Public Hearing
December 5, 2023

FY 2024 Cost-of-Service Rate Study

Tustin Water Services

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Executive Summary

The City of Tustin Water Service (City) periodically reviews its rates to determine if adjustments are required to continue meeting its operational costs, system improvements, and adequate reserve funding based on the adopted reserve policies. The City most recent 5-year rate schedule was adopted in January 2020, which set rates through Fiscal Year 2023-2024 (FY 2024). Since that time, the State Water Resources Control Board (SWRCB), Division of Drinking Water updated its monitoring and safety limits of polyfluoroalkyl substances (PFAS) in groundwater.

PFAS are a group of thousands of chemicals that are used to make carpets, clothing, fabrics for furniture, food packaging, cookware, and other materials to make them non-stick and/or resistant to water, oil, and stains. The City owns and operates groundwater wells that are impacted with PFAS. The City elected to shut down all groundwater sources that were operating at or near the SWRCB regulatory levels. Concurrently, the City partnered with Orange County Water District (OCWD), in constructing a water treatment plant to address the PFAS detected. Due to the shutdown of City groundwater wells, the City water supplies adjusted from a planned 95% groundwater / 5% imported water supply to approximately 50% groundwater / 50% imported water supply since February 2021. Imported water is substantially more expensive than local groundwater and has caused the City to incur millions of dollars in additional water supply costs. The City absorbed most of these costs through reserves and a general fund loan but can no longer absorb these costs with the previously approved rates for FY 2024. Therefore, the City hired IB Consulting to conduct a comprehensive cost-of-service analysis to establish rates for the utility systems for the 5-year period starting in FY 2024 through FY 2028 (Rate Setting Period).

The City's water utility is a separate business enterprise from the General Fund that collects revenues primarily through user fees (rates and charges) to cover all the utility's revenue requirements (expenses including reserve funding). Water rates are designed to fully fund the utility and ensure that each customer pays their fair share of their total use of the water system. This Cost-of-Service Study is intended to (1) establish the total projected cost of the water utility over a five-year period (the financial plan); and (2) allocate those costs among customers in a way that ensures that each customer pays its fair share of those costs in compliance with California Constitution Article XIII D, section 6, also known as Proposition 218 (the rate structure).

Updating a utility's long-term financial plan and performing a comprehensive cost-of-service analysis is a prudent business practice to ensure a utility can fully fund its multi-year revenue requirements. As part of reviewing and updating utility rates, the first step is to conduct a thorough review of the utility's financial health. Based on a 5-year financial plan, revenues from existing rates are reviewed to determine if current rate revenue sufficiently covers operating expenses, capital spending and satisfies minimum reserve requirements. With financial planning, it is critical to not only look at the short-term needs but also review the revenue requirements beyond FY 2024. This approach ensures that the City plans for future obligations and clearly understands its current financial position.

Based on a financial review, the water utility is projected to end FY 2024 with an operating deficit of $1.5M, which will grow to approximately $5.1M by FY 2028. Separate from operating expenses, planned capital projects over the next five years total $18M of which approximately $4M will be funded from loan proceeds. Reserves are below the minimum reserve requirements in FY 2024 and fully depleted by FY 2027. Therefore,

the proposed financial plan generates additional rate revenue that is phased in over the Rate Setting Period to 1) generate positive net income starting in FY 2025, 2) fund the water utility's Capital Improvement Plan (CIP), and 3) ensure reserves satisfy the minimum requirement by FY 2028.

The water rate structure includes a bi-monthly fixed charge by meter size, a bi-monthly additional dwelling unit charge for accounts with more than one dwelling unit (DU), dedicated fire line charges by connection size, and a uniform consumption charge per hundred cubic feet (hcf)[1]. The updated cost-of-service recovers approximately 34% of total revenue through its bi-monthly fixed charges. The proposed rates reflect an updated cost-of-service analysis that identifies which expenses are recovered through the bi-monthly meter charges versus the uniform consumption charge.

The proposed rates derived within this report are for FY 2024, commencing on January 1, 2024, through FY 2028. The recommended rates have been incorporated into a mailed notice to each customer as part of the Proposition 218 noticing requirements. A Public Hearing is scheduled for December 5, 2023, on the proposed rates identified in Table 1 through Table 4.

Table 1: Proposed Bi-Monthly Meter Service Charges

Meter Service Charges ($/Bi-Month)					
Meter Size	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
≤3/4"	$49.73	$54.21	$59.09	$64.41	$70.21
1"	$104.86	$114.30	$124.59	$135.81	$148.04
1 1/2"	$196.73	$214.44	$233.74	$254.78	$277.72
2"	$306.98	$334.61	$364.73	$397.56	$433.35
3"	$656.11	$715.16	$779.53	$849.69	$926.17
4"	$1,115.48	$1,215.88	$1,325.31	$1,444.59	$1,574.61
6"	$2,493.61	$2,718.03	$2,962.66	$3,229.30	$3,519.94
8"	$5,157.98	$5,622.20	$6,128.20	$6,679.74	$7,280.92
10"	$7,730.48	$8,426.23	$9,184.60	$10,011.22	$10,912.23

Table 2: Proposed Bi-Monthly Additional Dwelling Unit Charge

Additional Dwelling Unit Charge ($/DU/Bi-Month)					
Dwelling Unit Charge	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Additional Dwelling Units	$12.98	$14.15	$15.43	$16.82	$18.34

[1] 1 hcf = 748.05 gallons

Table 3: Proposed Bi-Monthly Fire Line Service Charges

Fire Line Service Charges ($/Bi-Month)					
Connection Size	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
4"	$10.60	$11.56	$12.61	$13.75	$14.99
5"	$13.25	$14.45	$15.76	$17.18	$18.73
6"	$15.90	$17.34	$18.91	$20.62	$22.48
8"	$21.20	$23.11	$25.19	$27.46	$29.94
10"	$26.50	$28.89	$31.50	$34.34	$37.44
12"	$31.80	$34.67	$37.80	$41.21	$44.92

Table 4: Proposed Consumption Charge

Consumption Charge ($/HCF)					
Customer Class	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
All Customers	$3.57	$3.90	$4.26	$4.65	$5.07

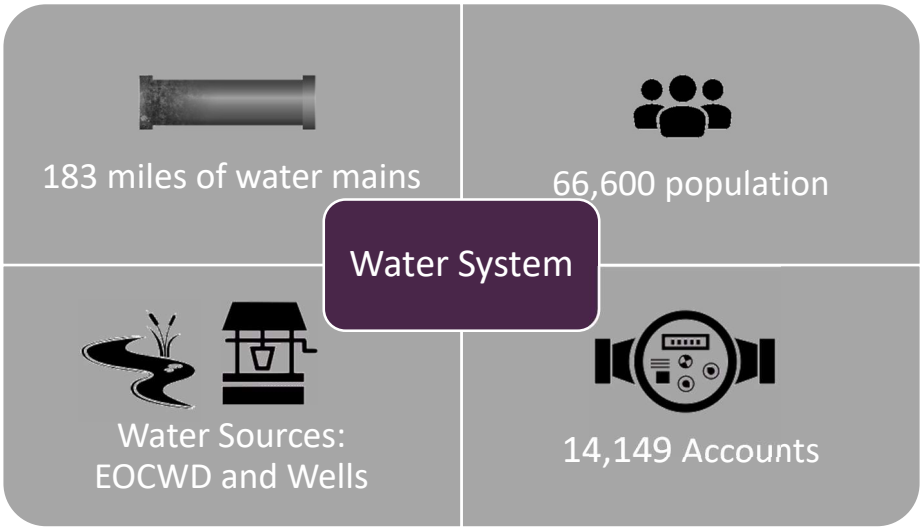
Background

Water System

The City is located in central Orange County and spans 11 square miles. The City is adjacent to the Cities of Irvine, Orange, Santa Ana, and unincorporated areas of Orange County.

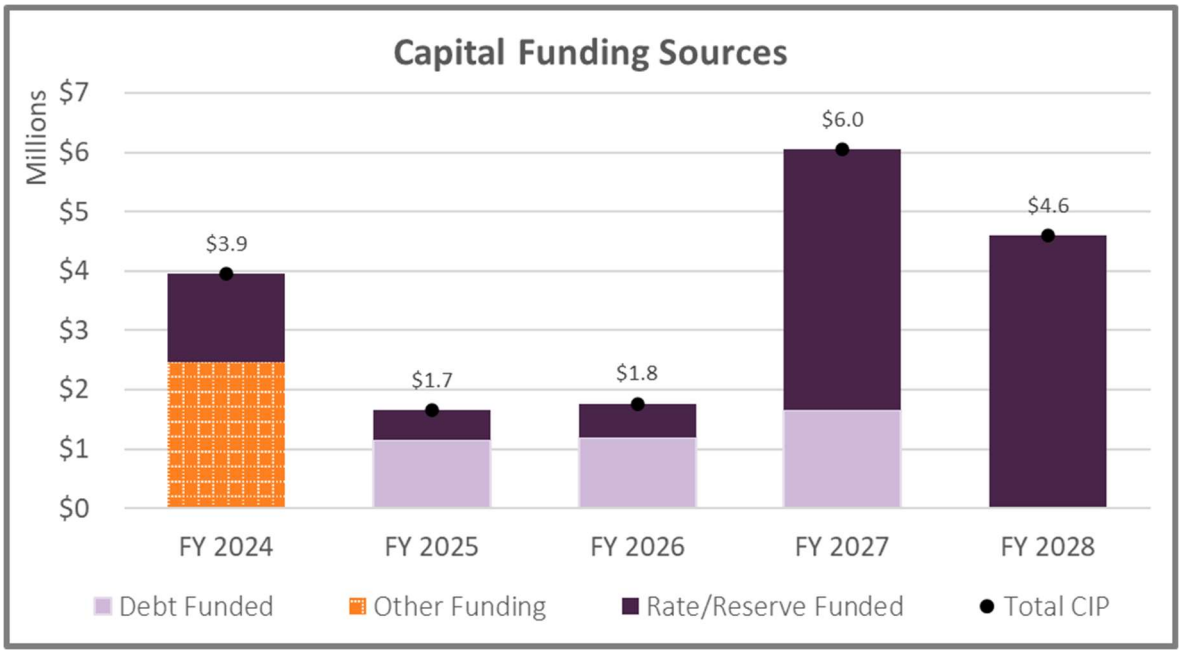
The City provides water to its customers from local groundwater wells and imported water from the Metropolitan Water District of Southern California (MWD) via the East Orange County Water District (EOCWD). The City operates 9 active groundwater wells, six reservoirs and has approximately 183 miles of water mains, serving a population of approximately 66,600 customers.

Figure 1: Water System



The water system's capital spending will average approximately $3.6M annually over the Rate Setting Period. Figure 2 shows the capital repair and replacement plan through FY 2028 with funding sources. As shown in the figure, besides rates, the City also has remaining debt proceeds and other one-time funding sources, including grants and the sale of single-family residence that was purchased to allow reconstruction of a water storage reservoir that was completed in 2022.

Figure 2: Capital Improvement Plan



Customers

The City serves 14,149 active accounts. Table 5 provides a summary of accounts by meter size.

Table 5: Accounts by Meter Size

Meter Size	Number of Accounts
≤3/4"	9,907
1"	3,189
1 1/2"	374
2"	597
3"	22
4"	45
6"	14
8"	1
10"	0
Total	14,149

As previously mentioned, the existing rate structure consists of bi-monthly fixed meter charges, a bi-monthly additional dwelling unit charge, bi-monthly dedicated fire line charges, and a uniform consumption charge for all customers. Existing bi-monthly fixed and consumption charges are identified in Table 6 through Table 8.

