
Kinneloa Irrigation District

2024 Water Rate Study

Final Report – September 17, 2024

Prepared by: Water Resources Economics, LLC



**Water Resources
Economics**

PROMOTING THE VALUE AND PRICE OF
WATER SERVICE

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September 17, 2024

Tom Majich
General Manager
Kinneloa Irrigation District
1999 Kinclair Dr
Pasadena, CA 91107

Subject: Kinneloa Irrigation District Water Rate Study Report

Dear Mr. Majich,

Water Resources Economics, LLC (WRE) is pleased to submit this 2024 Water Rate Study Report to Kinneloa Irrigation District (District). This report documents the results and recommendations of the District's water rate study. The goal of the study was to develop a five-year schedule of water rates that will sufficiently fund the District's water system expenses, allow the District to meet its financial goals within the study period, and comply with cost-of-service principles.

This study utilized industry-standard rate-setting methodology in accordance with guidelines developed by the American Water Works Association and incorporates guidance provided by the District's Board of Directors. Our project team has a proven track record of developing fair and equitable water rates for numerous public water agencies in California over the past 25 years. We are confident in our ability to develop sound water rates that satisfy the requirements of Proposition 218.

It has been a pleasure assisting the District, and we appreciate the support provided by yourself, Ms. Melanie Timoteo, the Board of Directors, and other District staff during this study.

Sincerely,

A handwritten signature in black ink, appearing to read "Sanjay Gaur".

Sanjay Gaur
President

A handwritten signature in black ink, appearing to read "Hannah Phan".

Hannah Phan
Principal Consultant

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1. EXECUTIVE SUMMARY

1.1 SYSTEM OVERVIEW

The Kinneloa Irrigation District (District) provides water service to 590 metered customer connections, almost all of which are residential customers. The District was formed in October 1953 by Resolution of the Los Angeles County Board of Supervisors and is governed by a five-member Board of Directors elected by the public.

The water system, which is owned and operated by the District, consists of two groundwater wells, over 90,000 feet of transmission and distribution pipelines, five booster pump stations, and ten water storage reservoirs with a total capacity of approximately four million gallons.

The District's primary water supply source is groundwater pumped from the Raymond Basin aquifer, from which the District has an adjudicated pumping allowance of 516 acre-feet (AF). The District also operates five water tunnels producing groundwater from the mountainous formations that surround the District. In addition, the District also maintains six emergency interconnections with the City of Pasadena to supply water to its reservoirs during an emergency.

1.2 RATE STUDY OVERVIEW

Public retail water agencies in California typically conduct a cost-of-service study every five years to ensure that customers are appropriately charged for water service and to reestablish the cost-of-service nexus that is required by Proposition 218. The District has engaged Water Resources Economics, LLC (WRE) to conduct a comprehensive water rate study, with the following objectives:

- Develop a five-year water rate schedule for Calendar Year (CY) 2025 through CY 2029
- Conduct a cost-of-service analysis based on the most recent data and customer use characteristics
- Evaluate a five-year financial plan scenario to meet financial targets for CY 2025 to CY 2029

1.3 LEGAL REQUIREMENTS

Legal considerations relating to retail water rates in California focus heavily on Proposition 218, which was enacted in 1996 and is now reflected in Article XIII C and Article XIII D of the California Constitution. Proposition 218 states that "property related fees and charges" (which include retail water rates) may not exceed the proportional cost of providing the service to the customer and may not be used for any purpose other than providing said service. The practical implication is that public retail water agencies in California must demonstrate a sufficient nexus between the costs incurred by the agency to provide water service and the rates charged to customers. The primary means by which retail water agencies address this requirement is by conducting a "cost-of-service analysis."

Proposition 218 also affects the rate adoption process by requiring agencies to hold a public hearing to adopt rates. The agency must mail public hearing notices to all customers no fewer than 45 days prior to the public hearing. The public hearing notices must clearly show all proposed rate changes,

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provide information on the public hearing date/time/location, and provide instructions on how customers may protest the proposed rate changes. If a majority of customers submit a protest, the proposed rate changes cannot be adopted.

1.4 RATE-SETTING METHODOLOGY

This study was conducted using industry-standard methodology outlined by the American Water Works Association (AWWA) in its *Manual of Water Supply Practices M1: Principles of Water Rates, Fees and Charges, Seventh Edition* (M1 Manual). The rate study process includes the following steps:

1. **Financial Plan:** Annual revenues and expenses are projected over the rate-setting period to determine the magnitude of rate increases needed to maintain financial sufficiency. Financial policies, such as reserve targets, are also evaluated and updated if necessary.
2. **Cost-of-Service Analysis:** Costs are allocated to customers in proportion to use of and burden on the water system. The overall goal is to establish a robust nexus between the costs incurred by an agency and the rates charged to customers, as required by Proposition 218.
3. **Rate Design:** The existing rate structure is evaluated, and potential changes are identified. A multi-year proposed rate schedule is then calculated directly from the results of the financial plan and cost-of-service analysis.
4. **Rate Study Documentation:** A rate study report is developed to document the proposed rate development process. This provides transparency and enhances compliance with Proposition 218 requirements. This document serves as the report for this rate study.

1.5 ADDITIONAL INFORMATION AND DISCLAIMERS

This report summarizes the data, analyses, processes, and results of the District's water rate study. Some important information to keep in mind when reading the report includes the following:

- All study projections are based on the best available data as of April 2024.
- All table values are rounded to the nearest digit shown unless stated otherwise. However, all calculations are based on precise values. Attempting to manually recreate the calculations described in this report from the values displayed in tables may therefore produce slightly different results.
- All current and proposed rates and charges in this report are shown on a monthly basis.

1.6 CURRENT WATER RATES

The District's current water rate structure includes a fixed daily service charge, which is a readiness to serve charge computed based on the actual number of days between meter readings, and a monthly usage charge per hundred cubic feet (ccf) of water usage. The water rates apply to all customers and meter sizes. **Table 1-1** shows the current water rates that were adopted in the two most recent budgets.

Table 1-1: Current Water Rates

Line		As of 1/1/23	As of 1/1/24
1	Daily Service Charge	\$2.48	\$2.48
2	Monthly Usage Charge (\$/ccf)	\$4.98	\$6.20

1.7 FINANCIAL PLAN

WRE worked closely with District staff and the District’s Board of Directors to determine the financial plan scenario that best suits the District’s needs. The results and recommendations of the water rate study are driven by the District’s financial performance, input from District staff, and feedback and direction from the Board.

FACTORS AFFECTING FINANCIAL PERFORMANCE

The water system’s financial performance is driven by the ability of the current water rates to meet the District’s funding needs. To maintain financial sufficiency, water rates must fully fund operations and maintenance (O&M) costs, capital improvement plan (CIP) expenditures, and any relevant financial policies, which typically include target reserve balances and debt coverage.

The key factors affecting financial performance include:

- **Substantial capital investment needs over the next five years:** The cost of planned capital projects over the next five years (CY 2025 through CY 2029) is approximately \$8.3 million. Key projects include the Brown-Glen to Villa Knolls/Edgecliff Project, the Villa Mesa/Villa Rica and the Lower Pasadena Glen Road pipeline replacement projects.
- **Water demand fluctuations:** The District currently receives over 75 percent of its revenue from water consumption. A reduction in water usage can result in major revenue shortfall for the District. For example, in CY 2023, water usage was over 30 percent lower than the prior year.
- **Reserve policy targets:** The District’s current reserve policy includes targets for operating, emergency, replacement, and capital improvement needs. The reserve policy in place allows the District to maintain cash on hand to meet short-term cash flow requirements, to cover unexpected repairs, and to execute CIP projects. WRE proposes that the District revise its reserve policy to be more in line with its operations and risks.

PROPOSED REVENUE ADJUSTMENTS AND DEBT ISSUANCES

Overall annual increases in water rate revenues resulting from rate increases are referred to as “revenue adjustments.” WRE worked with the Board and District staff to determine the most appropriate financial plan scenario, which is shown in **Table 1-2**. The proposed financial plan scenario includes five years of revenue adjustments, which are required to maintain financial sufficiency and resiliency, and one debt issuance in CY 2025 to refund the current debt and fund \$4.6 million worth of CIP projects.

Table 1-2: Proposed Financial Plan Scenario

Line	Fiscal Year	Revenue Adjustments	Debt Issuance	Debt Refund	Debt Proceeds for CIP
1	CY 2025	19.0%	\$5,699,482	\$935,169	\$4,564,831
2	CY 2026	19.0%	\$0		\$0
3	CY 2027	9.0%	\$0		\$0
4	CY 2028	9.0%	\$0		\$0
5	CY 2029	9.0%	\$0		\$0

Under this proposed financial plan, the District will meet its reserve targets by year four of the planning period and meet coverage requirements for all years.

1.8 COST-OF-SERVICE ANALYSIS

A cost-of-service analysis is a technical process used to determine the cost of providing water service to the District’s customers based on each customer’s use of and burden on the water system. The cost-of-service analysis is the basis of the nexus between the costs incurred by the utility to provide water service and the water rates charged to customers, which is a requirement of Proposition 218.

COST-OF-SERVICE METHODOLOGY

The cost-of-service methodology is based on industry standards set forth by AWWA in its M1 Manual; this rate study utilizes the base-extra capacity method. The overall goal of the cost-of-service analysis is to develop “unit costs,” which provide the basis from which proposed rates are directly calculated. Note that although the study period spans three years, the cost-of-service analysis is limited to a single representative year referred to as the “test year.” The test year in this study is CY 2024. The key steps in conducting a water cost-of-service analysis are outlined below:

- **Revenue requirement determination:** The total rate revenue requirement for the test year is determined based on the results of the proposed financial plan and divided into primary sub-components (operating, capital, etc.).
- **Cost functionalization:** Operating and capital costs are evaluated and assigned to “functional categories” in the water system (e.g., customer service, water supply, distribution, etc.). This provides a proportional breakdown of system costs by functional category.
- **Revenue requirement allocation to cost causation components:** Functionalized costs are allocated to “cost causation components” (e.g., water supply, base delivery, max day delivery, etc.), which is used to attribute customers’ use of the system to the costs incurred by the District.
- **Unit cost development:** The rate revenue requirement allocation for each individual cost causation component is divided by the appropriate units of service to establish unit costs for the test year. Unit costs provide the basis from which proposed rates are calculated.

1.9 PROPOSED WATER RATES

WRE worked closely with the Board and District staff to determine the most appropriate water rate structure that meets the District’s needs.

PROPOSED RATE STRUCTURE CHANGES

The main objective was to conduct a comprehensive cost-of-service analysis while maintaining as much of the current water rate structure as possible to minimize customer impacts. The District’s current rate structure includes a daily service charge and a uniform water usage charge for all customers.

After examining the existing rate methodology, WRE recommends a change to the daily service charge to be based on meter size to reflect the different capacity of each meter size. This rate structure is also consistent with industry standards and Proposition 218’s proportionality requirement. Given the District’s water supply and customer profile, WRE recommends the District retains the current uniform monthly water usage charge structure.

PROPOSED FIVE-YEAR WATER RATE SCHEDULE

The proposed five-year water rate schedules in this section are based on the proposed rate structure and methodology changes, the updated cost-of-service analysis, and the proposed revenue adjustments. The rate schedule shows the proposed water rates to be implemented in January 2025 through January 2029. **Table 1-3** and **Table 1-4** show the current and proposed daily service charge and water usage charge, respectively.

Table 1-3: Proposed Daily Service Charge

Line	Meter Size	As of 1/1/24	Effective 1/1/25	Effective 1/1/26	Effective 1/1/27	Effective 1/1/28	Effective 1/1/29
1	3/4 inch	\$2.48	\$2.68	\$3.19	\$3.48	\$3.80	\$4.15
2	1 inch	\$2.48	\$2.68	\$3.19	\$3.48	\$3.80	\$4.15
3	1.5 inch	\$2.48	\$5.04	\$6.00	\$6.54	\$7.13	\$7.78
4	2 inch	\$2.48	\$7.87	\$9.37	\$10.22	\$11.14	\$12.15

Table 1-4: Proposed Water Usage Charge

Line	Usage Charge (\$/ccf)	As of 1/1/24	Effective 1/1/25	Effective 1/1/26	Effective 1/1/27	Effective 1/1/28	Effective 1/1/29
1	All customers	\$6.20	\$6.90	\$8.22	\$8.96	\$9.77	\$10.65

2. FINANCIAL PLAN

2.1 FINANCIAL PLAN METHODOLOGY

The purpose of a financial plan is to project revenues, expenses, cash flows, reserve balances, and debt coverage over a multi-year period to assess financial sufficiency and performance and to determine the amount of required rate revenue. For this study, the planning period is from CY 2025 through CY 2029; data for CY 2023 and CY 2024 are shown when needed to represent actual or budgeted data inputs. The key steps in developing a financial plan for a water enterprise are below:

- **Revenue projections:** Annual revenues from rates and other miscellaneous sources are projected over the planning period. Rate revenues are projected based on current rates to establish baseline revenues from which the need for additional rate increases can be evaluated.
- **Expense projections:** Annual expenses are projected over the study period, including O&M expenses, debt service, and CIP costs. CIP funding options (grants, debt, etc.) are evaluated.
- **Financial policy evaluation:** Key financial policies include debt coverage requirements and reserve targets. Debt coverage requirements are typically explicitly stated in official agreements on outstanding debt issuances. Reserve targets are typically set by an agency's elected officials and may need to be periodically evaluated and updated.
- **Status quo financial plan projections:** Cash flow, reserve balances, and debt coverage are projected over the study period in the absence of additional rate increases (this scenario is called the "status quo"). Projected reserve balances and debt coverage are then compared to the agency's financial policy requirements and targets. The status quo financial plan provides a baseline to evaluate the need for rate increases.
- **Proposed financial plan projections:** The magnitude and timing of annual proposed revenue increases over the study period are evaluated and determined based on the agency's financial policies, financial performance, and policy objectives. Proposed rate increases (referred to as "revenue adjustments") should generate sufficient revenue to recover the agency's expenses, maintain adequate reserves, and meet all debt coverage requirements. The proposed financial plan determines the total annual rate revenue requirement over the study period.

2.2 REVENUES

CURRENT WATER RATES

The District's current water rate structure includes a fixed daily service charge which is a readiness to serve charge computed on the actual number of days between meter readings, and a monthly usage charge per ccf of water usage. The water rates apply to all customers and meter sizes.

Table 2-1 shows the current water rates shown in the last two most recent annual budgets.

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Table 2-1: Current Water Rates

Line		As of 1/1/23	As of 1/1/24
1	Daily Service Charge	\$2.48	\$2.48
2	Monthly Usage Charge (\$/ccf)	\$4.98	\$6.20

CUSTOMER ACCOUNTS AND USAGE

This section details the customer accounts and water usage for all years of the study, which are referred to as the units of service. Units of service represent the quantity of billing units that are subject to the District’s water rates and charges.

