Public Hearing
November 14, 2023

CY 2024 Water Cost-of-Service Rate Study

Citrus Heights Water District

CITRUS HEIGHTS WATER DISTRICT

IB CONSULTING

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Report Date 12/15/2023

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Executive Summary

The Citrus Heights Water District (District) reviews its revenue requirements annually to determine if revenue adjustments are needed to continue meeting its operational costs, system improvements, and adequate reserve funding based on adopted reserve policies. The last rate study in 2022 set rates for Calendar Year (CY) 2023. The District updated its fixed and variable rates and maintained its fixed surcharge for funding the Project 2030 mainline replacement program. The District hired IB Consulting to develop proposed rates for CY 2024.

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 five-year financial plan (Financial Plan Period), 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 District's revenue requirements beyond CY 2024. This approach ensures that the District plans for future obligations and clearly understands its current financial position, especially with Project 2030 on the horizon.

Water Utility

Based on a financial review of the water utility, revenues from existing rates generate positive net operating income through CY 2027, which are used for capital spending and reserve funding. However, by CY 2028, an operating deficit is projected, and additional revenue would be needed to ensure positive operating net income.

The District's water rate structure includes a bi-monthly fixed charge and a uniform variable rate per hundred cubic feet (hcf)[1]. The updated cost-of-service continues to recover approximately 67% of total revenue through its bi-monthly fixed charges (inclusive of the Project 2030 surcharge). The proposed rate structure reflects an updated cost-of-service analysis that identifies which expenses are recovered through the bi-monthly meter charges versus the uniform variable rate.

The proposed rates derived within this report are for CY 2024, commencing on January 1, 2024, with additional revenue adjustments identified over the Financial Plan Period. With the proposed five years of revenue adjustments, the utility will continue to generate positive net operating income, fully fund its capital repair and replacement program, and meet minimum reserve targets over the Financial Plan Period, except in CY 2027. CY 2027 capital spending is approximately $11.1M and reserves are used to cover a portion of the capital needs. However, the reduction in reserves is temporary. In CY 2028, capital spending reduces to $5.6M allowing reserves to replenish and meet the minimum reserve requirement.

The proposed CY 2024 rates include the increases from San Juan Water District (SJWD) for surface water, which were formally adopted on December 13, 2023. Therefore, any changes to the SJWD rates will be captured through the pass-through provisions of *Ca. Gov. Code § 53756.* SJWD charges the District an annual

[1] 1 hcf = 748.05 gallons

fixed charge and variable rates for purchased water. The proposed SJWD rates for CY 2024 have been restructured with 83% of their cost recovered as a fixed charge and the remainder through its variable rate. The allocation of SJWD fixed charges to its member agencies has also changed. Previously, SJWD's total fixed costs were allocated to the member agency based on each member agency's percentage share of surface water over the last five years (5-Year Rolling Average). The new proposed fixed allocation method by SJWD uses a 10-year average of surface water purchases.

Table 1 and Table 2 reflects the proposed fixed charges and variable rate, respectively, including the final adopted rates by SJWD on December 13, 2023. Table 3 identifies the Project 2030 bi-monthly fixed surcharges previously established, which will not change.

Table 1: Proposed Bi-Monthly Fixed Charges

Base Fixed Meter Charges ($/Bi-Month)		
Meter Size	Existing	CY 2024
≤ 3/4"	$60.35	$55.71
1"	$94.69	$101.28
1 1/2"	$151.92	$177.23
2"	$220.60	$268.37
3"	$438.07	$556.98
4"	$758.81	$982.30
Combination Meters		
2x4" - Combo	$220.60	$268.37
3x6" - Combo	$438.07	$556.98
4x8" - Combo	$758.55	$982.30
10" - Combo	$2,441.10	$3,215.23

Table 2: Proposed Variable Rates

Variable Rates ($/HCF)		
Customer Class	Existing	CY 2024
All Customers	$1.43	$1.60

Table 3: Bi-Monthly Project 2030 Surcharges

Project 2030 Surcharges ($/Bi-Month)		
Meter Size	Existing	CY 2024
≤ 3/4"	$4.20	$4.20
1"	$10.50	$10.50
1 1/2"	$21.00	$21.00
2"	$33.59	$33.59
3"	$73.48	$73.48
4"	$132.30	$132.30
Combination Meters		
2x4" - Combo	$33.59	$33.59
3x6" - Combo	$73.48	$73.48
4x8" - Combo	$132.26	$132.26
10" - Combo	$440.86	$440.86

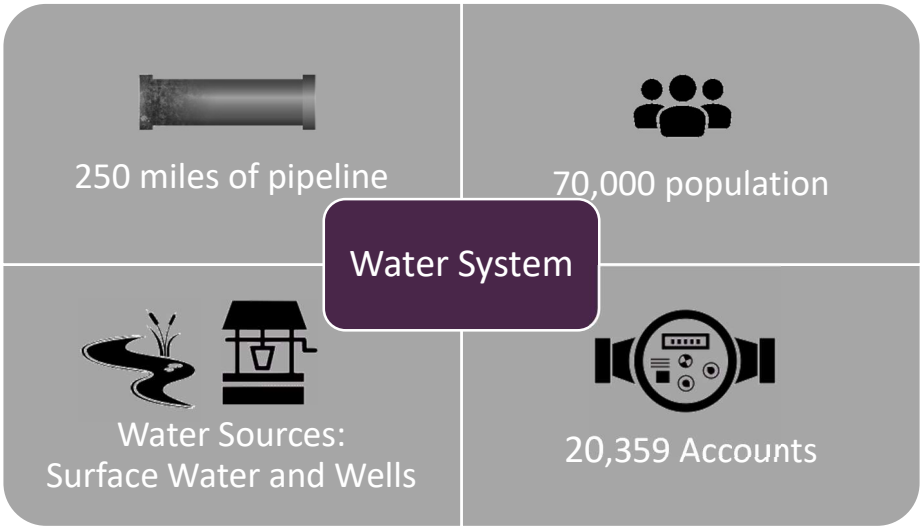
Background

Water System

The District is in the northeastern portion of Sacramento County and southern Placer County, California, approximately 15 miles northeast of downtown Sacramento. The District provides water service to portions of Citrus Heights and Roseville and portions of the unincorporated Sacramento communities of Orangevale, Fair Oaks, Carmichael, and a part of unincorporated Placer County. The District's water supplies include surface water through SJWD and groundwater wells.

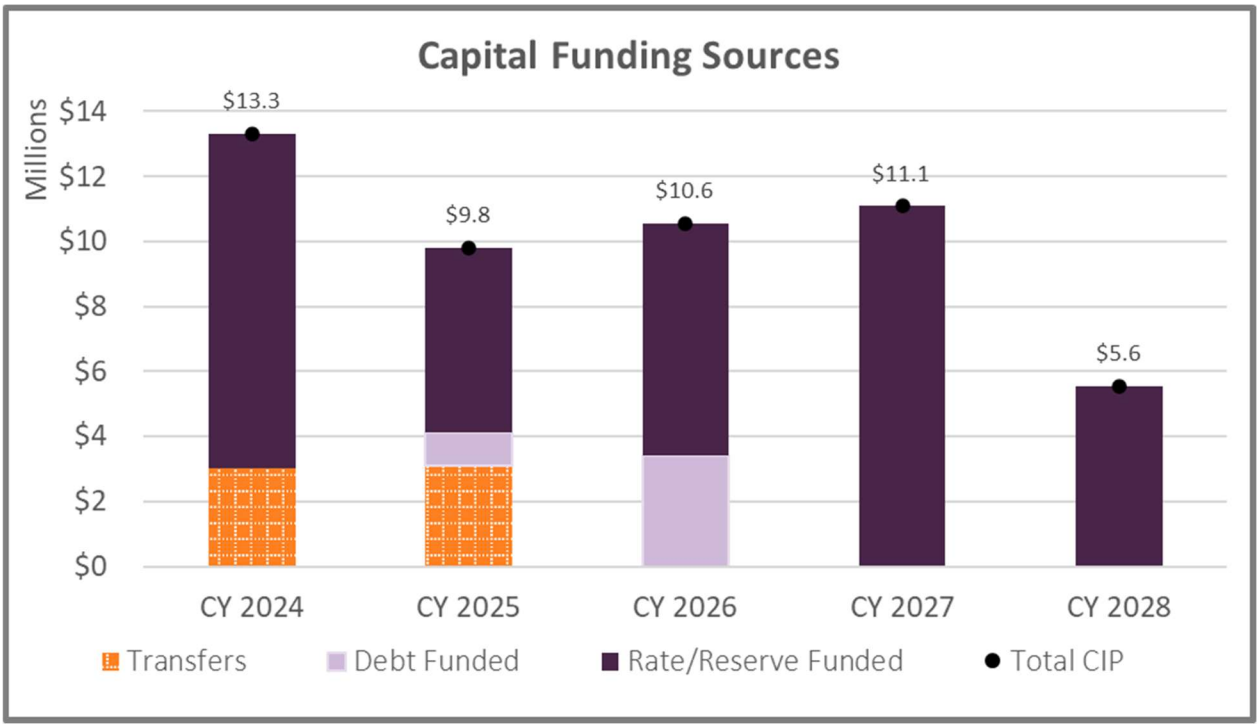
The District has approximately 250 miles of distribution and transmission water mains ranging from 4 inches to 42 inches in size, serving a population of approximately 70,000 customers. The larger water mains make up a small percentage of the District's total system pipelines but convey most of the water from Folsom Lake and distributes it throughout the entire service area. These water mains are considered the backbone of the water system and part of the District's Project 2030 Study.

Figure 1: Water System



The District's capital spending will average approximately $10M annually over the Financial Plan Period for the system's repair and replacement program. In CY 2024 and CY 2025, two additional wells are planned (Well #7 – Ella and Well #8 – Highland), with secured grants of $3.1M. In CY 2025 through CY 2027, the District plans to construct a new corporate yard facility estimated at $11M, which will be funded through a combination of rates/reserves and debt. Figure 2 shows the District's capital repair and replacement plan through CY 2028 with funding sources. Transfers are monies from dedicated reserves to fund specific capital costs. In CY 2024 and CY 2025, funds are transferred from the Water Supply Reserve to cover costs associated with the construction of the new wells. The District also plans to issue $4.4M in debt in CY 2025 to partially fund the new corporate yard facility.

Figure 2: Capital Improvement Plan



Customers

The District serves 20,359 active accounts. Table 4 provides a summary of accounts by meter size.

Table 4: Accounts by Meter Size

Meter Size	Number of Accounts
≤ 3/4"	1,929
1"	17,133
1 1/2"	578
2"	614
3"	61
4"	0
Combination Meters	
2x4" - Combo	21
3x6" - Combo	12
4x8" - Combo	10
10" - Combo	1
Total	20,359

As previously mentioned, the existing rate structure consists of bi-monthly fixed meter charges and a uniform variable rate for all customers. Existing bi-monthly fixed charges are identified in Table 5 and Table 6 lists the Project 2030 bi-monthly fixed surcharges established in CY 2022. The existing variable rate is shown in Table 7.

