



Report to:

# Mission Hills Community Services District

1550 Burton Mesa Boulevard  
Lompoc, CA 93436  
(805) 733-4366

## Water, Wastewater, and Street Sweeping Rate Study

Submitted By:

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FINANCIAL CONSULTING  
**TUCKFIELD &  
ASSOCIATES**  
MANAGEMENT CONSULTING

June 2022

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# Tuckfield & Associates

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June 6, 2022

Mr. Brad Hagemann  
General Manager  
Mission Hills Community Services District  
1550 Burton Mesa Boulevard  
Lompoc, CA 93436

Dear Mr. Hagemann:

I am pleased to present this Water, Wastewater, and Street Sweeping Rate Study (Study) report for the Mission Hills Community Services District (District). The rates presented in this report have been developed based on cost of service principles and industry methods that result in fair and equitable rates for the users of the systems.

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

- Generate positive levels of income in the Study period
- Maintain 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 the water, wastewater, and street sweeping rates and charges and cash reserves

This report presents the findings and recommendations for the financial plans and rates for the District's water, wastewater, and street sweeping systems. 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

## MISSION HILLS COMMUNITY SERVICES DISTRICT

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# Executive Summary

In September of 2020, the Mission Hills Community Services District (District) retained Tuckfield & Associates to conduct a comprehensive Water, Wastewater, and Street Sweeping Rate Study (Study). The objectives of the Study included determining water, wastewater, and street sweeping rates for FY 2021-22 through FY 2026-27 (the “Study Period”) by projecting revenues and revenue requirements for each system and determining the costs of providing service.

## Enterprise Financial Plans

Financial plans were developed for the water, wastewater, and street sweeping enterprises that projected revenue and revenue requirements (costs) for each system. The amount of revenue needed to meet the revenue requirements of each system was determined such that the revenue is increased annually by various percentages to create financially sustainable enterprises for each system. The revenue increases are necessary to maintain the financial health of each enterprise while funding the operation and maintenance (O&M) expenses, capital funding needs, debt service, and reserve requirements. Tables 11, 28, and 35 provide the financial plans for the water, wastewater, and street sweeping systems respectively.

## Proposed Water Rate Structure and Rates

The District’s current water rate structure was reviewed in relation to current industry practice, trends, and state of California guidelines. It is recommended that the current tiered rate structure be revised as discussed below.

For the Residential classification, it is recommended that a tiered rate structure be implemented with tier break points that reflect the current classification consumption patterns. It is proposed that Tier 1 be established as zero to 9 hundred cubic feet (HCF), reflecting current indoor water consumption for SFR customers as follows.

$$\text{Tier 1} = 4 \text{ pph} * 55 \text{ gpcd} * \frac{365 \text{ days}}{\text{year}} * \frac{1}{748 \text{ gal/HCF}} * \frac{1 \text{ year}}{12 \text{ months}} = \sim 9 \text{ HCF/month}$$

*pph* = persons per household

*gpcd* = gallons per capita per day

In addition, it is proposed that the Tier 2 break point be established as the summer peak average consumption for the Residential classification. Therefore, Tier 2 is 10 to 19 HCF. Tier 3 is proposed for all use over Tier 2. The recommended Residential Tier restructuring is provided in Table ES-1.

For the Commercial and Irrigation classifications, it is recommended that they have an individual class uniform volume rate structure where all consumption is charged at a uniform rate in dollars per HCF (\$/HCF). Outdoor consumption for Commercial customers should be captured in separate landscape irrigation meters.

Table ES-1  
Current and Proposed Tiers

Tier	Current Residential Tiers	Proposed Residential Tiers	Current Commercial Tiers	Proposed Commercial Tiers	Current Irrigation Tiers	Proposed Irrigation Tiers
Tier 1	All Use	0 - 9 units	All Use	All use	All Use	All use
Tier 2	All Use	10 - 19 units	All Use	All Use	All Use	All use
Tier 3	All Use	Over 19 units	All Use	All Use	All Use	All use

The proposed water rate structure and rates are provided in Table ES-2 for implementation beginning October 1, 2022 and each July 1 thereafter.