Table 2-2 shows the projected number of meters for the study period. District staff provided actual data for CY 2024; this study assumes no growth in metered connections throughout the period. The number of metered connections is the unit of service for the District’s daily service charge.

Table 2-2: Projected Customer Accounts (Meters)

Line	Customer Accounts (Meters)	CY 2024	CY 2025	CY 2026	CY 2027	CY 2028	CY 2029
1	All Customers	590	590	590	590	590	590

Table 2-3 shows the water demand growth assumptions for the study period. WRE worked with District staff to determine the most appropriate estimates for annual water usage based on historical trends, expected water usage rebounds from the most recent water reduction, and ongoing conservation messaging.

Table 2-3: Water Demand Growth Assumptions

Line	Water Demand Growth	CY 2025	CY 2026	CY 2027	CY 2028	CY 2029
1	All Customers	Historical average	-1%	-1%	-1%	-1%

Table 2-4 shows the projected water usage for each year. District staff provided estimated water usage for CY 2024. To establish a baseline consumption level for the purpose of projecting future water usage, District staff reviewed the historical five-year and ten-year averages. The baseline consumption level is then projected forward for CY 2026 through 2029 based on the water demand growth assumptions (**Table 2-3**).

Table 2-4: Projected Customer Water Usage (ccf)

Line	Water Usage (ccf)	CY 2024	CY 2025	CY 2026	CY 2027	CY 2028	CY 2029
1	All Customers	257,362	250,000	247,500	245,025	242,575	240,149

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REVENUES FROM CURRENT RATES

Table 2-5 shows the calculated water rate revenues for the study period based on the current effective water rates and the projected units of service. The service charge revenue (Line 2) is calculated by multiplying the effective daily service charge (**Table 2-1**) by the projected meter connections (**Table 2-2**) for a period of 365 days. The usage charge revenue (Line 3) is calculated by multiplying the effective water usage charge (**Table 2-1**) by the projected water usage (**Table 2-4**) in each year.

Table 2-5: Calculated Rate Revenues at Current Rates

Line	Calculated Rate Revenues	CY 2024	CY 2025	CY 2026	CY 2027	CY 2028	CY 2029
1	Rate Revenue						
2	Service Charge	\$534,068	\$534,068	\$534,068	\$534,068	\$534,068	\$534,068
3	Usage Charge	\$1,595,644	\$1,550,000	\$1,534,500	\$1,519,155	\$1,503,963	\$1,488,924
4	Total – Rate Revenue	\$2,129,712	\$2,084,068	\$2,068,568	\$2,053,223	\$2,038,031	\$2,022,992

REVENUE SUMMARY

Table 2-6 shows the summary of projected revenues for the study period. District staff provided the budgeted revenues for CY 2024 and CY 2025; all other years are projected based on the relevant assumptions or calculations. Water rate revenues (Lines 1 and 2) are from Lines 2 and 3 of **Table 2-5**, respectively. Interest-Reserve Fund (Line 4) is calculated based on ending fund balances and a 3% interest rate for CY 2026 and 2027 and a 1% interest rate for CY 2028 and 2029.

Table 2-6: Revenue Summary

Line	Revenues	CY 2024	CY 2025	CY 2026	CY 2027	CY 2028	CY 2029
1	Water Sales - DSC	\$531,352	\$531,352	\$534,068	\$534,068	\$534,068	\$534,068
2	Water Sales - Consumption	\$1,595,644	\$1,550,000	\$1,534,500	\$1,519,155	\$1,503,963	\$1,488,924
3	Interest-Reserve Fund	\$39,257	\$45,000	\$124,080	\$78,290	\$25,330	\$25,833
4	Misc. Income	\$0	\$0	\$0	\$0	\$0	\$0
5	Total - Revenues	\$2,166,253	\$2,126,352	\$2,192,648	\$2,131,513	\$2,063,361	\$2,048,825

2.3 OPERATING EXPENSES

Table 2-7 shows the summary of O&M expenses for the study period. District staff provided the budgeted O&M expenses for CY 2024 and CY 2025 and projected O&M expenses for all other years (CY 2026 through CY 2029). As shown, most of the District’s O&M expenses are fixed, meaning that the costs do not fluctuate based on the amount of water sold. The only true variable expense is the electricity category, related to running the wells and pump stations. However, not all of the electricity category would be considered variable since power is necessary to maintain other parts of the District’s system.

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Table 2-7: Operating Expenses

Line	Operating Expenses	CY 2024	CY 2025	CY 2026	CY 2027	CY 2028	CY 2029
1	Leased Water Rights	\$0	\$0	\$0	\$0	\$0	\$0
2	Electricity	\$190,859	\$209,945	\$230,939	\$254,033	\$279,437	\$307,380
3	Maintenance Supplies	\$25,000	\$25,000	\$26,250	\$27,563	\$28,941	\$30,388
4	Material and Labor for Install	\$0	\$0	\$0	\$0	\$0	\$0
5	Safety Equipment	\$2,000	\$3,000	\$3,090	\$3,183	\$3,278	\$3,377
6	Operations & Maintenance Labor	\$275,000	\$255,000	\$265,200	\$275,808	\$286,840	\$298,314
7	Operations & Maintenance OT Non-Emergency	\$21,000	\$40,000	\$41,600	\$43,264	\$44,995	\$46,794
8	Stand-by Compensation	\$10,980	\$10,950	\$10,950	\$10,950	\$10,950	\$10,950
9	Training/Certification	\$1,600	\$3,000	\$3,120	\$3,245	\$3,375	\$3,510
10	Water Treatment/Analysis	\$12,000	\$12,000	\$12,360	\$12,731	\$13,113	\$13,506
11	Water Treatment/Materials	\$10,000	\$10,000	\$10,500	\$11,025	\$11,576	\$12,155
12	Maintenance Contractors	\$128,000	\$124,000	\$128,340	\$132,832	\$137,481	\$142,293
13	SCADA System O&M	\$15,000	\$15,000	\$15,525	\$16,068	\$16,631	\$17,213
14	Repair Contractors - Emergency	\$0	\$0	\$0	\$0	\$0	\$0
15	Equipment Maintenance	\$7,500	\$15,000	\$15,525	\$16,068	\$16,631	\$17,213
16	Vehicle Maintenance	\$12,500	\$6,000	\$6,210	\$6,427	\$6,652	\$6,885
17	Fuel - All Equipment	\$20,000	\$20,000	\$21,000	\$22,050	\$23,153	\$24,310
18	Equipment Rental	\$500	\$500	\$513	\$525	\$538	\$552
19	Insurance-Workers Comp.	\$16,000	\$17,500	\$18,025	\$18,566	\$19,123	\$19,696
20	Insurance-Liability	\$32,065	\$34,455	\$36,177	\$37,986	\$39,885	\$41,880
21	Insurance-Property	\$4,746	\$4,995	\$5,245	\$5,507	\$5,783	\$6,072
22	Insurance-Medical	\$75,000	\$71,500	\$75,075	\$78,829	\$82,770	\$86,909
23	Engineering Services	\$115,000	\$45,000	\$46,125	\$47,278	\$48,460	\$49,672
24	Watermaster Services (Raymond Basin)	\$46,795	\$19,000	\$19,475	\$19,962	\$20,461	\$20,972
25	Executive Officer Salary	\$179,220	\$190,612	\$198,236	\$206,166	\$214,413	\$222,989
26	Administrative Travel	\$1,800	\$1,800	\$1,845	\$1,891	\$1,938	\$1,987
27	BofD Compensation	\$9,000	\$9,000	\$9,000	\$9,001	\$9,002	\$9,003
28	Administrative & Board Exp.	\$2,000	\$2,500	\$2,563	\$2,627	\$2,692	\$2,760
29	B of D Election	\$0	\$0	\$12,500	\$0	\$0	\$0
30	Customer/Public Information	\$17,000	\$17,000	\$17,425	\$17,861	\$18,307	\$18,765
31	PERS - KID	\$47,000	\$50,000	\$52,500	\$55,125	\$57,881	\$60,775
32	Social Security - KID	\$39,000	\$40,000	\$41,200	\$42,436	\$43,709	\$45,020
33	Medicare - KID	\$9,500	\$9,800	\$10,094	\$10,397	\$10,709	\$11,030
34	Office/Computer Supplies	\$7,000	\$7,000	\$7,210	\$7,426	\$7,649	\$7,879
35	Postage/Delivery	\$5,000	\$5,000	\$5,150	\$5,305	\$5,464	\$5,628
36	Professional Dues	\$19,910	\$20,906	\$21,533	\$22,179	\$22,844	\$23,529
37	Legal	\$6,000	\$6,000	\$6,180	\$6,365	\$6,556	\$6,753
38	Telephone	\$4,000	\$4,000	\$4,120	\$4,244	\$4,371	\$4,502
39	Mobile Communications	\$2,000	\$3,000	\$3,090	\$3,183	\$3,278	\$3,377
40	Pagers	\$500	\$0	\$0	\$0	\$0	\$0
41	Internet Service	\$1,500	\$1,500	\$1,545	\$1,591	\$1,639	\$1,688

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42	Computer/Software Maintenance	\$13,994	\$10,550	\$10,867	\$11,192	\$11,528	\$11,874
43	Office Equipment Maintenance	\$2,500	\$2,500	\$2,575	\$2,652	\$2,732	\$2,814
44	Accounting Services	\$7,700	\$7,700	\$7,931	\$8,169	\$8,414	\$8,666
45	Office & Accounting Labor	\$172,500	\$195,000	\$201,825	\$208,889	\$216,200	\$223,767
46	Professional Services	\$65,000	\$15,000	\$15,375	\$15,759	\$16,153	\$16,557
47	Contract Services	\$22,260	\$44,260	\$45,809	\$47,412	\$49,072	\$50,789
48	Administrative Fee (FMWD)	\$13,193	\$13,853	\$14,337	\$14,839	\$15,359	\$15,896
49	Permits/Fees	\$15,000	\$15,000	\$15,525	\$16,068	\$16,631	\$17,213
50	Taxes - Use	\$500	\$500	\$518	\$536	\$554	\$574
51	Customer Project Expenses	\$0	\$0	\$0	\$0	\$0	\$0
52	Bank Service Charges	\$12,000	\$18,000	\$18,630	\$19,282	\$19,957	\$20,655
53	Water Mains	\$0	\$0	\$0	\$0	\$0	\$0
54	Water Tunnels	\$10,000	\$10,000	\$10,500	\$11,025	\$11,576	\$12,155
55	Water Treatment Plant	\$0	\$0	\$0	\$0	\$0	\$0
56	Water Meters	\$20,000	\$25,000	\$26,250	\$27,563	\$28,941	\$30,388
57	Electrical/Electronic Equipment	\$25,000	\$10,000	\$10,500	\$11,025	\$11,576	\$12,155
58	Computer/Office Equipment	\$2,500	\$2,500	\$2,575	\$2,652	\$2,732	\$2,814
59	Vehicles	\$0	\$50,000	\$75,000	\$0	\$0	\$0
60	Water Company Facilities	\$20,000	\$10,000	\$0	\$0	\$0	\$0
61	KID Office	\$0	\$0	\$0	\$0	\$0	\$0
62	Booster Pump Replacement	\$0	\$0	\$0	\$0	\$75,000	\$0
63	SCADA System O&M	\$10,000	\$10,000	\$10,500	\$11,025	\$11,576	\$12,155
64	Tools	\$3,000	\$4,000	\$4,120	\$4,244	\$4,371	\$4,502
65	Total - Expenses	\$1,787,122	\$1,753,825	\$1,858,271	\$1,852,029	\$2,012,896	\$2,028,699

2.4 DEBT SERVICE

EXISTING AND PROPOSED DEBT SERVICE

Table 2-8 shows the District’s annual debt service for the study period. The District has existing debt service payments on a 2015 installment purchase agreement (IPA) of approximately \$200,000 each year. The proposed financial plan scenario also includes a new debt issuance in CY 2025 of \$5,699,482 (assuming a 5.25% interest rate, a 30-year term, and 3.5% issuance cost). The existing debt will be refunded by the new debt issuance – so the total debt service will be \$381,392 per year. This debt issuance results in \$4,564,831 million of proceeds used to fund CIP.

Table 2-8: Existing and Proposed Debt Service

Line	Debt Service	CY 2024	CY 2025	CY 2026	CY 2027	CY 2028	CY 2029
1	Existing Debt Service						
2	2015 IPA	\$200,202	\$0	\$0	\$0	\$0	\$0
6	Subtotal	\$200,202	\$0	\$0	\$0	\$0	\$0
7							
8	Proposed Debt Service						
9	Proposed CY 2025 Issuance	\$0	\$381,392	\$381,392	\$381,392	\$381,392	\$381,392
10	Subtotal	\$0	\$381,392	\$381,392	\$381,392	\$381,392	\$381,392
11							
12	Total - Debt Service	\$200,202	\$381,392	\$381,392	\$381,392	\$381,392	\$381,392

2.5 CAPITAL IMPROVEMENT PLAN

CAPITAL IMPROVEMENT PROJECTS

Table 2-9 shows the District’s six-year CIP summary; project costs are inflated by 4% per year starting in CY 2025. Detailed CIP costs are included in the **Appendix (Table 5-1)**.

Table 2-9: Capital Project Costs Summary

Line	Capital Improvement Projects	CY 2024	CY 2025	CY 2026	CY 2027	CY 2028	CY 2029
1	General Projects	\$0	\$195,676	\$221,728	\$184,703	\$40,945	\$355,681
2	Water Storage Projects	\$0	\$323,736	\$81,120	\$0	\$0	\$121,665
3	Pumping Projects	\$0	\$326,040	\$659,776	\$598,990	\$0	\$0
4	Treatment Projects	\$0	\$137,540	\$91,936	\$84,365	\$0	\$0
5	Spreading Projects	\$0	\$41,600	\$81,120	\$0	\$0	\$0
6	Distribution System Projects - Valves/Hydrants	\$0	\$46,800	\$27,040	\$28,122	\$29,246	\$85,166
7	Distribution System Projects - Mainline	\$125,000	\$0	\$2,238,912	\$623,246	\$688,754	\$979,406
8	Total - Capital Projects	\$125,000	\$1,071,392	\$3,401,632	\$1,519,425	\$758,946	\$1,541,918

CAPITAL FINANCING PLAN

Table 2-10 shows the capital financing plan. The proposed debt issuance will provide \$4.6 million in debt proceeds, which will fund capital projects in CY 2025 through 2027 (Line 1). All other project costs will be funded by water rates or reserves (Line 2).