Table 5: CY 2023 Bi-Monthly Fixed Charges

Base Fixed Meter Charges ($/Bi-Month)	
Meter Size	Existing
≤ 3/4"	$60.35
1"	$94.69
1 1/2"	$151.92
2"	$220.60
3"	$438.07
4"	$758.81
Combination Meters	
2x4" - Combo	$220.60
3x6" - Combo	$438.07
4x8" - Combo	$758.55
10" - Combo	$2,441.10

Table 6: CY 2023 Bi-Monthly Project 2030 Surcharges

Project 2030 Surcharges ($/Bi-Month)	
Meter Size	Existing
≤ 3/4"	$4.20
1"	$10.50
1 1/2"	$21.00
2"	$33.59
3"	$73.48
4"	$132.30
Combination Meters	
2x4" - Combo	$33.59
3x6" - Combo	$73.48
4x8" - Combo	$132.26
10" - Combo	$440.86

Table 7: CY 2023 Variable Rate

Variable Rates ($/HCF)	
Customer Class	Existing
All Customers	$1.43

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) 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 8 identifies assumptions used for forecasting revenues, and Table 9 identifies assumptions used for forecasting expenses over the Financial Plan Period.

For forecasting revenues, our analysis assumes no growth in accounts or water demand as a conservative assumption, so projected revenues do not rely on development to occur. Water sales for CY 2024 reflect a 4% reduction from CY 2022 actuals based on discussions with District staff and water resources.

Increases in purchased water costs (fixed and variable) are not assumed in CY 2025 and beyond as the District will utilize the pass-through provisions within the Proposition 218 Omnibus Implementation Act for any increases adopted by SJWD (*Ca. Gov. Code § 53756)*. The additional District staffing is from a Staffing Augmentation Study[2] that was performed by the District in CY 2021. The staffing augmentation will add positions to engineering and operations.

Table 8: Assumptions for Forecasting Revenues

Key Assumptions	CY 2024	CY 2025	CY 2026	CY 2027	CY 2028
Revenue Escalation					
Non-Rate Revenues	2.0%	2.0%	2.0%	2.0%	2.0%
Reserve Interest	1.0%	1.0%	1.0%	1.0%	1.0%
Account Growth					
All Customers	0.0%	0.0%	0.0%	0.0%	0.0%
Demand / Usage Adjustments					
All Customers	0.0%	0.0%	0.0%	0.0%	0.0%
Projected Accounts / Water Sales					
Total All Customers Meters	20,359	20,359	20,359	20,359	20,359
Total Consumption (HCF)	4,508,944	4,508,944	4,508,944	4,508,944	4,508,944

[2] Final Draft 5-12-2021 – Citrus Heights Water District Staffing Analysis

Table 9: Assumptions for Forecasting Expense

Key Assumptions	Source:	CY 2024	CY 2025	CY 2026	CY 2027	CY 2028
Expenditure Escalation						
Benefits		*Budget*	5.0%	5.0%	5.0%	5.0%
Capital Construction	*ENR - SF 5-Year Average*	*Budget*	5.0%	5.0%	5.0%	5.0%
Energy Costs		*Budget*	7.0%	7.0%	7.0%	7.0%
General Costs	*CPI - SF (BLS) 5-Year Average*	*Budget*	3.5%	3.5%	3.5%	3.5%
Non-Inflated		*Budget*	0.0%	0.0%	0.0%	0.0%
Retirement		*Budget*	5.0%	5.0%	5.0%	5.0%
Salaries		*Budget*	7.0%	7.0%	7.0%	7.0%
SJWD Service Charge		*Pass-Through*	*Pass-Through*	*Pass-Through*	*Pass-Through*	*Pass-Through*
Wholesale Purchased Water		*Pass-Through*	*Pass-Through*	*Pass-Through*	*Pass-Through*	*Pass-Through*
Additional Staffing (Full Time Equivalents or FTEs)						
New FTEs		0	1	2	2	2

Current Financial Position

Revenues

Based on the forecasting assumptions, fixed revenues were calculated using account data by meter size shown in Table 4, multiplied by existing rates shown in Table 5 over six billing periods. Variable revenue was calculated by taking the variable rate in Table 7 multiplied by the projected total water sales shown in Table 8. Table 10 shows the calculated rate revenues through the Financial Plan Period. Table 11 summarizes calculated rate revenues and other non-rate revenues, with future projections rounded to the nearest thousands. Project 2030 revenues were calculated based on the account data and dedicated fixed surcharge developed in CY 2022 (Table 6). Revenues from these rates are restricted for the purpose of funding Project 2030 capital costs. Non-rate revenues increase over the Financial Plan Period using the inflation factors in Table 8.

Table 10: Calculated Rate Revenues

Revenue Summary	CY 2024	CY 2025	CY 2026	CY 2027	CY 2028
Rate Revenues					
Base Fixed Charge	$12,052,000	$12,052,000	$12,052,000	$12,052,000	$12,052,000
Variable Revenue	$6,448,000	$6,448,000	$6,448,000	$6,448,000	$6,448,000
Total Rate Revenues	**$18,500,000**	**$18,500,000**	**$18,500,000**	**$18,500,000**	**$18,500,000**

Table 11: Projected Revenues

Revenue Summary	CY 2024	CY 2025	CY 2026	CY 2027	CY 2028
Rate Revenues					
Base Fixed Charge	$12,052,000	$12,052,000	$12,052,000	$12,052,000	$12,052,000
Variable Revenue	$6,448,000	$6,448,000	$6,448,000	$6,448,000	$6,448,000
Subtotal Rate Revenues	$18,500,000	$18,500,000	$18,500,000	$18,500,000	$18,500,000
Project 2030 Charge	$1,372,000	$1,372,000	$1,372,000	$1,372,000	$1,372,000
Operating Revenues	$77,000	$77,000	$77,000	$77,000	$77,000
Other Revenue	$80,000	$36,000	$38,000	$41,000	$43,000
Total Revenues	**$20,029,000**	**$19,985,000**	**$19,987,000**	**$19,990,000**	**$19,992,000**

Purchased Water

The water supplies available to meet customer demand consist of groundwater and surface water from SJWD. The District owns water rights of the surface water that is treated and conveyed to the District by SJWD. Therefore, most of its water to serve customer demand is through surface water purchased from SJWD. SJWD charges the District a fixed charge each quarter in addition to a charge for every acre-foot of water purchased. Table 12 provides a summary of projected purchased water costs rounded to the nearest thousandth. The calculations for the cost of purchased water can be found in Appendix A.

Table 12: Projected Purchased Water Costs

Purchased Water Costs	CY 2024	CY 2025	CY 2026	CY 2027	CY 2028
Purchased Water Costs					
SJWD Fixed Charge	$2,407,000	$2,407,000	$2,407,000	$2,407,000	$2,407,000
Wholesale Water Purchases	$554,000	$554,000	$554,000	$554,000	$554,000
Total Purchased Water Costs	**$2,961,000**	**$2,961,000**	**$2,961,000**	**$2,961,000**	**$2,961,000**

Expenses

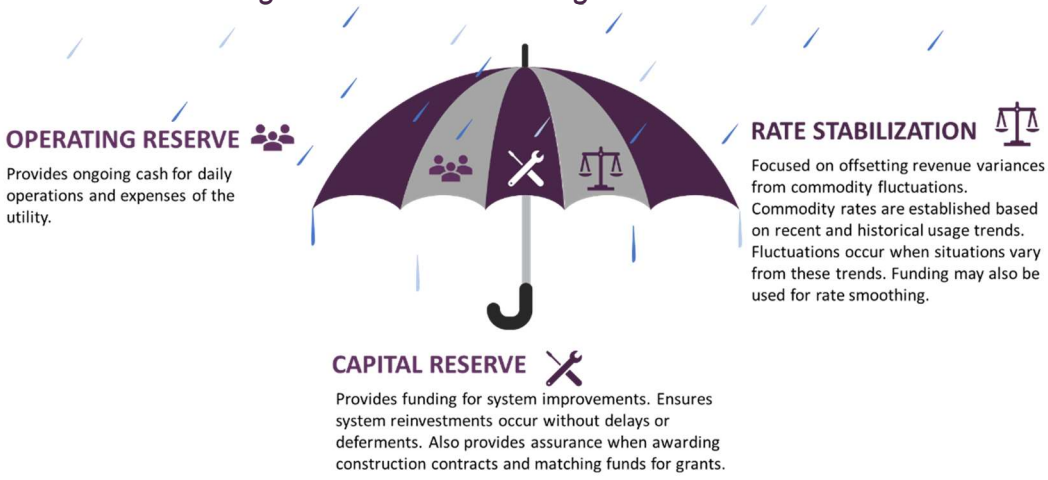
The CY 2024 budget was used as the utility's baseline Operational and Maintenance (O&M) expenses and adjusted in subsequent years based on the escalation factors shown in Table 9. Table 13 provides projected O&M expenses through the Financial Plan Period with future projections rounded to the nearest 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. In addition, expenses include the new FTEs from the Staffing Augmentation Study.

Table 13: Projected O&M Expenses

O&M Expenses		CY 2024	CY 2025	CY 2026	CY 2027	CY 2028
Purchased Water Costs						
SJWD Fixed Charge	Table 12	$2,407,000	$2,407,000	$2,407,000	$2,407,000	$2,407,000
Wholesale Water Purchases		$554,000	$554,000	$554,000	$554,000	$554,000
Subtotal Purchased Water Costs		$2,961,000	$2,961,000	$2,961,000	$2,961,000	$2,961,000
Operating Expenses						
Board		$48,000	$51,000	$53,000	$56,000	$59,000
Administrative Services		$3,403,000	$3,605,000	$3,819,000	$4,047,000	$4,289,000
Human Resources/Risk Management		$635,000	$663,000	$692,000	$722,000	$754,000
Finance/Customer Service		$713,000	$739,000	$765,000	$792,000	$821,000
IT		$403,000	$417,000	$432,000	$447,000	$463,000
Public Engagement		$394,000	$409,000	$423,000	$439,000	$454,000
Engineering		$1,798,000	$1,897,000	$2,003,000	$2,115,000	$2,235,000
Transmission/Distribution		$2,869,000	$3,043,000	$3,227,000	$3,424,000	$3,633,000
Production		$1,107,000	$1,175,000	$1,248,000	$1,326,000	$1,408,000
Water Efficiency		$721,000	$746,000	$773,000	$800,000	$828,000
Staffing Augmentation		$0	$105,000	$335,000	$595,000	$889,000
Subtotal Operating Expenses		$12,091,000	$12,850,000	$13,770,000	$14,763,000	$15,833,000
Debt Service						
Existing Debt		$172,000	$169,000	$169,000	$168,000	$172,000
New/Proposed Debt		$0	$0	$0	$0	$0
Subtotal Debt Service		$172,000	$169,000	$169,000	$168,000	$172,000
Total Expenses		**$15,224,000**	**$15,980,000**	**$16,900,000**	**$17,892,000**	**$18,966,000**

Reserves

Figure 4: District Undesignated Reserves



Established Undesignated Reserves include Operating Reserve, Capital Reserve, and Rate Stabilization Reserve, plus six designated reserves used for other specific purposes (including Project 2030). These 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. The designated reserves receive funding each year via transfers at the discretion of the Board. Table 14 summarizes the minimum reserve requirements and the ideal targets of each reserve, when applicable.

Table 14: Reserve Requirements and Targets

Reserve	Minimum Requirement	Reserve Target
Undesignated		
Operating	90 days of operating costs	120 days of operating costs
Capital	5% of Asset Value	Two years of annual capital expenses
Rate Stabilization	Fixed amount of $1M	Minimum Only
Designated		
Employment-Related Benefits	Fixed amount of $500,000	Minimum Only
Water Supply	N/A	N/A
Fleet Equipment	10% of Equipment Assets	Minimum Only
Water Efficiency	Fixed amount of $200,000	Minimum Only
Water Meter Replacement	N/A	N/A
Project 2030	No Min Target – Annual Prefunding from Surcharge equals approximately $1.37M	N/A

The reserve balance as of January 1, 2023, equaled approximately $23.9M.