Table ES-2  
Current and Proposed Water Fixed and Variable Charges

	Current Rate	October 1, FY 22-23	July 1, FY 23-24	July 1, FY 24-25	July 1, FY 25-26	July 1, FY 26-27
Fixed Charge (\$ per month)						
Meter Size						
3/4"	\$43.52	\$42.01	\$44.32	\$46.76	\$49.33	\$52.04
3/4" x 1" (residential only)	\$48.56	\$42.01	\$44.32	\$46.76	\$49.33	\$52.04
1"	\$48.56	\$43.47	\$45.86	\$48.38	\$51.04	\$53.85
1.5"	\$55.28	\$45.42	\$47.92	\$50.56	\$53.34	\$56.27
2"	\$73.74	\$50.78	\$53.57	\$56.52	\$59.63	\$62.91
3"	\$209.79	\$90.25	\$95.21	\$100.45	\$105.97	\$111.80
4"	\$260.18	\$104.87	\$110.64	\$116.73	\$123.15	\$129.92
Variable Charge (\$ per HCF)						
<b>Residential</b>						
Tier 1 - 0 to 9 units	\$2.46	\$2.31	\$2.44	\$2.57	\$2.71	\$2.86
Tier 2 - 10 to 19 units	\$2.46	\$2.57	\$2.71	\$2.86	\$3.02	\$3.19
Tier 3 - 19 and Over	\$2.46	\$3.85	\$4.06	\$4.28	\$4.52	\$4.77
<b>Commercial</b>						
All Consumption	\$2.46	\$3.62	\$3.82	\$4.03	\$4.25	\$4.48
<b>Irrigation</b>						
All Consumption	\$2.46	\$3.96	\$4.18	\$4.41	\$4.65	\$4.91
<b>Hydrant Meter</b>						
All Consumption	\$2.46	\$6.67	\$7.04	\$7.43	\$7.84	\$8.27

## Water Bill Impacts

Table ES-3 presents the impacts to single-family residential (SFR) water bills from the implementation of the proposed October 1, 2022 water rates. For a SFR customer with a 3/4-inch meter using the average consumption of 13 HCF monthly, the bill will decrease from \$75.50 to \$73.08, a decrease of \$2.42, or -3.2 percent.

**Table ES-3**  
**Comparison of Current Single-family Residential Monthly Water Bill with 3/4-inch Meter with Proposed Bill Using October 2022 Water Rates**

Description	Use (HCF)	Current Bill			Proposed FY 22-23 Bill				
		Service Charge	Volume Charge	Current Bill	Service Charge	Volume Charge	Proposed Bill	Dollar Difference	Percent Change
	0	\$43.52	\$0.00	\$43.52	\$42.01	\$0.00	\$42.01	(\$1.51)	-3.5%
Very Low	5	\$43.52	\$12.30	\$55.82	\$42.01	\$11.55	\$53.56	(\$2.26)	-4.0%
Low	8	\$43.52	\$19.68	\$63.20	\$42.01	\$18.48	\$60.49	(\$2.71)	-4.3%
Median	11	\$43.52	\$27.06	\$70.58	\$42.01	\$25.93	\$67.94	(\$2.64)	-3.7%
Average	13	\$43.52	\$31.98	\$75.50	\$42.01	\$31.07	\$73.08	(\$2.42)	-3.2%
	20	\$43.52	\$49.20	\$92.72	\$42.01	\$50.34	\$92.35	(\$0.37)	-0.4%
High	30	\$43.52	\$73.80	\$117.32	\$42.01	\$88.84	\$130.85	\$13.53	11.5%
Very High	50	\$43.52	\$123.00	\$166.52	\$42.01	\$165.84	\$207.85	\$207.64	24.8%

Chart ES-1 has been prepared to compare the District’s average SFR water bill with those of other communities at the same consumption. The chart indicates that with the October 1, 2022 rates, a SFR customer with a 3/4-inch meter using the average monthly consumption of 13 HCF will experience a bill that is in the lower half of the communities listed.

**Chart ES-1**  
**Single-family Residential Monthly Water Bills with 3/4-inch Meter Using 13 HCF**



Note: Above table uses water rates in effect April 2022. Bills are not adjusted for property tax revenue received by an agency. Mission Hills Community Services District October 2022 bill is based on the rate structure and rates in Table ES-2.

## Proposed Wastewater Rate Structure and Rates

It is proposed that the current wastewater rate structure be maintained. Table ES-4 presents the wastewater rates for the next five years.