Table 2-10: Capital Financing Plan

Line	Capital Financing Plan	CY 2024	CY 2025	CY 2026	CY 2027	CY 2028	CY 2029
1	Debt Funded CIP	\$0	\$1,071,392	\$3,401,632	\$91,806	\$0	\$0
2	Rate Funded CIP	\$125,000	\$0	\$0	\$1,427,618	\$758,946	\$1,541,918
3	Total - Capital Financing Plan	\$125,000	\$1,071,392	\$3,401,632	\$1,519,425	\$758,946	\$1,541,918

2.6 FINANCIAL POLICIES

RESERVE POLICY

The District’s current reserve policy maintains cash on hand to meet short-term cash imbalances, to execute CIP projects, and to cover unexpected repairs.

The District currently has an adopted reserve policy that consists of the following components:

- Operating Reserve Target: 1 to 2 months of annual operating expenses
- Emergency Target: 5-10% of fixed assets
- Replacement Target: Planned maintenance schedule with a minimum of 5% of fixed assets
- Improvement Target: Projects from Master Plan

WRE proposes several revisions to the District’s current reserve policy to be more in line with the District’s operation and risk profile as well as industry standards.

- Operating Reserve Target: 25% of annual operating expenses
- Capital Reserve Target: 100% of five-year average CIP costs
- Emergency Reserve Target: Net replacement cost of a major asset
- Rate Stabilization Reserve Target: 10% of rate revenue

The reserve target for the study period ranges from approximately \$2.4 to \$2.9 million in the District’s reserve funds.

DEBT COVERAGE REQUIREMENT

The District’s debt coverage requirement is 125% of annual debt service. To meet coverage requirements, net revenues (revenues less operating expenses) must be 125% or more of annual debt service.

2.7 NO REVENUE ADJUSTMENT FINANCIAL PLAN

NO REVENUE ADJUSTMENT FINANCIAL PLAN SCENARIO

Table 2-11 shows the no revenue adjustment financial plan scenario, which assumes no revenue adjustments and no proposed debt issuances. This scenario is used to evaluate the ability of the current water rates to meet the District’s financial targets and to determine the need for revenue adjustments.

Table 2-11: No Revenue Adjustment Financial Plan Scenario

Line	Fiscal Year	Revenue Adjustments	Effective Month	Debt Issuance	Debt Proceeds for CIP
1	CY 2025	0.0%	January	\$0	\$0
2	CY 2026	0.0%	January	\$0	\$0
3	CY 2027	0.0%	January	\$0	\$0
4	CY 2028	0.0%	January	\$0	\$0
5	CY 2029	0.0%	January	\$0	\$0

NO REVENUE ADJUSTMENT CASH FLOW PROJECTIONS

Table 2-12 shows the cash flow projections for the no revenue adjustment financial plan. Revenues¹ (Lines 1-6) are from **Table 2-6**. Operating expenses (Lines 8-10) are from **Table 2-7**. Net operating revenue (Line 12) is equal to the difference between total revenues (Line 6) and total expenses (Line 10). Debt service (Lines 14-17) is from **Table 2-8**. Rate funded CIP (Line 20) is the total capital projects from **Table 2-10**. The status quo scenario assumes no new debt; all CIP is expected to be rate funded. Net cash flow (Line 23) is equal to the net operating revenue (Line 12) less debt service (Line 17) and rate funded CIP (Line 20). Debt proceeds and debt funded CIP are not included in the cash flow projections.

The net operating revenue in this scenario is positive for all years except CY 2029, meaning that the District's current revenues are sufficient to fund its operating expenses in the near future. However, the net cash flow in the status quo scenario is negative for CY 2025 through CY 2029, meaning that the District's current revenues are not sufficient to fund its debt service and annual CIP.

¹ Interest income (Line 5) is different in the status quo financial plan scenario because it is based on projected fund balances. The status quo scenario results in lower fund balances; therefore, the District has less interest income. **Table 2-6** shows the interest income for the proposed financial plan scenario.

Table 2-12: Projected Cash Flows (No Revenue Adjustment Financial Plan)

Line	Cash Flow Projections	CY 2024	CY 2025	CY 2026	CY 2027	CY 2028	CY 2029
1	Revenues						
2	Rate Revenues at Existing Rates	\$2,126,996	\$2,081,352	\$2,068,568	\$2,053,223	\$2,038,031	\$2,022,992
3	Revenue Adjustments	\$0	\$0	\$0	\$0	\$0	\$0
4	Other Revenues	\$0	\$0	\$0	\$0	\$0	\$0
5	Interest Income	\$39,257	\$45,000	\$0	\$0	\$0	\$0
6	Subtotal - Revenues	\$2,166,253	\$2,126,352	\$2,068,568	\$2,053,223	\$2,038,031	\$2,022,992
7							
8	Expenses						
9	Operating Expenses	\$1,787,122	\$1,753,825	\$1,858,271	\$1,852,029	\$2,012,896	\$2,028,699
10	Subtotal - Expenses	\$1,787,122	\$1,753,825	\$1,858,271	\$1,852,029	\$2,012,896	\$2,028,699
11							
12	Net Operating Revenue	\$379,131	\$372,527	\$210,297	\$201,194	\$25,135	(\$5,707)
13							
14	Debt Service						
15	Existing Debt Service	\$200,202	\$200,202	\$200,202	\$200,202	\$200,202	\$200,202
16	Proposed Debt Service	\$0	\$0	\$0	\$0	\$0	\$0
17	Subtotal - Debt Service	\$200,202	\$200,202	\$200,202	\$200,202	\$200,202	\$200,202
18							
19	Capital Projects						
20	Rate Funded CIP	\$125,000	\$1,071,392	\$3,401,632	\$1,519,425	\$758,946	\$1,541,918
21	Subtotal - Capital Projects	\$125,000	\$1,071,392	\$3,401,632	\$1,519,425	\$758,946	\$1,541,918
22							
23	Net Cash Flow	\$53,929	(\$899,067)	(\$3,391,537)	(\$1,518,433)	(\$934,013)	(\$1,747,827)

NO REVENUE ADJUSTMENT FUND BALANCE PROJECTIONS

Table 2-13 shows the fund balance projections for the no revenue adjustment financial plan. Based on the sources (revenues) and uses (operating expenses, debt service, and CIP) of funds, the District’s fund balances will be negative by the end of CY 2026. At the end of the study period, the District’s fund balances will be approximately negative \$6.9 million in CY 2029, from a starting balance of \$1.6 million in CY 2024. This represents a net loss of \$8.5 million in six years.

Table 2-13: Projected Fund Balances (No Revenue Adjustment Financial Plan)

Line	Fund Balance Projections	CY 2024	CY 2025	CY 2026	CY 2027	CY 2028	CY 2029
1	Beginning Balance	\$1,558,030	\$1,611,959	\$712,892	(\$2,678,646)	(\$4,197,078)	(\$5,131,091)
2							
3	Sources of Funds						
4	Rate Revenues at Existing Rates	\$2,126,996	\$2,081,352	\$2,068,568	\$2,053,223	\$2,038,031	\$2,022,992
5	Revenue Adjustments	\$0	\$0	\$0	\$0	\$0	\$0
6	Other Revenues	\$0	\$0	\$0	\$0	\$0	\$0
7	Debt Proceeds for CIP	\$0	\$0	\$0	\$0	\$0	\$0
8	Interest Income	\$39,257	\$45,000	\$0	\$0	\$0	\$0
11	Subtotal	\$2,166,253	\$2,126,352	\$2,068,568	\$2,053,223	\$2,038,031	\$2,022,992
12							
13	Uses of Funds						
14	Operating Expenses	\$1,787,122	\$1,753,825	\$1,858,271	\$1,852,029	\$2,012,896	\$2,028,699
15	Existing Debt Service	\$200,202	\$200,202	\$200,202	\$200,202	\$200,202	\$200,202
16	Debt Funded CIP	\$0	\$0	\$0	\$0	\$0	\$0
17	Rate Funded CIP	\$125,000	\$1,071,392	\$3,401,632	\$1,519,425	\$758,946	\$1,541,918
18	Subtotal	\$2,112,324	\$3,025,419	\$5,460,105	\$3,571,656	\$2,972,044	\$3,770,819
19							
20	Ending Balance	\$1,611,959	\$712,892	(\$2,678,646)	(\$4,197,078)	(\$5,131,091)	(\$6,878,918)

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NO REVENUE ADJUSTMENT FINANCIAL PERFORMANCE

The District’s financial performance is evaluated based on the reserve targets and debt coverage requirements, as shown in **Table 2-14**. Under the status quo financial plan, the District will not meet its reserve targets from CY 2024 to CY 2029. The District will not be able to meet its debt coverage requirements in CY 2026 through 2029 without any revenue adjustments. Fund balances and debt coverage requirements are the District’s constraining factors during the study period.

Table 2-14: Forecasted Financial Performance (No Revenue Adjustment Financial Plan)

Line	Financial Performance	CY 2024	CY 2025	CY 2026	CY 2027	CY 2028	CY 2029
1	Reserve Policy						
2	Operating	\$446,781	\$438,456	\$464,568	\$463,007	\$503,224	\$507,175
3	Capital Replacement	\$1,375,279	\$1,658,663	\$1,686,060	\$1,157,395	\$1,088,904	\$1,074,464
4	Emergency	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000
5	Rate Stabilization	\$212,700	\$208,135	\$206,857	\$205,322	\$203,803	\$202,299
6	Combined Reserve Target	\$2,534,759	\$2,805,254	\$2,857,485	\$2,325,724	\$2,295,931	\$2,283,938
7	Combined Reserves	\$1,611,959	\$712,892	(\$2,678,646)	(\$4,197,078)	(\$5,131,091)	(\$6,878,918)
8	Meets Target?	No	No	No	No	No	No
9							
10	Debt Coverage						
11	Required Debt Coverage	125%	125%	125%	125%	125%	125%
12	Calculated Debt Coverage	189%	186%	105%	100%	13%	-3%
13	Meets Target?	Yes	Yes	No	No	No	No

Figure 2-1 shows the comparison of revenues and the revenue requirement for the no revenue adjustment scenario. The stacked bars represent the revenue requirements, or costs: blue for O&M expenses, green for debt service, and gray for rate funded CIP. The District will not be adding to its reserves (black bars) in this scenario. The current revenue, shown as a solid line, is lower than the revenue requirements, meaning that revenues are insufficient to fund necessary costs.

Figure 2-1: Revenue Requirements vs. Revenues (No Revenue Adjustment Financial Plan)

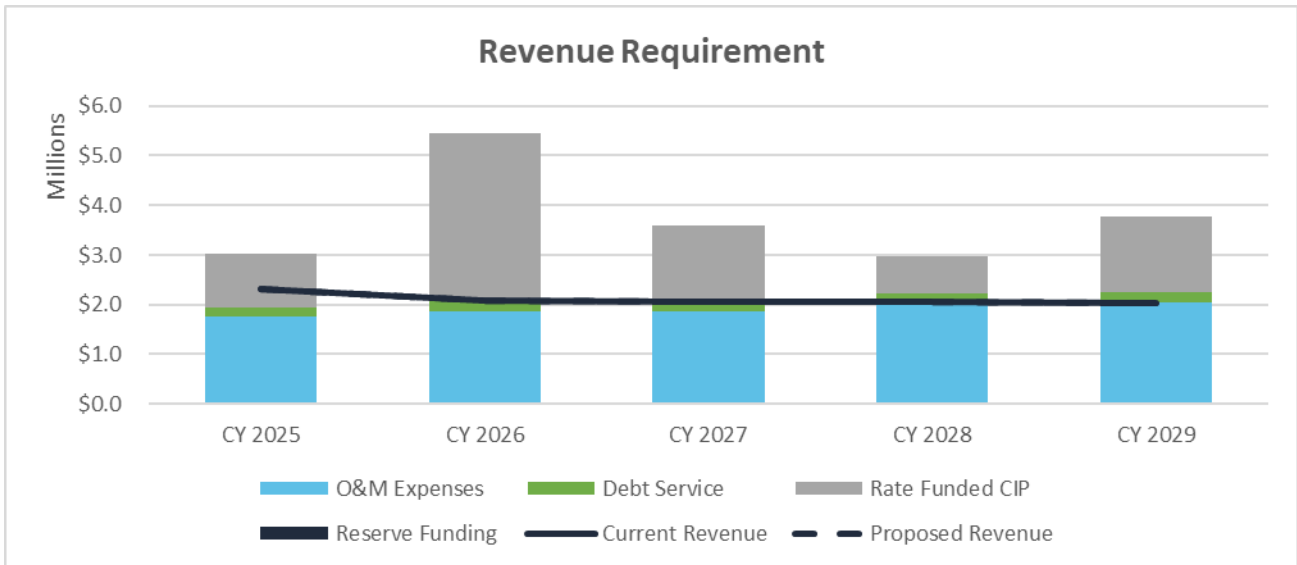


Figure 2-2 shows the debt coverage projections in the status quo financial plan. The required debt coverage (dashed line) is equal to 125%. The District will not meet its debt coverage requirements starting in CY 2026 in this scenario.

