



Ramona Municipal Water District

Comprehensive Water Rate Study

FINAL REPORT / April 17, 2024



April 17, 2024

Mr. Joe Spence
Chief Financial Officer
Ramona Municipal Water District
105 Earlham Street
Ramona, CA 92065-1599

Subject: Comprehensive Water Rate Study Report

Dear Mr. Spence:

Raftelis Financial Consultants, Inc. (Raftelis) is pleased to present this Water Rate Study Report (Report) to the Ramona Municipal Water District (District). The Water Rate Study (Study) involved a comprehensive review of the District's financial plan and water rates.

The resulting rates are based on cost of service principles and are fair and equitable to the District's customers. This Report includes a brief Executive Summary highlighting the main results of the Study, a summary of the District's water system, financial plans, cost of service analyses, and detailed rate derivations in the subsequent sections.

It has been a pleasure working with you, and we wish to express our thanks to you and District staff for the support provided during this study. If you have any questions, please do not hesitate to contact me at (213) 262-9308.

Sincerely,

A handwritten signature in blue ink that reads 'Steve Gagnon'.

Steve Gagnon, PE (AZ)
Vice President

A handwritten signature in blue ink that reads 'Richardson Irvine'.

Richardson Irvine
Associate Consultant

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1. Executive Summary

1.1. Background

In 2023, Ramona Municipal Water District (District) engaged Raftelis Financial Consultants, Inc. (Raftelis) to conduct a comprehensive Water Rate Study (Study), which includes a five-year financial plan, cost of service analysis, and rate derivation for the water system. This Water Rate Study Report (Report) presents the financial plans and resulting rates for implementation on July 1, 2024.

This Executive Summary is an overview of the District's water rate-making process, describing the study methodology, results, and recommendations for near-term District water rates. The District process establishes fair and equitable rates that:

- » Provide necessary revenues to meet the District's operational and capital expenses, as well as reserve requirements to ensure the financial stability of the District,
- » Are easy to implement, update in the future, and convey to customers, and
- » Proportionally allocates costs of providing service informed by Article XIII D of the California Constitution, commonly known as Proposition 218

1.2. Process

Raftelis worked closely with District staff to develop a long-term financial plan which projects revenues and expenses, incorporates capital expenditures and existing debt service, sets forth proposed debt and reserve targets, and recommends total revenue adjustments for the five-year Study Period (FYE 2025-FYE 2029). Raftelis presented the Financial Plan and rates to the Chief Financial Officer for review and presentation to the Board.

1.3. Methodology

The water rates were developed using cost of service principles set forth by the American Water Works Association M1 Manual titled *Principles of Water Rates, Fees and Charges* (AWWA M1 Manual). Cost of service principles distribute costs to customer classes in accordance with the way each class uses the water system. This methodology is described in Sections 4 and 5. The study uses the Base-Extra Capacity Method of the AWWA M1 Manual to distribute costs. Costs were separated into three main components¹: "(1) base costs, (2) extra capacity costs, and (3) customer costs. Base costs are costs associated with meeting average daily demand needs and include operations, maintenance, and capital costs designed to accommodate average demand conditions. Extra capacity costs are costs associated with meeting peak demand conditions. Customer costs are costs associated with serving customers, such as meter reading, billing, customer service, and other such services.

The rates are designed to meet the requirements of Proposition 218; all rates are charged to customers based on the identified cost of providing comprehensive water service.

¹ Other rate components were used to appropriately distribute costs to customers, see Section 5 for additional information

1.4. Results and Recommendations

Table 1-1 summarizes the Financial Plan recommendations. Although the table shows anticipated revenue adjustments for each year of the Study Period, the District will review and confirm the needed revenue adjustments on an annual basis. Revenue adjustments represent the required increase in rate revenues and does not necessarily correlate to the increase in proposed rates. Bill impacts and rates for individual customers depend on the cost of service analysis. The revenue adjustments do not include increased costs from San Diego County Water Authority (SDCWA). Any increases from SDCWA will be passed-through to customers and are in addition to the proposed adjustments.

Table 1-1: Financial Plan Recommendations

	FYE 2025	FYE 2026	FYE 2027	FYE 2028	FYE 2029
Revenue Adjustments	9.0%	7.0%	7.0%	7.0%	7.0%
Pass-through of SDCWA costs	Yes	Yes	Yes	Yes	Yes

Table 1-2 shows the recommended reserves and the minimum targets for each reserve.

Table 1-2: Recommended Reserves

Reserves	Target	FYE 2025 Min Target	FYE 2026 Min Target	FYE 2027 Min Target	FYE 2028 Min Target	FYE 2029 Min Target
Operating	90 days of O&M	\$5,221,363	\$5,589,675	\$5,989,395	\$6,399,055	\$6,843,807
Debt Service	110% of Annual Debt Pmt	\$417,212	\$417,212	\$417,212	\$417,212	\$417,212
Capital	½ Yr Avg CIP	\$2,800,077	\$2,794,600	\$2,949,272	\$3,100,030	\$3,236,336
Rate Stabilization	10% of Rate Revenues	\$2,061,345	\$2,211,374	\$2,372,322	\$2,544,985	\$2,730,214
Total Minimum Reserve		\$10,499,997	\$11,012,861	\$11,728,201	\$12,461,283	\$13,227,568

1.4.1. Factors Affecting Revenue Adjustments

The following factors affect revenue requirements (i.e. costs) and thus the water rates. District expenses include Operation and Maintenance (O&M) expenses, capital expenses, and Pass-Through costs from SDCWA.

- **O&M Expenses:** District O&M expenses are expected to increase an average of 7.4% per year from FYE 2025 to FYE 2029. Water rates, when adjusted, will recover the general O&M expenses incurred.
- **Water System Capital Investments:** The District is projecting an average of \$5.6M in capital during the Study Period². Reinvestment in the water system is a key component in providing safe and reliable water to the District’s customers. It is anticipated these investments will be funded through rates and reserves.
- **Reserve Funding:** The District’s reserve policy is shown in Table 1-2. The proposed revenue adjustments strike a balance between maintaining a healthy financial position and minimizing rate increases to customers through a multi-year measured approach. Without any revenue adjustments,

² Capital Investment Schedule was provided by the District.

District reserves would be fully depleted by FYE 2028 and the District would no longer be able to reinvest in its water system.

- **Projected Water Sales:** FY 2023 was the wettest year on record and when customers curtail lawn irrigation, the District’s revenue falls. FY 2024 water use was estimated by averaging the prior 5 fiscal years and that water use was increased slightly to incorporate account growth (0.26%).
- **Water Purchase Costs:** The District purchases water from the San Diego County Water Authority and proposes to continue to pass-through these increases in water purchase costs. Water purchase costs are approximately 46% of operating costs.

1.4.2. Proposed Water Rates

The proposed water rates retain the District’s current rate structure and contain the following two components:

- 1) A **monthly fixed charge** based on meter size and is intended to recover the costs related to meter maintenance and reading, customer service, billing, a portion of the costs of peaking, and the fixed costs from SDCWA.
- 2) A **monthly private fire meter reading and maintenance charge** based on the costs associated with the meter reading and maintenance for those utilizing the private fire service.
- 3) **Uniform volumetric rates** that vary by customer type [General Treated, PSAWR Treated, General Untreated, PSAWR Untreated, Construction] and recovers the remaining costs related to water supply and production, base delivery, and extra capacity. The District also recover costs related to pumping via the “Pumping” uniform volumetric rate and which is applied to all customers.

Rate structures consisting of a fixed monthly charge by meter size and a volumetric charge based on usage are the most common and accepted rate structures in the industry³. The fixed charge provides revenue stability while the volumetric charge encourages conservation.

Table 1-3 shows the current and proposed fixed service charges for the Study Period. The proposed rates will be effective each July 1st, beginning in 2024.,

Table 1-3: Current and Proposed Fixed Service Charges

Meter Size	Current Fixed Service Charge	FYE 2025 Proposed Fixed Service Charge	FYE 2026 Proposed Fixed Service Charge	FYE 2027 Proposed Fixed Service Charge	FYE 2028 Proposed Fixed Service Charge	FYE 2029 Proposed Fixed Service Charge
3/4" or smaller	\$38.47	\$46.54	\$49.80	\$53.29	\$57.02	\$61.01
1"	\$59.35	\$73.85	\$79.02	\$84.55	\$90.47	\$96.80
1 1/2"	\$110.91	\$140.93	\$150.79	\$161.35	\$172.64	\$184.72
2"	\$176.11	\$225.19	\$240.95	\$257.82	\$275.87	\$295.18
3"	\$366.16	\$417.00	\$446.19	\$477.42	\$510.84	\$546.60
4"	\$648.23	\$694.41	\$743.01	\$795.02	\$850.67	\$910.22
6"	\$0.00	\$1,364.60	\$1,460.12	\$1,562.33	\$1,671.69	\$1,788.71

³ More than 83% of water providers in the US have either uniform or tier/block rates – 2022 Water and Wastewater Rate Survey, conducted by Raftelis.

Table 1-4 details the current and proposed private fire meter reading and maintenance charge for the Study Period.

Table 1-4: Proposed Private Fire Meter Reading & Maintenance

	Current Fixed Service Charge	FYE 2025 Proposed Fixed Service Charge	FYE 2026 Proposed Fixed Service Charge	FYE 2027 Proposed Fixed Service Charge	FYE 2028 Proposed Fixed Service Charge	FYE 2029 Proposed Fixed Service Charge
Private Fire Meter Reading & Maintenance	\$0.00	\$10.30	\$11.02	\$11.79	\$12.62	\$13.50

Table 1-5 details the current and proposed volumetric rates for the Study Period.

Table 1-5: Current and Proposed Volumetric Rates

Customer Classes	Current Variable Rates	FYE 2025 Proposed Commodity Rates	FYE 2026 Proposed Commodity Rates	FYE 2027 Proposed Commodity Rates	FYE 2028 Proposed Commodity Rates	FYE 2029 Proposed Commodity Rates
General Treated	\$7.25	\$7.27	\$7.78	\$8.32	\$8.90	\$9.52
General Treated - AG	\$7.69	\$7.27	\$7.78	\$8.32	\$8.90	\$9.52
PSAWR Treated	\$6.37	\$5.84	\$6.25	\$6.69	\$7.16	\$7.66
General Untreated	\$6.88	\$6.26	\$6.70	\$7.17	\$7.67	\$8.21
PSAWR Untreated	\$5.56	\$4.83	\$5.17	\$5.53	\$5.92	\$6.33
Construction Treated	\$9.80	\$7.27	\$7.78	\$8.32	\$8.90	\$9.52
Pumping Rate	\$0.98	\$1.47	\$1.57	\$1.68	\$1.80	\$1.93

Table 1-6 shows the estimated pass-through rate which passes through wholesale water purchase costs from the SDCWA and MWD. The FYE 2025 pass-through as well as the out years are estimated. The District will calculate the pass-through when its wholesaler costs are known. The calculation is further demonstrated in Appendix B.

Table 1-6: Estimated Pass-through Rate

	FYE 2025	FYE 2026	FYE 2027	FYE 2028	FYE 2029
Marginal Pass Through (\$/HCF)	\$0.24	\$0.57	\$0.63	\$0.69	\$0.76

2. Water System

2.1. Water Sources and System Facilities

The Ramona Municipal Water District (District) serves the unincorporated Santa Maria Valley and San Vicente Valley areas including the surrounding hills with elevations ranging from 1,300 feet to 2,100 feet mean sea level (MSL). The District's total service area covers approximately 45,800 acres and provides water to approximately 36,000 people⁴.

The District relies entirely on treated and untreated water purchased from the SDCWA, which purchases its water from the Metropolitan Water District of Southern California. The water is a blend of Colorado River water, California State Water Project water, and other sources. SDCWA also owns and operates the Carlsbad Desalination Plant. Water from this plant is mixed with MWD supplies in the treated water supplies provided to the District.

Water from the SDCWA is obtained at the connection point into SDCWA aqueducts located west of Espola Road in Poway. Water is then routed through the Poway Pump station located at an approximate elevation of 718 above MSL. From this pump station, untreated water is pumped to Lake Ramona (1,150 MSL) and delivered to approximately 6,200 acres of agricultural lands in the Highland Valley area. Treated water is pumped to the Mt. Woodson Reservoir (1,800 MSL) and West End Tank (1,700 MSL) and then delivered to Ramona treated customers through the treated water distribution system. The District's water system is comprised of approximately 220 miles of pipelines and related appurtenances.

⁴ Statistics given by the Ramona Municipal Water District "About Us" website.

3. Financial Plan Assumptions

3.1. Account Growth and Water Use Assumptions

The revenue calculated for each fiscal year in the Financial Plan is a function of the number of accounts, account growth, water use, timing of the water use, and existing rates. Table 3-1 summarizes account growth assumptions, demand growth assumptions and the percentage of water used during the 1st and 2nd halves of the fiscal year. As shown, the study assumes no demand growth (outside of account growth).