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 are sufficient to fund O&M through CY 2027 but net operating income (net cashflow) continues to decrease as operating expenses increase over time and is inadequate by CY 2028. Annual net cashflow is insufficient to fund operating revenue requirements and system reinvestment needs while meeting minimum reserve requirements through the Financial Plan Period. Table 15 forecasts existing revenues and expenses through CY 2028[3]. Table 16 identifies reserve transfers and reserve activity for the Undesignated Reserves, with projected CY 2024 starting reserve balances shown for each reserve. Table 17 identifies reserve activity for the designated reserves, with projected CY 2024 starting reserve balances shown for each reserve.

[3] The Proposed financial plan assumes water usage does not fall below 4,508,944 hcf for CY 2024 and beyond, and future expenses do not exceed the projected costs identified herein.

Table 15: Financial Plan at Existing Rates

Revenue		CY 2024	CY 2025	CY 2026	CY 2027	CY 2028
Rate Revenues						
Base Fixed Charge	Table 11	$12,052,000	$12,052,000	$12,052,000	$12,052,000	$12,052,000
Variable Revenue		$6,448,000	$6,448,000	$6,448,000	$6,448,000	$6,448,000
Subtotal Rate Revenues		$18,500,000	$18,500,000	$18,500,000	$18,500,000	$18,500,000
Other Rate Revenue						
Project 2030 Charge	Table 11	$1,372,000	$1,372,000	$1,372,000	$1,372,000	$1,372,000
Operating Revenues	Table 11	$77,000	$77,000	$77,000	$77,000	$77,000
Other Revenue		$80,000	$36,000	$38,000	$41,000	$43,000
Total Revenues		**$20,029,000**	**$19,985,000**	**$19,987,000**	**$19,990,000**	**$19,992,000**

O&M Expenses		CY 2024	CY 2025	CY 2026	CY 2027	CY 2028
Purchased Water Costs						
SJWD Fixed Charge	Table 13	$2,407,000	$2,407,000	$2,407,000	$2,407,000	$2,407,000
Wholesale Water Purchases		$554,000	$554,000	$554,000	$554,000	$554,000
Subtotal Purchased Water Costs		$2,961,000	$2,961,000	$2,961,000	$2,961,000	$2,961,000
Operating Expenses						
Board		$48,000	$51,000	$53,000	$56,000	$59,000
Administrative Services		$3,403,000	$3,605,000	$3,819,000	$4,047,000	$4,289,000
Human Resources/Risk Management		$635,000	$663,000	$692,000	$722,000	$754,000
Finance/Customer Service		$713,000	$739,000	$765,000	$792,000	$821,000
IT		$403,000	$417,000	$432,000	$447,000	$463,000
Public Engagement	Table 13	$394,000	$409,000	$423,000	$439,000	$454,000
Engineering		$1,798,000	$1,897,000	$2,003,000	$2,115,000	$2,235,000
Transmission/Distribution		$2,869,000	$3,043,000	$3,227,000	$3,424,000	$3,633,000
Production		$1,107,000	$1,175,000	$1,248,000	$1,326,000	$1,408,000
Water Efficiency		$721,000	$746,000	$773,000	$800,000	$828,000
Staffing Augmentation		$0	$105,000	$335,000	$595,000	$889,000
Subtotal Operating Expenses		$12,091,000	$12,850,000	$13,770,000	$14,763,000	$15,833,000
Debt Service						
Existing Debt	Table 13	$172,000	$169,000	$169,000	$168,000	$172,000
New/Proposed Debt		$0	$0	$0	$0	$0
Subtotal Debt Service		$172,000	$169,000	$169,000	$168,000	$172,000
Total Expenses		**$15,224,000**	**$15,980,000**	**$16,900,000**	**$17,892,000**	**$18,966,000**
Net Operating Income		**$4,805,000**	**$4,005,000**	**$3,087,000**	**$2,098,000**	**$1,026,000**

Table 16: Transfers & Undesignated Reserve Activity at Existing Rates

Line No.	Direct Transfers - (to)/from reserves		CY 2024	CY 2025	CY 2026	CY 2027	CY 2028
1	Net Operating Income	Table 15	$4,805,000	$4,005,000	$3,087,000	$2,098,000	$1,026,000
2	Water Supply Reserve		($200,000)	$0	$0	$0	$0
3	Water Meter Replacement Reserve		($200,000)	$0	$0	$0	$0
4	Project 2030 Reserve		($1,372,000)	($1,372,000)	($1,372,000)	($1,372,000)	($1,372,000)
5	**Net Operating Income (After Direct Transfers)**		**$3,033,000**	**$2,633,000**	**$1,715,000**	**$726,000**	**($346,000)**
	Operating Fund/Reserve		**CY 2024**	**CY 2025**	**CY 2026**	**CY 2027**	**CY 2028**
6	Beginning Balance		$3,431,096	$3,753,863	$3,940,274	$4,167,123	$4,411,726
7	Net Operating Income (After Direct Transfers)	*Line 5*	$3,033,000	$2,633,000	$1,715,000	$726,000	($346,000)
8	Transfers from/(to) Capital Improvement Reserve		($2,710,233)	($2,446,589)	($1,488,151)	($481,397)	$0
9	**Ending Balance**		**$3,753,863**	**$3,940,274**	**$4,167,123**	**$4,411,726**	**$4,065,726**
	Capital Improvement Reserve		**CY 2024**	**CY 2025**	**CY 2026**	**CY 2027**	**CY 2028**
10	Beginning Balance		$12,327,865	$4,811,844	$580,759	($8,484,189)	($19,083,819)
11	Plus:						
12	Transfers from/(to) Operating Fund/Reserve	*Line 8*	$2,710,233	$2,446,589	$1,488,151	$481,397	$0
13	New Debt Proceeds		$0	$0	$0	$0	$0
14	Transfers (to)/from Water Supply Reserve		$2,800,000	$3,110,700	$0	$0	$0
15	Transfers (to)/from Fleet Equipment Reserve		$200,000	$0	$0	$0	$0
16	Less:						
17	CIP		($13,311,526)	($9,815,203)	($10,553,099)	($11,081,027)	($5,557,235)
18	Subtotal Capital Improvement Reserve		$4,726,572	$553,930	($8,484,189)	($19,083,819)	($24,641,054)
19	Interest Earnings		$85,272	$26,829	$0	$0	$0
20	**Ending Balance**		**$4,811,844**	**$580,759**	**($8,484,189)**	**($19,083,819)**	**($24,641,054)**
	Rate Stabilization Reserve		**CY 2024**	**CY 2025**	**CY 2026**	**CY 2027**	**CY 2028**
21	Beginning Balance		$1,010,000	$1,020,100	$1,030,301	$1,040,604	$1,051,010
22	Transfers (to)/from Rate Stabilization Reserve		$0	$0	$0	$0	$0
23	Subtotal Rate Stabilization Reserve		$1,010,000	$1,020,100	$1,030,301	$1,040,604	$1,051,010
24	Interest Earnings		$10,100	$10,201	$10,303	$10,406	$10,510
25	**Ending Balance**		**$1,020,100**	**$1,030,301**	**$1,040,604**	**$1,051,010**	**$1,061,520**
26	**Ending Balance - Undesignated Reserves**		**$9,585,807**	**$5,551,334**	**($3,276,462)**	**($13,621,083)**	**($19,513,808)**

Table 17: Designated Reserve Activity at Existing Rates

Employment-Related Benefits Reserve		CY 2024	CY 2025	CY 2026	CY 2027	CY 2028
Beginning Balance		$996,832	$1,006,800	$1,016,868	$1,027,037	$1,037,307
Transfers (to)/from Employment-Related Benefits Reserve		$0	$0	$0	$0	$0
Subtotal Employment-Related Benefits Reserve		$996,832	$1,006,800	$1,016,868	$1,027,037	$1,037,307
Interest Earnings		$9,968	$10,068	$10,169	$10,270	$10,373
Ending Balance		**$1,006,800**	**$1,016,868**	**$1,027,037**	**$1,037,307**	**$1,047,680**

Water Supply Reserve		CY 2024	CY 2025	CY 2026	CY 2027	CY 2028
Beginning Balance		$2,850,405	$3,076,190	$292,952	$295,882	$298,841
Transfers (to)/from Water Supply Reserve	**Table 16,** *Line 2*	$200,000	$0	$0	$0	$0
Ella Grant Funding		$1,446,300	$160,700	$0	$0	$0
Highland Grant Funding		$1,350,000	$150,000	$0	$0	$0
Transfers (to)/from Capital Improvement Reserve	**Table 16,** *Line 13*	($2,800,000)	($3,110,700)	$0	$0	$0
Subtotal Water Supply Reserve		$3,046,705	$276,190	$292,952	$295,882	$298,841
Interest Earnings		$29,486	$16,762	$2,930	$2,959	$2,988
Ending Balance		**$3,076,190**	**$292,952**	**$295,882**	**$298,841**	**$301,829**

Fleet Equipment Reserve		CY 2024	CY 2025	CY 2026	CY 2027	CY 2028
Beginning Balance		$237,096	$38,466	$38,851	$39,240	$39,632
Transfers (to)/from Fleet Equipment Reserve		$0	$0	$0	$0	$0
Transfers (to)/from Capital Improvement Reserve	**Table 16,** *Line 14*	($200,000)	$0	$0	$0	$0
Subtotal Fleet Equipment Reserve		$37,096	$38,466	$38,851	$39,240	$39,632
Interest Earnings		$1,371	$385	$389	$392	$396
Ending Balance		**$38,466**	**$38,851**	**$39,240**	**$39,632**	**$40,028**

Water Efficiency Reserve	CY 2024	CY 2025	CY 2026	CY 2027	CY 2028
Beginning Balance	$202,000	$204,020	$206,060	$208,121	$210,202
Transfers (to)/from Water Efficiency Reserve	$0	$0	$0	$0	$0
Transfers (to)/from Capital Improvement Reserve	$0	$0	$0	$0	$0
Subtotal Water Efficiency Reserve	$202,000	$204,020	$206,060	$208,121	$210,202
Interest Earnings	$2,020	$2,040	$2,061	$2,081	$2,102
Ending Balance	**$204,020**	**$206,060**	**$208,121**	**$210,202**	**$212,304**