Figure 2-2: Projected Debt Coverage (No Revenue Adjustment Financial Plan)

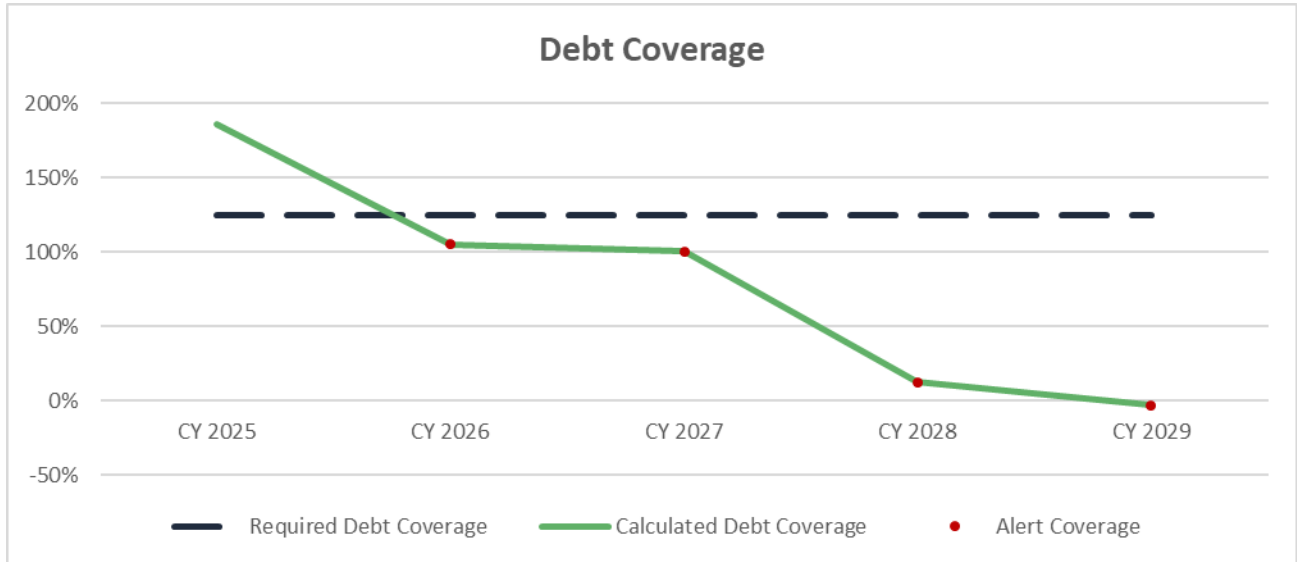
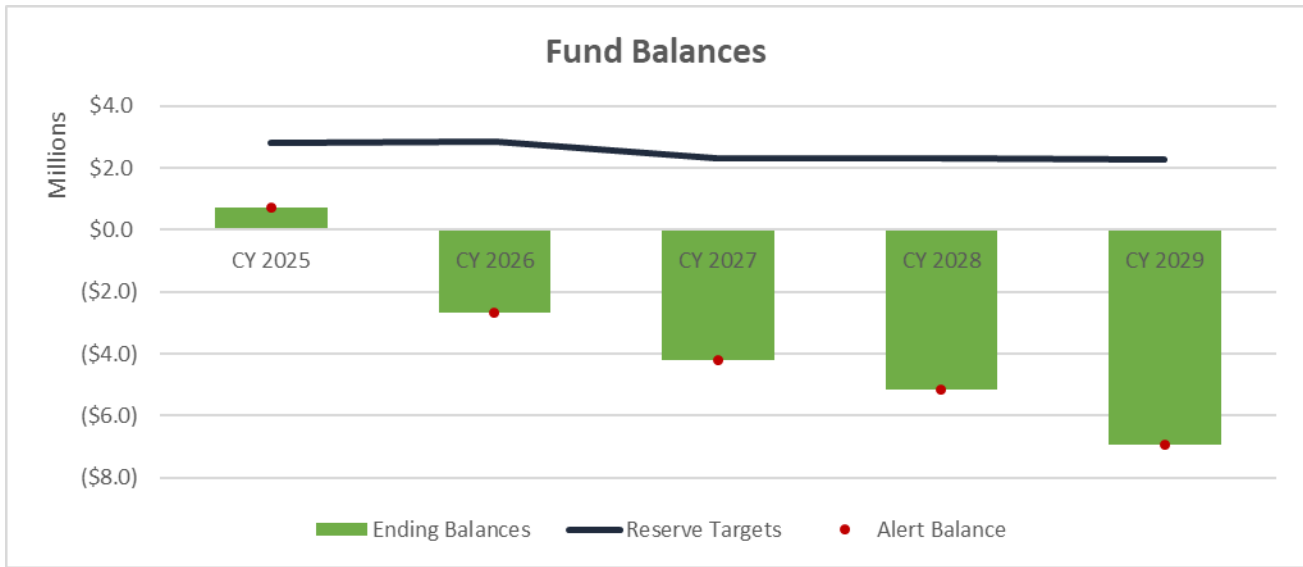


Figure 2-3 shows the fund balance projections in the status quo financial plan. The District’s ending balance (green bars) will not meet the reserve targets (solid line) from CY 2025 through CY 2029. The District’s fund balances will be negative by CY 2026.

Figure 2-3: Projected Fund Balances (No Revenue Adjustment Financial Plan)



2.8 PROPOSED FINANCIAL PLAN

PROPOSED FINANCIAL PLAN SCENARIO

The proposed financial plan includes five years of revenue adjustments and a debt issuance in CY 2025, shown in **Table 2-15**. These adjustments are needed to maintain the District’s financial sufficiency and were developed based on direction from the District’s Board.

Table 2-15: Proposed Financial Plan Scenario

Line	Fiscal Year	Revenue Adjustments	Effective Month	Debt Issuance	Debt Proceeds for CIP
1	CY 2025	19.0%	January	\$5,699,482	\$4,564,831
2	CY 2026	19.0%	January	\$0	\$0
3	CY 2027	9.0%	January	\$0	\$0
4	CY 2028	9.0%	January	\$0	\$0
5	CY 2029	9.0%	January	\$0	\$0

PROPOSED CASH FLOW PROJECTIONS

Table 2-16 shows the cash flow projections for the proposed financial plan. Revenues (Lines 1-6) are from **Table 2-6**, with the exception of revenue adjustments (Line 2), which are based on the adjustments shown in **Table 2-15**. Operating expenses (Lines 8-10) are from **Table 2-7**. Net operating revenue (Line 12) is equal to the difference between total revenues (Line 6) and total expenses (Line 10). Debt service (Lines 14-17) is from **Table 2-8**. Rate funded CIP (Line 20) is from **Table 2-10**. Net cash flow (Line 23) is equal to the net operating revenue (Line 12) less debt service (Line 17) and rate funded CIP (Line 20). Debt proceeds and debt funded CIP are not included in the cash flow projections, since they are accounted for in the rate funded CIP projection numbers.

Table 2-16: Projected Cash Flows (Proposed Financial Plan)

Line	Cash Flow Projections	CY 2024	CY 2025	CY 2026	CY 2027	CY 2028	CY 2029
1	Revenues						
2	Rate Revenues at Existing Rates	\$2,126,996	\$2,081,352	\$2,068,568	\$2,053,223	\$2,038,031	\$2,022,992
3	Revenue Adjustments	\$0	\$395,457	\$860,731	\$1,116,027	\$1,390,892	\$1,686,954
4	Other Revenues	\$0	\$0	\$0	\$0	\$0	\$0
5	Interest Income	\$39,257	\$45,000	\$124,080	\$78,368	\$25,367	\$25,789
6	Subtotal - Revenues	\$2,166,253	\$2,521,809	\$3,053,379	\$3,247,619	\$3,454,290	\$3,735,734
7							
8	Expenses						
9	Operating Expenses	\$1,787,122	\$1,753,825	\$1,858,271	\$1,852,029	\$2,012,896	\$2,028,699
10	Subtotal - Expenses	\$1,787,122	\$1,753,825	\$1,858,271	\$1,852,029	\$2,012,896	\$2,028,699
11							
12	Net Operating Revenue	\$379,131	\$767,984	\$1,195,107	\$1,395,590	\$1,441,394	\$1,707,035
13							
14	Debt Service						
15	Existing Debt Service	\$200,202	\$0	\$0	\$0	\$0	\$0
16	Proposed Debt Service	\$0	\$381,392	\$381,392	\$381,392	\$381,392	\$381,392
17	Subtotal - Debt Service	\$200,202	\$381,392	\$381,392	\$381,392	\$381,392	\$381,392
18							
19	Capital Projects						
20	Rate Funded CIP	\$125,000	\$0	\$0	\$1,427,618	\$758,946	\$1,541,918
21	Subtotal - Capital Projects	\$125,000	\$0	\$0	\$1,427,618	\$758,946	\$1,541,918
22							
23	Net Cash Flow	\$53,929	\$386,592	\$813,716	(\$413,421)	\$301,056	(\$216,274)

PROPOSED FUND BALANCE PROJECTIONS

Table 2-17 shows the fund balance projections for the proposed financial plan. Based on the sources (revenues, revenue adjustments, debt proceeds) and uses (operating expenses, debt service, and CIP) of funds, the District’s fund balances will be approximately \$2.48 million at the end of the study in CY 2029.

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Table 2-17: Projected Fund Balances (Proposed Financial Plan)

Line	Fund Balance Projections	CY 2024	CY 2025	CY 2026	CY 2027	CY 2028	CY 2029
1	Beginning Balance	\$1,558,030	\$1,611,959	\$5,491,989	\$2,904,073	\$2,398,846	\$2,699,902
2							
3	Sources of Funds						
4	Rate Revenues at Existing Rates	\$2,126,996	\$2,081,352	\$2,068,568	\$2,053,223	\$2,038,031	\$2,022,992
5	Revenue Adjustments	\$0	\$395,457	\$860,731	\$1,116,027	\$1,390,892	\$1,686,954
6	Other Revenues	\$0	\$0	\$0	\$0	\$0	\$0
7	Debt Proceeds for CIP	\$0	\$4,564,831	\$0	\$0	\$0	\$0
8	Interest Income	\$39,257	\$45,000	\$124,080	\$78,368	\$25,367	\$25,789
11	Subtotal	\$2,166,253	\$7,086,640	\$3,053,379	\$3,247,619	\$3,454,290	\$3,735,734
12							
13	Uses of Funds						
14	Operating Expenses	\$1,787,122	\$1,753,825	\$1,858,271	\$1,852,029	\$2,012,896	\$2,028,699
15	Existing Debt Service	\$200,202	\$0	\$0	\$0	\$0	\$0
16	Proposed Debt Service	\$0	\$381,392	\$381,392	\$381,392	\$381,392	\$381,392
17	Debt Funded CIP	\$0	\$1,071,392	\$3,401,632	\$91,806	\$0	\$0
18	Rate Funded CIP	\$125,000	\$0	\$0	\$1,427,618	\$758,946	\$1,541,918
19	Subtotal	\$2,112,324	\$3,206,609	\$5,641,295	\$3,752,845	\$3,153,234	\$3,952,008
20							
21	Ending Balance	\$1,611,959	\$5,491,989	\$2,904,073	\$2,398,846	\$2,699,902	\$2,483,628

PROPOSED FINANCIAL PERFORMANCE

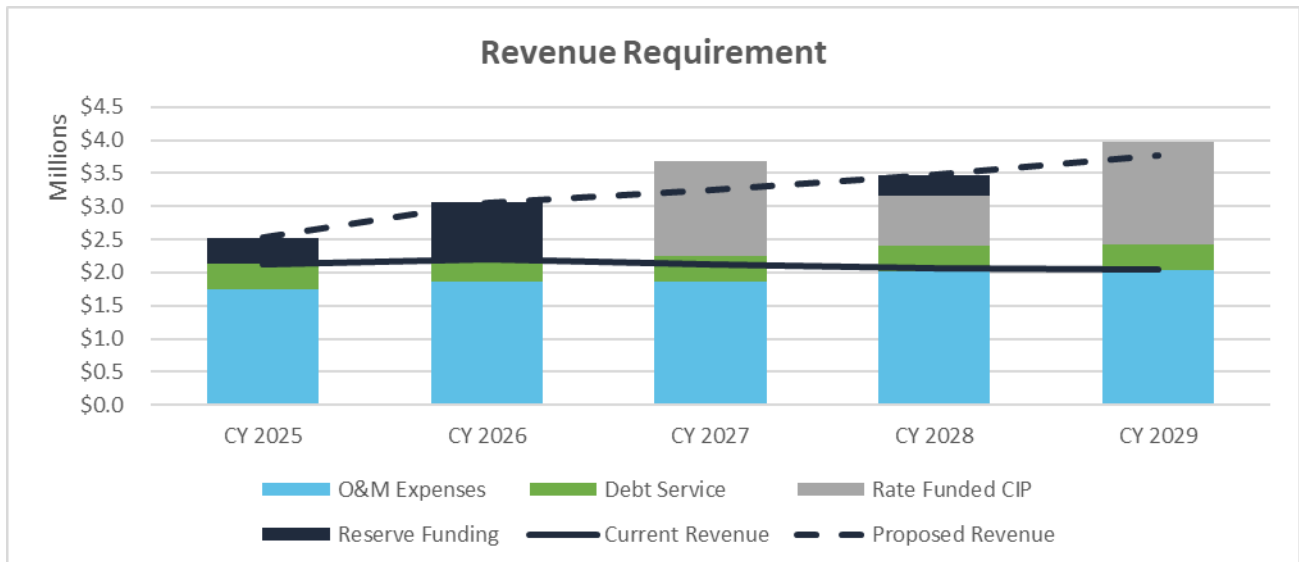
Table 2-18 shows the forecasted financial performance for the proposed financial plan. Under this plan, the District will meet its reserve targets by CY 2028. The District will be able to meet its debt coverage requirements in all years with the proposed revenue adjustments.

Table 2-18: Forecasted Financial Performance (Proposed Financial Plan)

Line	Financial Performance	CY 2024	CY 2025	CY 2026	CY 2027	CY 2028	CY 2029
1	Reserve Policy						
2	Operating	\$446,781	\$438,456	\$464,568	\$463,007	\$503,224	\$507,175
3	Capital Replacement	\$1,375,279	\$1,658,663	\$1,686,060	\$1,157,395	\$1,088,904	\$1,074,464
4	Emergency	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000
5	Rate Stabilization	\$212,700	\$247,681	\$292,930	\$316,925	\$342,892	\$370,995
6	Combined Reserve Target	\$2,534,759	\$2,844,800	\$2,943,558	\$2,437,327	\$2,435,020	\$2,452,633
7	Combined Reserves	\$1,611,959	\$5,491,989	\$2,904,073	\$2,398,846	\$2,699,902	\$2,483,628
8	Meets Target?	No	Yes	No	No	Yes	Yes
9							
10	Debt Coverage						
11	Required Debt Coverage	125%	125%	125%	125%	125%	125%
12	Calculated Debt Coverage	189%	201%	313%	366%	378%	448%
13	Meets Target?	Yes	Yes	Yes	Yes	Yes	Yes

Figure 2-4 shows the comparison of revenues and the revenue requirement for the proposed scenario. The stacked bars represent the revenue requirements, or costs. The District will add to its reserves (black bars) in this scenario. The current revenue, shown as a solid line, is lower than the revenue requirements. The proposed revenue, shown as a dotted line, is greater than the revenue requirements (except for CY 2027 and CY 2029), meaning that the District’s revenues are able to sufficiently fund its expenses.

Figure 2-4: Revenue Requirements vs. Revenues (Proposed Financial Plan)



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Figure 2-5 shows the debt coverage projections in the proposed financial plan. The required debt coverage (dashed line) is equal to 125%. The District is expected to meet its debt coverage requirements for all years of this scenario.

