

Report To:

**Winton Water and  
Sanitary District**

6951 N. Winton Way  
Winton, CA 95388  
(209) 358-2367

**Report on**

**Water and Wastewater  
Rate Study**

Submitted By:

**Tuckfield & Associates**

Contact: Mr. Clayton Tuckfield  
2549 Eastbluff Dr, #450B  
Newport Beach, CA 92660  
(949) 760-9454

[www.tuckfieldassociates.com](http://www.tuckfieldassociates.com)

FINANCIAL CONSULTING  
**TUCKFIELD &  
ASSOCIATES**  
MANAGEMENT CONSULTING

**January 2024**



[This Page Intentionally Left Blank for Two-sided Printing]

# Tuckfield & Associates

2549 Eastbluff Drive, Suite 450B, Newport Beach, CA 92660  
Phone (949) 760-9454 Fax (949) 760-2725  
Email [ctuckfield@tuckfieldassociates.com](mailto:ctuckfield@tuckfieldassociates.com)

January 23, 2024

Ms. Jennifer Caldera  
General Manager  
Winton Water and Sanitary District  
6951 N. Winton Way  
Winton, CA 95388

Dear Ms. Caldera:

I am pleased to present this Water and Wastewater Rate Study (Study) report for the Winton Water and Sanitary District (District). The water and wastewater rates presented in this report have been developed based on cost of service principles and industry methods that result in fair and equitable rates in accordance with Proposition 218 for the users of the water and wastewater systems.

This study included review and analysis of the water and wastewater enterprise revenue and revenue requirements, number of customers, volumes, and current rate structures. The major objectives of the Study include the following.

- Determining revenue levels sufficient to generate positive levels of income in the Study period
- Maintain operating and capital reserves at or greater than target levels
- Meet planned annual capital replacement spending from the water and wastewater rates, charges, and reserves
- Establish rates that fair and equitable and meet legislation requirements

The findings and recommendations for the financial plans and rates for the District's water and wastewater enterprises are presented in this report and tables and figures throughout the report are provided to demonstrate the calculations.

It has been a pleasure to work with District staff during the performance of this study. If there are any questions, please contact me at (949) 760-9454.

Very Truly Yours,

TUCKFIELD & ASSOCIATES



G. Clayton Tuckfield  
President/Project Consultant

# Water and Wastewater Rate Study

## WINTON WATER AND SANITARY DISTRICT

### Table of Contents

	<u>Page</u>
<b>Executive Summary .....</b>	<b>1</b>
Water Financial Plan .....	1
Proposed Water Rates .....	1
Current Water Rates .....	1
Proposed Water Rate Structure and Rates .....	2
Water Bill Impacts .....	3
Water Bill Survey .....	4
Wastewater Financial Plan .....	4
Proposed Wastewater Rates .....	5
Current Wastewater Rates .....	5
Proposed Wastewater Rate Structure and Rates .....	5
Wastewater Bill Survey .....	6
<b>Introduction .....</b>	<b>7</b>
Background .....	7
Objectives .....	7
Scope of Study .....	7
<b>Assumptions .....</b>	<b>8</b>
Reserve Policy .....	8
Beginning Balances and Reserve Targets .....	9
<b>Water Financial Planning .....</b>	<b>10</b>
Current Water Rates .....	10
Water User Classifications .....	10
Number of Customers .....	10
Number of Water Meters .....	11
Water Sales Volumes .....	12
Water Financial Plan .....	12
Revenues .....	12
Miscellaneous Revenues .....	13
Revenue Requirements .....	13
Water Operation and Maintenance Expense .....	13
Debt Service .....	13
Water Capital Improvement Program .....	14
Water Financial Plan .....	15

# Water and Wastewater Rate Study

## WINTON WATER AND SANITARY DISTRICT

### Table of Contents (continued)

	<u>Page</u>
Proposed Revenue Adjustments.....	16
<b>Water Cost of Service .....</b>	<b>17</b>
Industry Methodology.....	17
Costs of Service to be Recovered from Water Rates .....	18
Costs of Service to be Allocated .....	18
<b>Water Rate Design.....</b>	<b>19</b>
Proposed Water Rate Structure .....	19
Proposed Water Fixed Charges .....	19
Proposed Water Variable Charges.....	21
Tier Definitions.....	21
Groundwater Costs .....	21
Delivery Costs .....	22
Peaking Costs .....	22
Summary of Proposed Residential Water Rates .....	23
Groundwater Penalty Costs .....	23
Proposed Water Rates.....	24
<b>Water Bill Impact Analysis.....</b>	<b>25</b>
<b>Future Water Bill Impacts .....</b>	<b>26</b>
<b>Water Bill Survey .....</b>	<b>37</b>
<b>Wastewater Financial Planning.....</b>	<b>28</b>
Current Wastewater Rates.....	28
Wastewater User Classifications.....	29
Number of Customers.....	29
Water Sales Volumes of Wastewater Customers .....	29
Wastewater Financial Plan.....	30
Revenues.....	30
Miscellaneous Revenues .....	31
Revenue Requirements.....	31
Wastewater Operation and Maintenance Expense.....	31
Wastewater Capital Improvement Program .....	32
Wastewater Financial Plan .....	33
Proposed Revenue Adjustments.....	34
<b>Proposed Wastewater Rates .....</b>	<b>35</b>

# Water and Wastewater Rate Study

## WINTON WATER AND SANITARY DISTRICT

### Table of Contents (continued)

	<u>Page</u>
<b>Wastewater Bill Survey .....</b>	<b>35</b>

### List of Tables

Table ES-1	Current and Proposed Water Fixed Charges and Variable Charges.....	2
Table ES-2	Comparison of Current Single-family Residential Monthly Bill with Proposed Bill Using June 2024 Water Rates .....	3
Table ES-3	Current and Proposed Wastewater Fixed and Variable Charges .....	5
Table 1	Assumptions and Planning Factors.....	8
Table 2	June 30, 2018 Beginning Cash Balances and Reserve Targets .....	9
Table 3	Current Water Rates .....	10
Table 4	Historical and Projected Water Customers by Classification .....	11
Table 5	Historical and Projected Number of Water Meters by Size .....	11
Table 6	Historical and Projected Water Consumption (in HCF).....	12
Table 7	Projected Rate-based Water Revenue Using Existing Rates .....	12
Table 8	Projected Miscellaneous Revenue .....	13
Table 9	Budgeted and Projected Water Operation and Maintenance Expense .....	14
Table 10	Water Capital Improvement Program.....	14
Table 11	Water Financial Plan .....	15
Table 12	Costs of Service to be Recovered from Water Rates .....	18
Table 13	Allocation of Water Revenue Requirements to Cost Component.....	19
Table 14	Design of Water Fixed Charges .....	20
Table 15	Design of Water Fixed Charges by Meter Size .....	20
Table 16	Proposed Water Monthly Fixed Charges .....	21
Table 17	Design of Single-family and Multifamily Residential Tiered Rate Structure .....	22
Table 18	Summary of Proposed Residential Variable Rates .....	23
Table 19	Design of Non-Residential Rate Structure .....	23
Table 20	Design of Groundwater Penalties Rate .....	23
Table 21	Proposed Water Fixed Charges and Variable Charges.....	24
Table 22	Comparison of Current Single-family Residential Monthly Bill with ¾-inch Meter with Proposed Bill Using June 2024 Water Rates .....	25
Table 23	Current Wastewater Rates .....	28
Table 24	Historical and Projected Wastewater Customers by Classification.....	29
Table 25	Historical and Projected Water Sales Volume of Wastewater Customers	

# **Water and Wastewater Rate Study**

## **WINTON WATER AND SANITARY DISTRICT**

### **Table of Contents (continued)**

	<b><u>Page</u></b>
Subject to Variable Charge (HCF).....	30
Table 26 Projected Rate-based Wastewater Revenue Using Existing Rates.....	30
Table 27 Projected Wastewater Miscellaneous Revenue.....	31
Table 28 Projected Wastewater Operation and Maintenance Expense .....	32
Table 29 Wastewater Capital Improvement Program .....	32
Table 30 Wastewater Financial Plan.....	33

### **List of Figures**

Figure ES-1	Future Single-family Residential Monthly Water Bills with 3/4-inch Meter at 19 HCF .....	3
Figure 1	Water Financial Plan Comparison of Revenue with Revenue Requirements.....	16
Figure 2	Water Reserves versus Target Reserves .....	17
Figure 3	Future Single-family Residential Monthly Water Bills with 3/4-inch Meter at 19 HCF .....	26
Figure 4	Wastewater Financial Plan Comparison of Revenue with Revenue Requirements .....	34
Figure 5	Wastewater Reserves versus Target Reserves.....	35

### **List of Charts**

Chart ES-1	Single-family Residential Monthly Water Bills with a 3/4-inch Meter Using 19 HCF .....	4
Chart ES-2	Single-family Residential Monthly Wastewater Bills with a 3/4-inch Meter .....	6
Chart 1	Single-family Residential Monthly Water Bills with a 3/4-inch Meter Using 19 HCF .....	27
Chart 2	Single-family Residential Monthly Wastewater Bills with a 3/4-inch Meter .....	36

### **List of Appendices**

Appendix A-1	Water Financial Plan Projected for a 10-Year Period.....	38
Appendix A-2	FY 24-25 Allocation of Water Revenue Requirements to Cost Component .....	39
Appendix A-3	Accounts Included in Multifamily Customer Classification .....	40
Appendix A-4	Water Rate Codes and Definitions .....	41



# Executive Summary

The Winton Water and Sanitary District (District) engaged Tuckfield & Associates to conduct a comprehensive Water and Wastewater Rate Study (Study) for its enterprise systems. This Study included development of financial plans of revenues and revenue requirements for each system, analyses to determine the costs of providing service, and design of new rates and charges for implementation.

## Water Financial Plan

The revenue and revenue requirements of the water system were identified and projected to create a forward-looking financial plan of the water enterprise. Annual costs of the water system include operation and maintenance (O&M) expense, debt service payments for repayment of a loan from the wastewater enterprise, and annual capital spending. Projected O&M expenses include the District's budgeted expenses for FY 2023-24 for the first year of projection, while future expenses are projected through application of inflation factors to budget year expenses.

In addition to annual expenses, the District is incurring costs from repayment of a loan from the wastewater fund that was used to construct water wells. Additionally, the Merced Irrigation-Urban Groundwater Sustainability Agency (MIUGSA) is charging the District a penalty for pumping groundwater beyond limits established by the MIUGSA. Customers who use water above 20 hundred cubic feet (HCF) per month will be subject to the groundwater penalty rate.

The District has prepared a ten-year Capital Improvement Program (CIP) spending plan that includes improvements and various replacements. Major projects of the CIP include water line replacements, valve replacements, and meter replacements. CIP spending totals about \$1.3 million over the Study period. The costs of the CIP are proposed to be financed with the water system revenue and reserves. Any amounts not spent accumulate into water system reserves to be spent on future improvements and replacements.

Analyses were performed that compared the projected revenue using the District's current water rates with the projected revenue requirements (costs) of the water system. The analyses indicated that the current level of revenue received is not sufficient to meet future obligations and revenue increases are recommended to adequately meet revenue requirements and other financial planning criteria. The proposed revenue increases include a 97.0 percent revenue increase on June 1, 2024 and 4.0 percent revenue increases on each January 1 for the remaining years of the Study. The water financial plan is presented in Table 11.

## Proposed Water Rates

### Current Water Rates

The current water rates consist of seven water consumption Tiers for single-family (SFR); multifamily (MFR); Business/ Church/Institution; and Other Services customer classifications. The SFR, MFR, and Business/Church/Institution classification are charged fixed charges in the first few Tiers in lieu of variable charges for consumption while the Other Services classification is charged a fixed charge by meter size. Table 3 provides the current water rates charged to District water customers.



## Proposed Water Rate Structure and Rates

The proposed water rate structure includes monthly fixed charges by meter size that is applicable to residential customers. The rate structure also includes a four-tier water consumption rate structure that is applicable to residential customers while Business, Church, Institution, and Other customers have a uniform volume rate structure. The proposed rate structure is designed so that all metered water consumption is charged based on the volume of water delivered.

The proposed rates generate sufficient revenue to meet the future revenue requirements of the water system. The June 1, 2024 rates are designed based on the cost of providing service. Rates subsequent to June 2024 are increased by the percentages in the financial plan provided in Table 11. Table ES-1 presents the proposed water rates to be adopted for June 2024 and for future years.

Table ES-1  
Proposed Water Fixed and Variable Rates

	June 1, 2024	Jan 1, 2025	Jan 1, 2026	Jan 1, 2027	Jan 1, 2028
<b>Residential</b>					
<b>Meter Size</b>	<b>Fixed Charge (\$ per month)</b>				
5/8" thru 1"	\$11.99	\$12.47	\$12.97	\$13.49	\$14.03
1.5"	\$26.25	\$27.30	\$28.39	\$29.53	\$30.71
2"	\$40.75	\$42.38	\$44.08	\$45.84	\$47.67
3"	\$102.91	\$107.03	\$111.31	\$115.76	\$120.39
4"	\$145.05	\$150.85	\$156.88	\$163.16	\$169.69
6"	\$287.69	\$299.20	\$311.17	\$323.62	\$336.56
<b>Non-Residential</b>					
<b>Meter Size</b>	<b>Fixed Charge (\$ per month)</b>				
5/8"	\$9.96	\$10.36	\$10.77	\$11.20	\$11.65
3/4"	\$11.99	\$12.47	\$12.97	\$13.49	\$14.03
1"	\$16.52	\$17.18	\$17.87	\$18.58	\$19.32
1.5"	\$26.25	\$27.30	\$28.39	\$29.53	\$30.71
2"	\$40.75	\$42.38	\$44.08	\$45.84	\$47.67
3"	\$102.91	\$107.03	\$111.31	\$115.76	\$120.39
4"	\$145.05	\$150.85	\$156.88	\$163.16	\$169.69
6"	\$287.69	\$299.20	\$311.17	\$323.62	\$336.56
<b>Classification/Tier</b>	<b>June 1, 2024</b>	<b>Jan 1, 2025</b>	<b>Jan 1, 2026</b>	<b>Jan 1, 2027</b>	<b>Jan 1, 2028</b>
<b>Single-family Residential and Multifamily Residential</b>					
Tier 1 - 0 to 10 HCF	\$1.37	\$1.43	\$1.49	\$1.55	\$1.61
Tier 2 - 11 to 20 HCF	\$1.49	\$1.55	\$1.61	\$1.67	\$1.74
Tier 3 - 21 to 45 HCF	\$1.73	\$1.80	\$1.87	\$1.94	\$2.02
Tier 4 - Over 45 HCF	\$1.93	\$2.00	\$2.08	\$2.16	\$2.25
<b>Business, Church, Inst</b>	\$1.30	\$1.35	\$1.41	\$1.46	\$1.52
<b>Other Services</b>	\$1.33	\$1.38	\$1.44	\$1.49	\$1.55
<b>Groundwater Penalty [1]</b>	\$0.62	\$0.64	\$0.67	\$0.70	\$0.73

[1] Additional charges to the rates above. Applies to dwelling units/meters using over 20 HCF per month.

