

Mesa Water District

Potable and Recycled Water Cost-of-Service and Rate Study Report

Final Report, December 17, 2021

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December 17, 2021

Mr. Paul E. Shoenberger
General Manager
Mesa Water District
1965 Placentia Ave
Costa Mesa, CA 92627

Subject: Potable and Recycled Water Cost-of-Service and Rate Study Report

Dear Mr. Shoenberger,

Raftelis is pleased to provide this Water Cost-of-Service and Rate Study Report (Report) for the Mesa Water District (Mesa Water). This Report includes an updated financial plan for fiscal year (FY) 2022 to FY 2032 (study period). Mesa Water is proposing to set water charges and rates for FY 2023 through FY 2027.

The Report objectives include the following:

1. Update Mesa Water's ten-year financial plan to support financial sufficiency, meet operation and maintenance (O&M) costs, and ensure funding to meet debt obligations and fund necessary capital expenditures;
2. Conduct a water cost-of-service study that is based on Mesa Water's costs to align with Proposition 218 requirements;
3. Calculate proposed, updated water charges and rates for FY 2023 through FY 2027 including a portion of net revenue requirements that are proposed to be collected through the Orange County Treasurer-Tax Collector's office;
4. Conduct a customer impact analysis for the proposed charges and rates; and
5. Develop a Report that demonstrates the nexus between Mesa Water's costs and the proposed rates/charges, to align with the requirements of Proposition 218.

This Report summarizes the key findings and recommendations related to the development of the financial plan and the development of the associated water charges and rates.

It has been a pleasure working with you, Marwan Khalifa, and other Mesa Water staff.

Sincerely,

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

Steve Gagnon, PE (AZ)
Senior Manager

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Abbreviations & Acronyms

Terms	Descriptions
AF	Acre foot / Acre feet, 1 AF = 435.6 hcf
AWWA	American Water Works Association
BPP	Basin pumping percentage
ccf	Hundred cubic feet, 1 ccf = 748 gallons
COS	Cost-of-Service
FY	Fiscal Year ending June 30 (July 1 – June 30)
G&A or Admin	General and Administrative
gpm	Gallons per minute
LAFCO	Local Agency Formation Commission
LRP	Local Resource Program
Max	Maximum
M1 Manual	“Principles of Water Rates, Fees, and Charges: Manual of Water Supply Practices M1”, 6 th edition published by AWWA
Mesa Water	Mesa Water District
MWD	Metropolitan Water District of Southern California
MWDOC	Municipal Water District of Orange County
MWRF	Mesa Water Reliability Facility
OCWD	Orange County Water District
O&M	Operations and Maintenance
Paygo	Pay-As-You-Go
Prop 218	Proposition 218
Raftelis	Raftelis Financial Consultants, Inc.
Report	The Potable and Recycled Water Cost-of-Service and Rate Study Report dated as of December 17, 2021, as presented to Mesa Water
T&D	Transmission & Distribution

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1. Executive Summary

Since 1960, Mesa Water District (Mesa Water) has been providing clean, safe, reliable drinking water at a reasonable cost to approximately 110,000 residents in an 18-square-mile area in Costa Mesa, parts of Newport Beach and certain unincorporated areas of Orange County, including John Wayne Airport.

Mesa Water's primary source of water is groundwater, pumped from Orange County's natural groundwater basin via seven wells. More than two decades ago, Mesa Water's Board of Directors set a goal to reduce reliance on imported water from Northern California and the Colorado River by increasing Mesa Water's production capacity of groundwater and recycled water. The completion of the Mesa Water Reliability Facility (MWRF) in January 2013 has achieved Mesa Water's goal to provide 100 percent local and reliable water to its customers.

Mesa Water's five clear-water wells pump water from 200-600 feet below the surface and provide up to 82 percent of the water needs for Mesa Water's service area. The two deep-water wells pump water from 1,200 feet below the surface and provide the remaining water needed for Mesa Water customers. The aquifer extends down to 2,000 feet below the surface. The MWRF treats amber groundwater from a previously unusable aquifer, providing Mesa Water with an additional potable water source.

Mesa Water also sells recycled water for irrigation purposes. The recycled water is purchased from Orange County Water District (OCWD) and replaces potable water that would otherwise have been used for irrigation. OCWD owns the recycled water distribution system and is responsible for the maintenance and replacement of the recycled water system. Mesa Water is the retail provider and bills customers for such recycled water service.

In 2009, to improve Mesa Water's credit rating to a strong AAA in seven years, the Board adopted additional financial goals to further measure its creditworthiness at the end of each fiscal year by using the Days Cash Ratio and Cash on Hand metrics. The Days Cash Ratio is defined as total cash available divided by Operating Expenses per day and is a measurement of an agency's ability to meet known and unanticipated expenses. In 2017, the Board established a Days Cash Ratio goal of 600 days.

In November 2017, the Board updated the long-term financial plan and adopted multi-year rate increases from FY 2019 to FY 2022. The previously adopted water charges and rates were developed as part of the five-year rate adoption in the 2017 Rate Study, with the first charges and rates adjustments effective as of January 1, 2019, and the last charge/rate adjustments going into effect as of January 1, 2022. In June 2021, Mesa Water engaged Raftelis Financial Consultants (Raftelis) to conduct a comprehensive water rate study for its water services.

The major objectives of the study include the following:

1. Develop a 10-year financial plan to ensure financial sufficiency and funding for operation and maintenance, capital improvement, and capital replacement expenses.
2. Conduct a cost-of-service analysis for water services, and proportionately allocate the costs of providing services.
3. Develop proposed water charges/rates and a water charge/rate structure that would encompass collection of a portion of the revenue requirement via charges levied through the Orange County Treasurer-Tax Collector's office and to perform a customer impact analysis.
4. Develop a Report that demonstrates the nexus between Mesa Water's costs and charges/rates, to align with the requirements of Proposition 218.

This Report summarizes the water rate study’s financial plan and rate development key findings and recommendations.

1.1. Methodology

Raftelis and Mesa Water developed the proposed water charges/rates and proposed rate structure 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) and any modifications, as applicable, to align with the requirements of California’s Proposition 218 and related California law. Cost-of-service principles endeavor to distribute costs to customer classes in proportion to the way each class uses or places demand on the water system. This water rate study used the Base-Extra Capacity Method, described in the AWWA M1 Manual, to distribute water system costs.

1.2. Proposed Financial Plan and Revenue Adjustments

The financial planning model enables Mesa Water to set rates and charges to generate sufficient revenue to meet its short-term and long-term obligations, including reserve fund requirements, and avoid significant future rate fluctuations. Table 1-1 shows the proposed revenue adjustments and 12-year self-insurance program funding selected by the Board of Directors at the October 5, 2021, Board Meeting. The self-insurance program funding is treated as an integral part of the financial plan for purposes of the water rate study and this Report. The proposed financial plan implements an initial higher level of revenue adjustments to make initial contributions to the self-insurance program fund, then levels off at five percent (5%) per Fiscal Year. Revenue adjustments occur on January 1 for each year. This proposed scenario allows Mesa Water to build a self-insurance program fund over 12 years, maintain reserves, and mitigate ratepayer bill impacts.

Table 1-1: Proposed Revenue Adjustments Including Self-Insurance Program Funding

Fiscal Year	Proposed Revenue Adjustment	Self-Insurance Program
2023	8%	\$12,000,000
2024	8%	\$11,987,500
2025	5%	\$12,220,000
2026	5%	\$12,831,000
2027	5%	\$13,472,550

Table 1-2 shows the proposed financial plan incorporating the proposed revenue adjustments and self-insurance program funding (Line 31).

Table 1-2: Proposed Financial Plan Cashflow

Line No.	Line Item		2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
1	Revenue Under Existing Rates		\$40,405,141	\$41,423,152	\$41,562,597	\$41,702,642	\$41,843,289	\$41,984,540	\$42,126,399	\$42,268,868	\$42,411,950	\$42,555,647	\$42,699,961
	Revenue Adjustments												
	Mo. Effctv.												
	FY	First Year	Adjustment										
2	2022	6	0.0%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	2023	6	8.0%		\$1,656,926	\$3,325,008	\$3,336,211	\$3,347,463	\$3,358,763	\$3,370,112	\$3,381,509	\$3,392,956	\$3,404,452
4	2024	6	8.0%			\$1,795,504	\$3,603,108	\$3,615,260	\$3,627,464	\$3,639,721	\$3,652,030	\$3,664,392	\$3,676,808
5	2025	6	5.0%				\$1,216,049	\$2,440,301	\$2,448,538	\$2,456,812	\$2,465,120	\$2,473,465	\$2,481,845
6	2026	6	5.0%					\$1,281,158	\$2,570,965	\$2,579,652	\$2,588,376	\$2,597,138	\$2,605,938
7	2027	6	5.0%						\$1,349,757	\$2,708,635	\$2,717,795	\$2,726,995	\$2,736,234
8	2028	6	5.0%							\$1,422,033	\$2,853,685	\$2,863,345	\$2,873,046
9	2029	6	5.0%								\$1,498,185	\$3,006,512	\$3,016,698
10	2030	6	5.0%									\$1,578,419	\$3,167,533
11	2031	6	5.0%										\$1,662,955
12	Total Adjusted Revenue		\$0	\$1,656,926	\$5,120,512	\$8,155,369	\$10,684,182	\$13,355,488	\$16,176,965	\$19,156,701	\$22,303,222	\$25,625,510	\$25,712,411
13	LAFCO Surcharge (1)		\$24,874	\$24,874	\$24,874	\$24,874	\$24,874	\$24,874	\$24,874	\$24,874	\$24,874	\$24,874	\$24,874
14	Total Rate-Based Revenue		\$40,430,015	\$43,104,952	\$46,707,983	\$49,882,884	\$52,552,344	\$55,364,902	\$58,328,238	\$61,450,443	\$64,740,046	\$68,206,030	\$68,437,246
	Other Revenue												
15	Misc Net Revenues		\$340,000	\$358,550	\$362,136	\$365,757	\$369,414	\$373,109	\$376,840	\$380,608	\$384,414	\$388,258	\$392,141
16	Interest Income		\$458,063	\$406,369	\$365,382	\$362,391	\$316,018	\$286,392	\$282,561	\$289,075	\$302,788	\$324,299	\$337,030
17	Total Revenue		\$41,228,077	\$43,869,871	\$47,435,501	\$50,611,032	\$53,237,777	\$56,024,402	\$58,987,639	\$62,120,127	\$65,427,248	\$68,918,588	\$69,166,418
	O&M Expenses												
18	Imported/Basin Managed Water Costs		\$498,700	\$500,389	\$517,619	\$535,444	\$553,887	\$572,967	\$592,708	\$613,132	\$634,262	\$656,124	\$678,742
19	Clear Water Costs		\$7,960,022	\$8,563,982	\$9,311,433	\$9,927,925	\$10,618,497	\$11,222,162	\$11,889,098	\$12,597,140	\$13,348,873	\$14,147,046	\$14,994,584
20	Amber Water Costs		\$3,479,832	\$3,343,282	\$3,045,919	\$3,214,100	\$3,399,662	\$3,567,305	\$3,750,036	\$3,943,032	\$4,146,903	\$4,362,299	\$4,589,908
21	Transmission & Distribution		\$6,975,463	\$7,198,678	\$7,429,182	\$7,667,218	\$7,913,035	\$8,166,892	\$8,429,058	\$8,699,806	\$8,979,425	\$9,268,208	\$9,566,461
22	General & Administrative		\$9,464,124	\$9,748,045	\$10,040,720	\$10,342,426	\$10,653,449	\$10,974,083	\$11,304,634	\$11,645,415	\$11,996,752	\$12,358,980	\$12,732,443
23	Recycled Water Costs		\$1,000,025	\$1,050,026	\$1,107,268	\$1,167,631	\$1,231,285	\$1,298,408	\$1,369,191	\$1,443,832	\$1,522,543	\$1,605,544	\$1,693,070
24	Total O&M Expenses		\$29,378,166	\$30,404,402	\$31,452,140	\$32,854,744	\$34,369,815	\$35,801,818	\$37,334,724	\$38,942,357	\$40,628,758	\$42,398,200	\$44,255,209
25	Net Revenues		\$11,849,911	\$13,465,469	\$15,983,360	\$17,756,288	\$18,867,962	\$20,222,585	\$21,652,915	\$23,177,769	\$24,798,490	\$26,520,387	\$24,911,208
	Debt Service												
26	Existing		\$6,746,450	\$6,797,700	\$6,848,450	\$6,898,200	\$6,921,450	\$4,723,950	\$3,976,200	\$3,980,700	\$3,976,450	\$3,978,700	\$3,976,950
27	Proposed		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
28	Total Debt Service		\$6,746,450	\$6,797,700	\$6,848,450	\$6,898,200	\$6,921,450	\$4,723,950	\$3,976,200	\$3,980,700	\$3,976,450	\$3,978,700	\$3,976,950
29	Capital-Related (Paygo)		\$0	\$0	\$0	\$0	\$2,307,233	\$3,428,596	\$3,567,709	\$3,710,995	\$3,858,580	\$4,010,593	\$4,167,166
30	Pension Liability Prepayment		\$110,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
31	Self Insurance Program Funding		\$11,000,000	\$12,000,000	\$11,987,500	\$12,220,000	\$12,831,000	\$13,472,550	\$14,146,178	\$14,853,486	\$15,596,161	\$16,375,969	\$17,194,767
32	Annual Surplus/(Deficit)		-\$6,006,539	-\$5,332,231	-\$2,852,590	-\$1,361,912	-\$3,191,720	-\$1,402,512	-\$37,172	\$632,587	\$1,367,299	\$2,155,126	-\$427,674
33	Beginning Balance		\$31,349,150	\$25,342,611	\$20,010,380	\$17,157,790	\$15,795,878	\$12,604,158	\$11,201,646	\$11,164,474	\$11,797,061	\$13,164,360	\$15,319,486
34	Ending Operating* Balance		\$25,342,611	\$20,010,380	\$17,157,790	\$15,795,878	\$12,604,158	\$11,201,646	\$11,164,474	\$11,797,061	\$13,164,360	\$15,319,486	\$14,891,812
35	Ending Balance Operating* and Capital Funds**		\$37,302,985	\$31,970,754	\$30,810,060	\$26,782,181	\$22,604,158	\$21,201,646	\$21,164,474	\$21,797,061	\$23,164,360	\$25,319,486	\$24,891,812
36	Captive Funds Ending Balance		\$11,340,206	\$24,412,796	\$38,281,114	\$53,246,956	\$69,768,417	\$87,973,216	\$107,998,546	\$129,991,741	\$154,110,984	\$180,526,064	\$209,419,188

* Customer & Development Deposits + Other Funds + Liquidity Funds

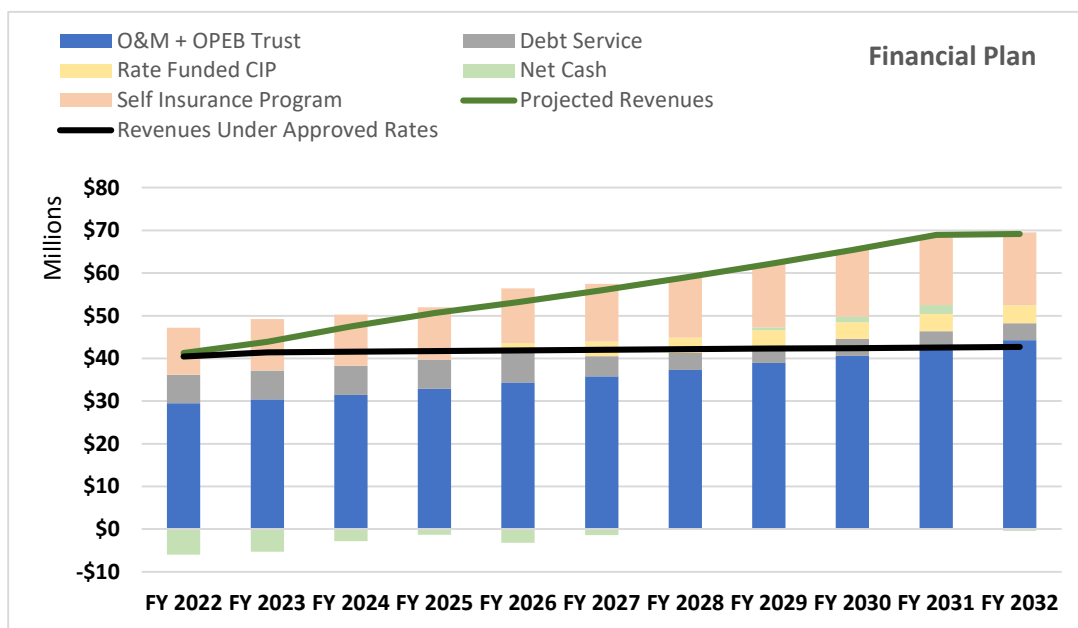
** Capital Replacement Fund

(1) Per account surcharge, not subject to revenue adjustments.

Line 1 shows revenue from current charges/rates, assuming no increase in charges/rates. Revenue from current charges/rates includes water, recycled water, and private fire customers and consumption, where applicable. Line 12 shows the additional revenue received from the revenue adjustments proposed in Table 1-1. Line 13 shows the LAFCO surcharge and Line 14 shows the total rate-based revenues. Lines 15 and 16 show non-rate revenues. Interest revenues (Line 16) decreases in FY 2023 through FY 2028 due to declining reserve balances caused by the deficit (Line 32) to fund the self-insurance program over the 12-year program timeline. Line 17 shows projected revenues. Lines 18 – 23 summarize the O&M expense projections. Line 25 shows net revenues, which are revenues less O&M expenses. Lines 26 and 27 show the existing and proposed debt service, respectively. Line 29 shows the cash funding of capital improvement projects on an on-going basis (also called “Paygo”). Line 30 shows a final payment into the pension liability prepayment in FY 2022. Line 31 shows the projected self-insurance program funding. Line 32 shows the annual surplus/deficit. Due to initial self-insurance program funding levels, the operating cash balance is initially drawn down. Lines 33 and 34 show the beginning and ending operating fund balance, respectively. Line 35 shows the ending balance including the capital replacement fund, which maintains a minimum target balance of \$10 million. Line 36 shows the projected self-insurance program funds balance, which includes projected interest earnings for the fund. The proposed financial plan strongly supports financial sufficiency and solvency for Mesa Water to meet projected expenditures and financial obligations, including debt service, debt coverage, and most reserve targets while also funding the self-insurance program.

Figure 1-1 graphically illustrates the operating Financial Plan – it compares existing (current) and proposed revenues with projected expenses. The stacked bars show expenses, including O&M expenses, debt service, and rate-funded CIP. Total revenues at existing and proposed charges/rates are shown by horizontal black and green lines, respectively. Current revenue from existing charges/rates, in black, does not meet future total expenses and shows the nexus to the proposed revenue adjustments.

Figure 1-1: Proposed Financial Plan



1.3. Proposed Five-Year Rate Structure

1.3.1. FIXED BI-MONTHLY AND MONTHLY BASIC AND FIRELINE SERVICE CHARGES

Basic charges recover costs associated with billing, meter reading, meter maintenance and public fire service. To develop the proposed bi-monthly and monthly basic charges, Raftelis used AWWA meter capacity ratios. Raftelis also assisted Mesa Water in evaluating different fixed revenue levels and means of collecting fixed revenues to enhance future revenue stability. Mesa Water currently collects about 22 percent of its rate revenue from fixed meter basic charges, including fireline service charges. As part of introducing and phasing-in of capital charges collected via the property-tax billing process, cost-of-service charges were developed for each year FY 2023 – FY 2027. The cost-of-service analysis is detailed in Section 6 of this Report. Proposed basic and fireline charges have been rounded up to the nearest cent.

Private fireline charges recover costs associated with the billing, meter reading, capital and operating costs associated with delivering private fireline service. The proposed fireline charges have been prepared in accordance with the AWWA M1 manual with modifications, as applicable, to align with Proposition 218, using the projected fire demands from Mesa Water’s November 2014 Water Master Plan, and are in proportion to the potential flow through each connection size. In discussions with Mesa Water staff, a 1-inch service line was deemed the smallest service line; and thus, the charges for meters of 1-inch or smaller are billed at the 1-inch charge.

Table 1-3 shows the previously adopted January 2022 and proposed bi-monthly and monthly basic charges. Table 1-4 shows the adopted January 2022 and the proposed bi-monthly and monthly fireline service charges. The proposed fireline service charges apply to all Mesa Water customers with private fireline service connections. The charges for the current and proposed bi-monthly and monthly basic charges and fireline service charges are calculated based on the meter size and diameter of the fire line serving a property, respectively. The proposed charges are rounded up to the nearest cent.

Table 1-3: Adopted Jan. 2022 and Proposed (FY 2023 – FY 2027) Bi-Monthly and Monthly Basic Charge

Proposed Rates	Fiscal Year					
	2022	2023	2024	2025	2026	2027
Effective Date	Jan 2022	Jan 2023	Jan 2024	Jan 2025	Jan 2026	Jan 2027
Bi-Monthly Potable Water & Recycled Water Basic Charge						
Meter Size						
5/8-inch	\$30.03	\$29.55	\$30.99	\$31.54	\$32.16	\$32.83
3/4-inch	\$45.36	\$36.30	\$37.77	\$38.57	\$39.50	\$40.42
1-inch	\$75.37	\$49.79	\$51.33	\$52.62	\$54.16	\$55.61
1 1/2-inch	\$151.36	\$83.52	\$85.23	\$87.76	\$90.83	\$93.57
2-inch	\$242.04	\$124.00	\$125.91	\$129.92	\$134.83	\$139.13
3-inch	\$529.38	\$252.17	\$254.72	\$263.42	\$274.15	\$283.40
4-inch	\$953.36	\$441.06	\$444.55	\$460.16	\$479.48	\$496.00
6-inch	\$2,119.97	\$960.50	\$966.58	\$1,001.20	\$1,044.12	\$1,080.67
8-inch	\$3,626.88	\$1,635.11	\$1,644.55	\$1,703.85	\$1,777.42	\$1,839.97
10-inch	\$5,746.80	\$2,579.55	\$2,593.70	\$2,687.56	\$2,804.04	\$2,902.99
Monthly Potable Water & Recycled Water Basic Charge						
Meter Size						
5/8-inch	\$15.02	\$22.81	\$24.21	\$24.52	\$24.83	\$25.24
3/4-inch	\$22.68	\$26.18	\$27.60	\$28.03	\$28.50	\$29.03
1-inch	\$37.69	\$32.92	\$34.38	\$35.06	\$35.83	\$36.63
1 1/2-inch	\$75.68	\$49.79	\$51.33	\$52.62	\$54.16	\$55.61
2-inch	\$121.02	\$70.03	\$71.67	\$73.70	\$76.16	\$78.39
3-inch	\$264.69	\$134.11	\$136.08	\$140.46	\$145.82	\$150.52
4-inch	\$476.68	\$228.56	\$230.99	\$238.83	\$248.49	\$256.82
6-inch	\$1,059.99	\$488.28	\$492.01	\$509.35	\$530.81	\$549.15
8-inch	\$1,813.44	\$825.58	\$830.99	\$860.67	\$897.46	\$928.81
10-inch	\$2,873.40	\$1,297.81	\$1,305.57	\$1,352.53	\$1,410.77	\$1,460.32

Table 1-4: Adopted Jan. 2022 and Proposed (FY 2023 – FY 2027) Bi-monthly and Monthly Fireline Charges

Proposed Rates	2022	2023	2024	2025	2026	2027
Effective Date	Jan 2022	Jan 2023	Jan 2024	Jan 2025	Jan 2026	Jan 2027
Bi-Monthly Fireline Class I and II						
Fireline Service Size						
1-inch	\$8.30	\$17.38	\$18.81	\$18.94	\$19.02	\$19.24
1 1/2-inch	\$8.30	\$19.90	\$21.44	\$21.69	\$21.93	\$22.28
2-inch	\$8.30	\$24.24	\$25.96	\$26.43	\$26.95	\$27.51
3-inch	\$24.08	\$39.81	\$42.21	\$43.47	\$44.94	\$46.32
4-inch	\$51.29	\$66.67	\$70.23	\$72.85	\$75.98	\$78.75
6-inch	\$148.96	\$163.09	\$170.79	\$178.29	\$187.39	\$195.15
8-inch	\$317.40	\$329.38	\$344.25	\$360.16	\$379.55	\$395.92
10-inch	\$570.77	\$579.52	\$605.16	\$633.73	\$668.59	\$697.92
Monthly Fireline Class I and II						
Fireline Service Size						
1-inch	\$3.95	\$16.72	\$18.12	\$18.21	\$18.26	\$18.44
1 1/2-inch	\$3.95	\$17.98	\$19.44	\$19.59	\$19.71	\$19.96
2-inch	\$3.95	\$20.15	\$21.70	\$21.96	\$22.22	\$22.58
3-inch	\$11.47	\$27.93	\$29.82	\$30.48	\$31.22	\$31.98
4-inch	\$24.42	\$41.37	\$43.83	\$45.17	\$46.74	\$48.20
6-inch	\$70.93	\$89.57	\$94.11	\$97.89	\$102.44	\$106.40
8-inch	\$151.14	\$172.72	\$180.84	\$188.83	\$198.52	\$206.78
10-inch	\$271.80	\$297.79	\$311.30	\$325.61	\$343.05	\$357.78

1.3.2. PROPOSED CAPITAL CHARGE

To provide a more stable revenue base, the proposed capital charge recovers capital-related costs, as well as certain fixed operating and maintenance costs via a fixed charged. Mesa Water is proposing to collect a portion of the revenue requirement associated with providing water service through a capital charge that would be collected by the Orange County Treasurer-Tax Collector's office by way of the annual County property tax roll process. Table 1-5 shows the proposed, annual capital charge based on customer meter size. Certain properties may have more than one water meter and the capital charge would be imposed and levied accordingly. Raftelis did not evaluate parcel data. Mesa Water customers who do not receive a property tax bill would be billed the capital charge directly.

Table 1-5: Proposed Capital Charge, \$/yr

Proposed Rates	2022	2023	2024	2025	2026	2027
Effective Date	Jan 2022	Jan 2023	Jan 2024	Jan 2025	Jan 2026	Jan 2027
Potable Water Meter Size						
5/8-inch	\$0.00	\$99.92	\$163.45	\$198.13	\$235.17	\$274.93
3/4-inch	\$0.00	\$149.88	\$245.17	\$297.20	\$352.76	\$412.39
1-inch	\$0.00	\$249.79	\$408.61	\$495.33	\$587.92	\$687.31
1 1/2-inch	\$0.00	\$499.57	\$817.21	\$990.65	\$1,175.84	\$1,374.61
2-inch	\$0.00	\$799.31	\$1,307.54	\$1,585.04	\$1,881.35	\$2,199.37
3-inch	\$0.00	\$1,748.49	\$2,860.23	\$3,467.27	\$4,115.44	\$4,811.11
4-inch	\$0.00	\$3,147.29	\$5,148.40	\$6,241.08	\$7,407.79	\$8,659.99
6-inch	\$0.00	\$6,993.96	\$11,440.89	\$13,869.06	\$16,461.75	\$19,244.41
8-inch	\$0.00	\$11,989.65	\$19,612.96	\$23,775.53	\$28,220.13	\$32,990.42
10-inch	\$0.00	\$18,983.61	\$31,053.84	\$37,644.58	\$44,681.87	\$52,234.83

1.3.3. PROPOSED USAGE RATES

The remaining revenue (i.e., the revenue that is not collected through the fixed meter basic charge, the fireline charges, and through the capital charge) for potable, construction¹, fireline, and recycled water usage would be recovered by usage rates under the proposed rate structure described herein. As with the fixed and capital charges, the proposed FY 2023 – FY 2027 usage rates are based on cost-of-service. The proposed rates are rounded up to the nearest cent. Table 1-6 shows usage rates for the previously adopted January 2022 rates and the following five years.

Table 1-6: Adopted and Proposed (FY 2023 – FY 2027) Usage Rates by Class, \$/ccf

Proposed Rates	Fiscal Year					
	2022	2023	2024	2025	2026	2027
Effective Date	Jan 2022	Jan 2023	Jan 2024	Jan 2025	Jan 2026	Jan 2027
Potable Water	\$4.72	\$4.85	\$4.91	\$5.01	\$5.10	\$5.19
Construction	\$5.21	\$4.85	\$4.91	\$5.01	\$5.10	\$5.19
Fireline Water	\$5.21	\$4.85	\$4.91	\$5.01	\$5.10	\$5.19
Recycled Water	\$3.08	\$3.40	\$3.56	\$3.72	\$3.89	\$4.07

1.3.4. AVERAGE CUSTOMER BILL IMPACT

Table 1-7 illustrates the customer bill impact for an average single-family residential water customer with a 5/8" meter using an average of 24 ccf in a bi-monthly billing period (60 days). Example proposed bills are shown with and without the estimated capital charge on a bi-monthly basis. The Total Water Bill represents an annual average increase of 1.9 percent per year, though year-to-year increases may vary slightly from that annual average.

