

VENTURA COUNTY **DISTRICT 1 - MOORPARK**

Water Financial Plan & Rate Update

Draft Summary / January 12, 2022



January 12, 2022

Jean Fontayne
Staff Services Manager
Ventura County Public Works Department
Waterworks District No. 1 - Moorpark
6767 Spring Road
Moorpark, CA 93020

Subject: Water Financial Plan and Rate Update

Dear Ms. Fontayne,

Raftelis Financial Consultants, Inc. (Raftelis) is pleased to provide this Water Financial Plan and Rate Update for Ventura County Waterworks District No. 1 (District). This Executive Summary provides key findings and recommendations on the development of the financial plans and updated water rates. Consistent with American Water Works Association (AWWA) standards, we have developed rates that also ensure the District effectively:

- meets operation and maintenance costs,
- maintains sufficient funding for critical capital replacement and refurbishment needs, and
- maintains sufficient reserve fund balances.

It has been a pleasure working with you, and we thank you and the District staff for the support provided during the course of this study.

Sincerely,

A blue ink signature of Sudhir Pardiwala, written in a cursive style.

Sudhir Pardiwala
Executive Vice President

A blue ink signature of Arisha Ashraf, written in a cursive style.

Arisha Ashraf, PhD
Lead Consultant

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1. Executive Summary

1.1. Objectives

In 2021, Ventura County Water and Sanitation Department (County) engaged Raftelis to update water rates for Waterworks District Number One – Moorpark (District). This follows the Water Cost of Service and Rate Analysis Raftelis conducted for the County in 2017. The main objectives of this study are:

1. to maintain financial sufficiency for the water enterprise through developing a robust revenue requirement that meets day-to-day operational and critical capital and reserves needs and
2. propose rates consistent with cost of service principles followed in the industry.

This study used methodologies that are consistent with industry standard practices for rate setting as promulgated by the American Water Works Association (AWWA) and California Constitution Article XIII D, Section 6(b) known as Proposition 218. This summary provides the proposed financial plan and resultant rates for FY 2023 through FY 2027. Details of the study, such as underlying calculations and data, are available in the financial planning model developed by Raftelis for the County.

1.2. Legal and Statutory Considerations

1.2.1. PROPOSITION 218

In November 1996, California voters approved Proposition 218, which amended the California Constitution by adding Article XIII C and Article XIII D. Article XIII D placed substantive limitations on the use of the revenue collected from property-related fees and on the amount of the fee that may be imposed on each parcel. Additionally, it established procedural requirements for imposing new, or increasing existing, property-related fees. The California Supreme Court has determined that water service fees are property-related fees. These provisions require that a property-related fee must meet all of the following requirements:

- Revenues derived from the fee must not exceed the funds required to provide the property-related service.
- Revenues from the fee must not be used for any purpose other than that for which the fee is imposed.
- The amount of a fee imposed upon any parcel or person as an incident of property ownership must not exceed the proportional cost of the service attributable to the parcel.
- The fee may not be imposed for a service, unless the service is actually used by, or immediately available to, the owner of the property subject to the fee. A fee based on potential or future use of a service is not permitted and stand-by charges must be classified as assessments subject to the ballot protest and proportionality requirements for assessments.
- No fee may be imposed for general governmental services, such as police, fire, ambulance, or libraries, where the service is available to the public in substantially the same manner as it is to property owners. The five substantive requirements in Article XIII D are structured to place limitations on (1) the use of the revenue collected from property-related fees and (2) the allocation of costs recovered by such fees to ensure that they are proportionate to the cost of providing the service attributable to each parcel.

Proposition 218 requires that water rates cannot be “arbitrary and capricious,” meaning that the rate-setting methodology must be sound and that there must be a nexus between the costs and the rates charged in addition to meeting the substantive requirements set forth therein. California Courts have also made clear that, while agencies are authorized to use industry-standard rate setting methodologies set forth in AWWA Manual M1, rates for water service must meet the substantive requirements of Proposition 218. This study demonstrates that such requirements have been met for the water fees.

1.2.2. 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 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.

Raftelis followed the prime principle of rate setting in the AWWA publication, *Manual of Water Supply Practice M1, Principles of Water Rates, Fees, and Charges*, 7th Edition (AWWA Manual M1), “water rates and charges should be recovered from classes of customers in proportion to the cost of serving those customers.”

1.3. County Background

The District provides water service to over 10,0000 customers across roughly 20,000 acres. This includes the City of Moorpark and the contiguous, unincorporated areas north and west of Moorpark. Infrastructure assets include 138 miles of water lines, 5 groundwater wells, 18 tanks, 10 booster pump stations, and 4 lift stations. Water is procured from local groundwater wells and imported water from the California State Water Project through Metropolitan Water District of Southern California and Calleguas Municipal Water District. More than 80% of water is supplied by this imported source. The District owns and operates the Moorpark Water Reclamation Facility, which has a design capacity of 5.0 million gallons per day (mgd).

1.4. Key Assumptions

To develop projections based on current budgets, we need to make assumptions regarding inflation and growth. The District provided financial information through FY 2022, after which these data were inflated in outyears based on the assumptions in Table 1-1. Lines 1 – 6 are O&M escalation factors, while Line 7 escalates revenue generated from interest. All other non-rate revenues are not inflated during the planning period. These values are based on discussions with District staff. Table 1-2 presents assumptions on demand and account growth in outyears, also based on discussions with District staff.