Table 6: FY 2023 Bi-Monthly Fixed Charges

Meter Service Charges ($/Bi-Month)	
Meter Size	Existing
≤3/4"	$46.03
1"	$97.03
1 1/2"	$182.04
2"	$284.06
3"	$607.09
4"	$1,083.15
6"	$2,392.30
8"	$4,092.51
10"	$6,472.79

Additional Dwelling Unit Charge ($/DU/Bi-Month)	
Dwelling Unit Charge	Existing
Additional Dwelling Units	$12.02

Table 7: FY 2023 Bi-Monthly Fire Line Service Charges

Fire Line Service Charges ($/Bi-Month)	
Connection Size	Existing
4"	$21.65
5"	$27.05
6"	$32.46
8"	$43.28
10"	$54.11
12"	$64.92

Table 8: FY 2023 Consumption Charge

Consumption Charge ($/HCF)	
Customer Class	Existing
All Customers	$3.24

Financial Plan Overview

Financial Planning

Financial planning incorporates numerous considerations, including projecting revenues and forecasting expected costs using various inflationary adjustments. Utilities also need to account for changes in water demand driven by variations in weather, water availability, state mandates, growth, and economic factors. In addition, system maintenance and reinvestment, reserves, and debt compliance all influence the revenues needed in future years. Therefore, a comprehensive financial plan reviews the following:

1) Historical water sales and consumption patterns to determine an appropriate level of usage for projecting future water use.
2) Operational costs that may change over the planning period as a result of inflation as well as any new expenditures incurred to meet strategic goals, state mandates, or changes in operations.
3) Multi-year system improvement needs, and scheduling based on priority. This review also considers available funding sources to complete projects such as pay-as-you-go (PAYGO), grants, loans, and debt financing.
4) Satisfy debt service coverage ratio requirements based on bond covenants (120%).
5) Reserve funding to meet adopted reserve policies. The goal is to generate adequate cash on hand to mitigate financial risks related to operating cashflow needs, unexpected increases in expenses, shortages in system reinvestment, and mitigating potential system failures.

Figure 3 illustrates the key elements when developing a long-term financial plan.

Figure 3: Financial Plan Key Elements

Financial Planning Assumptions

Developing a long-term financial plan requires an understanding of the utility's financial position by evaluating existing revenue streams, ongoing expenses, how those expenses will change over time, existing debt coverage requirements, and reserve policies. With these considerations, certain assumptions are required for projecting revenues, expenses, and expected ending fund balances. Table 9 identifies assumptions used for forecasting revenues. Table 10 details the number of accounts by meter size, the number of additional dwelling units, and the number of fire lines by connection size. Table 11 identifies the projected water usage and Table 12 identifies assumptions used for forecasting expenses over the Rate Setting Period.

Table 9: Assumptions for Forecasting Revenues

Key Assumptions	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Revenue Escalation					
Reserve Interest	0.5%	0.5%	0.5%	0.5%	0.5%
System Assumptions					
Account Growth	0.0%	0.0%	0.0%	0.0%	0.0%

Table 10: FY 2024 through FY 2028 Accounts

Customer Accounts	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Meter Size					
≤3/4"	9,907	9,907	9,907	9,907	9,907
1"	3,189	3,189	3,189	3,189	3,189
1 1/2"	374	374	374	374	374
2"	597	597	597	597	597
3"	22	22	22	22	22
4"	45	45	45	45	45
6"	14	14	14	14	14
8"	1	1	1	1	1
10"	0	0	0	0	0
Total Meters	**14,149**	**14,149**	**14,149**	**14,149**	**14,149**
Additional Dwelling Units	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**
Additional Dwelling Units	9,690	9,690	9,690	9,690	9,690
Fire Lines	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**
Connection Size					
4"	58	58	58	58	58
5"	1	1	1	1	1
6"	104	104	104	104	104
8"	68	68	68	68	68
10"	4	4	4	4	4
12"	2	2	2	2	2
Total Fire Lines	**237**	**237**	**237**	**237**	**237**

Table 11: FY 2024 through FY 2028 Projected Consumption[2]

Consumption	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Customer Usage	4,290,660	4,290,660	4,290,660	4,290,660	4,290,660
Total Consumption (HCF)	**4,290,660**	**4,290,660**	**4,290,660**	**4,290,660**	**4,290,660**
Total Usage (AF)	9,850 AF	9,850 AF	9,850 AF	9,850 AF	9,850 AF

[2] 1 AF = 435.6 hcf or 325,851 gallons

Table 12: Assumptions for Forecasting Expense

Key Assumptions	Source:		FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Expenditure Escalation							
Benefits			*Budget*	8.0%	8.0%	8.0%	8.0%
Capital	*ENR 20-City*	*5-Year Average*	*Budget*	*Budget*	3.9%	3.9%	3.9%
General Costs	*CPI - LA (BLS)*	*5-Year Average*	*Budget*	*Budget*	4.0%	4.0%	4.0%
Indirect			*Budget*	*Budget*	5.0%	5.0%	5.0%
Non-Inflated			*Budget*	*Budget*	0.0%	0.0%	0.0%
PERS / OPEB			*Budget*	*Budget*	3.0%	3.0%	3.0%
Salaries			*Budget*	5.0%	4.0%	3.0%	2.5%
Utilities			*Budget*	*Budget*	5.0%	5.0%	5.0%

Current Financial Position

Revenues

Based on the forecasting assumptions, fixed revenues were calculated by multiplying the existing fixed charges (Table 6 and Table 7) by the account data by meter size, additional dwelling units, and fire line accounts by connection size (Table 10) over six billing periods. Variable revenues were calculated using the existing consumption charge shown in Table 8 and projected total water sales (Table 11). Table 13 shows the calculated rate revenues through the Rate Setting Period.

Table 14 summarizes calculated rate revenues and other non-rate revenues, with future projections rounded to the nearest thousands. Non-Operating revenues include reimbursements, miscellaneous revenue, and customer service credits of (-$15,000), which nets a total sum (-$5,000) for FY 2025 through FY 2028. Non-rate revenues are not increased over the Rate Setting Period.

Table 13: Calculated Rate Revenues

Fixed Revenue	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Meter Service Charge	$6,616,783	$6,616,783	$6,616,783	$6,616,783	$6,616,783
Additional Dwelling Unit Charge	$698,843	$698,843	$698,843	$698,843	$698,843
Total Fixed Revenue	$7,315,625	$7,315,625	$7,315,625	$7,315,625	$7,315,625
Fire Line Revenue	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**
Fire Line Service Charge	$47,687	$47,687	$47,687	$47,687	$47,687
Variable Revenue	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**
Consumption Charge	$13,901,738	$13,901,738	$13,901,738	$13,901,738	$13,901,738
Total Rate Revenue	$21,265,051	$21,265,051	$21,265,051	$21,265,051	$21,265,051

Table 14: Projected Revenues

Revenue Summary	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Rate Revenues					
Fixed Revenue	$7,316,000	$7,316,000	$7,316,000	$7,316,000	$7,316,000
Variable Revenue	$13,902,000	$13,902,000	$13,902,000	$13,902,000	$13,902,000
Fire Line Revenue	$48,000	$48,000	$48,000	$48,000	$48,000
Subtotal Rate Revenues	$21,266,000	$21,266,000	$21,266,000	$21,266,000	$21,266,000
PFAS Reimbursement	$0	$0	$300,000	$312,000	$325,000
Operating Revenues	$260,000	$260,000	$260,000	$260,000	$260,000
Non-Operating Revenues	$1,000	($5,000)	($5,000)	($5,000)	($5,000)
Total Revenues	**$21,527,000**	**$21,521,000**	**$21,821,000**	**$21,833,000**	**$21,846,000**

Expenses

Water Supply

The current water usage is 9,850 AF per year, as shown in Table 11. The City's water supplies available to meet customer demand consist of treated and untreated groundwater and purchased water from EOCWD.

The City must pay a groundwater basin assessment charge for every acre foot of groundwater used. The City is using more purchased water than usual due to the treatment improvements currently being constructed to treat PFAS. Therefore, the City's purchase water costs from EOCWD are higher in FY 2024 and FY 2025 during construction. By FY 2026, the PFAS treatment improvements will be completed, and the City will return to meeting its water demand primarily through groundwater. EOCWD charges the City a fixed connection fee each month in addition to a charge for every acre foot of water purchased. Table 15 summarizes water supply costs and the detailed calculations can be found in Appendix A.

Table 15: Projected Water Supply Costs

Water Supply Costs	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Groundwater Basin Assessment	$3,731,000	$5,440,000	$6,882,000	$7,091,000	$7,303,000
EOCWD - Water Purchased	$5,544,000	$2,990,000	$729,000	$765,000	$803,000
EOCWD - Connection Fees	$657,000	$677,000	$697,000	$718,000	$739,000
Total Water Supply Costs	**$9,932,000**	**$9,107,000**	**$8,308,000**	**$8,574,000**	**$8,845,000**

Operating Expenses

The City provided budgeted water expenses for FY 2024 and FY 2025. However, the expense categories of benefits and salaries were escalated by 8% and 5%, respectively in FY 2025. The Memorandum of Understanding (MOU) between the City and its employees ends on June 30, 2024. Therefore, City staff adjusted the budgeted amounts in FY 2025 to ensure proposed rates will cover the final results of new MOU negotiations. In subsequent years, the Operational & Maintenance (O&M) expenses were increased based on the escalation factors shown in Table 12. Table 16 provides projected O&M expenses through the Rate

Setting Period with future projections rounded to the nearest thousands. Each expense category includes detailed line-item expenditures that were discussed with staff to determine the appropriate escalation factor to use for forecasting how costs will increase over time.

Table 16: Projected O&M Expenses

O&M Expenses		FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Purchased Water Costs						
Water Supply						
Groundwater Basin Assessment		$3,731,000	$5,440,000	$6,882,000	$7,091,000	$7,303,000
EOCWD - Water Purchased	Table 15	$5,544,000	$2,990,000	$729,000	$765,000	$803,000
EOCWD - Connection Fees		$657,000	$677,000	$697,000	$718,000	$739,000
Subtotal Water Supply		$9,932,000	$9,107,000	$8,308,000	$8,574,000	$8,845,000
Operating Expenses						
Finance - Water Billings		$2,736,000	$3,692,000	$3,860,000	$4,027,000	$4,196,000
Finance - Administrative Fees		$1,500,000	$1,500,000	$1,575,000	$1,654,000	$1,737,000
Public Works - Water Administration		$1,128,000	$1,181,000	$1,228,000	$1,274,000	$1,321,000
PW Water Admin - S&B		$1,258,000	$1,363,000	$1,430,000	$1,490,000	$1,547,000
Public Works - Water Distribution		$1,645,000	$1,741,000	$1,824,000	$1,901,000	$1,975,000
Public Works - Main Street Facilities		$289,000	$306,000	$331,000	$345,000	$359,000
Public Works - 17th Street Desalter		$902,000	$930,000	$1,181,000	$1,233,000	$1,287,000
Public Works - Imported Water O&M		$115,000	$124,000	$130,000	$135,000	$140,000
Public Works - Water Production		$1,136,000	$907,000	$950,000	$993,000	$1,037,000
PFAS Treatment		$0	$600,000	$624,000	$649,000	$674,000
Subtotal Operating Expenses		$10,709,000	$12,344,000	$13,133,000	$13,701,000	$14,273,000
Debt Service						
Existing Debt		$2,430,000	$2,641,000	$2,561,000	$3,265,000	$3,266,000
New/Proposed Debt		$0	$294,000	$587,000	$587,000	$587,000
Subtotal Debt Service		$2,430,000	$2,935,000	$3,148,000	$3,852,000	$3,853,000
Total Expenses		**$23,071,000**	**$24,386,000**	**$24,589,000**	**$26,127,000**	**$26,971,000**

Reserves

Figure 4: Water Enterprise Reserves

Established reserves include Operating Reserve, Capital Reserve, and Emergency Reserve. In addition, this Cost-of-Service Study recommends that the City establish a Rate Stabilization Reserve (RSR). The City has incurred more imported water costs than expected due to the construction of the PFAS treatment plant for its groundwater. These additional purchased water costs caused the City to not meet its debt service coverage ratio of 120% and required a loan from the general fund to satisfy the bond covenants. The establishment of a RSR will allow transfers from the RSR to the operating fund to cover these types of cost increases. Instead of generating the initial RSR funding through increased rates, we recommend using $1M from the Emergency Reserve to establish the RSR. The Emergency Reserve is currently set at a fixed amount of $2M. Typically, an Emergency Reserve minimum requirement would be a percentage of either the total system asset value or depreciation value. The remaining $1M is equivalent to approximately 1.5% of total asset value or approximately 50% of the annual deprecation value, which is a reasonable amount of set aside funding for unforeseen system failures. The RSR is usually a percentage of total rate revenue with 5% as the minimum and 10% as the ideal target. For FY 2024 the minimum requirement for the proposed RSR at 5% of rate revenue would be $1,002,500 and the $1M would be sufficient to establish the RSR. Collectively, all of the water utility reserves help mitigate risks to the utility by ensuring sufficient cash is on hand for daily operations and to fund system improvements. In addition, these reserves mitigate rate spikes due to emergencies or above-average system costs. Table 17 summarizes the minimum reserve requirements and the ideal targets of each reserve, when applicable.

