2,338,442	2,167,074	2,338,442	2,338,442