Table 1-1: Escalation Factors

Line No.	Inflation Factor	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
1	General	2.0%	2.0%	2.0%	2.0%	2.0%
2	Salary	3.5%	3.5%	3.5%	3.5%	3.5%
3	Benefits	5.0%	5.0%	5.0%	5.0%	5.0%
4	Utilities	5.0%	5.0%	5.0%	5.0%	5.0%
5	Water Costs	3.7%	3.7%	3.7%	3.7%	3.7%
6	Capital	3.2%	3.2%	3.2%	3.2%	3.2%
7	Reserve Interest Rate	0.5%	0.8%	1.0%	1.3%	1.5%

Table 1-2: Growth Assumptions

Growth Factor	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Demand - All Classes	100.0%	99.0%	99.0%	99.0%	99.0%
Account Growth					
Residential (SFR and MFR)	1.0%	1.0%	1.0%	1.0%	1.0%
All Other Classes	0.0%	0.0%	0.0%	0.0%	0.0%

1.5. Projected O&M Expenses

Table 1-3 shows the projected O&M expenses for the planning period. These costs were escalated based on the assumptions in Table 1-1. Lines 1 - 2 reflect water purchase costs, summarized in Table 1-6 (Line 6). With the exception of water system power costs, all other expenses in Table 1-3 are summarized in the proposed financial plan (Table 1-6) as “Other O&M”.

Table 1-3: Projected O&M Expenses

Line No.	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
1	Water Supply Cost	\$12,022,400	\$12,544,258	\$12,958,985	\$13,387,731	\$13,830,982	\$14,432,671
2	Groundwater Extraction	\$43,900	\$44,171	\$44,003	\$43,837	\$43,673	\$43,947
3	Water And Sewer System Power	\$778,300	\$822,264	\$860,098	\$899,693	\$941,133	\$994,387
4	Voice Data Isf	\$7,800	\$7,959	\$8,122	\$8,288	\$8,458	\$8,631
5	Radio Communications Isf	\$2,300	\$2,347	\$2,395	\$2,444	\$2,494	\$2,545
6	General Insurance Allocation Isf	\$14,600	\$14,899	\$15,203	\$15,514	\$15,831	\$16,155
7	Equipment Maintenance	\$20,000	\$20,409	\$20,826	\$21,252	\$21,686	\$22,130
8	Equipment Maintenance Contracts	\$763,200	\$778,804	\$794,727	\$810,975	\$827,556	\$844,476
9	Maintenance Supplies	\$385,000	\$392,871	\$400,904	\$409,100	\$417,465	\$426,000
10	Water System Maintenance Supply	\$80,000	\$81,636	\$83,305	\$85,008	\$86,746	\$88,519
11	Buildings And Improvements Maintenance	\$96,000	\$97,963	\$99,966	\$102,009	\$104,095	\$106,223
12	Other Buildings And Improvements Maintenance	\$50,000	\$51,022	\$52,065	\$53,130	\$54,216	\$55,325
13	Facilities and Materials Sq Ft Allocation ISF	\$51,900	\$52,961	\$54,044	\$55,149	\$56,276	\$57,427
14	Memberships And Dues	\$8,000	\$8,164	\$8,330	\$8,501	\$8,675	\$8,852
15	Cost Allocation Plan Charges	\$47,600	\$48,573	\$49,566	\$50,580	\$51,614	\$52,669
16	Miscellaneous Expense	\$17,000	\$17,348	\$17,702	\$18,064	\$18,434	\$18,810
17	Cross Connection Fees	\$22,500	\$22,960	\$23,429	\$23,908	\$24,397	\$24,896
18	Federal State Permits And Fees	\$56,000	\$57,145	\$58,313	\$59,506	\$60,722	\$61,964
19	Conservation Program	\$4,000	\$4,082	\$4,165	\$4,250	\$4,337	\$4,426
20	Printing And Binding Non Isf	\$2,000	\$2,041	\$2,083	\$2,125	\$2,169	\$2,213
21	Mail Center Isf	\$43,800	\$44,696	\$45,609	\$46,542	\$47,493	\$48,464
22	Purchasing Charges Isf	\$23,000	\$23,470	\$23,950	\$24,440	\$24,939	\$25,449
23	Graphics Charges Isf	\$49,800	\$50,818	\$51,857	\$52,917	\$53,999	\$55,103
24	Stores Isf	\$8,000	\$8,164	\$8,330	\$8,501	\$8,675	\$8,852
25	Engineering And Technical Surveys	\$289,500	\$295,419	\$301,459	\$307,622	\$313,912	\$320,330
26	Refuse Disposal	\$1,000	\$1,020	\$1,041	\$1,063	\$1,084	\$1,106
27	Attorney Services	\$415,000	\$423,485	\$432,143	\$440,978	\$449,994	\$459,195
28	Lab Services	\$22,000	\$22,450	\$22,909	\$23,377	\$23,855	\$24,343
29	Collection And Billing Services	\$42,700	\$43,573	\$44,464	\$45,373	\$46,301	\$47,247
30	Other Professional And Specialized Non Isf	\$5,000	\$5,102	\$5,207	\$5,313	\$5,422	\$5,532
31	County Geographical Information Systems Expense I:	\$1,000	\$1,020	\$1,041	\$1,063	\$1,084	\$1,106
32	Management And Admin Survey Isf	\$385,300	\$393,178	\$401,216	\$409,419	\$417,790	\$426,332
33	Public Works Isf Charges	\$3,367,500	\$3,436,350	\$3,506,607	\$3,578,301	\$3,651,460	\$3,726,115
34	Professional And Specialized Services Isf	\$2,000	\$2,041	\$2,083	\$2,125	\$2,169	\$2,213
35	Publications And Legal Notices	\$500	\$510	\$521	\$531	\$542	\$553
36	Rent And Leases Equipment Noncounty Owned	\$45,000	\$45,920	\$46,859	\$47,817	\$48,795	\$49,792
37	Computer Equipment <5000	\$5,000	\$5,102	\$5,207	\$5,313	\$5,422	\$5,532
38	Small Tools And Instruments	\$8,000	\$8,164	\$8,330	\$8,501	\$8,675	\$8,852
39	Meter Purchases	\$260,000	\$265,316	\$270,740	\$276,276	\$281,924	\$287,688
40	Transportation Charges Isf	\$300	\$306	\$312	\$319	\$325	\$332
41	Transportation Work Order	\$8,000	\$8,164	\$8,330	\$8,501	\$8,675	\$8,852
42	Total	\$6,610,300	\$6,745,450	\$6,883,363	\$7,024,095	\$7,167,705	\$7,314,251