Table 17: Reserve Requirements and Targets

Reserve	Minimum Requirement	Reserve Target
Operating	90 days of operating costs	120 days of operating costs
Capital	1 Year of Depreciation Expense	2 years of annual capital expenses
Emergency	Fixed amount of $1M	Same as Minimum ($1M)
Rate Stabilization	5% of Rate Revenue	10% of Rate Revenue

The reserve balance as of July 1, 2023, equaled approximately $9M.

Financial Outlook at Existing Rates

Calculating revenue using existing rates and projecting expenses helps determine the current financial health of the utility. Revenues from existing rates will not cover operating expenses. In addition, capital spending towards repair & replacement would require the use of reserves as the primary funding source once the remaining debt proceeds are expended, which is not sustainable. Table 18 forecasts existing revenues and expenses through the Rate Setting Period. Table 19 identifies reserve transfers and reserve activity for the Operating, Capital, Emergency, and Rate Stabilization Reserves, with projected FY 2024 starting reserve balances shown for each reserve.

Table 18: Financial Plan at Existing Rates

Revenue		FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Rate Revenues						
Fixed Revenue		$7,316,000	$7,316,000	$7,316,000	$7,316,000	$7,316,000
Variable Revenue	Table 14	$13,902,000	$13,902,000	$13,902,000	$13,902,000	$13,902,000
Fire Line Revenue		$48,000	$48,000	$48,000	$48,000	$48,000
Total Rate Revenues		$21,266,000	$21,266,000	$21,266,000	$21,266,000	$21,266,000
PFAS Reimbursement		$0	$0	$300,000	$312,000	$325,000
Operating Revenues	Table 14	$260,000	$260,000	$260,000	$260,000	$260,000
Non-Operating Revenues		$1,000	($5,000)	($5,000)	($5,000)	($5,000)
Total Revenues		**$21,527,000**	**$21,521,000**	**$21,821,000**	**$21,833,000**	**$21,846,000**

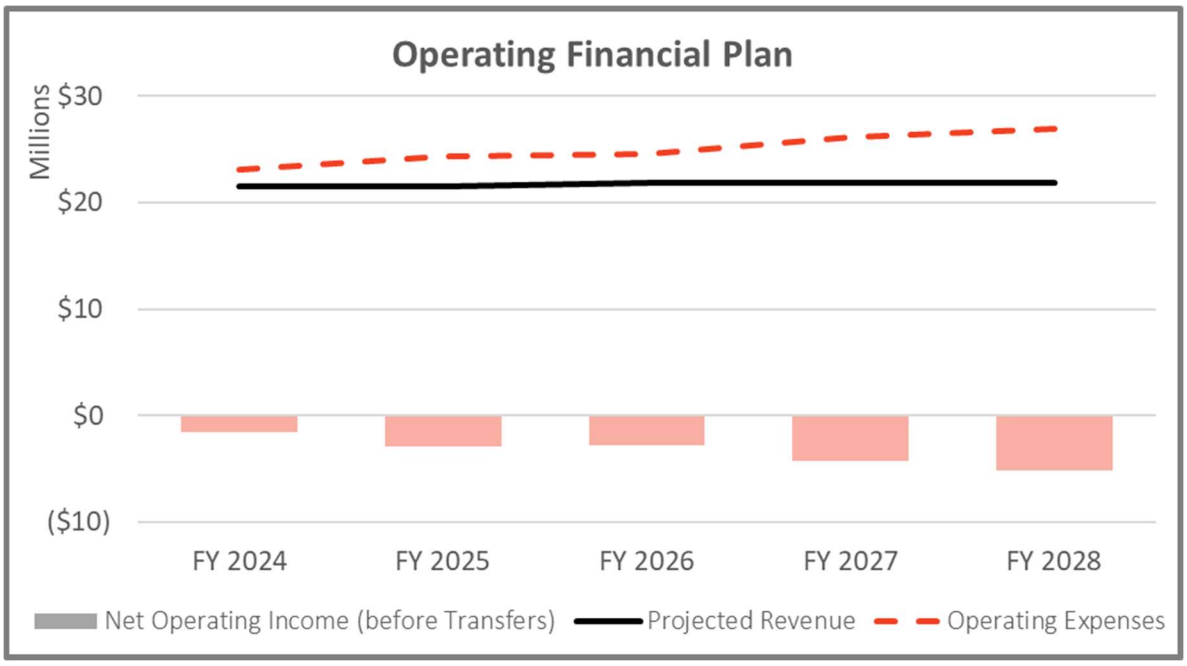
O&M Expenses		FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Purchased Water Costs						
Water Supply						
Groundwater Basin Assessment		$3,731,000	$5,440,000	$6,882,000	$7,091,000	$7,303,000
EOCWD - Water Purchased	Table 16	$5,544,000	$2,990,000	$729,000	$765,000	$803,000
EOCWD - Connection Fees		$657,000	$677,000	$697,000	$718,000	$739,000
Subtotal Water Supply		$9,932,000	$9,107,000	$8,308,000	$8,574,000	$8,845,000
Operating Expenses						
Finance - Water Billings		$2,736,000	$3,692,000	$3,860,000	$4,027,000	$4,196,000
Finance - Administrative Fees		$1,500,000	$1,500,000	$1,575,000	$1,654,000	$1,737,000
Public Works - Water Administration		$1,128,000	$1,181,000	$1,228,000	$1,274,000	$1,321,000
PW Water Admin - S&B		$1,258,000	$1,363,000	$1,430,000	$1,490,000	$1,547,000
Public Works - Water Distribution	Table 16	$1,645,000	$1,741,000	$1,824,000	$1,901,000	$1,975,000
Public Works - Main Street Facilities		$289,000	$306,000	$331,000	$345,000	$359,000
Public Works - 17th Street Desalter		$902,000	$930,000	$1,181,000	$1,233,000	$1,287,000
Public Works - Imported Water O&M		$115,000	$124,000	$130,000	$135,000	$140,000
Public Works - Water Production		$1,136,000	$907,000	$950,000	$993,000	$1,037,000
PFAS Treatment		$0	$600,000	$624,000	$649,000	$674,000
Subtotal Operating Expenses		$10,709,000	$12,344,000	$13,133,000	$13,701,000	$14,273,000
Debt Service						
Existing Debt	Table 16	$2,430,000	$2,641,000	$2,561,000	$3,265,000	$3,266,000
New/Proposed Debt		$0	$294,000	$587,000	$587,000	$587,000
Subtotal Debt Service		$2,430,000	$2,935,000	$3,148,000	$3,852,000	$3,853,000
Total Expenses		**$23,071,000**	**$24,386,000**	**$24,589,000**	**$26,127,000**	**$26,971,000**
Net Operating Income		**($1,544,000)**	**($2,865,000)**	**($2,768,000)**	**($4,294,000)**	**($5,125,000)**

Table 19: Transfers & Reserve Activity at Existing Rates

Line No.	Direct Transfers		FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
1	Net Operating Income	Table 18	($1,544,000)	($2,865,000)	($2,768,000)	($4,294,000)	($5,125,000)
2	Transfers (to)/from Water Emergency Fund (302)		$1,000,000	$0	$0	$0	$0
3	Transfers (to)/from Rate Stabilization (New)		($1,000,000)	$0	$0	$0	$0
4	**Net Operating Income (after Direct Transfers)**		**($1,544,000)**	**($2,865,000)**	**($2,768,000)**	**($4,294,000)**	**($5,125,000)**
	Water Enterprise (300)		**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**
5	Beginning Balance		$4,227,349	$2,700,626	($164,374)	($2,932,374)	($7,226,374)
6	Transfers (Net Operating Income)	*Line 4*	($1,544,000)	($2,865,000)	($2,768,000)	($4,294,000)	($5,125,000)
7	Transfers (to) Water Capital Fund (301)		$0	$0	$0	$0	$0
8	Subtotal Water Enterprise (300)		$2,683,349	($164,374)	($2,932,374)	($7,226,374)	($12,351,374)
9	Interest Earnings		$17,277	$0	$0	$0	$0
10	**Ending Balance**		**$2,700,626**	**($164,374)**	**($2,932,374)**	**($7,226,374)**	**($12,351,374)**
	Water Capital Fund (301)		**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**
11	Beginning Balance		$2,798,169	$499,223	$1,654,594	$2,831,412	$259,033
12	Transfers from/(to) Water Enterprise (300)	*Line 7*	$0	$0	$0	$0	$0
13	Plus:						
14	Capital Funding within Operating Budget		$800,000	$1,650,000	$1,732,500	$1,819,125	$1,910,081
15	Grant Reimbursement		$840,000	$0	$0	$0	$0
16	Other Remaining Proceeds		$0	$1,150,000	$1,200,000	$1,650,000	$0
17	Less:						
18	CIP		($3,947,169)	($1,650,000)	($1,766,869)	($6,049,212)	($4,603,095)
19	Subtotal Water Capital Fund (301)		$491,000	$1,649,223	$2,820,225	$251,326	($2,433,982)
20	Interest Earnings		$8,223	$5,371	$11,187	$7,707	$0
21	**Ending Balance**		**$499,223**	**$1,654,594**	**$2,831,412**	**$259,033**	**($2,433,982)**
	Water Emergency Fund (302)		**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**
22	Beginning Balance		$2,020,315	$1,027,917	$1,033,056	$1,038,221	$1,043,413
23	Direct transfers to/(from) Water Emergency Fund (302)	*Line 2*	($1,000,000)	$0	$0	$0	$0
24	Subtotal Water Emergency Fund (302)		$1,020,315	$1,027,917	$1,033,056	$1,038,221	$1,043,413
25	Interest Earnings		$7,602	$5,140	$5,165	$5,191	$5,217
26	**Ending Balance**		**$1,027,917**	**$1,033,056**	**$1,038,221**	**$1,043,413**	**$1,048,630**
	Rate Stabilization (New)		**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**
27	Beginning Balance		$0	$1,002,500	$1,007,513	$1,012,550	$1,017,613
28	Direct transfers to/(from) Rate Stabilization (New)	*Line 3*	$1,000,000	$0	$0	$0	$0
29	Subtotal Rate Stabilization (New)		$1,000,000	$1,002,500	$1,007,513	$1,012,550	$1,017,613
30	Interest Earnings		$2,500	$5,013	$5,038	$5,063	$5,088
31	**Ending Balance**		**$1,002,500**	**$1,007,513**	**$1,012,550**	**$1,017,613**	**$1,022,701**
32	**Ending Balance - All Reserves**		**$5,230,265**	**$3,530,788**	**$1,949,810**	**($4,906,316)**	**($12,714,025)**

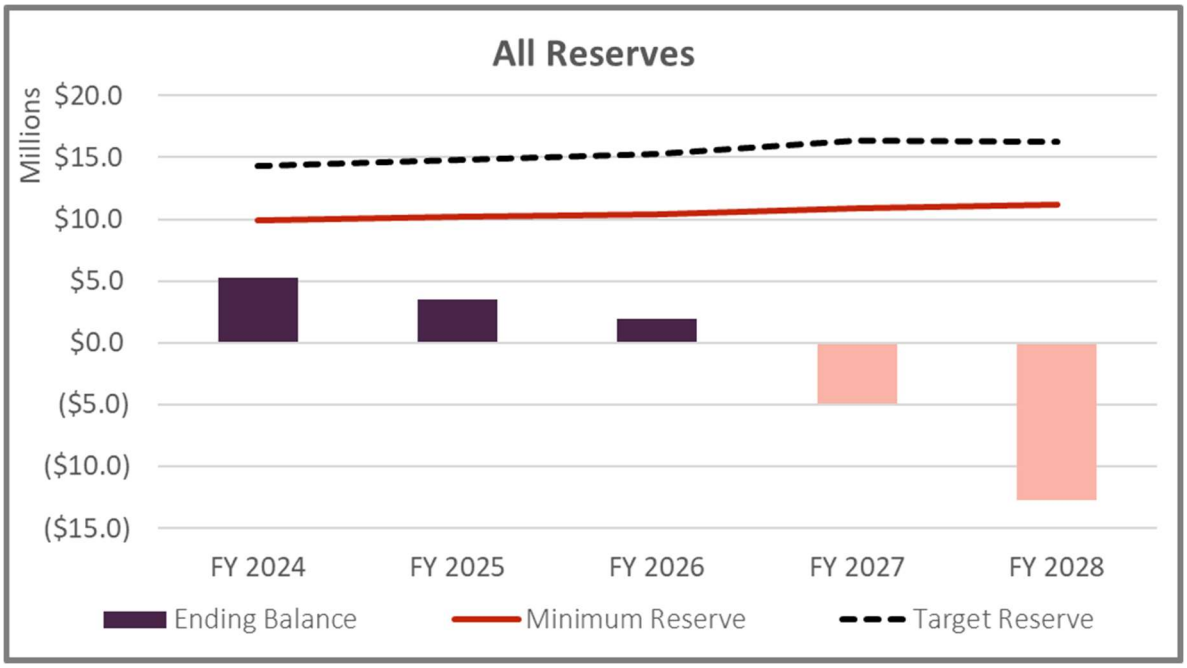
Figure 5 illustrates the operating position of the utility, where O&M expenses are identified with the dashed red trendline, and the horizontal black trendline shows total revenues at existing rates. The bars represent the net operating income available for capital spending and reserve funding.