## Water Bill Impacts

Table ES-2 presents the impacts to SFR bills from the implementation of the proposed June 2024 water rates. For an SFR customer with a 3/4-inch meter using the average consumption of 19 hundred cubic feet (HCF) monthly, the bill will increase from \$17.94 to \$39.10, an increase of \$21.16, or 117.9 percent. The bill increase of 117.9 percent is higher than the 97.0 percent stated in the water financial plan in Table 11 for the first increase due to the implementation of the new rate structure.

**Table ES-2**  
Comparison of Current Single-family Residential Monthly Bills with 3/4-inch Meter with  
Proposed Bills Using June 2024 Water Rates

Description	Use (HCF)	Current Bill			Proposed FY 23-24 Bill				
		Service Charge	Volume Charge	Current Bill	Service Charge	Volume Charge	Proposed Bill	Dollar Difference	Percent Change
	0	\$16.68	\$0.00	\$16.68	\$11.99	\$0.00	\$11.99	(\$4.69)	-28.1%
Very Low	5	\$16.68	\$0.00	\$16.68	\$11.99	\$6.85	\$18.84	\$2.16	12.9%
Low	10	\$16.68	\$0.00	\$16.68	\$11.99	\$13.70	\$25.69	\$9.01	54.0%
Median	14	\$17.94	\$0.00	\$17.94	\$11.99	\$19.66	\$31.65	\$13.71	76.4%
Average	19	\$17.94	\$0.00	\$17.94	\$11.99	\$27.11	\$39.10	\$21.16	117.9%
	30	\$19.35	\$0.00	\$19.35	\$11.99	\$52.10	\$64.09	\$44.74	231.2%
	40	\$20.92	\$0.00	\$20.92	\$11.99	\$75.60	\$87.59	\$66.67	318.7%
High	50	\$20.92	\$76.00	\$96.92	\$11.99	\$100.10	\$112.09	\$15.17	15.7%
Very High	100	\$20.92	\$152.00	\$172.92	\$11.99	\$227.60	\$239.59	\$66.67	38.6%

Figure ES-1 provides how SFR water bills with a 3/4-inch meter using the monthly average consumption of 19 HCF will escalate over time with implementation of the proposed rates from Table ES-1.

**Figure ES-1**  
Future Single-family Residential Monthly Water Bills  
with 3/4-inch Meter at 19 HCF

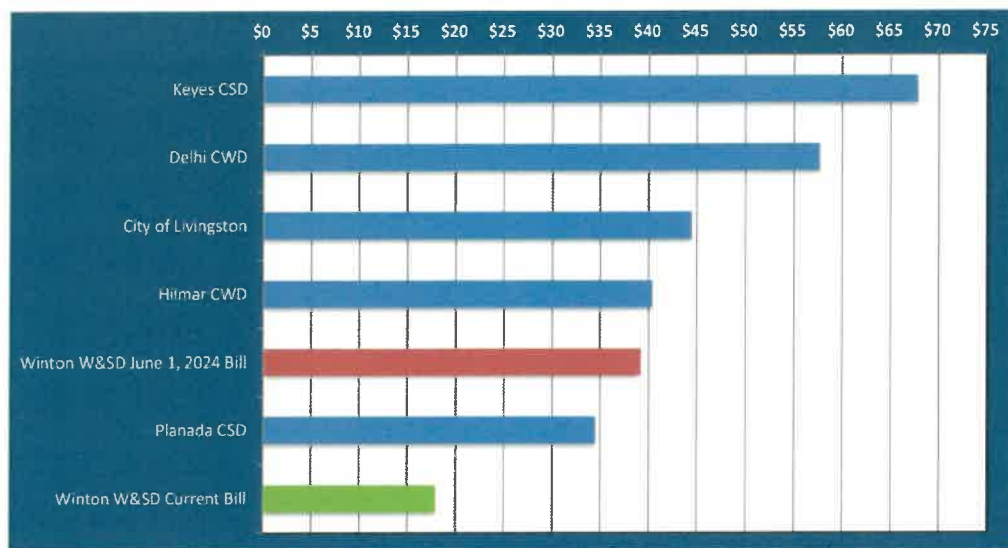


SFR Charges	Current	Proposed				
		FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28
Fixed Charges	\$17.94	\$11.99	\$12.47	\$12.97	\$13.49	\$14.03
Variable Charges	\$0.00	\$27.11	\$28.25	\$29.39	\$30.53	\$31.76
Total Charges	\$17.94	\$39.10	\$40.72	\$42.36	\$44.02	\$45.79
Dollar Change		\$21.16	\$1.62	\$1.64	\$1.66	\$1.77
Percent Change		117.9%	4.1%	4.0%	3.9%	4.0%

## Water Bill Survey

Chart ES-1 has been prepared to compare the District's SFR average water bill with those of other communities at the same monthly consumption of 19 HCF. The chart indicates that with the June 2024 rates, a District SFR customer with a 3/4-inch meter and monthly consumption of 19 HCF will experience a bill that is in the lower to mid-range of the communities listed.

Chart ES-1  
Single-family Residential Monthly Water Bills with a 3/4-inch Meter Using 19 HCF  
For Rates in Effect July 2023



Note: Above table uses water rates in effect July 2023.

## Wastewater Financial Plan

The revenue and revenue requirements of the wastewater system were identified and projected to create a forward-looking financial plan of the wastewater enterprise. Annual costs include O&M expenses and capital spending. Projected O&M expenses include the District's budgeted expenses for FY 2023-24 for the first year, while future expenses are projected through application of inflation factors to budget year expenses.

The District has prepared a ten-year CIP spending plan that includes wastewater improvements and various replacements. Major projects of the CIP include replacement of Myrtle lift station pumps and control panel, force main rehabilitation, manhole repair and replacement, and other replacements. CIP spending totals about \$470,000 over the Study period. The costs of the CIP are proposed to be financed with the wastewater system revenue and reserves. Any amounts not spent accumulate into wastewater system reserves to be spent on future improvements and replacements.

Analyses were performed that compared the projected revenue, using the District's current wastewater rates, with the projected revenue requirements (costs) of the wastewater system. The analyses indicated that the current level of revenue received is sufficient to meet future obligations and no revenue increases are recommended. The wastewater financial plan is presented in Table 28.

## Proposed Wastewater Rates

### Current Wastewater Rates

The current wastewater rates consist of fixed charges for all customers and variable charges for Commercial low, medium, and high strength customers and Institutional customers only. All customers are charged by the dwelling unit or a multiple of the SFR charge based on their proportional wastewater flow to the SFR wastewater flow. The current rates are shown in Table ES-3 and Table 21.

Table ES-3  
Current and Proposed Wastewater Fixed and Variable Rates

Rate Code	Customer Classification	Fixed Charge	Variable Charge
<b>Residential</b>		\$/mo/unit	\$/HCF
R1	Residential	\$49.16	
R10	Outside Residential	\$54.39	
<b>Commercial</b>			
C1, C3, C4, C5, C6, C10,			
G1, M1	Commercial Class	\$49.16	
C2	Commercial Class 2	\$49.16	\$2.41
C7	Commercial Class 7	\$49.16	\$3.90
C8	Commercial Class 8	\$49.16	\$2.63
C9	Commercial Class 9	\$49.16	\$4.05
<b>Industrial</b>			
ID1	Industrial Class 1	\$1,079.67	
<b>Institutional</b>			
IN1	Institutional Class 1	\$49.16	\$2.29
IN2	Institutional Class 2	\$794.96	\$1.31
IN3	Institutional Class 3	\$49.16	\$2.65
<b>School</b>			
S1 thru S6	Flat Sewer	\$49.16	
S1S	Surcharge 1 School	\$70.08	
S2S	Surcharge 2 School	\$59.78	
SC1	Surcharge 1	\$2.70	
SC2	Surcharge 2	\$1.80	
SS2	Surcharge School	\$59.78	

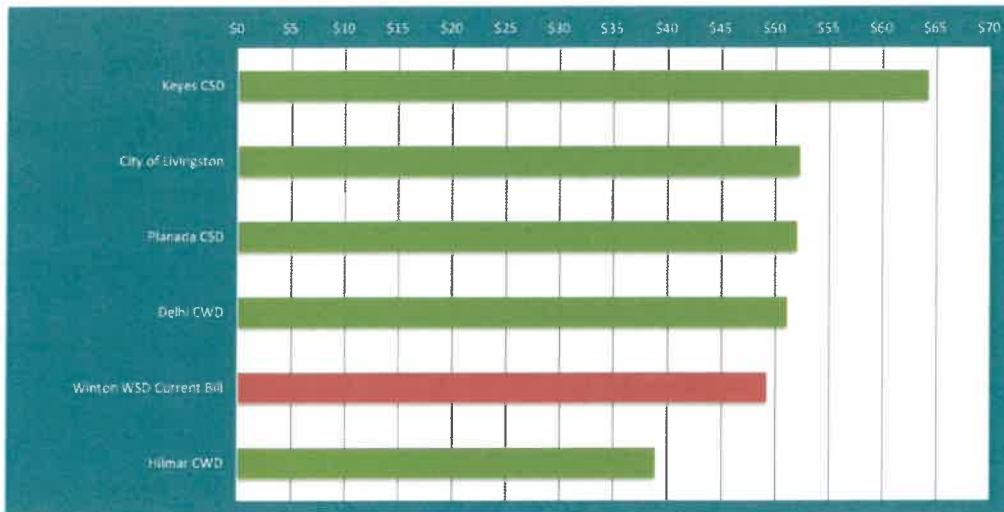
### Proposed Wastewater Rate Structure and Rates

The proposed wastewater rate structure keeps the current rate structure and charges in place. Table ES-3 above presents the proposed wastewater rates for the next five years.

## Wastewater Bill Survey

Chart ES-2 has been prepared to compare District's average SFR wastewater bill with those of other communities. The chart indicates that District's SFR wastewater bill with a 3/4-inch meter and 19 HCF of consumption monthly is in the lower-range of the communities listed.

Chart ES-2  
Single-family Residential Monthly Wastewater Bills with a 3/4-inch Meter  
For Rates in Effect July 2023



Note: Above table uses wastewater rates in effect July 2023.

# Introduction

The Winton Water and Sanitary District (District) engaged Tuckfield & Associates to conduct a comprehensive Water and Wastewater Rate Study (Study) for its water and wastewater enterprise systems. This Study includes development of pro forma statements of revenues and revenue requirements for each enterprise, analyses to determine the revenue required to meet revenue requirements, the cost of providing service, and design of new water and wastewater rates and charges for implementation.

## Background

The Winton Water and Sanitary District, California is located in Merced County about 10 miles northwest of Merced and about 30 miles southeast of Modesto. The District's climate is hot and dry in the summers while winters are mild with temperatures rarely dropping below freezing.

The District provides water and wastewater service to a population of approximately 11,600 as stated by Census.gov. The customer base consists of residential, commercial, and institutional customers with a total number of customers of about 2,600. Water and Wastewater services are accounted for in separate enterprise funds of the District.

## Objectives

The objectives of this Study are to (1) review the current and future financial status of each of the water and wastewater enterprises, (2) make any adjustments to the revenue being received to ensure that the financial obligations are being met now, and in the future, including adequate reserves and debt service coverage, and (3) design water and wastewater rates that generate the required revenue while being fair and equitable for its customers. Additionally, the Study also sought to provide the following.

- Revenue sufficiency to fund operating and capital needs
- Appropriate levels of operating and capital reserves
- Cost of service allocations following appropriate standards, regulations, and guidelines
- Rates that are consistent with industry practice
- Ease of rate understanding and administration

## Scope of the Study

This Study includes the findings and recommendations of analyzing each of the water and wastewater enterprise's financial status and related CIP. Historical trends were analyzed from data supplied by the District showing the number of customers, volumes, revenue, and revenue requirements.

Revenue requirements of each enterprise include O&M expense, routine capital outlays, capital replacements, debt service, and additions to reserves. Changing conditions such as additional facilities, system growth, employee additions/reductions, and non-recurring maintenance expenditures are recognized. Inflation for ongoing expenditures is included to reflect cost escalation.

The financial plan and rates developed herein are based on funding of the capital improvement plans as stated as well as estimates of O&M expenses developed from information provided by the District. Deviation from the



financial plans, construction cost estimates and funding requirements, major operational changes, or other financial policy changes that were not foreseen, may result in the need for lower or higher revenue than anticipated. It is suggested that the District conduct an update to the rate study at least every three to five years for prudent rate planning.

## Assumptions

Several assumptions were used to conduct the Study for the period FY 2023-24 to FY 2027-28. The assumptions include growth rates in the number of customers and annual consumption, interest earnings rate, and expense inflation factors. The financial planning assumptions are provided in Table 1.