1.6. Capital Improvement Plan (CIP)

The Repair and Replacement capital improvement projects for the planning period are shown in Table 1-4. Based on discussions with District staff, not all projects will be implemented.

Table 1-4: Repair & Replacement CIP

Projects	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Stockton Reservoir #2 (New)	\$3,350,000	\$0	\$0	\$0	\$0	\$0
Redrill Well No. 97 & Water Treatment Facilities	\$1,600,000	\$0	\$0	\$0	\$0	\$0
Well 95 Booster Pump Station Upgrade	\$100,000	\$0	\$0	\$0	\$0	\$0
Well Nos. 95 & 98 Water Treatment Facilities	\$0	\$0	\$0	\$0	\$527,686	\$538,239
0.2 MG Reservoir No. 2 at Fruitvale	\$0	\$0	\$0	\$0	\$78,801	\$80,377
General Water System Improvement	\$315,000	\$600,000	\$600,000	\$600,000	\$600,000	\$600,000
Well 95 MCC Replacement	\$510,000	\$0	\$0	\$0	\$0	\$0
SCADA Improvement	\$50,000	\$51,000	\$52,020	\$53,060	\$54,122	\$55,204
Valve Replacement Proj (12" < larger, 50 yds)	\$120,000	\$0	\$0	\$0	\$0	\$0
Valve Replacement Proj (10" > larger, 50 yds)	\$120,000	\$0	\$0	\$0	\$0	\$0
S&K Generator	\$160,000	\$0	\$0	\$0	\$0	\$0
Portable Generator (Well 98)	\$500,000	\$0	\$0	\$0	\$0	\$0
Grimes Reservoir and 770 Zone Interconnections	\$0	\$300,000	\$3,200,000	\$0	\$0	\$0
Waterline Roberts, Esther, Sherman Ave (Walnut Acres Tract)	\$0	\$0	\$200,000	\$550,000	\$1,800,000	\$0
1.5 MG Reservoir No. 2 at Moorpark Yard	\$0	\$0	\$0	\$0	\$650,000	\$650,000
0.2 MG Reservoir No. 2 at Fruitvale	\$0	\$0	\$0	\$0	\$150,000	\$150,000
Stockton Reservoir No. 1 Replacement	\$0	\$0	\$0	\$0	\$375,000	\$375,000
1.5 MG Ridgemark Reservoir No. 2	\$0	\$0	\$0	\$0	\$436,250	\$436,250
Emergency Booster Pump Station within 920 Zone	\$0	\$0	\$0	\$0	\$337,500	\$337,500
10-inch Water Line from Pecan Avenue, northward at 944 Zone	\$0	\$0	\$0	\$0	\$337,500	\$337,500
8-inch 5700 ft Water Line between Stockton Rd & Grimes Canyon Road at 744 Zone	\$0	\$0	\$0	\$0	\$338,750	\$338,750
8-inch 1600 ft Water Line between Stockton Road and Grimes Canyon Road at 944 Zone	\$0	\$0	\$0	\$0	\$350,000	\$350,000
10-inch Water Line North of Intersection of Los Angeles Ave. & Hitch Blvd. at 757 Zone	\$0	\$0	\$0	\$0	\$500,000	\$500,000
Water Line between Stockton Road and Well No. 98	\$0	\$0	\$0	\$0	\$500,000	\$500,000
12-inch Water Line South of Well No. 98 at 944 Zone	\$0	\$0	\$0	\$0	\$500,000	\$500,000
944 and 1250 Pressure Zone Connection	\$0	\$0	\$0	\$0	\$662,500	\$662,500
Reservoirs Repairs, Relining, & Recoating	\$1,659,000	\$750,000	\$750,000	\$750,000	\$750,000	\$750,000
Total	\$8,484,000	\$1,701,000	\$4,802,020	\$1,953,060	\$8,948,108	\$7,161,321