Table 3-1: Water Account Growth and Demand Assumptions

	FYE 2025	FYE 2026	FYE 2027	FYE 2028	FYE 2029
Account Growth					
General (3/4" & 1")	0.26%	0.26%	0.26%	0.26%	0.26%
General	0.26%	0.26%	0.26%	0.26%	0.26%
PSAWR	0.26%	0.26%	0.26%	0.26%	0.26%
District & Park	0.26%	0.26%	0.26%	0.26%	0.26%
Demand Factor					
General	100%	100%	100%	100%	100%
PSAWR	100%	100%	100%	100%	100%
Construction	100%	100%	100%	100%	100%
Treated					
% of Use 1st Half of FY (July - Dec)	59%	59%	59%	59%	59%
% of Use 2nd Half of FY (Jan - June)	41%	41%	41%	41%	41%
Untreated					
% of Use 1st Half of FY (July - Dec)	50%	50%	50%	50%	50%
% of Use 2nd Half of FY (Jan - June)	50%	50%	50%	50%	50%

3.2. Number of Accounts

The District provided the number of accounts by meter size. The number of accounts are used to forecast the amount of fixed revenue the District will receive from the monthly fixed charges. The District has realized relatively low account growth over the past few years and doesn't anticipate much growth during the next 5-10 years.

Table 3-2 shows the projected number of accounts by meter size for the Study Period assuming the growth as shown in Table 3-1.

Table 3-2: Projected Water Customer Accounts

Meter Size	FYE 2025	FYE 2026	FYE 2027	FYE 2028	FYE 2029
3/4" or smaller	9,003	9,026	9,050	9,073	9,097
1"	372	373	374	375	376
1 1/2"	124	124	124	125	125
2"	166	166	167	167	168
3"	20	20	20	20	20
4"	3	3	3	3	3
6"	0	0	0	0	0
8"	0	0	0	0	0
Total - All Meters	9,687	9,712	9,738	9,763	9,788

3.3. Water Use

Water use for the Study Period was assumed equal to the average of the last 5 fiscal years – FY 2019 to FY 2023. Table 3-3 details the projected customer use for each customer class.

Table 3-3: Projected Billable Water Usage

Customer Class	Water Source	FYE 2025	FYE 2026	FYE 2027	FYE 2028	FYE 2029
General Treated	General Treated	1,483,316	1,487,173	1,491,039	1,494,916	1,498,803
PSAWR Treated	PSAWR Treated	14,652	14,690	14,728	14,767	14,805
General Untreated	General Untreated	59,945	60,101	60,257	60,413	60,571
General Untreated - AG	General Untreated	406	407	408	409	410
PSAWR Untreated	PSAWR Untreated	96,259	96,509	96,760	97,012	97,264
Construction	General Treated	9,139	9,162	9,186	9,210	9,234
Contract	PSAWR Untreated	42,177	42,287	42,396	42,507	42,617
District & Park	General Treated	36,266	36,360	36,455	36,549	36,644
Total (hcf)		1,742,159	1,746,638	1,751,230	1,755,783	1,760,348

FYE 2023 consumption data was analyzed to determine the percentage of use that occurred during the first half of the fiscal year and the percentage that occurred during the second half of the year (see Table 3-1). The timing of use is important since the District’s existing rates were not in effect for the full fiscal year.

3.4. Key Assumptions

The Study uses the District’s proposed FYE 2024 budget as the base year and the model projects the District’s revenue requirements through FYE 2029. Table 3-4 shows the revenue escalation assumptions for two items not related to rate revenue.

Table 3-4: Water Revenue Inflationary Assumptions

Revenues	FYE 2025	FYE 2026	FYE 2027	FYE 2028	FYE 2029
Non-Rate Revenue	1.6%	1.6%	1.6%	1.6%	1.6%
Contract Customer Rate Increase	8.2%	8.2%	8.2%	8.2%	8.2%

To project future expenses, inflationary assumptions are utilized. Table 3-5 shows the inflationary assumptions utilized to inflate the expenses for future years (FYE 2025 and onward) in the financial plan. Based on Raftelis’ experience, the inflationary assumptions used are within the typical range utilized by other Southern California water agencies. Benefit inflation was provided by the District.

Table 3-5: Water Expense Inflationary Assumptions

Escalation Factors	FYE 2025	FYE 2026	FYE 2027	FYE 2028	FYE 2029
General	3.0%	3.0%	3.0%	3.0%	3.0%
Salary	7.4%	6.4%	6.4%	3.5%	3.5%
Benefits	9.8%	6.2%	6.2%	5.0%	5.0%
Purchased Water	10.0%	10.0%	10.0%	10.0%	10.0%
Capital	3.0%	3.0%	3.0%	3.0%	3.0%
Overhead	4.0%	3.0%	3.0%	3.0%	3.0%

Purchased water costs from SDCWA are a significant component of projecting the District’s costs. However, the District will pass through the increased costs of purchasing water through what is known as a pass-through rate. Table 3-6 summarizes the assumptions used to project purchased water costs for the purpose of this report, however actual water purchase costs will be passed-through to customers.

Table 3-6: Water Purchase Assumptions

	FYE 2025	FYE 2026	FYE 2027	FYE 2028	FYE 2029
Water Loss					
Treated Water Loss	5%	5%	5%	5%	5%
Untreated Water Loss	5%	5%	5%	5%	5%
Water Purchases (AF)					
General Treated	3,509	3,519	3,528	3,537	3,546
PSAWR Treated	34	34	34	34	34
General Untreated	139	139	139	140	140
PSAWR Untreated	221	222	222	223	223
Contract Customers (PSAWR Untreated)	97	97	97	98	98
Treated Use					
% of Usage 1st Half of FY (July - Dec)	59%	59%	59%	59%	59%
% of Usage 2nd Half of FY (Jan - June)	41%	41%	41%	41%	41%
Untreated Use					
% of Usage 1st Half of FY (July - Dec)	50%	50%	50%	50%	50%
% of Usage 2nd Half of FY (Jan - June)	50%	50%	50%	50%	50%

Current Water Rates and Charges Table 3-7 shows the District’s current rates that are used to calculate the revenues under the status quo conditions.

Table 3-7: Current Water Rates

	FYE 2025	FYE 2026	FYE 2027	FYE 2028	FYE 2029
Fixed Charge (per Month)					
3/4" or smaller	\$38.47	\$38.47	\$38.47	\$38.47	\$38.47
1"	\$59.35	\$59.35	\$59.35	\$59.35	\$59.35
1 1/2"	\$110.91	\$110.91	\$110.91	\$110.91	\$110.91
2"	\$176.11	\$176.11	\$176.11	\$176.11	\$176.11
3"	\$366.16	\$366.16	\$366.16	\$366.16	\$366.16
4"	\$648.23	\$648.23	\$648.23	\$648.23	\$648.23
Use Charge (per hcf)					
General Treated	\$7.25	\$7.25	\$7.25	\$7.25	\$7.25
General Treated - AG	\$7.69	\$7.69	\$7.69	\$7.69	\$7.69
PSAWR Treated	\$6.37	\$6.37	\$6.37	\$6.37	\$6.37
General Untreated	\$6.88	\$6.88	\$6.88	\$6.88	\$6.88
PSAWR Untreated	\$5.56	\$5.56	\$5.56	\$5.56	\$5.56
Construction	\$9.80	\$9.80	\$9.80	\$9.80	\$9.80
Electrical Pumping Treated	\$0.98	\$0.98	\$0.98	\$0.98	\$0.98
Electrical Pumping Untreated	\$0.98	\$0.98	\$0.98	\$0.98	\$0.98
Contract	\$3.95	\$4.28	\$4.62	\$5.00	\$5.41

Table 3-8 shows the calculated water rate revenues under current rates. The fixed charge revenue is calculated by multiplying the number of accounts in Table 3-2 by the monthly fixed charge in Table 3-7 and then multiplying the result by the number of months in the fiscal year (12). The use charge revenue is calculated by multiplying the projected water use in Table 3-3 by the use rate in Table 3-7. The pumping revenue is calculated by multiplying the projected water usage for all customer classes except Construction and Contract Customers from Table 3-3 by the pumping rate in Table 3-7.

Table 3-8: Calculated Water Rate Revenue (Without Revenue Adjustments)

Calculated Rate Revenues	FYE 2025	FYE 2026	FYE 2027	FYE 2028	FYE 2029
Fixed Revenues	\$5,047,724	\$5,060,848	\$5,074,006	\$5,087,198	\$5,100,425
Usage Revenues					
General Treated	\$10,754,042	\$10,782,003	\$10,810,036	\$10,838,142	\$10,866,321
PSAWR Treated	\$93,334	\$93,577	\$93,820	\$94,064	\$94,309
General Untreated	\$412,419	\$413,492	\$414,567	\$415,645	\$416,725
General Untreated - AG	\$2,255	\$2,261	\$2,267	\$2,273	\$2,279
PSAWR Untreated	\$535,199	\$536,591	\$537,986	\$539,385	\$540,787
District & Park	\$355,405	\$356,329	\$357,256	\$358,185	\$359,116
Construction	\$89,559	\$89,792	\$90,025	\$90,259	\$90,494
Total - Usage Revenues	\$12,242,214	\$12,274,044	\$12,305,957	\$12,337,952	\$12,370,031
Pumping Revenue	\$1,621,486	\$1,625,702	\$1,629,929	\$1,634,166	\$1,638,415
Total Water Rate Revenue	\$18,911,424	\$18,960,594	\$19,009,891	\$19,059,317	\$19,108,871

3.4.1. Water Purchase Cost

The District purchases its water from the SDCWA. The District wholesale costs include a MWD Readiness-to-Serve charge, a MWD Capacity Charge, and a SDCWA Customer Service Charge, an Infrastructure Access Charge, a Supply Reliability Charge, and an Emergency Storage Charge. The volumetric portion of wholesale water purchases consists of a SDWCA M&I Melded Untreated Rate, SDCWA Treatment Charge, Transportation Charge (charged to all units of water, both treated and untreated), and a Permanent Special Agriculture Water Rate (PSAWR) discount. PSAWR customers receive water at a discounted rate because they have agreed to reduce use during water shortages. Since they are required to reduce use and since their service is interruptible, they do not receive the benefits of the Supply Reliability Charge or the Emergency Storage Charge. Currently, the District provides a variable discount for PSAWR customers that takes into account the variable credit, Supply Reliability Charge credit, and the Emergency Storage Charge credit. Raftelis calculated the water purchase cost for FYE 2025 and subsequent years by using supply costs, projected water demand, water loss factors, and timing of water use as described in earlier sections. Table 3-9 summarizes the water purchase costs. Based on historical increases, purchased water costs were inflated by 10% each year beginning in FYE 2025. The Study projects these increases to more accurately reflect the District’s anticipated expenditures. However, the District will pass-through increases in purchased water costs. In other words, though Raftelis has estimated future water purchase costs, actual water purchase costs will be passed through to customers.

Table 3-9: Water Purchase Costs

Water Purchases	FYE 2025	FYE 2026	FYE 2027	FYE 2028	FYE 2029
Fixed Costs					
MWD Readiness-to-Serve Charge	\$ (118,998)	\$(130,898)	\$(143,988)	\$(158,386)	\$(174,225)
MWD Capacity Charge	\$119,977	\$131,975	\$145,172	\$159,690	\$175,659
Customer Service Charge	\$327,953	\$360,748	\$396,823	\$436,505	\$480,156
Infrastructure Access Charge	\$561,670	\$617,837	\$679,621	\$747,583	\$822,341
Supply Reliability Charge	\$480,677	\$528,745	\$581,620	\$639,782	\$703,760
Emergency Storage Charge	\$646,254	\$710,879	\$781,967	\$860,164	\$946,180
Variable Costs					
SDCWA M&I Melded (Treated Usage)	\$4,658,985	\$5,138,209	\$5,666,725	\$6,249,604	\$6,892,438
SDCWA M&I Melded (Untreated Usage)	\$476,844	\$525,892	\$579,985	\$639,642	\$705,436
SDCWA M&I Melded (Contract Usage)	\$526,315	\$579,314	\$637,650	\$701,862	\$772,541
SDCWA Treatment Costs	\$1,552,995	\$1,712,736	\$1,888,908	\$2,083,201	\$2,297,479
Transportation Costs (Treated Usage)	\$733,790	\$809,268	\$892,509	\$984,313	\$1,085,559
Transportation Costs (Untreated Usage)	\$75,103	\$82,828	\$91,348	\$100,744	\$111,106
Transportation Costs (Contract Usage)	\$82,895	\$91,242	\$100,430	\$110,543	\$121,675
PSAWR Discount	\$(79,312)	\$(87,470)	\$(96,468)	\$(106,390)	\$(117,333)
PSAWR Discount (Contract Customers)	\$(123,750)	\$(136,211)	\$(149,927)	\$(165,025)	\$(181,644)
Total Water Purchase Costs	\$9,921,398	\$10,935,094	\$12,052,376	\$13,283,821	\$14,641,129

3.4.2. O&M Expenses

The District’s FYE 2024 budget and assumed inflationary factors (Table 3-5) were used as the basis for projecting O&M costs. Table 3-10 shows projected O&M expenses for FYE 2025 through FYE 2029, excluding purchased water costs and capital investments.