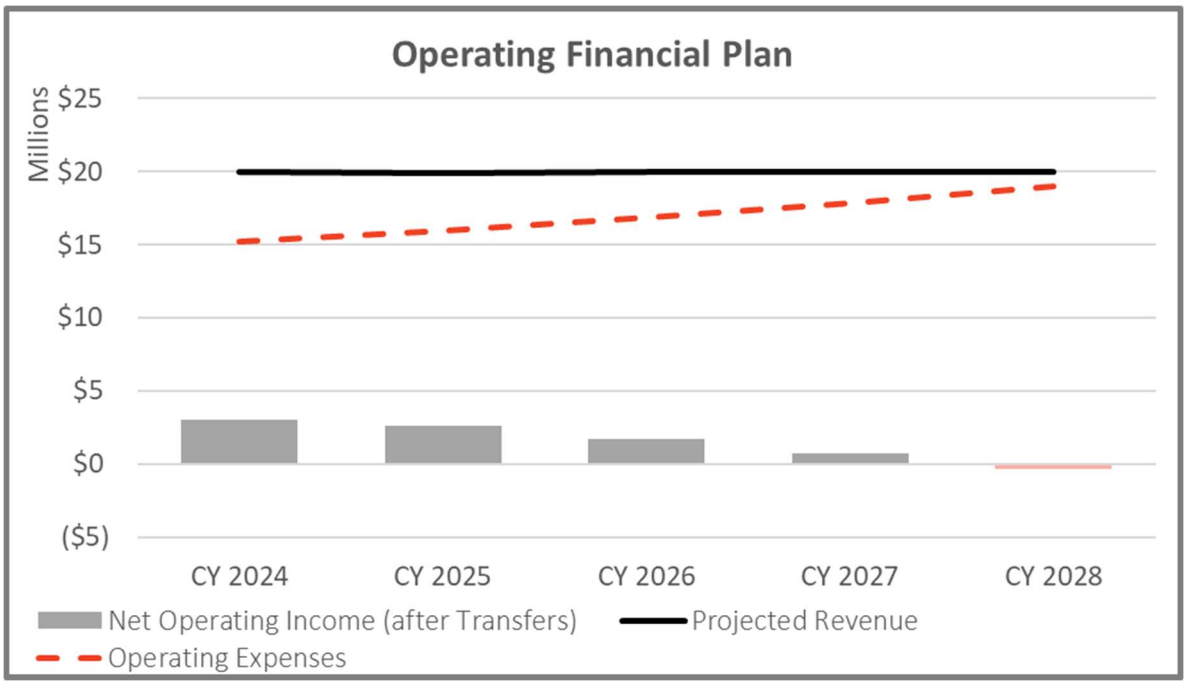
Water Meter Replacement Reserve		CY 2024	CY 2025	CY 2026	CY 2027	CY 2028
Beginning Balance		$1,943,250	$2,163,683	$2,185,319	$2,207,173	$2,229,244
Transfers (to)/from Water Meter Replacement Reserve	**Table 16,** *Line 3*	$200,000	$0	$0	$0	$0
Transfers (to)/from Capital Improvement Reserve		$0	$0	$0	$0	$0
Subtotal Water Meter Replacement Reserve		$2,143,250	$2,163,683	$2,185,319	$2,207,173	$2,229,244
Interest Earnings		$20,433	$21,637	$21,853	$22,072	$22,292
Ending Balance		**$2,163,683**	**$2,185,319**	**$2,207,173**	**$2,229,244**	**$2,251,537**

Project 2030 Reserve		CY 2024	CY 2025	CY 2026	CY 2027	CY 2028
Beginning Balance		$2,580,103	$3,984,764	$5,403,472	$6,836,367	$8,283,590
Transfers (to)/from Project 2030 Reserve	**Table 16,** *Line 4*	$1,372,000	$1,372,000	$1,372,000	$1,372,000	$1,372,000
Transfers (to)/from Capital Improvement Reserve		$0	$0	$0	$0	$0
Subtotal Project 2030 Reserve		$3,952,103	$5,356,764	$6,775,472	$8,208,367	$9,655,590
Interest Earnings		$32,661	$46,708	$60,895	$75,224	$89,696
Ending Balance		**$3,984,764**	**$5,403,472**	**$6,836,367**	**$8,283,590**	**$9,745,286**

Ending Balance - Designated Reserves	**$10,473,923**	**$9,143,523**	**$10,613,818**	**$12,098,816**	**$13,598,664**

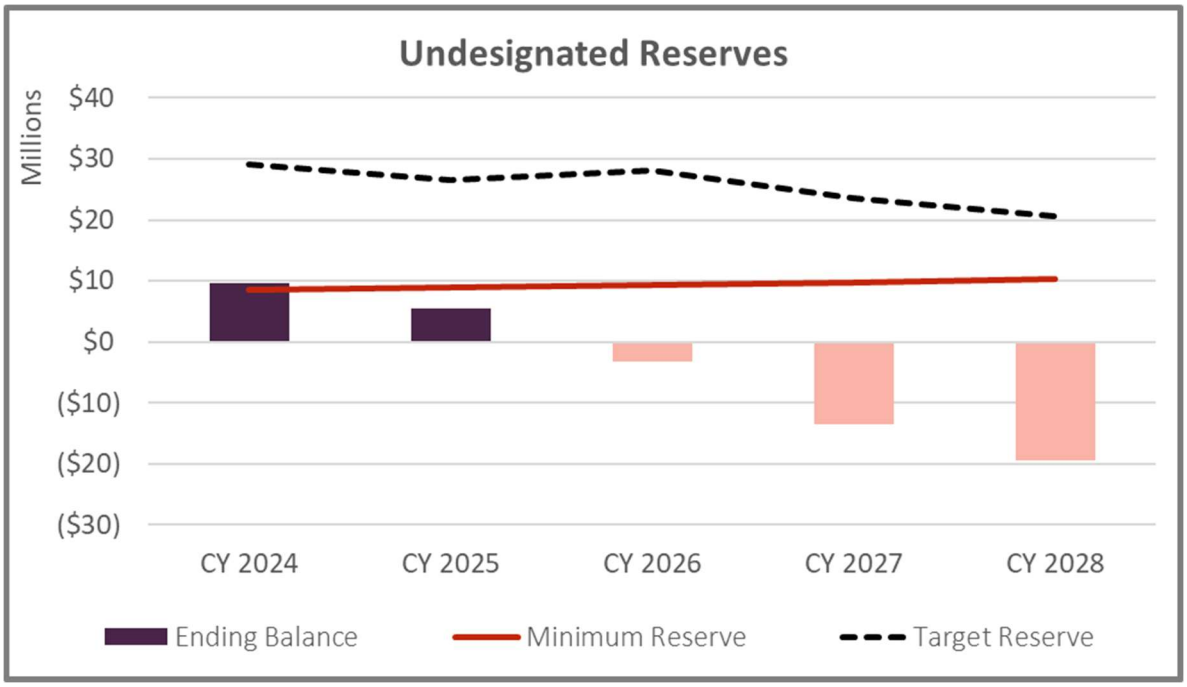
Figure 5 illustrates the operating position of the utility, where O&M expenses are identified with the dashed red trendline, and the horizontal black trendline shows total revenues at existing rates. The bars represent the net operating income available for capital spending and reserve funding.

Figure 5: Current Operating Financial Position



With the capital improvement plan reflecting over $50.3M in spending from CY 2024 through CY 2028, 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 Operating, Capital Improvement, and Rate Stabilization reserves after funding operating and capital projects. Reserves dip below the total minimum reserve target in CY 2025 and are negative in CY 2026.

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 except in CY 2027. CY 2027 capital spending is approximately $11.1M and reserves are used to cover a portion of the capital needs. However, the reduction in reserves is temporary. In CY 2028, capital spending reduces to $5.6M allowing reserves to replenish and meet the minimum reserve requirement. Table 18 forecasts projected revenues and expenses through CY 2028, including projected revenue adjustments outside CY 2024 (greyed out and shown in red). Table 19 identifies the projected CY 2024 total starting balances for the Undesignated Reserves, activity within each reserve (including net income transfer from Table 18, transfers between reserves, annual CIP, and debt proceeds), and projected ending balances for each fiscal year. As mentioned previously, the revenue from the Project 2030 dedicated fixed charge is restricted for funding the Project 2030 mainline replacement program. Therefore, these revenues do not appear in the proposed financial plan as they cannot be used to fund operating or other capital costs. Table 20 identifies reserve activity for the designated reserves, with projected CY 2024 starting reserve balances shown for each reserve.

Table 18: Proposed Financial Plan

Revenue		CY 2024	CY 2025	CY 2026	CY 2027	CY 2028
Rate Revenues						
Base Fixed Charge	Table 11	$12,052,000	$12,052,000	$12,052,000	$12,052,000	$12,052,000
Variable Revenue		$6,448,000	$6,448,000	$6,448,000	$6,448,000	$6,448,000
Subtotal Rate Revenues		$18,500,000	$18,500,000	$18,500,000	$18,500,000	$18,500,000
Additional Revenue (from revenue adjustments):						

Fiscal Year	Revenue Adjustment	Effective Month	*Grey Cells are NOT a part of the Proposition 218 Notice*				
FY 2024	9.15%	January	$1,692,000	*$1,692,000*	*$1,692,000*	*$1,692,000*	*$1,692,000*
FY 2025	9.15%	January		*$1,847,000*	*$1,847,000*	*$1,847,000*	*$1,847,000*
FY 2026	9.15%	January			*$2,016,000*	*$2,016,000*	*$2,016,000*
FY 2027	9.15%	January				*$2,201,000*	*$2,201,000*
FY 2028	9.15%	January					*$2,402,000*
Total Additional Revenue			$1,692,000	$3,539,000	$5,555,000	$7,756,000	$10,158,000
Other Rate Revenue							
Project 2030 Charge	Table 11		$1,372,000	$1,372,000	$1,372,000	$1,372,000	$1,372,000
Operating Revenues	Table 11		$77,000	$77,000	$77,000	$77,000	$77,000
Other Revenue			$80,000	$36,000	$39,000	$41,000	$44,000
Total Revenues			**$21,721,000**	**$23,524,000**	**$25,543,000**	**$27,746,000**	**$30,151,000**

O&M Expenses		CY 2024	CY 2025	CY 2026	CY 2027	CY 2028
Purchased Water Costs						
SJWD Fixed Charge	Table 13	$2,407,000	$2,407,000	$2,407,000	$2,407,000	$2,407,000
Wholesale Water Purchases		$554,000	$554,000	$554,000	$554,000	$554,000
Subtotal Purchased Water Costs		$2,961,000	$2,961,000	$2,961,000	$2,961,000	$2,961,000
Operating Expenses						
Board	Table 13	$48,000	$51,000	$53,000	$56,000	$59,000
Administrative Services		$3,403,000	$3,605,000	$3,819,000	$4,047,000	$4,289,000
Human Resources/Risk Management		$635,000	$663,000	$692,000	$722,000	$754,000
Finance/Customer Service		$713,000	$739,000	$765,000	$792,000	$821,000
IT		$403,000	$417,000	$432,000	$447,000	$463,000
Public Engagement		$394,000	$409,000	$423,000	$439,000	$454,000
Engineering		$1,798,000	$1,897,000	$2,003,000	$2,115,000	$2,235,000
Transmission/Distribution		$2,869,000	$3,043,000	$3,227,000	$3,424,000	$3,633,000
Production		$1,107,000	$1,175,000	$1,248,000	$1,326,000	$1,408,000
Water Efficiency		$721,000	$746,000	$773,000	$800,000	$828,000
Staffing Augmentation		$0	$105,000	$335,000	$595,000	$889,000
Subtotal Operating Expenses		$12,091,000	$12,850,000	$13,770,000	$14,763,000	$15,833,000
Debt Service						
Existing Debt	Table 13	$172,000	$169,000	$169,000	$168,000	$172,000
New/Proposed Debt		$0	$325,000	$325,000	$325,000	$325,000
Subtotal Debt Service		$172,000	$494,000	$494,000	$493,000	$497,000
Total Expenses		**$15,224,000**	**$16,305,000**	**$17,225,000**	**$18,217,000**	**$19,291,000**
Net Operating Income		**$6,497,000**	**$7,219,000**	**$8,318,000**	**$9,529,000**	**$10,860,000**