**Table 1**  
**Assumptions and Planning Factors**

Description	Value
<b>Annual Account &amp; Demand growth [1]</b>	
Single-family Residential	0.25%
All Other	0.0%
<b>Interest earnings on fund reserves (annual)</b>	2.0%
<b>Cost Escalation</b>	
Personnel Services [2]	4.0%
Benefits	8.0%
Electrical Power	4.0%
Chemicals	5.0%
Groundwater Penalties	4.0%
All Other Operations & Maintenance	3.0%
Capital	3.0%

[1] Annualized growth in water accounts is based on historical information provided by staff.

[2] Personnel Services growth in staffing, promotions, and inflation is 4.0% annually.

## Reserve Policy

The District currently does not have written reserve policies regarding the level of reserves to be maintained for the water and wastewater enterprises. However, the District does have reserve policy goals for maintaining reserves for water and wastewater operations and capital reserves. The reserve goals provide a means to meet unanticipated reductions in revenues, changes in the costs of providing services, fixed asset repair and replacement, natural disaster, and other issues. The reserves also provide guidelines to maintain the financial health and stability of the enterprise funds.



To develop the financial plans presented in this Study, certain reserve targets have been established with the intent to provide planning criteria for the financial plans of each utility system. The reserve types and the amount of reserves used in this Study are discussed below.

**Operating Reserve** – The purpose of the Operating Reserve is to provide working capital to meet cash flow needs during normal operations and support the operation, maintenance and administration of the utility. This reserve ensures that operations can continue should there be significant events that impact cash flow. The target balance to be maintained is 180 days (50 percent) of the current annual operating expense budget.

**Capital Replacement Reserve** – The Capital Replacement Reserve is used to fund future replacement of assets and capital improvement projects. The target balance is equal to the expected average annual capital improvement spending, \$300,000 for water and \$100,000 for wastewater.

## Beginning Balances and Reserve Targets

As of June 30, 2023, the District's beginning fund balances are listed in the table below. The reserves are used in developing the financial plans for the water and wastewater utilities. Target Reserves described above are also provided.

Table 2  
June 30, 2023 Beginning Cash Balances and Reserve Targets

Reserve Type	Water		Wastewater	
	Reserve Balance	Reserve Target	Reserve Balance	Reserve Target
Operating Fund Reserve	\$1,046,000	\$529,000	\$2,519,000	\$937,000
Capital Reserve	\$300,000	\$300,000	\$100,000	\$100,000
Total	\$1,346,000	\$829,000	\$2,619,000	\$1,037,000

## Water Financial Planning

Financial planning for the water system includes identifying and projecting revenues and revenue requirements for a five-year planning period. Estimates of revenue from various sources are compared with the projected revenue requirements of the water system. This comparison allows the review of the adequacy of existing revenue to meet annual obligations and provide the basis for any rate adjustments. New water rates and charges are then created to recover all of the District's annual operating and capital costs associated with the water system.

This section discusses current water rates, user classifications, projected revenues and revenue requirements, capital improvement expenditures and financing sources, and proposed revenue adjustments.

## Current Water Rates

The current water rates consist of fixed and variable charges to residential and non-residential customers. SFR, Business, Church, and Institutional customers are charged a fixed charge for consumption up to 40 HCF/month whereas MFR is charged a fixed charge up to 30 HCF/month. All SFR, Business, Church, and Institutional customers are charged for water consumption of over 40 HCF/month while MFR customers are charged for use over 30 HCF/month. Other Services customers are charged a fixed charge by meter size and a charge for consumption over 40 HCF/month. Table 3 provides the current water rates of the water system.

Table 3  
Current Water Rates

Meter Size / Tier	SFR & Duplex	MFR	Bus, Chrch Institution	Other Services
Meter Size	Fixed Charge (\$ per month)			
1.5"				\$28.24
2"				\$32.79
3"				\$25.50
4"				\$34.50
6"				\$549.15
<b>Tiers</b>				
Tier 1 - 0 to 10 HCF	\$16.68	\$12.55	\$23.64	
Tier 2 - 11 to 20 HCF	\$17.94	\$12.55	\$23.64	
Tier 3 - 21 to 30 HCF	\$19.35	\$12.55	\$23.64	
Tier 4 - 31 to 40 HCF	\$20.92		\$23.64	
<b>Variable Charge (\$ per HCF)</b>				
<b>Tiers</b>				
Tier 4 - 31 to 40 HCF		\$1.46		
Tier 5 - 41 to 100 HCF	\$1.52	\$1.46	\$1.52	\$1.52
Tier 6 - 101 to 300 HCF	\$2.30	\$1.46	\$2.30	\$2.30
Tier 7 - Over 300 HCF	\$3.03	\$1.46	\$3.03	\$3.03

## Water User Classifications

### Number of Customers

The District classifies water customers as Single family Residential (SFR) and Duplex, Multifamily Residential (MFR), Business, Church, Institution, and Other. Table 4 provides the projected number of total customers by classification.

From review of the billing information, it was noted that there are numerous accounts where one meter is serving multiple water uses. For example, one meter may serve a SFR (rate code W1) while also serving MFR (rate code W2) and commercial uses (rate code W3). It is recommended that SFR and non-residential customer classifications be individually metered for water rate design purposes because of the water use characteristics associated with each classification. This will be necessary if the District should desire to properly establish a tiered rate structure separately for the SFR and MFR classifications in the future.

**Table 4**  
**Historical and Projected Number of Water Customers**

Customer Class	Historical	Projected				
	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28
<b>Number of Accounts</b>						
Single-family Residential [1]	2,359	2,365	2,371	2,377	2,383	2,389
Multifamily Residential	126	126	126	127	127	128
Business, Church, Inst	85	85	85	85	85	85
Other Services	18	18	18	18	18	18
<b>Total Accounts</b>	<b>2,588</b>	<b>2,594</b>	<b>2,600</b>	<b>2,607</b>	<b>2,613</b>	<b>2,620</b>
<b>Number of Dwelling Units</b>						
Single-family Residential [1]	2,359	2,365	2,371	2,377	2,383	2,389
Multifamily Residential	665	667	669	671	673	675

[1] Residential accounts/units are forecast to increase based on the assumed growth rate of 0.25% annually.

Growth is projected to occur only in SFR accounts and MFR dwelling units at a rate of 0.25 percent annually or about 6 accounts, and 8 dwelling units, added each year, following the assumptions listed in Table 1.

### Number of Water Meters

Table 5 provides a summary of the number of current and projected water meters by size. The majority of customers have 3/4-inch meters installed at the service location. All new SFR customers will have 1-inch meters installed and this is the minimum size for new residential meter installations for the District's customer base.

**Table 5**  
**Historical and Projected Number of Water Meters by Size**

Description	Historical	Projected				
	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28
<b>Active Water Meters/Accounts [1]</b>						
5/8"	3	3	3	3	3	3
3/4"	2,453	2,453	2,453	2,453	2,453	2,453
1"	92	97	103	110	116	123
1.5"	11	11	11	11	11	11
2"	19	19	19	19	19	19
3"	4	4	4	4	4	4
4"	1	1	1	1	1	1
6"	6	6	6	6	6	6
<b>Total Accounts</b>	<b>2,588</b>	<b>2,594</b>	<b>2,600</b>	<b>2,607</b>	<b>2,613</b>	<b>2,620</b>

[1] Historical water accounts for FY 22-23 were provided through District billing records.

## Water Sales Volumes

Table 6 provides the historical and projected water sales volume. Water sales volumes were projected by recognizing the growth in the number of accounts and prior years' history of consumption.

Table 6  
Historical and Projected Water Consumption (HCF)

Description	Historical	Projected <sup>[1]</sup>				
	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28
Single-family Residential	562,737	545,006	546,389	547,771	549,154	550,537
Multifamily Residential	128,801	124,340	124,340	125,326	125,326	126,313
Business, Church, Inst	21,364	20,577	20,577	20,577	20,577	20,577
Other Services	9,857	9,478	9,478	9,478	9,478	9,478
<b>Total Consumption</b>	<b>722,759</b>	<b>699,401</b>	<b>700,784</b>	<b>703,152</b>	<b>704,535</b>	<b>706,905</b>

[1] Forecast assumes that the use per customer from FY 22-23 is applied to the number of customers.  
Consumption increases due to the growth in customers.

## Water Financial Plan

The financial plan provides the means of analyzing the revenue and revenue requirements of the water system and its impact on reserves as well as the ability to fund on-going O&M expense and capital infrastructure requirements. This section of the Report discusses the projection of revenue, O&M expenses, capital improvement needs of the water system and its financing, debt service requirements, and revenue adjustments needed to maintain a sustainable water enterprise.

### Revenues

The District receives water operating and capital revenue from several sources. Operating revenue is received from rates and charges for water service. Revenue from water rates is projected by applying the current water rates to the projected number of accounts and consumption volume. Table 7 presents the projected revenue from current water rates of the system.

Table 7  
Projected Rate-Based Water Revenue Using Current Rates

Description	Projected				
	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28
<b>Water Service Revenues</b>					
Fixed Charges <sup>[1]</sup>	\$675,775	\$676,147	\$676,519	\$676,891	\$677,263
Variable Charges <sup>[2]</sup>	147,567	147,814	148,170	148,415	148,771
<b>Total Revenues From Current Rates</b>	<b>\$823,342</b>	<b>\$823,961</b>	<b>\$824,689</b>	<b>\$825,306</b>	<b>\$826,034</b>

[1] FY 23-24 and forecast revenue calculated by multiplying current water service rate by the number of projected meters.

[2] FY 23-24 and forecast revenue calculated by multiplying projected water sales by the current variable rates.

### Miscellaneous Revenue

Miscellaneous revenues are received from several sources including water meter installations, reconnect charges, penalties/late fees, taxes, and other sources. Table 8 below provides sources of miscellaneous revenue.

**Table 8**  
**Projected Miscellaneous Revenue**

Description	Budget	Projected			
	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28
Water Meter Service	\$3,128	\$900	\$900	\$900	\$900
Reconnect Charge	6,599	1,800	1,800	1,800	1,800
Late Fee Water	9,052	9,000	9,000	9,000	9,000
Current Secured Taxes	36,099	36,100	36,100	36,100	36,100
Current Unsecured Taxes	4,738	4,700	4,700	4,700	4,700
Unitary Taxes	1,318	1,300	1,300	1,300	1,300
Delinquent Unsecured Taxes	200	200	200	200	200
Teeter Taxes	3,927	3,900	3,900	3,900	3,900
HOPTR Taxes	313	300	300	300	300
Interest	382	400	400	400	400
<b>Total Miscellaneous Revenues</b>	<b>\$65,756</b>	<b>\$58,600</b>	<b>\$58,600</b>	<b>\$58,600</b>	<b>\$58,600</b>

### Revenue Requirements

Revenue requirements of the water system include O&M expense, debt service for loan repayment to the Wastewater Fund, and capital improvement spending. Each of these items are discussed below.

#### Water Operation and Maintenance Expense

Table 9 provides a summary of the projected O&M expenses for the Study period. O&M expenses are an ongoing obligation of the water system and such costs are normally met from water service revenue. O&M expense includes the cost to operate and maintain the water supply, reservoirs, and distribution system facilities. Costs also include technical services and other general and administrative expenses.

O&M expense has been projected recognizing the major expense categories of personnel services, electric power expense, chemicals, all other expenses, and capital outlay. O&M expenses are increased in future years following the inflation factors provided in Table 1. Projected O&M expenses also include estimates of groundwater penalties levied by the Merced Irrigation-Urban Groundwater Sustainability Agency (MIUGSA) at \$250/AFY that the District will experience for pumping beyond 1.1 AF/acre per year or 1,106 AFY determined as follows.

$$(1,142 \text{ District acres} - 137 \text{ ag acres}) * 1.1 \frac{\text{AF}}{\text{acre}} / \text{yr} = 1,106 \text{ AFY}$$

#### Debt Service

The District does not currently have any outstanding debt on the water system, however, has the Water Fund has borrowed from the Wastewater Fund in the amount of \$2,511,057. This Study proposes to repay that amount with terms that include a 10-year amortization and a 1 percent interest rate. The proposed repayment will have annual debt service payments of about \$265,100 beginning July 1, 2024.



**Table 9**  
**Budgeted and Projected Operation and Maintenance Expense**

Description	Budget	Projected			
	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28
<b>Water System</b>					
Salaries	\$252,366	\$262,461	\$272,960	\$283,878	\$295,232
Benefits	96,598	104,327	112,671	121,687	131,420
Supplies	16,676	17,176	17,692	18,222	18,769
Chlorine and Disinfectants	7,725	8,127	8,562	9,008	9,491
Gas and Electricity Wells	189,792	197,774	206,380	215,057	224,412
Groundwater Penalties	-	155,114	161,541	168,776	175,768
All Other	106,761	109,963	113,264	116,661	120,162
<b>Total Water System</b>	<b>\$669,918</b>	<b>\$854,942</b>	<b>\$893,070</b>	<b>\$933,289</b>	<b>\$975,254</b>
<b>General and Administrative</b>					
Salaries	\$130,078	\$135,281	\$140,693	\$146,320	\$152,173
Benefits	61,724	60,452	65,288	70,510	76,150
Meters and Services Contract	3,090	3,183	3,278	3,376	3,477
TCP Mitigation	8,240	8,488	8,742	9,004	9,274
Laboratory Services	16,995	17,505	18,030	18,571	19,128
Payment to General Fund (Utility Tax)	41,167	41,198	41,234	41,265	41,302
All Other	126,560	110,202	113,508	116,912	120,420
<b>Subtotal</b>	<b>\$387,854</b>	<b>\$376,309</b>	<b>\$390,773</b>	<b>\$405,958</b>	<b>\$421,924</b>
<b>Total Water O&amp;M Expense</b>	<b>\$1,057,772</b>	<b>\$1,231,251</b>	<b>\$1,283,843</b>	<b>\$1,339,247</b>	<b>\$1,397,178</b>

### Water Capital Improvement Program

The District has developed a CIP that includes capital expenditures for FY 2023-24 through FY 2027-28. Over this period the District projects that it would spend approximately \$1.3M. The major improvements include waterline replacements, valve replacements, and other improvements. Table 10 provides the water system CIP.