Figure 2-5: Projected Debt Coverage (Proposed Financial Plan)

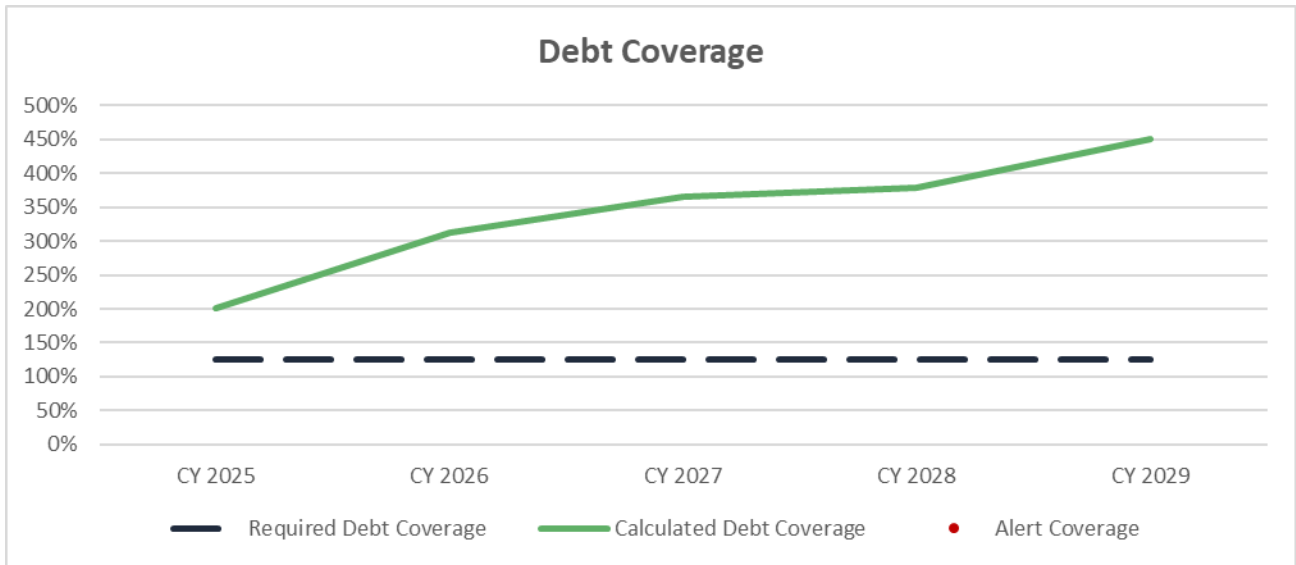
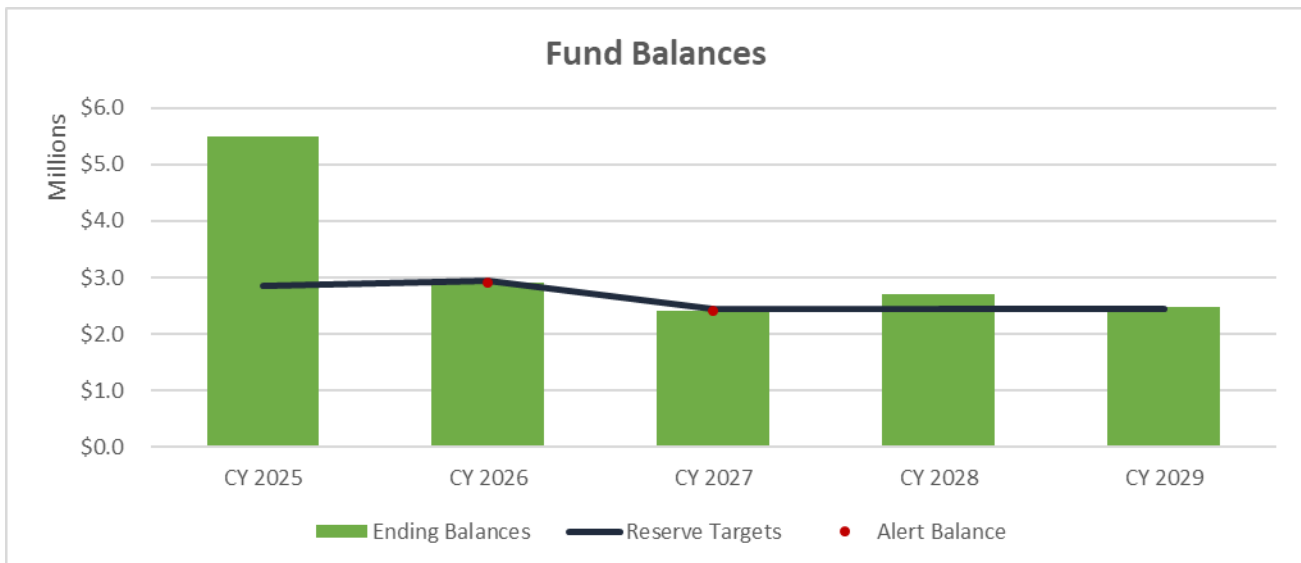


Figure 2-6 shows the fund balance projections in the proposed financial plan. The District's ending balance (green bars) will meet the reserve targets (solid line) by CY 2028.

Figure 2-6: Projected Fund Balances (Proposed Financial Plan)



3. COST-OF-SERVICE ANALYSIS

3.1 COST-OF-SERVICE METHODOLOGY

A cost-of-service analysis was conducted to allocate CY 2024 rate revenue requirement to customers in proportion to use of and burden on the District’s water system. The overall goal of the cost-of-service analysis is to develop “unit costs,” which provide the basis from which proposed rates are directly calculated from. Note that although the study period spans five years, the cost-of-service analysis is limited to a single representative year referred to as the “test year.” The test year in this study is CY 2024.

The cost-of-service analysis is “revenue neutral,” meaning that the resulting cost-of-service based rates collect the same amount of revenue as the District expects to collect in CY 2024. The revenue neutral unit costs determine revenue neutral rates, which are then adjusted based on the proposed financial plan increases to arrive at the proposed water rates for five years. All values presented in this section pertain to CY 2024 and are revenue neutral unless stated otherwise.

The key steps in conducting a water cost-of-service analysis are outlined below:

- **Revenue requirement determination:** The total rate revenue requirement for the test year is determined based on the results of the proposed financial plan and divided into primary sub-components (operating, capital, etc.).
- **Cost functionalization:** Operating and capital costs are evaluated and assigned to “functional categories” in the water system (e.g., customer service, water supply, distribution, etc.). This provides a proportional breakdown of system costs by functional category.
- **Revenue requirement allocation to cost causation components:** Functionalized costs are allocated to “cost causation components” (e.g., water supply, base delivery, max day delivery, etc.), which is used to attribute customers’ use of the system to the costs incurred by the District.
- **Unit cost development:** The rate revenue requirement allocation for each individual cost causation component is divided by the appropriate units of service to establish unit costs for the test year. Unit costs provide the basis from which proposed rates are calculated.

3.2 REVENUE REQUIREMENT

REVENUE REQUIREMENT DETERMINATION

The total rate revenue requirement for the test year, CY 2024, is based on the financial plan projections (**Table 2-16**) and is allocated between the Operating and Capital, as shown in **Table 3-1**. The Operating revenue requirement consists of operating expenses (Line 2), interest income (Line 9) and adjustments for cash from reserves (Line 13; from **Table 2-16**, Line 23). The Capital revenue requirement includes debt service (Line 3) and rate funded CIP (Line 4). The total revenue requirement (Line 16) is equal to the amount of rate revenue collected in CY 2024 (**Table 2-16**, Line 2).

Table 3-1: CY 2024 Revenue Requirement

Line	CY 2024 Revenue Requirement	Operating	Capital	Total
1	Revenue Requirements			
2	Operating Expenses	\$1,787,122		\$1,787,122
3	Debt Service		\$200,202	\$200,202
4	Rate Funded CIP		\$125,000	\$125,000
5	Subtotal	\$1,787,122	\$325,202	\$2,112,324
6				
7	Revenue Offsets			
8	Other Revenues	\$0		\$0
9	Interest Income	(\$39,257)		(\$39,257)
10	Subtotal	(\$39,257)	\$0	(\$39,257)
11				
12	Adjustments			
13	Cash to/(from) Reserves	\$53,929		\$53,929
14	Subtotal	\$53,929	\$0	\$53,929
15				
16	Total - Revenue Requirement	\$1,801,794	\$325,202	\$2,126,996

3.3 COST FUNCTIONALIZATION

FUNCTIONAL CATEGORY DEFINITIONS

After determining the revenue requirement, the next step in the cost-of-service analysis is to allocate the District’s costs into various functional categories. These categories represent the main functions of the District’s water system and include:

- **Meters:** costs of meter maintenance and replacement
- **Customer:** costs related to customer service and billing
- **Fire Service:** costs related to providing fire protection services
- **Supply:** costs of supplying water from local sources to serve the District’s customers
- **Treatment:** costs related to the treatment of water to potable standards
- **Pumping:** costs relating to pumping water to higher elevations
- **Storage:** costs related to water storage facilities (such as reservoirs and tanks)
- **Distribution:** costs related to the transmission and distribution of water through the District’s water system
- **General:** costs that are not directly attributable to any other functional category

OPERATING COST FUNCTIONALIZATION

WRE worked closely with District staff to evaluate and allocate the operating expenses for CY 2024 (Table 2-7) to the most closely associated functional categories within the water system, as shown in Table 3-2. The detailed allocation of the operating expense budget to the functional categories is included in the Appendix (Table 5-2).

Table 3-2: Operating Costs by System Functions

Line	Cost Functions	Operating Expenses	Percent of Total
1	Supply	\$59,988	3.4%
2	Distribution	\$414,568	23.2%
3	Treatment	\$137,078	7.7%
4	Pumping	\$198,359	11.1%
5	Storage	\$85,333	4.8%
6	Meter	\$20,000	1.1%
7	Fire Service	\$0	0.0%
8	Customer	\$34,000	1.9%
9	General	\$837,795	46.9%
10	Total	\$1,787,122	100.0%

CAPITAL ASSET FUNCTIONALIZATION

WRE worked with District staff to evaluate and allocate the District’s current capital assets to the most closely associated functional categories within the water system, as shown in **Table 3-3**. The detailed allocation of the current capital assets to the functional categories is included in the **Appendix (Table 5-3)**.

It is standard practice in most water cost-of-service studies to functionalize current capital assets rather than planned CIP costs, since the latter can fluctuate more significantly from year to year. The current capital asset base provides a more stable representation of long-term capital needs and their associated costs. The asset valuation methodology used in this study is Replacement Cost, since the District does not have reliable depreciation data on all the system assets.

Table 3-3: Capital Assets by System Functions

Line	Cost Functions	Capital Assets (Replacement Cost)	Percent of Total
1	Supply	\$12,175,317	12.2%
2	Distribution	\$43,555,000	43.5%
3	Treatment	\$780,000	0.8%
4	Pumping	\$3,595,000	3.6%
5	Storage	\$35,435,000	35.4%
6	Meter	\$477,200	0.5%
7	Fire Service	\$2,775,000	2.8%
8	Customer	\$0	0.0%
9	General	\$1,345,000	1.3%
10	Total	\$100,137,517	100.0%

3.4 COST CAUSATION COMPONENTS

COST COMPONENT DEFINITIONS

While the functional categories represent the costs of system functions, cost causation components represent the reasons for why and how those costs are incurred within the system (thus, cost causation). Cost causation components will be referred to as cost components in this report. The next step of the cost-of-service analysis is to allocate the Operating, Capital, and Revenue Offsets in the functional categories between the cost components, most of which directly correspond to a single functional category.

The cost components in this study include the following:

- **Meter:** directly corresponds to the Meter functional category
- **Customer:** directly corresponds to the Customer functional category
- **Fire Service:** directly corresponds to the Fire functional category
- **Supply:** directly corresponds to the Supply functional category
- **Average Day Demand (Base):** costs associated with delivering water to customers during average water demand conditions (average daily use)
- **Maximum Day Demand (Max Day):** costs associated with delivering water to customers during maximum day demand conditions (water usage during highest day of year)
- **Maximum Hour Demand (Max Hour):** costs associated with delivering water to customer during maximum hour demand conditions (water usage during highest hour of highest day)
- **General:** directly corresponds to the General functional category

SYSTEM-WIDE MAXIMUM CAPACITY FACTORS

System-wide maximum capacity factors for the District's water system, shown in **Table 3-4**, are used to allocate costs associated with the Treatment, Pumping, Storage, and Distribution functional categories to the Base, Max Day, and Max Hour cost components. Maximum capacity factors represent the ratio of maximum to average water demand over the course of one year for the entire system. This provides a basis to identify costs incurred to provide water service during average demand conditions and to provide additional capacity during maximum demand conditions.

District staff provided the average day, maximum day, and maximum hour demand capacity factors, which are normalized based on average day demand (meaning that the average day demand is always equal to 1.00).

The percentage allocations to the Base, Max Day, and Max Hour cost components based on the average day, maximum day, and maximum demand capacity factors are calculated as follows:

- Average day demand is allocated entirely to Base
- Max day demand is allocated proportionately to Base² and Max Day³

² $1.00/2.00 = 50.0\%$

³ $(2.00-1.00)/2.00 = 50.0\%$

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- Max hour demand is allocated proportionately to Base⁴, Max Day⁵, and Max Hour⁶

Table 3-4: System-Wide Maximum Capacity Allocation

Line	System-Wide Maximum Capacity	Factor	Base	Max Day	Max Hour	Total
1	Average Day Demand	1.00	100.0%	0.0%	0.0%	100.0%
2	Max Day Demand	2.00	50.0%	50.0%	0.0%	100.0%
3	Max Hour Demand	5.00	20.0%	20.0%	60.0%	100.0%

⁴ 1.00/5.00 = 20.0%

⁵ (2.00-1.00)/5.00 = 20.0%

⁶ (5.00-2.00)/5.00 = 60.0%

COST COMPONENT ALLOCATION FACTORS

Table 3-5 shows the factors used to allocate the functionalized costs to the cost components. For the cost components that directly correlate to a functional category (Meter, Customer, Fire Service, Supply, and General), the functionalized costs are allocated entirely to the matching cost component. Treatment, Pumping, and Storage facilities (Lines 3-5) are sized based on maximum day demand and are allocated based on the Max Day maximum capacity factor (**Table 3-4**, Line 2). Distribution facilities (Line 2) are sized based on maximum hour demand and are allocated based on the Max Hour maximum capacity factors (**Table 3-4**, Line 3).

Table 3-5: System Function Allocation to Cost Components

Line	Cost Functions	Meter	Customer	Fire	Base	Max Day	Max Hour	Supply	General	Total
1	Supply	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%	0.0%	100.0%
2	Distribution	0.0%	0.0%	0.0%	20.0%	20.0%	60.0%	0.0%	0.0%	100.0%
3	Treatment	0.0%	0.0%	0.0%	50.0%	50.0%	0.0%	0.0%	0.0%	100.0%
4	Pumping	0.0%	0.0%	0.0%	50.0%	50.0%	0.0%	0.0%	0.0%	100.0%
5	Storage	0.0%	0.0%	0.0%	50.0%	50.0%	0.0%	0.0%	0.0%	100.0%
6	Meter	100%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
7	Fire Service	0.0%	0.0%	100%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
8	Customer	0.0%	100%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
9	General	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%	100.0%

OPERATING COST COMPONENT ALLOCATION

Table 3-6 shows the operating cost allocation by cost component. The functionalized operating expenses from **Table 3-2** are allocated based on the cost component allocation factors in **Table 3-5**. The operating allocation (Line 11) is derived from the total operating expenses by cost component (Line 10) and represents the proportion of the Operating revenue requirement that will be allocated to each cost component.