1.7. Proposed Financial Plan

The financial plan shows revenue adjustments that generate enough water rate revenue to meet the District’s short- and long-term obligations and avoid significant rate fluctuations. The revenue will maintain appropriate reserves and provide adequate debt service coverage while maintaining a sensitivity to ratepayers’ rate increases. Revenue adjustments represent the average rate increase for District customers as a whole; rate increases for individual classes will depend on the cost of service results – since a cost of service analysis allocates costs to each user class. Table 1-5 shows the proposed revenue adjustments for the financial planning period. The District has decided not to implement any rate increases in FY 2022.

Table 1-5: Proposed Revenue Adjustments

Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Effective Month	July	July	July	July	July
Revenue Adjustment (%)	0.0%	3.5%	9.0%	9.0%	3.5%

Table 1-6 shows the proposed financial plan incorporating the proposed revenue adjustments. The proposed financial plan ensures financial sufficiency and solvency for the District to meet projected expenditures and financial obligations, and reserve targets while funding critical CIP projects. The District does not have any existing debt and does not propose to issue any debt during the planning period. Although the District anticipates receiving grant funding, this is currently not reflected in the proposed financial plan because the exact amount and terms have not been finalized as of the writing of this document. The key elements of Table 1-6 are summarized as follows:

- **Revenues:** Line 2 shows revenue from current rates, assuming no revenue adjustments. Line 3 shows the additional revenue received from the revenue adjustments proposed in Table 1-5. Line 5 shows total rate and non-rate revenues.

- **O&M:** These are expenses that allow the water enterprise to function daily. The bulk of O&M expenses are made up of water supply and power costs (Lines 8 and 9). Total O&M expenses are shown in Line 11.
- **Rate-Funded Capital (PAYGO):** Line 13 shows the CIP expenditures that will be paid by rate revenues and reserves. Since there is no debt issuance during the planning period, critical CIP expenses will be funded through PAYGO.
- **Net Cashflow:** The net cashflow (Line 16) is the total revenue (Line 5) less O&M (Line 11), and less PAYGO (Line 13). Cashflow is negative until FY 2025 indicating reserve funding.
- **Ending Balance:** The ending reserve balance (Line 18) is positive throughout the planning period, and ultimately exceeds the recommended target balance (Line 19) by the end of the planning period.

Table 1-6: Proposed Financial Plan

Line No.	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
1	Revenues						
2	Revenue at Existing Rates	\$19,323,911	\$19,448,240	\$19,404,120	\$19,360,794	\$19,318,254	\$19,444,280
3	Revenue Adjustment	\$0	\$680,688	\$2,486,638	\$4,446,855	\$5,268,521	\$6,169,042
4	Non-Rate Revenues	\$887,053	\$891,751	\$882,773	\$880,541	\$897,591	\$914,542
5	Total Revenues	\$20,210,963	\$21,020,680	\$22,773,531	\$24,688,189	\$25,484,367	\$26,527,863
6							
7	O&M Expenses						
8	Water Supply	\$12,158,394	\$12,697,335	\$13,101,634	\$13,519,554	\$13,951,582	\$14,567,345
9	Water System Power	\$778,300	\$822,264	\$860,098	\$899,693	\$941,133	\$994,387
10	Other O&M Expenses	\$6,610,300	\$6,745,450	\$6,883,363	\$7,024,095	\$7,167,705	\$7,314,251
11	Total O&M Expenses	\$19,546,994	\$20,265,049	\$20,845,095	\$21,443,343	\$22,060,420	\$22,875,983
12							
13	Rate-Funded Capital	\$2,969,400	\$1,275,750	\$1,920,808	\$488,265	\$2,237,027	\$1,790,330
14	Total Revenue Requirement	\$22,516,394	\$21,540,799	\$22,765,903	\$21,931,608	\$24,297,447	\$24,666,313
15							
16	Net Cashflow (Line 5 - Line 14)	(\$2,305,431)	(\$520,120)	\$7,628	\$2,756,582	\$1,186,920	\$1,861,550
17							
18	Ending Reserve Balance	\$7,377,593	\$6,481,033	\$6,129,800	\$8,542,462	\$9,394,589	\$10,943,364
19	Target Reserve Balance	\$8,927,172	\$9,187,187	\$9,508,382	\$9,849,633	\$10,081,815	\$10,388,360
20	Variance from Target	(\$1,549,579)	(\$2,706,154)	(\$3,378,581)	(\$1,307,171)	(\$687,226)	\$555,003

The financial plan presented in Table 1-6 is shown graphically in Figure 1-1. The dark blue bars represent the net operating cash flow, whereas the other colored bars break out the components of expenses (Water Supply & Power Costs, Other O&M, CIP). The dashed dark blue line represents revenues without revenue adjustments, while the solid line is revenues with adjustments (i.e., proposed revenues). As shown in the graph, proposed revenues start below the expense bars and continue to rise to the same level as expenses by the end of the planning period.