Table 19: Proposed Transfers & Undesignated Reserve Activity

Line No.	Direct Transfers - (to)/from reserves		CY 2024	CY 2025	CY 2026	CY 2027	CY 2028
1	Net Operating Income	**Table 18**	$6,497,000	$7,219,000	$8,318,000	$9,529,000	$10,860,000
2	Water Supply Reserve		($200,000)	$0	$0	$0	$0
3	Water Meter Replacement Reserve		($200,000)	$0	$0	$0	$0
4	Project 2030 Reserve		($1,372,000)	($1,372,000)	($1,372,000)	($1,372,000)	($1,372,000)
5	**Net Operating Income (After Direct Transfers)**		**$4,725,000**	**$5,847,000**	**$6,946,000**	**$8,157,000**	**$9,488,000**
	Operating Fund/Reserve		**CY 2024**	**CY 2025**	**CY 2026**	**CY 2027**	**CY 2028**
6	Beginning Balance		$3,431,096	$3,753,863	$4,020,411	$4,247,260	$4,491,863
7	Net Operating Income (After Direct Transfers)	*Line 5*	$4,725,000	$5,847,000	$6,946,000	$8,157,000	$9,488,000
8	Transfers from/(to) Capital Improvement Reserve		($4,402,233)	($5,580,452)	($6,719,151)	($7,912,397)	($9,223,178)
9	**Ending Balance**		**$3,753,863**	**$4,020,411**	**$4,247,260**	**$4,491,863**	**$4,756,685**
	Capital Improvement Reserve		**CY 2024**	**CY 2025**	**CY 2026**	**CY 2027**	**CY 2028**
10	Beginning Balance		$12,327,865	$6,512,304	$9,869,756	$6,115,335	$2,992,016
11	Plus:						
12	Transfers from/(to) Operating Fund/Reserve	*Line 8*	$4,402,233	$5,580,452	$6,719,151	$7,912,397	$9,223,178
13	New Debt Proceeds		$0	$4,400,000	$0	$0	$0
14	Transfers (to)/from Water Supply Reserve		$2,800,000	$3,110,700	$0	$0	$0
15	Transfers (to)/from Fleet Equipment Reserve		$200,000	$0	$0	$0	$0
16	Less:						
17	CIP		($13,311,526)	($9,815,203)	($10,553,099)	($11,081,027)	($5,557,235)
18	Subtotal Capital Improvement Reserve		$6,418,572	$9,788,253	$6,035,808	$2,946,705	$6,657,959
19	Interest Earnings		$93,732	$81,503	$79,528	$45,310	$48,250
20	**Ending Balance**		**$6,512,304**	**$9,869,756**	**$6,115,335**	**$2,992,016**	**$6,706,209**
	Rate Stabilization Reserve		**CY 2024**	**CY 2025**	**CY 2026**	**CY 2027**	**CY 2028**
21	Beginning Balance		$1,010,000	$1,020,100	$1,030,301	$1,040,604	$1,051,010
22	Transfers (to)/from Rate Stabilization Reserve		$0	$0	$0	$0	$0
23	Subtotal Rate Stabilization Reserve		$1,010,000	$1,020,100	$1,030,301	$1,040,604	$1,051,010
24	Interest Earnings		$10,100	$10,201	$10,303	$10,406	$10,510
25	**Ending Balance**		**$1,020,100**	**$1,030,301**	**$1,040,604**	**$1,051,010**	**$1,061,520**
26	**Ending Balance - Undesignated Reserves**		**$11,286,267**	**$14,920,468**	**$11,403,200**	**$8,534,889**	**$12,524,414**

Table 20: Proposed Designated Reserve Activity

Employment-Related Benefits Reserve		CY 2024	CY 2025	CY 2026	CY 2027	CY 2028
Beginning Balance		$996,832	$1,006,800	$1,016,868	$1,027,037	$1,037,307
Transfers (to)/from Employment-Related Benefits Reserve		$0	$0	$0	$0	$0
Subtotal Employment-Related Benefits Reserve		$996,832	$1,006,800	$1,016,868	$1,027,037	$1,037,307
Interest Earnings		$9,968	$10,068	$10,169	$10,270	$10,373
Ending Balance		**$1,006,800**	**$1,016,868**	**$1,027,037**	**$1,037,307**	**$1,047,680**

Water Supply Reserve		CY 2024	CY 2025	CY 2026	CY 2027	CY 2028
Beginning Balance		$2,850,405	$3,076,190	$292,952	$295,882	$298,841
Transfers (to)/from Water Supply Reserve	**Table 19,** *Line 2*	$200,000	$0	$0	$0	$0
Ella Grant Funding		$1,446,300	$160,700	$0	$0	$0
Highland Grant Funding		$1,350,000	$150,000	$0	$0	$0
Transfers (to)/from Capital Improvement Reserve	**Table 19,** *Line 13*	($2,800,000)	($3,110,700)	$0	$0	$0
Subtotal Water Supply Reserve		$3,046,705	$276,190	$292,952	$295,882	$298,841
Interest Earnings		$29,486	$16,762	$2,930	$2,959	$2,988
Ending Balance		**$3,076,190**	**$292,952**	**$295,882**	**$298,841**	**$301,829**

Fleet Equipment Reserve		CY 2024	CY 2025	CY 2026	CY 2027	CY 2028
Beginning Balance		$237,096	$38,466	$38,851	$39,240	$39,632
Transfers (to)/from Fleet Equipment Reserve		$0	$0	$0	$0	$0
Transfers (to)/from Capital Improvement Reserve	**Table 19,** *Line 14*	($200,000)	$0	$0	$0	$0
Subtotal Fleet Equipment Reserve		$37,096	$38,466	$38,851	$39,240	$39,632
Interest Earnings		$1,371	$385	$389	$392	$396
Ending Balance		**$38,466**	**$38,851**	**$39,240**	**$39,632**	**$40,028**

Water Efficiency Reserve		CY 2024	CY 2025	CY 2026	CY 2027	CY 2028
Beginning Balance		$202,000	$204,020	$206,060	$208,121	$210,202
Transfers (to)/from Water Efficiency Reserve		$0	$0	$0	$0	$0
Transfers (to)/from Capital Improvement Reserve		$0	$0	$0	$0	$0
Subtotal Water Efficiency Reserve		$202,000	$204,020	$206,060	$208,121	$210,202
Interest Earnings		$2,020	$2,040	$2,061	$2,081	$2,102
Ending Balance		**$204,020**	**$206,060**	**$208,121**	**$210,202**	**$212,304**

Water Meter Replacement Reserve		CY 2024	CY 2025	CY 2026	CY 2027	CY 2028
Beginning Balance		$1,943,250	$2,163,683	$2,185,319	$2,207,173	$2,229,244
Transfers (to)/from Water Meter Replacement Reserve	**Table 19,** *Line 3*	$200,000	$0	$0	$0	$0
Transfers (to)/from Capital Improvement Reserve		$0	$0	$0	$0	$0
Subtotal Water Meter Replacement Reserve		$2,143,250	$2,163,683	$2,185,319	$2,207,173	$2,229,244
Interest Earnings		$20,433	$21,637	$21,853	$22,072	$22,292
Ending Balance		**$2,163,683**	**$2,185,319**	**$2,207,173**	**$2,229,244**	**$2,251,537**

Project 2030 Reserve		CY 2024	CY 2025	CY 2026	CY 2027	CY 2028
Beginning Balance		$2,580,103	$3,984,764	$5,403,472	$6,836,367	$8,283,590
Transfers (to)/from Project 2030 Reserve	**Table 19,** *Line 4*	$1,372,000	$1,372,000	$1,372,000	$1,372,000	$1,372,000
Transfers (to)/from Capital Improvement Reserve		$0	$0	$0	$0	$0
Subtotal Project 2030 Reserve		$3,952,103	$5,356,764	$6,775,472	$8,208,367	$9,655,590
Interest Earnings		$32,661	$46,708	$60,895	$75,224	$89,696
Ending Balance		**$3,984,764**	**$5,403,472**	**$6,836,367**	**$8,283,590**	**$9,745,286**

Ending Balance - Designated Reserves		**$10,473,923**	**$9,143,523**	**$10,613,818**	**$12,098,816**	**$13,598,664**

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 the Operating, Capital, and Rate Stabilization reserves.