Table ES-4  
Current and Proposed Wastewater Fixed and Variable Charges

Rate Description	Current Rate	October 1, FY 22-23	July 1, FY 23-24	July 1, FY 24-25	July 1, FY 25-26	July 1, FY 26-27
<b>Monthly Fixed Charges</b>						
Residential	\$63.83	\$68.82	\$74.60	\$80.87	\$87.66	\$95.02
Commercial	\$63.83	\$68.82	\$74.60	\$80.87	\$87.66	\$95.02
School (per ADA)	\$1.17	\$1.24	\$1.34	\$1.46	\$1.58	\$1.71
<b>Variable Charges</b>						
Commercial	\$3.87	\$5.04	\$5.46	\$5.92	\$6.42	\$6.96

## Wastewater Bill Impacts

Table ES-5 presents the impacts to SFR wastewater bills from the implementation of the proposed October 1, 2022 wastewater rates. For a SFR customer with a 3/4-inch meter using the average consumption of 13 HCF monthly, the wastewater bill will increase from \$63.83 to \$68.82, an increase of \$4.99, or 7.8 percent.

Table ES-5  
Comparison of Current Single-family Residential Monthly Wastewater Bill with 3/4-inch Meter with Proposed Bill Using October 2022 Wastewater Rates

Description	Use (HCF)	Current Bill			Proposed FY 22-23 Bill				
		Service Charge	Volume Charge	Current Bill	Service Charge	Volume Charge	Proposed Bill	Dollar Difference	Percent Change
	0	\$63.83	\$0.00	\$63.83	\$68.82	\$0.00	\$68.82	\$4.99	7.8%
Very Low	5	\$63.83	\$0.00	\$63.83	\$68.82	\$0.00	\$68.82	\$4.99	7.8%
Low	10	\$63.83	\$0.00	\$63.83	\$68.82	\$0.00	\$68.82	\$4.99	7.8%
Median	10	\$63.83	\$0.00	\$63.83	\$68.82	\$0.00	\$68.82	\$4.99	7.8%
Average	13	\$63.83	\$0.00	\$63.83	\$68.82	\$0.00	\$68.82	\$4.99	7.8%
	20	\$63.83	\$0.00	\$63.83	\$68.82	\$0.00	\$68.82	\$4.99	7.8%
High	30	\$63.83	\$0.00	\$63.83	\$68.82	\$0.00	\$68.82	\$4.99	7.8%
Very High	50	\$63.83	\$0.00	\$63.83	\$68.82	\$0.00	\$68.82	\$4.99	7.8%

Chart ES-2 has been prepared to compare the District’s average SFR wastewater bill with a 3/4-inch meter using 13 HCF per month bill with those of other communities at the same consumption. The chart indicates that the District’s SFR wastewater bill is in the mid-range of the communities listed.

Chart ES-2  
Single-family Residential Monthly Wastewater Bills with 3/4-inch Meter Using 13 HCF



Note: Above table uses wastewater rates in effect March 2020. Bills are not adjusted for property tax revenue received by an agency. Cities of Santa Barbara and Lompoc assume 10 HCF per month. Mission Hills Community Services District October 2022 bill is based on the rate structure and rates in Table ES-4.

## Proposed Street Sweeping Rate Structure and Rates

The financial plan prepared for the street sweeping activity in Table 35 showed that no increase in the rate of \$1.32 per account is needed at this time.

# Introduction

The Mission Hills Community Services District (District) retained Tuckfield & Associates to conduct a comprehensive Water, Wastewater, and Street Sweeping Rate Study (Study) for its water, wastewater, and street sweeping enterprise systems. This Study develops pro forma statements of revenues and revenue requirements for each enterprise, determines the cost of providing service to customers, and designs new rates and charges for implementation.

## Objectives

The objectives of this Study are to (1) review the current and future financial status of each of the water, wastewater, and street sweeping 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, wastewater, and street sweeping rates that generate the required revenue while being fair and equitable for its customers.

## Scope of the Study

This Study includes the findings and recommendations of analyzing each of the water, wastewater, and street sweeping system's financial status and related CIP projects. 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 includes operation and maintenance (O&M) expense, routine capital outlays, CIP funding, 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 CIP and estimates of O&M expenses 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 years for prudent rate planning.

# Assumptions

Several assumptions were used to conduct the Study for the period FY 2021-22 to FY 2026-27. The assumptions included growth rates in customer accounts and related consumption, expense inflation factors, financing and other assumptions used for projecting revenue and expense and estimating debt service payments. 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>	
Residential	0.0%
All Other	0.0%
<b>Interest earnings on fund reserves (annual)</b>	<b>0.50%</b>
<b>Cost Escalation</b>	
Personnel Services [2]	5.0%
Benefits	2.5%
Electrical Power	3.0%
Chemicals	6.0%
All Other Operations & Maintenance	4.0%
Capital	4.0%

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

[2] Personnel Services growth in staffing, promotions, and inflation is 5.0% annually.