Figure 1-1: Proposed Financial Plan

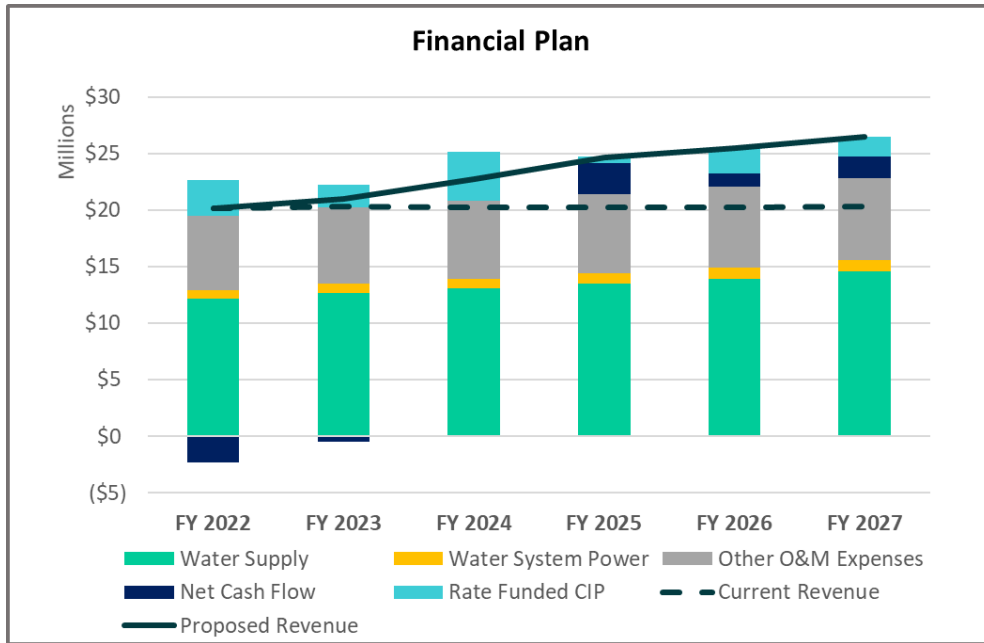
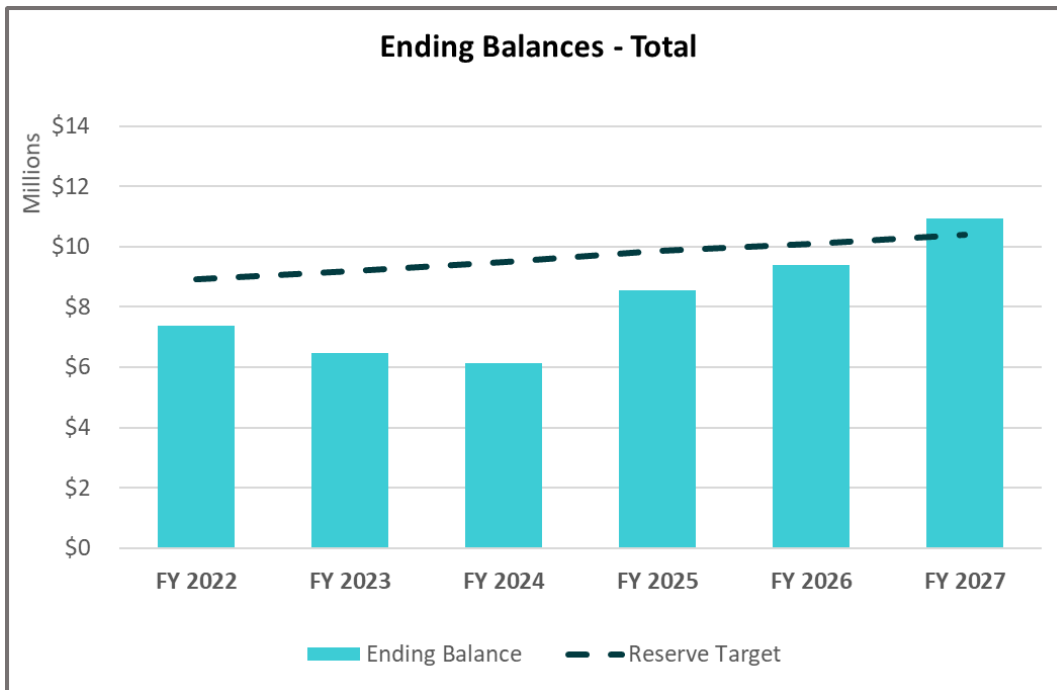


Figure 1-2 shows a graph of ending reserve balances (teal bars) which ultimately rise beyond the level of target reserve balances (dashed line). The target reserves are retained at the levels originally recommended in the previous study at 25 percent of the operating expenses for Operating Reserves, 10 percent of rate revenue for the Rate Stabilization Reserve and 2 percent of the replacement costs of assets for the Replacement Reserve.