Figure 7: Proposed Operating Position

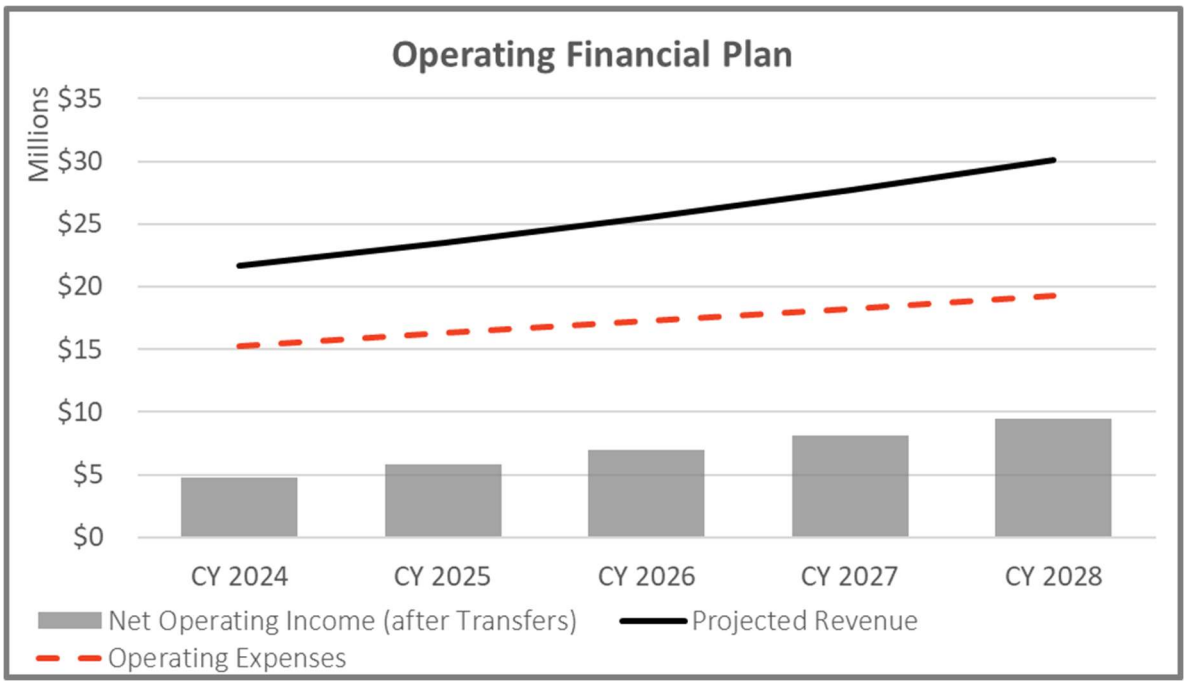


Figure 8: Capital Improvement Plan with Funding Sources

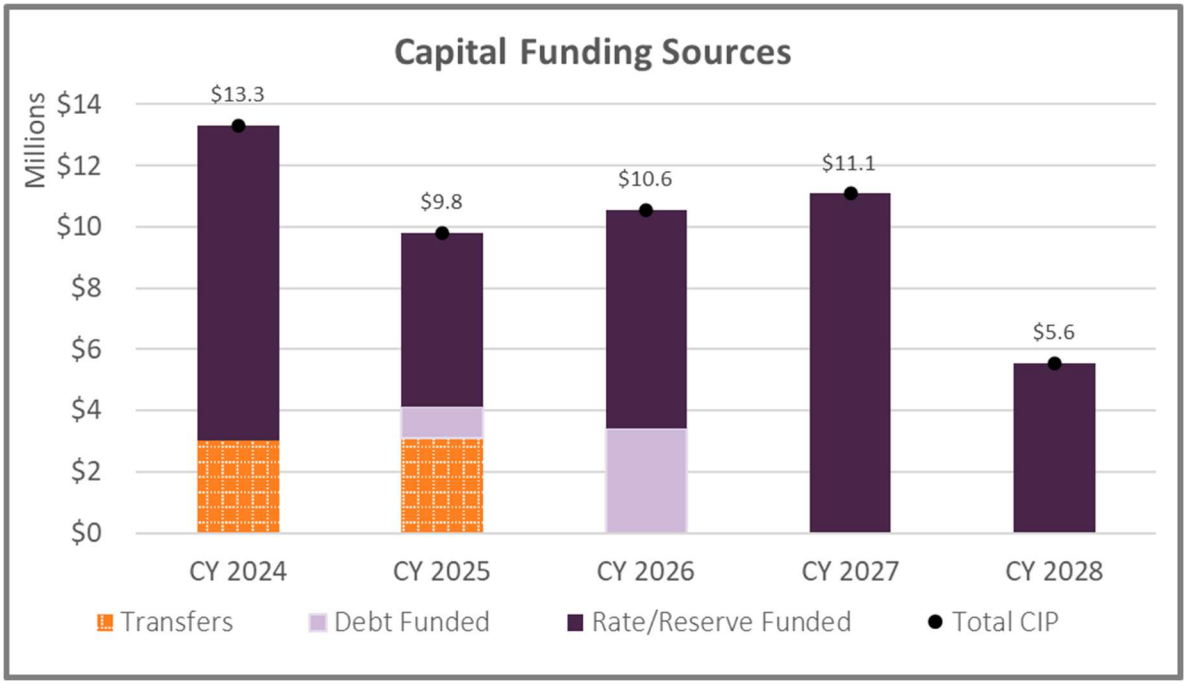
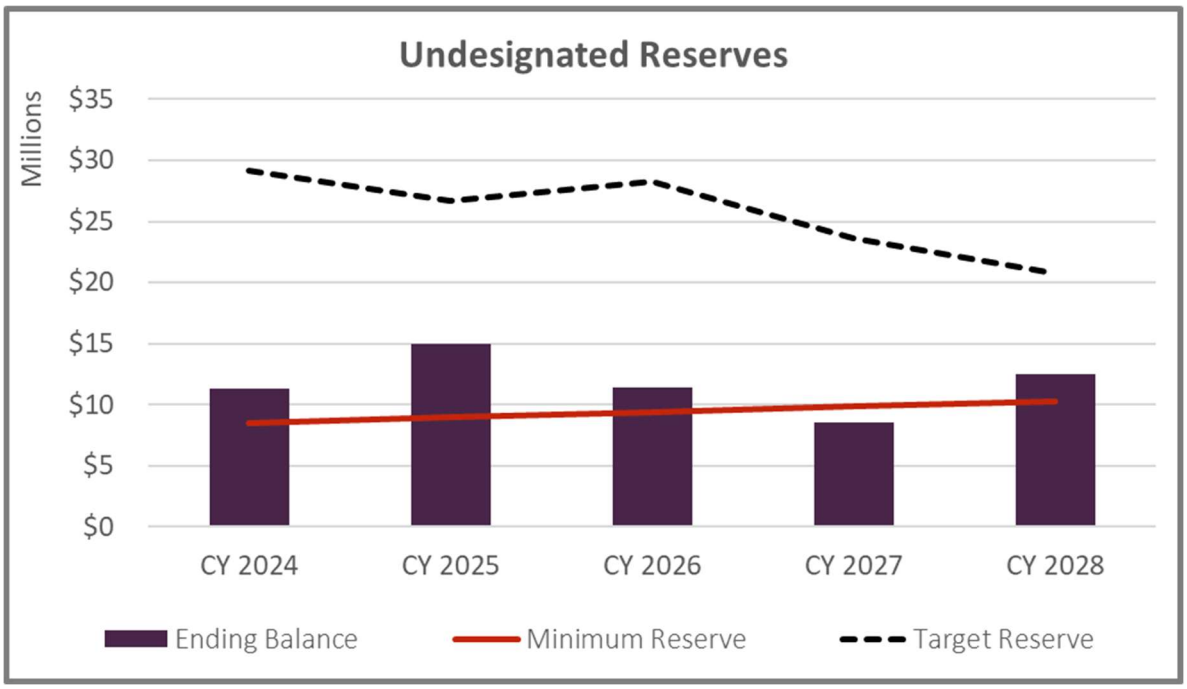


Figure 9: Proposed Ending Balances of Undesignated Reserves

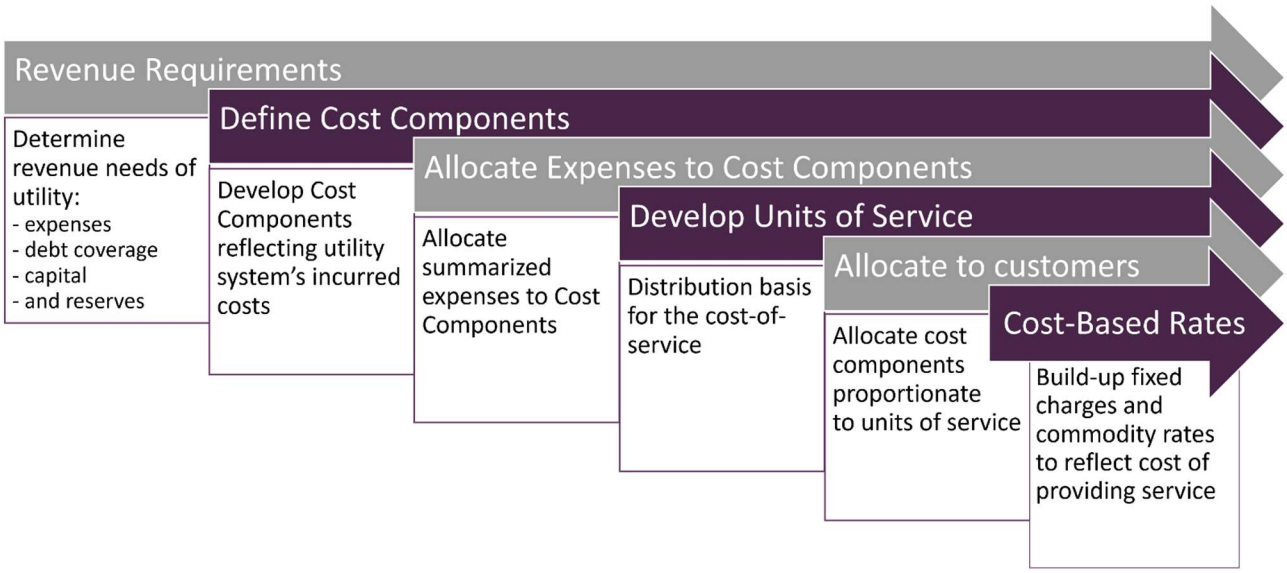


Cost-of-Service Analysis

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

Revenue requirements are determined for CY 2024 and used for the cost-of-service. Revenue requirements include O&M expenses, fixed and variable purchased water costs, available revenue offsets from other revenues, and reserve funding. Funding the capital plan and maintaining reserves to meet or exceed the minimum reserve requirement is part of the long-term financial plan. However, only rate adjustments for CY 2024 are part of the Proposition 218 Notice. The results of the financial plan analysis are summarized in Table 21 and represent the revenue required from rates for the Financial Plan Period, however, the cost-of-service analysis is for CY 2024 only.

Table 21: Revenue Requirements

Revenue Requirements	CY 2024 Total	CY 2025 Total	CY 2026 Total	CY 2027 Total	CY 2028 Total
Purchased Water Costs					
SJWD Fixed Charge	$2,407,000	$2,407,000	$2,407,000	$2,407,000	$2,407,000
Wholesale Water Purchases	$554,000	$554,000	$554,000	$554,000	$554,000
Total Purchased Water Costs	$2,961,000	$2,961,000	$2,961,000	$2,961,000	$2,961,000
Operating Expenses					
Board	$48,000	$51,000	$53,000	$56,000	$59,000
Administrative Services	$3,403,000	$3,605,000	$3,819,000	$4,047,000	$4,289,000
Human Resources/Risk Management	$635,000	$663,000	$692,000	$722,000	$754,000
Finance/Customer Service	$713,000	$739,000	$765,000	$792,000	$821,000
IT	$403,000	$417,000	$432,000	$447,000	$463,000
Public Engagement	$394,000	$409,000	$423,000	$439,000	$454,000
Engineering	$1,798,000	$1,897,000	$2,003,000	$2,115,000	$2,235,000
Transmission/Distribution	$2,869,000	$3,043,000	$3,227,000	$3,424,000	$3,633,000
Production	$1,107,000	$1,175,000	$1,248,000	$1,326,000	$1,408,000
Water Efficiency	$721,000	$746,000	$773,000	$800,000	$828,000
Staffing Augmentation	$0	$105,000	$335,000	$595,000	$889,000
Total Operating Expenses	$12,091,000	$12,850,000	$13,770,000	$14,763,000	$15,833,000
Debt Service					
Existing Debt	$172,000	$169,000	$169,000	$168,000	$172,000
New/Proposed Debt	$0	$325,000	$325,000	$325,000	$325,000
Total Debt Service	$172,000	$494,000	$494,000	$493,000	$497,000
Total Operating Expenses	$15,224,000	$16,305,000	$17,225,000	$18,217,000	$19,291,000
Other Funding					
Revenue Offsets					
Operating Revenues	($77,000)	($77,000)	($77,000)	($77,000)	($77,000)
Other Revenue	($80,000)	($36,000)	($39,000)	($41,000)	($44,000)
Total Revenue Offsets	($157,000)	($113,000)	($116,000)	($118,000)	($121,000)
Direct Transfers					
Water Supply Reserve	$200,000	$0	$0	$0	$0
Water Meter Replacement Reserve	$200,000	$0	$0	$0	$0
Project 2030 Reserve	$1,372,000	$1,372,000	$1,372,000	$1,372,000	$1,372,000
Total Direct Transfers	$1,772,000	$1,372,000	$1,372,000	$1,372,000	$1,372,000
Adjustments					
Reserve Funding	$4,725,000	$5,847,000	$6,946,000	$8,157,000	$9,488,000
Total Other Funding	$6,340,000	$7,106,000	$8,202,000	$9,411,000	$10,739,000
Revenue Requirement from Rates	**$21,564,000**	**$23,411,000**	**$25,427,000**	**$27,628,000**	**$30,030,000**

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 are associated with human resources, customer service, IT, and public engagement staffing costs.
Meter Capacity – Expenses associated with administrative services, maintaining the system, capital, and reserve funding.
Fixed Purchased Water – Fixed monthly water supply costs incurred by the District from SJWD.
Project 2030 – Fixed expenses for funding the Project 2030 mainline replacement program.
Variable Purchased Water – Treated water supply from SJWD.
Conveyance – Expenses associated with operating and maintaining the water system, groundwater supply expenses, permits, transmission and distribution, and water efficiency 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 variable rates. 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**.

Table 22 summarizes the percent allocation of purchased water costs to the fixed and variable water supply components. Table 23 reflects the dollars to each cost component based on the percent allocations in Table 22.

Table 22: Purchased Water Cost Allocation to Cost Components (%)

Purchased Water Costs	Methodology / Allocation Basis	Cost Components						Total
		Account Services	Meter Capacity	Fixed Purchased Water	Project 2030	Variable Purchased Supply	Conveyance	
SJWD Fixed Charge	Specific	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Wholesale Water Purchases	Specific	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%

Table 23: Purchased Water Allocation to Cost Components ($)

Purchased Water Costs	Methodology / Allocation Basis	Cost Components						Total
		Account Services	Meter Capacity	Fixed Purchased Water	Project 2030	Variable Purchased Supply	Conveyance	
SJWD Fixed Charge	*Specific*	$0	$0	$2,407,000	$0	$0	$0	$2,407,000
Wholesale Water Purchases	*Specific*	$0	$0	$0	$0	$554,000	$0	$554,000
Total Allocation ($)		**$0**	**$0**	**$2,407,000**	**$0**	**$554,000**	**$0**	**$2,961,000**

Table 24 summarizes the percent allocation of Operating Expenses revenue requirements to the cost components, and Table 25 uses the percent allocations in Table 24 to allocate expenses in dollars to each cost component.