Table 3-10: Projected Water O&M Expenses

O&M Expenditures	FYE 2025	FYE 2026	FYE 2027	FYE 2028	FYE 2029
Admin and General	\$3,220,565	\$3,339,887	\$3,464,226	\$3,576,063	\$3,691,612
Facilities Maint.	\$688,216	\$715,592	\$744,214	\$769,525	\$795,736
Meter Maint.	\$866,131	\$909,279	\$954,809	\$989,356	\$1,025,207
Pumping Facilities	\$2,489,707	\$2,564,398	\$2,641,330	\$2,720,570	\$2,802,187
Supply	\$116,056	\$119,538	\$123,124	\$126,818	\$130,622
Systems	\$1,826,894	\$1,924,136	\$2,026,975	\$2,104,979	\$2,186,123
Trans. and Dist.	\$1,725,864	\$1,819,239	\$1,918,043	\$1,991,622	\$2,068,149
Treatment	\$30,619	\$31,537	\$32,483	\$33,458	\$34,462
Subtotal O&M	\$10,964,052	\$11,423,607	\$11,905,204	\$12,312,390	\$12,734,098

3.4.3. Capital Improvement Plan

Table 3-11 shows the District’s five-year capital improvement plan. The capital expenses have not been inflated per District advice.

Table 3-11: District Capital Improvement Plan

Capital Projects	FYE 2025	FYE 2026	FYE 2027	FYE 2028	FYE 2029
30-in Poway Transmission Pipeline Replacement	\$6,440,770				
Pipeline Replacement Program		\$2,940,000	\$4,690,000	\$290,000	\$3,590,000
Tank & Reservoir Rehabilitation Program		\$1,950,000	\$150,000		\$2,000,000
PRV Rehabilitation Program	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000
Pump and Motor Efficiency Program		\$150,000		\$150,000	
16-in Elm Street Transmission Main			\$250,000	\$4,800,000	
Total	\$6,590,770	\$5,190,000	\$5,240,000	\$5,390,000	\$5,740,000

3.4.4. Existing Debt

Table 3-12 shows the District’s existing debt service. The existing debt consists of one Chase Bank Loan. The final debt payment for this loan will occur in FYE 2030.

Table 3-12: Existing Water Debt Service

Existing Debt	FYE 2025	FYE 2026	FYE 2027	FYE 2028	FYE 2029
Chase Loan					
Principal	\$320,000	\$330,000	\$340,000	\$351,000	\$362,000
Interest	\$58,630	\$48,685	\$38,434	\$27,861	\$16,952
Total Chase Loan	\$378,630	\$378,685	\$378,434	\$378,861	\$378,952

3.4.5. Financial Outlook at Current Rates (without Revenue Increases)

Based on the District’s assumed expenses, reserve policies, capital planning schedule, and current revenues, the existing water rates will:

- » Result in negative net operating cashflow in each year of the study with the deficit increasing in each year, as shown by the red negative net cashflow in Figure 3-1.
- » Not meet the *minimum* reserve targets beyond FYE 2025 as shown in Figure 3-2.

Figure 3-1 compares expenses with revenues, where expenses, inclusive of reserve funding, are shown in stacked bars; and the total revenues at current rates are shown by the horizontal orange trend line.

Figure 3-1: District Operating Plan at Current Rates

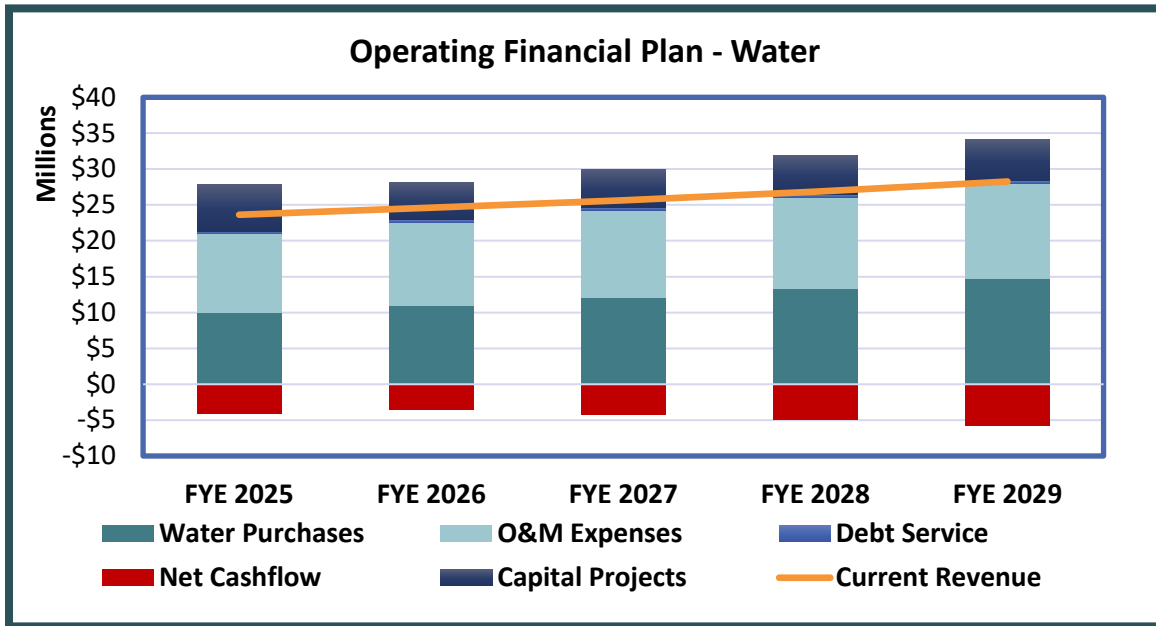


Figure 3-2 displays the ending total balances, without revenue increases, for all reserves by fiscal year for the District.

Figure 3-2: Current District Reserve Balances at Current Rates

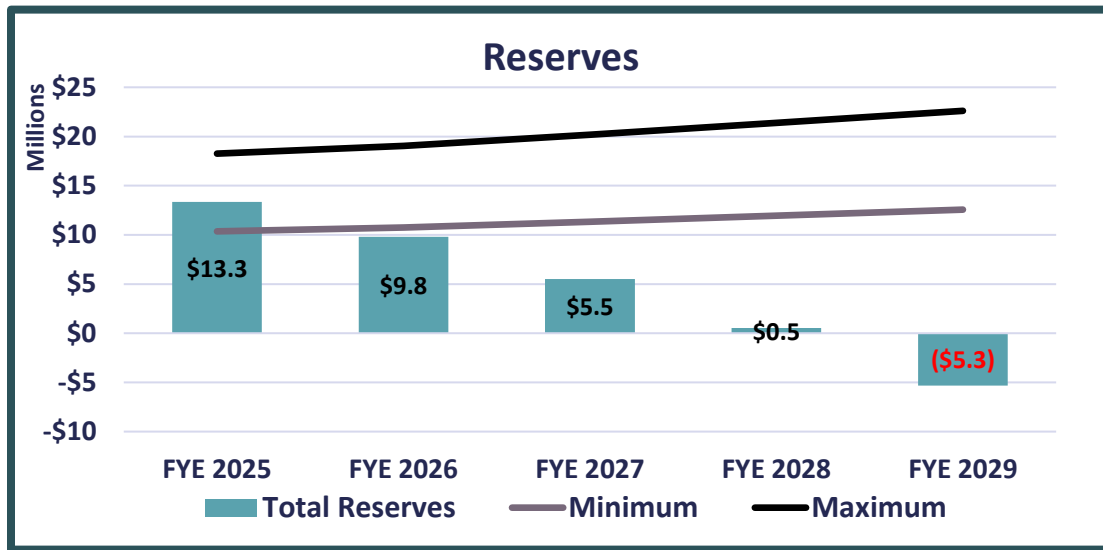
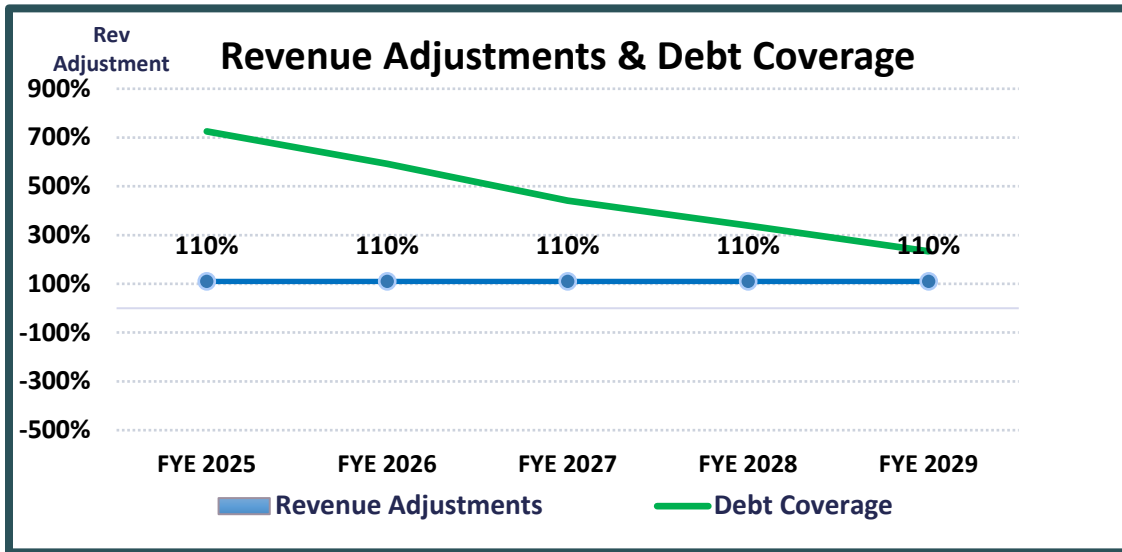


Figure 3-3 displays the debt coverage, without revenue increases, over the study period.

Figure 3-3: Debt Coverage



3.5. Proposed Financial Plan

The proposed revenue adjustments provide adequate revenue to fund operating expenses, capital expenditures, and recommended reserve targets. Financial plan modeling assumes the revenue adjustments occurs on July 1st each year of the Study Period. The proposed revenue adjustments enable the District to execute the CIP and meet or exceed the minimum reserve target during the Study Period.

Table 3-13 shows the recommended financial plan. Although Table 3-13 shows anticipated revenue adjustments for each year of the Study Period, the District will review and confirm the needed revenue adjustments on a yearly basis. The rates presented in Section 6 are based on this financial plan.

Table 3-13: Financial Plan Recommendations

	FYE 2025	FYE 2026	FYE 2027	FYE 2028	FYE 2029
Revenue Adjustments	9.0%	7.0%	7.0%	7.0%	7.0%

Table 3-14 shows the cashflow summary (also called the financial plan) over the study period assuming the recommended financial plan⁵.

⁵ The detailed cashflow can be seen in the Ramona 2023 Water Rate Model, which is on file with the District.

Table 3-14: Proposed Water Financial Plan

Line No.	Revenues	FYE 2025	FYE 2026	FYE 2027	FYE 2028	FYE 2029
1	Rate Revenue	\$18,911,424	\$18,960,594	\$19,009,891	\$19,059,317	\$19,108,871
2	Additional Revenues (Adj.)	\$1,702,028	\$3,153,147	\$4,713,331	\$6,390,529	\$8,193,266
3	Total Projected Rate Revenues	\$20,613,452	\$22,113,740	\$23,723,223	\$25,449,846	\$27,302,137
4	Pass-through Revenue	\$410,191	\$1,405,075	\$2,503,497	\$3,716,044	\$5,054,383
5	Total Other Revenue	\$4,336,752	\$4,334,937	\$4,263,179	\$4,363,414	\$4,490,032
6	Total Revenue	\$25,360,395	\$27,853,753	\$30,489,899	\$33,529,303	\$36,846,552

Line No.	O&M Expenses	FYE 2025	FYE 2026	FYE 2027	FYE 2028	FYE 2029
Water Purchase Costs						
7	Water Purchases - Fixed	\$2,017,534	\$2,219,287	\$2,441,216	\$2,685,337	\$2,953,871
8	Water Purchases - Variable	\$7,903,865	\$8,715,807	\$9,611,160	\$10,598,494	\$11,687,258
9	Water Purchase Costs	\$9,921,398	\$10,935,094	\$12,052,376	\$13,283,831	\$14,641,129
10	Other O&M	\$10,964,052	\$11,423,607	\$11,905,204	\$12,312,390	\$12,734,098
11	Total Operating Expenses	\$20,885,450	\$22,358,701	\$23,957,579	\$25,596,221	\$27,375,227
12	Total Debt	\$378,630	\$378,685	\$378,434	\$378,861	\$378,952
13	Total CIP Expense	\$6,440,770	\$5,190,000	\$5,240,000	\$5,390,000	\$5,740,000
14	Total Expenses	\$27,704,850	\$27,927,385	\$29,576,013	\$31,365,082	\$33,494,180
15	Net Cashflow	-\$2,344,455	-\$73,632	\$913,886	\$2,164,221	\$3,352,372

The Net Cashflow from Table 3-14 is used to fund the reserves and the capital expenses. Table 3-15 shows the total reserves, in the first line, and the *recommended* target minimum and maximum total reserve. As shown in the table, the proposed revenue adjustments aim to keep the reserve above the minimum target and within a fiscally responsible level during the Study Period.