Figure 1-2: Ending Reserve Balances



1.8. Revenue Requirement

The rate-making process starts by identifying the "test-year" (rate-setting year, which is FY 2023) revenue requirement from rates. The revenue requirement is the net of the operating and capital expenses less revenue offsets which include miscellaneous fees, fire service fees, disaster relief funds, concessions, interest and rent. Table 1-7 shows the FY 2023 revenue requirement distributed between Operating and Capital Revenue Requirements. The value of the gross revenue requirement (Line 11) is the same as the total expenditures for FY 2023 (Line 14) in Table 1-6. We arrive at the net revenue requirement (Line 24) after subtracting revenue offsets (Line 17) and adjustments (Line 22).

Table 1-7: FY 2023 Revenue Requirement

Line No.	Description	Operating	Capital	Total
1	O&M Expenses			
2	Water Supply	\$12,697,335	\$0	\$12,697,335
3	Water System Power	\$822,264	\$0	\$822,264
4	Other O&M Expenses	\$6,745,450	\$0	\$6,745,450
5	Subtotal O&M Expenses	\$20,265,049	\$0	\$20,265,049
6				
7	Capital Expenses			
8	PAYGO CIP	\$0	\$1,275,750	\$1,275,750
9	Subtotal Capital Expenses		\$1,275,750	\$1,275,750
10				
11	Gross Revenue Requirement	\$20,265,049	\$1,275,750	\$21,540,799
12				
13	(-) Revenue Offsets			
14	Operations	(\$489,200)	\$0	(\$489,200)
15	Operations Interest	(\$19,451)	\$0	(\$19,451)
16	Rental Offset	(\$383,100)	\$0	(\$383,100)
17	Subtotal Revenue Offsets	(\$891,751)	\$0	(\$891,751)
18				
19	(-) Adjustments			
20	Transfers to (from) Reserves	(\$520,120)	\$0	(\$520,120)
21	Mid-Year Adjustment	\$0	\$0	\$0
22	Subtotal Adjustments	(\$520,120)	\$0	(\$520,120)
23				
24	Net Revenue Requirement	\$18,853,179	\$1,275,750	\$20,128,929

1.9. Cost of Service Analysis

The cost of service (COS) analysis is a method of allocating the annual revenue requirement from rates developed in the financial plan to customer classes based on the principle of cost causation. Customer classes are assigned costs based on the demands each customer class imposes on the water utility system. The cost causation components for this analysis include:

- Water Supply
- Base Delivery
- Peaking (Maximum Day, Maximum Hour)

- Fire Service
- Customer Service
- Revenue Offset

Table 1-8 distributes the revenue requirement between fixed and volumetric components, which results in the revenue recovery shown in Line 10.

Table 1-8: Fixed versus Volumetric Revenue Recovery

Line No.	Cost Component	Revenue Requirement	Fixed	Volumetric
1	Supply	\$13,020,176		\$13,020,176
2	Base Delivery	\$2,167,211		\$2,167,211
3	Max Day	\$2,310,964		\$2,310,964
4	Max Hour	\$544,727		\$544,727
5	Fire	\$138,381	\$138,381	
6	Meter	\$2,013,374	\$2,013,374	
7	Customer Service	\$354,820	\$354,820	
8	Revenue Offset			(\$383,100)
9	Total		\$2,506,575	\$17,659,978
10	Revenue Recovery (%)		12%	88%

The revenue requirement for each cost component is further broken down into a unit cost, summarized in Table 1-9. The final step in the COS analysis is to distribute costs to each customer class, as shown in Table 1-10. The details of this analysis are available in the comprehensive COS model developed by Raftelis.

Table 1-9: Unit Cost of Service

Description	Supply	Base Delivery	Max Day	Max Hour	Fire	Meter	Customer	Rental Offset
Revenue Requirement	\$13,020,176	\$2,167,211	\$2,310,964	\$544,727	\$138,381	\$2,013,374	\$354,820	(\$383,100)
Units of Service	3,842,642	3,842,642	5,799	4,962	3,444	200,881	141,805	3,842,642
Units	hcf	hcf	hcf	hcf	equiv. meter/yr	equiv. meter/yr	bills/yr	hcf
Unit Cost	\$3.39	\$0.56	\$398.54	\$109.78	\$40.18	\$10.02	\$2.50	(\$0.10)

The unit costs are applied to the demands of the various customer classes to determine the total costs to be recovered from each class as shown in Table 1-10.

Table 1-10: Class COS

Customer Class	FY 2023 COS	COS at Existing Rates
Residential (Consolidated)	\$9,817,015	\$10,079,981
Tier 1	\$0	\$0
Tier 2	\$0	\$0
Tier 3	\$0	\$0
Residential Non-Tiered	\$2,013,040	\$1,866,859
Residential Multi Family	\$697,531	\$664,129
Commercial	\$1,367,993	\$1,322,377
Agricultural	\$4,354,111	\$3,650,464
Industrial	\$188,974	\$181,100
Institutional	\$1,361,260	\$1,331,243
Temporary Construction	\$154,736	\$166,924
Private Fire Service	\$146,307	\$166,792
Agricultural Dwelling	\$1,291	\$0
Tier 1	\$64,295	\$54,722
Tier 2	\$0	\$0
Total	\$20,166,553	\$19,484,592

1.10. Rate Derivation

This section shows the unit costs allocation used to develop volumetric and fixed rates for each customer class. Existing rates are provided in Tables 1-11 to 1-13.