Table 24: Operating Expense Allocation to Cost Components (%)

Operating Expenses	Methodology / Allocation Basis	Cost Components						Total
		Account Services	Meter Capacity	Fixed Purchased Water	Project 2030	Variable Purchased Supply	Conveyance	
Board	Specific	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Administrative Services	Specific	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Human Resources/Risk Management	Specific	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Finance/Customer Service	Specific	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
IT	Specific	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Public Engagement	Specific	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Engineering	Specific	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Transmission/Distribution	Specific	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
Production	Specific	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
Water Efficiency	Specific	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
Staffing Augmentation	Specific	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%

Table 25: Operating Expense Allocation to Cost Components ($)

Operating Expenses	Methodology / Allocation Basis	Cost Components: Account Services	Meter Capacity	Fixed Purchased Water	Project 2030	Variable Purchased Supply	Conveyance	Total
Board	*Specific*	$48,000	$0	$0	$0	$0	$0	$48,000
Administrative Services	*Specific*	$0	$3,403,000	$0	$0	$0	$0	$3,403,000
Human Resources/Risk Management	*Specific*	$635,000	$0	$0	$0	$0	$0	$635,000
Finance/Customer Service	*Specific*	$713,000	$0	$0	$0	$0	$0	$713,000
IT	*Specific*	$403,000	$0	$0	$0	$0	$0	$403,000
Public Engagement	*Specific*	$394,000	$0	$0	$0	$0	$0	$394,000
Engineering	*Specific*	$0	$1,798,000	$0	$0	$0	$0	$1,798,000
Transmission/Distribution	*Specific*	$0	$0	$0	$0	$0	$2,869,000	$2,869,000
Production	*Specific*	$0	$0	$0	$0	$0	$1,107,000	$1,107,000
Water Efficiency	*Specific*	$0	$0	$0	$0	$0	$721,000	$721,000
Staffing Augmentation	*Specific*	$0	$0	$0	$0	$0	$0	$0
Total Allocation ($)		**$2,193,000**	**$5,201,000**	**$0**	**$0**	**$0**	**$4,697,000**	**$12,091,000**
Operating Expenses Allocation (%)		*18.1%*	*43.0%*	*0.0%*	*0.0%*	*0.0%*	*38.8%*	*100.0%*

For the Debt Service Revenue Requirement, 100% is allocated to meter capacity to ensure stable cost recovery to make annual debt payments. Table 26 summarizes the allocation of existing indebtedness. Table 27 provides the cost in dollars allocated to each cost component.

Table 26: Debt Service Expense Allocation to Cost Components (%)

Debt Service	Methodology / Allocation Basis	Cost Components: Account Services	Meter Capacity	Fixed Purchased Water	Project 2030	Variable Purchased Supply	Conveyance	Total
Existing Debt	**Specific**	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
New/Proposed Debt	**Specific**	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%

Table 27: Debt Service Expense Allocation to Cost Components ($)

Debt Service	Methodology / Allocation Basis	Cost Components: Account Services	Meter Capacity	Fixed Purchased Water	Project 2030	Variable Purchased Supply	Conveyance	Total
Existing Debt	*Specific*	$0	$172,000	$0	$0	$0	$0	$172,000
New/Proposed Debt	*Specific*	$0	$0	$0	$0	$0	$0	$0
Total Allocation ($)		**$0**	**$172,000**	**$0**	**$0**	**$0**	**$0**	**$172,000**

Other Funding includes other operating and non-operating revenues as an offset, direct transfers, and reserve funding. All items under "Other Funding" are allocated based on Operating Expense percentages derived at the bottom of Table 25. Table 28 summarizes the percent allocation of Other Funding to the cost components, and Table 29 uses the percent allocations in Table 28 to allocate revenues and expenses in dollars to each cost component.

Table 28: Other Funding to Cost Components (%)

Other Funding	Methodology / Allocation Basis	Cost Components: Account Services	Meter Capacity	Fixed Purchased Water	Project 2030	Variable Purchased Supply	Conveyance	Total
Revenue Offsets								
Operating Revenues	O&M Allocation	18.1%	43.0%	0.0%	0.0%	0.0%	38.8%	100.0%
Other Revenue	O&M Allocation	18.1%	43.0%	0.0%	0.0%	0.0%	38.8%	100.0%
Direct Transfers								
Water Supply Reserve	O&M Allocation	18.1%	43.0%	0.0%	0.0%	0.0%	38.8%	100.0%
Water Meter Replacement Reserve	O&M Allocation	18.1%	43.0%	0.0%	0.0%	0.0%	38.8%	100.0%
Project 2030 Reserve	Specific	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
Adjustments								
Reserve Funding	O&M Allocation	18.1%	43.0%	0.0%	0.0%	0.0%	38.8%	100.0%

Table 29: Other Funding Allocation to Cost Components ($)

Other Funding	Methodology / Allocation Basis	Cost Components: Account Services	Meter Capacity	Fixed Purchased Water	Project 2030	Variable Purchased Supply	Conveyance	Total
Revenue Offsets								
Operating Revenues	O&M Allocation	($13,966)	($33,122)	$0	$0	$0	($29,912)	($77,000)
Other Revenue	O&M Allocation	($14,510)	($34,412)	$0	$0	$0	($31,078)	($80,000)
Direct Transfers								
Water Supply Reserve	O&M Allocation	$36,275	$86,031	$0	$0	$0	$77,694	$200,000
Water Meter Replacement Re:	O&M Allocation	$36,275	$86,031	$0	$0	$0	$77,694	$200,000
Project 2030 Reserve	Specific	$0	$0	$0	$1,372,000	$0	$0	$1,372,000
Adjustments								
Reserve Funding	O&M Allocation	$856,995	$2,032,481	$0	$0	$0	$1,835,524	$4,725,000
Total Allocation ($)		**$901,069**	**$2,137,008**	**$0**	**$1,372,000**	**$0**	**$1,929,923**	**$6,340,000**

Table 30 summarizes the revenue requirement derived in Table 21 by cost component.

Table 30: CY 2024 Cost-of-Service Requirements by Cost Component

Revenue Requirement		Fixed Components: Account Services	Meter Capacity	Fixed Purchased Water	Project 2030	Variable Components: Variable Purchased Supply	Conveyance	Total
Purchased Water Costs	**Table 23**	$0	$0	$2,407,000	$0	$554,000	$0	$2,961,000
Operating Expenses	**Table 25**	$2,193,000	$5,201,000	$0	$0	$0	$4,697,000	$12,091,000
Debt Service	**Table 27**	$0	$172,000	$0	$0	$0	$0	$172,000
Other Funding	**Table 29**	$901,069	$2,137,008	$0	$1,372,000	$0	$1,929,923	$6,340,000
COS Requirements		**$3,094,069**	**$7,510,008**	**$2,407,000**	**$1,372,000**	**$554,000**	**$6,626,923**	**$21,564,000**

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 variable rates. 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 total bills, Meter Equivalents (MEs), which reflect demand placed on the system, and total water sales.

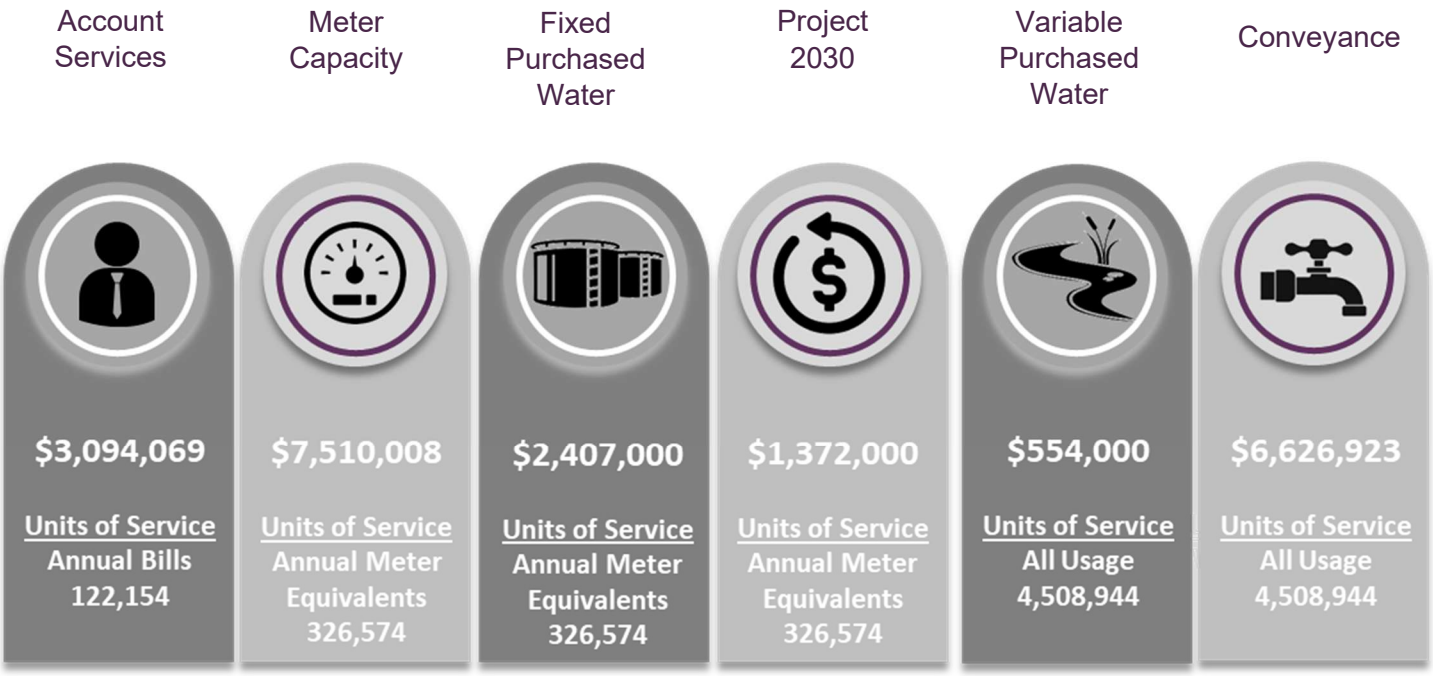
Each meter size was assigned an equivalency factor based on the meter's flow characteristics of meters used by the District. The 5/8" x 3/4" Singlejet meter type was used for meter sizes that are ≤ 3/4". The safe maximum operating flow capacity by meter type, as identified in the AWWA M1 Manual, 6th Edition – Table B-2, was used to determine the capacity ratio of each connected 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 31 summarizes the units of service related to total Accounts, MEs, and projected usage. Annual Bills and Annual MEs account for the District's six bi-monthly billing periods.