Table 3-15: Proposed Water Fund Balance

	FYE 2025	FYE 2026	FYE 2027	FYE 2028	FYE 2029
Total Reserves	\$15,180,090	\$15,106,458	\$16,020,344	\$18,184,565	\$21,536,937
Minimum Target	\$10,499,997	\$11,012,861	\$11,728,201	\$12,461,283	\$13,227,568
Maximum Target	\$18,378,386	\$19,243,995	\$20,502,774	\$21,785,052	\$23,120,209

Figure 3-4 and Figure 3-5 display the FYE 2025 through FYE 2029 Financial Plan in graphical format. Figure 3-4 graphically illustrates the Operating Financial Plan. It compares existing and proposed revenues and projected expenses. The expenses include purchased water, O&M, debt service, and reserve funding and are shown by the stacked bars; the total revenues at existing rates and proposed rates are shown by the horizontal orange and black lines, respectively. In addition, Capital projects are funded through the capital reserve, therefore, it is important to meet the minimum reserve targets to ensure sufficient funding of capital projects. Figure 3-5 shows the ending balance for the sum of the District’s reserves and the reserve targets. As shown, under the proposed financial plan, the District will meet or exceed the minimum reserves each year of the Study Period.

Figure 3-4: Proposed Operating Financial Plan

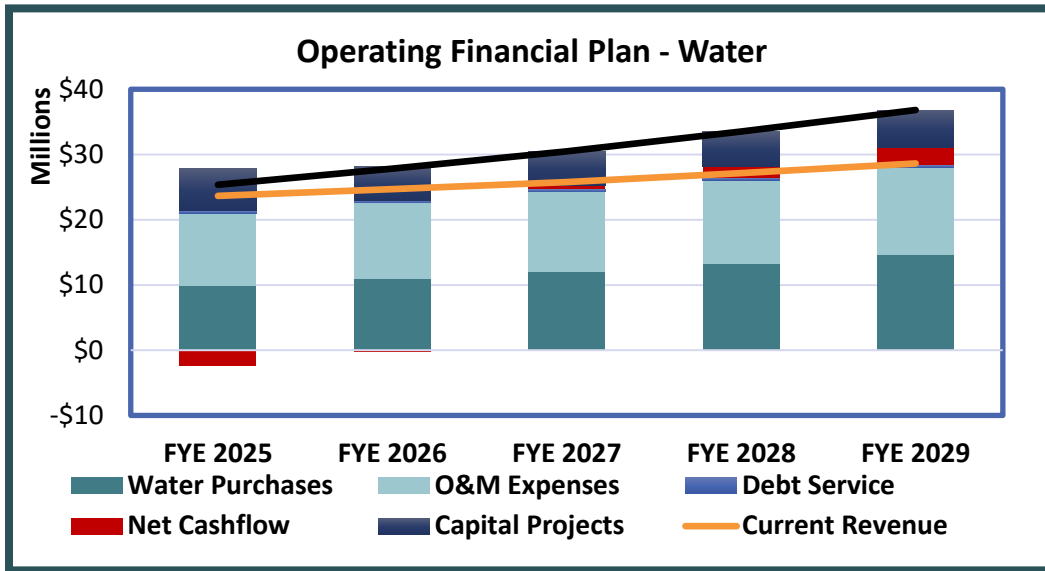
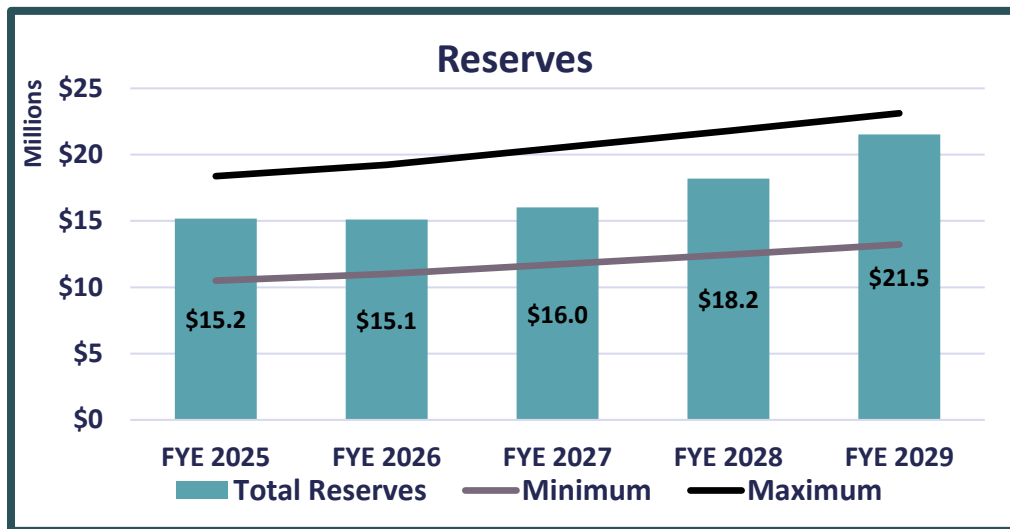


Figure 3-5: Proposed Reserve Balance



4. Legal Framework & Rate Setting Methodology

4.1. Legal Framework

This Report section describes the legal framework that informed the cost of service rate derivation to provide a fair and equitable allocation of costs to customer classes.

4.1.1. California Constitution – Article XIII D, Section F (Proposition 218)

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

1. A property-related charge (such as water rates) imposed by a public agency on a parcel shall not exceed the costs required to provide the property related service.
2. Revenues derived by the charge shall not be used for any other purpose other than that for which the charge was imposed.
3. The amount of the charge imposed upon any parcel shall not exceed the proportional cost of service attributable to the parcel.
4. No charge may be imposed for a service unless that service is actually used or immediately available to the owner of property.
5. No fee or charge may be imposed for general governmental services including, but not limited to, police, fire, ambulance or library services, where the service is available to the public at large in substantially the same manner as it is to property owners.
6. A written notice of the proposed charge shall be mailed to the record owner of each parcel at least 45 days prior to the public hearing, when the agency considers all written protests against the charge.

As stated in AWWA’s M1 Manual, “water rates and charges should be recovered from classes of customers in proportion to the cost of serving those customers.” Proposition 218 requires that water rates cannot be “arbitrary and capricious,” meaning that the rate-setting methodology must be sound and that there must be a nexus between costs and the rates charged. Raftelis followed industry standard rate setting methodologies set forth by the AWWA M1 Manual.

4.1.2. Government Code – Section 53756 (Pass-Through Provision)

Government Code, Section 53756 states the following:

“An agency providing water, wastewater, sewer, or refuse collection service may adopt a schedule of fees or charges authorizing automatic adjustments that pass-through increases in wholesale charges for water, sewage treatment, or wastewater treatment or adjustments for inflation, if it complies with all of the following:

- a) It adopts the schedule of fees or charges for a property-related service for a period not to exceed five years pursuant to Section 53755.
- b) The schedule of fees or charges may include a schedule of adjustments, including a clearly defined formula for adjusting for inflation. Any inflation adjustment to a fee or charge for a property-related service shall not exceed the cost of providing that service.

- c) The schedule of fees or charges for an agency that purchases wholesale water, sewage treatment, or wastewater treatment from a public agency may provide for automatic adjustments that pass through the adopted increases or decreases in the wholesale charges for water, sewage treatment, or wastewater treatment established by the other agency.
- d) Notice of any adjustment pursuant to the schedule shall be given pursuant to subdivision (a) of Section 53755, not less than 30 days before the effective date of the adjustment.”

The District will use the provisions of Government Code Section 53756 to authorize automatic pass-through adjustments to rates for the potential wholesale water rate increases implemented by SDCWA and charged to the District. Authorizing automatic pass-through adjustments mitigates the risk of unknown rate increases by SDCWA as the District’s water wholesaler. In addition to mitigating risks, this approach provides clear transparency between costs that are controlled by the District versus uncontrolled costs from outside agencies.

4.2. Cost-Based Rate Setting Methodology

As stated in the AWWA M1 Manual, “the costs of water rates and charges should be recovered from classes of customers in proportion to the cost of serving those customers.” To develop utility rates that comply with Proposition 218 and industry standards while meeting other emerging goals and objectives of the utility, there are four major steps as discussed below:

Step 1) Calculate Revenue Requirements

The rate-making process starts by determining the test year revenue requirements – which for this study is FYE 2025. The revenue requirements should sufficiently fund the utility’s O&M, debt service, capital expenses, and reserve funding. Test Year revenue requirements are used in the cost allocation process. Subsequent years’ revenue adjustments are incremental and the rates for future years are based on the respective revenue adjustments, which are applied across-the-board. The District should review the cost of service analysis at least once every five years to ensure that the rates are consistent with the costs of providing service.

2) Cost of Service (COS) Analysis

The annual cost of providing water service is distributed among customer classes commensurate with their service requirements. A COS analysis involves the following:

1. Functionalizing costs. Examples of functions are supply, treatment, transmission and distribution, storage, meter maintenance, and customer billing and collection.
2. Allocating functionalized costs to cost causation components. Examples of cost causation components include base, maximum day, maximum hour⁶, meter capacity, and customer servicing.
3. Distributing the cost causation components. Distribute cost causation components, using unit costs, to customer classes in proportion to their demands on the water system. This is described in the M1 Manual published by AWWA.

A COS analysis considers both the average quantity of water consumed (base costs) and the peak rate at which it is consumed (peaking or capacity costs as identified by maximum day and maximum hour

⁶ Collectively, maximum day and maximum hour costs are known as peaking costs or capacity costs.

demands)⁷. The water system must be designed to meet peak demands. There are additional costs associated with designing, constructing, and operating and maintaining facilities to meet peak demands. These peak demand costs need to be allocated to those imposing such costs on the utility. Different customer classes impose different peak demands on the water system. In other words, not all customer classes share the same responsibility for peaking related costs.

3) Rate Design and Calculations

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

4) Rate Adoption

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

⁷ System capacity is the system's ability to supply water to all delivery points at the time when demanded. Coincident peaking factors are calculated for each customer class at the time of greatest system demand. The time of greatest demand is known as peak demand. Both the operating costs and capital asset related costs incurred to accommodate the peak flows are generally allocated to each customer class based upon the peak month, day and hour peaks of each customer class.

5. Cost of Service Analysis

5.1. Revenue Requirements

The revenue requirement determination is the annual revenue to meet Supply, O&M expenses, any debt service needs, reserve levels, and capital investment needs. Deductions are made to account for revenue offsets, required net cashflows, and any mid-year adjustments. The FYE 2025 revenue requirement to be recovered from the District's water customers is shown in Table 5-1. As shown in the table, the revenue requirement were categorized into Water Purchases, Untreated Water Purchase Offset, Specific Allocations, Operating, and Capital.

As shown in Table 5-1, the total revenue requirement is \$20,613,452 and reflects the amount that rates are designed to recover during FYE 2025.