**Table 10**  
**Water Capital Improvement Program**

Description	Budget	Projected			
	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28
<b>Capital Improvement Program (CIP) Projects [1]</b>					
Replace Thin-Walled PVC water lines	\$37,500	\$38,600	\$39,800	\$41,000	\$42,200
Replace galvanized water lines	22,500	23,200	23,900	24,600	25,300
Replace Walnut Avenue Water Line (located in backyards)	-	-	-	-	84,400
4" valves (replace 30 each)	10,800	11,100	11,500	11,800	12,200
6" valves (replace 150 each)	-	-	-	-	35,500
8" valves (replace 50 each)	-	-	-	-	14,200
Replace 3/4" meters (replace 1,500 older meters)	144,000	148,300	152,800	157,400	162,100
Office Improvement & Upgrades (1/2 cost)	-	-	26,500	-	-
Furniture (1/2 cost)	-	-	3,200	-	-
<b>Total Water CIP</b>	<b>\$214,800</b>	<b>\$221,200</b>	<b>\$257,700</b>	<b>\$234,800</b>	<b>\$375,900</b>

## Water Financial Plan

A financial plan has been prepared that includes the revenues and revenue requirements that were identified for the water system and is presented in Table 11. The financial plan includes the revenue and revenue requirements discussed above. The plan incorporates specific financial planning criteria to provide guidance to maintain the health of the water utility on an on-going basis. The criteria included the following.

- Generate positive levels of income in each year of the Study period
- Maintain the operating and capital reserves at or greater than target levels
- Maintain debt service coverage ratios at or greater than the minimum required
- Meet annual capital replacement spending from water rates, charges, and reserves

Table 11  
Water Financial Plan

Description	Projected				
	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28
<b>Proposed Revenue Increase (June 1)</b>	<b>97.0%</b>				
<b>Proposed Revenue Increase (January 1)</b>		<b>4.0%</b>	<b>4.0%</b>	<b>4.0%</b>	<b>4.0%</b>
<b>Water Fund</b>					
<b>Revenue</b>					
Revenues from Existing Water Rates [1]	\$823,342	\$823,961	\$824,689	\$825,306	\$826,034
Total Additional Water Sales Revenue [2]	-	826,295	893,093	962,525	1,034,950
Miscellaneous Income	65,756	58,600	58,600	58,600	58,600
Interest Income [3]	36,200	37,400	38,700	39,600	41,300
<b>Total Revenue</b>	<b>\$925,298</b>	<b>\$1,746,256</b>	<b>\$1,815,082</b>	<b>\$1,886,031</b>	<b>\$1,960,884</b>
<b>Operating Expense</b>					
Operation and Maintenance Expense [4]	\$1,057,772	\$1,231,251	\$1,283,843	\$1,339,247	\$1,397,178
<b>Total Operating Expense</b>	<b>\$1,057,772</b>	<b>\$1,231,251</b>	<b>\$1,283,843</b>	<b>\$1,339,247</b>	<b>\$1,397,178</b>
<b>Capital Expenditures</b>					
Capital Improvements [5]	\$214,800	\$221,200	\$257,700	\$234,800	\$375,900
Sanitary Fund Loan Payment [6]	-	265,100	265,100	265,100	265,100
<b>Total Capital Expenditures</b>	<b>\$214,800</b>	<b>\$486,300</b>	<b>\$522,800</b>	<b>\$499,900</b>	<b>\$641,000</b>
<b>Net Funds Available After Capital</b>	<b>(\$347,274)</b>	<b>\$28,705</b>	<b>\$8,439</b>	<b>\$46,884</b>	<b>(\$77,294)</b>
<b>Available Reserves</b>					
Beginning available reserves [7]	\$1,346,000	\$998,726	\$1,027,431	\$1,035,870	\$1,082,754
Ending available reserves	\$998,726	\$1,027,431	\$1,035,870	\$1,082,754	\$1,005,460
<b>Target Reserves [8]</b>	<b>829,000</b>	<b>916,000</b>	<b>942,000</b>	<b>970,000</b>	<b>999,000</b>
<b>Above (below) Target</b>	<b>\$169,726</b>	<b>\$111,431</b>	<b>\$93,870</b>	<b>\$112,754</b>	<b>\$6,460</b>
<b>Debt Service Coverage</b>					
Net Revenues	(\$132,474)	\$515,005	\$531,239	\$546,784	\$563,706
Annual Debt Service	-	265,100	265,100	265,100	265,100
<b>Debt Service Coverage [9]</b>	<b>n/a</b>	<b>194%</b>	<b>200%</b>	<b>206%</b>	<b>213%</b>

[1] Projected using the District's current rates.

[2] Additional revenue from proposed rate adjustments.

[3] Interest earnings on the average fund balance calculated at 2.0% annually.

[4] From Table 9.

[5] From Table 10.

[6] Repayment to Sanitary Fund for \$2,511,057 in borrowed funds at 1.0 percent interest with a 10 year term.

[7] The available beginning FY 23-24 working capital reserve balance provided by the District.

[8] Includes 6 months of O&M expense and \$300,000 for capital reserve.

[9] Minimum coverage is 100 percent.

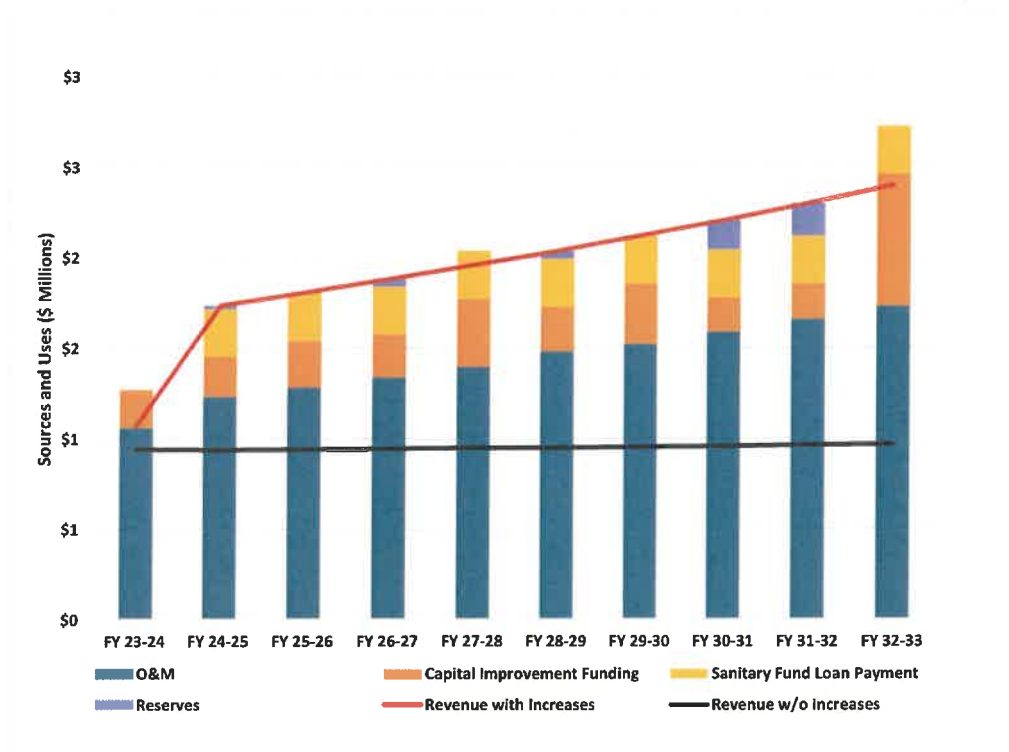


### Proposed Revenue Adjustments

Table 11 provides the annual revenue increases recommended to meet the financial planning criteria for a five-year Study period. The financial plan indicates that a 97.0 percent increase is recommended on June 1, 2024 followed by 4.0 percent increases on each January thereafter for the remainder of the Study period. The increases are necessary to meet the planning criteria discussed above.

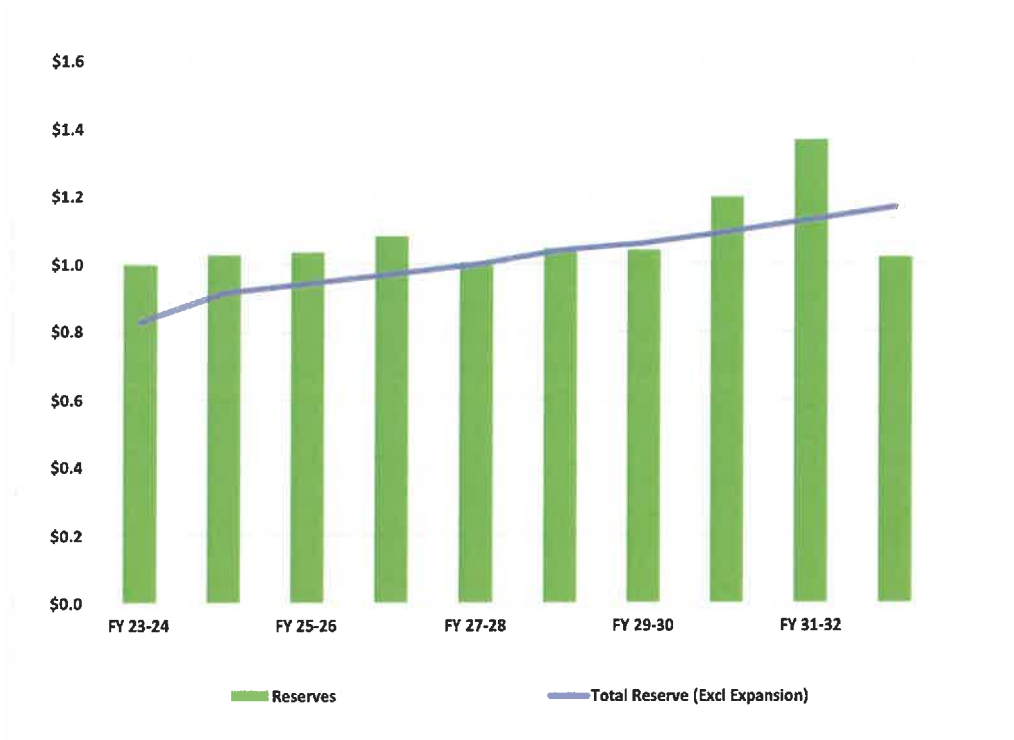
A graphical depiction of the revenue and revenue requirements from Table 11 are presented in Figure 1, however, is extended for a 10-year period. Revenue using the current rates is shown as the black line while revenue with revenue adjustments is shown as the red line. Figure 1 shows that the revenue increases outlined in Table 11 are necessary to meet annual O&M expenses, debt service, fund the CIP program, and maintain the operating reserve.

**Figure 1**  
**Water Financial Plan**  
**Comparison of Revenue with Revenue Requirements**



The District's water fund reserve position at the end of each fiscal year is provided in Figure 2. The green columns represent the end of year reserve balance while the purple line indicates the Target level for these reserves. The figure shows that the reserve balance is above the Target Reserve level throughout the ten-year period except for the tenth year.

**Figure 2**  
**Water Reserves versus Target Reserves**



## Water Cost of Service

This section of the report discusses the allocation of the water system's operating and capital costs for use in designing water rates. The agency responsible for imposing property-related fees in California is required to establish rates that create a nexus between the cost of providing service and the rates to be imposed.

### Industry Methodology

This Study uses methodologies from the American Water Works Association (AWWA) to allocate costs in an appropriate manner. AWWA is an industry trade organization providing guidance on operations and management of water utilities. AWWA provides general principles to assist agencies in the design of water rates such that they are consistent with local requirements while also recognizing state laws and legal framework. The AWWA guidelines have been used to conduct this Study and have been used in the design of the District's water rates while also following Proposition 218.

The annual costs of providing water service from the financial plan are allocated to cost components following industry standards provided in the AWWA Manual M1. The methodology provides the basis to design rates to generate adequate revenue to meet estimated annual revenue requirements from the financial plan. Costs are then recovered through fixed charges and variable charges to system users.

## Costs of Service to be Recovered from Water Rates

The annual cost of service consists of the O&M expenses and capital costs of the water system. O&M expenses include costs related to water supply, water distribution, operation and maintenance of the facilities, and general and administrative costs. Capital costs include annual capital replacement and debt service discussed in the financial plan. The annual costs are offset by other revenues received during the year, use of reserves that may occur to meet an annual deficit, and to account for a partial year revenue increase. Table 12 below identifies the costs to be recovered from water rates for the first two years of the financial plan.

Table 12  
Costs of Service to be Recovered From Water Rates

Description	FY 23-24	FY 24-25
<b>Operating Expense</b>		
Operation and Maintenance Expense	\$1,057,772	\$1,231,251
Subtotal	\$1,057,772	\$1,231,251
<b>Capital Spending</b>		
Capital Improvements	\$214,800	\$221,200
Sanitary Fund Loan Payment	0	265,100
Subtotal	\$214,800	\$486,300
<b>Met From Other Sources</b>		
Miscellaneous Income	(\$65,756)	(\$58,600)
Interest Income	(36,200)	(37,400)
Subtotal	(\$101,956)	(\$96,000)
<b>Adjustments</b>		
Adjustments for Annual Cash Balance	(\$347,274)	\$28,705
Adjustments to Annualize Rate Increase [1]	798,642	37,875
Subtotal	\$451,368	\$66,580
<b>Total Costs to be Recovered from Rates</b>	<b>\$1,621,984</b>	<b>\$1,688,131</b>

[1] Adjustment to annualize revenue from the partial year rate adjustment.

## Costs of Service to be Allocated

Costs of service are first allocated to water system cost component based on the operating characteristics and design of the water system facilities. Cost allocations consider the average quantity of water consumed as well as the peak rate at which water is consumed. The System is designed to serve average and peak demands, and costs that are related to serving average and peak demands are allocated in a manner such that they may be recovered appropriately.