Table 31: Units of Service

Meter Size	AWWA Capacity (gpm) [A]	Capacity Ratio [B] = A ÷20	Number of Accounts [C]	Meter Equivalents [D] = (B x C)	Annual Bills [E] = (C x 6)	Annual ME's [F] = (D x 6)	Projected Usage (HCF) [G]
≤ 3/4"	20	1.00	1,929	1,929	11,574	11,574	
1"	50	2.50	17,133	42,833	102,798	256,995	
1 1/2"	100	5.00	578	2,890	3,468	17,340	
2"	160	8.00	614	4,912	3,684	29,472	
3"	350	17.50	61	1,068	366	6,405	
4"	630	31.50	0	0	0	0	
Combination Meters							
2x4" - Combo	160	8.00	21	168	126	1,008	
3x6" - Combo	350	17.50	12	210	72	1,260	
4x8" - Combo	630	31.50	10	315	60	1,890	
10" - Combo	2,100	105.00	1	105	6	630	
Total			**20,359**	**54,429**	**122,154**	**326,574**	**4,508,944**

With the units of service shown in Table 31, we identified the distribution basis for each cost component. Figure 12 identifies the total revenue requirements by cost component from Table 30 and the corresponding units of service.

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



Using CY 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.

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. These costs should be spread equally across all accounts. This is achieved by using the distribution basis of Annual Bills. Annual Bills are determined by multiplying the number of accounts by 6 billing periods (Table 31). 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 32.

Table 32: CY 2024 Account Services Bi-Monthly Unit Rate

Account Services Component Unit Rate	
Revenue Requirement	$3,094,069
÷ Annual Bills	122,154
Bi-Monthly Unit Rate	**$25.33**

Meter Capacity

Meter Capacity costs include Administrative Services, Engineering, debt, and a portion of capital spending and reserve funding. Administrative Services and Engineering are responsible for system planning, capital improvements, and ensuring total water demand is accommodated. Therefore, these costs along with capital spending (debt and reserves) are 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 31) in Table 33.

Table 33: CY 2024 Meter Capacity Bi-Monthly Unit Rate

Meter Capacity Component Unit Rate	
Revenue Requirement	$7,510,008
÷ Annual ME's	326,574
Bi-Monthly Unit Rate	**$23.00**

Fixed Purchased Water

SJWD fixed costs are incurred by the District based on the 10-year peak of water usage of all member agencies. These fixed costs are recovered as a fixed charge to District customers based on meter size, reflecting the potential water demand placed on SJWD surface water facilities and operations by each meter. The revenue requirement for Fixed Purchased Water is apportioned over meter equivalents as shown in Table 34. If SJWD changes the fixed charge, any cost incurred by the District will be captured through pass-throughs.

Table 34: CY 2024 Fixed Purchased Water Bi-Monthly Unit Rate

Fixed Purchased Water Component Unit Rate	
Revenue Requirement	$2,407,000
÷ Annual ME's	326,574
Bi-Monthly Unit Rate	**$7.38**

Project 2030

Project 2030 costs include funding for the Project 2030 mainline replacement program. The revenue requirement for Project 2030 is apportioned based on meter size to reflect the potential demand placed on the new transmission lines. The revenue requirement for Projected 2030 is apportioned to meter size as represented by total MEs (Table 31) in Table 35. This charge was established in CY 2022 and the rates by meter size will remain the same.

Table 35: CY 2024 Meter Capacity Bi-Monthly Unit Rate

Project 2030 Component Unit Rate	
Revenue Requirement	$1,372,000
÷ Annual ME's	326,574
Bi-Monthly Unit Rate	**$4.20**

Variable Cost Recovery

The remaining cost components of Variable Purchased Water and Conveyance are recovered through a variable rate. The proposed rate structure consists of a uniform rate per hcf.

Variable Purchased Supply

The District purchases water from SJWD. Table 36 allocates the revenue requirement of Variable Purchased Water to each customer class based on projected usage for CY 2024.

Table 36: CY 2024 Variable Purchased Water Cost Unit Rate

Variable Purchased Supply Component Unit Rate	
Revenue Requirement	$554,000
÷ Projected Usage (HCF)	4,508,944
Unit Rate	**$0.13**

Conveyance

Conveyance costs are incurred based on the total volume of water produced and delivered to customers throughout the year. Therefore, the revenue requirement for Conveyance is apportioned based on projected total water usage identified in Table 31 to determine the unit cost-of-service, as shown in Table 37.

Table 37: CY 2024 Conveyance Unit Rate

Conveyance Component Unit Rate	
Revenue Requirement	$6,626,923
÷ Projected Usage (HC	4,508,944
Unit Rate	**$1.47**

Water Rate Summary

Financial Plan Summary

The financial plan developed for the District identifies revenue adjustments through CY 2028; however, the District is only setting rates for CY 2024. Based on the review of the District's current rate revenue and multi-year revenue requirements, rate revenue for CY 2024 needs to recover approximately $1.69M in additional annual revenue. Forward-looking through CY 2028, revenue adjustments for CY 2025 through CY 2028 are projected to be 9.15% per year. These recommended revenue adjustments will allow the District to cover its multi-year operational expenses. In addition to the revenue adjustments, it is anticipated that the District will issue debt in CY 2025, equal to $4.4M, to cover 40% of the new corp. yard ($11M). The financial plan should be updated annually to review actual revenue recovered, capture new accounts, update changes in water usage, and track capital expenses as estimates change. As the baseline assumptions change, the proposed revenue adjustments may also need to be revised to reflect updated conditions.

Cost-of-Service and Rate Summary

The District's proposed rates maintain the same rate structure as existing rates with bi-monthly fixed charges that vary by meter size and a uniform variable rate to all customers. The District also plans on utilizing the pass-through provisions of the Proposition 218 Omnibus Implementation Act (Government Code Section 53756) for increases in purchased water costs from SJWD in subsequent years. There will be two separate pass-throughs, one for increases in fixed charges and the other for increases in variable rates.

The updated cost-of-service analysis identifies the cost components that make up the proposed fixed charges and proposed variable rate. Fixed charges are composed of an Account Charge, Meter Charge, Fixed Purchased Water Charge. The Project 2030 Surcharges will not change and remain the same as in CY 2022. The variable rate is composed of Variable Purchased Water and Conveyance.

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 District'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 District is a special district established for delivering safe and reliable water and does not use rate revenue for any other purpose. In addition, the Project 2030 Surcharge is a dedicated revenue source for Project 2030 related expenses.

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 variable rate 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 variable rate are for costs incurred by the District, including reserve requirements. The District previously established a Project 2030 surcharge and all rate revenue generated by the Project 2030 surcharge will be deposited into the Project 2030 Reserve.

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 November 14, 2023, Public Hearing.

Proposed fixed charges and the proposed variable rate for CY 2024 are shown within the following section, which includes the final SJWD rates adopted on December 13, 2023.

Cost-Based Rates

Proposed Bi-Monthly Fixed Charges

The District approves rates on an annual basis and the cost-based rates are only for CY 2024. The proposed bi-monthly fixed charges for CY 2024 are shown in Table 38, reflecting the combined charges of Account Services, Meter Capacity, and Fixed Purchased Water.

Table 38: CY 2024 Bi-Monthly Fixed Charges

Base Fixed Charge					
Meter Size	Capacity Ratio [A]	Account Services [B] = $25.33	Meter Capacity [C] = $23.00 x A	Fixed Purchased Water [D] = $7.38 x A	CY 2024 Proposed Base Fixed Charge [E] = A + B + C + D
≤ 3/4"	1.00	$25.33	$23.00	$7.38	**$55.71**
1"	2.50	$25.33	$57.50	$18.45	**$101.28**
1 1/2"	5.00	$25.33	$115.00	$36.90	**$177.23**
2"	8.00	$25.33	$184.00	$59.04	**$268.37**
3"	17.50	$25.33	$402.50	$129.15	**$556.98**
4"	31.50	$25.33	$724.50	$232.47	**$982.30**
Combination Meters					
2x4" - Combo	8.00	$25.33	$184.00	$59.04	**$268.37**
3x6" - Combo	17.50	$25.33	$402.50	$129.15	**$556.98**
4x8" - Combo	31.50	$25.33	$724.50	$232.47	**$982.30**
10" - Combo	105.00	$25.33	$2,415.00	$774.90	**$3,215.23**

As mentioned previously, the bi-monthly Project 2030 fixed surcharges previously established in CY 2022 will not change, as shown in Table 39.

Table 39: CY 2024 Bi-Monthly Project 2030 Surcharges

Meter Size	CY 2024
≤ 3/4"	$4.20
1"	$10.50
1 1/2"	$21.00
2"	$33.59
3"	$73.48
4"	$132.30
Combination Meters	
2x4" - Combo	$33.59
3x6" - Combo	$73.48
4x8" - Combo	$132.26
10" - Combo	$440.86

Proposed Variable Rate

Table 40 provides the variable rate for CY 2024, reflecting the combined Variable Purchased Water and Conveyance rates.

Table 40: CY 2024 Proposed Variable Rate ($/hcf)

Customer Class	Variable Purchased Supply [A]	Conveyance [B]	CY 2024 Proposed Variable Rate [C] = A + B
All Customers	$0.13	$1.47	$1.60

Appendix A – Purchased Water Cost Analysis

Table 41: Projected Purchased Water Costs (CY 2024 – CY 2028)

Key Inputs / Assumptions	CY 2024	CY 2025	CY 2026	CY 2027	CY 2028
SJWD Rates Effective Date	7/1/2023	7/1/2024	7/1/2025	7/1/2026	7/1/2027
Effective Months	6	6	6	6	6
% of Usage at prior rate	0.0%	0.0%	0.0%	0.0%	0.0%
% of Usage at current rate	100.0%	100.0%	100.0%	100.0%	100.0%
System/Supply Characteristics					
Water Loss	6.0%	6.0%	6.0%	6.0%	6.0%
Groundwater (AF)	550 AF	550 AF	550 AF	550 AF	550 AF
Change in GW Production	55.0%	100.0%	100.0%	100.0%	100.0%
SJWD Fixed Charge Allocation					
Citrus Heights 10-Year Peak	31.0%	31.0%	31.0%	31.0%	31.0%
% Change of Citrus Heights 10-Year Peak	100.0%	100.0%	100.0%	100.0%	100.0%
Water Supply Rates	**CY 2024**	**CY 2025**	**CY 2026**	**CY 2027**	**CY 2028**
Fixed					
SJWD Fixed Charge	$2,406,700	$2,406,700	$2,406,700	$2,406,700	$2,406,700
Variable Purchased Water Costs					
SJWD	$52.96	$52.96	$52.96	$52.96	$52.96
Fixed Purchased Water Costs (Annual)	**CY 2024**	**CY 2025**	**CY 2026**	**CY 2027**	**CY 2028**
Fixed Purchased Water Costs					
SJWD Fixed Charge	$2,406,700	$2,406,700	$2,406,700	$2,406,700	$2,406,700
Variable Purchased Water Costs (Annual)	**CY 2024**	**CY 2025**	**CY 2026**	**CY 2027**	**CY 2028**
Water Billings/Sales (AF)	10,351 AF	10,351 AF	10,351 AF	10,351 AF	10,351 AF
Water Demand	11,012 AF	11,012 AF	11,012 AF	11,012 AF	11,012 AF
Less Groundwater	550 AF	550 AF	550 AF	550 AF	550 AF
Water Purchases (Imported Water)	10,462 AF	10,462 AF	10,462 AF	10,462 AF	10,462 AF
Water Purchased at Prior Rate	AF	AF	AF	AF	AF
Water Purchased at Current Rate	10,462 AF	10,462 AF	10,462 AF	10,462 AF	10,462 AF
Calculated Variable Purchased Water Costs					
Water Purchases	$554,058	$554,058	$554,058	$554,058	$554,058
Total Calculated Water Supply Costs	**$2,960,758**	**$2,960,758**	**$2,960,758**	**$2,960,758**	**$2,960,758**

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 SJWD to meet the remaining demand was calculated by subtracting the available groundwater supplies from the total water demand. 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 from July to January (% at Prior Rate) and the amount of water purchased 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 to calculate the total annual variable water supply costs.