Figure 5: Current Operating Financial Position



With the capital improvement plan reflecting over $18M in total spending, as shown in Figure 2, reserves will be utilized to cover the remaining capital expenses to ensure necessary projects continue to move forward as scheduled. Figure 6 reflects the projected ending balances of the reserves after funding operating and capital projects. Reserves are below the total minimum reserve target in FY 2024 and are fully depleted by FY 2027. Without revenue adjustments, capital improvements would need to be delayed and operations could be impacted.

Figure 6: Projected Ending Reserves at Existing Rates



Proposed Financial Plan

From the financial outlook at existing rates, a proposed financial plan can be developed to adequately fund the multi-year revenue requirements, while meeting reserve requirements. Based on funding the water CIP over the Rate Setting Period and ensuring healthy reserves, Table 20 forecasts projected revenues and expenses through FY 2028. Table 21 identifies the projected FY 2024 total starting balances for the Operating, Capital, Emergency, and Rate Stabilization reserves, activity within each reserve (including net income transfer from Table 20, transfers between reserves, and annual CIP), and projected ending balances for each fiscal year.

Table 20: Proposed Financial Plan

Revenue		FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Rate Revenues						
Fixed Revenue	Table 14	$7,316,000	$7,316,000	$7,316,000	$7,316,000	$7,316,000
Variable Revenue		$13,902,000	$13,902,000	$13,902,000	$13,902,000	$13,902,000
Fire Line Revenue		$48,000	$48,000	$48,000	$48,000	$48,000
Total Rate Revenues		$21,266,000	$21,266,000	$21,266,000	$21,266,000	$21,266,000
Additional Revenue (from revenue adjustments):						
FY 2024 (9.0% January)		$956,000	$1,913,000	$1,913,000	$1,913,000	$1,913,000
FY 2025 (9.0% January)			$1,043,000	$2,086,000	$2,086,000	$2,086,000
FY 2026 (9.0% January)				$1,136,000	$2,273,000	$2,273,000
FY 2027 (9.0% January)					$1,239,000	$2,478,000
FY 2028 (9.0% January)						$1,350,000
Total Additional Revenue		$956,000	$2,956,000	$5,135,000	$7,511,000	$10,100,000
Projected Rate Revenue *(including revenue adjustments)*		**$22,222,000**	**$24,222,000**	**$26,401,000**	**$28,777,000**	**$31,366,000**
PFAS Reimbursement		$0	$0	$300,000	$312,000	$325,000
Operating Revenues	Table 14	$260,000	$260,000	$260,000	$260,000	$260,000
Non-Operating Revenues		$1,000	($5,000)	($5,000)	($5,000)	($5,000)
Total Revenues		**$22,483,000**	**$24,477,000**	**$26,956,000**	**$29,344,000**	**$31,946,000**

O&M Expenses		FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Purchased Water Costs						
Water Supply						
Groundwater Basin Assessment	Table 16	$3,731,000	$5,440,000	$6,882,000	$7,091,000	$7,303,000
EOCWD - Water Purchased		$5,544,000	$2,990,000	$729,000	$765,000	$803,000
EOCWD - Connection Fees		$657,000	$677,000	$697,000	$718,000	$739,000
Subtotal Water Supply		$9,932,000	$9,107,000	$8,308,000	$8,574,000	$8,845,000
Operating Expenses						
Finance - Water Billings	Table 16	$2,736,000	$3,692,000	$3,860,000	$4,027,000	$4,196,000
Finance - Administrative Fees		$1,500,000	$1,500,000	$1,575,000	$1,654,000	$1,737,000
Public Works - Water Administration		$1,128,000	$1,181,000	$1,228,000	$1,274,000	$1,321,000
PW Water Admin - S&B		$1,258,000	$1,363,000	$1,430,000	$1,490,000	$1,547,000
Public Works - Water Distribution		$1,645,000	$1,741,000	$1,824,000	$1,901,000	$1,975,000
Public Works - Main Street Facilities		$289,000	$306,000	$331,000	$345,000	$359,000
Public Works - 17th Street Desalter		$902,000	$930,000	$1,181,000	$1,233,000	$1,287,000
Public Works - Imported Water O&M		$115,000	$124,000	$130,000	$135,000	$140,000
Public Works - Water Production		$1,136,000	$907,000	$950,000	$993,000	$1,037,000
PFAS Treatment		$0	$600,000	$624,000	$649,000	$674,000
Subtotal Operating Expenses		$10,709,000	$12,344,000	$13,133,000	$13,701,000	$14,273,000
Debt Service						
Existing Debt	Table 16	$2,430,000	$2,641,000	$2,561,000	$3,265,000	$3,266,000
New/Proposed Debt		$0	$294,000	$587,000	$587,000	$587,000
Subtotal Debt Service		$2,430,000	$2,935,000	$3,148,000	$3,852,000	$3,853,000
Total Expenses		**$23,071,000**	**$24,386,000**	**$24,589,000**	**$26,127,000**	**$26,971,000**
Net Operating Income		**($588,000)**	**$91,000**	**$2,367,000**	**$3,217,000**	**$4,975,000**

Table 21: Proposed Transfers & Reserve Activity

Line No.	Direct Transfers		FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
1	Net Operating Income	Table 20	($588,000)	$91,000	$2,367,000	$3,217,000	$4,975,000
2	Transfers (to)/from Water Emergency Fund (302)		$1,000,000	$0	$0	$0	$0
3	Transfers (to)/from Rate Stabilization (New)		($1,000,000)	$0	$0	$0	$0
4	**Net Operating Income (after Direct Transfers)**		**($588,000)**	**$91,000**	**$2,367,000**	**$3,217,000**	**$4,975,000**
	Water Enterprise (300)		**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**
5	Beginning Balance		$4,227,349	$3,659,016	$3,768,538	$6,087,620	$6,473,599
6	Transfers (Net Operating Income)	*Line 4*	($588,000)	$91,000	$2,367,000	$3,217,000	$4,975,000
7	Transfers (to) Water Capital Fund (301)		$0	$0	($72,497)	($2,862,346)	($4,798,215)
8	Subtotal Water Enterprise (300)		$3,639,349	$3,750,016	$6,063,041	$6,442,274	$6,650,384
9	Interest Earnings		$19,667	$18,523	$24,579	$31,325	$32,810
10	**Ending Balance**		**$3,659,016**	**$3,768,538**	**$6,087,620**	**$6,473,599**	**$6,683,194**
	Water Capital Fund (301)		**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**
11	Beginning Balance		$2,798,169	$499,223	$1,654,594	$2,904,091	$3,201,576
12	Transfers from/(to) Water Enterprise (300)	*Line 7*	$0	$0	$72,497	$2,862,346	$4,798,215
13	Plus:						
14	Capital Funding within Operating Budget		$800,000	$1,650,000	$1,732,500	$1,819,125	$1,910,081
15	Grant Reimbursement		$840,000	$0	$0	$0	$0
16	Other Remaining Proceeds		$0	$1,150,000	$1,200,000	$1,650,000	$0
17	Less:						
18	CIP		($3,947,169)	($1,650,000)	($1,766,869)	($6,049,212)	($4,603,095)
19	Subtotal Water Capital Fund (301)		$491,000	$1,649,223	$2,892,722	$3,186,350	$5,306,777
20	Interest Earnings		$8,223	$5,371	$11,368	$15,226	$21,271
21	**Ending Balance**		**$499,223**	**$1,654,594**	**$2,904,091**	**$3,201,576**	**$5,328,048**
	Water Emergency Fund (302)		**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**
22	Beginning Balance		$2,020,315	$1,027,917	$1,033,056	$1,038,221	$1,043,413
23	Direct transfers to/(from) Water Emergency Fund (302)	*Line 2*	($1,000,000)	$0	$0	$0	$0
24	Subtotal Water Emergency Fund (302)		$1,020,315	$1,027,917	$1,033,056	$1,038,221	$1,043,413
25	Interest Earnings		$7,602	$5,140	$5,165	$5,191	$5,217
26	**Ending Balance**		**$1,027,917**	**$1,033,056**	**$1,038,221**	**$1,043,413**	**$1,048,630**
	Rate Stabilization (New)		**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**
27	Beginning Balance		$0	$1,002,500	$1,007,513	$1,012,550	$1,017,613
28	Direct transfers to/(from) Rate Stabilization (New)	*Line 3*	$1,000,000	$0	$0	$0	$0
29	Subtotal Rate Stabilization (New)		$1,000,000	$1,002,500	$1,007,513	$1,012,550	$1,017,613
30	Interest Earnings		$2,500	$5,013	$5,038	$5,063	$5,088
31	**Ending Balance**		**$1,002,500**	**$1,007,513**	**$1,012,550**	**$1,017,613**	**$1,022,701**
32	**Ending Balance - All Reserves**		**$6,188,655**	**$7,463,701**	**$11,042,482**	**$11,736,200**	**$14,082,572**

Figure 7 identifies the operating position based on the proposed financial plan and Figure 8 shows the capital plan with funding sources. Figure 9 identifies the ending reserve balances for all reserves.