Table 5-1: Revenue Requirements

		FYE 2025					
Line No.	Revenue Requirements	Water Purchases	Untreated Water Purchase Offset	Specific Allocation	Operating	Capital	Total
Purchased Water Costs							
1	MWD Readiness-to-Serve Charge	-\$118,998					-\$118,998
2	MWD Capacity Charge	\$119,977					\$119,977
3	Customer Service Charge	\$327,953					\$327,953
4	Infrastructure Access Charge	\$561,670					\$561,670
5	Supply Reliability Charge	\$480,677					\$480,677
6	Emergency Storage Charge	\$646,254					\$646,254
7	SDCWA Untreated Costs (Treated Use)	\$4,658,985					\$4,658,985
8	SDCWA Untreated Costs (Untreated Use)	\$476,844					\$476,844
9	SDCWA Untreated Costs (Untreated Contract Use)	\$526,315					\$526,315
10	SDCWA Treatment Costs	\$1,552,995					\$1,552,995
11	Transportation Costs (Treated Use)	\$733,790					\$733,790
12	Transportation Costs (Untreated Use)	\$75,103					\$75,103
13	Transportation Costs (Untreated Contract Use)	\$82,895					\$82,895
14	PSAWR Discount (Credit)			-\$79,312			-\$79,312
15	PSAWR Discount (Contract)			-\$123,750			-\$123,750
16	Subtotal Purchased Water	\$10,124,461	\$0	-\$203,062	\$0	\$0	\$9,921,398
Other O&M Expenses							
18	Admin and General				\$3,220,565		\$3,220,565
19	Facilities Maint.				\$688,216		\$688,216
20	Meter Maint.				\$866,131		\$866,131
21	Pumping Facilities			\$2,489,707			\$2,489,707
22	Supply				\$116,056		\$116,056
23	Systems				\$1,826,894		\$1,826,894
24	Trans. and Dist.				\$1,725,864		\$1,725,864
25	Treatment				\$30,619		\$30,619
26	Subtotal Other O&M Expenses	\$0	\$0	\$2,489,707	\$8,474,345	\$0	\$10,964,052
Debt Service							
28	Chase Bank Loan					\$378,630	\$378,630
29	Proposed Debt Service					\$0	\$0
30	Total Debt Service	\$0	\$0	\$0	\$0	\$378,630	\$378,630
31	Rate Funded Capital					\$6,440,770	\$6,440,770
32	Total Revenue Requirements	\$10,124,461	\$0	\$2,286,645	\$8,474,345	\$6,819,400	\$27,704,850
Less: Revenue Offsets							
34	Pass-through revenue				\$410,191		\$410,191
35	Other Revenues				\$247,286		\$247,286
36	Interest Income					\$515,034	\$515,034
37	Property Taxes		\$353,494			\$2,843,858	\$3,197,352
38	Other Operating Revenue				\$43,000		\$43,000
39	Capacity Fee Revenue					\$160,335	\$160,335
40	Other Non-Operating Income				\$7,000		\$7,000
41	Contract Revenue		\$166,745				\$166,745
42	Total Revenue Offsets	\$0	\$520,238	\$0	\$707,477	\$3,519,227	\$4,746,943
Less: Adjustments							
44	Adjustment for Cash Balance					\$2,344,455	\$2,344,455
45	Adjustment for Mid-Year Increase					\$0	\$0
46	Total Adjustments	\$0	\$0	\$0	\$0	\$2,344,455	\$2,344,455
47							
48	Revenue Requirement from Rates	\$10,124,461	-\$520,238	\$2,286,645	\$7,766,868	\$955,717	\$20,613,452

5.2. Functionalized Costs

5.2.1. O&M Functionalized Expenses

A cost of service analysis distributes a utility’s revenue requirements to each customer class. To do so, operating expenses are allocated to functions. The following functions were used to functionalize costs:

- Administration and General costs – Includes costs of staff, finance, administration, and communications
- Facilities Maintenance – Costs of maintaining water system facilities
- Meter Maintenance – Costs related to maintaining meters
- Supply – Costs related to daily operations and maintenance of the District’s water supply, includes Lake Ramona operations, and pumping and booster stations.
- Systems – Represents the operating and maintenance cost of the water distribution system, including engineering
- Transmission and Distribution – Represents the operating and maintenance cost of the water transmission and distribution system, including pipelines and service lines
- Treatment – The cost associated with treating water to make it ready for consumption

Table 5-2 summarizes the functionalized costs prior to any offset adjustments.

Table 5-2: O&M Functionalized Expenses

Line No.	Functionalized Expenses	FYE 2025 Functionalized Expenses
1	Admin and General	\$3,220,565
2	Facilities Maint.	\$688,216
3	Meter Maint.	\$866,131
4	Supply	\$116,056
5	Systems	\$1,826,894
6	Trans. and Dist.	\$1,725,864
7	Treatment	\$30,619
8	Total O&M Expenses⁸	\$8,474,345

5.2.2. Functionalized Assets

Similar to O&M, assets are also functionalized. The District provided Raftelis with a comprehensive listing of asset for the water utility, which were functionalized based on the asset’s purpose.

⁸ Excludes pumping facilities cost

Table 5-3 summarizes the functionalized assets.

Table 5-3: Functionalized Assets

Functionalized Expenses	FYE 2025 Functionalized Assets
Supply	\$27,435,541
Pumping	\$4,912,536
Transmission & Distribution	\$31,190,511
Treatment	\$3,651,177
Storage	\$1,229,782
Meter Maintenance	\$1,599,573
General & Admin	\$21,259,099
Total Assets	\$91,278,219

5.3. Allocate Costs to Cost Causation Components

The functionalized costs are then allocated to the cost causation components, which include:

- » Customer service – costs that are incurred to provide billing and customer service
- » Private Fire Meter Reading & Maintenance – costs related to providing private fire service
- » Meter Capacity – costs that are associated with maintenance and capital costs of meters
- » SDWCA Fixed – fixed costs that are incurred to purchase water from SDWCA
- » Emergency Storage & Supply Reliability – SDCWA costs related to providing a reliable supply of water
- » Treated Base Supply – variable costs that are incurred to purchase treated water from SDCWA
- » Untreated Base Supply – variable costs that are incurred to purchase untreated water from SDCWA
- » Treatment – variable costs that are incurred to purchase treated water from SDCWA
- » PSWAR Discount – credit received from SDCWA for PSAWR water purchases, includes variable credit in addition to the credit related to the supply reliability and emergency storage charges
- » Base Delivery costs – costs that are associated with providing service under average conditions
- » Peaking costs (maximum day and maximum hour) – costs that are associated with meeting the peak demand in excess of the average rate of use
- » Pumping – costs that are associated with pumping water to the District
- » General – costs that cannot be readily assigned to one of the other cost causation factors

Peaking costs are further divided into maximum day and maximum hour demand. The maximum day demand is the maximum amount of water used in a single day in a year. The maximum hour demand is the maximum usage in an hour on the maximum usage day. Different facilities, such as distribution and storage facilities, and the O&M costs associated with those facilities are designed to meet the peaking demands of customers. Therefore, extra capacity⁹ costs include the O&M and capital costs associated with meeting peak

⁹ The terms extra capacity, peaking, and capacity costs are used interchangeably.

customer demand. This method is consistent with the AWWA M1 Manual and is widely used in the water industry to perform COS analyses.

5.3.1. System-Wide Peaking Factors

After functionalizing expenses and assets, the next step is to allocate the functionalized expenses to cost causation components. To do so, Raftelis identified system-wide peaking factors, which are shown in Table 5-4. The system-wide peaking factors are used to derive the cost component allocation bases (or percentages). Functionalized expenses are then allocated to the cost causation components using these allocation bases.

To understand the interpretation of the percentages, Raftelis first establishes the base use as the average daily demand during the year. To determine the relative proportion of costs to assign to Supply, Base Delivery, Maximum Day, and Maximum Hour, allocations are calculated based on these factors. Cost components that are solely related to providing average day demand (ADD) are allocated entirely to Base Delivery.

Cost components that are designed to meet Maximum Day peaks, such as storage facilities, are allocated to Base Delivery and Maximum Day factors. The system Maximum Day and Maximum Hour factors provided by the District are 2.25 and 3.80, respectively¹⁰. Base Delivery is assigned a value of 1 and a Max Day factor of 2.25 means that the maximum use on any day in a year is 2.25 times the average day use. The Maximum Day allocation is as follows:

- » Base Delivery: 44% = $(1.00/2.25)$
- » Maximum Day: 56% = $(2.25-1.00)/2.25$

The interpretation of a cost that is allocated to the cost components using Maximum Day is that 44% of those costs has to do with average daily demand and 56% has to do with Maximum Day demand.

Cost components that are allocated for Maximum Hour peaks are allocated as follows:

- » Base Delivery: 26% = $(1.00/3.80)$
- » Maximum Day: 33% = $(2.25-1.00)/3.80$
- » Maximum Hour: 41% = $(3.80-2.25)/3.80$

Collectively, the Maximum Day and Maximum Hour cost components are known as peaking costs. These allocation bases are used to assign the functionalized costs to the cost causation components. The derived factors can be seen in Table 5-4.

Table 5-4: Water System-Wide Peaking Factors

System Peaking	Factor	Base	Max Day	Max Hour
Base	1.00	100%	0%	0%
Max Day	2.25	44%	56%	0%
Max Hour	3.80	26%	33%	41%

¹⁰ The District follows San Diego Water Agencies Standards (SCWAS), the max day and max hour system peaking factors were estimated from Figures 4-1-1 & 4-1-2 of the SDWAS Design Guidelines.

5.3.2. Purchased Water Cost Allocation

Table 5-5 allocates the water purchases to each cost causation component. The detailed Water Purchases from Table 5-1 (lines 1 through 15) were allocated 100% to specific cost components. Table 5-6 shows the total resulting cost causation component allocation for the District’s Purchased Water costs. Purchased Water costs were shown separately to clearly show the costs outside of the District’s control. The resulting Water Purchase Allocation (%) will be used to allocate the Water Purchase Costs Requirement.

Table 5-5: Water Purchases Percentage Allocation

Functionalized Expenses	Cost Components					Total
	SDCWA Fixed	Emer. Stor & Supp Reliability	Treated Base Supply	Untreated Base Supply	Treatment	
MWD Readiness-to-Serve Charge	100%					100%
MWD Capacity Charge	100%					100%
Customer Service Charge	100%					100%
Infrastructure Access Charge	100%					100%
Supply Reliability Charge		100%				100%
Emergency Storage Charge		100%				100%
SDCWA Untreated Costs (Treated Use)			100%			100%
SDCWA Untreated Costs (Untreated Use)				100%		100%
SDCWA Untreated Costs (Untreated Contract Use)				100%		100%
SDCWA Treatment Costs					100%	100%
Transportation Costs (Treated Use)			100%			100%
Transportation Costs (Untreated Use)				100%		100%
Transportation Costs (Untreated Contract Use)				100%		100%

Table 5-6: Water Purchases Allocation by Causation Component

Functionalized Expenses	Cost Components					Total
	SDCWA Fixed	Emer. Stor & Supp Reliability	Treated Base Supply	Untreated Base Supply	Treatment	
MWD Readiness-to-Serve Charge	-\$118,998					-\$118,998
MWD Capacity Charge	\$119,977					\$119,977
Customer Service Charge	\$327,953					\$327,953
Infrastructure Access Charge	\$561,670					\$561,670
Supply Reliability Charge		\$480,677				\$480,677
Emergency Storage Charge		\$646,254				\$646,254
SDCWA Untreated Costs (Treated Use)			\$4,658,985			\$4,658,985
SDCWA Untreated Costs (Untreated Use)				\$476,844		\$476,844
SDCWA Untreated Costs (Contract Use)				\$526,315		\$526,315
SDCWA Treatment Costs					\$1,552,995	\$1,552,995
Transportation Costs (Treated Use)			\$733,790			\$733,790
Transportation Costs (Untreated Use)				\$75,103		\$75,103
Transportation Costs (Contract Use)				\$82,895		\$82,895
Total Water Purchases	\$ 890,602	\$ 1,126,931	\$ 5,392,776	\$ 1,161,156	\$ 1,552,995	\$ 10,124,461
Water Purchase Allocation (%)	8.8%	11.1%	53.3%	11.5%	15.3%	100%

5.3.3. Specific Cost Allocation

The PSAWR Discount is only applicable to certain customer classes (PSAWR Treated and PSAWR Untreated customers), therefore, the discount should be specifically allocated. Raftelis separated these credits and specifically allocated them.

To ensure the pumping component of the proposed rate structure only reflects the costs incurred to pump water to the District, Raftelis specifically allocated pumping costs. This prevents the pumping component from being impacted by revenue adjustments, revenue offsets, or mid-year adjustments.

Table 5-7 allocates the specific costs for the PSWAR Discount (Credit) and Pumping costs to their respective cost causation components and spreads the cost as seen in Table 5-8.

Table 5-7: Specific Cost Percentage Allocation

Functionalized Expenses	Cost Components			Total
	Untreated Base Supply	PSAWR Discount	Pumping	
PSAWR Discount (Credit)	46%	54%		100%
Pumping Facilities			100%	100%

Table 5-8: Specific Allocation by Cost Causation Component

Functionalized Expenses	Cost Components			Total
	Untreated Base Supply	PSAWR Discount	Pumping	
PSAWR Discount (Credit)	-\$93,555	-\$109,507	\$0	-\$203,062
Pumping Facilities	\$0	\$0	\$2,489,707	\$2,489,707

5.3.4. O&M Cost Allocation

Table 5-9 allocates the remaining O&M expenses to each cost causation component. The estimated portion of Administration and General costs related to customer service and billing was allocated to the Customer Service cost component and 60% was allocated to the Meter Capacity component and the remainder to the general cost component. Facilities Maintenance and Systems were allocated based on Max Hour since the system was designed to meet max hour requirements. Meter Maintenance and Supply was allocated 100% to the respective cost components. Transmission and Distribution was allocated based on Max Day allocation (see Table 5-4) since transmission systems are designed for Max Day and distribution systems for Max Hour.