Table 3-6: Operating Allocation by Cost Component

Line	Operating Expenses	Meter	Customer	Fire	Base	Max Day	Max Hour	Supply	General	Total
1	Supply	\$0	\$0	\$0	\$0	\$0	\$0	\$59,988	\$0	\$59,988
2	Distribution	\$0	\$0	\$0	\$82,914	\$82,914	\$248,741	\$0	\$0	\$414,568
3	Treatment	\$0	\$0	\$0	\$68,539	\$68,539	\$0	\$0	\$0	\$137,078
4	Pumping	\$0	\$0	\$0	\$99,180	\$99,180	\$0	\$0	\$0	\$198,359
5	Storage	\$0	\$0	\$0	\$42,667	\$42,667	\$0	\$0	\$0	\$85,333
6	Meter	\$20,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$20,000
7	Fire Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
8	Customer	\$0	\$34,000	\$0	\$0	\$0	\$0	\$0	\$0	\$34,000
9	General	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$837,795	\$837,795
10	Total - Operating Expenses	\$20,000	\$34,000	\$0	\$293,299	\$293,299	\$248,741	\$59,988	\$837,795	\$1,787,122
11	Operating Cost Allocation	1.1%	1.9%	0.0%	16.4%	16.4%	13.9%	3.4%	46.9%	100.0%

CAPITAL COST COMPONENT ALLOCATION

Table 3-7 shows the capital cost allocation by cost component. The functionalized capital assets from Table 3-3 are allocated based on the cost component allocation factors in Table 3-5. The capital allocation (Line 11) is derived from the total capital asset value by cost component (Line 10) and represents the proportion of the Capital revenue requirement that will be allocated to each cost component.

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Table 3-7: Capital Allocation by Cost Component

Line	Capital Assets (RC)	Meter	Customer	Fire	Base	Max Day	Max Hour	Supply	General	Total
1	Supply	\$0	\$0	\$0	\$0	\$0	\$0	\$12,175,317	\$0	\$12,175,317
2	Distribution	\$0	\$0	\$0	\$8,711,000	\$8,711,000	\$26,133,000	\$0	\$0	\$43,555,000
3	Treatment	\$0	\$0	\$0	\$390,000	\$390,000	\$0	\$0	\$0	\$780,000
4	Pumping	\$0	\$0	\$0	\$1,797,500	\$1,797,500	\$0	\$0	\$0	\$3,595,000
5	Storage	\$0	\$0	\$0	\$17,717,500	\$17,717,500	\$0	\$0	\$0	\$35,435,000
6	Meter	\$477,200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$477,200
7	Fire Service	\$0	\$0	\$2,775,000	\$0	\$0	\$0	\$0	\$0	\$2,775,000
8	Customer	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9	General	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,345,000	\$1,345,000
10	Total - Capital Fixed Assets	\$477,200	\$0	\$2,775,000	\$28,616,000	\$28,616,000	\$26,133,000	\$12,175,317	\$1,345,000	\$100,137,517
11	Capital Cost Allocation	0.5%	0.0%	2.8%	28.6%	28.6%	26.1%	12.2%	1.3%	100.0%

3.5 SYSTEM CAPACITY ALLOCATIONS

The costs for certain system functions are based on the capacity requirements related to that function. For example, meter-related costs are allocated based on meter capacity, which is defined by the safe maximum operating capacity of each meter size. This section describes and defines capacity requirements and allocations relating to water meters.

EQUIVALENT METER UNITS

Costs related to meter capacity increase based on meter size. Therefore, equivalent meter units are calculated to provide a basis from which to allocate costs in proportion to meter size. Equivalent meter calculations are shown in **Table 3-8**.

Equivalent meters are calculated based on meter capacity ratios, which represent the safe operating capacity of a water meter relative to the base meter size. For this study, the base meter size is a 1" meter, which is the most common meter size in the District's system. Capacity in gallons per minute (gpm) is derived from the AWWA M1 Manual. The meter ratio for a 1.5" meter is 2.00, which means that the capacity of a 1.5" meter is two times that of a 1" meter.

The number of meters is from **Table 2-2**. Equivalent meters are calculated by multiplying the meter counts by the meter ratio in each size.

Table 3-8: Equivalent Meter Units

Line	Meter Size	Safe Operating Capacity (gpm)	Meter Ratio	Meter Counts	Meter Equivalents
1	3/4 inch	30	1.00	145	145
2	1 inch	50	1.00	278	278
3	1.5 inch	100	2.00	127	254
4	2 inch	160	3.20	40	128
9	Total			590	805

3.6 ALLOCATION TO COST COMPONENTS

PRELIMINARY COST-OF-SERVICE ALLOCATION AND GENERAL REALLOCATION

Table 3-9 shows the preliminary cost-of-service allocation prior to any adjustments and the adjusted cost-of-service allocations after the General cost reallocation. The Operating costs (Line 1) are equal to the total Operating revenue requirements (**Table 3-1**, Line 16) allocated to each cost component based on the Operating allocation (**Table 3-6**, Line 11). The Capital costs (Line 2) are equal to the total Capital revenue requirements (**Table 3-1**, Line 16) allocated to each cost component based on the Capital allocation (**Table 3-7**, Line 11). Note that the total cost-of-service (Line 3) is equal to the total rate revenue requirement for CY 2024 (**Table 3-1**, Line 16).

The next step is to reallocate General costs (Line 4) based on the proportion of costs in each cost component (except General) in the preliminary allocation. The total revenue requirement (Line 5) stays the same after the General cost reallocation.

Table 3-9: Cost-of-Service Allocation by Cost Component (Preliminary, General)

Line	Revenue Requirement	Meter	Customer	Fire	Base	Max Day	Max Hour	Supply	General	Total
1	Operating Costs	\$20,164	\$34,279	\$0	\$295,707	\$295,707	\$250,783	\$60,480	\$844,673	\$1,801,794
2	Capital Costs	\$1,550	\$0	\$9,012	\$92,932	\$92,932	\$84,868	\$39,540	\$4,368	\$325,202
3	Total - Revenue Requirement	\$21,714	\$34,279	\$9,012	\$388,639	\$388,639	\$335,651	\$100,020	\$849,041	\$2,126,996
4	General Cost Allocation	\$14,426	\$22,774	\$5,987	\$258,202	\$258,202	\$222,998	\$66,451	(\$849,041)	\$0
5	Total - Requirement after General Allocation	\$36,140	\$57,053	\$14,999	\$646,841	\$646,841	\$558,650	\$166,472	\$0	\$2,126,996

FIRE PROTECTION AND MAXIMUM CAPACITY REALLOCATION

Table 3-10 shows the cost-of-service in each cost component after reallocating fire protection and maximum capacity-related costs. The cost-of-service after General cost reallocation (Line 1) is from **Table 3-9**. Public Fire costs (Line 2) are reallocated to the Meter component, since public fire protection is a safety benefit shared by all District customers. Finally, the maximum capacity reallocation (Line 4) adjusts the costs in Max Hour to recover maximum capacity costs in the Meter cost component. This allocation is to increase the percentage of fixed revenue recovery, which will provide a higher level of financial and rate stability for the District. Currently, the District recovers approximately 25% of its total rate revenue from fixed charges. However, based on an analysis of the District’s O&M expenses, over 95% of the District’s costs are fixed. Thus, WRE recommends that the District gradually increases its fixed costs recovery to a maximum of 40% to be more in line with its cost structure. To minimize rate shock to the District’s customers, the proposed plan is set to collect 30% of the total

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rate revenue from fixed charges. To achieve this objective, WRE reallocated 95% of Max Hour costs to the Meter component to achieve a higher percentage of fixed revenues.

Table 3-10: Cost-of-Service Allocation by Cost Component (Fire Protection, Maximum Capacity)

Line	Revenue Requirement	Meter	Customer	Fire	Base	Max Day	Max Hour	Supply	Total
1	Adjusted for General	\$36,140	\$57,053	\$14,999	\$646,841	\$646,841	\$558,650	\$166,472	\$2,126,996
2	Public Fire Allocation	\$14,999		(\$14,999)					\$0
3	Adjusted for Fire	\$51,139	\$57,053	\$0	\$646,841	\$646,841	\$558,650	\$166,472	\$2,126,996
4	Maximum Capacity Reallocation	\$530,717					(\$530,717)		
5	Adjusted for Max. Capacity	\$581,857	\$57,053	\$0	\$646,841	\$646,841	\$27,932	\$166,472	\$2,126,996

FINAL COST-OF-SERVICE ALLOCATION

Table 3-11 shows the final cost-of-service allocation based on the adjustments for General, Fire, and Maximum Capacity from the prior report tables. The Meter and Customer components add up to approximately 30% of the total costs.

Table 3-11: Cost-of-Service Allocation by Cost Component (Final)

Line	Cost Components	Final Cost Allocation
1	Meter	\$581,857
2	Customer	\$57,053
3	Base	\$646,841
4	Max Day	\$646,841
5	Max Hour	\$27,932
6	Supply	\$166,472
11	Total	\$2,126,996

3.7 UNIT COST CALCULATION

UNITS OF SERVICE DEFINITIONS

The appropriate units of service are then established for each cost component based on cost causation, which is shown in **Table 3-12**. Cost components to be recovered by the fixed charges are assigned units of service based on the number of equivalent meters and meter counts (**Table 3-8**). Cost components to be recovered by the quantity charges are assigned units based on annual usage in ccf (**Table 2-4**).

Table 3-12: Units of Service Definitions

Line	Cost Components	Units of Service Definition	Units of Service	Units
1	Meter	<i>Equivalent meters x 365 days</i>	293,825	equiv. meters/year
2	Customer	<i>Meter counts x 12 months</i>	7,080	bills/year
3	Base	<i>Annual usage in ccf</i>	257,362	ccf/year
4	Max Day	<i>Annual usage in ccf</i>	257,362	ccf/year
5	Max Hour	<i>Annual usage in ccf</i>	257,362	ccf/year
6	Supply	<i>Annual usage in ccf</i>	257,362	ccf/year

UNIT COST BY COST COMPONENT

Table 3-13 shows the calculation of unit costs by each cost component. The final cost-of-service allocation (**Table 3-11**) is divided by the units of service (**Table 3-12**) for each cost component to derive the unit cost. These unit costs will determine the rates in Section 4.

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Table 3-13: Unit Cost by Cost Component

Line	Cost Components	Final Cost Allocation	Units of Service	Unit Cost	Units
1	Meter	\$581,857	293,825	\$1.98	per equiv. meter per day
2	Customer	\$57,053	7,080	\$8.06	per bill per month
3	Base	\$646,841	257,362	\$2.51	per ccf
4	Max Day	\$646,841	257,362	\$2.51	per ccf
5	Max Hour	\$27,932	257,362	\$0.11	per ccf
6	Supply	\$166,472	257,362	\$0.65	per ccf

4. WATER RATES

4.1 RATE DESIGN METHODOLOGY

A five-year proposed water rate schedule was developed based on the results of the proposed financial plan and cost-of-service analysis. The key steps in developing the proposed rate schedule are outlined below:

- **Rate structure evaluation:** The existing rate structure is evaluated, and any proposed changes are identified. Proposed rate structure changes are typically intended to address specific policy objectives or to allocate costs based on the cost-of-service analysis.
- **Test year rate development:** Rates are calculated for the proposed rate structure for the cost-of-service test year (CY 2024). Rate calculations directly incorporate the unit costs developed in the cost-of-service analysis. The test year rates are revenue neutral, then are increased based on the proposed financial plan revenue adjustments. Although total rate revenues in the first year of adjustments (CY 2025) are designed to increase by the proposed revenue adjustment percentage (19% in CY 2025), the proposed percentage increase to each rate/charge varies due to the updated cost-of-service allocations.
- **Five-year rate schedule development:** Proposed rates for the five-year period are calculated by increasing the cost-of-service rates by the proposed annual revenue adjustment percentages from the proposed financial plan.

4.2 PROPOSED CHANGES TO RATE STRUCTURE

The main objective of the rate study was to conduct a comprehensive cost-of-service analysis while maintaining as much of the current water rate structure as possible to minimize customer impacts. The District's current rate structure includes a daily service charge and a uniform water usage charge for all customers.

After examining the existing rate methodology, WRE recommends a change to the daily service charge to be based on meter size to reflect the different capacity of each meter size. This rate structure is also consistent with industry standards and Proposition 218's proportionality requirement. Given the District's water supply and customer profile, WRE recommends the District retains the current uniform monthly water usage charge structure.

4.3 PROPOSED DAILY SERVICE CHARGE

REVENUE NEUTRAL RATES

The revenue neutral rate represents the cost-of-service analysis for CY 2024 but does not include the proposed revenue adjustments for the first year of rates in CY 2025. **Table 4-1** shows the revenue neutral daily service charge calculations. The Meter and Customer unit costs are from **Table 3-13** (Lines 1-2). Meter unit cost is multiplied by the meter capacity ratio; Customer unit cost does not vary

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based on meter size and thus is the same for all meter sizes. The monthly Customer unit cost is converted to daily cost to be consistent with the Meter unit cost⁷.

Table 4-1: Revenue Neutral Daily Service Charge

Line	Meter Size	Meter Ratio	Number of Accounts	Meter Cost	Customer Cost	Revenue Neutral Rate
1	3/4 inch	1.00	145	\$1.98	\$0.26	\$2.25
2	1 inch	1.00	278	\$1.98	\$0.26	\$2.25
3	1.5 inch	2.00	127	\$3.96	\$0.26	\$4.23
4	2 inch	3.20	40	\$6.34	\$0.26	\$6.60

PROPOSED RATES WITH ADJUSTMENT

Table 4-2 shows the proposed daily service charge for CY 2025 based on the revenue neutral rate (**Table 4-1**) adjusted by the proposed revenue adjustment of 19% in the first year (**Table 2-15**) and rounded up to the nearest cent.

Table 4-2: Proposed Daily Service Charge after Adjustment

Line	Meter Size	Revenue Neutral Rate	Proposed Rate (w/ 19% Adj.)	Current Rate	Difference (\$)	Difference (%)
1	3/4 inch	\$2.25	\$2.68	\$2.48	\$0.20	8.1%
2	1 inch	\$2.25	\$2.68	\$2.48	\$0.20	8.1%
3	1.5 inch	\$4.23	\$5.04	\$2.48	\$2.56	103.2%
4	2 inch	\$6.60	\$7.87	\$2.48	\$5.39	217.3%

4.4 PROPOSED USAGE CHARGE

REVENUE NEUTRAL RATES

The revenue neutral rate represents the cost-of-service analysis for CY 2024 but does not include the proposed revenue adjustments for the first year of rates in CY 2025. **Table 4-3** shows the revenue neutral water usage charge for all customers, based on the Supply, Base, Max Day, and Max Hour unit costs from **Table 3-13**.