## Reserve Policy

The District has a reserve policy in Resolution No. 16-306 that provides for maintaining the District's fixed asset list and maintaining cash reserves for the water and wastewater systems. The reserves provide a means to meet unanticipated reductions in revenues, meet changes in the costs of providing services, provide for fixed asset repair and replacement, natural disaster needs, and other issues. The reserves also provide guidelines to maintain the financial health and stability of the enterprise funds. 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 flows. The target balance to be maintained is 20 percent of the annual operating expense budget which may increase annually with the District's future expense budgets.

### Capital Replacement Reserve

The purpose of the Capital Replacement Reserve is to fund future replacement of assets and CIP projects. The capital reserves are used to fund replacement of system assets as they reach their useful life or reach obsolescence. The reserve target has been established as 50 percent of the total value of accumulated depreciation which will increase annually as replacement assets and CIP are booked by District.

## Emergency Capital Reserve

The purpose of the Emergency Capital Reserve is to provide protection against catastrophic loss and to provide a cushion for inaccuracy in the long-range replacement program. The Target reserve is established at 5 percent of the value of capital fixed asset value. The value of capital assets will continue to increase as CIP is booked into fixed assets.

## Beginning Balances and Reserve Targets

As of June 30, 2021, the District's beginning reserve balances are listed in the table below. The reserves are used in developing the financial plans for the water and wastewater utility systems. The Target Reserves are also provided in the table.

Table 2  
June 30, 2021 Beginning Fund Balances and Reserve Targets

Reserve Type	Water		Wastewater	
	Reserve Balance	Reserve Target	Reserve Balance	Reserve Target
Operating Fund Reserve	\$246,400	\$246,400	\$211,500	\$211,500
Capital Replacement Reserve	\$2,145,679	\$1,853,000	\$1,309,487	\$1,086,900
Emergency Capital Reserve	\$131,000	\$131,000	\$194,000	\$194,000
Total	\$2,523,079	\$2,230,400	\$1,714,987	\$1,492,400

# Water Financial Planning

Financial planning for the water system includes identifying and projecting revenues and revenue requirements for a five-year planning period. This section discusses current water rates, current user classifications, projected revenues and revenue requirements, capital improvement expenditures and financing sources, and proposed revenue adjustments.

## Current Water Rates

Table 3 provides the current water rates of the water system. The current rate structure was established with the District's last rate study. The water rates consist of monthly fixed and variable charges to residential and non-residential customers. All customers are charged a monthly fixed charge that increases with their meter size. Additionally, all customers are charged for consumption using a uniform volume rate structure.

**Table 3**  
**Current Water Rates**

Meter Size	All Customers (\$/month)
3/4"	\$43.52
3/4" x 1" (residential only)	\$48.56
1"	\$48.56
1.5"	\$55.28
2"	\$73.74
3"	\$209.79
4"	\$260.18

Customer Class	Variable Rate (\$/HCF)
All Customers	\$2.46

## Water User Classifications

### Number of Customers

The District classifies water customers as Residential, Commercial, Irrigation, and Hydrant meter. Residential customers account for over 98 percent of the total customers served by the water system. No growth is projected for the Study Period. Table 4 provides the historical and projected average number of customers by classification.

**Table 4**  
**Historical and Projected Water Customers by Classification**

Customer Class	Historical	Projected					
	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27
<b>Number of Accounts</b>							
Residential	1,279	1,279	1,279	1,279	1,279	1,279	1,279
Commercial	11	11	11	11	11	11	11
Irrigation	8	8	8	8	8	8	8
Hydrant Meter	1	1	1	1	1	1	1
<b>Total Accounts</b>	<b>1,299</b>						
<b>Fire Protection</b>							
Public Fire Hydrants	106	106	106	106	106	106	106
Private Firelines	1	1	1	1	1	1	1
<b>Total Fire Protection</b>	<b>107</b>						

## Number of Water Meters

Table 5 provides a summary of the current and projected average number of water customers by meter size. The majority of customers have 3/4-inch meter (70 percent) installed at the service location. It is assumed that all new residential customers will have 3/4 x 1-inch meters (residential only meters) installed and this is the minimum size for new Residential meter installations for the District's customer base.

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

Description	Historical		Projected				
	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27
Active Water Meters/Accounts [1]							
3/4"	855	855	855	855	855	855	855
3/4" x 1" (residential only)	428	428	428	428	428	428	428
1"	5	5	5	5	5	5	5
1.5"	2	2	2	2	2	2	2
2"	6	6	6	6	6	6	6
3"	1	1	1	1	1	1	1
4"	2	2	2	2	2	2	2
<b>Total Meters</b>	<b>1,299</b>						

[1] Historical water accounts for FY20-21 were provided through District billing records.