Figure 7: Proposed Operating Position

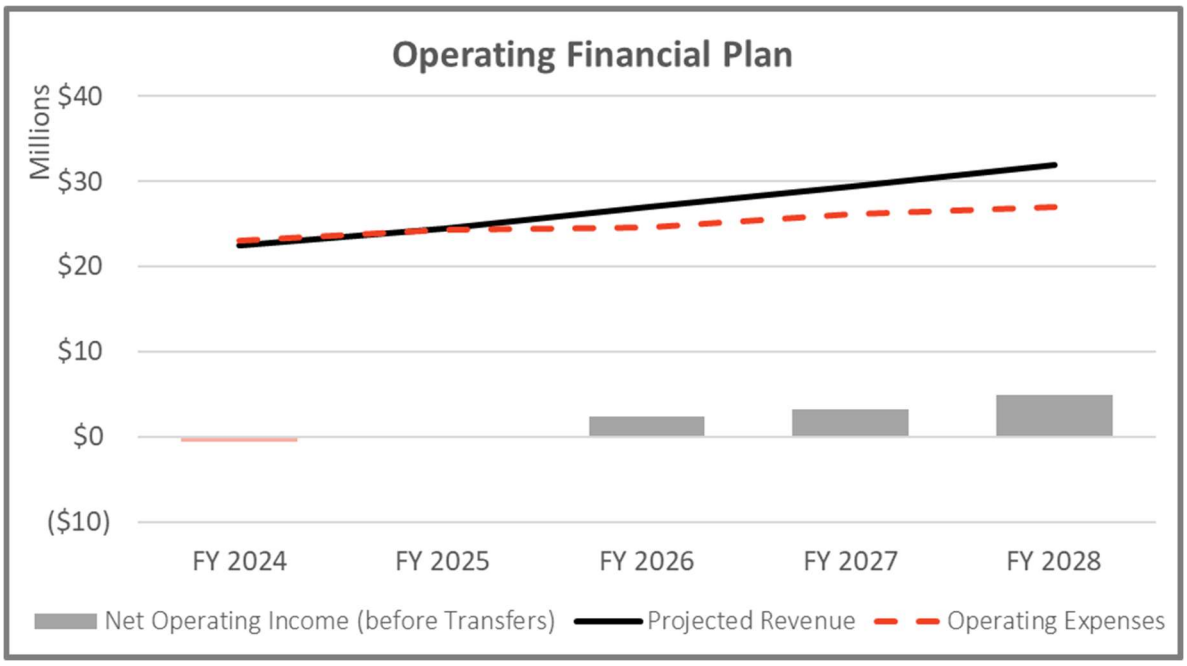


Figure 8: Capital Improvement Plan with Funding Sources

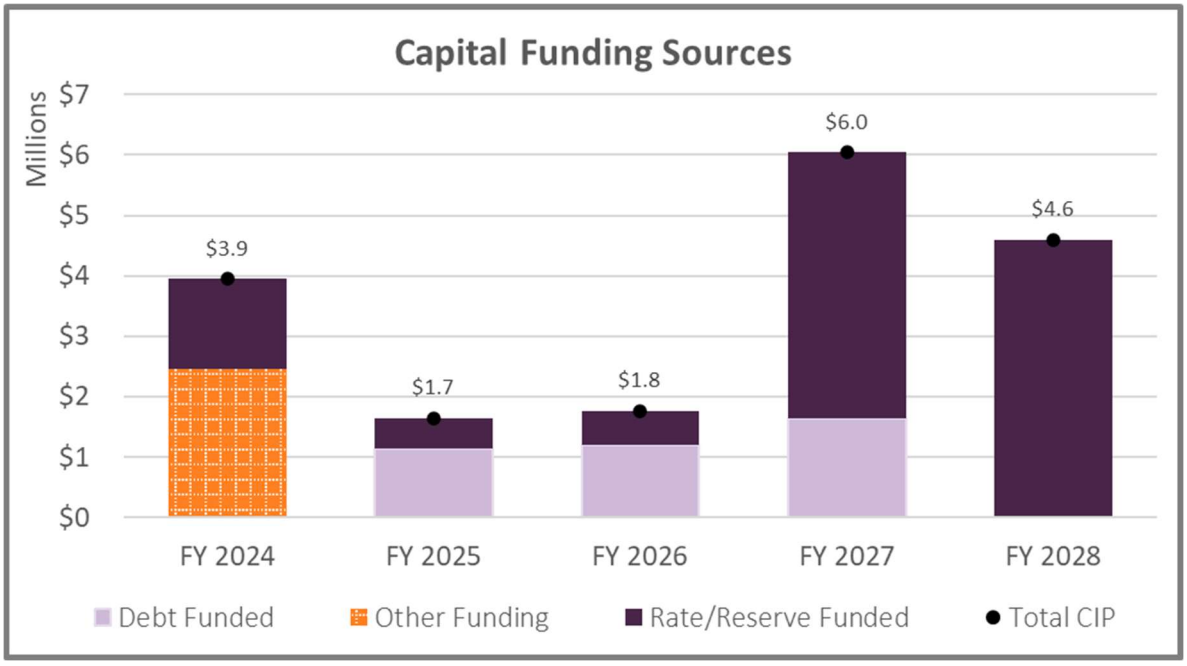
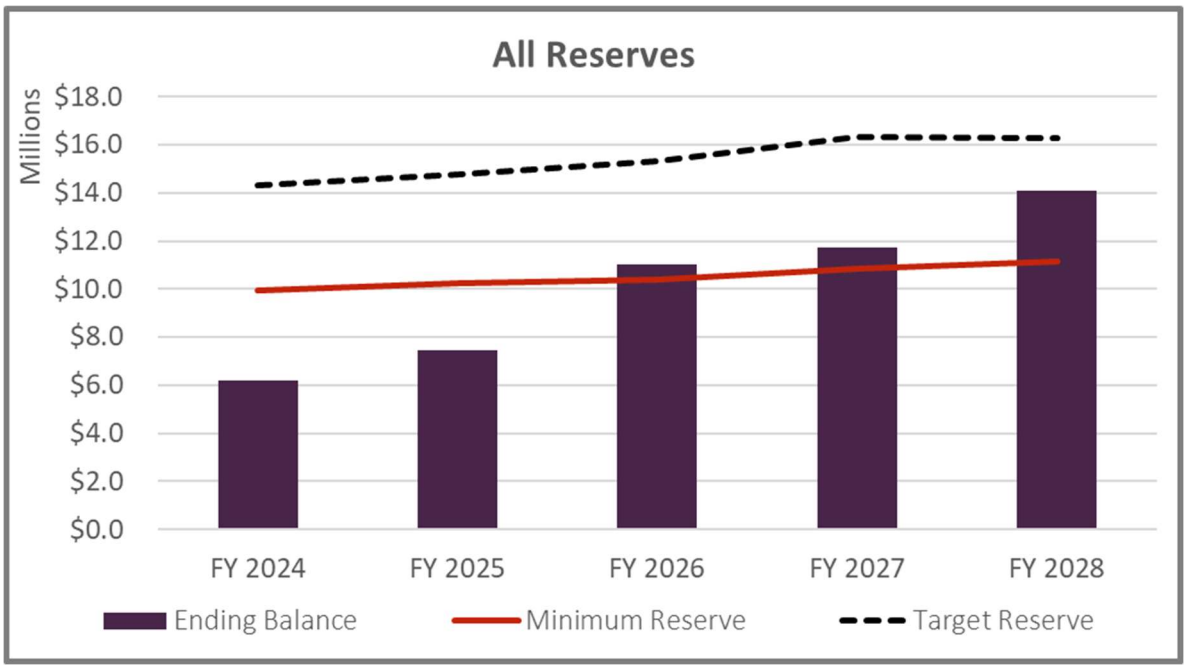


Figure 9: Proposed Ending Balances of All Reserves

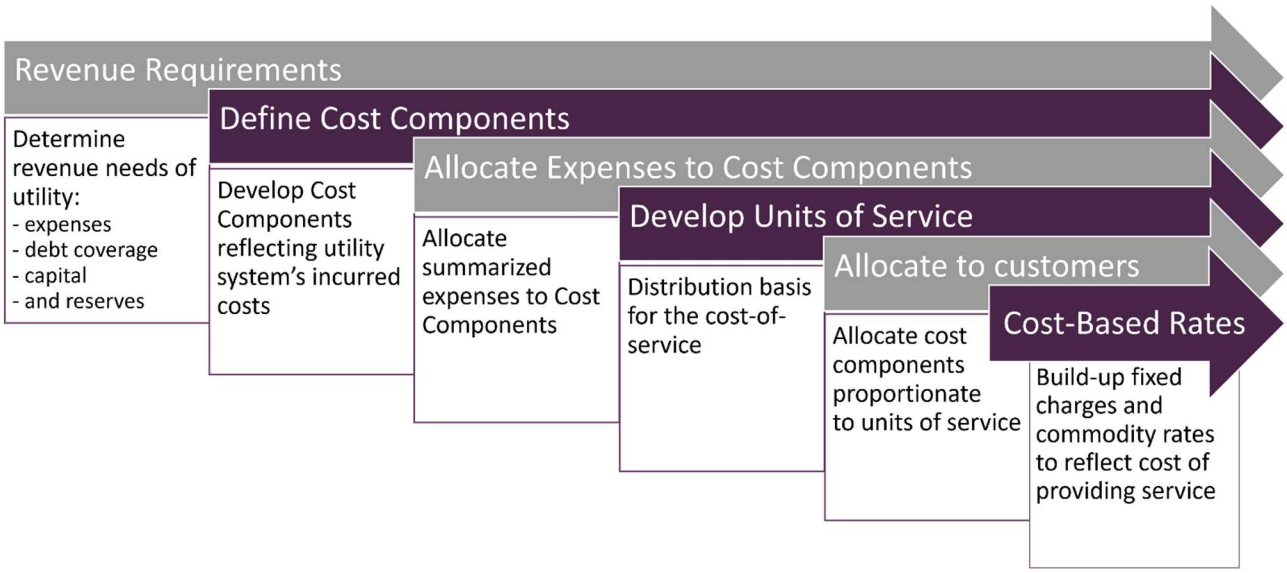


Cost-of-Service Analysis

Cost-of-Service Process

The next step in developing rates is to perform a cost-of-service analysis. It is important to understand **how** costs are incurred in order to determine the most appropriate way to recover these costs. The following graphic summarizes the cost-of-service process. Through this process, costs incurred are allocated to customers based on their proportional share. As a result, the proposed rates are cost-based and reflect the costs incurred to provide service to customers.

Figure 10: Cost-of-Service Process



Revenue Requirements

With FY 2024 as the first year of the proposed rate schedule, revenue requirements are determined for FY 2024 and used for the cost-of-service. Revenue requirements include purchased water, O&M expenses, debt service, and other funding. Other funding includes available offsets from non-rate revenues, reserve funding, and any mid-year adjustments if rates are implemented after the start of the fiscal year. The mid-year adjustment annualizes the proposed revenue adjustment to account for the time elapsed before new rates take effect to connect to the annual units of service used within this report for deriving rates. Funding the capital plan is achieved through a combination of rate revenues and reserves over the Rate Setting Period. Table 22 represents the revenue required from rates over the Rate Setting Period (FY 2024 through FY 2028).

Table 22: FY 2024 – FY 2028 Revenue Requirements

Revenue Requirements	FY 2024 Total	FY 2025 Total	FY 2026 Total	FY 2027 Total	FY 2028 Total
Water Supply Costs					
Groundwater Basin Assessment	$3,731,000	$5,440,000	$6,882,000	$7,091,000	$7,303,000
EOCWD - Water Purchased	$5,544,000	$2,990,000	$729,000	$765,000	$803,000
EOCWD - Connection Fees	$657,000	$677,000	$697,000	$718,000	$739,000
Total Water Supply Costs	$9,932,000	$9,107,000	$8,308,000	$8,574,000	$8,845,000
Operating Expenses					
Finance - Water Billings	$2,736,000	$3,692,000	$3,860,000	$4,027,000	$4,196,000
Finance - Administrative Fees	$1,500,000	$1,500,000	$1,575,000	$1,654,000	$1,737,000
Public Works - Water Administration	$1,128,000	$1,181,000	$1,228,000	$1,274,000	$1,321,000
PW Water Admin - S&B	$1,258,000	$1,363,000	$1,430,000	$1,490,000	$1,547,000
Public Works - Water Distribution	$1,645,000	$1,741,000	$1,824,000	$1,901,000	$1,975,000
Public Works - Main Street Facilities	$289,000	$306,000	$331,000	$345,000	$359,000
Public Works - 17th Street Desalter	$902,000	$930,000	$1,181,000	$1,233,000	$1,287,000
Public Works - Imported Water O&M	$115,000	$124,000	$130,000	$135,000	$140,000
Public Works - Water Production	$1,136,000	$907,000	$950,000	$993,000	$1,037,000
PFAS Treatment	$0	$600,000	$624,000	$649,000	$674,000
Total Operating Expenses	$10,709,000	$12,344,000	$13,133,000	$13,701,000	$14,273,000
Debt Service					
Existing Debt	$2,430,000	$2,641,000	$2,561,000	$3,265,000	$3,266,000
New/Proposed Debt	$0	$294,000	$587,000	$587,000	$587,000
Total Debt Service	$2,430,000	$2,935,000	$3,148,000	$3,852,000	$3,853,000
Other Funding					
Revenue Offsets					
PFAS Reimbursement	$0	$0	($300,000)	($312,000)	($325,000)
Operating Revenues	($260,000)	($260,000)	($260,000)	($260,000)	($260,000)
Non-Operating Revenues	($1,000)	$5,000	$5,000	$5,000	$5,000
Total Revenue Offsets	($261,000)	($255,000)	($555,000)	($567,000)	($580,000)
Adjustments					
Reserve Funding	($588,000)	$91,000	$2,367,000	$3,217,000	$4,975,000
Adjustment for Mid-Year Increase	$956,000	$1,043,000	$1,136,000	$1,239,000	$1,350,000
Total Adjustments	$368,000	$1,134,000	$3,503,000	$4,456,000	$6,325,000
Total Other Funding	$107,000	$879,000	$2,948,000	$3,889,000	$5,745,000
Revenue Requirement from Rates	**$23,178,000**	**$25,265,000**	**$27,537,000**	**$30,016,000**	**$32,716,000**

Define Cost Components

The utility incurs costs to accommodate total water demand that varies throughout the year. Therefore, to determine the most appropriate way to recover the utility's expenses, cost components are identified to allocate expenses based on how they are incurred. By reviewing the revenue requirements and understanding the utility system, it is appropriate and reasonable to utilize the base-extra capacity methodology outlined in the American Water Works Association M1 Manual. This methodology accounts for utility systems costs to meet revenue needs based on average annual usage and total demand. The cost components shown in Figure 11 reflect the cost components used for this study.