The cost allocation components for water service for this Study are Groundwater, Delivery, Peaking, Meters and Services, Customer, and Groundwater Penalties. FY 2024-25 was used as the year for assigning the operating and capital costs of the water system to each of these parameters due to the wastewater loan repayment and groundwater penalties projected to first occur in this year. The total cost to be recovered from the users of the

water system for FY 2023-24 by cost component is presented in Table 13. The FY 23-24 cost allocation uses the percentages developed for the FY 24-25 cost allocation. Appendix A-2 provides a detailed cost allocation for FY 2024-25.

**Table 13**  
**Allocation of Water Revenue Requirements to Cost Component**

Description	FY 24-25				Customer		Groundwater
	Total Costs	Groundwater	Delivery	Peaking	Meters/Serv	Customer	Penalty
<b>Total Costs of Service</b>	\$1,688,131	\$205,901	\$679,566	\$400,799	\$174,034	\$72,718	\$155,114
Percent Allocation		12.2%	40.3%	23.7%	10.3%	4.3%	9.2%
<b>FY 23-24 Costs to be Recovered</b>	\$1,621,984	197,833	652,937	385,094	167,215	69,869	149,036

## Water Rate Design

The cost of service analyses described in the previous section provides the basis for the water rate design. The emphasis on the design of rates is to achieve fairness and ensure that each customer class pays its fair share of costs. Rates should be simple to administer, easy to understand, and comply with regulatory requirements. This section describes how water rates and charges are designed and includes the proposed schedule of water rates for implementation.

### Proposed Water Rate Structure

The water rate structure proposed includes designing fixed charges by meter size and developing a four-tiered variable rate structure for residential customers and a uniform variable rate for all other customers. The design of the fixed charges and variable charges are discussed below.

### Proposed Water Fixed Charges

The proposed fixed charges recover the Customer, Meters and Services, and 45 percent of Peaking costs of service that were identified in Table 13. The result is fixed charges that generate about 25 percent of total revenue from water rates. Customer costs are recovered on the number of bills issued. Meters and Services costs are recovered based on meter and service ratios while Peaking costs are recovered on meter capacity ratios, both ratios provided by AWWA. Table 14 below presents the design of the proposed monthly fixed charges for water customers.

**Table 14**  
**Design of Water Fixed Charges**

<b>Customer Service Cost</b>		<b>FY 23-24</b>
Customer Cost		\$69,869
Number of Bills		31,128
Customer Cost per Unit		\$2.24
<b>Meters and Services Cost</b>		<b>FY 23-24</b>
Meters and Services Cost		\$167,215
Number of Equivalent Meters & Services		33,460
Meters and Services Cost per Unit		\$5.00
<b>Peaking Costs</b>		<b>FY 23-24</b>
Peaking Costs Less Public Fire		173,292
Number of Equivalent Meters		36,452
Peaking Cost per Unit		\$4.75
Base Fixed Charge - 3/4" Meter		\$11.99

Fixed charges for meter sizes greater than 5/8-inch are increased through application of cost ratios as shown below in Table 15. The Meter and Service unit cost is increased through meter and service ratios while the Peaking unit costs are increased by applying the Meter Capacity ratios. The Customer unit cost is a charge per bill and does not increase with meter size. The charges are summed to provide the total monthly charge by meter size as shown in the last column of Table 15.

**Table 15**  
**Design of Water Fixed Charges by Meter Size**

<b>Meter Size</b>	<b>Meter &amp; Service Ratio</b>	<b>Meter &amp; Services Charge</b>	<b>Meter Capacity Ratio</b>	<b>Peaking Cost Less Fire Charge</b>	<b>Customer Charge</b>	<b>Total Monthly Charge</b>
inches						
5/8"	0.91	\$4.55	0.67	\$3.17	\$2.24	\$9.96
3/4"	1.00	\$5.00	1.00	\$4.75	\$2.24	\$11.99
1"	1.27	\$6.36	1.67	\$7.92	\$2.24	\$16.52
1.5"	1.64	\$8.18	3.33	\$15.83	\$2.24	\$26.25
2"	2.64	\$13.18	5.33	\$25.33	\$2.24	\$40.75
3"	10.00	\$50.00	10.67	\$50.67	\$2.24	\$102.91
4"	12.73	\$63.64	16.67	\$79.17	\$2.24	\$145.05
6"	19.09	\$95.45	40.00	\$190.00	\$2.24	\$287.69

The fixed charges for years beyond FY 2023-24 are increased by application of the percentages identified in the financial plan in Table 11 and are presented in Table 16. Residential customers are charged the same charge for meter sizes 5/8-inch through 1-inch to recognize that 1-inch is the minimum meter size for all new construction of SFR customers due to fire code.

**Table 16**  
**Proposed Water Monthly Fixed Charges**

	June 1, 2024	Jan 1, 2025	Jan 1, 2026	Jan 1, 2027	Jan 1, 2028
<b>Residential</b>					
<b>Meter Size</b>	<b>Fixed Charge (\$ per month)</b>				
5/8" thru 1"	\$11.99	\$12.47	\$12.97	\$13.49	\$14.03
1.5"	\$26.25	\$27.30	\$28.39	\$29.53	\$30.71
2"	\$40.75	\$42.38	\$44.08	\$45.84	\$47.67
3"	\$102.91	\$107.03	\$111.31	\$115.76	\$120.39
4"	\$145.05	\$150.85	\$156.88	\$163.16	\$169.69
6"	\$287.69	\$299.20	\$311.17	\$323.62	\$336.56
<b>Non-Residential</b>					
<b>Meter Size</b>	<b>Fixed Charge (\$ per month)</b>				
5/8"	\$9.96	\$10.36	\$10.77	\$11.20	\$11.65
3/4"	\$11.99	\$12.47	\$12.97	\$13.49	\$14.03
1"	\$16.52	\$17.18	\$17.87	\$18.58	\$19.32
1.5"	\$26.25	\$27.30	\$28.39	\$29.53	\$30.71
2"	\$40.75	\$42.38	\$44.08	\$45.84	\$47.67
3"	\$102.91	\$107.03	\$111.31	\$115.76	\$120.39
4"	\$145.05	\$150.85	\$156.88	\$163.16	\$169.69
6"	\$287.69	\$299.20	\$311.17	\$323.62	\$336.56

### Proposed Water Variable Charges

Variable charges are designed to recover the Groundwater, Delivery, a portion of Peaking, and Groundwater Penalty costs from Table 13. The method used and calculations are described below.

**Tier Definitions.** For this Study it is proposed that a four-tier rate structure be implemented for SFR and MFR customers. The tiered rate structure applies to both SFR and MF because they showed very similar use patterns.

Tier 1 is defined as consumption to provide basic indoor water use and is based on 4.0 persons per household (pph), using 55 gallons per capita per day (gpcd) resulting in a Tier 1 breakpoint of 10 HCF (4.0 pph x 55 gpcd x 365 days per year ÷ 748 gal per HCF ÷ 12 billing periods per year).

Tier 2 is defined as outdoor consumption for smaller SFR lots or consumption between 10 HCF and 20 HCF.

Tier 3 is outdoor consumption up to the average of the SFR summer peak demand which was determined from billing information to be 45 HCF.

Tier 4 is defined as outdoor water use above Tier 3.

For the other customer classes of Business, Church, Institution, and Other, these classes will have an individual uniform volume rate structure, however each also recognizes the peaking characteristics of each class in their variable rate.

**Groundwater Costs.** The District's water supply consists of groundwater well water. Groundwater costs include the electricity costs and chemical costs involved in groundwater production. All customers share equally in the cost of producing groundwater.



**Delivery Costs.** Delivery costs are operating and capital costs of the water system related to delivering water to all customers at an average rate of use. Delivery costs tend to vary with the total quantity of water consumed under average-load conditions. These costs are shared uniformly by all customers of the system.

**Peaking Costs.** Peaking costs are costs associated with meeting peak demand rates of use requirements of the water system and include operating and capital costs beyond that required for average rates of use. Water system facilities are designed to meet peak characteristics and are apportioned to customer classes based on their system use characteristics. Peaking costs may be assigned to tiers in a tiered-rate structure based on the customers within the tier that are causing the peak demand.

Peaking costs are first allocated to each customer class based on their total demand. Then for residential, peaking costs are allocated to the defined tiers based on the peaking factors that occur from customer use within the tiers based on the tier break points discussed above. Tier 1 is considered to have a peaking factor of 1.0, Tier 2 and Tier 3 have peaking factors that reflect the average use per customer within these tiers as a ratio to Tier 1.

Table 17 presents the residential unit rate components for Groundwater, Delivery, and 55 percent of Peaking costs from Table 13 that develop the tiered rate structure for SFR and MFR customers.

Table 17  
Design of Single-family and Multifamily Tiered Rate Structure

Groundwater Component of Variable Charge						
Line No.	Tier	Tier Range	Consumption	% Share	Groundwater Costs	Unit Rate \$/HCF
1	Tier 1	0 - 10	292,160	43.6%	\$82,640	\$0.28
2	Tier 2	11 - 20	173,106	25.9%	\$48,965	\$0.28
3	Tier 3	21 - 45	148,089	22.1%	\$41,889	\$0.28
4	Tier 4	46 - 45	55,992	8.4%	\$15,838	\$0.28
5			669,346	100.0%	\$189,332	
Delivery Component of Variable Charge						
Line No.	Tier	Tier Range	Consumption	% Share	Delivery Costs	Unit Rate \$/HCF
6	Tier 1	0 - 10	292,160	43.6%	\$272,750	\$0.93
7	Tier 2	11 - 20	173,106	25.9%	\$161,606	\$0.93
8	Tier 3	21 - 45	148,089	22.1%	\$138,251	\$0.93
9	Tier 4	46 - 45	55,992	8.4%	\$52,272	\$0.93
10			669,346	100.0%	\$624,879	
Peaking Component of Variable Charge						
Line No.	Tier	Tier Range	Peaking Factor	Weighted Consumption	Peaking Costs	Unit Rate \$/HCF
11	Tier 1	0 - 10	1.00	292,160	\$46,131	\$0.16
12	Tier 2	11 - 20	1.74	301,031	\$47,532	\$0.27
13	Tier 3	21 - 45	3.24	479,098	\$75,648	\$0.51
14	Tier 4	46 - 45	4.50	251,962	\$39,784	\$0.71
15				1,324,250	\$209,095	



**Summary of Proposed Residential Variable Water Rates.** Table 18 provides a summary of the variable rate components from Tables 17 applicable to the residential customer classification. The total rate shown in the last column is a sum of the three components developed in Table 17.

**Table 18**  
**Summary of Proposed Residential Variable Water Rates**

Tier	Range	Ground Supply	Delivery	Peaking	Total Rate
		Water	\$/HCF	\$/HCF	\$/HCF
Single-family and Multifamily Residential					
Tier 1	0 - 10 HCF	\$0.28	\$0.93	\$0.16	\$1.37
Tier 2	11 - 20 HCF	\$0.28	\$0.93	\$0.27	\$1.49
Tier 3	21 - 45 HCF	\$0.28	\$0.93	\$0.51	\$1.73
Tier 4	Over 45 HCF	\$0.28	\$0.93	\$0.71	\$1.93

For Non-Residential customers, it is proposed that these classes have an individual uniform volume rate structure that recognizes a blending of the three components of Groundwater, Delivery, and Peaking costs. However, each classification will recognize the individual peaking characteristics of its class in their variable rate. A uniform variable rate structure is recommended for Non-residential classes as they are intended to have separate irrigation meters to separate outdoor use from indoor use. Table 19 below provides the Non-residential variable rates.

**Table 19**  
**Design of Non-Residential Rate Structure**

Classification	Groundwater Costs	Delivery Costs	Peaking Costs <sup>[2]</sup>	Total Costs	Projected Volume	Total Rate \$/HCF
<b>Business, Church, Inst</b>	\$5,820	\$19,210	\$1,654	\$26,685	20,577	\$1.30
<b>Other Services</b>	\$2,681	\$8,848	\$1,053	\$12,582	9,478	\$1.33

**Groundwater Penalty Costs.** A groundwater pumping limitation has been established by the local Merced Irrigation-Urban Groundwater Sustainability Agency (MIUGSA). As of this writing, the limitation is determined as follows.

$$(1,142 \text{ District acres} - 137 \text{ ag acres}) * 1.1 \frac{AF}{acre} / yr = 1,106 \text{ AFY}$$

Using the billing information provided by the District, it was determined that water use above 20 HCF per month per dwelling unit or meter corresponds to the groundwater pumping subject to groundwater pumping penalties. Therefore, the proposed tiers for the groundwater penalty are Tier 1 = 0 to 20 HCF and Tier 2 = Over 20 HCF.

Groundwater penalties will be charged at the rate of \$250/AFY. Consumption characteristics of water system customers were analyzed to determine the amount of consumption in each of the two water rate tiers. The Groundwater Penalty costs are recovered in Tier 3 and above of the proposed residential tiered water rate structure and will be additional charge for non-residential meter using above 20 HCF per month. Table 20 provides the Groundwater penalty rate.

**Table 20**  
**Design of Groundwater Penalties Rate**

Tier	Percent Consumption in Tier	Consumption	Groundwater Penalty Allocation	Rate in Tier
Tier 1 - 0 to 20 HCF	65.6%	459,020		\$0.00
Tier 2 - Over 20	34.4%	240,381	149,036	\$0.62
	100.0%	699,401	\$149,036	

## Proposed Water Rates

Table 21 presents the proposed fixed charges and variable charges for the water system for the next five years. The proposed fixed and variable charges for June 1, 2024 are provided that were developed in the tables above, and the proposed fixed and variable charges for each January 1 through January 1, 2028.