Table 1-7: Proposed Bi-Monthly Bill for an Average 5/8" Single Family Customer

	Jan. 1, 2022	Jan. 1, 2023	Jan. 1, 2024	Jan. 1, 2025	Jan. 1, 2026	Jan. 1, 2027
Bi-monthly Basic Charge: 5/8"	\$30.03	\$29.55	\$30.99	\$31.54	\$32.16	\$32.83
Capital Charge, 5/8" (\$/bi-mo)	\$0.00	\$16.65	\$27.24	\$33.02	\$39.20	\$45.82
Usage Charge (ccf): 24	\$113.28	\$116.40	\$117.84	\$120.00	\$122.40	\$124.56
Total Water Bill + Capital Charge	\$143.31	\$162.60	\$176.07	\$184.56	\$193.76	\$203.21
Total Water Bill	\$143.31	\$145.95	\$148.83	\$151.54	\$154.56	\$157.39

¹ Construction use = the temporary use of water for construction from a meter installed on a fire hydrant

2. Introduction

2.1. Overview of Mesa Water District

Since 1960, Mesa Water District (Mesa Water) has been providing clean, safe, reliable drinking water at a reasonable cost to approximately 110,000 residents in 18-square-mile service area, which encompasses Costa Mesa, parts of Newport Beach and some unincorporated areas of Orange County, including John Wayne Airport.

Mesa Water currently owns and maintains 317 miles of mainlines, 3,438 fire hydrants, 2 booster pump stations, 2 storage reservoirs, and 7 groundwater wells. Mesa Water's five clear-water wells pump water from 200-600 feet below the surface and provide up to 82 percent of the water needs for Mesa Water's service area. The two deep-water wells pump water from 1,200 feet below the surface and provide the remaining water needed to meet the needs of Mesa Water customers. The aquifer extends down to 2,000 feet below the surface. The MWRf treats amber groundwater from a previously unusable aquifer, providing Mesa Water with an additional potable water source. Amber groundwater from this lower aquifer is more expensive to produce than clear groundwater produced from the upper aquifer. However, the treatment cost of amber groundwater is substantially less expensive than purchasing imported water.

Mesa Water also sells recycled water for irrigation purposes. The recycled water is purchased from Orange County Water District (OCWD) and replaces potable water that would otherwise have been used for irrigation. OCWD owns the recycled water distribution system and is responsible for the maintenance and replacement of the recycled water system.

In 2017, the Board established a Days Cash goal of 600 days. The Days Cash Ratio is defined as total cash available divided by the Operating Expenses per day and is a measurement of an agency's ability to meet known and unanticipated expenses. Due to creating a self-insurance program fund, which can be included in the calculation of Days Cash, Mesa Water is also calculating a new, unofficial, operating minimum target of 125 days that excludes money in the self-insurance program fund.

Mesa Water's revenues result solely from its activities as a water utility. It receives no tax revenue of any kind. However, as discussed within this Report, Mesa Water plans to have some water-related costs collected through the Orange County Treasurer-Tax Collector's office. The majority of Mesa Water's revenue comes from meter basic charges and usage (volumetric) charges. Other revenues include non-operating revenue such as delinquent fees, new service establishment fees, interest income, development-related revenue, etc. In addition, Mesa Water receives reimbursement from MWD's Local Resource Program (LRP) for a portion of its water production costs from Mesa Water's MWRf.

2.2. Methodology

Raftelis and Mesa Water developed the proposed charges/rates and charge/rate structure 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) with modifications, as applicable, to align with the requirements of Proposition 218 and related California law. Cost-of-service principles endeavor to distribute costs to customer classes in proportion to the way each class uses (places demand upon) the water system. This study used the Base-Extra Capacity Method, described in the AWWA M1 Manual, to distribute water system costs.

3. Legal Framework and Rate Setting Methodology

3.1. California Constitution – Article XIII D, Section 6 (Prop 218)

Proposition 218, reflected in the California Constitution as Article XIII D, was enacted in 1996 to ensure that charges, rates and fees implemented by public agency service providers are proportional to the cost of providing such service(s). The principal requirements for imposing such rates, fees and charges, as they relate to public water service, include the following:

1. A property-related charge (such as water and recycled water charges) 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/rate shall not be used for any purpose other than that for which the charge/rate was imposed.
3. The amount of the charge/rate imposed upon any parcel shall not exceed the proportional cost-of-service attributable to the parcel.
4. No charge/rate may be imposed for a service unless that service is actually used or immediately available to the owner of the property.
5. A written notice of the proposed charge/rate 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(s)/rate(s).

As stated in AWWA's *Principles of Water Rates, Fees, and Charges: Manual of Water Supply Practices M1*, 7th Edition (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 charges/rates cannot be "arbitrary and capricious," meaning that the rate-setting methodology must be sound and that there must be a nexus between the costs and the rates charged and the cost of service(s) provided. This water rate study follows industry-standard rate-setting methodologies set forth by the M1 Manual, adhering to Proposition 218 requirements by developing charges/rates that do not exceed the proportionate cost of providing water service(s).

3.2. California Constitution – Article X, Section 2

Article X, Section 2 of the California Constitution (established in 1976) states the following:

"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."

Article X, Section 2 of the State Constitution institutes the need to preserve the State's water supplies and to discourage the wasteful or unreasonable use of water by encouraging conservation. As such, public agencies are constitutionally mandated to maximize the beneficial use of water, prevent waste, and encourage conservation. However, current California case law states that the conservation directives of Article X, Section 2, do not override the rate setting limitations set out in Article XIII D.

Cost-Based Rate-Setting Methodology

As stated in the 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.” The four major steps to develop utility charges/rates that align with the requirements of Proposition 218 and industry standards are as follows:

Calculate Revenue Requirement

The rate-making process starts by determining the test year (rate-setting year) revenue requirement. The revenue requirement should sufficiently fund the utility’s O&M, debt service, capital expenses, and other identified costs with funding to reserves (positive cash) or using reserves (negative cash), all based on a long-term financial plan.

Cost-of-Service Analysis

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

- Functionalize costs. Examples of functions include storage, treatment, and distribution.
- Allocate functionalized costs to cost components. Examples of cost components include supply, base delivery, and meter servicing.
- Distribute the cost components. Distribute cost components, using unit costs, to customer classes in proportion to their burden/demand on the water system.

Rate Design and Calculations

Once the cost to provide service to each service/customer class is known, charges/rates are designed to collect the cost to serve each class. The total cost for all classes equals the revenue requirement from charges/rates.

Rate Adoption

Rate adoption is the last step of the rate-making process and is part of the procedural requirements of Proposition 218 and related California law. Raftelis has documented the water rate study results in this Report to serve as Mesa Water’s administrative record and a public education tool about the proposed charges/rates and charge/rate structure changes, the rationale and justifications behind the changes, and their anticipated financial impacts.

Raftelis conducted a comprehensive cost-of-service water rate study for Mesa Water, as described in Section 6, and documented the results and findings in this Report. The water rate study focuses on financial plan updates and incorporates the latest financial information and cost projections for the next five years.

4. General Assumptions

This section describes the assumptions used to project annual revenues and expenses including reserve targets and required debt coverage ratios to determine the revenue adjustments required to support Mesa Water's financial stability.

4.1. Key Information Used in this Report

The Report utilized the following key information provided by Mesa Water

- FY 2020 and FY 2021 operating budget
- Debt service schedule(s) for all outstanding debt
- Historical and forecast number of services and consumption sales for water services
- Actual and budgeted capital improvement project expenditures for FY 2022 – FY 2032
- Water asset list
- Historical water charges and rates and previously approved water charge/rate adjustment for January 1, 2022.
- System-wide capacity demands
- Mesa Water's Water Master Plan, November 2014
- Beginning reserve fund balances as of FY 2022

4.2. Reserve Funds and Targets

Mesa Water has five reserve funds, with targets as shown in Table 4-1. The minimum operating-related reserve funds total 350 days of O&M and the maximum totals 430 days of O&M.

Table 4-1: Current Reserve Policy

Reserve Fund	Minimum Target	Maximum Target
Administration & General	20 days O&M	25 days O&M
Catastrophe	150 days O&M	180 days O&M
Operating	120 days O&M	150 days O&M
Rate Stabilization	60 days O&M	75 days O&M
Capital Replacement	\$10,000,000	--

Mesa Water also has an overall desired target of 600 days of O&M. Additionally, the minimum debt coverage ratio required by Mesa Water's outstanding 2020 Revenue Certificates of Participation is 1.25.

4.3. Cost Escalation Factors

The study period comprises FY 2022 through FY 2032. Various assumptions and inputs were incorporated into the water rate study based on direction from Mesa Water staff and Raftelis recommendations. Table 4-2 shows the cost escalation factors assumed in the water rate study.

Table 4-2: Cost Escalation Factors

Cost Type	Escalation
General	2.5% per year
Payroll	3.5% per year
Utilities	3.5% per year
Basin RA	Actual forecasted costs FY 2023 – FY 2027, then 6% per year
Imported Variable Costs	5.0% per year
Fixed Purchase Water Supply Costs	3.5% per year
Capital Cost	3.0% per year

5. 10-Year Financial Plan

Reviewing a utility's revenue requirement is a key first step in the rate study process. Raftelis analyzed annual operating revenue under the status quo, operation and maintenance (O&M) expenses, transfers between funds, and reserve requirements. This section of the Report provides a discussion of the projected revenues, O&M expenses, reserve funding requirements and the revenue adjustments needed to support fiscal sustainability and solvency.

5.1. Revenue from Current Water Charges and Rates

5.1.1. CURRENT WATER CHARGES AND RATES

The current water charges and rates, adopted by Mesa Water Resolution No. 1505², include the following components: bi-monthly and monthly meter basic charge by meter size and uniform volumetric water rates. Table 5-1 shows the current and adopted bi-monthly and monthly basic charges applied to both water and recycled water meters.

Table 5-1: Current and Adopted Basic Charge

Existing Rates	FY 2021	FY 2022
Bi-Monthly Potable & Recycled Water		
5/8-inch	\$28.60	\$30.03
3/4-inch	\$43.20	\$45.36
1-inch	\$71.78	\$75.37
1 1/2-inch	\$144.15	\$151.36
2-inch	\$230.51	\$242.04
3-inch	\$504.17	\$529.38
4-inch	\$907.96	\$953.36
6-inch	\$2,019.01	\$2,119.97
8-inch	\$3,454.17	\$3,626.88
10-inch	\$5,473.14	\$5,746.80
Monthly Potable & Recycled Water		
5/8-inch	\$14.30	\$15.02
3/4-inch	\$21.60	\$22.68
1-inch	\$35.89	\$37.69
1 1/2-inch	\$72.08	\$75.68
2-inch	\$115.25	\$121.02
3-inch	\$252.08	\$264.69
4-inch	\$453.98	\$476.68
6-inch	\$1,009.50	\$1,059.99
8-inch	\$1,727.09	\$1,813.44
10-inch	\$2,736.57	\$2,873.40

Table 5-2 shows the current and adopted fireline charges for bi-monthly and monthly customers.

² Resolution No. 1505 Adopted November 9, 2017

Table 5-2: Current and Adopted Fireline Charge

Existing Rates	FY 2021	FY 2022
Bi-Monthly Fireline Class I and II		
2-inch	\$7.90	\$8.30
3-inch	\$22.93	\$24.08
4-inch	\$48.84	\$51.29
6-inch	\$141.86	\$148.96
8-inch	\$302.28	\$317.40
10-inch	\$543.59	\$570.77
Monthly Fireline Class I and II		
2-inch	\$3.95	\$3.95
3-inch	\$11.47	\$11.47
4-inch	\$24.42	\$24.42
6-inch	\$70.93	\$70.93
8-inch	\$151.14	\$151.14
10-inch	\$271.80	\$271.80

Table 5-3 summarizes the current and adopted usage rates per ccf for potable, construction, fire and recycled water. Construction use is the temporary use of water for construction from a meter installed on a fire hydrant.

Table 5-3: Current and Adopted Usage Rates, (\$/ccf)

Existing Rates	FY 2021	FY 2022
Potable Water	\$4.49	\$4.72
Recycled Water	\$2.93	\$3.08
Construction Water	\$4.96	\$5.21
Fireline Water	\$4.96	\$5.21

In addition to these charges, Mesa Water also collects a LAFCO charge of \$1/account/year, which is based on Mesa Water's obligation to support the Orange County LAFCO adopted budget.

5.1.2.ACCOUNT AND WATER USE GROWTH ASSUMPTIONS

The two factors used to estimate future water rate revenue are new account growth and annual water demand changes. Table 5-4 shows the financial plan assumptions in new water service connections and water use growth for the study period. Mesa Water staff anticipate little-to-no account growth. Mesa Water is also anticipating a slight increase in water service demand. Mesa Water estimates a 7 percent water loss assumption for the study period. The additional water purchases above customer demand account for water losses in the system, such as water lost during treatment, leaks in pipes, etc.

Table 5-4: Account Growth, Water Use, and Water Loss Assumptions

Line Item	Assumption
Account Growth	none
Water Use Growth	None in FY 2022 and FY 2023, then 0.43% per year
Water Loss	7.0% per year

Table 5-5 shows the estimated number of water service customer accounts, not including fireline service, by meter size for the study period. The number of accounts is used to forecast the amount of fixed revenue Mesa Water will receive from the basic charge.

Table 5-5: Projected Potable and Recycled Water Accounts by Meter Size and Billing Period

Meter Size	Fiscal Year										
	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Bi-Monthly											
5/8-inch	16,847	16,847	16,847	16,847	16,847	16,847	16,847	16,847	16,847	16,847	16,847
3/4-inch	2,178	2,178	2,178	2,178	2,178	2,178	2,178	2,178	2,178	2,178	2,178
1-inch	3,053	3,053	3,053	3,053	3,053	3,053	3,053	3,053	3,053	3,053	3,053
1 1/2-inch	903	903	903	903	903	903	903	903	903	903	903
2-inch	1,069	1,069	1,069	1,069	1,069	1,069	1,069	1,069	1,069	1,069	1,069
3-inch	6	6	6	6	6	6	6	6	6	6	6
4-inch	5	5	5	5	5	5	5	5	5	5	5
6-inch	3	3	3	3	3	3	3	3	3	3	3
8-inch	1	1	1	1	1	1	1	1	1	1	1
10-inch	0	0	0	0	0	0	0	0	0	0	0
Total	24,065	24,065	24,065	24,065	24,065	24,065	24,065	24,065	24,065	24,065	24,065
Monthly											
5/8-inch	0	0	0	0	0	0	0	0	0	0	0
3/4-inch	0	0	0	0	0	0	0	0	0	0	0
1-inch	5	5	5	5	5	5	5	5	5	5	5
1 1/2-inch	11	11	11	11	11	11	11	11	11	11	11
2-inch	24	24	24	24	24	24	24	24	24	24	24
3-inch	54	54	54	54	54	54	54	54	54	54	54
4-inch	34	34	34	34	34	34	34	34	34	34	34
6-inch	17	17	17	17	17	17	17	17	17	17	17
8-inch	10	10	10	10	10	10	10	10	10	10	10
10-inch	0	0	0	0	0	0	0	0	0	0	0
Total	155	155	155	155	155	155	155	155	155	155	155

Table 5-6 shows the projected water use totals by class. Water use by class is escalated by the water use growth assumption shown in Table 5-4.

5.1.3. REVENUE PROJECTIONS

Table 5-7 shows the projected water revenue based on the previously approved January 1, 2022, charges/rates and the account and usage projections presented above.

Table 5-8 presents the projection of other revenues, which includes other charges and services, the LAFCO surcharge, interest income, and non-operating revenues.

Table 5-6: Projected Water Use by Customer Class (ccf)

Usage, ccf	Fiscal Year										
	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
% Growth	0.00%	0.00%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%	0.43%
Potable Water Customer Classes											
Bi-Monthly											
Single Family	2,011,800	2,011,800	2,020,451	2,029,139	2,037,864	2,046,627	2,055,427	2,064,266	2,073,142	2,082,056	2,091,009
Multi-family, single unit	207,459	207,459	208,351	209,247	210,147	211,050	211,958	212,869	213,785	214,704	215,627
Multi-family, multiunit	1,742,400	1,742,400	1,749,892	1,757,417	1,764,974	1,772,563	1,780,185	1,787,840	1,795,528	1,803,248	1,811,002
Commercial	1,002,036	1,002,036	1,006,345	1,010,672	1,015,018	1,019,383	1,023,766	1,028,168	1,032,589	1,037,029	1,041,489
Industrial	93,200	93,200	93,601	94,003	94,407	94,813	95,221	95,631	96,042	96,455	96,870
Government	111,600	111,600	112,080	112,562	113,046	113,532	114,020	114,510	115,003	115,497	115,994
Irrigation	529,000	529,000	531,275	533,559	535,853	538,158	540,472	542,796	545,130	547,474	549,828
Subtotal bi-monthly	5,697,495	5,697,495	5,721,994	5,746,599	5,771,309	5,796,126	5,821,049	5,846,080	5,871,218	5,896,464	5,921,819
Monthly											
Multi-family, multiunit	140,220	140,220	140,823	141,428	142,037	142,647	143,261	143,877	144,495	145,117	145,741
Commercial	248,000	248,000	249,066	250,137	251,213	252,293	253,378	254,468	255,562	256,661	257,764
Industrial	13,600	13,600	13,658	13,717	13,776	13,835	13,895	13,955	14,015	14,075	14,135
Government	307,710	307,710	309,033	310,362	311,697	313,037	314,383	315,735	317,092	318,456	319,825
Irrigation	139,680	139,680	140,281	140,884	141,490	142,098	142,709	143,323	143,939	144,558	145,180
Subtotal monthly	849,210	849,210	852,862	856,529	860,212	863,911	867,626	871,357	875,103	878,866	882,645
Total Potable Use (ccf)	6,546,705	6,546,705	6,574,856	6,603,128	6,631,521	6,660,037	6,688,675	6,717,436	6,746,321	6,775,330	6,804,464
Other Water Uses											
Construction BiMo (ccf)	6,785	6,785	6,814	6,843	6,873	6,902	6,932	6,962	6,992	7,022	7,052
Fireline BiMo (ccf)	1,200	1,200	1,205	1,210	1,216	1,221	1,226	1,231	1,237	1,242	1,247
Fireline Mo (ccf)	864	864	868	871	875	879	883	887	890	894	898
RW BiMo Usage (ccf)	481,338	481,338	483,408	485,486	487,574	489,671	491,776	493,891	496,015	498,147	500,289
Total (ccf)	7,036,892	7,036,892	7,067,151	7,097,539	7,128,059	7,158,709	7,189,492	7,220,407	7,251,454	7,282,636	7,313,951

Table 5-7: Projected Water Revenue

Line Item	Fiscal Year										
	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Basic & Fireline											
Bi-monthly	\$7,868,797	\$8,060,760	\$8,060,760	\$8,060,760	\$8,060,760	\$8,060,760	\$8,060,760	\$8,060,760	\$8,060,760	\$8,060,760	\$8,060,760
Monthly	\$913,151	\$933,320	\$933,320	\$933,320	\$933,320	\$933,320	\$933,320	\$933,320	\$933,320	\$933,320	\$933,320
Subtotal	\$8,781,948	\$8,994,080	\$8,994,080	\$8,994,080	\$8,994,080	\$8,994,080	\$8,994,080	\$8,994,080	\$8,994,080	\$8,994,080	\$8,994,080
Use	\$31,623,193	\$32,429,072	\$32,568,517	\$32,708,562	\$32,849,208	\$32,990,460	\$33,132,319	\$33,274,788	\$33,417,870	\$33,561,566	\$33,705,881
Total	\$40,405,141	\$41,423,152	\$41,562,597	\$41,702,642	\$41,843,289	\$41,984,540	\$42,126,399	\$42,268,868	\$42,411,950	\$42,555,647	\$42,699,961

Table 5-8: Projected Other Revenue

Misc. Revenues	Fiscal Year										
	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Other Charges & Services											
New Service Establishment Fee	\$50,000	\$50,500	\$51,005	\$51,515	\$52,030	\$52,551	\$53,076	\$53,607	\$54,143	\$54,684	\$55,231
Delinquent Fees	\$185,000	\$186,850	\$188,719	\$190,606	\$192,512	\$194,437	\$196,381	\$198,345	\$200,328	\$202,332	\$204,355
Loss Recovery	\$14,000	\$14,140	\$14,281	\$14,424	\$14,568	\$14,714	\$14,861	\$15,010	\$15,160	\$15,312	\$15,465
Cross Connection Testing Fee	\$8,000	\$8,080	\$8,161	\$8,242	\$8,325	\$8,408	\$8,492	\$8,577	\$8,663	\$8,749	\$8,837
Plan Check Fees	\$55,000	\$55,550	\$56,106	\$56,667	\$57,233	\$57,806	\$58,384	\$58,967	\$59,557	\$60,153	\$60,754
OC-44 HB contract revenue	\$30,000	\$30,300	\$30,603	\$30,909	\$31,218	\$31,530	\$31,846	\$32,164	\$32,486	\$32,811	\$33,139
Sale of brass & scrap	\$3,000	\$3,030	\$3,060	\$3,091	\$3,122	\$3,153	\$3,185	\$3,216	\$3,249	\$3,281	\$3,314
Other operating revenue	\$30,000	\$30,300	\$30,603	\$30,909	\$31,218	\$31,530	\$31,846	\$32,164	\$32,486	\$32,811	\$33,139
LAFCO	\$24,874	\$24,874	\$24,874	\$24,874	\$24,874	\$24,874	\$24,874	\$24,874	\$24,874	\$24,874	\$24,874
Interest Income	\$458,063	\$406,369	\$365,382	\$362,391	\$316,018	\$286,392	\$282,561	\$289,075	\$302,788	\$324,299	\$406,369
Other Non-Operating											
Loss on Disposal of Equipment	-\$15,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Non-Operating Revenue	\$100,000	\$101,000	\$102,010	\$103,030	\$104,060	\$105,101	\$106,152	\$107,214	\$108,286	\$109,369	\$110,462
Non-Operating Expense	-\$100,000	-\$101,000	-\$102,010	-\$103,030	-\$104,060	-\$105,101	-\$106,152	-\$107,214	-\$108,286	-\$109,369	-\$110,462
COPS Trustee Expense	-\$20,000	-\$20,200	-\$20,402	-\$20,606	-\$20,812	-\$21,020	-\$21,230	-\$21,443	-\$21,657	-\$21,874	-\$22,092
Total	\$822,937	\$789,793	\$752,392	\$753,022	\$710,307	\$684,374	\$684,275	\$694,557	\$712,076	\$737,431	\$823,384

5.2. Operating and Maintenance Expenses

5.2.1. WATER SUPPLY COSTS

Mesa Water's primary water source for potable water service to customers is groundwater, pumped from Orange County's natural groundwater basin via seven groundwater wells. The groundwater basin stretches 350-square miles from the Orange County line at Seal Beach and Long Beach, along the coast, down to the 55 freeway and east to Yorba Linda. Backup for Mesa Water's well water for potable water service to customers is imported water purchased from Metropolitan Water District of Southern California (MWD) via the Municipal Water District of Orange County (MWDOC). The completion of the Mesa Water Reliability Facility (MWRF) in January 2013 allows Mesa Water's to provide nearly all or all of its water needs locally.

Mesa Water's five clear-water wells pump water from 200-600 feet below the surface and provide up to 82 percent of the water needs for Mesa Water's service area. The two deep-water wells pump water from 1,200 feet below the surface and provide the remaining water needed to meet the service needs of Mesa Water customers. The groundwater aquifer extends down to 2,000 feet below the surface. The MWRF treats amber groundwater from a previously unusable aquifer, providing Mesa Water with an additional potable water source. Amber groundwater from this lower aquifer is more expensive to produce than clear groundwater produced from the upper aquifer. However, the treatment cost of amber groundwater is substantially less expensive than purchasing imported water.

From time-to-time various programs are implemented by OCWD or MWDOC to manage water on a county-wide basis. The "Basin Managed Water" program, aka the in-lieu program, is set up to manage the basin and to replenish the basin in an efficient way to keep the basin level as high as reasonably possible. At times, it may be preferable from a groundwater basin management standpoint to take surface water to put as much, and to leave as much, water in the basin.

Table 5-9 summarizes the projected potable water production by water supply sources. Mesa Water's clear water basin pumping percentage (BPP)³ is expected to grow from 77 percent in FY 2022 to 82 percent by FY 2024. The remaining demand will be met by amber water. FY 2022 shows a slight difference in modeled demand and budgeted sources of supply; however, this year is not used to set charge and rates.

Table 5-9: Projected Potable Water Production

Water Supply Sources	Fiscal Year										
	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Potable Water Sales, AF	15,047	15,047	15,112	15,177	15,242	15,308	15,374	15,440	15,506	15,573	15,640
Potable Water Loss	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%
Total Water Demand, AF	16,180	16,180	16,250	16,320	16,390	16,460	16,531	16,602	16,673	16,745	16,817
Water Sources											
Clear Water	12,523	12,782	13,325	13,382	13,440	13,497	13,555	13,614	13,672	13,731	13,790
Amber Water	3,741	3,398	2,925	2,938	2,950	2,963	2,976	2,988	3,001	3,014	3,027
Basin Managed Water	31	0	0	0	0	0	0	0	0	0	0
Imported Water (MWD, MWDOC)	0	0	0	0	0	0	0	0	0	0	0
Total Water Sources, AF	16,295	16,180	16,250	16,320	16,390	16,460	16,531	16,602	16,673	16,745	16,817

Table 5-10 shows the projected purchased water variable unit rate for the supply sources based on Mesa Water's projections. Mesa Water pays OCWD the Basin Replenishment Assessment for clear water and amber water pumped from the basin. Mesa Water does not plan to buy imported water from MWD/MWDOC during the study period. However, Mesa Water will continue to pay MWDOC the retail meter charge and share of pipeline

³ BPP = percentage of water demand (aka production) that can be pumped from the clear water basin to meet the Mesa Water's water demand

replacement costs. In addition, to the Basin Replenishment Assessment, Mesa Water also incurs the variable costs for pumping and treatment of the pumped groundwater. The chemical and utility unit costs for FY 2023 and beyond are escalated from budgeted FY 2022 numbers by the general and utilities escalation factors from Table 4-2, respectively.

Table 5-10: Projected Water Supply Unit Costs

Water Supply Costs	2022	2023	2024	2025	2026	Fiscal Year 2027	2028	2029	2030	2031	2032
Variable Costs, \$/AF											
Basin Replenishment Assessment	\$507	\$540	\$566	\$605	\$649	\$686	\$727	\$771	\$817	\$866	\$918
Basin Managed Water Variable Costs	\$1,124	\$1,172	\$1,231	\$1,292	\$1,357	\$1,425	\$1,496	\$1,571	\$1,649	\$1,732	\$1,818
Fixed Water Supply Costs (1)	\$455,035	\$470,961	\$487,445	\$504,505	\$522,163	\$540,439	\$559,354	\$578,932	\$599,194	\$620,166	\$641,872
Other Water Supply Costs											
Clear Water Unit Cost, \$/AF											
Chemical	\$13.79	\$14.14	\$14.49	\$14.85	\$15.23	\$15.61	\$16.00	\$16.40	\$16.81	\$17.23	\$17.66
Utility	\$82.06	\$84.94	\$87.92	\$91.01	\$94.21	\$97.52	\$100.94	\$104.49	\$108.15	\$111.95	\$115.89
Amber Water Unit Cost, \$/AF											
Chemical	\$97.08	\$99.50	\$101.99	\$104.54	\$107.15	\$109.83	\$112.58	\$115.39	\$118.28	\$121.23	\$124.26
Utility	\$228.28	\$236.30	\$244.60	\$253.19	\$262.08	\$271.28	\$280.81	\$290.67	\$300.88	\$311.45	\$322.39

(1) Includes Readiness-to-serve, retail meter charge, and shared pipeline maintenance costs.

Using the water production quantity from Table 5-9 and unit water costs from Table 5-10, Table 5-11 summarizes the calculated water supply costs and projected water supply-related costs such as labor, parts, and materials for each supply source.