Figure 11: Cost Components

Account Services – Fixed expenses that do not necessarily fluctuate based on usage nor are a function of meter size. Expenses associated with central service costs.
Meter Capacity – Expenses associated with water billings, Public Works support, and a portion of debt and reserve funding.
Fire Flow Demand – Portion of system costs to meet fire flow demand inherent to the water system.
Water Supply – Groundwater and purchased water costs.
Delivery – Expenses associated with water distribution, groundwater production and treatment, imported water operations and maintenance, and water production expenses incurred to deliver water to all customers. These costs tend to vary with the volume of water sold.

Allocate Expenses to Cost Components

The analysis herein establishes cost components for developing fixed charges and consumption charges. When allocating expenses to the defined costs components, it is important to identify which expenses were allocated to fixed versus variable or split between both fixed and variable. The distribution of expenses to the cost components should be straight-forward to ensure the method of apportionment is **understandable** and easily **correlates to how expenses are incurred**.

Water supply costs are separated from the rest of O&M expenses and the cost details are provided in Appendix A. Table 23 summarizes the percent allocation of water supply costs to the water supply component. Table 24 reflects the dollars to each cost component based on the percent allocations in Table 23.

Table 23: Water Supply Cost Allocation to Cost Components (%)

Water Supply Costs	Methodology / Allocation Basis	Cost Components					Total
		Account Service	Meter Capacity	Fire Flow Demand	Water Supply	Delivery	
Groundwater Basin Assessment	Specific	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
EOCWD - Water Purchased	Specific	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
EOCWD - Connection Fees	Specific	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%

Table 24: Water Supply Cost Allocation to Cost Components ($)

Water Supply Costs	Methodology / Allocation Basis	Cost Components					Total
		Account Service	Meter Capacity	Fire Flow Demand	Water Supply	Delivery	
Groundwater Basin Assessment	*Specific*	$0	$0	$0	$3,731,000	$0	$3,731,000
EOCWD - Water Purchased	*Specific*	$0	$0	$0	$5,544,000	$0	$5,544,000
EOCWD - Connection Fees	*Specific*	$0	$0	$0	$657,000	$0	$657,000
Total Allocation ($)		**$0**	**$0**	**$0**	**$9,932,000**	**$0**	**$9,932,000**

Certain O&M expenses are a function of serving Max Day Demand (Max Day) and Max Hour Demand (Max Hour), including fire flow demand (FFD). A water system is configured to accommodate these demands with the sizing of pipes, storage facilities and other appurtenant facilities to meet total demand. Therefore, to apportion certain O&M costs between Max Day, Max Hour, and FFD, the amount associated with FFD must be determined. Max Day is the amount of water delivered during the maximum day of usage throughout the year and Max Hour is the maximum hour of usage throughout the year. The system is constructed to accommodate Max Day and Max Hour, as well as FFD in the event of a fire.

Based on the system requirements, the maximum fire flow needs vary by land use from 1,500 gallons per minute (gpm) for residential up to 4,000 gpm for Industrial based on the guidelines the City follows. Fire flow requirements were weighted by the corresponding accounts to derive the typical fire flow requirement needed during a probable fire event within the City's service area. Table 25 derives the weighted fire flow demand and weighted time duration. Table 26 identifies the Max Day and Max Hour of the City's water system and the FFD from Table 25. Table 26 uses this information to calculate the portion of Max Day and Max Hour associated with a fire event. These percentages are used to allocate a portion of certain O&M expenses to FFD.

Table 25: Fire Flow Requirement within City's Service Area

FFD by Land Use	Fire Flow Demand [A]	Time Duration [B]	Accounts [C]	% of Accounts [D] = C as %	Weighted FFD [E] = A x D	Weighted Time Duration [F] = B x D
Low Density Residential	1,500 gpm	2 hours	11,981	84.5%	1,268 gpm	1.69 hours
Medium Density Residential	2,000 gpm	2 hours	843	5.9%	119 gpm	.12 hours
Commercial	2,500 gpm	3 hours	1,110	7.8%	196 gpm	.23 hours
Public Facility	3,000 gpm	3 hours	143	1.0%	30 gpm	.03 hours
Institutional/School	3,500 gpm	4 hours	44	0.3%	11 gpm	.01 hours
Industrial	4,000 gpm	4 hours	50	0.4%	14 gpm	.01 hours
Total			**14,171**	**100.0%**	**1,638 gpm**	**2.10 hours**

Table 26: Fire Flow Demand as Percentage of Max Day and Max Hour

Line No.	Conversions	Source	Max Day	Max Hour
1	System Demand			
2	System Demand	*(Provided by City)*	9,680 gpm	23,730 gpm
3	× 60 Minutes		60	60
4	× 24 Hours		24	N/A
5	System Demand (gallons)		13,939,200	1,423,800
6	Fire Flow Demand			
7	Weighted Average FFD (gpm)	(**Table 23**, *Column E*)	1,638 gpm	1,638 gpm
8	× 60 Minutes		60	60
9	Weighted Average FFD (gph)		98,294	98,294
10	× Time Duration	(**Table 23**, *Column F*)	2.10	1.00
11	Fire Flow Demand (gallons)		206,584	98,294
12	Total Demand	(*Line 5 + Line 11*)	14,145,784	1,522,094
13	FFD as % of System Demand	*(Line 11 ÷ Line 12)*	1.5%	6.5%

Table 27 summarizes the percentage allocations to Delivery and FFD.

Table 27: System Demand Allocations Between Delivery and FFD

System Peak	FFD [A]	Delivery [B] = 100% - A
Average Day	0.0%	100.0%
Max Day	0.0%	100.0%
Max Hour	0.0%	100.0%
Max Day + FFD	1.5%	98.5%
Max Hour + FFD	6.5%	93.5%

Table 28 summarizes the percent allocation of Operating Expense revenue requirements to the cost components and Table 29 uses the percent allocations in Table 28 to allocate expenses in dollars to each cost component. Salaries and Benefits (PW Water Admin – S&B) was allocated to Meter Capacity and Delivery with the percentage of cost associated with employees who work on the water distribution system assigned to Delivery and the remaining percentage allocated to Meter Capacity. Distribution facilities are designed to accommodate Max Hour, therefore, Public Works – Water Distribution was allocated using the distribution basis of Max Hour identified in Table 27. Public Works – Main Street Facilities, Public Works – 17th Street Desalter, and Public Works – Water Production are related to the City's ground water supplies and wells and are a function of serving Max Day. Therefore, these expenses were allocated using the distribution basis of Max Day identified in Table 27.

Table 28: Operating Expense Allocation to Cost Components (%)

Operating Expenses	Methodology / Allocation Basis	Cost Components					Total
		Account Service	Meter Capacity	Fire Flow Demand	Water Supply	Delivery	
Finance - Water Billings	Specific	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Finance - Administrative Fees	Specific	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Public Works - Water Administration	Specific	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
PW Water Admin - S&B	Specific	0.0%	70.6%	0.0%	0.0%	29.4%	100.0%
Public Works - Water Distribution	Max Hour + FFD	0.0%	0.0%	6.5%	0.0%	93.5%	100.0%
Public Works - Main Street Facilities	Max Day + FFD	0.0%	0.0%	1.5%	0.0%	98.5%	100.0%
Public Works - 17th Street Desalter	Max Day + FFD	0.0%	0.0%	1.5%	0.0%	98.5%	100.0%
Public Works - Imported Water O&M	Average Day	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
Public Works - Water Production	Max Day + FFD	0.0%	0.0%	1.5%	0.0%	98.5%	100.0%

Table 29: Operating Expense Allocation to Cost Components ($)

Operating Expenses	Methodology / Allocation Basis	Cost Components					Total
		Account Service	Meter Capacity	Fire Flow Demand	Water Supply	Delivery	
Finance - Water Billings	*Specific*	$0	$2,736,000	$0	$0	$0	$2,736,000
Finance - Administrative Fees	*Specific*	$1,500,000	$0	$0	$0	$0	$1,500,000
Public Works - Water Administration	*Specific*	$0	$1,128,000	$0	$0	$0	$1,128,000
PW Water Admin - S&B	*Specific*	$0	$888,330	$0	$0	$369,670	$1,258,000
Public Works - Water Distribution	*Max Hour + FFD*	$0	$0	$106,231	$0	$1,538,769	$1,645,000
Public Works - Main Street Facilities	*Max Day + FFD*	$0	$0	$4,221	$0	$284,779	$289,000
Public Works - 17th Street Desalter	*Max Day + FFD*	$0	$0	$13,173	$0	$888,827	$902,000
Public Works - Imported Water O&M	*Average Day*	$0	$0	$0	$0	$115,000	$115,000
Public Works - Water Production	*Max Day + FFD*	$0	$0	$16,590	$0	$1,119,410	$1,136,000
Total Allocation ($)		**$1,500,000**	**$4,752,330**	**$140,215**	**$0**	**$4,316,455**	**$10,709,000**
O&M Allocation (%)		*14.0%*	*44.4%*	*1.3%*	*0.0%*	*40.3%*	*100.0%*

The Debt Service revenue requirements are shown as a separate section to identify the existing debt obligation of the water utility; however, debt service payments are part of the City's operating budget. Therefore, Debt Service is allocated based on the operating expense percentages derived at the bottom of Table 29, which results in a portion of annual debt payments recovered overall operating expense cost components and corresponding unit rates derived in the Rate Design section of this report. Table 30 summarizes the allocation of Debt Service. Table 31 provides the cost in dollars allocated to each cost component.

Table 30: Debt Service Allocation to Cost Components (%)

Debt Service	Methodology / Allocation Basis	Cost Components					Total
		Account Service	Meter Capacity	Fire Flow Demand	Water Supply	Delivery	
Existing Debt	O&M Allocation	14.0%	44.4%	1.3%	0.0%	40.3%	100.0%
New/Proposed Debt	O&M Allocation	14.0%	44.4%	1.3%	0.0%	40.3%	100.0%

Table 31: Debt Service Allocation to Cost Components ($)

Debt Service	Methodology / Allocation Basis	Cost Components: Account Service	Meter Capacity	Fire Flow Demand	Water Supply	Delivery	Total
Existing Debt	O&M Allocation	$340,368	$1,078,360	$31,816	$0	$979,455	$2,430,000
New/Proposed Debt	O&M Allocation	$0	$0	$0	$0	$0	$0
Total Allocation ($)		**$340,368**	**$1,078,360**	**$31,816**	**$0**	**$979,455**	**$2,430,000**

Other Funding includes other operating and non-operating revenue offsets and adjustments for reserve funding and mid-year increases. All items under "Other Funding" are allocated based on Operating expense percentages derived at the bottom of Table 29 to maintain the proportionality in how O&M expenses were allocated to each cost component. Table 32 summarizes the percent allocation of Other Funding to the cost components, and Table 33 uses the percent allocations in Table 32 to allocate expenses in dollars to each cost component.

Table 32: Other Funding to Cost Components (%)

Other Funding	Methodology / Allocation Basis	Cost Components: Account Service	Meter Capacity	Fire Flow Demand	Water Supply	Delivery	Total
Revenue Offsets							
Operating Revenues	O&M Allocation	14.0%	44.4%	1.3%	0.0%	40.3%	100.0%
Non-Operating Revenues	O&M Allocation	14.0%	44.4%	1.3%	0.0%	40.3%	100.0%
Adjustments							
Reserve Funding	O&M Allocation	14.0%	44.4%	1.3%	0.0%	40.3%	100.0%
Adjustment for Mid-Year Increase	O&M Allocation	14.0%	44.4%	1.3%	0.0%	40.3%	100.0%

Table 33: Other Funding Allocation to Cost Components ($)

Other Funding	Methodology / Allocation Basis	Cost Components: Account Service	Meter Capacity	Fire Flow Demand	Water Supply	Delivery	Total
Revenue Offsets							
Operating Revenues	O&M Allocation	($36,418)	($115,380)	($3,404)	$0	($104,798)	($260,000)
Non-Operating Revenues	O&M Allocation	($140)	($444)	($13)	$0	($403)	($1,000)
Adjustments							
Reserve Funding	O&M Allocation	($82,361)	($260,937)	($7,699)	$0	($237,004)	($588,000)
Adjustment for Mid-Year Increase	O&M Allocation	$133,906	$424,244	$12,517	$0	$385,333	$956,000
Total Allocation ($)		**$14,987**	**$47,483**	**$1,401**	**$0**	**$43,128**	**$107,000**

Table 34 summarizes the revenue requirement derived in Table 22 by cost component.