Table 5-9: O&M Expenses Percentage Allocation

Functionalized Expenses	Cost Components							Total
	Customer Service	Private Fire Meter Reading &	Meter Capacity	Base	Max Day	Max Hour	General	
Admin and General	20%		60%				20%	100%
Facilities Maint.			0%	26%	33%	41%		100%
Meter Maint.		1.4%	99%					100%
Supply				100%				100%
Systems			0%	26%	33%	41%		100%
Trans. and Dist.				26%	33%	41%		100%
Treatment				44%	56%	0%		100%

Table 5-10 shows the total cost causation component allocations for O&M expenses. Using the Reallocation of General (%), general costs were spread to all O&M cost components except customer service. This reallocation spreads costs that were incurred for the general operations of the District proportionally to how O&M costs were incurred. The resulting O&M Allocation (%) is used to allocate the District’s operating revenue requirement from Table 5-1 to the cost causation components.

Table 5-10: O&M Expenses Allocation by Cost Causation Component

Functionalized Expenses	Cost Components							Total
	Customer Service	Private Fire Meter Reading & Maint	Meter Capacity	Base	Max Day	Max Hour	General	
Admin and General	\$644,113	\$0	\$1,932,339	\$0	\$0	\$0	\$644,113	\$3,220,565
Facilities Maint.	\$0	\$0	\$0	\$181,110	\$226,387	\$280,720	\$0	\$688,216
Meter Maint.	\$0	\$12,126	\$854,005	\$0	\$0	\$0	\$0	\$866,131
Supply	\$0	\$0	\$0	\$116,056	\$0	\$0	\$0	\$116,056
Systems	\$0	\$0	\$0	\$480,761	\$600,952	\$745,180	\$0	\$1,826,894
Trans. and Dist.	\$0	\$0	\$0	\$454,175	\$567,719	\$703,971	\$0	\$1,725,864
Treatment	\$0	\$0	\$0	\$13,608	\$17,010	\$0	\$0	\$30,619
Total O&M Expenses	\$ 644,113	\$ 12,126	\$ 2,786,344	\$ 1,245,710	\$ 1,412,068	\$ 1,729,871	\$ 644,113	\$ 8,474,345
Reallocation of General (%)	0%	0%	39%	17%	20%	24%	0%	100%
Reallocation of General Costs	\$ -	\$ 1,089	\$ 250,170	\$ 111,845	\$ 126,782	\$ 155,316	\$ (644,113)	\$ 1,089
Final O&M Expenses	\$ 644,113	\$ 13,215	\$ 3,036,515	\$ 1,357,556	\$ 1,538,849	\$ 1,885,187	\$ -	\$ 8,475,434

5.3.5. Asset Allocation

It is appropriate to allocate capital costs based on the allocation of system assets. Allocating capital costs individually from year to year would cause the costs to different cost causation components to change significantly from year to year based on the type of projects and would lead to rate spikes. Using the assets for allocation allows a consistent allocation to the different cost causation components, and is a rational methodology, consistent with industry practice, given that the assets all must be replaced over time. Table 5-11 shows the allocation of water assets to each cost component. The resulting asset allocation is derived in a similar manner as the O&M expense allocation. First, Raftelis functionalized the District’s water assets and then allocated the assets to the cost causation components resulting in the total asset allocation shown in Table 5-12. The resulting Capital Allocation (%) is used to allocate the District’s capital revenue

requirement, specifically debt service, from Table 5-1 to the cost causation components. It is reasonable to spread debt based on the asset or capital allocation because debt is incurred to finance capital projects.

Table 5-11: Capital Assets Percentage Allocation

Functionalized Assets	Cost Components				Total
	Meter Capacity	Base	Max Day	General	
Supply		44%	56%		100%
Pumping		44%	56%		100%
Transmission & Distribution		26%	33%		100%
Treatment		100%			100%
Storage		44%	56%		100%
Meter Maintenance	100%				100%
General & Admin				100%	100%

Table 5-12: Capital Asset Allocation by Cost Causation Component

Functionalized Assets	Cost Components					Total
	Meter Capacity	Base	Max Day	Max Hour	General	
Supply	\$0	\$12,193,574	\$15,241,967		\$0	\$27,435,541
Pumping	\$0	\$2,183,349	\$2,729,187		\$0	\$4,912,536
Transmission & Distribution	\$0	\$8,208,029	\$10,260,036	\$12,722,445	\$0	\$31,190,511
Treatment	\$0	\$3,651,177		\$0	\$0	\$3,651,177
Storage	\$0	\$546,570	\$683,212		\$0	\$1,229,782
Meter Maintenance	\$1,599,573	\$0	\$0		\$0	\$1,599,573
General & Admin	\$0	\$0	\$0		\$21,259,099	\$21,259,099
Total Assets	\$1,599,573	\$26,782,699	\$28,914,403	\$12,722,445	\$21,259,099	\$91,278,219
Reallocation of General (%)	2%	38%	41%	18%		100%
Reallocation of General Cost	\$485,660	\$8,131,722	\$8,778,947	\$3,862,769	-\$21,259,099	\$0
Final O&M Expenses	\$2,085,233	\$34,914,422	\$37,693,350	\$16,585,215	\$0	\$91,278,219

5.3.6. Allocation of Revenue Requirements to Cost Causation Components

The next step is to use the allocation percentages developed in the preceding sections to allocate the Test Year revenue requirements to cost components. The Revenue Requirements from Rates (Table 5-1, line 48) were allocated to cost components as summarized Table 5-13. The Purchased Water requirement was allocated based on the corresponding Purchased Water Allocation percentages from Table 5-6, Untreated Purchased Water Offset was allocated directly to the Untreated Base Supply component, the Specific requirement was allocated as shown in Table 5-8, the Operating requirement was allocated based on the O&M Allocation percentages from

Table 5-10, and the Capital requirement from Table 5-12 was allocated based on the Asset Allocation percentages from Table 5-11.

Table 5-13: Cost of Service Requirements

Revenue Req.	Customer Service	Meter Reading & Maint	Meter Capacity	SDCWA Fixed	Emer. Stor & Supp Reliability	Treated Base Supply	Untreated Base Supply	Treatment	PSAWR Discount	Base	Max Day	Max Hour	Pumping	Total Req.
Purchased Water	\$0	\$0	\$0	\$890,602	\$1,126,931	\$5,392,776	\$1,161,156	\$1,552,995	\$0	\$0	\$0	\$0	\$0	\$10,124,461
Utrtd. Water Offset	\$0	\$0	\$0	\$0	\$0	\$0	-\$520,238	\$0	\$0	\$0	\$0	\$0	\$0	-\$520,238
Specific Allocation	\$0	\$0	\$0	\$0	\$0	\$0	-\$93,555	\$0	-\$109,507	\$0	\$0	\$0	\$2,489,707	\$2,286,645
Operating	\$590,264	\$12,110	\$2,782,655	\$0	\$0	\$0	\$0	\$0	\$0	\$1,244,061	\$1,410,198	\$1,727,581	\$0	\$7,766,868
Capital	\$0	\$0	\$21,833	\$0	\$0	\$0	\$0	\$0	\$0	\$365,567	\$394,664	\$173,653	\$0	\$955,717
Total Cost of Service	\$590,264	\$12,110	\$2,804,488	\$890,602	\$1,126,931	\$5,392,776	\$547,363	\$1,552,995	-\$109,507	\$1,609,628	\$1,804,862	\$1,901,234	\$2,489,707	\$20,613,452
Reallocation of Base & Peaking	\$0	\$0	\$1,853,048	\$0	\$0	\$0	\$0	\$0	\$0	\$0	-\$902,431	-\$950,617	\$0	\$0
COS Requirement	\$590,264	\$12,110	\$4,657,536	\$890,602	\$1,126,931	\$5,392,776	\$547,363	\$1,552,995	-\$109,507	\$1,609,628	\$902,431	\$950,617	\$2,489,707	\$20,613,452

To provide additional revenue stability for the District’s water system a portion (50%) of peaking costs are allocated to the Meter Capacity component so that the District will collect approximately 30% of its revenue through fixed charges. Table 5-13 shows the total cost by cost component in the bottom line of the table. Section 6 will derive the rates based on the cost by cost component in Table 5-13.

6. Rate Design and Calculations

The study retains the existing rate structure comprised of a monthly fixed charge that varies by meter size, uniform commodity rates based on customer class and usage, and a pumping charge rate. In addition, the District wants to continue the automatic pass-through provision to mitigate the risks of increased purchased water costs from SDCWA.

6.1. Rate Derivation

This section derives the rates and charges based on the cost allocations to each cost component in the prior section.

6.1.1. Customer Service Component

The customer service component recovers costs associated with meter reading, customer billing and collection, and customer service costs. These costs are incurred equally across the accounts or bills regardless of customer class, type of water being purchased, or the total amount of water delivered, therefore, the customer service component is based on the number of bills. The number of bills can be determined by multiplying the number of accounts, times the number of billing periods, in a year. The total customer service revenue requirement from Table 5-13, is divided by the number of bills to determine the unit cost of service shown in Table 6-1.

Table 6-1: Customer Service Component – Unit Rate

Customer Service Component - Unit Rate	
Revenue Requirements	\$590,263.65
# of bills	116,246
Monthly Unit Rate	\$5.08

6.1.2. Private Fire Meter Reading & Maintenance

The private fire meter reading and maintenance component recovers costs associated with meter reading, and meter maintenance related to owning a private fire meter. These costs are the same regardless of meter size. The number of bills can be determined by multiplying the number of accounts, times the number of billing periods, in a year. The total private fire meter reading and maintenance requirement from Table 5-13, is divided by the number of bills to determine the unit cost of service shown in Table 6-2.

Table 6-2: Private Fire Meter Reading & Maintenance – Unit Rate

Private Fire Meter Reading & Maint. - Unit Rate	
Revenue Requirements	\$12,110
# of bills	1,176
Monthly Unit Rate	\$10.30

6.1.3. Meter Capacity Component

The meter capacity component recovers costs associated with meter maintenance, capital costs, and a portion of peaking costs. To allocate meter related costs appropriately, the concept of equivalent meters needs to be understood. By using equivalent meters instead of a simple meter count, the analysis accounts for the fact that larger meters impose larger demands, are more expensive to install, maintain, and replace than smaller meters and commit a greater capacity in the system.

Equivalent meters represent the potential demand on the water system in units of the smallest meter size. For the purposes of this Study, the safe maximum operating capacity by meter type, as identified in the AWWA M1 Manual, 6th Edition, Table B-1, was used to calculate the equivalent meter ratios. The AWWA ratio is calculated by dividing larger meter capacities by the base meter capacity as shown in the AWWA ratio column. The base meter is the smallest meter, which is the ¾” or smaller meter for this Study. The actual number of meters by size is multiplied by the corresponding capacity ratio to calculate equivalent meters. Table 6-3 details the calculation of the AWWA equivalent meters that were used in this Study¹¹.

Table 6-3: AWWA & SDCWA Based Equivalent Meters

Meter Size	Number of Meters	AWWA Capacity (gpm)	AWWA Ratio	SDCWA Ratio	AWWA based Equivalent Meters	SDCWA based Equivalent Meters	Private Fire Meters
¾"	9,003	30	1.00	1.00	9,003	9,003	97
1"	372	50	1.67	1.60	621	595	1
1 1/2"	124	100	3.33	3.00	412	371	0
2"	166	160	5.33	5.20	884	862	0
3"	20	300	10.00	9.60	201	193	0
4"	3	500	16.67	16.40	50	49	0
6"	0	1,000	33.33	30.00	0	0	0
8"	0	1,600	53.33	52.00	0	0	0
10"	0	2,300	76.67	78.00	0	0	0
Total	9,687				11,171	11,074	98

The annual AWWA based Equivalent Units are determined by multiplying the equivalents units from Table 6-3 by the number of billing periods. The total meter capacity revenue requirement from Table 5-13 is divided by the number of annual equivalent units to determine the monthly unit cost of service shown in Table 6-4.

¹¹ May be slight difference due to rounding

Table 6-4: Meter Capacity Component – Unit Rate

Meter Capacity Component - Unit Rate	
Revenue Requirements	\$4,657,536
Annual Equivalent Units	134,050
Monthly Unit Rate	\$34.75

6.1.4. SCDWA Fixed Component

The SDCWA fixed component recovers fixed costs associated with purchasing water from SDCWA. Equivalent meters were used to create parity across the various meter sizes, however, instead of AWWA ratio’s Raftelis utilized SDCWA ratios. Table 6-3 details the calculation of the SDCWA based equivalent meters that were used in this Study.

The total SDCWA Fixed revenue requirement from Table 5-13 is divided by the number of annual equivalent units, to determine the unit monthly cost of service shown in Table 6-5.

Table 6-5: SDCWA Fixed Component – Unit rate

SDCWA Fixed Component	
Revenue Requirement	\$890,602
Annual Equivalent Units	132,883
Monthly Unit Rate	\$6.71

6.1.5. Treated Supply Component

The treated supply component recovers the base purchased water supply costs incurred to purchase water for treated customers. These supply costs are spread equally over all units of treated usage. Customers receiving treated water supply include General Treated, PSAWR Treated, and Construction. The total treated supply revenue requirement from Table 5-13 is divided by the projected treated water sales to determine the unit cost of service shown in Table 6-6. As shown in the table, each customer class is allocated their proportionate share of the revenue requirements.