Table 5-11: Projected Potable Water Supply Costs

Line Item	2022	2023	2024	2025	2026	Fiscal Year 2027	2028	2029	2030	2031	2032
Imported/Basin Managed Water Expenses											
Imported Water Fixed Costs	\$435,000	\$470,961	\$487,445	\$504,505	\$522,163	\$540,439	\$559,354	\$578,932	\$599,194	\$620,166	\$641,872
Imported Water Variable Costs	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Basin Managed Water	\$35,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Chemicals and Treatment	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Utilities - Imported	\$1,000	\$1,035	\$1,071	\$1,109	\$1,148	\$1,188	\$1,230	\$1,273	\$1,318	\$1,364	\$1,412
Labor Import	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Parts and Materials - Import	\$10,000	\$10,250	\$10,506	\$10,769	\$11,038	\$11,314	\$11,597	\$11,887	\$12,184	\$12,489	\$12,801
Support Services - Import	\$17,700	\$18,143	\$18,596	\$19,061	\$19,537	\$20,026	\$20,527	\$21,040	\$21,566	\$22,105	\$22,657
In-Lieu Water	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Clear Water Expenses											
Chemicals - Clear	\$172,737	\$180,721	\$193,100	\$198,779	\$204,625	\$210,642	\$216,837	\$223,213	\$229,777	\$236,535	\$243,490
Basin Replenishment Assessment - Clear	\$6,374,207	\$6,902,433	\$7,541,801	\$8,096,130	\$8,722,285	\$9,259,193	\$9,856,948	\$10,493,293	\$11,170,719	\$11,891,879	\$12,659,595
Well Land Leases - Clear	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
BEA (Rebilled to Segerstrom)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Utilities - Clear	\$1,027,607	\$1,085,720	\$1,171,545	\$1,217,905	\$1,266,099	\$1,316,201	\$1,368,285	\$1,422,430	\$1,478,718	\$1,537,233	\$1,598,063
Labor Clear	\$90,000	\$92,250	\$94,556	\$96,920	\$99,343	\$101,827	\$104,372	\$106,982	\$109,656	\$112,398	\$115,208
Parts and Materials - Clear	\$80,000	\$82,000	\$84,050	\$86,151	\$88,305	\$90,513	\$92,775	\$95,095	\$97,472	\$99,909	\$102,407
Support Services - Clear	\$215,471	\$220,858	\$226,379	\$232,039	\$237,840	\$243,786	\$249,880	\$256,127	\$262,530	\$269,094	\$275,821
Amber Water Expenses											
Chemicals - Amber	\$363,158	\$338,090	\$298,314	\$307,086	\$316,117	\$325,413	\$334,983	\$344,834	\$354,974	\$365,413	\$376,159
Basin Replenishment Assessment - Amber	\$1,904,169	\$1,834,824	\$1,655,517	\$1,777,199	\$1,914,648	\$2,032,506	\$2,163,720	\$2,303,406	\$2,452,109	\$2,610,412	\$2,778,935
Utilities - Amber	\$854,000	\$802,900	\$715,433	\$743,744	\$773,175	\$803,771	\$835,577	\$868,642	\$903,016	\$938,750	\$975,897
Labor Amber	\$30,000	\$30,750	\$31,519	\$32,307	\$33,114	\$33,942	\$34,791	\$35,661	\$36,552	\$37,466	\$38,403
Parts and Materials - Amber	\$100,000	\$102,500	\$105,063	\$107,689	\$110,381	\$113,141	\$115,969	\$118,869	\$121,840	\$124,886	\$128,008
Support Services - Amber	\$228,505	\$234,218	\$240,073	\$246,075	\$252,227	\$258,532	\$264,996	\$271,621	\$278,411	\$285,371	\$292,506
Total Potable Water Supply Costs	\$11,938,554	\$12,407,653	\$12,874,970	\$13,677,469	\$14,572,046	\$15,362,434	\$16,231,842	\$17,153,304	\$18,130,038	\$19,165,469	\$20,263,234

Mesa Water also sells recycled water for irrigation purposes. The recycled water is purchased from OCWD and replaces potable water that would otherwise have been used for irrigation. Table 5-12 displays the FY 2022 budgeted 1,105 AF of recycled water demand and FY 2022 unit rate. The unit rate is escalated per the imported variable costs factor in Table 4-2.

Table 5-12: Projected Recycled Water Purchase Costs

Line Item	Fiscal Year											
	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	
Unit Rate, \$/AF	\$905	\$950	\$998	\$1,048	\$1,100	\$1,155	\$1,213	\$1,273	\$1,337	\$1,404	\$1,474	
Demand, AF	1,105	1,105	1,110	1,115	1,119	1,124	1,129	1,134	1,139	1,144	1,149	
Total	\$1,000,025	\$1,050,026	\$1,107,268	\$1,167,631	\$1,231,285	\$1,298,408	\$1,369,191	\$1,443,832	\$1,522,543	\$1,605,544	\$1,693,070	

5.2.2. WATER OPERATING EXPENSE

Table 5-13 projects the annual water operating and maintenance expenses, which includes the potable water supply costs, recycled water costs, and Mesa Water's budgeted and projected O&M expenses.

5.3. Debt Service

Mesa Water is currently obligated to make annual debt service payments for two outstanding revenue certificates of participation securities:

- Mesa Water District 2017 Revenue Certificates of Participation
- Mesa Water District 2020 Revenue Certificates of Participation

Table 5-14 shows the annual debt service associated with the two outstanding revenue certificates of participation. This water rate study assumes Mesa Water will not incur additional debt during the study period.

Table 5-13: Projected Water O&M Expenses

Line Item	Fiscal Year										
	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Board of Directors	\$426,397	\$440,821	\$455,737	\$471,163	\$487,115	\$503,612	\$520,673	\$538,316	\$556,563	\$575,434	\$594,949
Office of General Manager	\$1,577,051	\$1,623,498	\$1,671,351	\$1,720,656	\$1,771,456	\$1,823,799	\$1,877,732	\$1,933,305	\$1,990,570	\$2,049,579	\$2,110,386
Water Operations											
Water Costs											
Total Imported Water Costs	\$498,700	\$500,389	\$517,619	\$535,444	\$553,887	\$572,967	\$592,708	\$613,132	\$634,262	\$656,124	\$678,742
Total Clear Water Costs	\$7,960,022	\$8,563,982	\$9,311,433	\$9,927,925	\$10,618,497	\$11,222,162	\$11,889,098	\$12,597,140	\$13,348,873	\$14,147,046	\$14,994,584
Total Amber Water Costs	\$3,479,832	\$3,343,282	\$3,045,919	\$3,214,100	\$3,399,662	\$3,567,305	\$3,750,036	\$3,943,032	\$4,146,903	\$4,362,299	\$4,589,908
Recycled Water Costs	\$1,000,025	\$1,050,026	\$1,107,268	\$1,167,631	\$1,231,285	\$1,298,408	\$1,369,191	\$1,443,832	\$1,522,543	\$1,605,544	\$1,693,070
Other Water Operations	\$6,326,178	\$6,527,898	\$6,736,186	\$6,951,259	\$7,173,342	\$7,402,668	\$7,639,477	\$7,884,017	\$8,136,544	\$8,397,325	\$8,666,634
Subtotal Water Operations	\$19,264,757	\$19,985,577	\$20,718,424	\$21,796,359	\$22,976,673	\$24,063,510	\$25,240,510	\$26,481,152	\$27,789,125	\$29,168,338	\$30,622,939
Engineering	\$649,285	\$670,780	\$692,997	\$715,959	\$739,693	\$764,225	\$789,581	\$815,790	\$842,880	\$870,883	\$899,827
Customer Service	\$1,090,587	\$1,126,111	\$1,162,813	\$1,200,731	\$1,239,907	\$1,280,383	\$1,322,202	\$1,365,410	\$1,410,054	\$1,456,182	\$1,503,843
Financial Services	\$1,398,124	\$1,441,856	\$1,486,989	\$1,533,569	\$1,581,641	\$1,631,257	\$1,682,465	\$1,735,319	\$1,789,871	\$1,846,179	\$1,904,298
Public Affairs	\$910,678	\$936,527	\$963,129	\$990,508	\$1,018,688	\$1,047,691	\$1,077,543	\$1,108,270	\$1,139,897	\$1,172,453	\$1,205,964
Admin Services	\$2,405,172	\$2,473,703	\$2,544,241	\$2,616,848	\$2,691,584	\$2,768,515	\$2,847,706	\$2,929,227	\$3,013,147	\$3,099,539	\$3,188,478
Human Resources	\$1,125,453	\$1,158,814	\$1,193,192	\$1,228,618	\$1,265,126	\$1,302,749	\$1,341,523	\$1,381,484	\$1,422,668	\$1,465,114	\$1,508,863
Water Policy	\$530,662	\$546,715	\$563,267	\$580,334	\$597,932	\$616,078	\$634,789	\$654,085	\$673,982	\$694,501	\$715,662
Total	\$29,378,166	\$30,404,402	\$31,452,140	\$32,854,744	\$34,369,815	\$35,801,818	\$37,334,724	\$38,942,357	\$40,628,758	\$42,398,200	\$44,255,209

Table 5-14: Annual Debt Service

Bond Issue	Fiscal Year										
	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
2017 Revenue COP (senior)	\$4,180,250	\$4,231,500	\$4,282,250	\$4,332,000	\$4,355,250	\$2,157,750					
2020 COPS (subordinate)	\$2,566,200	\$2,566,200	\$2,566,200	\$2,566,200	\$2,566,200	\$2,566,200	\$3,976,200	\$3,980,700	\$3,976,450	\$3,978,700	\$3,976,950
Total Existing Debt Service	\$6,746,450	\$6,797,700	\$6,848,450	\$6,898,200	\$6,921,450	\$4,723,950	\$3,976,200	\$3,980,700	\$3,976,450	\$3,978,700	\$3,976,950

5.4. Capital Improvement Program

Table 5-15 summarizes Mesa Water’s capital improvement plan. Mesa Water has approximately \$60 million in capital expenditures projected from FY 2022 -- FY 2024, most of which are covered by the remaining 2020 Revenue Certificates of Participation funds. Thereafter, Mesa Water plans to expend about \$4 million per year (uninflated) on capital projects. Mesa Water plans to finance its capital projects over the study period through System Development Charges (Capacity Fees) and rate revenues (also known as “Paygo” funding). The Capital Improvement Plan below shows line items in uninflated dollars and the total in both uninflated and inflated dollars⁴.

Table 5-15: Proposed Capital Improvement Plan

Categories	Fiscal Year											
	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	
Wells	\$12,845,409	\$198,550	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Reservoirs	\$800,400	\$7,264,977	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Distribution	\$8,471,541	\$7,197,394	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Routine Operations	\$1,950,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	
District Facilities	\$5,749,930	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Information Technology	\$2,367,300	\$1,123,720	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Staff Resources	\$1,120,201	\$820,642	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Contingency	\$0	\$1,885,525	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Undesignated	\$0	\$0	\$7,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	
Total Uninflated	\$33,304,781	\$19,490,808	\$8,000,000	\$4,000,000	\$4,000,000	\$4,000,000	\$4,000,000	\$4,000,000	\$4,000,000	\$4,000,000	\$4,000,000	
Total Inflated	\$33,304,781	\$20,075,532	\$8,487,200	\$4,370,908	\$4,502,035	\$4,637,096	\$4,776,209	\$4,919,495	\$5,067,080	\$5,219,093	\$5,375,666	

5.5. Proposed Financial Plan and Revenue Adjustments

The proposed financial plan enables Mesa Water to set rates and charges to generate sufficient revenues to meet its short-term and long-term obligations and avoid significant future rate fluctuations. The plan shows the revenues that will be used to maintain appropriate reserves and provide adequate debt service coverage while maintaining a sensitivity to rate increases.

Several financial plans were reviewed with the Board as part of the water rate study process. Table 5-16 shows the proposed revenue adjustments selected by the Board of Directors at the October 5, 2021, Board Meeting. The proposed financial plan implements an initial higher level of revenue adjustments to make initial contributions to the self-insurance program fund, then levels off at 5 percent per year of revenue adjustments on January 1 each year. This proposed scenario allows Mesa Water to build a self-insurance program fund over 12 years, maintain reserves, and mitigate impacts that ratepayers see to their water billings. Revenue adjustments are shown outside the rate-setting period (FY 2023 – FY 2027) *for planning purposes only* and are subject to the Board’s approval in future years. The blue box shows the revenue adjustments that Mesa Water proposes to implement for FY 2023-FY 2027.

⁴ Capital inflation percentages are shown in Table 4-2.

Table 5-16: Proposed Revenue Adjustments

Fiscal Year	Proposed Revenue Adjustment
2023	8%
2024	8%
2025	5%
2026	5%
2027	5%
2028	5%
2029	5%
2030	5%
2031	5%
2032	5%

Table 5-17 shows the proposed financial plan incorporating the proposed revenue adjustments and self-insurance program. Line 1 shows revenue from the current charges and rates, assuming no increase in charges/rates. Revenue from current charges/rates includes water, recycled water, private fire customers, and usage. Rate revenues were calculated using the water use and customer account assumptions shown in Section 5.1. Lines 2 through 11 show the additional revenue received from the revenue adjustments proposed in Table 5-16. Line 13 shows the LAFCO surcharge and Line 14 shows the total rate-based revenues. Lines 15 and 16 show non-rate revenues. Interest revenues (Line 16) decreases in FY 2023 through FY 2028 due to declining reserve balances caused by the negative net cash flow (Line 32) to fund the self-insurance over 12-years. Line 17 shows projected revenues. Lines 18 – 23 summarize the O&M expense projections. Line 25 shows net revenues, which are revenues less O&M expenses. Lines 26 and 27 show the existing and proposed debt service, respectively. Line 29 shows the cash funding of capital improvement projects, also called “Paygo”. Line 30 shows a final payment into the pension liability prepayment in FY 2022. Line 31 shows the projected self-insurance program funding. Line 32 shows the annual surplus/deficit. Due to initial self-insurance program funding levels, the operating cash balance is initially drawn down. Lines 33 and 34 show the beginning and ending operating fund balance, respectively. Line 35 shows the ending balance including the capital replacement fund, which maintains a minimum target balance of \$10 million. Line 36 shows the projected self-insurance program funds balance, which includes projected interest earnings for the fund. The proposed financial plan supports financial sufficiency and solvency for Mesa Water to meet projected expenditures and financial obligations, including debt service, debt coverage, and most reserve targets while funding the self-insurance program.

Table 5-17: Proposed Financial Plan Cashflow

Line No.	Line Item		2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
1	Revenue Under Existing Rates		\$40,405,141	\$41,423,152	\$41,562,597	\$41,702,642	\$41,843,289	\$41,984,540	\$42,126,399	\$42,268,868	\$42,411,950	\$42,555,647	\$42,699,961
	Revenue Adjustments												
	Mo. Effctv.												
	FY	First Year											
2	2022	6	0.0%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	2023	6	8.0%		\$1,656,926	\$3,325,008	\$3,336,211	\$3,347,463	\$3,358,763	\$3,370,112	\$3,381,509	\$3,392,956	\$3,404,452
4	2024	6	8.0%			\$1,795,504	\$3,603,108	\$3,615,260	\$3,627,464	\$3,639,721	\$3,652,030	\$3,664,392	\$3,676,808
5	2025	6	5.0%				\$1,216,049	\$2,440,301	\$2,448,538	\$2,456,812	\$2,465,120	\$2,473,465	\$2,481,845
6	2026	6	5.0%					\$1,281,158	\$2,570,965	\$2,579,652	\$2,588,376	\$2,597,138	\$2,605,938
7	2027	6	5.0%						\$1,349,757	\$2,708,635	\$2,717,795	\$2,726,995	\$2,736,234
8	2028	6	5.0%							\$1,422,033	\$2,853,685	\$2,863,345	\$2,873,046
9	2029	6	5.0%								\$1,498,185	\$3,006,512	\$3,016,698
10	2030	6	5.0%									\$1,578,419	\$3,167,533
11	2031	6	5.0%										\$1,662,955
12	Total Adjusted Revenue		\$0	\$1,656,926	\$5,120,512	\$8,155,369	\$10,684,182	\$13,355,488	\$16,176,965	\$19,156,701	\$22,303,222	\$25,625,510	\$25,712,411
13	LAFCO Surcharge (1)		\$24,874	\$24,874	\$24,874	\$24,874	\$24,874	\$24,874	\$24,874	\$24,874	\$24,874	\$24,874	\$24,874
14	Total Rate-Based Revenue		\$40,430,015	\$43,104,952	\$46,707,983	\$49,882,884	\$52,552,344	\$55,364,902	\$58,328,238	\$61,450,443	\$64,740,046	\$68,206,030	\$68,437,246
	Other Revenue												
15	Misc Net Revenues		\$340,000	\$358,550	\$362,136	\$365,757	\$369,414	\$373,109	\$376,840	\$380,608	\$384,414	\$388,258	\$392,141
16	Interest Income		\$458,063	\$406,369	\$365,382	\$362,391	\$316,018	\$286,392	\$282,561	\$289,075	\$302,788	\$324,299	\$337,030
17	Total Revenue		\$41,228,077	\$43,869,871	\$47,435,501	\$50,611,032	\$53,237,777	\$56,024,402	\$58,987,639	\$62,120,127	\$65,427,248	\$68,918,588	\$69,166,418
	O&M Expenses												
18	Imported/Basin Managed Water Costs		\$498,700	\$500,389	\$517,619	\$535,444	\$553,887	\$572,967	\$592,708	\$613,132	\$634,262	\$656,124	\$678,742
19	Clear Water Costs		\$7,960,022	\$8,563,982	\$9,311,433	\$9,927,925	\$10,618,497	\$11,222,162	\$11,889,098	\$12,597,140	\$13,348,873	\$14,147,046	\$14,994,584
20	Amber Water Costs		\$3,479,832	\$3,343,282	\$3,045,919	\$3,214,100	\$3,399,662	\$3,567,305	\$3,750,036	\$3,943,032	\$4,146,903	\$4,362,299	\$4,589,908
21	Transmission & Distribution		\$6,975,463	\$7,198,678	\$7,429,182	\$7,667,218	\$7,913,035	\$8,166,892	\$8,429,058	\$8,699,806	\$8,979,425	\$9,268,208	\$9,566,461
22	General & Administrative		\$9,464,124	\$9,748,045	\$10,040,720	\$10,342,426	\$10,653,449	\$10,974,083	\$11,304,634	\$11,645,415	\$11,996,752	\$12,358,980	\$12,732,443
23	Recycled Water Costs		\$1,000,025	\$1,050,026	\$1,107,268	\$1,167,631	\$1,231,285	\$1,298,408	\$1,369,191	\$1,443,832	\$1,522,543	\$1,605,544	\$1,693,070
24	Total O&M Expenses		\$29,378,166	\$30,404,402	\$31,452,140	\$32,854,744	\$34,369,815	\$35,801,818	\$37,334,724	\$38,942,357	\$40,628,758	\$42,398,200	\$44,255,209
25	Net Revenues		\$11,849,911	\$13,465,469	\$15,983,360	\$17,756,288	\$18,867,962	\$20,222,585	\$21,652,915	\$23,177,769	\$24,798,490	\$26,520,387	\$24,911,208
	Debt Service												
26	Existing		\$6,746,450	\$6,797,700	\$6,848,450	\$6,898,200	\$6,921,450	\$4,723,950	\$3,976,200	\$3,980,700	\$3,976,450	\$3,978,700	\$3,976,950
27	Proposed		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
28	Total Debt Service		\$6,746,450	\$6,797,700	\$6,848,450	\$6,898,200	\$6,921,450	\$4,723,950	\$3,976,200	\$3,980,700	\$3,976,450	\$3,978,700	\$3,976,950
29	Capital-Related (Paygo)		\$0	\$0	\$0	\$0	\$2,307,233	\$3,428,596	\$3,567,709	\$3,710,995	\$3,858,580	\$4,010,593	\$4,167,166
30	Pension Liability Prepayment		\$110,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
31	Self Insurance Program Funding		\$11,000,000	\$12,000,000	\$11,987,500	\$12,220,000	\$12,831,000	\$13,472,550	\$14,146,178	\$14,853,486	\$15,596,161	\$16,375,969	\$17,194,767
32	Annual Surplus/(Deficit)		-\$6,006,539	-\$5,332,231	-\$2,852,590	-\$1,361,912	-\$3,191,720	-\$1,402,512	-\$37,172	\$632,587	\$1,367,299	\$2,155,126	-\$427,674
33	Beginning Balance		\$31,349,150	\$25,342,611	\$20,010,380	\$17,157,790	\$15,795,878	\$12,604,158	\$11,201,646	\$11,164,474	\$11,797,061	\$13,164,360	\$15,319,486
34	Ending Operating* Balance		\$25,342,611	\$20,010,380	\$17,157,790	\$15,795,878	\$12,604,158	\$11,201,646	\$11,164,474	\$11,797,061	\$13,164,360	\$15,319,486	\$14,891,812
35	Ending Balance Operating* and Capital Funds**		\$37,302,985	\$31,970,754	\$30,810,060	\$26,782,181	\$22,604,158	\$21,201,646	\$21,164,474	\$21,797,061	\$23,164,360	\$25,319,486	\$24,891,812
36	Captive Funds Ending Balance		\$11,340,206	\$24,412,796	\$38,281,114	\$53,246,956	\$69,768,417	\$87,973,216	\$107,998,546	\$129,991,741	\$154,110,984	\$180,526,064	\$209,419,188

* Customer & Development Deposits + Other Funds + Liquidity Funds

** Capital Replacement Fund

(1) Per account surcharge, not subject to revenue adjustments.

Figure 5-1 graphically illustrates the proposed operating Financial Plan – it compares the existing (current) and proposed revenues with projected expenses. The stacked bars show expenses, including O&M expenses, debt service, and rate-funded CIP. The light green bars show the net cash. Net cash below the line indicates a drawdown of reserves during the noted period. Total revenues at existing and proposed charges/rates are shown by horizontal black and green lines, respectively. Current revenue from existing charges/rates does not meet future total expenses and shows the nexus for the proposed revenue adjustments.

Figure 5-1: Proposed Financial Plan

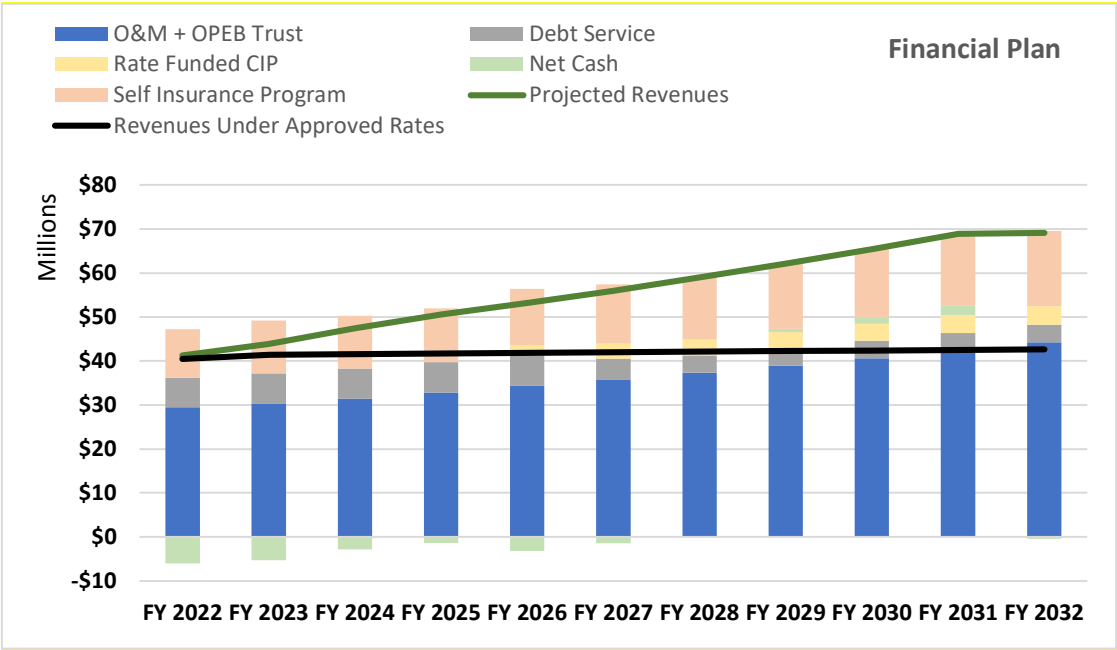


Figure 5-2 graphs the calculated and minimum debt coverage requirements as shown by the blue and peach lines, respectively. The debt coverage ratios increase due to Mesa Water’s outstanding 2017 Certificates of Participation having a final maturity in FY 2027 (Table 5-14).

Figure 5-2: Projected Debt Coverage Ratios

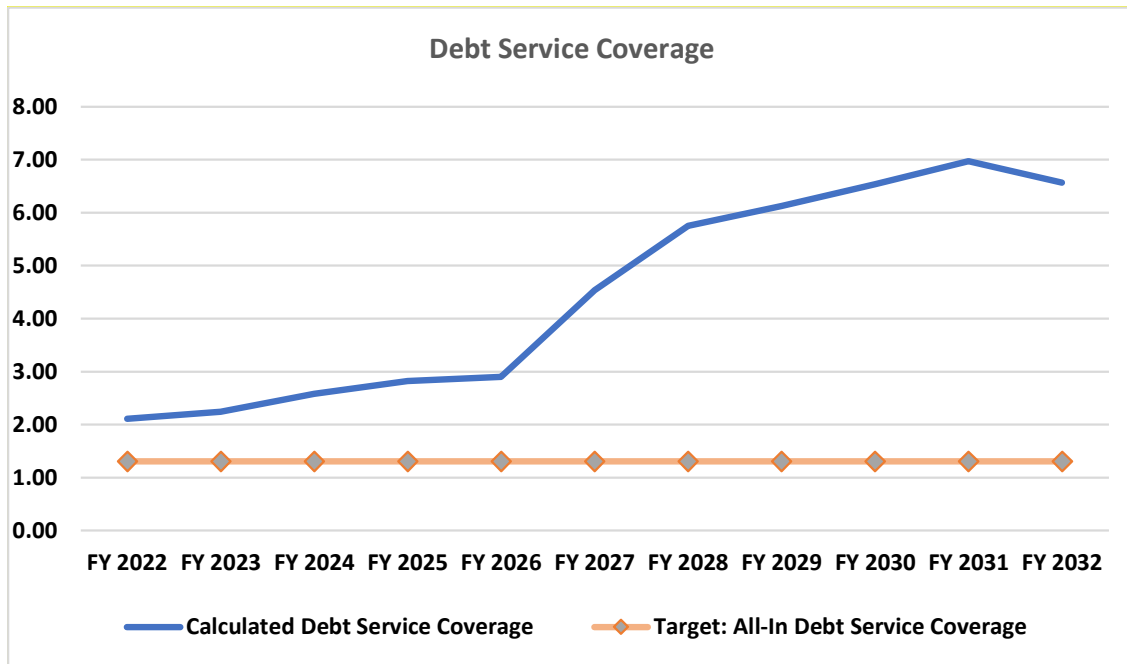


Figure 5-3 summarizes the projected (bond-funded and rate-funded) inflated CIP.