## Water Sales Volumes

Table 6 provides the historical and projected water sales volume by customer classification. Water sales volumes were projected by recognizing the growth in the number of accounts and the FY 2020-21 water use per customer.

Table 6  
Historical and Projected Water Consumption (in HCF)

Description	Historical		Projected <sup>[1]</sup>				
	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27
Residential	206,972	206,972	206,972	206,972	206,972	206,972	206,972
Commercial	11,891	11,891	11,891	11,891	11,891	11,891	11,891
Irrigation	13,273	13,273	13,273	13,273	13,273	13,273	13,273
Hydrant Meter	79	79	79	79	79	79	79
<b>Total Projected Consumption</b>	<b>232,215</b>	<b>232,215</b>	<b>232,215</b>	<b>232,215</b>	<b>232,215</b>	<b>232,215</b>	<b>232,215</b>

[1] Forecast assumes that the use per customer from FY 20-21 and applied to the number of 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 operation and maintenance (O&M) expense and capital infrastructure requirements. Below is a discussion of the projection of revenue, O&M expense, 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 Water Fund receives revenue from rates and charges for water service and miscellaneous sources. 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 water system.

Table 7  
Projected Rate-based Water Revenue Using Existing Rates

Description	Projected					
	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27
<b>Water Service Revenues</b>						
Fixed Charges <sup>[1]</sup>	\$688,345	\$688,345	\$688,345	\$688,345	\$688,345	\$688,345
Variable Charges <sup>[2]</sup>	571,250	571,250	571,250	571,250	571,250	571,250
<b>Total Revenues From Current Rates</b>	<b>\$1,259,672</b>	<b>\$1,259,672</b>	<b>\$1,259,672</b>	<b>\$1,259,672</b>	<b>\$1,259,672</b>	<b>\$1,259,672</b>

[1] FY 21-22 and forecast revenue calculated by multiplying current water service rate by the number of projected meters.

[2] FY 21-22 and forecast revenue calculated by multiplying projected water sales by the current variable rates.

## Miscellaneous Revenue

Miscellaneous revenues are received from late fees and charges. Table 8 below provides sources of miscellaneous revenue.

Table 8  
Projected Water Miscellaneous Revenue

Description	Budget	Projected				
	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27
Late Fees/Charges	\$17,500	\$17,500	\$17,500	\$17,500	\$17,500	\$17,500
<b>Total Miscellaneous Revenues</b>	<b>\$17,500</b>	<b>\$17,500</b>	<b>\$17,500</b>	<b>\$17,500</b>	<b>\$17,500</b>	<b>\$17,500</b>

## Revenue Requirements

Revenue requirements of the water system include expenses associated with operating and maintaining the water system as discussed below.

### Operation and Maintenance Expense

O&M expenses are an on-going obligation of the water system and such costs are normally met from water service revenue. O&M 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 has been projected recognizing the major expense categories of personnel services, electric power expense, chemicals, all other expenses, and capital outlay. Personnel costs consist of salaries and benefits expense of those personnel directly involved with providing water service. Salaries and wages are projected to increase by 2.5 percent annually, while benefits expense is also projected to increase by 2.5 percent annually. Electric power expense is projected to increase annually by 3 percent while chemicals expense increases also by 3 percent annually. All other O&M expense is projected to increase by 2 percent annually. Capital outlay is projected to increase by 3 percent annually. Table 9 provides a summary of the O&M expenses for the Study period.

Table 9  
Projected Water Operation and Maintenance Expense

Description	Budget		Projected			
	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27
<b>Water Salaries and Benefits Expense</b>						
Salaries & Wages	\$367,282	\$385,646	\$404,928	\$425,175	\$446,434	\$468,755
Benefits	128,033	131,234	134,515	137,878	141,324	144,858
All Other	11,500	11,788	12,082	12,384	12,694	13,011
Subtotal	\$506,815	\$528,668	\$551,525	\$575,437	\$600,452	\$626,624
<b>Water Operations and Maintenance</b>						
Operating Supplies	\$19,683	\$20,470	\$21,289	\$22,141	\$23,027	\$23,948
Chemicals	35,100	36,504	37,964	39,483	41,062	42,704
Contractual Services	46,800	48,672	50,619	52,644	54,750	56,940
Professional Services	81,000	22,100	22,984	23,903	24,859	55,853
Monitoring (Lab Samples)	14,400	14,976	15,575	16,198	16,846	17,520
Utilities	93,500	96,305	99,194	102,170	105,235	108,392
Government Fees	41,318	42,971	44,690	46,478	48,337	50,270
Repairs and Maintenance	140,000	145,599	151,422	157,479	163,777	170,329
All Other	73,480	76,419	79,475	82,654	85,960	89,398
Subtotal	\$545,281	\$504,016	\$523,212	\$543,150	\$563,853	\$615,354
Less Allocated Street Sweeping Costs	(9,259)	(9,444)	(9,633)	(9,826)	(10,022)	(10,223)
<b>Total Water System O&amp;M Expense</b>	<b>\$1,042,837</b>	<b>\$1,023,240</b>	<b>\$1,065,104</b>	<b>\$1,108,761</b>	<b>\$1,154,283</b>	<b>\$1,231,755</b>