Table 34: FY 2024 Cost-of-Service Requirements by Cost Component

		Fixed			Variable		
Revenue Requirement		Account Service	Meter Capacity	Fire Flow Demand	Water Supply	Delivery	Total
Water Supply Costs	Table 27	$0	$0	$0	$9,932,000	$0	$9,932,000
Operating Expenses	Table 29	$1,500,000	$4,752,330	$140,215	$0	$4,316,455	$10,709,000
Debt Service	Table 31	$340,368	$1,078,360	$31,816	$0	$979,455	$2,430,000
Other Funding	Table 33	$14,987	$47,483	$1,401	$0	$43,128	$107,000
COS Requirements		**$1,855,355**	**$5,878,174**	**$173,432**	**$9,932,000**	**$5,339,039**	**$23,178,000**

Rate Design

Develop Units of Service

Unit rates for each cost component are derived by spreading the corresponding revenue requirements over appropriate units of service (distribution basis). This approach provides a clear connection between costs incurred and the proportionate share attributable to each customer. When designing rates, the most critical component is to connect costs to the proposed rates, resulting in a cost-based rate structure.

The previous section summarized costs by expense category and allocated them to cost components based on how each cost is incurred. The next step in designing rates is apportioning each cost component to customers through fixed charges and consumption charges. The method of apportionment considers each customer's share of system costs as reflected by the units of service used to distribute the cost components to each customer account. The distribution basis varies by cost component and includes Annual Bills, Annual Meter Equivalents (MEs), which reflect demand placed on the system, Fire Flow Demand, and total water sales.

Based on discussion with staff regarding the City's meter inventory, each meter size was assigned an equivalency factor based on the 'flow characteristics' of the meter types used by the City. The safe maximum operating flow capacity for these meter types, as identified in the AWWA M1 Manual, 6th Edition, Table B-2, were used for determining total meter equivalencies when compared to a ≤ 3/4" meter. The capacity ratio represents the potential flow through each meter size compared to the smallest sized meter to establish parity between all meter sizes. The safe maximum operating flow capacity for each meter was divided by 20 gallons per minute (gpm) to determine the equivalent meter ratios. Total MEs are determined by multiplying the number of meters by the Capacity Ratio and then multiplying the result by the number of billing periods. Table 35 summarizes the units of service related to total Accounts and MEs.

Table 35: Accounts and Meter Equivalents[3]

Meter Size	AWWA Capacity (gpm)	Capacity Ratio	Accounts	Meter Equivalents	Annual Bills	Annual ME's
	[A]	[B] = A ÷20	[C]	[D] = (B x C)	[E] = (C x 6)	[F] = (D x 6)
≤3/4"	20	1.00	9,907	9,907	59,442	59,442
1"	50	2.50	3,189	7,973	19,134	47,835
1 1/2"	100	5.00	374	1,870	2,244	11,220
2"	160	8.00	597	4,776	3,582	28,656
3"	350	17.50	22	385	132	2,310
4"	600	30.00	45	1,350	270	8,100
6"	1,350	67.50	14	945	84	5,670
8"	2,800	140.00	1	140	6	840
10"	4,200	210.00	0	0	0	0
Total			14,149	27,346	84,894	164,073

[3] Annual Bills and Annual ME's account for the City's 6 billing periods.

If an account has more than one dwelling unit, the City charges each additional dwelling unit (unit 2 and above) an Additional Dwelling Unit charge. Table 36 shows the number of additional dwelling units and the Annual Bills to account for the 6 bi-monthly billing periods.

Table 36: Additional Dwelling Units

	Additional Dwelling Units [A]	Annual Bills [B] = (A x 6)
Additional Dwelling Units	9,690	58,140

Table 37 summarizes the units of service including Annual Bills (Table 35 – column E + Table 36 – column B), Annual ME's and Total Usage.

Table 37: Units of Service

Units of Service		Annual Bills	Annual ME's	Total Usage (HCF)
Accounts	Table 35	84,894	164,073	
Additional Dwelling Units	Table 36	58,140		
Customer Usage	Table 11			4,290,660
Total		143,034	164,073	4,290,660

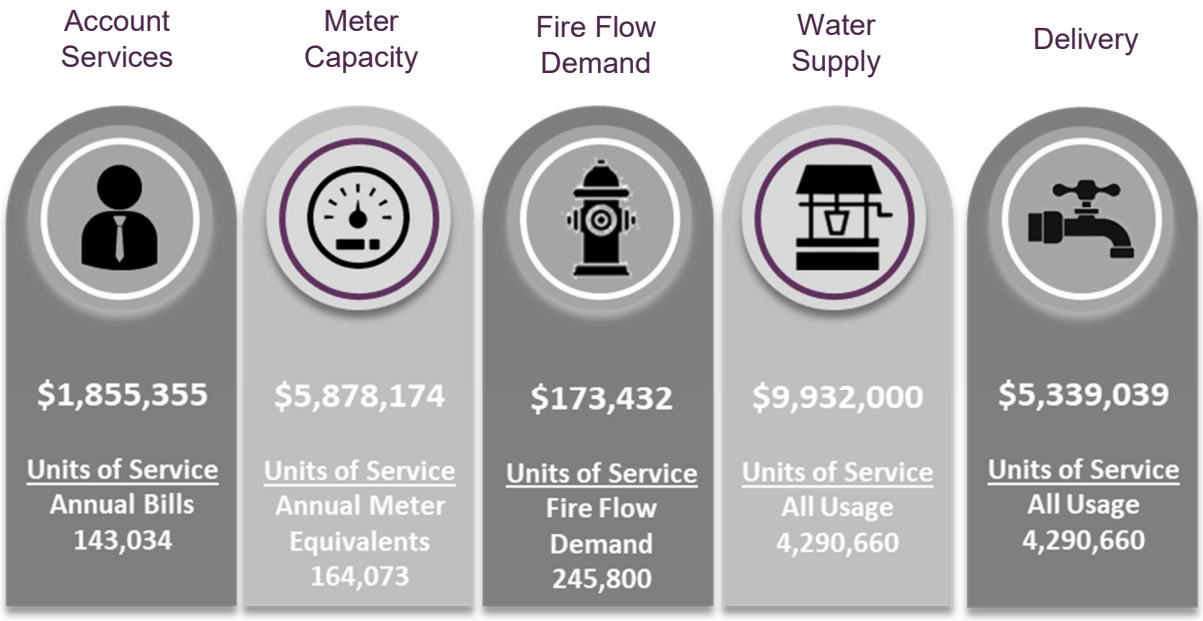
System fire flow revenue requirements are allocated between dedicated fire lines and hydrants based on fire flow demand of all connections. Potable meters recover the portion associated with the fire flow demand of all hydrants for the standby services that is available to all accounts. Table 38 identifies all connections by size (in diameter inches) between dedicated fire lines and hydrants. The connection size has a relative flow potential that is a function of the diameter size of the connection. Using the principles of the Hazen-Williams equation, each connection size was raised to the 2.63 power, to derive the relative flow potential of all fire line connections by size.

Table 38: Fire Flow Demand Units of Service

Line No.	Fire Lines	Connections	Annual Connections	Size of Line	Diameter Inches	Annual Diameter Inches	Fire Flow Demand
		[A]	[B] = A x 6	[C]	[D] = A x C	[E] = D x 6	[F] = A x (C ^ 2.63)
1	Public Hydrants						
2	6"	1,911	11,466	6.00	11,466	68,796	212,715
3	Subtotal	1,911	11,466		11,466	68,796	212,718
4	Fire Lines						
5	4"	58	348	4.00	232	1,392	2,223
6	5"	1	6	5.00	5	30	69
7	6"	104	624	6.00	624	3,744	11,576
8	8"	68	408	8.00	544	3,264	16,130
9	10"	4	24	10.00	40	240	1,706
10	12"	2	12	12.00	24	144	1,378
11	Subtotal Fire Lines	237	1,422		1,469	8,814	33,082
12	**Total**	**2,148**	**12,888**		**12,935**	**77,610**	**245,800**

With the units of service shown in Table 37 and Table 38, we identified the distribution basis for each cost component. Figure 12 identifies the total revenue requirements by cost component from Table 34 and the corresponding units of service.

Figure 12: Distribution Basis and Units of Service by Cost Component



Using FY 2024 revenue requirements, the cost-of-service allocates expenses to customers based on the service demands that each place on the system (cost causation). This cost causation approach ensures that each customer proportionately shares in the financial obligation of the utility. Unit rates were rounded up to the nearest penny for the following unit rate computations for each cost component.

Fixed Cost Recovery

Account Services

Each customer incurs Account Services costs regardless of the type of land use, meter size, or total amount of water used in a month. Furthermore, each additional dwelling unit also incurs Account Services costs. These costs should be spread equally across all accounts. This is achieved by using the distribution basis of Annual Bills. Annual Bills include the number of accounts multiplied by 6 billing periods (Table 35) plus the number of additional dwelling units multiplied by 6 billing periods (Table 36). Therefore, the revenue requirement for Account Services is apportioned based on the Annual Bills to determine the bi-monthly unit cost-of-service shown in Table 39.

Table 39: FY 2024 Account Services Bi-Monthly Unit Rate

Account Service Component Unit Rate	
Revenue Requirement	$1,855,355
÷ Annual Bills	143,034
Bi-Monthly Unit Rate	**$12.98**

Meter Capacity

The Meter Capacity includes billing and administrative costs, a portion of Public Works personnel costs related to salaries and benefits, debt, and reserve funding. The revenue requirement for Meter Capacity is apportioned based on meter size. Larger sized meters can generate a greater demand on the system from the amount of potential water flow that may pass through the meter in gpm. The revenue requirement for Meter Capacity is apportioned to meter size as represented by total MEs (Table 35) in Table 40.

Table 40: FY 2024 Meter Capacity Bi-Monthly Unit Rate

Meter Capacity Component Unit Rate	
Revenue Requirement	$5,878,174
÷ Annual ME's	164,073
Bi-Monthly Unit Rate	**$35.83**

Fire Flow Demand

Table 41 takes the fire flow demand units of service derived in Table 38 and allocated the FY 2024 cost-of-service fire flow demand revenue requirement between system hydrants and dedicated fire lines. Table 42 takes the portion associated with fire flow demand of the water system's connected hydrants and spreads the cost to potable meters based on MEs. The portion related to dedicated fire lines is recovered based on the unit rate per diameter inch derived in Table 43.

Table 41: FY 2024 Fire Flow Demand Revenue Requirement Allocation

Fire Lines		Fire Flow Demand [A]	% Allocation [B] = A as a %	Revenue Requirement [C] = $173,432 x B
Public Hydrants	**Table 38**, *Line 3*	212,718	86.5%	$150,090
Fire Lines	**Table 38**, *Line 11*	33,082	13.5%	$23,342
Total		**245,800**	**100%**	**$173,432**

Table 42: FY 2024 Public Fire Flow Demand Bi-Monthly Unit Rate

Public Fire Flow Demand Component Unit Rate	
Revenue Requirement	$150,090
÷ Meter Equivalents	164,073
Bi-Monthly Unit Rate	**$0.92**

Table 43: FY 2024 Dedicated Fire Line Bi-Monthly Unit Rate per Diameter Inch

Dedicated Fire Lines Demand Component Unit Rate	
Revenue Requirement	$23,342
÷ Annual Diameter Inches	8,814
Bi-Monthly Unit Rate	**$2.65**

Variable Cost Recovery

The remaining cost components of Water Supply and Delivery are recovered through a consumption charge. The proposed rate structure consists of a uniform rate per hcf.

Water Supply

The City water supplies include groundwater and imported water. Due to the construction of PFAS treatment facility, the City's has incurred more imported water supply costs. The percentage of groundwater versus imported water used to serve demand is currently in flux and does not reflect the City's historical trend of 95% groundwater and 5% imported water. Therefore, the City will continue charging all customers through one uniform rate for water supply costs. Table 44 allocates the revenue requirement of Water Supply based on projected total usage for FY 2024.