Figure 5-3: Proposed Capital Financing Plan

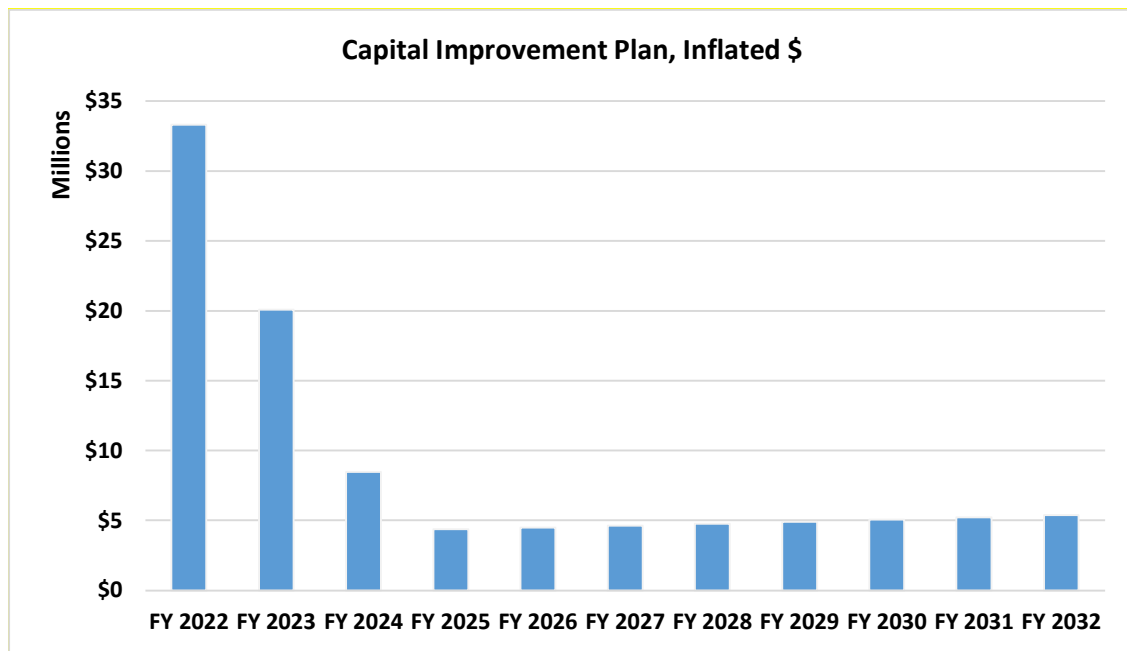
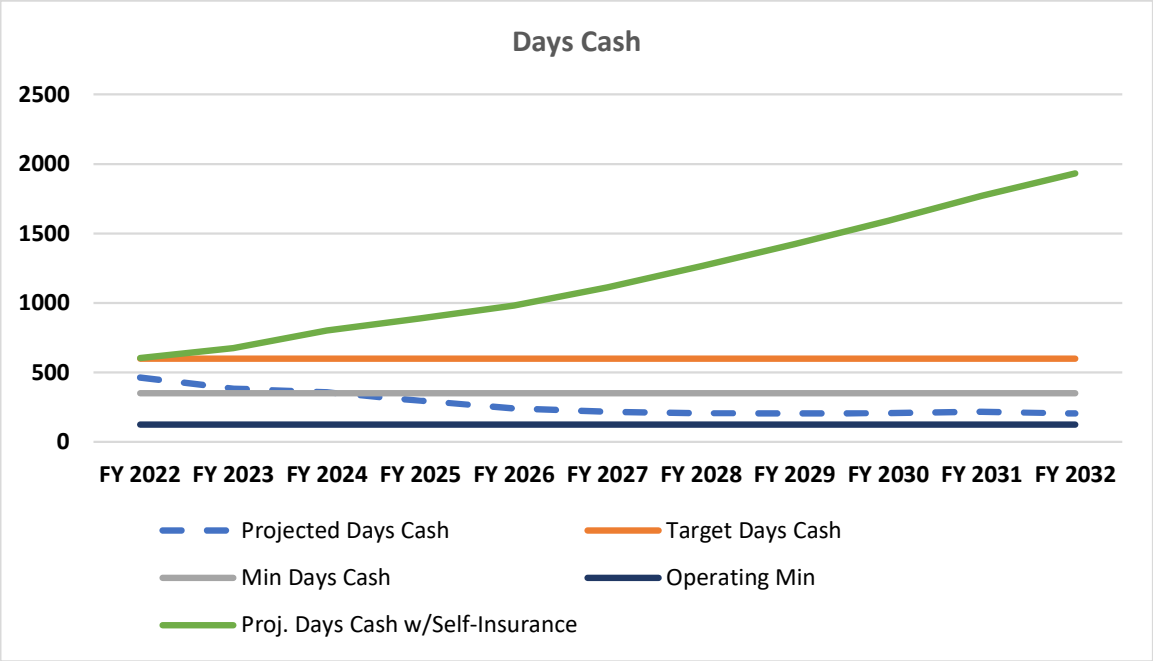


Figure 5-4 shows the projected Water Utility Fund projected days cash both without the self-insurance program fund (blue dashed line) and with the self-insurance program fund (solid green line). The projected days cash without the self-insurance program fund stays above the operating minimum of 125 days with the proposed revenue adjustments. This demonstrates the necessity for the proposed revenue adjustments in the proposed financial plan.

Figure 5-4: Projected Days Cash vs Targets



6. Cost-of-Service Analysis

Once the revenue requirements are known, the costs to provide service to customer classes, also known as the cost-of-service, can be allocated to customer classes. These net revenue requirements must be recovered through charges/rates. The cost-of-service analysis is the process of determining the cost of providing water service to each of the defined customer classifications. This analysis includes the functionalization and allocation of water system revenue requirements (the costs-of-service) followed by the distribution of costs to customer classifications based on the annual usage and customer-related costs for which each class of service is responsible. The allocations of these costs to functional costs, cost centers and ultimately to the customer classes take into account the quantity of water used, relative peak demand requirements placed on the system, the number and size of services to customers, and other relevant factors. The allocation process ultimately determines the costs on a unit basis (e.g., number of customers, usage). The unit rates then help guide the process for setting charges and rates. This process follows the guidelines set out in AWWA M1: *Principles of Water Rates, Fees, and Charges*, 7th edition, modified, as applicable, to align with the Proposition 218 requirements.

A cost-of-service analysis distributes a utility's revenue requirement, i.e., the yearly revenue needed, to each customer class by allocating the utility's revenue requirement to the cost-causation components. The cost-causation components include:

1. Volume
2. Meter service
3. Billing and customer service
4. Direct Public Fire protection
5. Recycled Water
6. General and administrative costs

Given that Mesa Water proposes to phase-in collection of some water utility costs by the Orange County Treasurer-Tax Collector's office, the cost-of-service analysis was done for each year of the rate setting period (FY 2023 – FY 2027). The body of this Report shows the rate derivation process for FY 2023. Detailed tables and derivation of the charges and rates for FY 2024 – FY 2027 are included in Appendix A.

6.1. Functionalizing Net O&M and Capital Expenses

Utilizing a public agency's approved budget, financial reports, operating data, and capital improvement plans, a rate study first categorizes ("functionalizes") the agency's costs among major operating functions. The water utility costs are categorized into the following functions:

- Water Supply – direct water supply costs to purchase and produce potable water
- Treatment – costs associated with treating water to potable water standards
- Transmission & Distribution (T&D) – weighted average costs of transmission and distribution systems
- Storage – costs associated with water storage within the distribution or transmission systems
- Direct Public Fire protection – costs associated with installing and maintaining fire hydrants. Facilities of the water system are used for providing water service, including public fire hydrants, which are used for supplying construction water through hydrant meters, flushing mains, and connecting fire trucks to the system in order to pump water at the higher pressures needed to fight fires. State law also mandates that domestic water systems provide pressures sufficient to fight fires. Meeting that State mandate is a cost of domestic water service.

- Customer Service – billing costs including meter reading, billing and collection costs associated with preparing a water customer bill and processing funds received from water users. Customer service costs include costs associated with administering customer accounts such as processing complaints, responding to customer inquiries, resolution of customer issues, performing rereads, etc.
- Meter services – costs associated with providing customer water meters and associated with testing and replacements.
- General & Administrative (G&A) – represents all other costs that do not serve a specific function referenced above.

Table 6-1 shows the functionalization of annual O&M costs based on input from Mesa Water staff. Chemicals are 100 percent functionalized as treatment costs. The utilities costs for clear water are to pump water from the groundwater basin; thus, 100 percent is functionalized as supply. Half of the utilities costs for amber water are related to pumping from the groundwater basin and the other 50 percent is for treatment. Detailed O&M allocation tables for FY 2024 – FY 2027 are shown in Appendix A.

Table 6-1: Functionalization of O&M Expenses, FY 2023

Line Item	FY 2023	Supply	Treatment	T&D	Storage	Meter	Customer	G&A	Public Fire	Recycled Water	Total
Other General & Admin	\$8,621,934							97.0%		3.0%	100.0%
Engineering	\$670,780	1.0%		90.5%	5.0%	0.5%				3.0%	100.0%
Customer Service	\$1,126,111						80.0%	20.0%			100.0%
Water Operations											
Payroll	\$4,509,024	15.4%	10.2%	31.9%	5.0%	0.5%	9.2%	18.8%	4.1%	5.0%	100.0%
Non-payroll	\$2,018,874			91.2%	3.0%	0.5%			4.1%	1.2%	100.0%
Imported/Basin Managed Water Expenses	\$0										
Imported Water Fixed Costs	\$470,961	100.0%									100.0%
Imported Water Variable Costs	\$0	100.0%									100.0%
Basin Managed Water	\$0	100.0%									100.0%
Chemicals and Treatment	\$0		100.0%								100.0%
Utilities - Imported	\$1,035	100.0%									100.0%
Labor Import	\$0	100.0%									100.0%
Parts and Materials - Import	\$10,250	100.0%									100.0%
Support Services - Import	\$18,143	100.0%									100.0%
In-Lieu Water	\$0	100.0%	0.0%								100.0%
Clear Water Expenses	\$0										
Chemicals - Clear	\$180,721		100.0%								100.0%
Basin Replenishment Assessment - Clear	\$6,902,433	100.0%									100.0%
Well Land Leases - Clear	\$0	100.0%									100.0%
BEA (Rebilled to Segerstrom)	\$0	100.0%									100.0%
Utilities - Clear	\$1,085,720	100.0%									100.0%
Labor Clear	\$92,250	100.0%									100.0%
Parts and Materials - Clear	\$82,000	100.0%									100.0%
Support Services - Clear	\$220,858	75.0%	25.0%								100.0%
Amber Water Expenses	\$0										
Chemicals - Amber	\$338,090		100.0%								100.0%
Basin Replenishment Assessment - Amber	\$1,834,824	100.0%									100.0%
Utilities - Amber	\$802,900	50.0%	50.0%								100.0%
Labor Amber	\$30,750	25.0%	75.0%								100.0%
Parts and Materials - Amber	\$102,500	20.0%	80.0%								100.0%
Support Services - Amber	\$234,218	10.0%	90.0%								100.0%
Recycled Water Costs	\$1,050,026									100.0%	100.0%
Total	\$30,404,402	\$11,815,613	\$1,749,902	\$3,884,988	\$319,556	\$32,492	\$1,315,719	\$9,437,096	\$270,551	\$1,578,485	
Allocation	100%	38.9%	5.8%	12.8%	1.1%	0.1%	4.3%	31.0%	0.9%	5.2%	

Table 6-2 summarizes the functionalization of O&M expenses for each year of the rate-setting period.

Table 6-2: Summary of Functionalized O&M Expenses, FY 2023 – FY 2027

Fiscal Year	Total	Supply	Treatment	T&D	Storage	Meter	Customer	G&A	Public Fire	Recycled Water
2023	\$30,404,402	\$11,815,613	\$1,749,902	\$3,884,988	\$319,556	\$32,492	\$1,315,719	\$9,437,096	\$270,551	\$1,578,485
2024	\$31,452,140	\$12,369,246	\$1,704,098	\$4,011,077	\$330,072	\$32,495	\$1,359,599	\$9,722,432	\$270,551	\$1,652,570
2025	\$32,854,744	\$13,158,949	\$1,758,825	\$4,141,067	\$340,939	\$32,499	\$1,404,961	\$10,016,630	\$270,551	\$1,730,323
2026	\$34,369,815	\$14,040,392	\$1,815,356	\$4,275,083	\$352,170	\$32,502	\$1,451,855	\$10,319,973	\$270,551	\$1,811,933
2027	\$35,801,818	\$14,817,299	\$1,873,753	\$4,413,251	\$363,775	\$32,506	\$1,500,333	\$10,632,752	\$270,551	\$1,897,598

Miscellaneous revenues, used to offset O&M are also allocated to the functions. The miscellaneous revenues have been allocated to the functional categories based on the allocation of total O&M in each year. These percentages and total miscellaneous revenue allocations are shown in Table 6-3. As O&M line-item expenses change from year-to-year, the percent allocations can change slightly.

Table 6-3: Functionalization of Miscellaneous Revenue, FY 2023 – FY 2027

Fiscal Year	Total	Supply	Treatment	T&D	Storage	Meter	Customer	G&A	Public Fire	Recycled Water
Allocations										
2023	100.0%	38.9%	5.8%	12.8%	1.1%	0.1%	4.3%	31.0%	0.9%	5.2%
2024	100.0%	39.3%	5.4%	12.8%	1.0%	0.1%	4.3%	30.9%	0.9%	5.3%
2025	100.0%	40.1%	5.4%	12.6%	1.0%	0.1%	4.3%	30.5%	0.8%	5.3%
2026	100.0%	40.9%	5.3%	12.4%	1.0%	0.1%	4.2%	30.0%	0.8%	5.3%
2027	100.0%	41.4%	5.2%	12.3%	1.0%	0.1%	4.2%	29.7%	0.8%	5.3%
Amount										
2023	\$789,793	\$306,925	\$45,456	\$100,917	\$8,301	\$844	\$34,177	\$245,140	\$7,028	\$41,003
2024	\$752,392	\$295,895	\$40,765	\$95,952	\$7,896	\$777	\$32,524	\$232,578	\$6,472	\$39,532
2025	\$753,022	\$301,600	\$40,312	\$94,912	\$7,814	\$745	\$32,201	\$229,578	\$6,201	\$39,659
2026	\$710,307	\$290,167	\$37,517	\$88,351	\$7,278	\$672	\$30,005	\$213,279	\$5,591	\$37,446
2027	\$684,374	\$283,242	\$35,818	\$84,362	\$6,954	\$621	\$28,680	\$203,252	\$5,172	\$36,274

Table 6-4 summarizes the net O&M expense, which is the fiscal year totals from Table 6-2 less the fiscal year totals from Table 6-3. This table also shows the percent allocation of the costs to each category excluding recycled water because recycled water is its own function.

Table 6-4: Net O&M Expense Allocation to Functional Categories, FY 2023 – FY 2027

Fiscal Year	Total	Supply	Treatment	T&D	Storage	Meter	Customer	G&A	Public Fire	Recycled Water
Amount										
2023	\$29,614,609	\$11,508,687	\$1,704,446	\$3,784,070	\$311,256	\$31,648	\$1,281,542	\$9,191,956	\$263,523	\$1,537,482
2024	\$30,699,749	\$12,073,352	\$1,663,333	\$3,915,125	\$322,176	\$31,718	\$1,327,075	\$9,489,854	\$264,079	\$1,613,037
2025	\$32,101,722	\$12,857,349	\$1,718,513	\$4,046,155	\$333,125	\$31,754	\$1,372,760	\$9,787,052	\$264,350	\$1,690,664
2026	\$33,659,508	\$13,750,225	\$1,777,839	\$4,186,731	\$344,891	\$31,831	\$1,421,850	\$10,106,694	\$264,960	\$1,774,486
2027	\$35,117,443	\$14,534,057	\$1,837,935	\$4,328,888	\$356,822	\$31,884	\$1,471,654	\$10,429,500	\$265,379	\$1,861,324
Allocations to Functional Categories Excluding Recycled Water										
2023	100.0%	41.0%	6.1%	13.5%	1.1%	0.1%	4.6%	32.7%	0.9%	0.0%
2024	100.0%	41.5%	5.7%	13.5%	1.1%	0.1%	4.6%	32.6%	0.9%	0.0%
2025	100.0%	42.3%	5.7%	13.3%	1.1%	0.1%	4.5%	32.2%	0.9%	0.0%
2026	100.0%	43.1%	5.6%	13.1%	1.1%	0.1%	4.5%	31.7%	0.8%	0.0%
2027	100.0%	43.7%	5.5%	13.0%	1.1%	0.1%	4.4%	31.4%	0.8%	0.0%

The annual capital-related costs are also allocated to functional components. However, capital costs are allocated in proportion to water asset investment (the existing plant's functionalization) recognizing that the functional make-up of the system is stable over time. Table 6-5 shows the functionalization of the water system assets.

Table 6-5: Functionalized Water Asset Investment, Replacement Costs Less Depreciation

Functional Category	Replacement Cost Less Depreciation, 2021	Allocation
Supply	\$21,131,770	10.1%
Treatment	\$17,117,319	8.2%
Trans. & Distr.	\$145,889,316	69.6%
Storage	\$11,892,738	5.7%
Meter	\$2,986,694	1.4%
Customer	\$0	0.0%
G&A	\$2,368,439	1.1%
Public Fire	\$8,100,309	3.9%
Recycled Water	\$21,825	0.0%
Total	\$209,508,410	100.0%

6.2. Net Revenue Requirements

The costs to be allocated to the various customer classes consist of the total revenue requirement less income received from other sources (net revenue requirements). Table 6-6 shows the development of the costs that must be recovered through charges/rates for FY 2023. Raftelis calculated the revenue requirement using the FY 2023 projections of O&M expenses, net capital expenses, existing debt service, and self-insurance program funding as shown in Lines 1 – 4. Lines 6 – 8 show the other operating revenues. The adjustments in Lines 10 and 11 ensure the cost-of-service accounts for the annual cash balances and that the impending rate adjustment will take place six months into FY 2023. Line 13 shows the total revenue required from charges/rates, calculated by subtracting other operating revenue (Line 9) and adjustments (Line 12) from the Total Revenue Requirements subtotal (Line 5). The net revenue requirements tables for FY 2024 – FY 2027 are in Appendix A.

Table 6-6: Net Revenue Requirements, FY 2023

No. Line Item	Operating	Capital-Related	Total
Total Revenue Requirements			
1 O&M	\$30,404,402		\$30,404,402
2 Total Debt Service		\$6,797,700	\$6,797,700
3 Cash Funded Capital		\$0	\$0
4 Self-insurance Funding	\$12,000,000		\$12,000,000
5 Subtotal	\$42,404,402	\$6,797,700	\$49,202,102
Less Other Operating Revenue			
6 Misc. Revenues	\$383,424		\$383,424
7 Pension/OPEB	\$0		\$0
8 Interest Income	\$406,369		\$406,369
9 Subtotal	\$789,793	\$0	\$789,793
Less Adjustments			
10 Change in Funds Available (1)	\$5,332,231		\$5,332,231
11 Annualized Rate Adjustment	-\$1,656,926		-\$1,656,926
12 Subtotal	\$3,675,305	\$0	\$3,675,305
13 Costs to be Recovered from Rates	\$37,939,304	\$6,797,700	\$44,737,004

(1) A positive amount indicates a drawdown of the available operating fund balance to cover expenses. A negative amount indicates an addition to the balance, which is an increase to the costs to be recovered from rate-based revenue.

The net revenue requirements are then allocated to the functional categories accounting for an additional adjustment to collect a portion of net revenue requirements via a capital charge collected through the Orange County Treasurer-Tax Collector's office. Table 6-7 shows the net revenue requirements in FY 2023 allocated to the functional buckets shown above as well as to the capital charge. The costs to be recovered through the capital charge are first assigned to capital-related costs. Any remaining amount of the charge is then taken from net O&M costs excluding recycled water. The resulting amount (total less recovered through the capital charge) is allocated to the remaining functional categories based on the percent allocations shown in Table 6-4 for net O&M costs and Table 6-5 for net capital-related costs. The net revenue requirements allocation for FY 2024 – FY 2027 are shown in Appendix A.

Table 6-7: Net Revenue Requirements Allocation to Functional Categories, FY 2023

Functional Category	Net O&M less Recycled Water	Recycled Water	Capital-Related	Net Revenue Requirements
Supply	\$14,920,942		\$183,758	\$15,104,700
Treatment	\$2,209,804		\$148,849	\$2,358,653
T&D	\$4,906,024		\$1,268,628	\$6,174,652
Storage	\$403,541		\$103,417	\$506,958
Meter	\$41,031		\$25,972	\$67,003
Customer	\$1,661,511		\$0	\$1,661,511
G&A	\$11,917,314		\$20,596	\$11,937,909
Public Fire	\$341,656		\$70,439	\$412,095
Recycled Water	\$0	\$1,537,482	\$190	\$1,537,672
Capital Charge	\$0		\$4,975,851	\$4,975,851
Total	\$36,401,822	\$1,537,482	\$6,797,700	\$44,737,004

6.3. Allocation to Cost Components

The next step is to allocate the net revenue requirement in the functional categories to cost-causation components.

Table 6-8 shows the allocation of functions to cost-causation components. The percentages shown are used to allocate the functionalized costs to each cost-causation component. The allocation basis is selected based on the type of cost for each line item and the proportion of those costs associated with each cost-causation component (e.g., general, customer, etc.). Certain cost bases are identical to the cost-causation components, such as Meter, and are easily allocated to the cost component with the same name. The corresponding tables for FY 2024 – FY 2027 are shown in Appendix A.

Table 6-9 shows the distribution of Mesa Water's FY 2023 net O&M expenses to the cost-causation components based on the allocations shown in Table 6-8. The Total line shows the result of the allocation of all O&M expenses to the cost-causation components and the total matches the sum of "Net O&M less Recycled Water" plus "Recycled Water" from Table 6-7. The corresponding tables for FY 2024 – FY 2027 are shown in Appendix A.

Net capital-related functional costs are allocated to the same cost components as the O&M expenses. Table 6-10 summarizes the allocation of Mesa Water's capital-related net revenue requirements to the cost-causation components for FY 2023. The corresponding tables for FY 2024 – FY 2027 are shown in Appendix A.

Table 6-11 summarizes the total allocations for net O&M and net Capital-related costs for each fiscal year.

Table 6-8: Allocation of Functions to Cost Components, FY 2023

Functions	Allocation Basis	Total	Volume	Bills	Meter	Public Fire	Recycled Water	Capital Charge
Supply	Volume	100%	100.0%					
Treatment	Volume	100%	100.0%					
T&D	Volume	100%	100.0%					
Storage	Volume	100%	100.0%					
Meter	Meter	100%			100.0%	0.0%		
Customer	Customer	100%		100.0%	0.0%			
G&A	Note 1	100%	91.9%	6.3%	0.3%	1.6%		
Direct Fire	Public Fire	100%				100.0%		
Recycled Water	Recycled Water	100%					100.0%	
Capital Charge	Capital Charge	100%						100.0%

(1) As all other costs except recycled water and capital charge

Table 6-9: Allocation of Net O&M Expenses to Cost-Causation Components, FY 2023

Functions	Allocation Basis	Net Rev. Req.	Volume	Bills	Equivalent Meters	Public Fire	Recycled Water	Capital Charge
Supply	Volume	\$14,920,942	\$14,920,942	\$0	\$0	\$0	\$0	\$0
Treatment	Volume	\$2,209,804	\$2,209,804	\$0	\$0	\$0	\$0	\$0
T&D	Volume	\$4,906,024	\$4,906,024	\$0	\$0	\$0	\$0	\$0
Storage	Volume	\$403,541	\$403,541	\$0	\$0	\$0	\$0	\$0
Meter	Meter	\$41,031	\$0	\$0	\$41,031	\$0	\$0	\$0
Customer	Customer	\$1,661,511	\$0	\$1,661,511	\$0	\$0	\$0	\$0
G&A	Note 1	\$11,917,314	\$10,946,808	\$753,293	\$30,378	\$186,835	\$0	\$0
Direct Fire	Public Fire	\$341,656	\$0	\$0	\$0	\$341,656	\$0	\$0
Recycled Water	Recycled Water	\$1,537,482	\$0	\$0	\$0	\$0	\$1,537,482	\$0
Capital Charge	Capital Charge	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total		\$37,939,304	\$33,387,118	\$2,414,804	\$71,408	\$528,491	\$1,537,482	\$0

(1) As all other costs except recycled water and capital charge.

Table 6-10: Allocation of Net Capital to Cost-Causations Components, FY 2023

Functions	Allocation Basis	Net Rev. Req.	Volume	Bills	Equivalent Meters	Public Fire	Recycled Water	Capital Charge
Supply	Volume	\$183,758	\$183,758	\$0	\$0	\$0	\$0	\$0
Treatment	Volume	\$148,849	\$148,849	\$0	\$0	\$0	\$0	\$0
T&D	Volume	\$1,268,628	\$1,268,628	\$0	\$0	\$0	\$0	\$0
Storage	Volume	\$103,417	\$103,417	\$0	\$0	\$0	\$0	\$0
Meter	Meter	\$25,972	\$0	\$0	\$25,972	\$0	\$0	\$0
Customer	Customer	\$0	\$0	\$0	\$0	\$0	\$0	\$0
G&A	Note 1	\$20,596	\$18,918	\$1,302	\$52	\$323	\$0	\$0
Direct Fire	Public Fire	\$70,439	\$0	\$0	\$0	\$70,439	\$0	\$0
Recycled Water	Recycled Water	\$190	\$0	\$0	\$0	\$0	\$190	\$0
Capital Charge	Capital Charge	\$4,975,851	\$0	\$0	\$0	\$0	\$0	\$4,975,851
Total		\$6,797,700	\$1,723,571	\$1,302	\$26,024	\$70,762	\$190	\$4,975,851

(1) As all other costs except recycled water and capital charge.

Table 6-11: Summary of Allocations to Cost-Causation Components by Fiscal Year

Fiscal Year	Net Rev. Req.	Volume	Bills	Equivalent Meters	Public Fire	Recycled Water	Capital Charge
Net O&M							
FY 2023	\$37,939,304	\$33,387,118	\$2,414,804	\$71,408	\$528,491	\$1,537,482	\$0
FY 2024	\$41,630,163	\$35,527,093	\$2,623,076	\$62,693	\$521,974	\$1,613,037	\$1,282,290
FY 2025	\$44,175,859	\$36,338,270	\$2,631,672	\$60,874	\$506,777	\$1,690,664	\$2,947,602
FY 2026	\$44,579,945	\$37,139,812	\$2,632,506	\$58,933	\$490,564	\$1,774,486	\$2,483,644
FY 2027	\$48,537,239	\$37,981,912	\$2,654,431	\$57,510	\$478,666	\$1,861,324	\$5,503,395
Net Capital-Related							
FY 2023	\$6,797,700	\$1,723,571	\$1,302	\$26,024	\$70,762	\$190	\$4,975,851
FY 2024	\$6,848,450	\$0	\$0	\$0	\$0	\$0	\$6,848,450
FY 2025	\$6,898,200	\$0	\$0	\$0	\$0	\$0	\$6,898,200
FY 2026	\$9,228,683	\$0	\$0	\$0	\$0	\$0	\$9,228,683
FY 2027	\$8,152,546	\$0	\$0	\$0	\$0	\$0	\$8,152,546

6.4. Units-of-Service

Since the responsibility for recovering the cost-of-service depends on the total units served by each cost center, the units-of-service are developed for each customer class. The following units are used for the cost-causative components.

- Volume (annual ccf)
- Bills (annual number of bills)
- Equivalent Meters (number of equivalent meters)
- Hydrants and Equivalent fire connections (number of hydrants or connections)

For example, base costs vary with the volume of water. Therefore, the unit cost for the volume cost-center is the total volume cost divided by the total volume served. Similar determinations of the units associated for equivalent meters are made for each of the customer classes.

The number of potable and recycled meters as well as average day usage are discussed in Section 5. Development of equivalent meters and equivalent fire connections is discussed below.

6.4.1. EQUIVALENT METERS

The concept of equivalent meters needs to be understood to allocate meter-related costs appropriately. By using equivalent meters instead of a total meter count, the analysis accounts for the fact that larger meters impose greater demands on the system and are also more expensive to install, maintain, and replace than smaller meters. Equivalent meters are used in calculating meter service costs.

Equivalent meters are based on meter hydraulic capacity. Equivalent meters represent the potential demand on the water system in terms of the base meter size. A ratio of hydraulic capacity is calculated by dividing large meter capacities by the base meter capacity. The capacity ratio is calculated using the meter capacity in gallons per minute (gpm) provided in the AWWA M1 Manual *Principles of Water Rates, Fees, and Charges* (7th Edition), as shown in Table 6-12.

Table 6-12: AWWA Capacity Ratio

Meter Size	Capacity (gpm)	AWWA Ratio
5/8"	20	1.00
3/4"	30	1.50
1"	50	2.50
1.5"	100	5.00
2"	160	8.00
3"	350	17.50
4"	630	31.50
6"	1,400	70.00
8"	2,400	120.00
10"	3,800	190.00

The base meter is the most common, smallest meter, in this case, a 5/8-inch meter. The capacity ratio is proportional to the potential flow through each meter size. For example, the flow through a 4-inch meter is 31.50 times that of a 5/8-inch meter, and therefore, the *meter capacity* component of the basic meter charge should be 31.50 times that of the 5/8-inch meter. Table 6-13 shows the total equivalent potable water meters (Column D) and equivalent recycled water meters (Column F), calculated by taking the number of meters by size (Column C or Column E) and multiplying by the corresponding capacity ratio (Column B). These equivalent meter totals

(Column D and Column F) are used as the denominator in developing unit costs for the components of the basic charge.

Table 6-13: Equivalent Water Meters

Meter Size	Capacity Ratio	Total Potable Meters	Equivalent Potable Meters	Total Recycle Meters	Equivalent Recycle Meters
(A)	(B)	(C)	(D)	(E)	(F)
5/8"	1.00	16,847	16,847	0	0
3/4"	1.50	2,178	3,267	0	0
1"	2.50	3,051	7,628	7	18
1.5"	5.00	913	4,565	1	5
2"	8.00	1,075	8,600	18	144
3"	17.50	55	963	5	88
4"	31.50	34	1,071	5	158
6"	70.00	17	1,190	3	210
8"	120.00	10	1,200	1	120
10"	190.00	0	0	0	0
Total		24,180	45,330	40	742

6.4.2.ALLOCATION OF PRIVATE FIRELINE COSTS

Water systems provide two types of fire protection: 1) private fire protection that provides dedicated fire flow to buildings and other structure-type sprinkler systems for fire suppression within private improvements, and 2) public fire protection for firefighting, generally in the form of hydrants on the street. Mesa Water's system is designed to provide fire flow to customers with private fire connections. Raftelis uses, as recommended in the AWWA M1 Manual, the potential flow of private fire lines and public hydrants to determine the share of total fire costs responsible for each.