## Water Capital Improvement Program

The District has developed a CIP shown in Table 10 that lists capital expenditures for FY 2021-22 through FY 2026-27. Over this period the District projects that it would spend about \$3.67 million on various capital projects. The CIP is planned to be funded from District reserves and rate revenue.

Table 10  
Water Capital Improvement Program

Description	Budget		Projected			
	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27
<b>Current Capital Improvement Program (CIP) Projects [1]</b>						
<b>Distribution</b>						
Valve Replacement Project	\$20,000	25,000	25,000	20,000	50,000	50,000
Upgrade Cla-Vals - Pressure Reducing Stations	15,000	-	15,000	-	15,000	-
Meter Replacement Programs	75,000	30,000	50,000	50,000	50,000	-
Water Main Replacement	-	-	-	-	-	150,000
SCADA System	75,000	-	15,000	15,000	15,000	15,000
<b>Equipment</b>						
Backup Generator	-	-	40,000	-	-	-
Purchase Company Vehicle GM - 50%	15,000	-	-	-	-	-
Replace Dump Truck	-	-	-	-	65,000	-
Replace Ops Truck	-	-	-	40,000	-	-
Case Tractor / Backhoe	-	60,000	-	-	-	-
<b>Storage</b>						
Tank #1 - East (Repair)	30,000	350,000	25,000	-	-	-
Tank #2 - West (Initial Repair)	30,000	150,000	25,000	-	-	-
<b>Treatment</b>						
Water Treatment Plant Filter Media	-	-	36,000	-	-	50,000
<b>Wells &amp; Pumping</b>						
Replace or Rebuild Wakesha Engine	-	-	-	-	60,000	-
Well #6 Rehabilitation	-	85,000	-	70,000	-	-
Well #7 Rehabilitation	150,000	-	-	-	-	-
Well #5 Rehabilitation	-	-	-	-	-	80,000
Contingency	41,000	70,000	23,100	19,500	25,500	34,500
<b>Total Water CIP</b>	<b>\$451,000</b>	<b>\$770,000</b>	<b>\$254,100</b>	<b>\$214,500</b>	<b>\$280,500</b>	<b>\$379,500</b>

[1] CIP Source: FY 21-22 District CIP document.

## Water Financial Plan

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

- Generate positive levels of income in each year of the Study period
- Fund the capital improvement program requirements
- Maintain the operating and capital reserves at or greater than target levels
- Fund the required debt service reserves
- Maintain debt service coverage ratios at or greater than the minimum required