Table 4-3: Revenue Neutral Usage Charge

Line	Customer Class	Annual Usage (ccf)	Supply Cost	Base Cost	Max Day Cost	Max Hour Cost	Revenue Neutral Rate
1	All Customers	257,362	\$0.65	\$2.51	\$2.51	\$0.11	\$5.78

⁷ \$8.06 per month per bill x 12 months / 365 days = \$0.26/day

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PROPOSED RATES WITH ADJUSTMENT

Table 4-4 shows the proposed water usage charge for CY 2025 based on the revenue neutral rate (**Table 4-3**) adjusted by the proposed revenue adjustment of 19% in the first year (**Table 2-15**) and rounded up to the nearest cent.

Table 4-4: Proposed Usage Charge after Adjustment

Line	Customer Class	Revenue Neutral Rate	Proposed Rate (w/ 19% Adj.)	Current Rate	Difference (\$)	Difference (%)
1	All Customers	\$5.78	\$6.90	\$6.20	\$0.70	11.3%

4.5 PROPOSED WATER RATE SCHEDULE

PROPOSED FIVE-YEAR REVENUE ADJUSTMENTS

Table 4-5 shows the revenue adjustments for the five-year period and their effective date based on the proposed financial plan (**Table 2-15**).

Table 4-5: Proposed Revenue Adjustments

Line	Fiscal Year	Revenue Adjustments	Effective Date
1	CY 2025	19.0%	1/1/2025
2	CY 2026	19.0%	1/1/2026
3	CY 2027	9.0%	1/1/2027
4	CY 2028	9.0%	1/1/2028
5	CY 2029	9.0%	1/1/2029

PROPOSED FIVE-YEAR WATER RATE SCHEDULE

The proposed five-year water rate schedules are based on the proposed rate structure changes, the cost-of-service analysis, and the proposed revenue adjustments (**Table 4-5**) in the five-year period. The proposed rates for CY 2026 through CY 2029 were calculated by increasing the CY 2025 rates by the revenue adjustments, rounded up to the nearest cent. **Table 4-6** and **Table 4-7** show the current and proposed daily service charge and water usage charge, respectively.

Table 4-6: Proposed Daily Service Charge

Line	Meter Size	As of 1/1/24	Effective 1/1/25	Effective 1/1/26	Effective 1/1/27	Effective 1/1/28	Effective 1/1/29
1	3/4 inch	\$2.48	\$2.68	\$3.19	\$3.48	\$3.80	\$4.15
2	1 inch	\$2.48	\$2.68	\$3.19	\$3.48	\$3.80	\$4.15
3	1.5 inch	\$2.48	\$5.04	\$6.00	\$6.54	\$7.13	\$7.78
4	2 inch	\$2.48	\$7.87	\$9.37	\$10.22	\$11.14	\$12.15

Table 4-7: Proposed Water Usage Charge

Line	Usage Charge (\$/ccf)	As of 1/1/24	Effective 1/1/25	Effective 1/1/26	Effective 1/1/27	Effective 1/1/28	Effective 1/1/29
1	All customers	\$6.20	\$6.90	\$8.22	\$8.96	\$9.77	\$10.65

4.6 CUSTOMER IMPACTS

WRE evaluated the impacts to each meter size based on the proposed water rates for CY 2025 at various levels of usage. The tables also include the number of bills at each level of usage. Please note that the number of bills does not represent the number of customers as each customer can have 12 different bills within a year.

Table 4-8 shows the proposed impacts for a customer with a 3/4” meter at various levels of monthly usage. For the average customer with this meter size that uses 11 ccf of water a month, the monthly impact will be \$13.78 or 9.6%, which is significantly lower than the 19% revenue adjustment applied to CY 2025.

Table 4-8: Proposed Customer Impacts (3/4 inch meters)

Line	Monthly Customer Bill Impacts	Monthly Usage (ccf)	No. of Bills	Current Bill	Proposed Bill	Difference (\$)	Difference (%)
1	Very Low Use (10th percentile)	2	101	\$87.83	\$95.32	\$7.48	8.5%
2	Low Use (25th percentile)	5	96	\$106.43	\$116.02	\$9.58	9.0%
3	Median Use	10	56	\$137.43	\$150.52	\$13.08	9.5%
4	Average Use	11	64	\$143.63	\$157.42	\$13.78	9.6%
5	High Use (75th percentile)	22	23	\$211.83	\$233.32	\$21.48	10.1%
6	Very High Use (90th percentile)	39	13	\$317.23	\$350.62	\$33.38	10.5%

Table 4-9 shows the proposed impacts for a customer with a 1” meter (the most common meter size, representing approximately 47% of customer accounts). For the average customer with this meter size that uses 11 ccf of water a month, the monthly impact will be \$13.78 or 9.6%, which is significantly lower than the 19% revenue adjustment applied to CY 2025.

Table 4-9: Proposed Customer Impacts (1 inch meters)

Line	Monthly Customer Bill Impacts	Monthly Usage (ccf)	No. of Bills	Current Bill	Proposed Bill	Difference (\$)	Difference (%)
1	Very Low Use (10th percentile)	3	142	\$94.03	\$102.22	\$8.18	8.7%
2	Low Use (25th percentile)	6	126	\$112.63	\$122.92	\$10.28	9.1%
3	Median Use	15	65	\$168.43	\$185.02	\$16.58	9.8%
4	Average Use	11	107	\$143.63	\$157.42	\$13.78	9.6%
5	High Use (75th percentile)	34	23	\$286.23	\$316.12	\$29.88	10.4%
6	Very High Use (90th percentile)	57	17	\$428.83	\$474.82	\$45.98	10.7%

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Table 4-10 shows the proposed impacts for a customer with a 1.5” meter at various levels of monthly usage. For the average customer with this meter size that uses 13 ccf of water a month, the monthly impact will be \$86.97 or 56%, which is higher than the 19% revenue adjustment applied to CY 2025.

Table 4-10: Proposed Customer Impacts (1.5 inch meters)

Line	Monthly Customer Bill Impacts	Monthly Usage (ccf)	No. of Bills	Current Bill	Proposed Bill	Difference (\$)	Difference (%)
1	Very Low Use (10th percentile)	3	27	\$94.03	\$174.00	\$79.97	85.0%
2	Low Use (25th percentile)	10	32	\$137.43	\$222.30	\$84.87	61.8%
3	Median Use	25	21	\$230.43	\$325.80	\$95.37	41.4%
4	Average Use	13	27	\$156.03	\$243.00	\$86.97	55.7%
5	High Use (75th percentile)	47	15	\$366.83	\$477.60	\$110.77	30.2%
6	Very High Use (90th percentile)	74	5	\$534.23	\$663.90	\$129.67	24.3%

Table 4-11 shows the proposed impacts for a customer with a 2” meter at various levels of monthly usage. For the average customer with this meter size that uses 26 ccf of water a month, the monthly impact will be \$182.15 or 77%, which is higher than the 19% revenue adjustment applied to CY 2025.

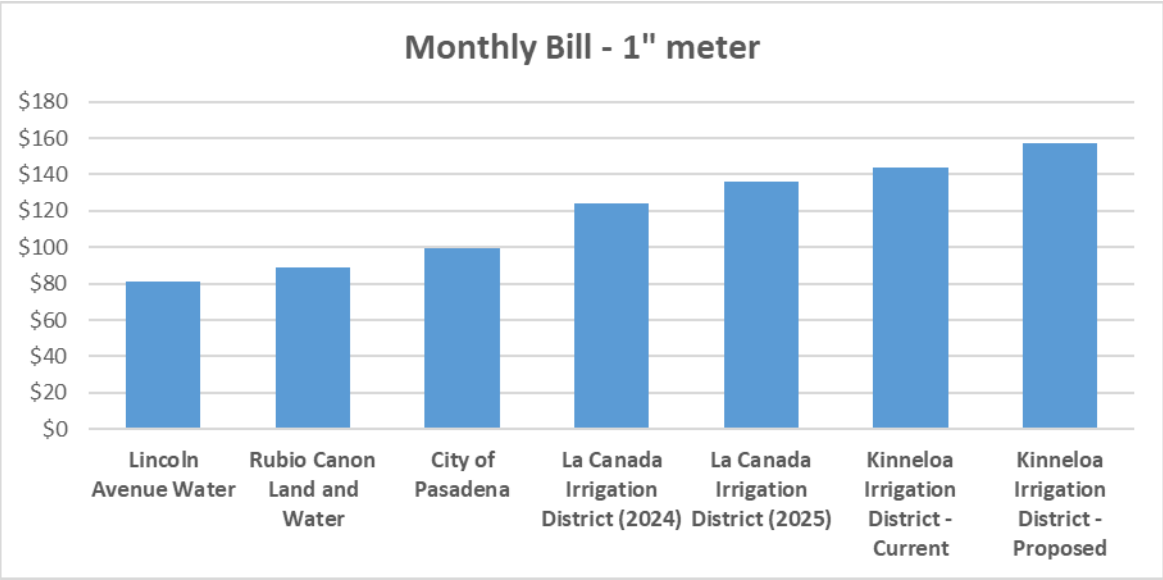
Table 4-11: Proposed Customer Impacts (2 inch meters)

Line	Monthly Customer Bill Impacts	Monthly Usage (ccf)	No. of Bills	Current Bill	Proposed Bill	Difference (\$)	Difference (%)
1	Very Low Use (10th percentile)	3	7	\$94.03	\$260.08	\$166.05	176.6%
2	Low Use (25th percentile)	12	7	\$149.83	\$322.18	\$172.35	115.0%
3	Median Use	35	5	\$292.43	\$480.88	\$188.45	64.4%
4	Average Use	26	6	\$236.63	\$418.78	\$182.15	77.0%
5	High Use (75th percentile)	93	2	\$652.03	\$881.08	\$229.05	35.1%
6	Very High Use (90th percentile)	186	1	\$1,229.25	\$1,523.47	\$294.22	23.9%

4.7 MONTHLY WATER BILL COMPARISON

WRE conducted a comparison of the District’s current and proposed CY 2025 monthly bills for an average customer with four neighboring agencies, as shown in **Figure 4-1**. All monthly bills are based on a 1” meter and assume a 11 ccf in monthly water use. Please note that the comparison is limited to published rates and that there are many variables that can and do impact rates such as governance structure, private, non-profit or public water agency, revenues from property taxes, customer base, levels of imported water and/or groundwater, infrastructure costs, etc.

Figure 4-1: Monthly Bill Comparison – 1” Meter



5. APPENDICES

5.1 FINANCIAL PLAN APPENDICES

Table 5-1: Capital Projects (Detail)

Line	Capital Projects (Inflated)	Project Number	CY 2024	CY 2025	CY 2026	CY 2027	CY 2028	CY 2029
1	General Projects		\$0	\$195,676	\$221,728	\$184,703	\$40,945	\$355,681
2	Main Office Solar and Battery Storage Project including New Roof	G-1	\$0	\$86,476	\$0	\$0	\$0	\$0
3	Remodel Main Office	G-2	\$0	\$0	\$0	\$0	\$0	\$112,351
4	Physical Site Security Improvements	G-3	\$0	\$26,000	\$48,672	\$60,968	\$0	\$0
5	Fire and Water Wise Landscape Improvements (Office, Eucalyptus, Brown Well, Sage/Wilcox Reservoir)	G-4	\$0	\$0	\$0	\$0	\$0	\$0
6	Roofing on Booster Stations and CL2 Rooms	G-5	\$0	\$15,600	\$16,224	\$16,873	\$17,548	\$0
7	SCADA Antenna Network Upgrade - Wilcox Well Repeater w/ NYD Project?	G-6	\$0	\$0	\$0	\$0	\$0	\$60,833
8	SCADA RTU Upgrades (current RTU's no longer supported after 2027)	G-7	\$0	\$0	\$64,896	\$67,492	\$0	\$0
9	Solar Panels/Batteries for Comms at all Generator Powered Sites (Glen in ST-2)	G-8	\$0	\$52,000	\$54,080	\$0	\$0	\$0
10	SCADA Radio Upgrades (current Radios still manufactured but likely required during years 5-10)	G-9	\$0	\$0	\$0	\$0	\$0	\$0
11	Fleet Replacement - Booster Backup Generators (Eucalyptus, Wilcox Resv, Vosburg/Sage, Glen,)	G-10	\$0	\$0	\$0	\$0	\$0	\$182,498
12	District Storage Facilities at Sage Site, Eucalyptus Site and Vosburg Site	G-11	\$0	\$15,600	\$16,224	\$16,873	\$0	\$0
13	Driveway Paving/Improvements at Wilcox Well/Wilcox Reservoir/Holly (3 locations, see ST-2 for Glen)	G-12	\$0	\$0	\$21,632	\$22,497	\$23,397	\$0
14	Clean Energy Program per SB 1020 (100% renewable and zero-carbon sources by 2035) - Undefined/Excluded	G-13	\$0	\$0	\$0	\$0	\$0	\$0
17	Water Storage Projects		\$0	\$323,736	\$81,120	\$0	\$0	\$121,665
18	Vosburg Reservoir - Replace all Exterior Cladding/Screens and Recoat/Patch Roof	ST-1	\$0	\$0	\$0	\$0	\$0	\$121,665
19	Glen Reservoir - New Roofing System, Solar, Liner, Sitework	ST-2	\$0	\$317,496	\$0	\$0	\$0	\$0
20	Brown Reservoir -New Roof Framing System + Interior Rehab/Liner	ST-3	\$0	\$0	\$0	\$0	\$0	\$0
21	Eucalyptus Reservoir - Roof/Paint/General Rehab pending recommendations following 2025 inspection	ST-4	\$0	\$0	\$27,040	\$0	\$0	\$0
22	Wilcox Reservoir - Roof/Paint/General Rehab pending recommendations following 2025 inspection	ST-5	\$0	\$0	\$54,080	\$0	\$0	\$0