Table 6-14 shows the equivalent potential demand from public fire hydrants and private fire lines. The Hazen-Williams equation is used to calculate the relative flow capacity by raising the pipeline's diameter to the power of 2.63⁵. Different fire connection sizes have a different fire flow demand factor like the hydraulic capacity factor of a water meter⁶. Since hydrants are typically on a 6-inch line, the equivalent hydrant ratio is determined based on the 6-inch line. The public fire hydrants and private fireline connections by size are each multiplied by the equivalent hydrant ratio to derive total equivalent connections.

⁵ Hazen-Williams equation via AWWA M1 Manual

⁶ Total demand for fire connections is based on line diameter and will vary from potable demand, based on meter size.

Table 6-14: Equivalent Hydrants and Private Fire Connections

Fire Line Size	Relative Flow		Public Fire Hydrants	Private Fire Connections
	Capacity Factor (1)	Equivalent Hydrant Ratio		
1"	1.0	0.01		13
1.5"	2.9	0.03		0
2"	6.2	0.06		62
3"	18.0	0.16		13
4"	38.3	0.34		109
6"	111.3	1.00	3,438	279
8"	237.2	2.13		155
10"	426.6	3.83		23
Total			3,438	654
Equivalent Hydrant Ratio x No. of Hydrants or Connections			3,438	741

(1) Equivalent flow basis per the Continuity Equation where flow equals pipe area times

velocity ($Q = A \times V$). Velocity is set based on the Hazen-Williams Equation

($V = 1.318 \times C \times R^{0.63} \times S^{0.54}$) where the hydraulic radius (R) is equal to the pipe area divided by its wetted perimeter, which reduces to the pipe diameter divided by 4. Since the coefficient (C), head loss (S), and all coefficients cancel out in the equation when used in a ratio with another pipe, the Continuity Equation results in the ratio of different pipe diameters to the 2.63 power.

6.5. Unit Cost-of-Service Derivation

The end goal of a cost-of-service analysis is to distribute the revenue requirement to each customer class. Raftelis calculated unit costs for every cost component by assessing the total water demand, meter count (number of accounts/bills), or equivalent service units. Table 6-15 shows the derivation of the unit cost for FY 2023. The equivalent meters from Table 6-13 are summarized in the “Equivalent Meters” column. The FY 2024 – FY 2027 units-of-service are shown in Appendix A.

Table 6-15: Derivation of Cost-Causation Components Units-of-Service, FY 2023

Customer Class	Equivalent		Annual Use	Fire Protection
	Acts No.	Bills No.		
Potable Water & Construction	24,180	146,010	45,330	6,553,490
Private Fire Protection	654	4,248		
Public Fire Protection				3,438
Total Potable Water	24,834	150,258	45,330	6,553,490
Recycled Water	40	240	742	481,338
Total Water	24,874	150,498	46,072	7,034,828

These units of service are divided into the net revenue requirements to determine the unit costs-of-service, which is shown at the bottom of Table 6-16 for FY 2023. The “Net Operating” line matches the total from Table 6-9 and the “Capital-Related” line matches the total from Table 6-10. The FY 2024 – FY 2027 unit costs-of-service are shown in Appendix A.

Table 6-16: Unit Costs-of-Service, FY 2023

Line Item	Total	Volume	Bills	Equivalent Meters	Public Fire	Recycled Water	Capital Charge
		ccf	No.	Equiv. Mtrs	Hydrants	ccf	Potable Eq. Mtr.
Units of Service		6,553,490	150,498	46,072	3,438	481,338	45,330
Net Operating, \$	\$37,939,304	\$33,387,118	\$2,414,804	\$71,408	\$528,491	\$1,537,482	\$0
Capital-Related, \$	\$6,797,700	\$1,723,571	\$1,302	\$26,024	\$70,762	\$190	\$4,975,851
Total	\$44,737,004	\$35,110,690	\$2,416,106	\$97,433	\$599,253	\$1,537,672	\$4,975,851
Unit Cost, \$/unit		\$5.36	\$16.05	\$2.11	\$174.30	\$3.19	\$109.77

These resulting unit costs-of-service can be applied to each customer class' demand on the system to determine each class' share of the cost-of-service, which is shown on Table 6-17. The units-of-service from the last row of Table 6-16 are repeated in the top row of Table 6-17. These unit costs are applied to the units-of-service associated with each customer class (Table 6-15) to derive the total costs associated with serving each class. The FY 2024 – FY 2027 allocation of unit costs-of-service are shown in Appendix A.

Fire protection (both public and private fireline) make up a part of the volumetric component, as shown in Table 6-17. The derivation of the fire-related volumetric-capacity component costs for public and private fireline service are shown in Appendix B.

Table 6-17: Allocation of Unit Costs-of-Service to Customer Classes

Line Item	Total	Volume/ Capacity	Bills	Equivalent Meters	Public Fire	Recycled Water	Capital Charge
		ccf	No.	Equiv. Mtrs	Hydrants	ccf	Potable Eq. Mtr.
Unit Cost of Service		\$5.36	\$16.05	\$2.11	\$174.30	\$3.19	\$109.77
Potable Water/Construction							
Units		6,553,490	146,010	45,330			
Costs	\$34,311,084	\$31,871,164	\$2,344,056	\$95,865			
Private Fire							
Units			4,248				
Costs (1)	\$642,386	\$574,188	\$68,198				
Public Fire							
Units					3,438		
Costs (1)	\$3,264,590	\$2,665,337			\$599,253		
Recycled Water							
Units			240	742		481,338	
Costs	\$1,543,093		\$3,853	\$1,568		\$1,537,672	
Capital Charge							
Units							45,330
Costs	\$4,975,851						\$4,975,851
Total	\$44,737,004	\$35,110,690	\$2,416,106	\$97,433	\$599,253	\$1,537,672	\$4,975,851

(1) Capacity component of fire costs are derived in Appendix B.

6.6. Final Allocation of Revenue Requirement to Cost Components

The cost-of-service analysis can now be completed by making the final adjustments shown in Table 6-18. A reallocation is made to account for the (public and private) fire protection portion of capacity that would be collected from potable water customers through the Orange County Treasurer-Tax Collector's office if this adjustment were not made. This adjustment is determined by evaluating fire protection's portion of capacity if a portion of costs were not collected through the Orange County Treasurer-Tax Collector's office. This is discussed in Appendix C. Additionally, public fire costs are redistributed proportionally to potable and recycled water customers for collection as part of the basic charge because these customers benefit from, and are the reason for, fire protection costs. Table 6-18 also shows that the projected FY 2023 cost-of-service is 8 percent higher than revenue under existing charges/rates, which is consistent with the financial plan revenue adjustment for FY 2023. The final cost-of-service allocation and comparison to revenue under existing charges/rates for FY 2024 – FY 2027 is shown in Appendix A.

Table 6-18: Final Cost-of-Service Allocation to Customer Classes and Comparison to Revenue Under Existing Charges/Rates, FY 2023

Customer Class	Proposed COS	Reallocation of Capital Charge Fire Capacity to Fire	Reallocation of Public Fire Protection	Adjusted COS	Revenue Under Existing Rates	Rev. Inc. (Decr.) from COS
Potable Water/Construction	\$34,311,084	\$0	\$3,475,845	\$37,786,930	\$39,137,116	-3.4%
Recycled Water	\$1,543,093	\$0	\$156,321	\$1,699,414	\$1,617,138	5.1%
Private Fire Protection	\$642,386	\$79,186	\$0	\$721,572	\$668,898	7.9%
Public Fire Protection	\$3,264,590	\$367,576	-\$3,632,167	\$0	\$0	--
Capital Charge	\$4,975,851	-\$446,763	\$0	\$4,529,088	--	--
Total	\$44,737,004	\$0	\$0	\$44,737,004	\$41,423,152	8.0%

7. Proposed Water Rates and Charges

This section calculates water charges and rates based on the cost-of-service analysis (Section 6). The charges and rates developed in this section may, in some cases, be referred to as the cost-of-service rates.

7.1. Basic Service Charge

Raftelis proposes that Mesa Water retain its bi-monthly and monthly water basic service charge on the basis of meter size for potable and recycled water service. Three cost components comprise the total proposed basic service charge:

1. Customer Billing
2. Meter Service
3. Public Fire

The Customer Billing component recovers costs associated with meter reading, customer billing, as well as customer service costs. These costs are the same for all meter sizes as reviews have demonstrated that it costs Mesa Water the same level of costs and resources to provide billing and customer services to any account, regardless of meter size. The Meter Service cost component recognizes the fact that Mesa Water incurs fixed costs related to maintaining/replacing meters. These costs generally increase with meter size increases, as it takes less time and resources to repair and maintain a smaller meter compared to a larger meter. Public Fire costs that were reallocated to potable and recycled water customers are recovered through the basic charge and also recognize that properties with larger meters generally have larger fire-fighting requirements.

Table 7-1 shows the derivation of the monthly and bi-monthly basic service charge for FY 2023. As discussed in Section 6, the 5/8-inch meter is the base meter size. Therefore, the unit rates shown for the 5/8-inch meter match the unit rates shown for “Bills” and “Equivalent Meters” from Table 6-16. The 5/8-inch public fire charge equals the total public fire costs from Table 6-17 divided by the total number of “Equivalent Meters” shown in Table 6-16. The meter and public fire components of the basic charge for the other meter sizes are calculated by multiplying the 5/8-inch unit rate by the capacity ratios shown in Table 6-13, Column B. The total basic charge is the sum of the billing component plus the quotient resulting from the sum of the annual meter and public fire components divided by the number of billing periods per year (6 for bi-monthly and 12 for monthly). The derivation of the basic charges for FY 2024 – FY 2027 are shown in Appendix A.

Table 7-1: Derivation of Monthly and Bi-Monthly Basic Charge, FY 2023

Meter Size	Billing \$/bill	Meter \$/mtr/yr	Public Fire \$/mtr/yr	Total \$/bi-mo	Total \$/mo
5/8-inch	\$16.05	\$2.11	\$78.84	\$29.55	\$22.81
3/4-inch	\$16.05	\$3.17	\$118.26	\$36.30	\$26.18
1-inch	\$16.05	\$5.29	\$197.09	\$49.79	\$32.92
1 1/2-inch	\$16.05	\$10.57	\$394.19	\$83.52	\$49.79
2-inch	\$16.05	\$16.92	\$630.70	\$124.00	\$70.03
3-inch	\$16.05	\$37.01	\$1,379.66	\$252.17	\$134.11
4-inch	\$16.05	\$66.62	\$2,483.38	\$441.06	\$228.56
6-inch	\$16.05	\$148.04	\$5,518.63	\$960.50	\$488.28
8-inch	\$16.05	\$253.78	\$9,460.51	\$1,635.11	\$825.58
10-inch	\$16.05	\$401.82	\$14,979.14	\$2,579.55	\$1,297.81

Table 7-2 presents the January 1, 2022, previously approved basic charges and the proposed basic charges for potable and recycled water customers for FY 2023 – FY 2027. The proposed charges are rounded up to the nearest cent.

Table 7-2: Adopted and Proposed (FY 2023 – FY 2027) Basic Charges

Proposed Rates	Fiscal Year					
	2022	2023	2024	2025	2026	2027
Effective Date	Jan 2022	Jan 2023	Jan 2024	Jan 2025	Jan 2026	Jan 2027
Bi-Monthly Potable Water & Recycled Water Basic Charge						
Meter Size						
5/8-inch	\$30.03	\$29.55	\$30.99	\$31.54	\$32.16	\$32.83
3/4-inch	\$45.36	\$36.30	\$37.77	\$38.57	\$39.50	\$40.42
1-inch	\$75.37	\$49.79	\$51.33	\$52.62	\$54.16	\$55.61
1 1/2-inch	\$151.36	\$83.52	\$85.23	\$87.76	\$90.83	\$93.57
2-inch	\$242.04	\$124.00	\$125.91	\$129.92	\$134.83	\$139.13
3-inch	\$529.38	\$252.17	\$254.72	\$263.42	\$274.15	\$283.40
4-inch	\$953.36	\$441.06	\$444.55	\$460.16	\$479.48	\$496.00
6-inch	\$2,119.97	\$960.50	\$966.58	\$1,001.20	\$1,044.12	\$1,080.67
8-inch	\$3,626.88	\$1,635.11	\$1,644.55	\$1,703.85	\$1,777.42	\$1,839.97
10-inch	\$5,746.80	\$2,579.55	\$2,593.70	\$2,687.56	\$2,804.04	\$2,902.99
Monthly Potable Water & Recycled Water Basic Charge						
Meter Size						
5/8-inch	\$15.02	\$22.81	\$24.21	\$24.52	\$24.83	\$25.24
3/4-inch	\$22.68	\$26.18	\$27.60	\$28.03	\$28.50	\$29.03
1-inch	\$37.69	\$32.92	\$34.38	\$35.06	\$35.83	\$36.63
1 1/2-inch	\$75.68	\$49.79	\$51.33	\$52.62	\$54.16	\$55.61
2-inch	\$121.02	\$70.03	\$71.67	\$73.70	\$76.16	\$78.39
3-inch	\$264.69	\$134.11	\$136.08	\$140.46	\$145.82	\$150.52
4-inch	\$476.68	\$228.56	\$230.99	\$238.83	\$248.49	\$256.82
6-inch	\$1,059.99	\$488.28	\$492.01	\$509.35	\$530.81	\$549.15
8-inch	\$1,813.44	\$825.58	\$830.99	\$860.67	\$897.46	\$928.81
10-inch	\$2,873.40	\$1,297.81	\$1,305.57	\$1,352.53	\$1,410.77	\$1,460.32

7.2. Private Fireline Charges

Private fireline service charges are composed of two cost components: billing & customer service and the fire capacity costs components. The customer billing component recovers costs associated with meter reading and customer billing. These costs are the same for all meter sizes as it costs Mesa Water the same to provide billing and customer services to private fireline accounts, regardless of fire line service size. The fire capacity cost component recovers fixed costs related to reading, maintaining, and replacing fire meters. Meter maintenance costs generally increase with meter size, as it takes less time and resources to repair and maintain a smaller meter compared to a larger meter.

Table 7-3 shows the calculation of the total bi-monthly and monthly private fireline service charge for each private fire connection size. The total proposed private fireline service charge is calculated by combining the billing and firefighting capacity costs. The customer billing component (Table 6-16, Bills) applies uniformly to all private fire customers. Firefighting capacity costs are proportional to the potential flow through each private fireline service, (Table 6-14), with a 6-inch base service line size. The firefighting capacity unit cost at the 6-inch service line equals the adjusted private fireline service cost from Table 6-18 less the billing-related costs from Table 6-17. The unit cost for the other fireline service line sizes are determined by multiplying the 6-inch unit rate by the fireline service capacity ratios shown in Table 6-14. The bi-monthly and monthly charges are the capacity unit rate divided by the number of billing periods plus the billing cost (per bill). The derivation of the private fireline service charges for FY 2024 – FY 2027 are shown in Appendix A.

Table 7-3: Derivation of Private Fireline Charges

Fire Service Line Size	Billing \$/bill	Capacity \$/F.S. line	Fireline Services, Bi-monthly \$/bi-mo	Fireline Services, Monthly \$/mo
1-inch	16.05	\$7.93	\$17.38	\$16.72
1 1/2-inch	16.05	\$23.02	\$19.90	\$17.98
2-inch	16.05	\$49.06	\$24.24	\$20.15
3-inch	16.05	\$142.51	\$39.81	\$27.93
4-inch	16.05	\$303.69	\$66.67	\$41.37
6-inch	16.05	\$882.17	\$163.09	\$89.57
8-inch	16.05	\$1,879.94	\$329.38	\$172.72
10-inch	16.05	\$3,380.78	\$579.52	\$297.79

Table 7-4 presents the previously adopted January 1, 2022, fireline service charges and the proposed charges for FY 2023 – FY 2027.

Table 7-4: Adopted and Proposed (FY 2023 – FY 2027) Fireline Service Charges

Proposed Rates	2022	2023	2024	2025	2026	2027
Effective Date	Jan 2022	Jan 2023	Jan 2024	Jan 2025	Jan 2026	Jan 2027
Bi-Monthly Fireline Class I and II						
Fireline Service Size						
1-inch	\$8.30	\$17.38	\$18.81	\$18.94	\$19.02	\$19.24
1 1/2-inch	\$8.30	\$19.90	\$21.44	\$21.69	\$21.93	\$22.28
2-inch	\$8.30	\$24.24	\$25.96	\$26.43	\$26.95	\$27.51
3-inch	\$24.08	\$39.81	\$42.21	\$43.47	\$44.94	\$46.32
4-inch	\$51.29	\$66.67	\$70.23	\$72.85	\$75.98	\$78.75
6-inch	\$148.96	\$163.09	\$170.79	\$178.29	\$187.39	\$195.15
8-inch	\$317.40	\$329.38	\$344.25	\$360.16	\$379.55	\$395.92
10-inch	\$570.77	\$579.52	\$605.16	\$633.73	\$668.59	\$697.92
Monthly Fireline Class I and II						
Fireline Service Size						
1-inch	\$3.95	\$16.72	\$18.12	\$18.21	\$18.26	\$18.44
1 1/2-inch	\$3.95	\$17.98	\$19.44	\$19.59	\$19.71	\$19.96
2-inch	\$3.95	\$20.15	\$21.70	\$21.96	\$22.22	\$22.58
3-inch	\$11.47	\$27.93	\$29.82	\$30.48	\$31.22	\$31.98
4-inch	\$24.42	\$41.37	\$43.83	\$45.17	\$46.74	\$48.20
6-inch	\$70.93	\$89.57	\$94.11	\$97.89	\$102.44	\$106.40
8-inch	\$151.14	\$172.72	\$180.84	\$188.83	\$198.52	\$206.78
10-inch	\$271.80	\$297.79	\$311.30	\$325.61	\$343.05	\$357.78

Table 7-5 presents the projected revenues from basic and fireline charges using the charges shown above and in Appendix A and projections of meters and usage discussed earlier in this Report.

Table 7-5: Projected Revenues from Basic and Fireline Charges, FY 2023 – FY 2027

Estimated Basic & Fireline Rev.	Fiscal Year				
	2023	2024	2025	2026	2027
Potable Water & Fireline	\$6,735,914	\$6,988,552	\$7,164,452	\$7,372,666	\$7,570,198
Recycled Water	\$63,881	\$64,509	\$66,720	\$69,449	\$71,797
Total	\$6,799,795	\$7,053,062	\$7,231,172	\$7,442,115	\$7,641,995

7.3. Proposed Potable Water and Recycled Water Usage Rates (\$/ccf)

Mesa Water employs a uniform usage rate for both its potable water, construction, and fireline customers as well as recycled water customers. Table 7-6 shows the calculation of the applicable usage rates for potable water, construction, and fireline customers as well as recycled water customers. To ensure full cost recovery for both the potable water, construction, and fireline customers as well as for the recycled water customers, the total “Usage Cost Recovery” amount is first determined by subtracting the class-specific “Basic/Fireline Services Cost

Recovery” from the cost-of-service for each customer class⁷. The total unit rate for each class is the respective quotient of the “Usage Cost Recovery” and “Annual Usage” for each customer class. The calculation of usage rates for FY 2024 – FY 2027 is shown in Appendix A.

Table 7-6: Calculation of Usage Rate, FY 2023

	Cost-of-Service \$	Basic/ Fireline Cost Recovery \$	Usage Cost Recovery \$	Annual Usage ccf	Total \$/ccf
Potable Water, Construction & Fireline	\$38,508,502	\$6,735,914	\$31,772,588	6,553,490	\$4.85
Recycled Water	\$1,699,414	\$63,881	\$1,635,534	481,338	\$3.40

Table 7-7 presents the January 1, 2022, previously approved usage rates and the proposed usage rates for potable/construction/fireline customers and recycled water customers for FY 2023 – FY 2027. The proposed usage rates are rounded up to the nearest cent.

Table 7-7: Adopted and Proposed (FY 2023 – FY 2027) Usage Rates, \$/ccf

Proposed Rates	Fiscal Year					
	2022	2023	2024	2025	2026	2027
Effective Date	Jan 2022	Jan 2023	Jan 2024	Jan 2025	Jan 2026	Jan 2027
Potable Water	\$4.72	\$4.85	\$4.91	\$5.01	\$5.10	\$5.19
Construction	\$5.21	\$4.85	\$4.91	\$5.01	\$5.10	\$5.19
Fireline Water	\$5.21	\$4.85	\$4.91	\$5.01	\$5.10	\$5.19
Recycled Water	\$3.08	\$3.40	\$3.56	\$3.72	\$3.89	\$4.07

7.4. Capital Charge

Raftelis estimated the annual capital charge for each of the study period years, as shown in Table 7-8. The unit rate for the 5/8-inch meter in FY 2023 is the “Adjusted COS” for the “Capital Charge” in Table 6-18 divided by the equivalent potable water meters, rounded up to the nearest cent. This capital charge is for each meter and presumes a direct correlation between parcels on the tax record and metered potable water accounts. Certain parcels may have several meters and would be billed accordingly. The charges for other meter sizes are determined using the capacity ratio from Table 6-13, Column B.

⁷ The “Potable Water, Construction, & Fireline” COS in Table 7-8 is the sum of the “Adjusted COS” for “Potable Water & Construction” and “Private Fire” shown in Table 6-18. The “Recycled Water” COS value matches the “Recycled Water” “Adjusted COS” in Table 6-18.

Table 7-8: Estimated Annual Capital Charge, FY 2023 – FY 2027

Proposed Rates	2022	2023	2024	2025	2026	2027
Effective Date	Jan 2022	Jan 2023	Jan 2024	Jan 2025	Jan 2026	Jan 2027
Potable Water Meter Size						
5/8-inch	\$0.00	\$99.92	\$163.45	\$198.13	\$235.17	\$274.93
3/4-inch	\$0.00	\$149.88	\$245.17	\$297.20	\$352.76	\$412.39
1-inch	\$0.00	\$249.79	\$408.61	\$495.33	\$587.92	\$687.31
1 1/2-inch	\$0.00	\$499.57	\$817.21	\$990.65	\$1,175.84	\$1,374.61
2-inch	\$0.00	\$799.31	\$1,307.54	\$1,585.04	\$1,881.35	\$2,199.37
3-inch	\$0.00	\$1,748.49	\$2,860.23	\$3,467.27	\$4,115.44	\$4,811.11
4-inch	\$0.00	\$3,147.29	\$5,148.40	\$6,241.08	\$7,407.79	\$8,659.99
6-inch	\$0.00	\$6,993.96	\$11,440.89	\$13,869.06	\$16,461.75	\$19,244.41
8-inch	\$0.00	\$11,989.65	\$19,612.96	\$23,775.53	\$28,220.13	\$32,990.42
10-inch	\$0.00	\$18,983.61	\$31,053.84	\$37,644.58	\$44,681.87	\$52,234.83

7.5. Projected Revenues Under Cost-of-Service Charges/Rates

Table 7-9 shows the projected revenues based on the projected number of bills, water usage, and charges/rates. This is compared against the projected cost-of-service. The summary and comparison tables for FY 2024 – FY 2027 are shown in Appendix A.

Table 7-9: Projected Revenues Under Cost-of-Service Charges/Rates, FY 2023

	Basic/ Standby Charges	Usage Revenue	Total Revenue	Cost-of- Service	Rev. as Percent of Cost-of- Service
Potable Water, Construction & Fireline	\$6,735,914	\$31,794,437	\$38,530,351	\$38,508,502	100.1%
Recycled Water	\$63,881	\$1,636,549	\$1,700,430	\$1,699,414	100.1%
Capital Charge			\$4,529,374	\$4,529,088	100.0%
Total	\$6,799,795	\$33,430,986	\$44,760,154	\$44,737,004	100.1%

7.6. Customer Impact Analysis

Table 7-10 illustrates the customer bill impact for an average residential water service customer with a 5/8" meter using an average of 24 ccf in a bi-monthly billing period (60 days). The table shows the sample bill both with and without the capital charge. Current customer bills are shown for the previously approved service charges/rates for January 1, 2022, and for the proposed service charges/rates for FY 2023 – FY 2027, each with effective dates of January 1. The Total Water Bill represents an annual average increase of 1.9 percent per year, though year-to-year increases may vary slightly from that annual average.