Table 6-6: Treated Supply Component – Unit Rate

Customer Class	Projected Usage (hcf)	% Allocation	Revenue Requirements	Unit Rate
General Treated	1,519,582	98.5%	\$5,309,647	\$3.50
General Treated - AG	-	0.0%	\$0	\$3.50
PSAWR Treated	14,652	0.9%	\$51,197	\$3.50
Construction Treated	9,139	0.6%	\$31,932	\$3.50
Total	1,543,373		\$5,392,776	

6.1.6. Untreated Supply Component

Similar to treated supply, the untreated supply component recovers costs incurred to purchase water for untreated customers. These supply costs are spread equally over all units of *untreated* usage. Untreated customers include General Untreated and PSAWR Untreated. The total untreated supply requirement from

Table 5-13 is divided by the projected untreated water sales to determine the unit cost of service shown in Table 6-7.

Table 6-7: Untreated Supply Component – Unit Rate

Customer Class	Projected Usage (hcf)	% Allocation	Revenue Requirements	Unit Rate
General Untreated	60,350	39%	\$210,930	\$3.50
PSAWR Untreated	96,259	61%	\$336,433	\$3.50
Total	156,609		\$550,856	

6.1.7. Treatment Component

The treatment component recovers the projected treatment costs from SDCWA. The treatment component is spread equally over only the units of water that were treated (General Treated, PSAWR Treated, and Construction). The treated revenue requirement from Table 5-13 is divided by the projected treated water sales to determine the unit cost of service shown in Table 6-8.

Table 6-8: Treatment Component – Unit Rate

Customer Class	Projected Usage (hcf)	% Allocation	Revenue Requirements	Unit Rate
General Treated	1,519,582	98%	\$1,529,056	\$1.01
General Treated - AG	-	0%	\$0	\$1.01
PSAWR Treated	14,652	1%	\$14,743	\$1.01
Construction Treated	9,139	1%	\$9,196	\$1.01
Total	1,543,373		\$1,552,995	

6.1.8. PSAWR Discount Component

The PSAWR Discount Component provides the credit for all PSAWR Customers that receive a discount from SDCWA. Therefore, this component is spread equally over all units of PSAWR Usage (both Treated and Untreated). The PSAWR revenue requirement from Table 5-13 is divided by the projected PSAWR water sales to determine the unit cost of service shown in Table 6-9

Table 6-9: PSAWR Discount Component – Unit Rate

Customer Class	Projected Usage (hcf)	% Allocation	Revenue Requirements	Unit Rate
PSAWR Treated	14,652	10%	-\$10,481	-\$0.72
PSAWR Untreated	96,259	63%	-\$68,856	-\$0.72
Contract (billed use)	42,177	28%	-\$30,170	-\$0.72
Total	153,088		-\$109,507	

6.1.9. Base Component

The base component recovers operating and capital costs associated with delivering water to all customers at a constant average rate of use. Therefore, base costs are spread equally over all units of water. The base revenue requirement from Table 5-13 is divided by the projected water sales to determine the unit cost of service shown in Table 6-10.

Table 6-10: Base Component – Unit Rate

Customer Class	Projected Usage (hcf)	% Allocation	Revenue Requirement	Unit Rate
General Treated	1,519,582	89%	\$1,437,622	\$0.95
General Treated - AG	-	0%	\$0	\$0.95
PSAWR Treated	14,652	1%	\$13,862	\$0.95
General Untreated	60,350	4%	\$57,095	\$0.95
PSAWR Untreated	96,259	6%	\$91,067	\$0.95
Construction Treated	9,139	1%	\$8,646	\$0.95
Total	1,699,982		\$1,608,292	

6.1.10. Peaking Component (Max Day and Max Hour)

Extra capacity or peaking costs represent the costs incurred to meet customer peak demands for water in excess of average day demand. Total extra capacity costs are apportioned between maximum day and maximum hour demands based on the type of expense. The maximum day demand is the maximum amount of water used in a single day in a year. The maximum hour demand is the maximum usage in an hour on the maximum usage day. Different facilities are designed to meet different peaking characteristics. Extra capacity costs include capital and operating costs and power related costs, and have been apportioned between base, maximum day, and maximum hour. Costs allocated to base were defined above. The peaking revenue requirement is the sum of the Max Day and Max Hour columns from Table 5-13.

After discussion with District staff, Raftelis eliminated customer classes and created one customer class, which means a system wide peaking factor for all classes. We believe it is better to have all customers in one class because 1) the treated and untreated water systems are physically separate systems and 2) the District does not separate its budget into treated and untreated water systems. Table 6-11 provides the peaking factor for each customer class by taking the max month use compared to the average month use.

Table 6-11: Customer Class Peaking Factors

Customer Class	Water Use	Max Month Usage [A]	Average Month Usage [B]	Peaking Factor by Class [A/B]
Total System	1,561,384	213,031	130,115	1.64

Table 6-12 shows the peaking rate for all classes, otherwise known as system wide peaking costs. It is derived by taking the systemwide peaking costs (col D) and dividing the use in column A.

Table 6-12: Peaking Component – Unit Rate

Customer Class	Projected Usage (hcf) [A]	Peaking Factor [B]	Weighted Peaking Factor [A x B]	Revenue Requirements [D]	Unit Rate [E]
General Treated	1,519,582	1.64	2,487,932	\$1,656,405	\$1.10
General Treated - AG	-	1.64	-	\$0	\$1.10
PSAWR Treated	14,652	1.64	23,989	\$15,971	\$1.10
General Untreated	60,350	1.64	98,808	\$65,784	\$1.10
PSAWR Untreated	96,259	1.64	157,600	\$104,926	\$1.10
Construction Treated	9,139	1.64	14,962	\$9,962	\$1.10
Total	1,699,982		2,783,291	\$1,853,048	

6.1.11. Pumping Rate

The pumping component recovers the costs associated with pumping water to the District. Therefore, pumping costs are spread equally over all units of water. The pumping revenue requirement from Table 5-13 is divided by the projected water sales to determine the unit cost of service shown in Table 6-13.

Table 6-13: Pumping Component – Unit Rate

Pumping Component - Unit Rate	
Revenue Requirements	\$2,489,707
Projected usage (hcf)	1,699,982
Unit Rate	\$1.47

6.2. Proposed Rates

6.2.1. Monthly Fixed Charges

Currently, the District’s fixed charges generate approximately 26% of the total rate revenues. The new rate structure will recover approximately 30% of rate revenues from fixed monthly charges as the District desires more revenue stability.

There are three components that comprise the fixed monthly service charge are: customer service, meter capacity, and the SDCWA Fixed charge. This charge recognizes the fact that even when a customer does not use water, the District incurs fixed costs related to billing customers, maintaining meters, maintaining the capacity ready to service each connection, and/or fixed purchased water costs. Table 6-14 summarizes the monthly fixed charges by meter size based on the unit rates developed in the prior section. Columns D and E represent District Charges and Column F represents a SDCWA charge.

Table 6-14: Proposed FYE 2025 Monthly Fixed Charges (\$/meter)

Meter Size	Number of Meters [A]	Meter Capacity Ratio [B]	SDCWA Fixed Ratio [C]	Customer Service [D]	Meter Capacity [E]	SDCWA Fixed Charge [F]	Proposed FYE 2025 Fixed Charge [G]
3/4" or smaller	9,003	1.00	1.00	\$5.08	\$34.75	\$6.71	\$46.54
1"	372	1.67	1.60	\$5.08	\$58.03	\$10.74	\$73.85
1 1/2"	124	3.33	3.00	\$5.08	\$115.72	\$20.13	\$140.93
2"	166	5.33	5.20	\$5.08	\$185.22	\$34.89	\$225.19
3"	20	10.00	9.60	\$5.08	\$347.50	\$64.42	\$417.00
4"	3	16.67	16.40	\$5.08	\$579.28	\$110.04	\$694.41
6"	0	33.33	30.00	\$5.08	\$1,158.22	\$201.30	\$1,364.60
8"	0	53.33	52.00	\$5.08	\$1,853.22	\$348.92	\$2,207.22
10"	0	76.67	78.00	\$5.08	\$2,664.28	\$523.38	\$3,192.74

As shown in the table above, the customer service components do not vary based on meter size whereas the meter capacity and SDCWA fixed components increase as the size of the meter increases. The meter capacity rate is determined by multiplying the unit cost of \$34.75 (Table 6-4) by the appropriate AWWA capacity ratio. The SDCWA Fixed Charge is determined by multiplying the unit cost of \$6.71 (Table 6-5) by the appropriate SDCWA ratio.

Applying the proposed revenue adjustments each year to the proposed monthly fixed charges yields the proposed monthly fixed charges for FYE 2026 to FYE 2029 in Table 6-15. Any increases in the SDCWA Fixed charges will be passed through to customers.

Table 6-15: Proposed 5-Yr Fixed Rates (\$/meter)

Meter Size	Current Fixed Charge	FYE 2025 Proposed Fixed Charge	FYE 2026 Proposed Fixed Charge	FYE 2027 Proposed Fixed Charge	FYE 2028 Proposed Fixed Charge	FYE 2029 Proposed Fixed Charge
3/4" or smaller	\$38.47	\$46.54	\$49.80	\$53.29	\$57.02	\$61.01
1"	\$59.35	\$73.85	\$79.02	\$84.55	\$90.47	\$96.80
1 1/2"	\$110.91	\$140.93	\$150.79	\$161.35	\$172.64	\$184.72
2"	\$176.11	\$225.19	\$240.95	\$257.82	\$275.87	\$295.18
3"	\$366.16	\$417.00	\$446.19	\$477.42	\$510.84	\$546.60
4"	\$648.23	\$694.41	\$743.01	\$795.02	\$850.67	\$910.22
6"	\$0.00	\$1,364.60	\$1,460.12	\$1,562.33	\$1,671.69	\$1,788.71
Private Fire	\$0.00	\$10.30	\$11.02	\$11.79	\$12.62	\$13.50

6.2.2. Volumetric Rates

The components of the volumetric rates are added together to produce rates for each customer class. Table 6-16 shows each rate component and the final proposed FYE 2025 commodity rate. Table 6-17 shows the proposed volumetric rates for the Study Period. Any increase in purchased water costs will be passed along to customers at the time of the increase and will be in addition to the rates shown below.

Table 6-16: Proposed FYE 2025 Volumetric Rates (\$/hcf)

Customer Classes	ES & SR Component [A]	Treated Supply Component [B]	Untreated Supply Component [C]	Treatment Component [D]	PSAWR Discount Component [E]	Base Component [F]	Peaking Component [G]	Proposed FYE 2025 Volumetric Rate [H]
General Treated	\$0.71	\$3.50	\$0.00	\$1.01	\$0.00	\$0.95	\$1.10	\$7.27
General Treated - AG	\$0.71	\$3.50	\$0.00	\$1.01	\$0.00	\$0.95	\$1.10	\$7.27
PSAWR Treated	\$0.00	\$3.50	\$0.00	\$1.01	-\$0.72	\$0.95	\$1.10	\$5.84
General Untreated	\$0.71	\$0.00	\$3.50	\$0.00	\$0.00	\$0.95	\$1.10	\$6.26
PSAWR Untreated	\$0.00	\$0.00	\$3.50	\$0.00	-\$0.72	\$0.95	\$1.10	\$4.83
Construction Treated	\$0.71	\$3.50	\$0.00	\$1.01	\$0.00	\$0.95	\$1.10	\$7.27