Table 44: FY 2024 Water Supply Unit Rate

Water Supply Component Unit Rate	
Revenue Requirement	$9,932,000
÷ Total Usage	4,290,660
Bi-Monthly Unit Rate	**$2.32**

Delivery

Delivery costs are incurred based on the total volume of water produced and delivered to customers throughout the year. Therefore, the revenue requirement for Delivery is apportioned based on projected total water usage identified in Table 37 to determine the unit cost-of-service, as shown in Table 45.

Table 45: FY 2024 Delivery Unit Rate

Delivery Component Unit Rate	
Revenue Requirement	$5,339,039
÷ Total Usage	4,290,660
Bi-Monthly Unit Rate	**$1.25**

FY 2024 Cost-of-Service Rates

Proposed FY 2024 Bi-Monthly Fixed Charges

The proposed bi-monthly fixed charges for FY 2024 are shown in Table 46, reflecting the combined charges of Account Service, Meter Capacity, and Fire Flow Demand. Account Service is constant for all meter sizes while all other fixed charge components increase with the size of the meter in relation to the Capacity Ratios. Table 47 shows the proposed bi-monthly additional dwelling unit charge and Table 48 provides the proposed bi-monthly dedicated fire line charge by size of connection.

Table 46: FY 2024 Bi-Monthly Meter Service Charges

Meter Size	Capacity Ratio [A]	Account Service [B] = $12.98	Meter Capacity [C] = $35.83 x A	Fire Flow Demand [D] = $.92 x A	Proposed Meter Service Charge [E] = A + B + C + D
≤3/4"	1.00	$12.98	$35.83	$0.92	**$49.73**
1"	2.50	$12.98	$89.58	$2.30	**$104.86**
1 1/2"	5.00	$12.98	$179.15	$4.60	**$196.73**
2"	8.00	$12.98	$286.64	$7.36	**$306.98**
3"	17.50	$12.98	$627.03	$16.10	**$656.11**
4"	30.00	$12.98	$1,074.90	$27.60	**$1,115.48**
6"	67.50	$12.98	$2,418.53	$62.10	**$2,493.61**
8"	140.00	$12.98	$5,016.20	$128.80	**$5,157.98**
10"	210.00	$12.98	$7,524.30	$193.20	**$7,730.48**

Table 47: FY 2024 Bi-Monthly Additional Dwelling Unit Charge

Additional Dwelling Unit Charge	Account Service	Proposed Additional Dwelling Unit Charge
Additional Dwelling Unit	$12.98	**$12.98**

Table 48: FY 2024 Bi-Monthly Fire Line Service Charges

Connection Size	Size of Line [A]	Fire Flow Demand [B] = $2.65 x A	Proposed Fire Line Charge
4"	4.00	$10.60	**$10.60**
5"	5.00	$13.25	**$13.25**
6"	6.00	$15.90	**$15.90**
8"	8.00	$21.20	**$21.20**
10"	10.00	$26.50	**$26.50**
12"	12.00	$31.80	**$31.80**

Proposed FY 2024 Variable Charges

Table 49 provides the consumption charge for FY 2024, reflecting the combined Water Supply and Delivery rates.

Table 49: FY 2024 Proposed Consumption Charge ($/hcf)

Customer Class	Water Supply [A]	Delivery [B]	Proposed Consumption Charge [C] = A + B
All Customers	$2.32	$1.25	**$3.57**

Cost-Based Rates

Cost-of-Service and Proposed Rate Schedules

The comprehensive cost-of-service analysis and rate development meet the requirements of Proposition 218, which includes:

1. An agency cannot collect revenue beyond what is necessary to provide service.

   The long-term financial plan identifies the City's revenue requirements including operating expense, capital improvement program, debt coverage, and reserves. Building up reserves is a prudent practice to mitigate rate spikes due to known future capital projects. Therefore, projected revenues do not exceed the cost of providing service.

2. Revenues derived by the charge shall not be used for any other purpose other than that for which the charge was imposed.

   The City's water utility is set up as a business enterprise to track revenues and expenses and does not fund other services outside of those necessary for the provision of delivering safe and reliable water.

3. The amount of the fee may not exceed the proportional cost-of-service for the parcel.

   The comprehensive cost-of-service analysis and updated fixed charges and consumption charge reflect the proportionate share of cost to each customer. Through this update, each account is paying for the costs of providing water service to the parcel.

4. No charge may be imposed for a service unless that service is actually used or immediately available to the owner of the property.

   The proposed fixed charges and consumption charges connect directly to the City's water enterprise budget and projected future revenue requirements and are recovered equitably from all active accounts receiving service.

5. A written notice of the proposed charge shall be mailed to the record owner of each parcel at least 45 days prior to the public hearing.

   Notices were mailed to each affected parcel at least 45 days prior to the December 5, 2023, Public Hearing.

The proposed water rate schedules for FY 2024 through FY 2028 are shown in the following section. If a majority protest does not exist at the December 5th Public Hearing, the City Council may adopt the rates with an effective date of January 1, 2024, for the first rate adjustment, and each January 1 thereafter through January 1, 2028.

Multi-Year Rate Schedules

Table 50 through Table 52 provide the five-year fixed charge schedule through FY 2028 for meters, additional dwelling units, and dedicated fire lines. Table 53 provides the five-year consumption charge schedule through FY 2028. For FY 2025 through FY 2028, the revenue adjustments are applied across-the-board to the cost-of-service rates derived for FY 2024 (rounded up to the next whole penny) as account growth and usage characteristics are projected to remain constant for financial planning.

Table 50: FY 2024 – FY 2028 Proposed Bi-Monthly Meter Service Charges

Revenue Adjustment:		9.0%	9.0%	9.0%	9.0%
Meter Service Charges ($/Bi-Month)					
Meter Size	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
≤3/4"	$49.73	$54.21	$59.09	$64.41	$70.21
1"	$104.86	$114.30	$124.59	$135.81	$148.04
1 1/2"	$196.73	$214.44	$233.74	$254.78	$277.72
2"	$306.98	$334.61	$364.73	$397.56	$433.35
3"	$656.11	$715.16	$779.53	$849.69	$926.17
4"	$1,115.48	$1,215.88	$1,325.31	$1,444.59	$1,574.61
6"	$2,493.61	$2,718.03	$2,962.66	$3,229.30	$3,519.94
8"	$5,157.98	$5,622.20	$6,128.20	$6,679.74	$7,280.92
10"	$7,730.48	$8,426.23	$9,184.60	$10,011.22	$10,912.23

Table 51: FY 2024 – FY 2028 Proposed Bi-Monthly Additional Dwelling Unit Charge

Revenue Adjustment:		9.0%	9.0%	9.0%	9.0%
Additional Dwelling Unit Charge ($/DU/Bi-Month)					
Dwelling Unit Charge	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Additional Dwelling Units	$12.98	$14.15	$15.43	$16.82	$18.34

Table 52: FY 2024 – FY 2028 Proposed Bi-Monthly Fire Line Service Charges

Revenue Adjustment:	9.0%	9.0%	9.0%	9.0%	
Fire Line Service Charges ($/Bi-Month)					
Connection Size	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
4"	$10.60	$11.56	$12.61	$13.75	$14.99
5"	$13.25	$14.45	$15.76	$17.18	$18.73
6"	$15.90	$17.34	$18.91	$20.62	$22.48
8"	$21.20	$23.11	$25.19	$27.46	$29.94
10"	$26.50	$28.89	$31.50	$34.34	$37.44
12"	$31.80	$34.67	$37.80	$41.21	$44.92

Table 53: FY 2024 – FY 2028 Proposed Consumption Charge

Revenue Adjustment:	9.0%	9.0%	9.0%	9.0%	
Consumption Charge ($/HCF)					
Customer Class	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
All Customers	$3.57	$3.90	$4.26	$4.65	$5.07

Appendix A – Water Supply Cost Analysis

In order to calculate the annual fixed water supply costs, the EOCWD connection fees shown above were multiplied by twelve. The annual variable water supply costs were calculated through the following analysis. First, the water loss percentage was applied to the water billings/sales to derive the total amount of water needed to meet customer demand. Next, the amount of purchased water needed from EOCWD to meet the remaining demand was calculated by subtracting the available amount of the groundwater supplies from the total water demand and water production disposed in the Brine line to remove high levels of salt and contaminants. The variable water supply rates have an effective date of January 1 of each year. In order to calculate the variable purchase water costs, the amount of water purchased or produced from July to January (% at Prior Rate) and the amount of water purchased or produced from January to June (% at Current Rate) must be determined. Once the amount of water used at the prior and current rates are determined, the volumes were then multiplied by the corresponding variable purchase water costs in order to calculate the total annual variable water supply costs.

Table 54: FY 2024 – FY 2028 Projected Purchased Water Costs

Key Inputs / Assumptions	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Escalation Factors					
GW Assessment	3.0%	0.0%	3.0%	3.0%	3.0%
EOCWD (Fixed)	3.0%	3.0%	3.0%	3.0%	3.0%
EOCWD (Variable)	5.0%	0.0%	5.0%	5.0%	5.0%
Effective Date	1/1/2024	1/1/2025	1/1/2026	1/1/2027	1/1/2028
% of Usage at prior rate	56.5%	50.0%	50.0%	50.0%	50.0%
% of Usage at current rate	43.5%	50.0%	50.0%	50.0%	50.0%
System/Supply Characteristics					
System Water Loss	7.0%	7.0%	7.0%	7.0%	7.0%

Water Supplies	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Groundwater					
Treated	2,400 AF	6,120 AF	7,980 AF	7,980 AF	7,980 AF
Untreated	3,960 AF	2,400 AF	2,400 AF	2,400 AF	2,400 AF
Brine					
Treated	352 AF	352 AF	352 AF	352 AF	352 AF
Brine (Water Not Available for Demand)	352 AF	352 AF	352 AF	352 AF	352 AF

Water Supply Rates	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Monthly Fixed Costs ($/Month)						
EOCWD - Connection Fees	$53,667	$54,740	$56,382	$58,074	$59,816	$61,610
Variable Purchased Water Costs ($/AF)						
Groundwater Basin Assessment	$558	$624	$653	$673	$693	$714
EOCWD - Water Purchased	$1,209	$1,209	$1,256	$1,319	$1,385	$1,454

Fixed Water Costs Calculation (Annual)	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Fixed Costs					
EOCWD - Connection Fees	**$656,880**	**$676,586**	**$696,884**	**$717,791**	**$739,324**

Variable Water Costs Calculation (Annual)	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Water Billings/Sales (AF)	9,850 AF	9,850 AF	9,850 AF	9,850 AF	9,850 AF
Water Demand	10,594 AF	10,594 AF	10,594 AF	10,594 AF	10,594 AF
GW Treated	2,400 AF	6,120 AF	7,980 AF	7,980 AF	7,980 AF
GW Untreated	3,960 AF	2,400 AF	2,400 AF	2,400 AF	2,400 AF
Brine (Not available for Sale)	-352 AF	-352 AF	-352 AF	-352 AF	-352 AF
Water Purchases (EOCWD)	4,586 AF	2,426 AF	566 AF	566 AF	566 AF
Water Characteristics					
Groundwater Production (AF)					
% at Prior Rate	3,593 AF	4,260 AF	5,190 AF	5,190 AF	5,190 AF
% at Current Rate	2,767 AF	4,260 AF	5,190 AF	5,190 AF	5,190 AF
Water Purchases - EOCWD (AF)					
% at Prior Rate	2,591 AF	1,213 AF	283 AF	283 AF	283 AF
% at Current Rate	1,995 AF	1,213 AF	283 AF	283 AF	283 AF
Calculated Variable Water Supply Costs					
Groundwater Basin Assessment	$3,731,476	$5,440,020	$6,881,940	$7,090,526	$7,303,242
EOCWD Water Purchases	$5,544,469	$2,990,040	$728,719	$765,212	$803,473
Total Variable Water Supply Costs	**$9,275,944**	**$8,430,060**	**$7,610,659**	**$7,855,738**	**$8,106,714**
Total Calculated Water Supply Costs	**$9,932,824**	**$9,106,646**	**$8,307,543**	**$8,573,529**	**$8,846,039**