Table 7-10: Average Single-Family Customer, Bi-Monthly Bill Impact

	Jan. 1, 2022	Jan. 1, 2023	Jan. 1, 2024	Jan. 1, 2025	Jan. 1, 2026	Jan. 1, 2027
Bi-monthly Basic Charge: 5/8"	\$30.03	\$29.55	\$30.99	\$31.54	\$32.16	\$32.83
Capital Charge, 5/8" (\$/bi-mo)	\$0.00	\$16.65	\$27.24	\$33.02	\$39.20	\$45.82
Usage Charge (ccf): 24	\$113.28	\$116.40	\$117.84	\$120.00	\$122.40	\$124.56
Total Water Bill + Capital Charge	\$143.31	\$162.60	\$176.07	\$184.56	\$193.76	\$203.21
Total Water Bill	\$143.31	\$145.95	\$148.83	\$151.54	\$154.56	\$157.39

APPENDIX A:

**Detailed Tables for
FY 2024 – FY 2027**

Functionalization of O&M Expenses, Tables for FY 2024 – FY 2027

Functionalization of O&M Expenses, FY 2024											
Line Item	FY 2023	Supply	Treatment	T&D	Storage	Meter	Customer	G&A	Public Fire	Recycled Water	Total
Other General & Admin	\$8,877,907							97.0%		3.0%	100.0%
Engineering	\$692,997	1.0%		90.6%	5.0%	0.4%				3.0%	100.0%
Customer Service	\$1,162,813						80.0%	20.0%			100.0%
Water Operations											
Payroll	\$4,666,840	15.4%	10.2%	32.0%	5.0%	0.4%	9.2%	18.8%	4.0%	5.0%	100.0%
Non-payroll	\$2,069,346			91.3%	3.0%	0.4%			4.0%	1.2%	100.0%
Imported/Basin Managed Water Expenses	\$0										
Imported Water Fixed Costs	\$487,445	100.0%									100.0%
Imported Water Variable Costs	\$0	100.0%									100.0%
Basin Managed Water	\$0	100.0%									100.0%
Chemicals and Treatment	\$0		100.0%								100.0%
Utilities - Imported	\$1,071	100.0%									100.0%
Labor Import	\$0	100.0%									100.0%
Parts and Materials - Import	\$10,506	100.0%									100.0%
Support Services - Import	\$18,596	100.0%									100.0%
In-Lieu Water	\$0	100.0%	0.0%								100.0%
Clear Water Expenses	\$0										
Chemicals - Clear	\$193,100		100.0%								100.0%
Basin Replenishment Assessment - Clear	\$7,541,801	100.0%									100.0%
Well Land Leases - Clear	\$0	100.0%									100.0%
BEA (Rebilled to Segerstrom)	\$0	100.0%									100.0%
Utilities - Clear	\$1,171,545	100.0%									100.0%
Labor Clear	\$94,556	100.0%									100.0%
Parts and Materials - Clear	\$84,050	100.0%									100.0%
Support Services - Clear	\$226,379	75.0%	25.0%								100.0%
Amber Water Expenses	\$0										
Chemicals - Amber	\$298,314		100.0%								100.0%
Basin Replenishment Assessment - Amber	\$1,655,517	100.0%									100.0%
Utilities - Amber	\$715,433	50.0%	50.0%								100.0%
Labor Amber	\$31,519	25.0%	75.0%								100.0%
Parts and Materials - Amber	\$105,063	20.0%	80.0%								100.0%
Support Services - Amber	\$240,073	10.0%	90.0%								100.0%
Recycled Water Costs	\$1,107,268									100.0%	100.0%
Total	\$31,452,140	\$12,369,246	\$1,704,098	\$4,011,077	\$330,072	\$32,495	\$1,359,599	\$9,722,432	\$270,551	\$1,652,570	
Allocation	100%	39.3%	5.4%	12.8%	1.0%	0.1%	4.3%	30.9%	0.9%	5.3%	

Functionalization of O&M Expenses, FY 2025

Line Item	FY 2023	Supply	Treatment	T&D	Storage	Meter	Customer	G&A	Public Fire	Recycled Water	Total
Other General & Admin	\$9,141,695							97.0%		3.0%	100.0%
Engineering	\$715,959	1.0%		90.6%	5.0%	0.4%				3.0%	100.0%
Customer Service	\$1,200,731						80.0%	20.0%			100.0%
Water Operations											
Payroll	\$4,830,179	15.4%	10.2%	32.1%	5.0%	0.4%	9.2%	18.8%	3.9%	5.0%	100.0%
Non-payroll	\$2,121,079			91.5%	3.0%	0.4%			3.9%	1.2%	100.0%
Imported/Basin Managed Water Expenses	\$0										
Imported Water Fixed Costs	\$504,505	100.0%									100.0%
Imported Water Variable Costs	\$0	100.0%									100.0%
Basin Managed Water	\$0	100.0%									100.0%
Chemicals and Treatment	\$0		100.0%								100.0%
Utilities - Imported	\$1,109	100.0%									100.0%
Labor Import	\$0	100.0%									100.0%
Parts and Materials - Import	\$10,769	100.0%									100.0%
Support Services - Import	\$19,061	100.0%									100.0%
In-Lieu Water	\$0	100.0%	0.0%								100.0%
Clear Water Expenses	\$0										
Chemicals - Clear	\$198,779		100.0%								100.0%
Basin Replenishment Assessment - Clear	\$8,096,130	100.0%									100.0%
Well Land Leases - Clear	\$0	100.0%									100.0%
BEA (Rebilled to Segerstrom)	\$0	100.0%									100.0%
Utilities - Clear	\$1,217,905	100.0%									100.0%
Labor Clear	\$96,920	100.0%									100.0%
Parts and Materials - Clear	\$86,151	100.0%									100.0%
Support Services - Clear	\$232,039	75.0%	25.0%								100.0%
Amber Water Expenses	\$0										
Chemicals - Amber	\$307,086		100.0%								100.0%
Basin Replenishment Assessment - Amber	\$1,777,199	100.0%									100.0%
Utilities - Amber	\$743,744	50.0%	50.0%								100.0%
Labor Amber	\$32,307	25.0%	75.0%								100.0%
Parts and Materials - Amber	\$107,689	20.0%	80.0%								100.0%
Support Services - Amber	\$246,075	10.0%	90.0%								100.0%
Recycled Water Costs	\$1,167,631									100.0%	100.0%
Total	\$32,854,744	\$13,158,949	\$1,758,825	\$4,141,067	\$340,939	\$32,499	\$1,404,961	\$10,016,630	\$270,551	\$1,730,323	
Allocation	100%	40.1%	5.4%	12.6%	1.0%	0.1%	4.3%	30.5%	0.8%	5.3%	

Functionalization of O&M Expenses, FY 2026

Line Item	FY 2023	Supply	Treatment	T&D	Storage	Meter	Customer	G&A	Public Fire	Recycled Water	Total
Other General & Admin	\$9,413,542							97.0%		3.0%	100.0%
Engineering	\$739,693	1.0%		90.6%	5.0%	0.4%				3.0%	100.0%
Customer Service	\$1,239,907						80.0%	20.0%			100.0%
Water Operations											
Payroll	\$4,999,236	15.4%	10.2%	32.3%	5.0%	0.4%	9.2%	18.8%	3.8%	5.0%	100.0%
Non-payroll	\$2,174,106			91.6%	3.0%	0.4%			3.8%	1.2%	100.0%
Imported/Basin Managed Water Expenses	\$0										
Imported Water Fixed Costs	\$522,163	100.0%									100.0%
Imported Water Variable Costs	\$0	100.0%									100.0%
Basin Managed Water	\$0	100.0%									100.0%
Chemicals and Treatment	\$0		100.0%								100.0%
Utilities - Imported	\$1,148	100.0%									100.0%
Labor Import	\$0	100.0%									100.0%
Parts and Materials - Import	\$11,038	100.0%									100.0%
Support Services - Import	\$19,537	100.0%									100.0%
In-Lieu Water	\$0	100.0%	0.0%								100.0%
Clear Water Expenses	\$0										
Chemicals - Clear	\$204,625		100.0%								100.0%
Basin Replenishment Assessment - Clear	\$8,722,285	100.0%									100.0%
Well Land Leases - Clear	\$0	100.0%									100.0%
BEA (Rebilled to Segerstrom)	\$0	100.0%									100.0%
Utilities - Clear	\$1,266,099	100.0%									100.0%
Labor Clear	\$99,343	100.0%									100.0%
Parts and Materials - Clear	\$88,305	100.0%									100.0%
Support Services - Clear	\$237,840	75.0%	25.0%								100.0%
Amber Water Expenses	\$0										
Chemicals - Amber	\$316,117		100.0%								100.0%
Basin Replenishment Assessment - Amber	\$1,914,648	100.0%									100.0%
Utilities - Amber	\$773,175	50.0%	50.0%								100.0%
Labor Amber	\$33,114	25.0%	75.0%								100.0%
Parts and Materials - Amber	\$110,381	20.0%	80.0%								100.0%
Support Services - Amber	\$252,227	10.0%	90.0%								100.0%
Recycled Water Costs	\$1,231,285									100.0%	100.0%
Total	\$34,369,815	\$14,040,392	\$1,815,356	\$4,275,083	\$352,170	\$32,502	\$1,451,855	\$10,319,973	\$270,551	\$1,811,933	
Allocation	100%	40.9%	5.3%	12.4%	1.0%	0.1%	4.2%	30.0%	0.8%	5.3%	

Functionalization of O&M Expenses, FY 2027

Line Item	FY 2023	Supply	Treatment	T&D	Storage	Meter	Customer	G&A	Public Fire	Recycled Water	Total
Other General & Admin	\$9,693,700							97.0%		3.0%	100.0%
Engineering	\$764,225	1.0%		90.6%	5.0%	0.4%				3.0%	100.0%
Customer Service	\$1,280,383						80.0%	20.0%			100.0%
Water Operations											
Payroll	\$5,174,209	15.4%	10.2%	32.4%	5.0%	0.4%	9.2%	18.8%	3.7%	5.0%	100.0%
Non-payroll	\$2,228,459			91.7%	3.0%	0.4%			3.7%	1.2%	100.0%
Imported/Basin Managed Water Expenses	\$0										
Imported Water Fixed Costs	\$540,439	100.0%									100.0%
Imported Water Variable Costs	\$0	100.0%									100.0%
Basin Managed Water	\$0	100.0%									100.0%
Chemicals and Treatment	\$0		100.0%								100.0%
Utilities - Imported	\$1,188	100.0%									100.0%
Labor Import	\$0	100.0%									100.0%
Parts and Materials - Import	\$11,314	100.0%									100.0%
Support Services - Import	\$20,026	100.0%									100.0%
In-Lieu Water	\$0	100.0%	0.0%								100.0%
Clear Water Expenses	\$0										
Chemicals - Clear	\$210,642		100.0%								100.0%
Basin Replenishment Assessment - Clear	\$9,259,193	100.0%									100.0%
Well Land Leases - Clear	\$0	100.0%									100.0%
BEA (Rebilled to Segerstrom)	\$0	100.0%									100.0%
Utilities - Clear	\$1,316,201	100.0%									100.0%
Labor Clear	\$101,827	100.0%									100.0%
Parts and Materials - Clear	\$90,513	100.0%									100.0%
Support Services - Clear	\$243,786	75.0%	25.0%								100.0%
Amber Water Expenses	\$0										
Chemicals - Amber	\$325,413		100.0%								100.0%
Basin Replenishment Assessment - Amber	\$2,032,506	100.0%									100.0%
Utilities - Amber	\$803,771	50.0%	50.0%								100.0%
Labor Amber	\$33,942	25.0%	75.0%								100.0%
Parts and Materials - Amber	\$113,141	20.0%	80.0%								100.0%
Support Services - Amber	\$258,532	10.0%	90.0%								100.0%
Recycled Water Costs	\$1,298,408									100.0%	100.0%
Total	\$35,801,818	\$14,817,299	\$1,873,753	\$4,413,251	\$363,775	\$32,506	\$1,500,333	\$10,632,752	\$270,551	\$1,897,598	
Allocation	100%	41.4%	5.2%	12.3%	1.0%	0.1%	4.2%	29.7%	0.8%	5.3%	

Net Revenue Requirements, Tables for FY 2024 – FY 2027

Projected Net Revenue Requirement, FY 2024			
Line Item	Operating	Capital-Related	Total
Total Revenue Requirements			
O&M	\$31,452,140		\$31,452,140
Total Debt Service		\$6,848,450	\$6,848,450
Cash Funded Capital		\$0	\$0
Self-insurance Funding	\$11,987,500		\$11,987,500
Subtotal	\$43,439,640	\$6,848,450	\$50,288,090
Less Other Operating Revenue			
Misc. Revenues	\$387,010		\$387,010
Pension/OPEB	\$0		\$0
Interest Income	\$365,382		\$365,382
Subtotal	\$752,392	\$0	\$752,392
Less Adjustments			
Change in Funds Available (1)	\$2,852,590		\$2,852,590
Annualized Rate Adjustment	-\$1,795,504		-\$1,795,504
Subtotal	\$1,057,086	\$0	\$1,057,086
Costs to be Recovered from Rates	\$41,630,163	\$6,848,450	\$48,478,613

(1) A positive amount indicates a drawdown of the available operating fund balance to cover expenses. A negative amount indicates an addition to the balance, which is an increase to the costs to be recovered from rate-based revenue.

Projected Net Revenue Requirement, FY 2025

Line Item	Operating	Capital-Related	Total
Total Revenue Requirements			
O&M	\$32,854,744		\$32,854,744
Total Debt Service		\$6,898,200	\$6,898,200
Cash Funded Capital		\$0	\$0
Self-insurance Funding	\$12,220,000		\$12,220,000
Subtotal	\$45,074,744	\$6,898,200	\$51,972,944
Less Other Operating Revenue			
Misc. Revenues	\$390,631		\$390,631
Pension/OPEB	\$0		\$0
Interest Income	\$362,391		\$362,391
Subtotal	\$753,022	\$0	\$753,022
Less Adjustments			
Change in Funds Available (1)	\$1,361,912		\$1,361,912
Annualized Rate Adjustment	-\$1,216,049		-\$1,216,049
Subtotal	\$145,863	\$0	\$145,863
Costs to be Recovered from Rates	\$44,175,859	\$6,898,200	\$51,074,059

(1) A positive amount indicates a drawdown of the available operating fund balance to cover expenses. A negative amount indicates an addition to the balance, which is an increase to the costs to be recovered from rate-based revenue.

Projected Net Revenue Requirement, FY 2026

Line Item	Operating	Capital-Related	Total
Total Revenue Requirements			
O&M	\$34,369,815		\$34,369,815
Total Debt Service		\$6,921,450	\$6,921,450
Cash Funded Capital		\$2,307,233	\$2,307,233
Self-insurance Funding	\$12,831,000		\$12,831,000
Subtotal	\$47,200,815	\$9,228,683	\$56,429,497
Less Other Operating Revenue			
Misc. Revenues	\$394,288		\$394,288
Pension/OPEB	\$0		\$0
Interest Income	\$316,018		\$316,018
Subtotal	\$710,307	\$0	\$710,307
Less Adjustments			
Change in Funds Available (1)	\$3,191,720		\$3,191,720
Annualized Rate Adjustment	-\$1,281,158		-\$1,281,158
Subtotal	\$1,910,563	\$0	\$1,910,563
Costs to be Recovered from Rates	\$44,579,945	\$9,228,683	\$53,808,628

(1) A positive amount indicates a drawdown of the available operating fund balance to cover expenses. A negative amount indicates an addition to the balance, which is an increase to the costs to be recovered from rate-based revenue.

Projected Net Revenue Requirement, FY 2027

Line Item	Operating	Capital-Related	Total
Total Revenue Requirements			
O&M	\$35,801,818		\$35,801,818
Total Debt Service		\$4,723,950	\$4,723,950
Cash Funded Capital		\$3,428,596	\$3,428,596
Self-insurance Funding	\$13,472,550		\$13,472,550
Subtotal	\$49,274,368	\$8,152,546	\$57,426,914
Less Other Operating Revenue			
Misc. Revenues	\$397,983		\$397,983
Pension/OPEB	\$0		\$0
Interest Income	\$286,392		\$286,392
Subtotal	\$684,374	\$0	\$684,374
Less Adjustments			
Change in Funds Available (1)	\$1,402,512		\$1,402,512
Annualized Rate Adjustment	-\$1,349,757		-\$1,349,757
Subtotal	\$52,755	\$0	\$52,755
Costs to be Recovered from Rates	\$48,537,239	\$8,152,546	\$56,689,785

(1) A positive amount indicates a drawdown of the available operating fund balance to cover expenses. A negative amount indicates an addition to the balance, which is an increase to the costs to be recovered from rate-based revenue.

Net Revenue Requirements Allocation to Functional Categories, Tables for FY 2024 – FY 2027

Net Revenue Requirements Allocation to Functional Categories, FY2024				
Functional Category	Net O&M less Recycled Water	Recycled Water	Capital- Related	Net Revenue Requirements
Supply	\$16,078,108		\$0	\$16,078,108
Treatment	\$2,215,064		\$0	\$2,215,064
T&D	\$5,213,780		\$0	\$5,213,780
Storage	\$429,043		\$0	\$429,043
Meter	\$42,239		\$0	\$42,239
Customer	\$1,767,269		\$0	\$1,767,269
G&A	\$12,637,659		\$0	\$12,637,659
Public Fire	\$351,674		\$0	\$351,674
Recycled Water	\$0	\$1,613,037	\$0	\$1,613,037
Capital Charge	\$1,282,290		\$6,848,450	\$8,130,740
Total	\$40,017,126	\$1,613,037	\$6,848,450	\$48,478,613

Net Revenue Requirements Allocation to Functional Categories, FY2025				
Functional Category	Net O&M less Recycled Water	Recycled Water	Capital- Related	Net Revenue Requirements
Supply	\$16,715,914		\$0	\$16,715,914
Treatment	\$2,234,249		\$0	\$2,234,249
T&D	\$5,260,430		\$0	\$5,260,430
Storage	\$433,098		\$0	\$433,098
Meter	\$41,283		\$0	\$41,283
Customer	\$1,784,733		\$0	\$1,784,733
G&A	\$12,724,202		\$0	\$12,724,202
Public Fire	\$343,683		\$0	\$343,683
Recycled Water	\$0	\$1,690,664	\$0	\$1,690,664
Capital Charge	\$2,947,602		\$6,898,200	\$9,845,802
Total	\$42,485,195	\$1,690,664	\$6,898,200	\$51,074,059

Net Revenue Requirements Allocation to Functional Categories, FY2026				
Functional Category	Net O&M less Recycled Water	Recycled Water	Capital- Related	Net Revenue Requirements
Supply	\$17,388,542		\$0	\$17,388,542
Treatment	\$2,248,256		\$0	\$2,248,256
T&D	\$5,294,543		\$0	\$5,294,543
Storage	\$436,150		\$0	\$436,150
Meter	\$40,253		\$0	\$40,253
Customer	\$1,798,073		\$0	\$1,798,073
G&A	\$12,780,931		\$0	\$12,780,931
Public Fire	\$335,068		\$0	\$335,068
Recycled Water	\$0	\$1,774,486	\$0	\$1,774,486
Capital Charge	\$2,483,644		\$9,228,683	\$11,712,326
Total	\$42,805,459	\$1,774,486	\$9,228,683	\$53,808,628

Net Revenue Requirements Allocation to Functional Categories, FY2027				
Functional Category	Net O&M less Recycled Water	Recycled Water	Capital- Related	Net Revenue Requirements
Supply	\$17,993,794		\$0	\$17,993,794
Treatment	\$2,275,443		\$0	\$2,275,443
T&D	\$5,359,352		\$0	\$5,359,352
Storage	\$441,761		\$0	\$441,761
Meter	\$39,474		\$0	\$39,474
Customer	\$1,821,971		\$0	\$1,821,971
G&A	\$12,912,174		\$0	\$12,912,174
Public Fire	\$328,551		\$0	\$328,551
Recycled Water	\$0	\$1,861,324	\$0	\$1,861,324
Capital Charge	\$5,503,395		\$8,152,546	\$13,655,942
Total	\$46,675,915	\$1,861,324	\$8,152,546	\$56,689,785

Allocation of Functions to Cost Components, Tables for FY 2024 – FY 2027

Allocation of Functions to Cost Components, FY2024

Functions	Allocation Basis	Total	Volume	Bills	Meter	Public Fire	Recycled Water	Capital Charge
Supply	Volume	100%	100.0%					
Treatment	Volume	100%	100.0%					
T&D	Volume	100%	100.0%					
Storage	Volume	100%	100.0%					
Meter	Meter	100%			100.0%	0.0%		
Customer	Customer	100%		100.0%	0.0%			
G&A	Note 1	100%	91.7%	6.8%	0.2%	1.3%		
Direct Fire	Public Fire	100%				100.0%		
Recycled Water	Recycled Water	100%					100.0%	
Capital Charge	Capital Charge	100%						100.0%

(1) As all other costs except recycled water and capital charge

Allocation of Functions to Cost Components, FY2025

Functions	Allocation Basis	Total	Volume	Bills	Meter	Public Fire	Recycled Water	Capital Charge
Supply	Volume	100%	100.0%					
Treatment	Volume	100%	100.0%					
T&D	Volume	100%	100.0%					
Storage	Volume	100%	100.0%					
Meter	Meter	100%			100.0%	0.0%		
Customer	Customer	100%		100.0%	0.0%			
G&A	Note 1	100%	91.9%	6.7%	0.2%	1.3%		
Direct Fire	Public Fire	100%				100.0%		
Recycled Water	Recycled Water	100%					100.0%	
Capital Charge	Capital Charge	100%						100.0%

(1) As all other costs except recycled water and capital charge

Allocation of Functions to Cost Components, FY2026

Functions	Allocation Basis	Total	Volume	Bills	Meter	Public Fire	Recycled Water	Capital Charge
Supply	Volume	100%	100.0%					
Treatment	Volume	100%	100.0%					
T&D	Volume	100%	100.0%					
Storage	Volume	100%	100.0%					
Meter	Meter	100%			100.0%	0.0%		
Customer	Customer	100%		100.0%	0.0%			
G&A	Note 1	100%	92.1%	6.5%	0.1%	1.2%		
Direct Fire	Public Fire	100%				100.0%		
Recycled Water	Recycled Water	100%					100.0%	
Capital Charge	Capital Charge	100%						100.0%

(1) As all other costs except recycled water and capital charge

Allocation of Functions to Cost Components, FY2027

Functions	Allocation Basis	Total	Volume	Bills	Meter	Public Fire	Recycled Water	Capital Charge
Supply	Volume	100%	100.0%					
Treatment	Volume	100%	100.0%					
T&D	Volume	100%	100.0%					
Storage	Volume	100%	100.0%					
Meter	Meter	100%			100.0%	0.0%		
Customer	Customer	100%		100.0%	0.0%			
G&A	Note 1	100%	92.3%	6.4%	0.1%	1.2%		
Direct Fire	Public Fire	100%				100.0%		
Recycled Water	Recycled Water	100%					100.0%	
Capital Charge	Capital Charge	100%						100.0%

(1) As all other costs except recycled water and capital charge

Allocation of Net O&M Including Recycled Water to Cost Components, Tables for FY 2024 – FY 2027

Allocation of Net O&M Including Recycled Water to Cost Components, FY2024

Functions	Allocation Basis	Net Rev. Req.	Volume	Bills	Equivalent Meters	Public Fire	Recycled Water	Capital Charge
Supply	Volume	\$16,078,108	\$16,078,108	\$0	\$0	\$0	\$0	\$0
Treatment	Volume	\$2,215,064	\$2,215,064	\$0	\$0	\$0	\$0	\$0
T&D	Volume	\$5,213,780	\$5,213,780	\$0	\$0	\$0	\$0	\$0
Storage	Volume	\$429,043	\$429,043	\$0	\$0	\$0	\$0	\$0
Meter	Meter	\$42,239	\$0	\$0	\$42,239	\$0	\$0	\$0
Customer	Customer	\$1,767,269	\$0	\$1,767,269	\$0	\$0	\$0	\$0
G&A	Note 1	\$12,637,659	\$11,591,098	\$855,807	\$20,454	\$170,300	\$0	\$0
Direct Fire	Public Fire	\$351,674	\$0	\$0	\$0	\$351,674	\$0	\$0
Recycled Water	Recycled Water	\$1,613,037	\$0	\$0	\$0	\$0	\$1,613,037	\$0
Capital Charge	Capital Charge	\$1,282,290	\$0	\$0	\$0	\$0	\$0	\$1,282,290
Total		\$41,630,163	\$35,527,093	\$2,623,076	\$62,693	\$521,974	\$1,613,037	\$1,282,290

(1) As all other costs except recycled water and capital charge.

Allocation of Net O&M Including Recycled Water to Cost Components, FY2025

Functions	Allocation Basis	Net Rev. Req.	Volume	Bills	Equivalent Meters	Public Fire	Recycled Water	Capital Charge
Supply	Volume	\$16,715,914	\$16,715,914	\$0	\$0	\$0	\$0	\$0
Treatment	Volume	\$2,234,249	\$2,234,249	\$0	\$0	\$0	\$0	\$0
T&D	Volume	\$5,260,430	\$5,260,430	\$0	\$0	\$0	\$0	\$0
Storage	Volume	\$433,098	\$433,098	\$0	\$0	\$0	\$0	\$0
Meter	Meter	\$41,283	\$0	\$0	\$41,283	\$0	\$0	\$0
Customer	Customer	\$1,784,733	\$0	\$1,784,733	\$0	\$0	\$0	\$0
G&A	Note 1	\$12,724,202	\$11,694,579	\$846,939	\$19,591	\$163,094	\$0	\$0
Direct Fire	Public Fire	\$343,683	\$0	\$0	\$0	\$343,683	\$0	\$0
Recycled Water	Recycled Water	\$1,690,664	\$0	\$0	\$0	\$0	\$1,690,664	\$0
Capital Charge	Capital Charge	\$2,947,602	\$0	\$0	\$0	\$0	\$0	\$2,947,602
Total		\$44,175,859	\$36,338,270	\$2,631,672	\$60,874	\$506,777	\$1,690,664	\$2,947,602

(1) As all other costs except recycled water and capital charge.

Allocation of Net O&M Including Recycled Water to Cost Components, FY2026

Functions	Allocation Basis	Net Rev. Req.	Volume	Bills	Equivalent Meters	Public Fire	Recycled Water	Capital Charge
Supply	Volume	\$17,388,542	\$17,388,542	\$0	\$0	\$0	\$0	\$0
Treatment	Volume	\$2,248,256	\$2,248,256	\$0	\$0	\$0	\$0	\$0
T&D	Volume	\$5,294,543	\$5,294,543	\$0	\$0	\$0	\$0	\$0
Storage	Volume	\$436,150	\$436,150	\$0	\$0	\$0	\$0	\$0
Meter	Meter	\$40,253	\$0	\$0	\$40,253	\$0	\$0	\$0
Customer	Customer	\$1,798,073	\$0	\$1,798,073	\$0	\$0	\$0	\$0
G&A	Note 1	\$12,780,931	\$11,772,322	\$834,434	\$18,680	\$155,495	\$0	\$0
Direct Fire	Public Fire	\$335,068	\$0	\$0	\$0	\$335,068	\$0	\$0
Recycled Water	Recycled Water	\$1,774,486	\$0	\$0	\$0	\$0	\$1,774,486	\$0
Capital Charge	Capital Charge	\$2,483,644	\$0	\$0	\$0	\$0	\$0	\$2,483,644
Total		\$44,579,945	\$37,139,812	\$2,632,506	\$58,933	\$490,564	\$1,774,486	\$2,483,644

(1) As all other costs except recycled water and capital charge.

Allocation of Net O&M Including Recycled Water to Cost Components, FY2027

Functions	Allocation Basis	Net Rev. Req.	Volume	Bills	Equivalent Meters	Public Fire	Recycled Water	Capital Charge
Supply	Volume	\$17,993,794	\$17,993,794	\$0	\$0	\$0	\$0	\$0
Treatment	Volume	\$2,275,443	\$2,275,443	\$0	\$0	\$0	\$0	\$0
T&D	Volume	\$5,359,352	\$5,359,352	\$0	\$0	\$0	\$0	\$0
Storage	Volume	\$441,761	\$441,761	\$0	\$0	\$0	\$0	\$0
Meter	Meter	\$39,474	\$0	\$0	\$39,474	\$0	\$0	\$0
Customer	Customer	\$1,821,971	\$0	\$1,821,971	\$0	\$0	\$0	\$0
G&A	Note 1	\$12,912,174	\$11,911,563	\$832,460	\$18,036	\$150,115	\$0	\$0
Direct Fire	Public Fire	\$328,551	\$0	\$0	\$0	\$328,551	\$0	\$0
Recycled Water	Recycled Water	\$1,861,324	\$0	\$0	\$0	\$0	\$1,861,324	\$0
Capital Charge	Capital Charge	\$5,503,395	\$0	\$0	\$0	\$0	\$0	\$5,503,395
Total		\$48,537,239	\$37,981,912	\$2,654,431	\$57,510	\$478,666	\$1,861,324	\$5,503,395

(1) As all other costs except recycled water and capital charge.

Allocation of Capital-Related to Cost Components, Tables for FY 2024 – FY 2027

Allocation of Capital-Related to Cost Centers, FY2024

Functions	Allocation Basis	Net Rev. Req.	Volume	Bills	Equivalent Meters	Public Fire	Recycled Water	Capital Charge
Supply	Volume	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Treatment	Volume	\$0	\$0	\$0	\$0	\$0	\$0	\$0
T&D	Volume	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Storage	Volume	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Meter	Meter	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Customer	Customer	\$0	\$0	\$0	\$0	\$0	\$0	\$0
G&A	Note 1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Direct Fire	Public Fire	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Recycled Water	Recycled Water	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Capital Charge	Capital Charge	\$6,848,450	\$0	\$0	\$0	\$0	\$0	\$6,848,450
Total		\$6,848,450	\$0	\$0	\$0	\$0	\$0	\$6,848,450

(1) As all other costs except recycled water and capital charge.

Allocation of Capital-Related to Cost Centers, FY2025

Functions	Allocation Basis	Net Rev. Req.	Volume	Bills	Equivalent Meters	Public Fire	Recycled Water	Capital Charge
Supply	Volume	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Treatment	Volume	\$0	\$0	\$0	\$0	\$0	\$0	\$0
T&D	Volume	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Storage	Volume	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Meter	Meter	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Customer	Customer	\$0	\$0	\$0	\$0	\$0	\$0	\$0
G&A	Note 1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Direct Fire	Public Fire	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Recycled Water	Recycled Water	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Capital Charge	Capital Charge	\$6,898,200	\$0	\$0	\$0	\$0	\$0	\$6,898,200
Total		\$6,898,200	\$0	\$0	\$0	\$0	\$0	\$6,898,200

(1) As all other costs except recycled water and capital charge.

Allocation of Capital-Related to Cost Centers, FY2026

Functions	Allocation Basis	Net Rev. Req.	Volume	Bills	Equivalent Meters	Public Fire	Recycled Water	Capital Charge
Supply	Volume	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Treatment	Volume	\$0	\$0	\$0	\$0	\$0	\$0	\$0
T&D	Volume	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Storage	Volume	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Meter	Meter	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Customer	Customer	\$0	\$0	\$0	\$0	\$0	\$0	\$0
G&A	Note 1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Direct Fire	Public Fire	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Recycled Water	Recycled Water	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Capital Charge	Capital Charge	\$9,228,683	\$0	\$0	\$0	\$0	\$0	\$9,228,683
Total		\$9,228,683	\$0	\$0	\$0	\$0	\$0	\$9,228,683

(1) As all other costs except recycled water and capital charge.

Allocation of Capital-Related to Cost Centers, FY2027

Functions	Allocation Basis	Net Rev. Req.	Volume	Bills	Equivalent Meters	Public Fire	Recycled Water	Capital Charge
Supply	Volume	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Treatment	Volume	\$0	\$0	\$0	\$0	\$0	\$0	\$0
T&D	Volume	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Storage	Volume	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Meter	Meter	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Customer	Customer	\$0	\$0	\$0	\$0	\$0	\$0	\$0
G&A	Note 1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Direct Fire	Public Fire	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Recycled Water	Recycled Water	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Capital Charge	Capital Charge	\$8,152,546	\$0	\$0	\$0	\$0	\$0	\$8,152,546
Total		\$8,152,546	\$0	\$0	\$0	\$0	\$0	\$8,152,546

(1) As all other costs except recycled water and capital charge.