Table 11  
Water Financial Plan

Description	Projected					
	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27
<b>Proposed Revenue Increase (October 1)</b>		5.5%				
<b>Proposed Revenue Increase (July 1)</b>			5.5%	5.5%	5.5%	5.5%
<b>Water Operations</b>						
<b>Revenue</b>						
Revenues from Existing Water Rates [1]	\$1,259,672	\$1,259,672	\$1,259,672	\$1,259,672	\$1,259,672	\$1,259,672
Total Additional Water Sales Revenue [2]	-	46,188	142,374	219,487	300,841	386,669
Miscellaneous Income [3]	17,500	17,500	17,500	17,500	17,500	17,500
Interest Income [4]	14,365	14,315	10,875	11,417	12,598	13,648
<b>Total Revenues</b>	<b>\$1,291,537</b>	<b>\$1,337,675</b>	<b>\$1,430,421</b>	<b>\$1,508,076</b>	<b>\$1,590,611</b>	<b>\$1,677,489</b>
<b>Revenue Requirements</b>						
Operation and Maintenance Expense	\$1,052,096	\$1,032,684	\$1,074,737	\$1,118,587	\$1,164,305	\$1,241,978
General Expense Allocation [5]	(9,259)	(9,444)	(9,633)	(9,826)	(10,022)	(10,223)
Capital Replacement Transfer	189,363	200,400	203,400	210,400	218,200	232,100
<b>Total Revenue Requirements</b>	<b>\$1,232,200</b>	<b>\$1,223,640</b>	<b>\$1,268,504</b>	<b>\$1,319,161</b>	<b>\$1,372,483</b>	<b>\$1,463,855</b>
<b>Net Funds Available Before Capital</b>	<b>\$59,337</b>	<b>\$114,035</b>	<b>\$161,917</b>	<b>\$188,915</b>	<b>\$218,128</b>	<b>\$213,634</b>
<b>Water Capital</b>						
<b>Capital Sources of Funds</b>						
Capital Replacement Transfer	\$189,363	\$200,400	\$203,400	\$210,400	\$218,200	\$232,100
Total Capital Sources	\$189,363	\$200,400	\$203,400	\$210,400	\$218,200	\$232,100
<b>Capital Uses of Funds</b>						
Capital Improvement Program [6]	\$451,000	\$770,000	\$254,100	\$214,500	\$280,500	\$379,500
Total Capital Improvement Spending	\$451,000	\$770,000	\$254,100	\$214,500	\$280,500	\$379,500
<b>Net Funds After Capital</b>	<b>(\$202,300)</b>	<b>(\$455,565)</b>	<b>\$111,217</b>	<b>\$184,815</b>	<b>\$155,828</b>	<b>\$66,234</b>
<b>Available Operating and Capital Reserves</b>						
Beginning available reserves [7]	\$2,523,079	\$2,320,779	\$1,865,214	\$1,976,431	\$2,161,246	\$2,317,074
Additions (reductions)	(202,300)	(455,565)	111,217	184,815	155,828	66,234
Ending available reserves	2,320,779	1,865,214	1,976,431	2,161,246	2,317,074	2,383,308
<b>Target Reserves [8]</b>	<b>2,230,400</b>	<b>2,348,700</b>	<b>2,486,200</b>	<b>2,600,800</b>	<b>2,716,700</b>	<b>2,847,100</b>
<b>Above (below) Target</b>	<b>\$90,379</b>	<b>(\$483,486)</b>	<b>(\$509,769)</b>	<b>(\$439,554)</b>	<b>(\$399,626)</b>	<b>(\$463,792)</b>

[1] Projected using the existing rates.

[2] Includes late fees, miscellaneous, and other income.

[3] Includes capacity charges and late fees.

[4] Interest earnings on the average fund balance calculated at 0.50%.

[5] Excludes street sweeping expenses.

[6] From Table 10.

[7] The available beginning FY 21-22 cash balance provided by District.

[8] Target reserves Includes Operation and Maintenance, Capital Replacement, and Emergency Capital.

### Proposed Revenue Adjustments

Table 11 provides the annual revenue increases recommended to meet the financial planning criteria for the five-year Study Period. The financial plan indicates that annual revenue increases of 5.5 percent are recommended beginning on October 1, 2022 and then on each July 1 for the remainder of the Study Period.

A graphical depiction of the revenue and revenue requirements from Table 11 are presented in Figure 1. 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 implementation of the revenue increases will allow the water enterprise to meet annual O&M expense, capital requirements, and reserve contributions which are represented by the columns in the figure.