Table 1-11: Existing Volumetric Rates

Customer Class	\$/hcf
Residential (Consolidated)	
Tier 1	\$3.95
Tier 2	\$4.72
Tier 3	\$5.42
Residential Non-Tiered	\$4.84
Residential Multi Family	\$4.18
Commercial	\$4.52
Agricultural	\$4.09
Industrial	\$4.25
Institutional	\$5.08
Temporary Construction	\$6.44
Agricultural Dwelling	
Tier 1	\$3.95
Tier 2	\$4.09
Private Fire	\$6.22

Table 1-12: Existing Fixed Charges

Meter Size	Charge (\$)
3/4"	14.02
1"	\$18.91
1 1/2"	\$31.10
2"	\$45.73
3"	92.05
4"	\$160.32
6"	\$323.71

Table 1-13: Existing Fire Line Charges

Meter Size	Charge (\$)
2"	8.87
3"	\$13.39
4"	\$21.19
6"	\$49.23
8"	97.59
10"	170.31

Table 1-14 through Table 1-16 show the derivation of volumetric, fixed, and private fire line rates and charges based on the unit costs in Table 1-9. The differences between proposed and current charges are also shown in these tables. It is important to note that these differences in unit rates/charges are not indicative of the total bill impact, which are the sum of volumetric rates and fixed charges. The current tier definitions are retained for the single family residential tiered customers.

Table 1-14: Volumetric Rate Derivation

Customer Class	Supply	Base Delivery	Peaking	Rental Offset	Proposed Volumetric Rate	Current Charge	Difference (\$)	Difference (%)
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)
Residential (Consolidated)								
Tier 1	\$3.39	\$0.56	\$0.18	(\$0.10)	\$4.03	\$3.95	\$0.08	2%
Tier 2	\$3.39	\$0.56	\$0.88	(\$0.10)	\$4.74	\$4.72	\$0.02	0%
Tier 3	\$3.39	\$0.56	\$1.51	(\$0.10)	\$5.37	\$5.42	(\$0.05)	-1%
Residential Non-Tiered	\$3.39	\$0.56	\$0.97	(\$0.10)	\$4.83	\$4.84	(\$0.01)	0%
Residential Multi Family	\$3.39	\$0.56	\$0.39	(\$0.10)	\$4.24	\$4.18	\$0.06	1%
Commercial	\$3.39	\$0.56	\$0.70	(\$0.10)	\$4.56	\$4.52	\$0.04	1%
Agricultural	\$3.39	\$0.56	\$0.91	(\$0.10)	\$4.77	\$4.09	\$0.68	17%
Industrial	\$3.39	\$0.56	\$0.45	(\$0.10)	\$4.31	\$4.25	\$0.06	1%
Institutional	\$3.39	\$0.56	\$1.20	(\$0.10)	\$5.06	\$5.08	(\$0.02)	0%
Temporary Construction	\$3.39	\$0.56	\$1.81		\$5.77	\$6.44	(\$0.67)	-10%
Agricultural Dwelling								
Tier 1	\$3.39	\$0.56	\$0.18	(\$0.10)	\$4.04	\$3.95	\$0.09	2%
Tier 2	\$3.39	\$0.56	\$0.91	(\$0.10)	\$4.77	\$4.09	\$0.68	17%

Table 1-15: Fixed Charge Derivation

Meter Size	Hydraulic Capacity	3/4" Equivalent Ratio	Meter	Customer	Proposed Fixed Rate	Current Charge	Difference (\$)	Difference (%)
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)
3/4"	30	1.00	\$10.02	\$2.50	\$12.53	\$14.02	-\$1.49	-11%
1"	50	1.67	\$16.70	\$2.50	\$19.21	\$18.91	\$0.30	2%
1 1/2"	100	3.33	\$33.41	\$2.50	\$35.92	\$31.10	\$4.82	15%
2"	160	5.33	\$53.45	\$2.50	\$55.96	\$45.73	\$10.23	22%
3"	350	11.67	\$116.93	\$2.50	\$119.44	\$92.05	\$27.39	30%
4"	630	21.00	\$210.48	\$2.50	\$212.98	\$160.32	\$52.66	33%
6"	1300	43.33	\$434.32	\$2.50	\$436.82	\$323.71	\$113.11	35%