Estimated Units-of-Service, Tables for FY 2024 – FY 2027

Estimated Units of Service. FY2024

Customer Class	Acts	Bills	Equivalent Meters	Annual Use	Public Fire Protection
	No.	No.	No.	ccf	Hydrants
Potable Water & Construction	24,834	146,010	45,330	6,581,670	
Private Fire Protection	654	4,248			
Public Fire Protection					3,438
Total Potable Water	25,488	150,258	45,330	6,581,670	3,438
Recycled Water	40	240	742	483,408	
Total Water	25,528	150,498	46,072	7,065,078	

Estimated Units of Service. FY2025

Customer Class	Acts	Bills	Equivalent Meters	Annual Use	Public Fire Protection
	No.	No.	No.	ccf	Hydrants
Potable Water & Construction	24,180	146,010	45,330	6,609,971	
Private Fire Protection	654	4,248			
Public Fire Protection					3,438
Total Potable Water	24,834	150,258	45,330	6,609,971	3,438
Recycled Water	40	240	742	485,486	
Total Water	24,874	150,498	46,072	7,095,458	

Estimated Units of Service. FY2026

Customer Class	Acts	Bills	Equivalent Meters	Annual Use	Public Fire Protection
	No.	No.	No.	ccf	Hydrants
Potable Water & Construction	24,180	146,010	45,330	6,638,394	
Private Fire Protection	654	4,248			
Public Fire Protection					3,438
Total Potable Water	24,834	150,258	45,330	6,638,394	3,438
Recycled Water	40	240	742	487,574	
Total Water	24,874	150,498	46,072	7,125,968	

Estimated Units of Service. FY2027

Customer Class	Acts No.	Bills No.	Equivalent Meters No.	Annual Use ccf	Public Fire Protection Hydrants
Potable Water & Construction	24,180	146,010	45,330	6,666,939	
Private Fire Protection	654	4,248			
Public Fire Protection					3,438
Total Potable Water	24,834	150,258	45,330	6,666,939	3,438
Recycled Water	40	240	742	489,671	
Total Water	24,874	150,498	46,072	7,156,610	

Unit Costs-of-Service, Tables for FY 2024 – FY 2027

Unit Costs of Service, FY2024							
Line Item	Total	Volume	Bills	Equivalent Meters	Public Fire	Recycled Waer	Capital Charge
		ccf	No.	Equiv. Mtrs	Hydrants	ccf	Potable Eq. Mtr.
Units of Service		6,581,670	150,498	46,072	3,438	483,408	45,330
Net Operating, \$	\$41,630,163	\$35,527,093	\$2,623,076	\$62,693	\$521,974	\$1,613,037	\$1,282,290
Capital-Related, \$	\$6,848,450	\$0	\$0	\$0	\$0	\$0	\$6,848,450
Total	\$48,478,613	\$35,527,093	\$2,623,076	\$62,693	\$521,974	\$1,613,037	\$8,130,740
Unit Cost, \$/unit		\$5.40	\$17.43	\$1.36	\$151.82	\$3.34	\$179.37

Unit Costs of Service, FY2025							
Line Item	Total	Volume	Bills	Equivalent Meters	Public Fire	Recycled Waer	Capital Charge
		ccf	No.	Equiv. Mtrs	Hydrants	ccf	Potable Eq. Mtr.
Units of Service		6,609,971	150,498	46,072	3,438	485,486	45,330
Net Operating, \$	\$44,175,859	\$36,338,270	\$2,631,672	\$60,874	\$506,777	\$1,690,664	\$2,947,602
Capital-Related, \$	\$6,898,200	\$0	\$0	\$0	\$0	\$0	\$6,898,200
Total	\$51,074,059	\$36,338,270	\$2,631,672	\$60,874	\$506,777	\$1,690,664	\$9,845,802
Unit Cost, \$/unit		\$5.50	\$17.49	\$1.32	\$147.40	\$3.48	\$217.20

Unit Costs of Service, FY2026

Line Item	Total	Volume	Bills	Equivalent Meters	Public Fire	Recycled Waer	Capital Charge
		ccf	No.	Equiv. Mtrs	Hydrants	ccf	Potable Eq. Mtr.
Units of Service		6,638,394	150,498	46,072	3,438	487,574	45,330
Net Operating, \$	\$44,579,945	\$37,139,812	\$2,632,506	\$58,933	\$490,564	\$1,774,486	\$2,483,644
Capital-Related, \$	\$9,228,683	\$0	\$0	\$0	\$0	\$0	\$9,228,683
Total	\$53,808,628	\$37,139,812	\$2,632,506	\$58,933	\$490,564	\$1,774,486	\$11,712,326
Unit Cost, \$/unit		\$5.59	\$17.49	\$1.28	\$142.69	\$3.64	\$258.38

Unit Costs of Service, FY2027

Line Item	Total	Volume	Bills	Equivalent Meters	Public Fire	Recycled Waer	Capital Charge
		ccf	No.	Equiv. Mtrs	Hydrants	ccf	Potable Eq. Mtr.
Units of Service		6,666,939	150,498	46,072	3,438	489,671	45,330
Net Operating, \$	\$48,537,239	\$37,981,912	\$2,654,431	\$57,510	\$478,666	\$1,861,324	\$5,503,395
Capital-Related, \$	\$8,152,546	\$0	\$0	\$0	\$0	\$0	\$8,152,546
Total	\$56,689,785	\$37,981,912	\$2,654,431	\$57,510	\$478,666	\$1,861,324	\$13,655,942
Unit Cost, \$/unit		\$5.70	\$17.64	\$1.25	\$139.23	\$3.80	\$301.26

Allocation of Unit Costs-of-Service to Customer Classes, Tables for FY 2024 – FY 2027

Allocation of Non-Fire-Related Unit Costs-of-Service to Customer Classes, FY 2024

Line Item	Total	Volume/ Capacity	Bills	Equivalent Meters	Public Fire	Recycled Water	Capital Charge
		ccf	No.	Equiv. Mtrs	Hydrants	ccf	Potable Eq. Mtr.
Unit Cost of Service		\$5.40	\$17.43	\$1.36	\$151.82	\$3.34	\$179.37
Potable Water/Construction							
Units		6,581,670	146,010	45,330			
Costs	\$35,010,553	\$32,404,016	\$2,544,853	\$61,684			
Private Fire							
Units			4,248				
Costs (1)	\$627,588	\$553,548	\$74,040				
Public Fire							
Units					3,438		
Costs (1)	\$3,091,503	\$2,569,529			\$521,974		
Recycled Water							
Units			240	742		483,408	
Costs	\$1,618,229		\$4,183	\$1,009		\$1,613,037	
Capital Charge							
Units							45,330
Costs	\$8,130,740						\$8,130,740
Total	\$48,478,613	\$35,527,093	\$2,623,076	\$62,693	\$521,974	\$1,613,037	\$8,130,740

(1) Capacity component of fire costs are derived in Appendix B.

Allocation of Non-Fire-Related Unit Costs-of-Service to Customer Classes, FY 2025

Line Item	Total	Volume/ Capacity	Bills	Equivalent Meters	Public Fire	Recycled Water	Capital Charge
		ccf	No.	Equiv. Mtrs	Hydrants	ccf	Potable Eq. Mtr.
Unit Cost of Service		\$5.50	\$17.49	\$1.32	\$147.40	\$3.48	\$217.20
Potable Water/Construction							
Units		6,609,971	146,010	45,330			
Costs	\$35,784,377	\$33,171,290	\$2,553,193	\$59,894			
Private Fire							
Units			4,248				
Costs (1)	\$635,612	\$561,330	\$74,282				
Public Fire							
Units					3,438		
Costs (1)	\$3,112,427	\$2,605,650			\$506,777		
Recycled Water							
Units			240	742		485,486	
Costs	\$1,695,841		\$4,197	\$980		\$1,690,664	
Capital Charge							
Units							45,330
Costs	\$9,845,802						\$9,845,802
Total	\$51,074,059	\$36,338,270	\$2,631,672	\$60,874	\$506,777	\$1,690,664	\$9,845,802

(1) Capacity component of fire costs are derived in Appendix B.

Allocation of Non-Fire-Related Unit Costs-of-Service to Customer Classes, FY 2026

Line Item	Total	Volume/ Capacity	Bills	Equivalent Meters	Public Fire	Recycled Water	Capital Charge
		ccf	No.	Equiv. Mtrs	Hydrants	ccf	Potable Eq. Mtr.
Unit Cost of Service		\$5.59	\$17.49	\$1.28	\$142.69	\$3.64	\$258.38
Potable Water/Construction							
Units		6,638,394	146,010	45,330			
Costs	\$36,544,365	\$33,932,378	\$2,554,002	\$57,985			
Private Fire							
Units			4,248				
Costs (1)	\$642,806	\$568,500	\$74,306				
Public Fire							
Units					3,438		
Costs (1)	\$3,129,498	\$2,638,934			\$490,564		
Recycled Water							
Units			240	742		487,574	
Costs	\$1,779,633		\$4,198	\$949		\$1,774,486	
Capital Charge							
Units							45,330
Costs	\$11,712,326						\$11,712,326
Total	\$53,808,628	\$37,139,812	\$2,632,506	\$58,933	\$490,564	\$1,774,486	\$11,712,326

(1) Capacity component of fire costs are derived in Appendix B.

Allocation of Non-Fire-Related Unit Costs-of-Service to Customer Classes, FY 2027							
Line Item	Total	Volume/ Capacity	Bills	Equivalent Meters	Public Fire	Recycled Water	Capital Charge
		ccf	No.	Equiv. Mtrs	Hydrants	ccf	Potable Eq. Mtr.
Unit Cost of Service		\$5.70	\$17.64	\$1.25	\$139.23	\$3.80	\$301.26
Potable Water/Construction							
Units		6,666,939	146,010	45,330			
Costs	\$37,357,066	\$34,725,209	\$2,575,273	\$56,584			
Private Fire							
Units			4,248				
Costs (1)	\$652,157	\$577,233	\$74,925				
Public Fire							
Units					3,438		
Costs (1)	\$3,158,137	\$2,679,470			\$478,666		
Recycled Water							
Units			240	742		489,671	
Costs	\$1,866,483		\$4,233	\$926		\$1,861,324	
Capital Charge							
Units							45,330
Costs	\$13,655,942						\$13,655,942
Total	\$56,689,785	\$37,981,912	\$2,654,431	\$57,510	\$478,666	\$1,861,324	\$13,655,942

(1) Capacity component of fire costs are derived in Appendix B.

Comparison of Cost-of-Service with Revenue Under Existing Charges/Rates, Tables for FY 2024 – FY 2027

Comparison of Cost-of-Service with Revenue Under Existing Rates, FY2024

Customer Class	Proposed COS	Reallocation of Capital Charge Fire Capacity to Fire	Reallocation of Public Fire Protection	Adjusted COS	Revenue Under Existing Rates	Rev. Inc. (Decr.) from COS
Potable Water & Construction	\$35,010,553	\$0	\$3,522,668	\$38,533,220	\$39,183,763	-1.7%
Recycled Water	\$1,618,229	\$0	\$162,822	\$1,781,051	\$1,623,513	9.7%
Private Fire Protection	\$627,588	\$127,961	\$0	\$755,549	\$668,944	12.9%
Public Fire Protection	\$3,091,503	\$593,986	-\$3,685,489	\$0	\$0	--
Capital Charge	\$8,130,740	-\$721,948	\$0	\$7,408,792	--	--
Total	\$48,478,613	\$0	\$0	\$48,478,613	\$41,476,220	16.9%

The cumulative revenue adjustment through FY 2024 is about 17 percent.

Comparison of Cost-of-Service with Revenue Under Existing Rates, FY2025

Customer Class	Proposed COS	Reallocation of Capital Charge Fire Capacity to Fire	Reallocation of Public Fire Protection	Adjusted COS	Revenue Under Existing Rates	Rev. Inc. (Decr.) from COS
Potable Water/ Construction	\$35,784,377	\$0	\$3,650,768	\$39,435,145	\$39,317,273	0.3%
Recycled Water	\$1,695,841	\$0	\$173,012	\$1,868,853	\$1,629,915	14.7%
Private Fire Protection	\$635,612	\$153,245	\$0	\$788,857	\$668,990	17.9%
Public Fire Protection	\$3,112,427	\$711,353	-\$3,823,780	\$0	\$0	--
Capital Charge	\$9,845,802	-\$864,598	\$0	\$8,981,204	--	--
Total	\$51,074,059	\$0	\$0	\$51,074,059	\$41,616,178	22.7%

The cumulative revenue adjustment through FY 2025 is about 23 percent.

Comparison of Cost-of-Service with Revenue Under Existing Rates, FY2026

Customer Class	Proposed COS	Reallocation of Capital Charge Fire Capacity to Fire	Reallocation of Public Fire Protection	Adjusted COS	Revenue Under Existing Rates	Rev. Inc. (Decr.) from COS
Potable Water/ Construction	\$36,544,365	\$0	\$3,809,657	\$40,354,022	\$39,451,443	2.3%
Recycled Water	\$1,779,633	\$0	\$185,522	\$1,965,155	\$1,636,345	20.1%
Private Fire Protection	\$642,806	\$186,492	\$0	\$829,298	\$669,037	24.0%
Public Fire Protection	\$3,129,498	\$865,681	-\$3,995,179	\$0	\$0	--
Capital Charge	\$11,712,326	-\$1,052,173	\$0	\$10,660,153	--	--
Total	\$53,808,628	\$0	\$0	\$53,808,628	\$41,756,825	28.9%

The cumulative revenue adjustment through FY 2026 is about 29 percent.

Comparison of Cost-of-Service with Revenue Under Existing Rates, FY2027

Customer Class	Proposed COS	Reallocation of Capital Charge Fire Capacity to Fire	Reallocation of Public Fire Protection	Adjusted COS	Revenue Under Existing Rates	Rev. Inc. (Decr.) from COS
Potable Water/ Construc	\$37,357,066	\$0	\$3,943,331	\$41,300,397	\$39,586,191	4.3%
Recycled Water	\$1,866,483	\$0	\$197,022	\$2,063,504	\$1,642,802	25.6%
Private Fire Protection	\$652,157	\$211,597	\$0	\$863,754	\$669,084	29.1%
Public Fire Protection	\$3,158,137	\$982,216	-\$4,140,353	\$0	\$0	--
Capital Charge	\$13,655,942	-\$1,193,813	\$0	\$12,462,129	--	--
Total	\$56,689,785	\$0	\$0	\$56,689,785	\$41,898,077	35.3%

The cumulative revenue adjustment through FY 2027 is about 35 percent.

Derivation of Basic Charge, Tables for FY 2024 – FY 2027

Basic Charge, Potable & Recycled Water, Test Year 2024

Meter	Billing	Meter	Public Fire	Total	Total
Size	\$/bill	\$/mtr/yr	\$/mtr/yr	\$/bi-mo	\$/mo
5/8-inch	\$17.43	\$1.36	\$79.99	\$30.99	\$24.21
3/4-inch	\$17.43	\$2.04	\$119.99	\$37.77	\$27.60
1-inch	\$17.43	\$3.40	\$199.99	\$51.33	\$34.38
1 1/2-inch	\$17.43	\$6.80	\$399.97	\$85.23	\$51.33
2-inch	\$17.43	\$10.89	\$639.96	\$125.91	\$71.67
3-inch	\$17.43	\$23.81	\$1,399.91	\$254.72	\$136.08
4-inch	\$17.43	\$42.86	\$2,519.84	\$444.55	\$230.99
6-inch	\$17.43	\$95.25	\$5,599.65	\$966.58	\$492.01
8-inch	\$17.43	\$163.29	\$9,599.40	\$1,644.55	\$830.99
10-inch	\$17.43	\$258.55	\$15,199.05	\$2,593.70	\$1,305.57

Basic Charge, Potable & Recycled Water, Test Year 2025

Meter	Billing	Meter	Public Fire	Total	Total
Size	\$/bill	\$/mtr/yr	\$/mtr/yr	\$/bi-mo	\$/mo
5/8-inch	\$17.49	\$1.32	\$83.00	\$31.54	\$24.52
3/4-inch	\$17.49	\$1.98	\$124.49	\$38.57	\$28.03
1-inch	\$17.49	\$3.30	\$207.49	\$52.62	\$35.06
1 1/2-inch	\$17.49	\$6.61	\$414.98	\$87.76	\$52.62
2-inch	\$17.49	\$10.57	\$663.97	\$129.92	\$73.70
3-inch	\$17.49	\$23.12	\$1,452.44	\$263.42	\$140.46
4-inch	\$17.49	\$41.62	\$2,614.39	\$460.16	\$238.83
6-inch	\$17.49	\$92.49	\$5,809.77	\$1,001.20	\$509.35
8-inch	\$17.49	\$158.56	\$9,959.60	\$1,703.85	\$860.67
10-inch	\$17.49	\$251.05	\$15,769.36	\$2,687.56	\$1,352.53

Basic Charge, Potable & Recycled Water, Test Year 2026

Meter	Billing	Meter	Public Fire	Total	Total
Size	\$/bill	\$/mtr/yr	\$/mtr/yr	\$/bi-mo	\$/mo
5/8-inch	\$17.49	\$1.28	\$86.72	\$32.16	\$24.83
3/4-inch	\$17.49	\$1.92	\$130.08	\$39.50	\$28.50
1-inch	\$17.49	\$3.20	\$216.79	\$54.16	\$35.83
1 1/2-inch	\$17.49	\$6.40	\$433.58	\$90.83	\$54.16
2-inch	\$17.49	\$10.23	\$693.74	\$134.83	\$76.16
3-inch	\$17.49	\$22.39	\$1,517.55	\$274.15	\$145.82
4-inch	\$17.49	\$40.29	\$2,731.58	\$479.48	\$248.49
6-inch	\$17.49	\$89.54	\$6,070.19	\$1,044.12	\$530.81
8-inch	\$17.49	\$153.50	\$10,406.03	\$1,777.42	\$897.46
10-inch	\$17.49	\$243.04	\$16,476.22	\$2,804.04	\$1,410.77

Basic Charge, Potable & Recycled Water, Test Year 2027

Meter	Billing	Meter	Public Fire	Total	Total
Size	\$/bill	\$/mtr/yr	\$/mtr/yr	\$/bi-mo	\$/mo
5/8-inch	\$17.64	\$1.25	\$89.87	\$32.83	\$25.24
3/4-inch	\$17.64	\$1.87	\$134.80	\$40.42	\$29.03
1-inch	\$17.64	\$3.12	\$224.67	\$55.61	\$36.63
1 1/2-inch	\$17.64	\$6.24	\$449.34	\$93.57	\$55.61
2-inch	\$17.64	\$9.99	\$718.94	\$139.13	\$78.39
3-inch	\$17.64	\$21.84	\$1,572.69	\$283.40	\$150.52
4-inch	\$17.64	\$39.32	\$2,830.84	\$496.00	\$256.82
6-inch	\$17.64	\$87.38	\$6,290.76	\$1,080.67	\$549.15
8-inch	\$17.64	\$149.79	\$10,784.16	\$1,839.97	\$928.81
10-inch	\$17.64	\$237.17	\$17,074.92	\$2,902.99	\$1,460.32

Derivation of Fireline Service Charge, Tables for FY 2024 – FY 2027

Private Fireline Services Charge, Class I and II, Test Year 2024				
Fire Service Line	Billing	Capacity	Fireline Services, Bi-monthly	Fireline Services, Monthly
Size	\$/bill	\$/F.S. line	\$/bi-mo	\$/mo
1-inch	\$17.43	\$8.27	\$18.81	\$18.12
1 1/2-inch	\$17.43	\$24.01	\$21.44	\$19.44
2-inch	\$17.43	\$51.17	\$25.96	\$21.70
3-inch	\$17.43	\$148.65	\$42.21	\$29.82
4-inch	\$17.43	\$316.77	\$70.23	\$43.83
6-inch	\$17.43	\$920.16	\$170.79	\$94.11
8-inch	\$17.43	\$1,960.89	\$344.25	\$180.84
10-inch	\$17.43	\$3,526.36	\$605.16	\$311.30

Private Fireline Services Charge, Class I and II, Test Year 2025				
Fire Service Line	Billing	Capacity	Fireline Services, Bi-monthly	Fireline Services, Monthly
Size	\$/bill	\$/F.S. line	\$/bi-mo	\$/mo
1-inch	\$17.49	\$8.67	\$18.94	\$18.21
1 1/2-inch	\$17.49	\$25.18	\$21.69	\$19.59
2-inch	\$17.49	\$53.66	\$26.43	\$21.96
3-inch	\$17.49	\$155.86	\$43.47	\$30.48
4-inch	\$17.49	\$332.14	\$72.85	\$45.17
6-inch	\$17.49	\$964.81	\$178.29	\$97.89
8-inch	\$17.49	\$2,056.03	\$360.16	\$188.83
10-inch	\$17.49	\$3,697.45	\$633.73	\$325.61

Private Fireline Services Charge, Class I and II, Test Year 2026				
Fire Service Line	Billing	Capacity	Fireline Services, Bi-monthly	Fireline Services, Monthly
Size	\$/bill	\$/F.S. line	\$/bi-mo	\$/mo
1-inch	\$17.49	\$9.16	\$19.02	\$18.26
1 1/2-inch	\$17.49	\$26.60	\$21.93	\$19.71
2-inch	\$17.49	\$56.69	\$26.95	\$22.22
3-inch	\$17.49	\$164.67	\$44.94	\$31.22
4-inch	\$17.49	\$350.93	\$75.98	\$46.74
6-inch	\$17.49	\$1,019.38	\$187.39	\$102.44
8-inch	\$17.49	\$2,172.32	\$379.55	\$198.52
10-inch	\$17.49	\$3,906.58	\$668.59	\$343.05

Private Fireline Services Charge, Class I and II, Test Year 2027				
Fire Service Line	Billing	Capacity	Fireline Services, Bi- monthly	Fireline Services, Monthly
Size	\$/bill	\$/F.S. line	\$/bi-mo	\$/mo
1-inch	\$17.64	\$9.57	\$19.24	\$18.44
1 1/2-inch	\$17.64	\$27.79	\$22.28	\$19.96
2-inch	\$17.64	\$59.23	\$27.51	\$22.58
3-inch	\$17.64	\$172.05	\$46.32	\$31.98
4-inch	\$17.64	\$366.65	\$78.75	\$48.20
6-inch	\$17.64	\$1,065.06	\$195.15	\$106.40
8-inch	\$17.64	\$2,269.68	\$395.92	\$206.78
10-inch	\$17.64	\$4,081.67	\$697.92	\$357.78

Derivation of Usage Rates, Tables for FY 2024 – FY 2027

Usage Charge, Test Year 2024

	Cost-of-Service	Basic/ Fireline Cost Recovery	Usage Cost Recovery	Annual Usage	Total
	\$	\$	\$	ccf	\$/ccf
Potable Water, Construction & Fireline	\$39,288,770	\$6,988,552	\$32,300,217	6,581,670	\$4.91
Recycled Water	\$1,781,051	\$64,509	\$1,716,542	483,408	\$3.56

Usage Rate, Test Year 2025

	Cost-of-Service	Basic/ Fireline Cost Recovery	Usage Cost Recovery	Annual Usage	Total
	\$	\$	\$	ccf	\$/ccf
Potable Water, Construction & Fireline	\$40,224,003	\$7,164,452	\$33,059,551	6,609,971	\$5.01
Recycled Water	\$1,868,853	\$66,720	\$1,802,132	485,486	\$3.72

Usage Rate, Test Year 2026

	Cost-of-Service	Basic/ Fireline Cost Recovery	Usage Cost Recovery	Annual Usage	Total
	\$	\$	\$	ccf	\$/ccf
Potable Water, Construction & Fireline	\$41,183,320	\$7,372,666	\$33,810,654	6,638,394	\$5.10
Recycled Water	\$1,965,155	\$69,449	\$1,895,706	487,574	\$3.89

Usage Rate, Test Year 2027

	Cost-of-Service	Basic/ Fireline Cost Recovery	Usage Cost Recovery	Annual Usage	Total
	\$	\$	\$	ccf	\$/ccf
Potable Water, Construction & Fireline	\$42,164,152	\$7,570,198	\$34,593,953	6,666,939	\$5.19
Recycled Water	\$2,063,504	\$71,797	\$1,991,708	489,671	\$4.07

Projected Revenues Under Cost-of-Service Charges/Rates, Tables for FY 2024 – FY 2027

Revenues Under Cost-of-Service Rates, Test Year 2024

	Basic/ Standby Charges	Usage Revenue	Total Revenue	Cost-of-Service	Rev. as Percent of Cost-of-Service
Potable Water, Construction & Fireline	\$6,988,552	\$32,326,178	\$39,314,730	\$39,288,770	100.1%
Recycled Water	\$64,509	\$1,720,932	\$1,785,441	\$1,781,051	100.2%
Capital Charge			\$7,409,189	\$7,408,792	100.0%
Total	\$7,053,062	\$34,047,109	\$48,509,359	\$48,478,613	100.1%

Revenues Under Cost-of-Service Rates, Test Year 2025

	Basic/ Standby Charges	Usage Revenue	Total Revenue	Cost-of-Service	Rev. as Percent of Cost-of-Service
Potable Water, Construction & Fireline	\$7,164,452	\$33,126,385	\$40,290,837	\$40,224,003	100.2%
Recycled Water	\$66,720	\$1,806,009	\$1,872,729	\$1,868,853	100.2%
Capital Charge			\$8,981,233	\$8,981,204	100.0%
Total	\$7,231,172	\$34,932,395	\$51,144,799	\$51,074,059	100.1%

Revenues Under Cost-of-Service Rates, Test Year 2026

	Basic/ Standby Charges	Usage Revenue	Total Revenue	Cost-of-Service	Rev. as Percent of Cost-of-Service
Potable Water, Construction & Fireline	\$7,372,666	\$33,866,473	\$41,239,139	\$41,183,320	100.1%
Recycled Water	\$69,449	\$1,896,663	\$1,966,112	\$1,965,155	100.0%
Capital Charge			\$10,660,256	\$10,660,153	100.0%
Total	\$7,442,115	\$35,763,135	\$53,865,506	\$53,808,628	100.1%

Revenues Under Cost-of-Service Rates, Test Year 2027

	Basic/ Standby Charges	Usage Revenue	Total Revenue	Cost-of-Service	Rev. as Percent of Cost-of-Service
Potable Water, Construction & Fireline	\$7,570,198	\$34,612,312	\$42,182,510	\$42,164,152	100.0%
Recycled Water	\$71,797	\$1,992,959	\$2,064,756	\$2,063,504	100.1%
Capital Charge			\$12,462,577	\$12,462,129	100.0%
Total	\$7,641,995	\$36,605,271	\$56,709,843	\$56,689,785	100.0%

APPENDIX B:

**Determining Fire Protection's
Proportionate Share of Volume-
Related Costs**

Determining Private and Public Fire Protection Volume/Capacity Costs

On a design-basis, fire flow places an extra-capacity demand on water systems, which is expressed in terms of maximum (max) day and peak hour demand. The potential fire demands on Mesa Water's potable water system are estimated using fire flow information from Mesa Water District's November 2014 Water Master Plan prepared by Carollo. The estimated fire flows and capacity demands are shown in Table B-1.

Table B-1: Estimated Maximum Fire Flow and Duration

Simultaneous Fires	Max. Fire Flow (gpm)	Duration (hours)	Max Day Fire Flow (ccf)	Peak Hour Fire Flow (ccf)
Minimum Flow Req.	1,500	2	241	2,888
Airport & South Coast Plaza	6,000	4	1,925	11,551
Total			2,166	14,439

Source: Table 12, Water Master Plan, November 2014

The max day and peak hour fire flows are allocated between public and private customers using the equivalent connections developed in Table 6-14, which are repeated in Column B of Table B-2.

Table B-2: Allocation of Private Fire Costs

Fire Service	Equivalent Connections	Distribution	Max Day Fire Flow	Peak Hour Fire Flow
(A)	(B)	(C)	(C)	(D)
Private	741	18%	384	2,559
Public	3,438	82%	1,782	11,879
Total	4,179	100%	2,166	14,439

This approach to allocating costs related to public fire service has been upheld by recent legislation, Senate Bill 1386, which added Section 53750.5 to the California Government Code effective January 1, 2021.

To determine fire protection's proportionate share of volume/capacity, the overall system capacity must be determined. This capacity share is often expressed as base, maximum day and peak hour. 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 hour usage on the maximum usage day. This method is consistent with the AWWA M1 Manual and is widely used in the water industry to perform cost allocations.

Table B-3 shows the system-wide peaking factors, which are used to allocate volume/capacity-related costs. The demand factors come from the Mesa Water District Water Master Plan, dated November 2014 and prepared by Carollo.