**Table 21**  
**Proposed Water Monthly Fixed and Variable Charges**

	June 1, 2024	Jan 1, 2025	Jan 1, 2026	Jan 1, 2027	Jan 1, 2028
<b>Residential</b>					
<b>Meter Size</b>	<b>Fixed Charge (\$ per month)</b>				
5/8" thru 1"	\$11.99	\$12.47	\$12.97	\$13.49	\$14.03
1.5"	\$26.25	\$27.30	\$28.39	\$29.53	\$30.71
2"	\$40.75	\$42.38	\$44.08	\$45.84	\$47.67
3"	\$102.91	\$107.03	\$111.31	\$115.76	\$120.39
4"	\$145.05	\$150.85	\$156.88	\$163.16	\$169.69
6"	\$287.69	\$299.20	\$311.17	\$323.62	\$336.56
<b>Non-Residential</b>					
<b>Meter Size</b>	<b>Fixed Charge (\$ per month)</b>				
5/8"	\$9.96	\$10.36	\$10.77	\$11.20	\$11.65
3/4"	\$11.99	\$12.47	\$12.97	\$13.49	\$14.03
1"	\$16.52	\$17.18	\$17.87	\$18.58	\$19.32
1.5"	\$26.25	\$27.30	\$28.39	\$29.53	\$30.71
2"	\$40.75	\$42.38	\$44.08	\$45.84	\$47.67
3"	\$102.91	\$107.03	\$111.31	\$115.76	\$120.39
4"	\$145.05	\$150.85	\$156.88	\$163.16	\$169.69
6"	\$287.69	\$299.20	\$311.17	\$323.62	\$336.56
Classification/Tier	June 1, 2024	Jan 1, 2025	Jan 1, 2026	Jan 1, 2027	Jan 1, 2028
<b>Single-family Residential and Multifamily Residential</b>					
Tier 1 - 0 to 10 HCF	\$1.37	\$1.43	\$1.49	\$1.55	\$1.61
Tier 2 - 11 to 20 HCF	\$1.49	\$1.55	\$1.61	\$1.67	\$1.74
Tier 3 - 21 to 45 HCF	\$1.73	\$1.80	\$1.87	\$1.94	\$2.02
Tier 4 - Over 45 HCF	\$1.93	\$2.00	\$2.08	\$2.16	\$2.25
<b>Business, Church, Inst</b>	\$1.30	\$1.35	\$1.41	\$1.46	\$1.52
<b>Other Services</b>	\$1.33	\$1.38	\$1.44	\$1.49	\$1.55
<b>Groundwater Penalty [1]</b>	\$0.62	\$0.64	\$0.67	\$0.70	\$0.73

[1] Additional charge to the rate above. Applies to dwelling units/meters using over 20 HCF per month.

## Water Bill Impact Analysis

An impact analysis was performed to evaluate the change in SFR customer bills that would occur from the implementation of the proposed water rates for the June 2024 rate structure implementation. The impacts are provided in Table 22 below. For an SFR customer with a 3/4-inch meter size using the average consumption of 19 HCF monthly, the bill will increase from \$17.94 to \$29.10, an increase of \$21.16 or 117.9 percent. The bill increase of 117.9 percent is higher than the 97.0 percent stated in the water financial plan in Table 11 for the first increase due to the implementation of the new rate structure.

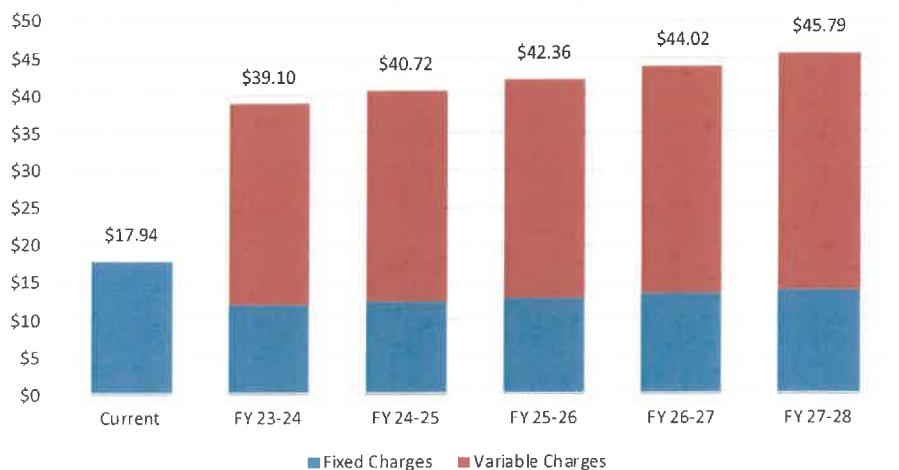
**Table 22**  
**Comparison of Current Single-family Residential Monthly Water Bill with 3/4-inch Meter Size**  
**with Proposed Bill Using June 2024 Water Rates**

Description	Use (HCF)	Current Bill			Proposed FY 23-24 Bill				
		Service Charge	Volume Charge	Current Bill	Service Charge	Volume Charge	Proposed Bill	Dollar Difference	Percent Change
	0	\$16.68	\$0.00	\$16.68	\$11.99	\$0.00	\$11.99	(\$4.69)	-28.1%
Very Low	5	\$16.68	\$0.00	\$16.68	\$11.99	\$6.85	\$18.84	\$2.16	12.9%
Low	10	\$16.68	\$0.00	\$16.68	\$11.99	\$13.70	\$25.69	\$9.01	54.0%
Median	14	\$17.94	\$0.00	\$17.94	\$11.99	\$19.66	\$31.65	\$13.71	76.4%
Average	19	\$17.94	\$0.00	\$17.94	\$11.99	\$27.11	\$39.10	\$21.16	117.9%
	30	\$19.35	\$0.00	\$19.35	\$11.99	\$52.10	\$64.09	\$44.74	231.2%
	40	\$20.92	\$0.00	\$20.92	\$11.99	\$75.60	\$87.59	\$66.67	318.7%
High	50	\$20.92	\$76.00	\$96.92	\$11.99	\$100.10	\$112.09	\$15.17	15.7%
Very High	100	\$20.92	\$152.00	\$172.92	\$11.99	\$227.60	\$239.59	\$66.67	38.6%

## Future Water Bill Impacts

Figure 3 provides how SFR water bills with a 3/4-inch meter using the monthly average consumption of 19 HCF will increase over time with implementation of the proposed water rates from Table 21.

**Figure 3**  
**Future Single-family Residential Monthly Water Bills**  
**with a 3/4-inch Meter at 19 HCF**



SFR Charges	Current	Proposed				
		FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28
Fixed Charges	\$17.94	\$11.99	\$12.47	\$12.97	\$13.49	\$14.03
Variable Charges	\$0.00	\$27.11	\$28.25	\$29.39	\$30.53	\$31.76
Total Charges	\$17.94	\$39.10	\$40.72	\$42.36	\$44.02	\$45.79
Dollar Change		\$21.16	\$1.62	\$1.64	\$1.66	\$1.77
Percent Change		117.9%	4.1%	4.0%	3.9%	4.0%

# Water Bill Survey

A water rate survey was conducted for neighboring communities to the District. Chart 1 compares the District SFR monthly water bill with those of neighboring communities at the same consumption of 19 HCF monthly with a ¾-inch meter. The rate survey includes rate schedules in effect July 2023.

Water bills for District are shown using the current rates and the proposed rates for implementation on June 1, 2024. The chart indicates that a District SFR customer with a ¾-inch meter using the average monthly consumption of 19 HCF will experience a bill that is in the lower to mid-range of the communities listed.

**Chart 1**  
**Single-family Residential Monthly Water Bills with a ¾-inch Meter Using 19 HCF**  
**For Rates in Effect July 2023**



Note: Above table uses water rates in effect July 2023.

# Wastewater Financial Planning

Financial planning for the wastewater enterprise includes identifying and projecting revenues and revenue requirements of the wastewater system for a five-year planning period. Estimates of revenue from various sources are compared with the projected revenue requirements. This comparison allows the review of the adequacy of existing revenue to meet annual obligations and provide the basis for revenue adjustments. New wastewater rates and charges are created to recover all of the District's annual operating and capital costs associated with the wastewater system.

This section discusses the current wastewater rates, user classifications, water consumption of wastewater customers, revenues and revenue requirements, planned capital improvement expenditures and financing sources, and proposed revenue adjustments.

## Current Wastewater Rates

The District's current wastewater rates are presented in Table 23. The current rates consist of fixed monthly charges for all customers. Customers are charged a fixed charge as a multiple of the SFR charge. Variable charges are charged to low, medium, and high strength commercial customers and Institutional customers.

Table 23  
Current Wastewater Rates

Rate Code	Customer Classification	Fixed Charge	Variable Charge
<b>Residential</b>		\$/mo/unit	\$/HCF
R1	Residential	\$49.16	
R10	Outside Residential	\$54.39	
<b>Commercial</b>			
C1, C3, C4, C5, C6, C10, G1, M1	Commercial Class	\$49.16	
C2	Commercial Class 2	\$49.16	\$2.41
C7	Commercial Class 7	\$49.16	\$3.90
C8	Commercial Class 8	\$49.16	\$2.63
C9	Commercial Class 9	\$49.16	\$4.05
<b>Industrial</b>			
ID1	Industrial Class 1	\$1,079.67	
<b>Institutional</b>			
IN1	Institutional Class 1	\$49.16	\$2.29
IN2	Institutional Class 2	\$794.96	\$1.31
IN3	Institutional Class 3	\$49.16	\$2.65
<b>School</b>			
S1 thru S6	Flat Sewer	\$49.16	
S1S	Surcharge 1 School	\$70.08	
S2S	Surcharge 2 School	\$59.78	
SC1	Surcharge 1	\$2.70	
SC2	Surcharge 2	\$1.80	
SS2	Surcharge School	\$59.78	



## Wastewater User Classifications

### Number of Customers

Wastewater customers are currently classified as residential and non-Residential. The non-residential classification is further separated into one of 10 separate classifications shown in Table 24. The number of billing units are also provided in the table.

**Table 24**  
**Historical and Projected Wastewater Customers by Classification**

Customer Class	Historical	Projected				
	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28
<b>Number of Accounts</b>						
Residential [1]	2,500	2,506	2,512	2,518	2,524	2,530
Commercial	52	52	52	52	52	52
Commercial Low Strength	3	3	3	3	3	3
Commercial Medium Strength	6	6	6	6	6	6
Commercial High Strength	6	6	6	6	6	6
Industrial	7	7	7	7	7	7
Institutional Class 1	1	1	1	1	1	1
Institutional Class 2	0	0	0	0	0	0
Institutional Class 3	4	4	4	4	4	4
Government	1	1	1	1	1	1
Outside District						
Residential	14	14	14	14	14	14
Res OD 2 Units	2	2	2	2	2	2
<b>Total Accounts</b>	<b>2,596</b>	<b>2,602</b>	<b>2,608</b>	<b>2,614</b>	<b>2,620</b>	<b>2,626</b>
<b>Number of Units</b>						
Residential [1]	3,182	3,190	3,198	3,206	3,214	3,222
Commercial	75	75	75	75	75	75
Commercial Low Strength	3	3	3	3	3	3
Commercial Medium Strength	8	8	8	8	8	8
Commercial High Strength	8	8	8	8	8	8
Industrial	22	22	22	22	22	22
Institutional Class 1	0	0	0	0	0	0
Institutional Class 2	0	0	0	0	0	0
Institutional Class 3	9	9	9	9	9	9
Government	1	1	1	1	1	1
Outside District						
Residential	15	15	15	15	15	15
Res OD 2 Units	4	4	4	4	4	4
<b>Total Number of Units</b>	<b>3,327</b>	<b>3,335</b>	<b>3,343</b>	<b>3,351</b>	<b>3,359</b>	<b>3,367</b>

[1] Accounts/units are forecast to increase based on the assumed growth rate of 0.25% annually.

### Water Sales Volumes of Wastewater Customers

Commercial low, medium, and high strength customers and Institutional customers are charged for consumption as well as a fixed charge. Table 25 provides the historical and projected water sales volumes of these customers by classification. Water sales volumes were projected by recognizing the growth in the number of these accounts and the prior history of total consumption. The water sales volumes of Commercial wastewater customers are used for calculation of projected wastewater revenue from these customers.



**Table 25**  
**Historical and Projected Water Sales Volume of Wastewater Customers Subject to**  
**Variable Charge (HCF)**

Description	Historical	Projected <sup>[1]</sup>				
	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28
Commercial Low Strength	10,219	10,219	10,219	10,219	10,219	10,219
Commercial Medium Strength	730	730	730	730	730	730
Commercial High Strength	1,781	1,781	1,781	1,781	1,781	1,781
Institutional Class 3	1,068	1,068	1,068	1,068	1,068	1,068
<b>Total Projected Consumption</b>	<b>13,798</b>	<b>13,798</b>	<b>13,798</b>	<b>13,798</b>	<b>13,798</b>	<b>13,798</b>

[1] Forecast based on application of FY 22-23 use per customer to the number of customers.

## Wastewater Financial Plan

The financial plan provides the means of analyzing the revenue and revenue requirements of the wastewater system and its impact on reserves as well as the ability to fund on-going O&M expenses and capital infrastructure requirements. This section of the Report discusses the projection of revenue, O&M expenses, capital improvement needs of the wastewater system and its financing, and revenue adjustments needed to maintain a sustainable wastewater enterprise.

### Revenues

The District receives wastewater operating and capital revenue from several sources. Operating revenue is received from rates and charges for wastewater service. Table 26 presents the projected fixed and variable rate revenue from current wastewater rates of the wastewater system. The revenue is projected by applying the current wastewater rates from Table 23 to the projected number of accounts and consumption volume.

**Table 26**  
**Projected Rate-Based Wastewater Revenue Using Current Rates**

Description	Projected				
	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28
<b>Wastewater Service Revenues</b>					
Fixed Charge Revenue [1]	\$1,967,383	\$1,972,102	\$1,976,822	\$1,981,541	\$1,986,260
Variable Consumption Revenue [2]	36,324	36,324	36,324	36,324	36,324
<b>Total Revenues From Current Rates</b>	<b>\$2,003,707</b>	<b>\$2,008,426</b>	<b>\$2,013,146</b>	<b>\$2,017,865</b>	<b>\$2,022,584</b>

[1] Current fixed charge multiplied by the number of customers/units.