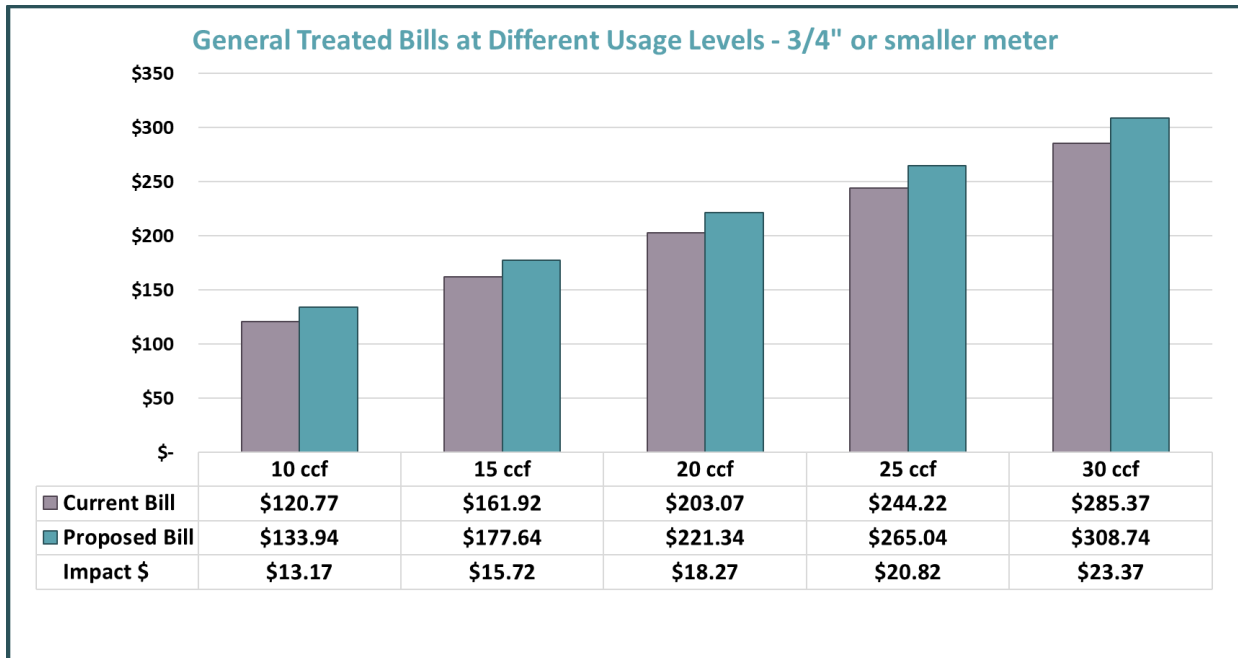
Table 6-17: Proposed 5-Yr Volumetric Rates (\$/hcf)

Customer Classes	Current Variable Rates	FYE 2025 Proposed Commodity Rates	FYE 2026 Proposed Commodity Rates	FYE 2027 Proposed Commodity Rates	FYE 2028 Proposed Commodity Rates	FYE 2029 Proposed Commodity Rates
General Treated	\$7.25	\$7.27	\$7.78	\$8.32	\$8.90	\$9.52
General Treated - AG	\$7.69	\$7.27	\$7.78	\$8.32	\$8.90	\$9.52
PSAWR Treated	\$6.37	\$5.84	\$6.25	\$6.69	\$7.16	\$7.66
General Untreated	\$6.88	\$6.26	\$6.70	\$7.17	\$7.67	\$8.21
PSAWR Untreated	\$5.56	\$4.83	\$5.17	\$5.53	\$5.92	\$6.33
Construction Treated	\$9.80	\$7.27	\$7.78	\$8.32	\$8.90	\$9.52
Pumping	\$0.98	\$1.47	\$1.57	\$1.68	\$1.80	\$1.93

7. Customer Impacts

Figure 7-1 compares bills for General Treated water customers with a meter size of 3/4" or smaller at various levels of usage based on the current and proposed rates.

Figure 7-1: Customer Bill Impact



Appendix A – Contract Customer Information

Purchased water costs include the purchases of Contract Customer water which is shown in the table below. The total estimated contract customer purchased water costs is shown in line 4. The Contract Customer uses Untreated PSAWR water which receives a credit – the credit is shown in line 5. The purchased water costs and credit is calculated by multiplying the wholesale rates by the estimated volume (approximately 410 AF). The discount is similarly calculated by multiplying the credit by 300 AF. Line 6 shows the total Contract Customer water purchase costs. The Contract Customer revenue (for water use above 300 AF) is shown in line 9. This is subtracted from line 6 to calculate the remaining purchased costs shown in line 10 (rounded). The District also has general and overhead The remaining \$350,000 (funded by property taxes) is used to lower untreated water purchase costs as shown in line 35 in the second table below. Unrestricted property tax revenue is used to fund contractual obligations of the District that cannot be recovered by any other revenue source. In addition to the known \$350,000, the District assigns an additional \$3,000-\$4,000 per year for incidental administration shown in line 7.

Line	Contract Customer	FY 2025
1	Contract	
2	Untreated Contract	\$526,315
3	Transporation	\$82,895
4	Subtotal	\$609,210
5	PSAWR Discount (1st 300)	(\$93,555)
6	Contract Purchased Water Costs	\$515,655
7	Administrative Costs	\$3,494
8		
9	Contract Revenues	\$166,745
10	Remaining Cost of Contract Water Supply	\$353,494

		FYE 2025					
Line No.	Revenue Requirements	Water Purchases	Water Purchase	Specific Allocation	Operating	Capital	Total
Purchased Water Costs							
1	MWD Readiness-to-Serve Charge	-\$118,998					-\$118,998
2	MWD Capacity Charge	\$119,977					\$119,977
3	Customer Service Charge	\$327,953					\$327,953
4	Infrastructure Access Charge	\$561,670					\$561,670
5	Supply Reliability Charge	\$480,677					\$480,677
6	Emergency Storage Charge	\$646,254					\$646,254
7	SDCWA Untreated Costs (Treated Use)	\$4,658,985					\$4,658,985
8	SDCWA Untreated Costs (Untreated Use)	\$476,844					\$476,844
9	SDCWA Untreated Costs (Untreated Contract Use)	\$526,315					\$526,315
10	SDCWA Treatment Costs	\$1,552,995					\$1,552,995
11	Transportation Costs (Treated Use)	\$733,790					\$733,790
12	Transportation Costs (Untreated Use)	\$75,103					\$75,103
13	Transportation Costs (Untreated Contract Use)	\$82,895					\$82,895
14	PSAWR Discount (Credit)			-\$79,312			-\$79,312
15	PSAWR Discount (Contract)			-\$123,750			-\$123,750
16	Subtotal Purchased Water	\$10,124,461	\$0	-\$203,062	\$0	\$0	\$9,921,398
Other O&M Expenses							
18	Admin and General				\$3,220,565		\$3,220,565
19	Facilities Maint.				\$688,216		\$688,216
20	Meter Maint.				\$866,131		\$866,131
21	Pumping Facilities			\$2,489,707			\$2,489,707
22	Supply				\$116,056		\$116,056
23	Systems				\$1,826,894		\$1,826,894
24	Trans. and Dist.				\$1,725,864		\$1,725,864
25	Treatment				\$30,619		\$30,619
26	Subtotal Other O&M Expenses	\$0	\$0	\$2,489,707	\$8,474,345	\$0	\$10,964,052
Debt Service							
28	Chase Bank Loan					\$378,630	\$378,630
29	Proposed Debt Service					\$0	\$0
30	Total Debt Service	\$0	\$0	\$0	\$0	\$378,630	\$378,630
31	Rate Funded Capital					\$6,440,770	\$6,440,770
32	Total Revenue Requirements	\$10,124,461	\$0	\$2,286,645	\$8,474,345	\$6,819,400	\$27,704,850
Less: Revenue Offsets							
34	Pass-through revenue				\$410,191		\$410,191
35	Other Revenues				\$247,286		\$247,286
36	Interest Income					\$515,034	\$515,034
37	Property Taxes		\$353,494			\$2,843,858	\$3,197,352
38	Other Operating Revenue				\$43,000		\$43,000
39	Capacity Fee Revenue					\$160,335	\$160,335
40	Other Non-Operating Income				\$7,000		\$7,000
41	Contract Revenue		\$166,745				\$166,745
42	Total Revenue Offsets	\$0	\$520,238	\$0	\$707,477	\$3,519,227	\$4,746,943
Less: Adjustments							
44	Adjustment for Cash Balance					\$2,344,455	\$2,344,455
45	Adjustment for Mid-Year Increase					\$0	\$0
46	Total Adjustments	\$0	\$0	\$0	\$0	\$2,344,455	\$2,344,455
47							
48	Revenue Requirement from Rates	\$10,124,461	-\$520,238	\$2,286,645	\$7,766,868	\$955,717	\$20,613,452

Appendix B - Pass-through Calculation

Appendix B shows the pass-through calculation for FYE 2025. Out year pass-through calculations are analogous. The Pass-through is calculated by calculating the difference between wholesale water purchase costs in FYE 2024 and FYE 2025. This includes both fixed and variable wholesale charges in 2025. The difference in wholesale water purchase costs is passed-through to customers by dividing the difference by the estimated volume of water sold in that year.

The left table shows the wholesale water purchase costs with the FYE 2025 wholesaler rates. The right table shows the wholesale water purchase costs assuming wholesaler rates are unchanged. The difference between the two (\$9,921,398 less \$9,511,207) is the amount that is passed through to customers for FYE 2025. This amount is divided by expected water use to create a rate (\$ / hcf).

SDCWA Fixed Charges (Monthly)	FYE 2024	FYE 2025
MWD Readiness-to-Serve Charge	-\$9,015	-\$9,917
MWD Capacity Charge	\$9,522	\$10,474
Customer Service Charge	\$26,028	\$28,631
Infrastructure Access Charge	\$44,577	\$49,035
Supply Reliability Charge	\$38,149	\$41,964
Emergency Storage Charge	\$51,290	\$56,419

Frozen SDCWA Fixed Charges (Monthly)	FYE 2024	FYE 2025
MWD Readiness-to-Serve Charge	-\$9,015	-\$9,015
MWD Capacity Charge	\$9,522	\$9,522
Customer Service Charge	\$26,028	\$26,028
Infrastructure Access Charge	\$44,577	\$44,577
Supply Reliability Charge	\$38,149	\$38,149
Emergency Storage Charge	\$51,290	\$51,290

SDCWA Volumetric Rates (\$ per AF)	FYE 2024	FYE 2025
SDCWA M&I Melded Untreated Rate	\$1,200	\$1,320
SDCWA Treatment Costs	\$400	\$440
Transportation Rate	\$189	\$208
PSAWR Discount	-\$297	-\$327

Frozen SDCWA Volumetric Rates (\$ per AF)	FYE 2024	FYE 2025
SDCWA M&I Melded Untreated Rate	\$1,200	\$1,200
SDCWA Treatment Costs	\$400	\$400
Transportation Charge	\$189	\$189
PSAWR Discount	-\$297	-\$297

UnFrozen Fixed Costs	FYE 2024	FYE 2025
MWD Readiness-to-Serve Charge	-\$108,180	-\$118,998
MWD Capacity Charge	\$101,418	\$119,977
Customer Service Charge	\$304,596	\$327,953
Infrastructure Access Charge	\$530,004	\$561,670
Supply Reliability Charge	\$439,878	\$480,677
Emergency Storage Charge	\$618,600	\$646,254
Calculated Fixed Purchased Water Costs	\$1,886,316	\$2,017,534

Frozen Fixed Costs	FYE 2024	FYE 2025
MWD Readiness-to-Serve Charge	-\$108,180	-\$108,180
MWD Capacity Charge	\$101,418	\$114,264
Customer Service Charge	\$304,596	\$312,336
Infrastructure Access Charge	\$530,004	\$534,924
Supply Reliability Charge	\$439,878	\$457,788
Emergency Storage Charge	\$618,600	\$615,480
Calculated Fixed Purchased Water Costs	\$1,886,316	\$1,926,612

UnFrozen Calculated Volumetric Costs	FYE 2024	FYE 2025
SDCWA M&I Melded Untreated Costs (Treated Usage)	\$4,211,489	\$4,658,985
SDCWA M&I Melded Untreated Costs (Untreated Usage)	\$431,255	\$476,844
SDCWA M&I Melded Untreated Costs (Contract Usage)	\$476,932	\$526,315
SDCWA Treatment Costs	\$1,378,224	\$1,552,995
Transportation Costs (Treated Usage)	\$667,946	\$733,790
Transportation Costs (Untreated Usage)	\$68,321	\$75,103
Transportation Costs (Contract Usage)	\$75,558	\$82,895
TSAWR Discount (Credit)	-\$66,715	-\$79,312
TSAWR Discount (Credit - Contract)	-\$104,497	-\$123,750
Calculated Total Volumetric Purchased Water Costs	\$7,138,513	\$7,903,865

Frozen Calculated Volumetric Costs (But vol goes up, increasing costs)	FYE 2024	FYE 2025
SDCWA M&I Melded Untreated Costs (Treated Usage)	\$4,211,489	\$4,475,490
SDCWA M&I Melded Untreated Costs (Untreated Usage)	\$431,255	\$454,137
SDCWA M&I Melded Untreated Costs (Contract Usage)	\$476,932	\$501,252
SDCWA Treatment Costs	\$1,378,224	\$1,491,830
Transportation Costs (Treated Usage)	\$667,946	\$704,890
Transportation Costs (Untreated Usage)	\$68,321	\$71,527
Transportation Costs (Contract Usage)	\$75,558	\$78,947
PSAWR Discount (Credit)	-\$66,715	-\$75,621
PSAWR Discount (Credit - Contract)	-\$104,497	-\$117,857
Calculated Total Volumetric Purchased Water Costs	\$7,138,513	\$7,584,595

Total SDCWA (UnFrozen)	\$9,024,829	\$9,921,398
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Total SDCWA (Frozen)	\$9,024,829	\$9,511,207
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Cumulative passed through cost	\$410,191
Year to Year Pass-Through cost	\$410,191
Total HCF Sold	1,742,159
Cumulative Pass-Through (\$/HCF)	\$0.24
Marginal Pass -Through (\$/HCF)	\$0.24