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Line	Capital Projects (Inflated)	Project Number	CY 2024	CY 2025	CY 2026	CY 2027	CY 2028	CY 2029
23	East Tank - Gabion Baskets and Labor to built retaining wall around tank (60 lf)	ST-6	\$0	\$6,240	\$0	\$0	\$0	\$0
24	Steel Tanks (assume all needs are covered in USG Asset Management Program, included in OpEx)	ST-7	\$0	\$0	\$0	\$0	\$0	\$0
25	Pumping Projects		\$0	\$326,040	\$659,776	\$598,990	\$0	\$0
26	K3 Well Pump Rehab/Upgrade to Water Lubricated, cleanup Electrical System, prep for Generator	P-1	\$0	\$208,000	\$0	\$0	\$0	\$0
27	Eucalyptus Booster Pump/Motor R&R (Pump 1)	P-2	\$0	\$0	\$389,376	\$0	\$0	\$0
28	Wilcox Booster: Pump Stand, new Booster, Electrical Upgrade and Pumping Line	P-3	\$0	\$78,000	\$0	\$0	\$0	\$0
29	Wilcox Well Rehab - Line Well/New Pump&Motor/Electrical/Generator and Disinfection Plant	P-4	\$0	\$0	\$270,400	\$506,189	\$0	\$0
30	Glen Reservoir Booster Pump/Motor R&R #1, new #2, related work and Electrical System Upgrade	P-5	\$0	\$40,040	\$0	\$92,801	\$0	\$0
31	Treatment Projects		\$0	\$137,540	\$91,936	\$84,365	\$0	\$0
32	Fluoride Blending Treatment for Delores Tunnel and Far Mesa Tunnel	T-1	\$0	\$137,540	\$0	\$0	\$0	\$0
33	K3 Chlorination System and Controls Upgrade (new Generator system and Controls)	T-2	\$0	\$0	\$0	\$84,365	\$0	\$0
34	Fluoride Blending Treatment for Hi-Low Tunnel to West Tank	T-3	\$0	\$0	\$91,936	\$0	\$0	\$0
35	Spreading Projects		\$0	\$41,600	\$81,120	\$0	\$0	\$0
36	Delores Tunnel - Pipeline Repair and Protection in Canyon, Tree Removals, Hazard Mitigation	SP-1	\$0	\$26,000	\$0	\$0	\$0	\$0
37	Far Mesa Tunnel: Access Structure on Rittenhouse Property with Pipe Shield	SP-2	\$0	\$0	\$54,080	\$0	\$0	\$0
38	Hi-Lo Tunnel - replace canyon piping with HDPE where potential for damage	SP-3	\$0	\$0	\$27,040	\$0	\$0	\$0
39	Eucalyptus Tunnel - Camera Inspection/Assessment Report	SP-4	\$0	\$15,600	\$0	\$0	\$0	\$0
40	Distribution System Projects - Valves/Hydrants		\$0	\$46,800	\$27,040	\$28,122	\$29,246	\$85,166
41	Control Valve Retrofit at Sage Booster Bypass to drop West Tank Water into Sage/Holly	D-1	\$0	\$10,400	\$0	\$0	\$0	\$0
42	Control Valve Retrofit at Eucalyptus Bypass to Drop Holly/Sage Water into Eucalyptus Reservoir	D-2	\$0	\$10,400	\$0	\$0	\$0	\$0
43	Earthquake Valve Actuators at Storage Tanks (10 valves, 2 EQ sensors)	D-3	\$0	\$0	\$0	\$0	\$0	\$0
44	Holly Booster Pump Removal/Install Transfer Valve for East Tank to Holly Tanks w/ new SCADA	D-4	\$0	\$0	\$0	\$0	\$0	\$54,749
45	Gate Valve Replacement Program (unrelated to pipeline projects)	D-5	\$0	\$26,000	\$27,040	\$28,122	\$29,246	\$30,416
46	Distribution System Projects - Mainline		\$125,000	\$0	\$2,238,912	\$623,246	\$688,754	\$979,406

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Line	Capital Projects (Inflated)	Project Number	CY 2024	CY 2025	CY 2026	CY 2027	CY 2028	CY 2029
47	Brown-Glen to Villa Knolls/Edgedcliff Project (per Civiltec design 2023)	D-6	\$0	\$0	\$2,238,912	\$0	\$0	\$0
48	Villa Mesa/Villa Rica: Upgrade 4"/2.5" STL to 8"/6" DIP, 13 services and 1 hydrant (FF<350gpm)	D-7	\$0	\$0	\$0	\$623,246	\$0	\$0
49	Lower Pasadena Glen Road: Replace 780' of 3" STL to 8" DIP (14 services, 2 new hydrants on V pressure, abandon GV-1&2)	D-8	\$0	\$0	\$0	\$0	\$688,754	\$0
50	East Mesaloe - 480' of 4" STL to 8" DIP, 7 services, 1 hydrant (H-03 no FF on file)	D-9	\$0	\$0	\$0	\$0	\$0	\$346,746
51	East Meyerloa: Replace 560' of 4" STL w/ 6"DIP, no (e) FH, add 1 (n) FH, 6 services	D-10	\$0	\$0	\$0	\$0	\$0	\$381,725
52	East Clarmeya - 300' of 4" STL with DIP, R&R 1 hydrant, 5 services; abandon 460' of 4" STL under homes between Clarmeya and Doyne	D-11	\$0	\$0	\$0	\$0	\$0	\$250,935
53	Eucalyptus-Holly Loop Phase 1: Eucalyptus Reservoir to 1850 Kinneloa Canyon Road; FF improvement on KCRd.	D-12	\$0	\$0	\$0	\$0	\$0	\$0
54	Eucalyptus-Holly Loop Phase 2: 1850 KCynRd to corner of Kinneloa Mesa Road, add 1 new hydrant, ~600ft	D-13	\$0	\$0	\$0	\$0	\$0	\$0
55	Glen Pumping/Drain Line: Cut in New Sump for Inlet/Drain, New Pumping Line to Intersection, New Drain to Wash	D-14	\$0	\$0	\$0	\$0	\$0	\$0
56	Brown Pumping Line, replace 6" steel from Reservoir to Barhite Street (1,200 lf)	D-15	\$0	\$0	\$0	\$0	\$0	\$0
57	East Fairpoint Street - Abandon 900 lf 4" STL, connect (6) Services to (e) 8" DIP and upgrade FPIC to 4"	D-16	\$0	\$0	\$0	\$0	\$0	\$0
58	West Windover: Replace 280' of 4" STL to 4" DIP, reconnect 6 services, no hydrants	D-17	\$0	\$0	\$0	\$0	\$0	\$0
59	Vosburg west of SMV: Replace 400' of 1.5" STL, abandon 1200' and reconnect 16 services to new service line or (e) AC	D-18	\$0	\$0	\$0	\$0	\$0	\$0
60	North Villa Heights Road: Abandon 240' of 4" AC and 210' of 2" STL, reconnect 7 services to (e) 12" DIP	D-19	\$0	\$0	\$0	\$0	\$0	\$0
61	1770-1790 Sierra Madre Villa: Replace 300' of 3" STL in private driveway with 4" DIP, reconnect 5 services	D-20	\$0	\$0	\$0	\$0	\$0	\$0
62	Total - Capital Projects		\$125,000	\$1,071,392	\$3,401,632	\$1,519,425	\$758,946	\$1,541,918

5.2 COST-OF-SERVICE ANALYSIS APPENDICES

Table 5-2: Operating Expenses by System Functions (Detail)

Line	Operating Expenses	CY 2024 Budget	Cost Function	Notes
1	Leased Water Rights	\$0	Supply	
2	Electricity	\$190,859	Pumping	
3	Maintenance Supplies	\$25,000	Distribution	
4	Material and Labor for Install	\$0	Distribution	
5	Safety Equipment	\$2,000	General	
6	Operations & Maintenance Labor	\$275,000		75% to Distribution 25 % to Treatment
7	Operations & Maintenance OT Non-Emergency	\$21,000		75% to Distribution 25 % to Treatment
8	Stand-by Compensation	\$10,980		75% to Distribution 25 % to Treatment
9	Training/Certification	\$1,600	General	
10	Water Treatment/Analysis	\$12,000	Treatment	
11	Water Treatment/Materials	\$10,000	Treatment	
12	Maintenance Contractors	\$128,000		2/3 to Storage, 1/3 to Distribution
13	SCADA System O&M	\$15,000	General	
14	Repair Contractors - Emergency	\$0	Distribution	
15	Equipment Maintenance	\$7,500	Pumping	
16	Vehicle Maintenance	\$12,500	General	
17	Fuel - All Equipment	\$20,000	Distribution	
18	Equipment Rental	\$500	General	
19	Insurance-Workers Comp.	\$16,000	General	
20	Insurance-Liability	\$32,065	General	
21	Insurance-Property	\$4,746	General	
22	Insurance-Medical	\$75,000	General	
23	Engineering Services	\$115,000		1/3 Treatment, 2/3 distribution
24	Watermaster Services (Raymond Basin)	\$46,795	Supply	
25	Executive Officer Salary	\$179,220	General	
26	Administrative Travel	\$1,800	General	
27	BofD Compensation	\$9,000	General	
28	Administrative & Board Exp.	\$2,000	General	
29	B of D Election	\$0	General	
30	Customer/Public Information	\$17,000	Customer	
31	PERS - KID	\$47,000	General	
32	Social Security - KID	\$39,000	General	
33	Medicare - KID	\$9,500	General	
34	Office/Computer Supplies	\$7,000	General	
35	Postage/Delivery	\$5,000	Customer	
36	Professional Dues	\$19,910	General	

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Line	Operating Expenses	CY 2024 Budget	Cost Function	Notes
37	Legal	\$6,000	General	
38	Telephone	\$4,000	General	
39	Mobile Communications	\$2,000	General	
40	Pagers	\$500	General	
41	Internet Service	\$1,500	General	
42	Computer/Software Maintenance	\$13,994	General	
43	Office Equipment Maintenance	\$2,500	General	
44	Accounting Services	\$7,700	General	
45	Office & Accounting Labor	\$172,500	General	
46	Professional Services	\$65,000	General	
47	Contract Services	\$22,260	General	
48	Administrative Fee (FMWD)	\$13,193	Supply	
49	Permits/Fees	\$15,000	General	
50	Taxes - Use	\$500	General	
51	Customer Project Expenses	\$0	General	
52	Bank Service Charges	\$12,000	Customer	
53	Water Mains	\$0	Distribution	
54	Water Tunnels	\$10,000	Distribution	
55	Water Treatment Plant	\$0	Treatment	
56	Water Meters	\$20,000	Meter	
57	Electrical/Electronic Equipment	\$25,000	General	
58	Computer/Office Equipment	\$2,500	General	
59	Vehicles	\$0	General	
60	Water Company Facilities	\$20,000	General	
61	KID Office	\$0	General	
62	Booster Pump Replacement	\$0	Pumping	
63	SCADA System O&M	\$10,000	Distribution	
64	Tools	\$3,000	General	
65	Total - Expenses	\$1,787,122		

Table 5-3: Capital Assets by System Functions (Detail)⁸

Line	Asset Description	Category	Year Built	Useful Life	Replacement Cost	Cost Function
1	West Tank	Storage		100	\$2,500,000	Storage
2	Sage Tank	Storage	2002	100	\$1,125,000	Storage
3	Holly Tank 1	Storage	1957	100	\$750,000	Storage
4	Holly Tank 2	Storage	1959	100	\$750,000	Storage
5	East Tank	Storage	1958	100	\$750,000	Storage
6	Wilcox Reservoir	Storage	1930	100	\$11,250,000	Storage
7	Brown Reservoir	Storage	1924	100	\$1,250,000	Storage
8	Glen Reservoir	Storage	1924	100	\$1,250,000	Storage
9	Vosburg Reservoir	Storage	1958	100	\$12,500,000	Storage
10	Eucalyptus Reservoir	Storage	1989	100	\$1,850,000	Storage
11	K-3 Well	Wells/Pumps	1965	100	\$3,000,000	Supply
12	K-3 Well Pump	Wells/Pumps	2005	20	\$250,000	Pumping
13	Wilcox Well	Wells/Pumps	1924	100	\$3,000,000	Supply
14	Wilcox Well Pump	Wells/Pumps	2000	20	\$250,000	Pumping
15	Eucalyptus Booster Pumps	Wells/Pumps	2015	15	\$225,000	Pumping
16	Sage Booster Pumps	Wells/Pumps	2009	15	\$150,000	Pumping
17	Wilcox Booster Pumps	Wells/Pumps	1997	15	\$150,000	Pumping
18	Glen Reservoir Pump	Wells/Pumps	2019	15	\$75,000	Pumping
19	Vosburg Booster Pumps	Wells/Pumps	2005	15	\$225,000	Pumping
20	Eucalyptus Booster Station	Buildings	1989	50	\$240,000	Pumping
21	Sage Booster Station	Buildings	2002	50	\$240,000	Pumping
22	Vosburg Booster Station	Buildings	2005	50	\$240,000	Pumping
23	K3 Chlorination Room	Buildings	1965	50	\$40,000	Treatment
24	District Office	Buildings	1965	50	\$375,000	General
25	Mainline	Pipeline System		65	\$36,000,000	Distribution
26	Service Line	Pipeline System		65	\$2,990,000	Distribution
27	Meters	Pipeline System		15	\$239,200	Meter
28	Meter AMI Hardware	Pipeline System			\$238,000	Meter
29	Valves - Mainline	Pipeline System		65	\$3,480,000	Distribution

⁸ The assets list represents a rough order of magnitude replacement cost estimate provided by District management based on the best available data

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Line	Asset Description	Category	Year Built	Useful Life	Replacement Cost	Cost Function
30	Valves - Hydrant	Pipeline System		65	\$1,665,000	Fire
31	Hydrants	Pipeline System		65	\$1,110,000	Fire
32	Cla-Val	Pipeline System		25	\$315,000	Distribution
33	Seismic Actuator Valves	Pipeline System		20	\$450,000	Distribution
34	Office/Hidden Valley	Land			\$750,000	General
35	Vosburg Reservoir	Land			\$1,000,000	Storage
36	Eucalyptus Reservoir	Land			\$10,000	Storage
37	Glen Reservoir Site	Land			\$250,000	Storage
38	Brown Reservoir Site	Land			\$100,000	Storage
39	Holly Tanks Site	Land			\$100,000	Storage
40	East Tank Site	Land			\$0	Storage
41	RBMB Pumping Rights	Water Rights			\$5,099,294	Supply
42	Tunnels/Diversions	Water Rights			\$1,076,023	Supply
43	SCADA System	Other		10	\$320,000	Distribution
44	Cl2 Generators	Other		20	\$500,000	Treatment
45	Cl2 Tanks and Pumps	Other		10	\$60,000	Treatment
46	Cl2 Analyzers	Other		25	\$120,000	Treatment
47	Fluoride Analyzers	Other		25	\$60,000	Treatment
48	Electrical MCC/ATS	Other		50	\$1,400,000	Pumping
49	Trucks	Other		10	\$220,000	General
50	Diesel BackUP Generators	Other		20	\$150,000	Pumping
51	TOTAL ASSETS				\$100,137,517	

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