[2] Current non-residential variable rates multiplied by projected non-residential water volumes.

## Miscellaneous Revenue

Miscellaneous revenues are received from various sources including repayment of a loan to the Water Fund, various fees, taxes, and other miscellaneous sources. Table 27 below provides the sources of miscellaneous revenue.

**Table 27**  
**Projected Wastewater Miscellaneous Revenue**

Description	Budget	Projected			
	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28
User Fees Calculated Rate	\$43,101	\$43,101	\$43,101	\$43,101	\$43,101
Repayment of Loan from Water Fund	-	265,100	265,100	265,100	265,100
Inspection Fees	26	25	25	25	25
Application Fees	52	50	50	50	50
Registration Fees	590	600	600	600	600
NSF Fees	496	500	500	500	500
Sewer Late Fee	7,496	7,500	7,500	7,500	7,500
Lien Release Fee	832	500	500	500	500
Web Processing Fees (\$1.50)	19,115	19,100	19,100	19,100	19,100
Blue Diamond - Coop	13,439	13,400	13,400	13,400	13,400
Interest - Passbook	311	0	0	0	0
Pasture Rent	1,984	2,000	2,000	2,000	2,000
Current Secured Taxes	37,101	37,800	38,600	39,400	40,200
Current Unsecured Taxes	4,667	4,800	4,900	5,000	5,100
HOPTR State Taxes (Merced Co Ad Volorem Taxes)	320	326	333	340	347
Delinquent Unsecured Taxes (Merced Co Ad Volorem Taxes)	60	61	62	63	64
SB813 Taxes (Merced Co Ad Volorem Taxes)	596	608	620	632	645
<b>Total Miscellaneous Revenues</b>	<b>\$130,210</b>	<b>\$395,471</b>	<b>\$396,391</b>	<b>\$397,311</b>	<b>\$398,232</b>

## Revenue Requirements

Revenue requirements of the wastewater system include O&M expense and capital improvement spending. Each of these items are discussed below.

### Wastewater Operation and Maintenance Expense

O&M expenses are an on-going obligation of the wastewater system and such costs are normally met from wastewater service revenue. O&M expenses include the cost to operate and maintain the wastewater collection system and lift stations. Wastewater treatment is provided by the City of Atwater who charges the District for that service. Costs also include technical services and other general and administrative expenses.

O&M expense has been projected recognizing the major expense categories of personnel services, electric power expense, chemicals, capital outlay, and all other expenses. O&M expenses are increased in future years following the inflation factors provided in Table 1. Table 28 provides a summary of the projected wastewater O&M expenses for the Study period.

**Table 28**  
**Projected Wastewater Operation and Maintenance Expense**

Description	Budget	Projected			
	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28
<b>Wastewater System</b>					
Salaries	\$67,449	\$70,147	\$72,952	\$75,871	\$78,906
Benefits	86,588	93,516	100,996	109,075	117,801
Lines, Lift Stations, Manholes	62,830	64,715	66,656	68,656	70,716
Gas and Electricity Office and Lift Stations	35,564	36,987	36,987	36,987	36,987
Sewage Treatment Expense	1,259,961	1,310,359	1,362,773	1,417,284	1,473,975
All Other	55,186	56,840	58,546	60,301	62,112
Subtotal Operations	\$1,567,578	\$1,632,564	\$1,698,910	\$1,768,174	\$1,840,497
<b>General and Administrative</b>					
Salaries	\$130,078	\$135,281	\$140,693	\$146,320	\$152,173
Benefits	55,355	59,784	64,567	69,732	75,310
Printing and Publication Expense	21,568	22,215	22,881	23,567	24,274
Office Equipment	7,828	8,063	8,305	8,554	8,811
CUSI, MAS90, Valey Technologic	7,972	8,211	8,457	8,711	8,972
Office Building Heating/Cooling	8,240	8,487	8,742	9,004	9,274
Payment to General Fund (Utility Tax)	2,100	2,163	2,228	2,295	2,364
Other G&A Expenses	201,529	202,684	205,989	209,385	212,873
Subtotal Capital Outlay	\$434,670	\$446,888	\$461,862	\$477,568	\$494,051
<b>Total Wastewater O&amp;M Expense</b>	<b>\$2,002,248</b>	<b>\$2,079,452</b>	<b>\$2,160,772</b>	<b>\$2,245,742</b>	<b>\$2,334,548</b>

### Wastewater Capital Improvement Program

The District has developed a wastewater CIP that lists capital expenditures for FY 2023-24 through FY 2027-28, presented in Table 29. Major projects include Myrtle lift station pumps and control panel, force main rehabilitation, sewer replacements, manhole repairs, and other replacements. Over this period the District projects that it would spend approximately \$470,000. The CIP is funded through operating revenues and reserves.

**Table 29**  
**Wastewater Capital Improvement Program**

Description	Fiscal Year				
	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28
<b>Capital Improvement Program (CIP) Projects [1]</b>					
Replace Myrtle LS Pumps & Control Panel	\$0	\$0	\$0	\$0	\$60,000
Replace Broken VCP Sewer Pipe	-	-	-	-	15,000
12" Force Main Rehabilitation (Metal Fittings)	\$0	\$0	\$0	\$0	\$7,500
Manhole Repair or Replacement	12,000	12,000	12,000	12,000	12,000
Replace Jet Truck	\$0	\$300,000	\$0	\$0	\$0
Office Improvement & Upgrades (1/2 cost)	-	-	25,000	-	-
Furniture (1/2 cost)	\$0	\$0	\$3,000	\$0	\$0
<b>Total Wastewater CIP</b>	<b>\$12,000</b>	<b>\$312,000</b>	<b>\$40,000</b>	<b>\$12,000</b>	<b>\$94,500</b>

## Wastewater Financial Plan

A financial plan has been prepared for the wastewater utility that includes the revenues and revenue requirements that were identified for the wastewater system. The financial plan, presented in Table 30, incorporates specific financial planning criteria to provide guidance to maintain the health of the wastewater utility on an on-going basis. The criteria included the following items.

- Generate positive levels of income in each year of the Study period
- Maintain the operating and capital reserves at or greater than target levels
- Maintain debt service coverage ratios at or greater than the minimum required
- Meet annual capital replacement spending

Table 30  
Wastewater Financial Plan

Description	Projected				
	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28
<b>Proposed Revenue Increase (May 1)</b>	<b>0.0%</b>				
<b>Proposed Revenue Increase (January 1)</b>		<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Sewer Fund</b>					
<b>Revenue</b>					
Rate-based Revenues, Existing Rates [1]	\$2,003,707	\$2,008,426	\$2,013,146	\$2,017,865	\$2,022,584
Total Additional Wastewater Revenue [2]	0	0	0	0	0
Miscellaneous Income	130,210	395,471	396,391	397,311	398,232
Interest Income [3]	54,339	60,002	60,901	65,747	69,616
<b>Total Revenue</b>	<b>\$2,188,256</b>	<b>\$2,463,899</b>	<b>\$2,470,438</b>	<b>\$2,480,923</b>	<b>\$2,490,432</b>
<b>Operating Expense</b>					
Operation and Maintenance Expense [4]	\$2,002,248	\$2,079,452	\$2,160,772	\$2,245,742	\$2,334,548
<b>Total Operating Expense</b>	<b>\$2,002,248</b>	<b>\$2,079,452</b>	<b>\$2,160,772</b>	<b>\$2,245,742</b>	<b>\$2,334,548</b>
<b>Capital Expenditures</b>					
Capital Improvements [5]	\$12,000	\$312,000	\$40,000	\$12,000	\$94,500
<b>Total Capital Expenditures</b>	<b>\$12,000</b>	<b>\$312,000</b>	<b>\$40,000</b>	<b>\$12,000</b>	<b>\$94,500</b>
<b>Net Funds Available After Capital</b>	<b>\$174,008</b>	<b>\$72,447</b>	<b>\$269,666</b>	<b>\$223,181</b>	<b>\$61,384</b>
<b>Available Reserves</b>					
Beginning available reserves [6]	\$2,619,000	\$2,793,008	\$2,865,455	\$3,135,121	\$3,358,302
Ending available reserves	\$2,793,008	\$2,865,455	\$3,135,121	\$3,358,302	\$3,419,686
Target Reserves [7]	\$1,101,000	\$1,140,000	\$1,180,000	\$1,223,000	\$1,267,000
Above (below) Target	\$1,692,008	\$1,725,455	\$1,955,121	\$2,135,302	\$2,152,686
<b>Debt Service Coverage</b>					
Net Revenues	\$196,008	\$394,447	\$319,666	\$245,181	\$165,884
Annual Debt Service	-	-	-	-	-
Debt Service Coverage [8]	n/a	n/a	n/a	n/a	n/a

[1] Projected using the existing rates.

[2] Additional revenue from rate adjustments.

[3] Interest earnings on the average fund balance calculated at 2.0% annually.

[4] From Table Table 33.

[5] From Table Table 34.

[6] The available FY 23-24 cash balance provided by the City. Includes operating and capital fund reserves

[7] Target reserve estimated at 180 days of operation and maintenance expense plus capital reserve.

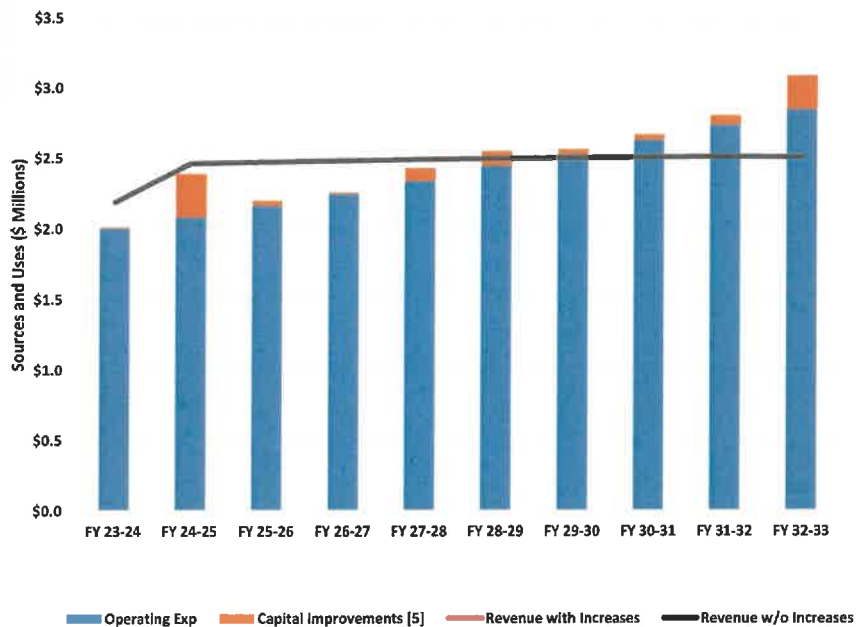
[8] Minimum coverage is 125 percent.

### Proposed Revenue Adjustments

Table 30 provides the annual revenue increases recommended to meet the financial planning criteria for the five-year Study period. The analyses indicated that the current level of revenue received is sufficient to meet future obligations and no revenue increases are recommended for the Study period.

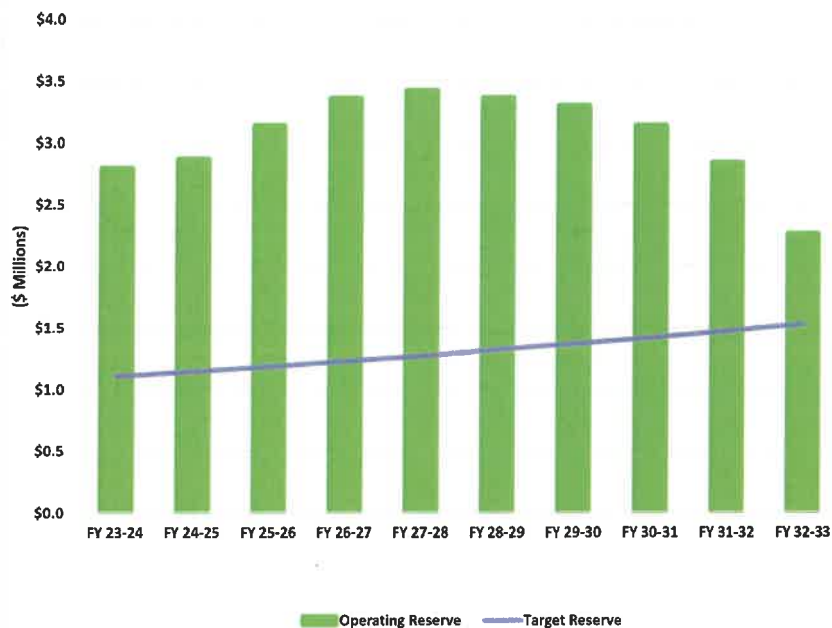
A graphical depiction of the revenue and revenue requirements from Table 28 is presented in Figure 4, however is extended for a 10-year period. Revenue using the current rates is shown as the black line. The figure shows that the revenue received from the current rates is sufficient to meet annual fund obligations, fund the CIP program, and maintain reserves for the next five years.

**Figure 4**  
**Wastewater Financial Plan**  
**Comparison of Revenue with Revenue Requirements**



The District's wastewater fund reserves position at the end of each fiscal year is provided in Figure 5. The green columns represent the end of year reserve balance while the purple line indicates the Target level for these reserves. The figure shows that the reserve balance increases in the early years of the 10-year period, however, slowly declines in the remaining years of the Study period while remaining above the Target level.

**Figure 5**  
**Wastewater Reserves versus Target Reserves**



## Proposed Wastewater Rates

From the results of the analyses from Table 30, since no revenue increases are required, the current rates are proposed to remain in place for the Study period. Table 23 provides the wastewater rates for implementation for the District.