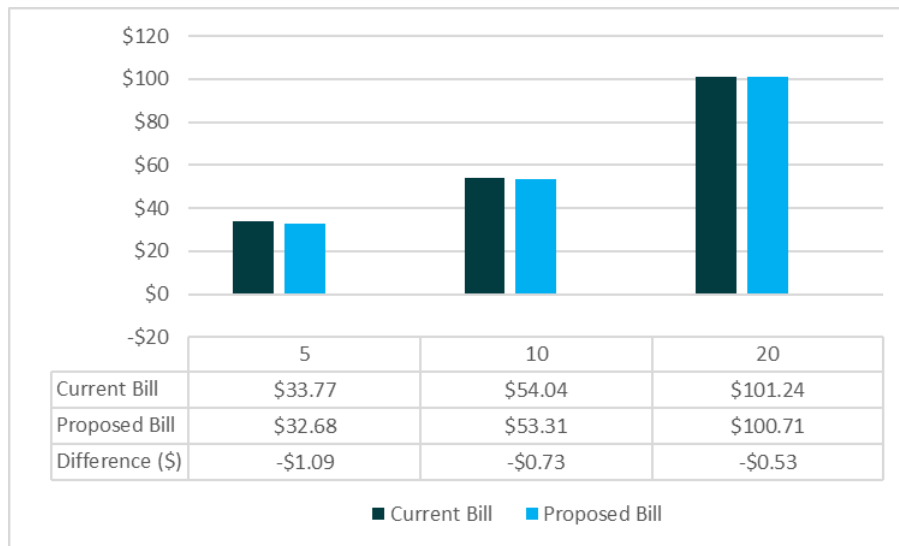
Table 1-16: Fire Line Charge Derivation

Meter Size	6" Equivalent Ratio	Fire	Customer	Proposed Fixed Rate	Current Charge	Difference (\$)	Difference (%)
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)
2"	0.06	\$2.23	\$2.50	\$4.74	\$8.87	-\$4.13	-47%
3"	0.16	\$6.49	\$2.50	\$9.00	\$13.39	-\$4.39	-33%
4"	0.34	\$13.83	\$2.50	\$16.34	\$21.19	-\$4.85	-23%
6"	1.00	\$40.18	\$2.50	\$42.69	\$49.23	-\$6.54	-13%
8"	2.13	\$85.63	\$2.50	\$88.13	\$97.59	-\$9.46	-10%
10"	3.83	\$153.98	\$2.50	\$156.49	\$170.31	-\$13.82	-8%

1.11. Bill Impacts

For purposes of brevity, only single-family residential bill impacts are shown in Figure 1-3.

Figure 1-3: SFR Bill Impacts



1.12. Proposed Rates

The proposed rates for the planning period are provided in the following tables.

Table 1-17: Proposed Volumetric Rates

Customer Class	Current	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Residential (Consolidated)							
Tier 1	\$3.95	\$4.03	\$4.17	\$4.55	\$4.96	\$5.13	\$5.31
Tier 2	\$4.72	\$4.74	\$4.91	\$5.35	\$5.83	\$6.03	\$6.24
Tier 3	\$5.42	\$5.37	\$5.56	\$6.06	\$6.60	\$6.83	\$7.07
Residential Non-Tiered	\$4.84	\$4.83	\$5.00	\$5.45	\$5.94	\$6.15	\$6.36
Residential Multi Family	\$4.18	\$4.24	\$4.39	\$4.78	\$5.21	\$5.40	\$5.59
Commercial	\$4.52	\$4.56	\$4.72	\$5.14	\$5.61	\$5.80	\$6.01
Agricultural	\$4.09	\$4.77	\$4.94	\$5.38	\$5.87	\$6.07	\$6.28
Industrial	\$4.25	\$4.31	\$4.46	\$4.86	\$5.30	\$5.49	\$5.68
Institutional	\$5.08	\$5.06	\$5.24	\$5.71	\$6.22	\$6.44	\$6.67
Temporary Construction	\$6.44	\$5.77	\$5.97	\$6.51	\$7.10	\$7.34	\$7.60
Agricultural Dwelling							
Tier 1	\$3.95	\$4.04	\$4.18	\$4.56	\$4.97	\$5.14	\$5.32
Tier 2	\$4.09	\$4.77	\$4.94	\$5.38	\$5.87	\$6.07	\$6.28
Private Fire	\$6.22	NA	NA	NA	NA	NA	NA

Table 1-18: Proposed Fixed Charges

Meter Size	Current	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
3/4"	\$14.02	\$12.53	\$12.97	\$14.14	\$15.41	\$15.95	\$16.51
1"	\$18.91	\$19.21	\$19.88	\$21.67	\$23.62	\$24.45	\$25.30
1 1/2"	\$31.10	\$35.92	\$37.18	\$40.52	\$44.17	\$45.72	\$47.32
2"	\$45.73	\$55.96	\$57.92	\$63.13	\$68.81	\$71.22	\$73.71
3"	\$92.05	\$119.44	\$123.62	\$134.75	\$146.87	\$152.01	\$157.33
4"	\$160.32	\$212.98	\$220.43	\$240.27	\$261.90	\$271.06	\$280.55
6"	\$323.71	\$436.82	\$452.11	\$492.80	\$537.15	\$555.95	\$575.41

Table 1-19: Proposed Fire Line Charges

Meter Size	Current	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
2"	\$8.87	\$4.74	\$4.91	\$5.35	\$5.83	\$6.03	\$6.24
3"	\$13.39	\$9.00	\$9.32	\$10.15	\$11.07	\$11.45	\$11.86
4"	\$21.19	\$16.34	\$16.91	\$18.43	\$20.09	\$20.80	\$21.52
6"	\$49.23	\$42.69	\$44.18	\$48.16	\$52.50	\$54.33	\$56.23
8"	\$97.59	\$88.13	\$91.21	\$99.42	\$108.37	\$112.17	\$116.09
10"	\$170.31	\$156.49	\$161.97	\$176.54	\$192.43	\$199.17	\$206.14