Table B-3: System-Wide Volume/Capacity Demand Factors

Cost Component	Demand Factor (1)	Base	Maximum Day	Peak Hour
Base	1.00	100.0%		
Maximum Day	1.50	66.7%	33.3%	
Peak Hour	2.50	40.0%	20.0%	40.0%

(1) From November 2014 Water Master Plan

To understand the interpretation of the percentage, we must first establish the base as the average daily demand during the year, which is assigned an allocation basis of 1. If the base allocation basis is used to allocate an expense, the costs associated with that expense are to meet average daily demand (base) related costs. Expenses that are allocated to the cost-causation components using the maximum day basis attribute 67 percent ($1.00/1.50$) of the demand (and therefore costs) to base (average daily demand) use and the remaining 33 percent to maximum day (peaking) use. Expenses allocated using the peak hour basis assume 40 percent ($1.00/2.50$) of costs are due to base demands, 20 percent due to max day ($(1.50-1.00)/2.50$) and the remaining 40 percent are due to peak hour costs. Collectively the maximum day and peak hour cost components are known as peaking costs. These allocation bases are used to assign functional costs to cost-causation components.

Table B-4 shows the allocation of volume/capacity-related functions to cost-causation components. The percentages shown are used to allocate the functionalized costs to the volume/capacity cost-causation component. The allocation basis is selected based on the type of cost for each line item and the proportion of those costs associated with each volume/capacity cost-causation component. For example, Transmission & Distribution is typically allocated using the peak hour basis; in proportion to peak hour allocations identified in Table B-3. This is because the transportation, distribution, and storage system must be sized and operated to meet peak hour demands.

Table B-4: Allocation of Volume to Base and Extra Capacity

Functions	Allocation Basis	Total Volume	Base	Capacity - Max Day	Capacity - Peak Hour
Supply	Max Day	100.0%	66.7%	33.3%	
Treatment	Max Day	100.0%	66.7%	33.3%	
T&D	Peak Hour	100.0%	40.0%	20.0%	40.0%
Storage	Peak Hour	100.0%	40.0%	20.0%	40.0%
G&A	Note 1	91.9%	54.5%	27.2%	10.2%

(1) Volume-only portion of G&A

Table B-5 shows the distribution of Mesa Water's FY 2023 net O&M expenses to the volume/capacity cost-causation components based on the allocations shown in Table B-4. The Total line shows the result of the allocation of all O&M expenses to the cost-causation components and the total matches the sum of "Net O&M less Recycled Water" plus "Recycled Water" from Table 6-7. The volume revenue requirement matches the values shown in Table 6-9 for the total Volume component.

Table B-5: Allocation of O&M to Cost Components, FY 2023

Allocation of Net O&M Volume-Related Including Recycled Water to Cost Components					
Functions	Allocation Basis	Volume Rev. Req.	Base	Capacity - Max Day	Capacity - Peak Hour
Supply	Max Day	\$14,920,942	\$9,947,295	\$4,973,647	\$0
Treatment	Max Day	\$2,209,804	\$1,473,203	\$736,601	\$0
T&D	Peak Hour	\$4,906,024	\$1,962,409	\$981,205	\$1,962,409
Storage	Peak Hour	\$403,541	\$161,416	\$80,708	\$161,416
G&A	Note 1	\$10,946,808	\$6,490,059	\$3,245,029	\$1,211,719
Total		\$33,387,118	\$20,034,382	\$10,017,191	\$3,335,545

Table B-6 summarizes the allocation of Mesa Water’s capital-related volume revenue requirements for FY 2023. The volume revenue requirement matches the values shown in Table 6-10 for the total Volume component.

Table B-6: Allocation of Capital to Cost Components, FY 2023

Functions	Allocation Basis	Volume Rev. Req.	Base	Capacity - Max Day	Capacity - Peak Hour
Supply	Max Day	\$183,758	\$122,506	\$61,253	\$0
Treatment	Max Day	\$148,849	\$99,233	\$49,616	\$0
T&D	Peak Hour	\$1,268,628	\$507,451	\$253,726	\$507,451
Storage	Peak Hour	\$103,417	\$41,367	\$20,683	\$41,367
G&A	Note 1	\$18,918	\$11,216	\$5,608	\$2,094
Total		\$1,723,571	\$781,773	\$390,886	\$550,912

(1) Volume-only portion of G&A

Unit Cost-of-Service Derivation, Volume/Capacity

To determine public and private fire protection’s portion of system capacity, a unit cost-of-service was developed for the capacity demand. Table B-7 shows the derivation of the capacity-related unit cost for FY 2023. The max day and peak hour capacities for potable water are calculated by dividing the annual use by 365 days and multiplying by the max day or peak hour capacity factor. This results in the total capacity, with extra capacity calculated by subtracting the average daily use from the total capacity for the max day and by subtracting the total capacity for the max day from the total capacity for a peak hour, respectively. The flow unit of hundred cubic feet per day (ccf/day) is used for both capacity calculations. The annual usage from Table 6-15 and the private and public fire capacities from Table B-2 are summarized. Fire protection peak extra capacity is peak total capacity less max day extra capacity.

Table B-7: Derivation of Cost-Causation Components Units-of-Service, FY 2023

Customer Class	Annual Use	Capacity - Max Day Requirements			Capacity - Peak Hour Requirements		
		Capacity Factor	Total Capacity	Extra Capacity	Capacity Factor	Total Capacity	Extra Capacity
	ccf	%	ccf/day	ccf/day	%	ccf/day	ccf/day
Potable Water & Construction	6,553,490	1.50	26,932	8,977	2.50	44,887	26,932
Private Fire Protection			384	384		2,559	2,175
Public Fire Protection			1,782	1,782		11,879	10,097
Total Potable Water	6,553,490			11,143			39,205

These units-of-service are divided into the net revenue requirements to determine the unit costs-of-service, which is shown in the middle of Table B-8 for FY 2023. The “Net Operating” line matches the total from Table 6-9 and the “Capital-Related” line matches the total from Table 6-10. The same methodology was followed for FY 2024 – FY 2027 and the corresponding tables, B-9 through B-24 are shown below. Note that in FY 2024 – FY 2027, the capital-related costs are allocated 100 percent to the capital charge; therefore, there is no volume-related component.

Table B-8: Volume/Capacity Unit Costs-of-Service and Fire Protection Volume Costs, FY 2023

Line Item	Volume	Base	Max Day	Peak Hour
		ccf	ccf/day	ccf/day
Units of Service		6,553,490	11,143	39,205
Net Operating, \$	\$33,387,118	\$20,034,382	\$10,017,191	\$3,335,545
Capital-Related, \$	\$1,723,571	\$781,773	\$390,886	\$550,912
Total	\$35,110,690	\$20,816,155	\$10,408,077	\$3,886,458
Unit Cost, \$/unit		\$3.18	\$934.03	\$99.13
Private Fire				
Units			384	2,175
Cost	\$574,188		\$358,549	\$215,639
Public Fire				
Units			1,782	10,097
Cost	\$2,665,337		\$1,664,357	\$1,000,981

Table B-9: Allocation of Volume to Base and Extra Capacity, FY 2024

Functions	Allocation Basis	Total Volume	Base	Capacity - Max Day	Capacity - Peak Hour
Supply	Max Day	100.0%	66.7%	33.3%	
Treatment	Max Day	100.0%	66.7%	33.3%	
T&D	Peak Hour	100.0%	40.0%	20.0%	40.0%
Storage	Peak Hour	100.0%	40.0%	20.0%	40.0%
G&A	Note 1	91.7%	55.4%	27.7%	8.6%

(1) Volume-only portion of G&A

Table B-10: Allocation of O&M to Cost Components, FY 2024

Functions	Allocation Basis	Volume Rev. Req.	Base	Capacity - Max Day	Capacity - Peak Hour
Supply	Max Day	\$16,078,108	\$10,718,739	\$5,359,369	\$0
Treatment	Max Day	\$2,215,064	\$1,476,709	\$738,355	\$0
T&D	Peak Hour	\$5,213,780	\$2,085,512	\$1,042,756	\$2,085,512
Storage	Peak Hour	\$429,043	\$171,617	\$85,809	\$171,617
G&A	Note 1	\$11,591,098	\$6,998,716	\$3,499,358	\$1,093,023
Total		\$35,527,093	\$21,451,293	\$10,725,647	\$3,350,153

(1) Volume-only portion of G&A

Table B-11: Derivation of Cost-Causation Components Units-of-Service, FY 2024

Customer Class	Annual Use ccf	Capacity - Max Day Requirements			Capacity - Peak Hour Requirements		
		Capacity Factor	Total Capacity	Extra Capacity	Capacity Factor	Total Capacity	Extra Capacity
		%	ccf/day	ccf/day	%	ccf/day	ccf/day
Potable Water & Construction	6,581,670	1.50	27,048	9,016	2.50	45,080	27,048
Private Fire Protection			384	384		2,559	2,175
Public Fire Protection			1,782	1,782		11,879	10,097
Total Potable Water	6,581,670			11,182			39,321

Table B-12: Volume/Capacity Unit Costs-of-Service and Fire Protection Volume Costs, FY 2024

Line Item	Volume	Base	Max Day	Peak Hour
	ccf	ccf/day	ccf/day	ccf/day
Units of Service	6,581,670	11,182	39,321	
Net Operating, \$	\$35,527,093	\$21,451,293	\$10,725,647	\$3,350,153
Capital-Related, \$	\$0	\$0	\$0	\$0
Total	\$35,527,093	\$21,451,293	\$10,725,647	\$3,350,153
Unit Cost, \$/unit		\$3.26	\$959.21	\$85.20
Private Fire				
Units			384	2,175
Cost	\$553,548		\$368,213	\$185,335
Public Fire				
Units			1,782	10,097
Cost	\$2,569,529		\$1,709,218	\$860,311

Table B-13: Allocation of Volume to Base and Extra Capacity, FY 2025

Functions	Allocation Basis	Total Volume	Base	Capacity - Max Day	Capacity - Peak Hour
Supply	Max Day	100.0%	66.7%	33.3%	
Treatment	Max Day	100.0%	66.7%	33.3%	
T&D	Peak Hour	100.0%	40.0%	20.0%	40.0%
Storage	Peak Hour	100.0%	40.0%	20.0%	40.0%
G&A	Note 1	91.9%	55.6%	27.8%	8.5%

(1) Volume-only portion of G&A

Table B-14: Allocation of O&M to Cost Components, FY 2025

Functions	Allocation Basis	Volume Rev. Req.	Base	Capacity - Max Day	Capacity - Peak Hour
Supply	Max Day	\$16,715,914	\$11,143,943	\$5,571,971	\$0
Treatment	Max Day	\$2,234,249	\$1,489,499	\$744,750	\$0
T&D	Peak Hour	\$5,260,430	\$2,104,172	\$1,052,086	\$2,104,172
Storage	Peak Hour	\$433,098	\$173,239	\$86,620	\$173,239
G&A	Note 1	\$11,694,579	\$7,075,894	\$3,537,947	\$1,080,738
Total		\$36,338,270	\$21,986,747	\$10,993,374	\$3,358,149

(1) Volume-only portion of G&A

Table B-15: Derivation of Cost-Causation Components Units-of-Service, FY 2025

Customer Class	Annual Use	Capacity - Max Day Requirements			Capacity - Peak Hour Requirements		
		Capacity Factor	Total Capacity	Extra Capacity	Capacity Factor	Total Capacity	Extra Capacity
	ccf	%	ccf/day	ccf/day	%	ccf/day	ccf/day
Potable Water & Construction	6,609,971	1.50	27,164	9,055	2.50	45,274	27,164
Private Fire Protection			384	384		2,559	2,175
Public Fire Protection			1,782	1,782		11,879	10,097
Total Potable Water	6,609,971			11,221			39,437

Table B-16: Volume/Capacity Unit Costs-of-Service and Fire Protection Volume Costs, FY 2025

Line Item	Volume	Base	Max Day	Peak Hour
	ccf	ccf/day	ccf/day	ccf/day
Units of Service	6,609,971	11,221	39,437	
Net Operating, \$	\$36,338,270	\$21,986,747	\$10,993,374	\$3,358,149
Capital-Related, \$	\$0	\$0	\$0	\$0
Total	\$36,338,270	\$21,986,747	\$10,993,374	\$3,358,149
Unit Cost, \$/unit		\$3.33	\$979.76	\$85.15
Private Fire				
Units			384	2,175
Cost	\$561,330		\$376,100	\$185,229
Public Fire				
Units			1,782	10,097
Cost	\$2,605,650		\$1,745,829	\$859,821

Table B-17: Allocation of Volume to Base and Extra Capacity, FY 2026

Functions	Allocation Basis	Total Volume	Base	Capacity - Max	Capacity -
				Day	Peak Hour
Supply	Max Day	100.0%	66.7%	33.3%	
Treatment	Max Day	100.0%	66.7%	33.3%	
T&D	Peak Hour	100.0%	40.0%	20.0%	40.0%
Storage	Peak Hour	100.0%	40.0%	20.0%	40.0%
G&A	Note 1	92.1%	55.9%	27.9%	8.3%

(1) Volume-only portion of G&A

Table B-18: Allocation of O&M to Cost Components, FY 2026

Functions	Allocation Basis	Volume Rev.	Base	Capacity - Max	Capacity -
		Req.		Day	Peak Hour
Supply	Max Day	\$17,388,542	\$11,592,361	\$5,796,181	\$0
Treatment	Max Day	\$2,248,256	\$1,498,837	\$749,419	\$0
T&D	Peak Hour	\$5,294,543	\$2,117,817	\$1,058,909	\$2,117,817
Storage	Peak Hour	\$436,150	\$174,460	\$87,230	\$174,460
G&A	Note 1	\$11,772,322	\$7,139,028	\$3,569,514	\$1,063,780
Total		\$37,139,812	\$22,522,504	\$11,261,252	\$3,356,057

(1) Volume-only portion of G&A

Table B-19: Derivation of Cost-Causation Components Units-of-Service, FY 2026

Customer Class	Annual Use	Capacity - Max Day Requirements			Capacity - Peak Hour Requirements		
		Capacity	Total Capacity	Extra	Capacity	Total	Extra
		Factor		Capacity	Factor	Capacity	Capacity
	ccf	%	ccf/day	ccf/day	%	ccf/day	ccf/day
Potable Water & Construction	6,638,394	1.50	27,281	9,094	2.50	45,468	27,281
Private Fire Protection			384	384		2,559	2,175
Public Fire Protection			1,782	1,782		11,879	10,097
Total Potable Water	6,638,394			11,259			39,554

Table B-20: Volume/Capacity Unit Costs-of-Service and Fire Protection Volume Costs, FY 2026

Line Item	Volume	Base	Max Day	Peak Hour
		ccf	ccf/day	ccf/day
Units of Service		6,638,394	11,259	39,554
Net Operating, \$	\$37,139,812	\$22,522,504	\$11,261,252	\$3,356,057
Capital-Related, \$	\$0	\$0	\$0	\$0
Total	\$37,139,812	\$22,522,504	\$11,261,252	\$3,356,057
Unit Cost, \$/unit		\$3.39	\$1,000.16	\$84.85
Private Fire				
Units			384	2,175
Cost	\$568,500		\$383,933	\$184,567
Public Fire				
Units			1,782	10,097
Cost	\$2,638,934		\$1,782,186	\$856,748

Table B-21: Allocation of Volume to Base and Extra Capacity, FY 2027

Functions	Allocation Basis	Total Volume	Base	Capacity - Max Day	Capacity - Peak Hour
Supply	Max Day	100.0%	66.7%	33.3%	
Treatment	Max Day	100.0%	66.7%	33.3%	
T&D	Peak Hour	100.0%	40.0%	20.0%	40.0%
Storage	Peak Hour	100.0%	40.0%	20.0%	40.0%
G&A	Note 1	92.3%	56.0%	28.0%	8.2%

(1) Volume-only portion of G&A

Table B-22: Allocation of O&M to Cost Components, FY 2027

Functions	Allocation Basis	Volume Rev. Req.	Base	Capacity - Max Day	Capacity - Peak Hour
Supply	Max Day	\$17,993,794	\$11,995,862	\$5,997,931	\$0
Treatment	Max Day	\$2,275,443	\$1,516,962	\$758,481	\$0
T&D	Peak Hour	\$5,359,352	\$2,143,741	\$1,071,870	\$2,143,741
Storage	Peak Hour	\$441,761	\$176,704	\$88,352	\$176,704
G&A	Note 1	\$11,911,563	\$7,234,233	\$3,617,117	\$1,060,213
Total		\$37,981,912	\$23,067,503	\$11,533,751	\$3,380,658

(1) Volume-only portion of G&A

Table B-23: Derivation of Cost-Causation Components Units-of-Service, FY 2027

Customer Class	Annual Use ccf	Capacity - Max Day Requirements			Capacity - Peak Hour Requirements		
		Capacity Factor	Total Capacity	Extra Capacity	Capacity Factor	Total Capacity	Extra Capacity
		%	ccf/day	ccf/day	%	ccf/day	ccf/day
Potable Water & Construction	6,666,939	1.50	27,398	9,133	2.50	45,664	27,398
Private Fire Protection			384	384		2,559	2,175
Public Fire Protection			1,782	1,782		11,879	10,097
Total Potable Water	6,666,939			11,299			39,671

Table B-24: Volume/Capacity Unit Costs-of-Service and Fire Protection Volume Costs, FY 2027

Line Item	Volume	Base	Max Day	Peak Hour
		ccf	ccf/day	ccf/day
Units of Service		6,666,939	11,299	39,671
Net Operating, \$	\$37,981,912	\$23,067,503	\$11,533,751	\$3,380,658
Capital-Related, \$	\$0	\$0	\$0	\$0
Total	\$37,981,912	\$23,067,503	\$11,533,751	\$3,380,658
Unit Cost, \$/unit		\$3.46	\$1,020.82	\$85.22
Private Fire				
Units			384	2,175
Cost	\$577,233		\$391,862	\$185,371
Public Fire				
Units			1,782	10,097
Cost	\$2,679,470		\$1,818,994	\$860,476

APPENDIX C:

**Determining Fire Protection's
Proportionate Share of Extra
Capacity Without the Capital
Charge**

Since the capital charge is to be recovered by the potable water customers, Raftelis estimated public and private fire protections' share of extra-capacity costs. This estimation allows private fire protection extra capacity costs to be re-allocated from the capital charge to the private fire protection components so that private fire protection customers are paying for their related, proportional costs. The public fire's portion of extra-capacity costs is also reallocated because public fire protection costs are recovered by way of the basic charge, which is applied to both potable and recycled water customers. Again, this allocates cost recovery to the customers that place the demand on the system as required by Proposition 218.

The cost and revenue redistribution was calculated by first determining extra-capacity costs' portion of the net revenue requirements without using a capital charge. Table C-1 shows the max day and peak hour costs for FY 2023 if no costs were allocated to the capital charge.

Table C-1: FY 2023 Extra-Capacity Portion of Revenue Requirement Without Use of Capital Charge

Line Item	Total	Base	Max Day	Peak Hour	Bills	Equivalent Meters	Public Fire	Recycled Water	Capital Charge
		ccf	ccf/day	ccf/day	No.	Equiv. Mtrs	Hydrants	ccf	Equiv. Mtrs
Units of Service		6,553,490	11,143	39,205	150,498	46,072	3,438	481,338	45,330
Net Operating, \$	\$37,939,304	\$19,815,039	\$9,907,519	\$3,716,987	\$2,296,056	\$93,710	\$572,511	\$1,537,482	\$0
Capital & Other, \$	\$6,797,700	\$2,915,543	\$1,457,772	\$2,058,029	\$4,092	\$97,246	\$264,311	\$708	\$0
Total	\$44,737,004	\$22,730,582	\$11,365,291	\$5,775,016	\$2,300,147	\$190,956	\$836,822	\$1,538,190	\$0
Percent of Total			25.4%	12.9%					

Next, the private and public fire portion contribution to these costs is determined based on the units-of-service (Table B-7). An abbreviated version of that table is shown in Table C-2 along with public and private fire protection's proportional share.

Table C-2: FY 2023 Units-of-Service, Extra-Capacity

Line Item	Max Day Extra Capacity, ccf/day	Max Day Extra Capacity, %	Peak Hour Extra Capacity, ccf/day	Peak Hour Extra Capacity, %
Private Fire	384	3.4%	2,175	5.5%
Public Fire	1,782	16.0%	10,097	25.8%
All Customers	11,143	--	39,205	--

Table C-3 shows the calculation of the reallocated amounts of the "Capital Charge" "Proposed COS" (from Table 6-18). Multiplying Column B by the sum of Column C times Column D and Column E times Column F results in the value in Column G. The values in Column G correspond to the values in Table 6-18 "Reallocation of Capital Charge Fire Capacity to Fire".

Table C-3: FY 2023 Units-of-Service, Extra-Capacity

Fire Category	Capital Charge Proposed COS	Max Day Percentage	Max Day Fire %	Peak Hour Percentage	Peak Hour Fire %	Reallocation
(A)	(B)	(C)	(D)	(E)	(F)	(G)
Private Fire	\$4,975,851	25.4%	3.4%	12.9%	5.5%	\$79,186
Public Fire	\$4,975,851	25.4%	16.0%	12.9%	25.8%	\$367,576
					Total =	\$446,763

The same methodology was followed for FY 2024 – FY 2027 and the corresponding tables, C-4 through C-15 are shown below.

Table C-4: FY 2024 Extra-Capacity Portion of Revenue Requirement Without Use of Capital Charge

Line Item	Total	Base	Max Day	Peak Hour	Bills	Equivalent Meters	Public Fire	Recycled Water	Capital Charge
		ccf	ccf/day	ccf/day	No.	Equiv. Mtrs	Hydrants	ccf	Equiv. Mtrs
Units of Service		6,581,670	11,182	39,321	150,498	46,072	3,438	483,408	45,330
Net Operating, \$	\$41,630,163	\$21,831,333	\$10,915,667	\$4,032,929	\$2,532,454	\$98,315	\$606,428	\$1,613,037	\$0
Capital & Other, \$	\$6,848,450	\$2,937,490	\$1,468,745	\$2,073,131	\$4,190	\$97,954	\$266,226	\$713	\$0
Total	\$48,478,613	\$24,768,824	\$12,384,412	\$6,106,060	\$2,536,644	\$196,269	\$872,654	\$1,613,751	\$0
Percent of Total			25.5%	12.6%					

Table C-5: FY 2024 Units-of-Service, Extra-Capacity

Line Item	Max Day Extra Capacity, ccf/day	Max Day Extra Capacity, %	Peak Hour Extra Capacity, ccf/day	Peak Hour Extra Capacity, %
Private Fire	384	3.4%	2,175	5.5%
Public Fire	1,782	15.9%	10,097	25.7%
All Customers	11,182	--	39,321	--

Table C-6: FY 2024 Units-of-Service, Extra-Capacity

Fire Category	Capital Charge Proposed COS	Max Day Percentage	Max Day Fire %	Peak Hour Percentage	Peak Hour Fire %	Reallocation
(A)	(B)	(C)	(D)	(E)	(F)	(G)
Private Fire	\$8,130,740	25.5%	3.4%	12.6%	5.5%	\$127,961
Public Fire	\$8,130,740	25.5%	15.9%	12.6%	25.7%	\$593,986
					Total =	\$721,948

Table C-7: FY 2025 Extra-Capacity Portion of Revenue Requirement Without Use of Capital Charge

Line Item	Total	Base	Max Day	Peak Hour	Bills	Equivalent Meters	Public Fire	Recycled Water	Capital Charge
		ccf	ccf/day	ccf/day	No.	Equiv. Mtrs	Hydrants	ccf	Equiv. Mtrs
Units of Service		6,609,971	11,221	39,437	150,498	46,072	3,438	485,486	45,330
Net Operating, \$	\$44,175,859	\$23,290,261	\$11,645,131	\$4,183,636	\$2,653,690	\$99,119	\$613,359	\$1,690,664	\$0
Capital & Other, \$	\$6,898,200	\$2,959,066	\$1,479,533	\$2,087,934	\$4,197	\$98,651	\$268,100	\$719	\$0
Total	\$51,074,059	\$26,249,327	\$13,124,664	\$6,271,570	\$2,657,888	\$197,770	\$881,459	\$1,691,383	\$0
Percent of Total			25.7%	12.3%					

Table C-8: FY 2025 Units-of-Service, Extra-Capacity

Line Item	Max Day Extra Capacity, ccf/day	Max Day Extra Capacity, %	Peak Hour Extra Capacity, ccf/day	Peak Hour Extra Capacity, %
Private Fire	384	3.4%	2,175	5.5%
Public Fire	1,782	15.9%	10,097	25.6%
All Customers	11,221	--	39,437	--

Table C-9: FY 2025 Units-of-Service, Extra-Capacity

Fire Category	Capital Charge Proposed COS	Max Day Percentage	Max Day Fire %	Peak Hour Percentage	Peak Hour Fire %	Reallocation
(A)	(B)	(C)	(D)	(E)	(F)	(G)
Private Fire	\$9,845,802	25.7%	3.4%	12.3%	5.5%	\$153,245
Public Fire	\$9,845,802	25.7%	15.9%	12.3%	25.6%	\$711,353
Total =						\$864,598

Table C-10: FY 2026 Extra-Capacity Portion of Revenue Requirement Without Use of Capital Charge

Line Item	Total	Base ccf	Max Day ccf/day	Peak Hour ccf/day	Bills No.	Equivalent Meters Equiv. Mtrs	Public Fire Hydrants	Recycled Water ccf	Capital Charge PW Eq. Mtr.
Units of Service		6,638,394	11,259	39,554	150,498	46,072	3,438	487,574	45,330
Net Operating, \$	\$44,579,945	\$23,487,916	\$11,743,958	\$4,277,502	\$2,583,978	\$104,380	\$607,725	\$1,774,486	\$0
Capital & Other, \$	\$9,228,683	\$3,958,330	\$1,979,165	\$2,794,250	\$5,191	\$132,036	\$358,750	\$961	\$0
Total	\$53,808,628	\$27,446,245	\$13,723,123	\$7,071,752	\$2,589,169	\$236,416	\$966,475	\$1,775,448	\$0
Percent of Total			25.5%	13.1%					

Table C-11: FY 2026 Units-of-Service, Extra-Capacity

Line Item	Max Day Extra Capacity, ccf/day	Max Day Extra Capacity, %	Peak Hour Extra Capacity, ccf/day	Peak Hour Extra Capacity, %
Private Fire	384	3.4%	2,175	5.5%
Public Fire	1,782	15.8%	10,097	25.5%
All Customers	11,259	--	39,554	--

Table C-12: FY 2026 Units-of-Service, Extra-Capacity

Fire Category	Capital Charge Proposed COS	Max Day Percentage	Max Day Fire %	Peak Hour Percentage	Peak Hour Fire %	Reallocation
(A)	(B)	(C)	(D)	(E)	(F)	(G)
Private Fire	\$11,712,326	25.5%	3.4%	13.1%	5.5%	\$186,492
Public Fire	\$11,712,326	25.5%	15.8%	13.1%	25.5%	\$865,681
Total =						\$1,052,173

Table C-13: FY 2027 Extra-Capacity Portion of Revenue Requirement Without Use of Capital Charge

Line Item	Total	Base	Max Day	Peak Hour	Bills	Equivalent Meters	Public Fire	Recycled Water	Capital Charge
		ccf	ccf/day	ccf/day	No.	Equiv. Mtrs	Hydrants	ccf	Equiv. Mtrs
Units of Service		6,666,939	11,299	39,671	150,498	46,072	3,438	489,671	45,330
Net Operating, \$	\$48,537,239	\$25,761,217	\$12,880,608	\$4,487,511	\$2,819,551	\$103,515	\$623,512	\$1,861,324	\$0
Capital & Other, \$	\$8,152,546	\$3,497,326	\$1,748,663	\$2,467,584	\$4,748	\$116,590	\$316,786	\$849	\$0
Total	\$56,689,785	\$29,258,543	\$14,629,272	\$6,955,095	\$2,824,298	\$220,106	\$940,298	\$1,862,173	\$0
Percent of Total			25.8%	12.3%					

Table C-14: FY 2027 Units-of-Service, Extra-Capacity

Line Item	Max Day Extra Capacity, ccf/day	Max Day Extra Capacity, %	Peak Hour Extra Capacity, ccf/day	Peak Hour Extra Capacity, %
Private Fire	384	3.4%	2,175	5.5%
Public Fire	1,782	15.8%	10,097	25.5%
All Customers	11,299	--	39,671	--

Table C-15: FY 2027 Units-of-Service, Extra-Capacity

Fire Category	Capital Charge Proposed COS	Max Day Percentage	Max Day Fire %	Peak Hour Percentage	Peak Hour Fire %	Reallocation
(A)	(B)	(C)	(D)	(E)	(F)	(G)
Private Fire	\$13,655,942	25.8%	3.4%	12.3%	5.5%	\$211,597
Public Fire	\$13,655,942	25.8%	15.8%	12.3%	25.5%	\$982,216
					Total =	\$1,193,813