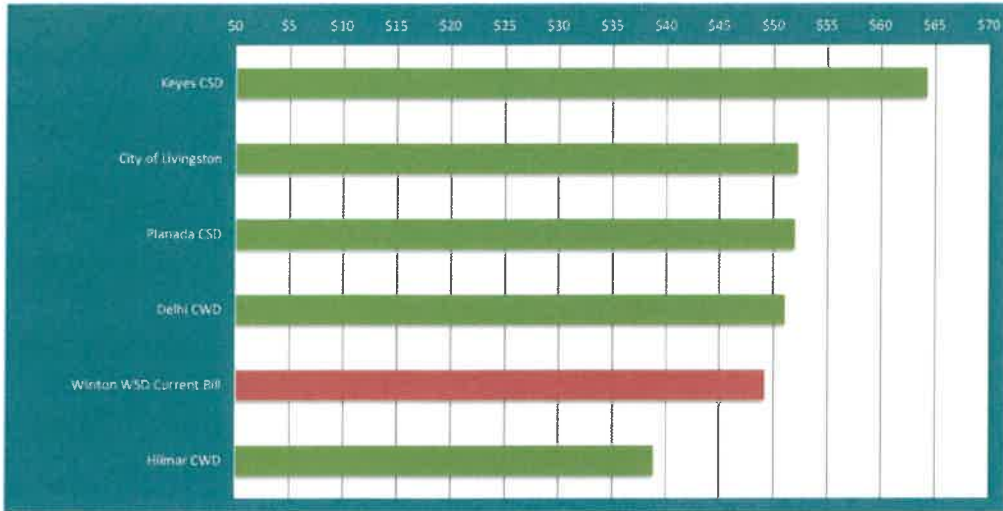
## Wastewater Rate Survey

A wastewater rate survey was conducted for neighboring communities to the District. Chart 2 compares the District's SFR monthly wastewater bill with those of neighboring communities at the same use. Wastewater bills were calculated assuming a 3/4" meter and a monthly use of 19 hundred cubic feet (HCF). The rate survey includes rate schedules in effect July 2023 and provides wastewater bills for the District using the current service charges.

From inspection of Chart 2, the District's proposed SFR monthly wastewater bill is among the lowest of the communities surveyed.



**Chart 2**  
**Comparison of Single-family Residential Monthly Wastewater Bills**  
For Rates in Effect July 2023



Note: Above table uses wastewater rates in effect July 2023.

# Appendix A

---

Water Financial Plan and Cost of Service Allocation is provided in Appendix A.

# Appendix A-1 Water Financial Plan Projected for 10-Year Period

Description	Projected									
	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28	FY 28-29	FY 29-30	FY 30-31	FY 31-32	FY 32-33
Proposed Revenue Increase (June 1)	97.0%									
Proposed Revenue Increase (January 1)		4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
<b>Water Fund</b>										
<b>Revenue</b>										
Revenues from Existing Water Rates [1]	\$823,342	\$823,961	\$824,689	\$825,306	\$826,034	\$826,651	\$827,268	\$828,010	\$828,627	\$829,244
Total Additional Water Sales Revenue [2]	-	826,295	893,093	962,525	1,034,950	1,110,219	1,188,580	1,270,351	1,355,296	1,443,729
Miscellaneous Income	65,756	58,600	58,600	58,600	58,600	58,600	58,600	58,600	58,600	58,600
Interest Income [3]	36,200	37,400	38,700	39,600	41,300	40,500	42,100	42,800	46,900	51,200
Total Revenue	\$925,298	\$1,746,256	\$1,815,082	\$1,886,031	\$1,960,884	\$2,035,970	\$2,116,548	\$2,199,761	\$2,288,423	\$2,382,773
<b>Operating Expense</b>										
Operation and Maintenance Expense [4]	\$1,057,772	\$1,231,251	\$1,283,843	\$1,339,247	\$1,397,178	\$1,480,930	\$1,521,773	\$1,588,881	\$1,659,678	\$1,733,426
Total Operating Expense	\$1,057,772	\$1,231,251	\$1,283,843	\$1,339,247	\$1,397,178	\$1,480,930	\$1,521,773	\$1,588,881	\$1,659,678	\$1,733,426
<b>Capital Expenditures</b>										
Capital Improvements [5]	\$214,800	\$221,200	\$257,700	\$234,800	\$375,900	\$248,700	\$333,800	\$190,000	\$195,800	\$730,000
Sanitary Fund Loan Payment [6]	-	265,100	265,100	265,100	265,100	265,100	265,100	265,100	265,100	265,100
Total Capital Expenditures	\$214,800	\$486,300	\$522,800	\$499,900	\$641,000	\$513,800	\$598,900	\$455,100	\$460,900	\$995,100
Net Funds Available After Capital	(\$347,274)	\$28,705	\$8,439	\$46,884	(\$77,294)	\$41,240	(\$4,125)	\$155,780	\$168,845	(\$345,753)
<b>Available Reserves</b>										
Beginning available reserves [7]	\$1,346,000	\$998,726	\$1,027,431	\$1,035,870	\$1,082,754	\$1,005,460	\$1,046,700	\$1,042,575	\$1,198,355	\$1,367,200
Ending available reserves	\$998,726	\$1,027,431	\$1,035,870	\$1,082,754	\$1,005,460	\$1,046,700	\$1,042,575	\$1,198,355	\$1,367,200	\$1,021,447
Target Reserves [8]	829,000	916,000	942,000	970,000	999,000	1,040,000	1,061,000	1,094,000	1,130,000	1,167,000
Above (below) Target	\$169,726	\$111,431	\$93,870	\$112,754	\$6,460	\$6,700	(\$18,425)	\$104,355	\$237,200	(\$145,553)
<b>Debt Service Coverage</b>										
Net Revenues	(\$132,474)	\$515,005	\$531,239	\$546,784	\$563,706	\$555,040	\$594,775	\$610,880	\$629,745	\$649,347
Annual Debt Service	-	265,100	265,100	265,100	265,100	265,100	265,100	265,100	265,100	265,100
Debt Service Coverage [9]	n/a	194%	200%	206%	213%	209%	224%	230%	238%	245%

[1] Projected using the District's current rates.

[2] Additional revenue from proposed rate adjustments.

[3] Interest earnings on the average fund balance calculated at 2.0% annually.

[4] From Table 9.

[5] From Table 10.

[6] Repayment to Sanitary Fund for \$2,511,057 in borrowed funds at 1.0 percent interest with a 10 year term.

[7] The available beginning FY 23-24 working capital reserve balance provided by the District.

[8] Includes 6 months of O&M expense and \$300,000 for capital reserve.

[9] Minimum coverage is 100 percent.

**Appendix A-2**  
**FY 2024-25 Allocation of Water Revenue Requirements to Cost Component**

Line No.	Description	Total FY 24-25	Groundwater	Delivery	Peaking	Customer Meters/Serv	Customer	Groundwater Penalty
1	Operations Salaries/Benefits							
	Salaries and Benefits	\$366,788	\$0	\$179,701	\$174,800	\$12,287	\$0	\$0
	Operations Services and Supplies							
2	Supplies	\$17,176	\$0	\$8,414	\$8,186	\$576	\$0	\$0
3	Chlorine and Disinfectants	8,127	8,127	-	-	-	-	-
4	Trans and Distr/Meters and Sensors	-	-	-	-	-	-	-
5	Gas and Electricity Wells	197,774	197,774	-	-	-	-	-
6	Groundwater Penalties	155,114	-	-	-	-	-	155,114
7	All Other	109,963	-	53,871	52,407	3,685	-	-
8	Total Services and Supplies	488,154	205,901	62,285	60,593	4,261	-	155,114
9	General and Administrative Expense	\$376,309	\$0	\$147,490	\$143,472	\$10,086	\$75,261	\$0
10	Total Operation and Maintenance Expense	\$1,231,251	\$205,901	\$389,476	\$378,865	\$26,634	\$75,261	\$155,114
	Capital Costs							
11	Capital Improvements [5]	\$221,200	\$0	\$38,158	\$34,742	\$148,300	\$0	\$0
14	Sanitary Fund Loan Payment [6]	265,100	-	265,100	-	-	-	-
18	Total Capital Costs	\$486,300	\$0	\$303,258	\$34,742	\$148,300	\$0	\$0
	Adjustments							
19	Revenue Offsets	(\$96,000)	\$0	(\$42,966)	(\$41,794)	(\$2,938)	(\$8,302)	\$0
20	Adjustments for Annual Cash Balance	28,705	-	12,846	12,497	879	2,483	-
21	Adjustments to Annualize Rate Increase	37,875	-	16,951	16,489	1,159	3,276	-
22	Total Adjustments	(\$29,420)	\$0	(\$13,169)	(\$12,808)	(\$900)	(\$2,543)	\$0
23	Total Cost of Service	\$1,688,131	\$205,901	\$679,566	\$400,799	\$174,034	\$72,718	\$155,114

### Appendix A-3

#### Accounts included in Multifamily Customer Classification

Account Number	Class	Number of Units	Account Number	Class	Number of Units	Account Number	Class	Number of Units	Account Number	Class	Number of Units
147-162-080	Res	2	147-200-010A	Res	29	146-131-040	Res	10	147-173-250	Res	4
147-161-140	Res	2	147-200-010B	Res	101	146-153-490	Res	3	147-173-260	Res	3
146-171-180	Res	2	147-174-280A	Res	3	146-070-180	Res	2	147-173-270	Res	3
146-142-010	Res	3	147-174-280B	Res	4	147-190-051	Res	4	147-111-440	Res	2
146-153-150	Res	2	146-132-070	Res	59	147-173-220	Res	3	146-173-020	Res	2
146-153-160	Res	2	146-132-07A	Res	2	146-152-120	Res	2	147-080-270	Res	2
146-082-190	Res	2	147-041-170	Res	2	146-152-130	Res	2	147-162-130	Res	9
146-141-210A	Res	9	147-173-370A	Res	3	146-141-160	Res	2	146-173-220	Res	19
147-161-090	Res	5	147-173-370B	Res	4	146-092-150	Res	3			
146-153-290	Res	3	147-080-110	Res	3	146-092-160	Res	2			
146-102-050	Res	3	147-174-110	Res	4	146-132-100	Res	8			
147-190-160	Res	3	146-131-160	Res	2	146-132-120	Res	2			
146-142-050	Res	2	146-131-200	Res	3	146-132-130	Res	2			
146-141-010	Res	5	146-131-200A	Res	5	146-132-140	Res	2			
147-173-240	Res	4	146-131-200B	Res	2	146-132-150	Res	4			
147-111-450	Res	21	146-131-200D	Res	2	146-142-130	Res	2			
146-142-060	Res	3	146-131-200F	Res	2	146-131-080B	Res	12			
146-154-170	Res	2	146-131-200G	Res	2	146-183-020	Res	4			
147-174-090	Res	3	146-131-200H	Res	4	146-141-130	Res	3			
147-230-130	Res	7	146-131-200I	Res	4	146-141-140	Res	3			
146-082-080	Res	10	146-131-200J	Res	4	146-141-120B	Res	4			
147-080-480	Res	2	146-131-200K	Res	3	146-141-120C	Res	2			
147-174-180	Res	4	146-131-200M	Res	3	146-141-120D	Res	8			
147-070-400	Res	2	146-131-200O	Res	5	146-141-120E	Res	12			
146-160-040	Res	2	146-131-200P	Res	2	147-174-140	Res	4			
146-143-100	Res	6	147-173-280	Res	4	147-174-150	Res	4			
147-174-130	Res	3	146-052-090	Res	13	147-111-390	Res	3			
146-143-070	Res	2	147-041-080	Res	2	147-111-450	Res	21			
146-153-070	Res	3	146-193-160	Res	9	146-143-110	Res	3			
146-091-180	Res	11	150-020-270	Res	2	143-172-120	Res	2			
146-091-170	Res	17	146-171-010	Res	2	146-153-040	Res	3			
146-173-200	Res	10	146-142-030	Res	3	146-062-050	Res	2			
146-102-070	Res	3	-041-130	Res	4	146-173-210	Res	6			
147-111-370	Res	6	146-153-480	Res	3	146-131-250	Res	3			
147-173-230	Res	3	147-041-130	Res	3	147-030-016	Res	2			

Appendix A-4  
Water Rate Codes and Definitions

Rate Code	Description
CO1	County Basin
M10	Multiple Water 10 Min
M11	Multiple Water 11 Min
M17	Multiple Water 17 Min
M22	Multiple Water 22 Min
M29	Multiple 29 Units
M43	Multiple Water 43 Min
M54	Multiple Water 54 Min
MU2	Multiple-1 W-1, 6 W2
MU3	Multiple-1 W-1, 11 W2, 1 W3
MU4	Multiple 4 W1, 1 W3
MU5	Multiple 7 W2, 3 W3
MU6	MULTIPLE 1W1,9W2,1W3
MU7	MULTIPLE 8 W1 4 W2
MUB	MULTIPLE 1-W1, 1-W3
W01	WATER ONLY 1 UNIT
W02	WATER ONLY 2 UNITS
W03	WATER ONLY 1 COMM UNIT
W1	RESIDENTIAL-INSIDE DISTRI
W12	6 INCH METER
W13	RES WATER 3 MINIMUMS
W14	RES WATER 4 MINIMUM
W16	RES WATER 6 MINIMUM
W1O	3/4 INCH METER
W2	MULTIPLE DWELLING UNITS
W21	RES WATER 21 MINIMUM
W23	MULTIPLE 3 MINIMUMS
W25	MULTIPLE WATER 5 MINIMUM
W29	MULTIPLE WATER 9 MINIMUM
W2M	RES WATER 2 MINIMUMS
W3	COMMERCIAL
W36	BUS WATER 6 MINIMUM
W7	1 1/2 INCH METER
W70	WATER ONLY - 1 UNIT 1.5" meter
W8	2 INCH METER
W9	3 INCH METER
WO1	WATER ONLY OD 1 UNIT
WO2	MULTIPLE OD 2 MINIMUM