Figure 1  
Water Financial Plan  
Comparison of Revenue with Annual Obligations

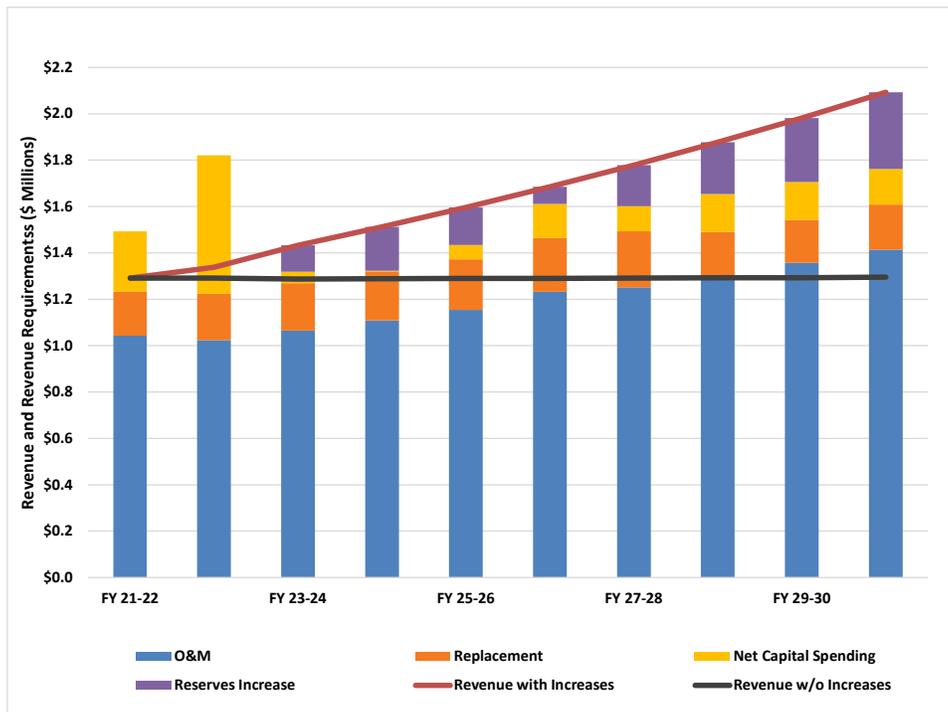
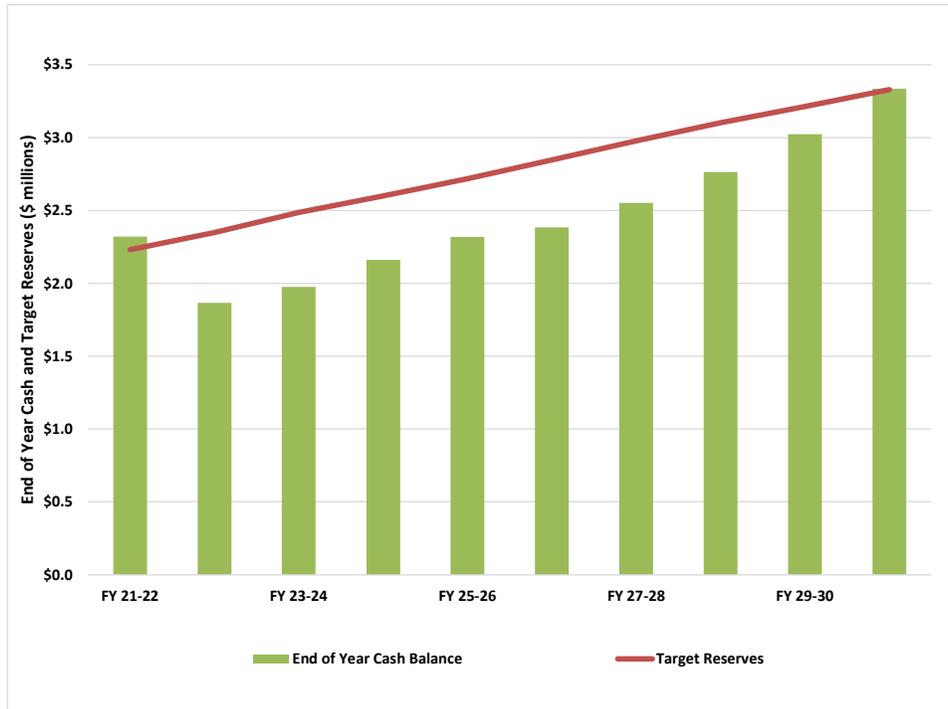


Figure 2 provides a comparison of the projected water system cash reserves with the Target Reserve. The green column represents the cash reserve balance at the end of year (including operating and capital reserves) while the red line indicates the Target Reserve level in total for these reserves. The figure shows that the cash reserve balance increases to meet the Target reserve level in later years assuming implementation of the annual increases from Table 11.

Figure 2  
Comparison of Water System Cash Reserves with 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 that provides 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 as well as recognizing state laws. 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 and the recent San Juan Capistrano court decision.

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

## Costs of Service to be Allocated

The annual water 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 capital improvement program funding discussed in the financial plan.

Costs 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 water 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 Direct Fire Protection. The 5-year average of District expenses from FY 2021-22 through FY 2025-26, together with average capital costs and revenue offsets, was used for assigning the operating and capital costs of the water system to each of these parameters. The total cost to be recovered from the users of the water system by cost component for FY 2022-23 is presented in Table 12. Appendix A-1 provides a detailed allocation.

Table 12  
Allocation of Revenue Requirements to Cost Components

Year	Total Revenue Requirement	Groundwater	Delivery	Peaking	Customer		Direct Fire Protection
					Meters/Serv	Customer	
FY 22-23	\$1,328,954	\$119,170	\$297,319	\$768,288	\$86,451	\$37,088	\$20,638

## Water Rate Design

The cost of service analyses described in the previous section provides the basis for water rate design. The intent of the rate design 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 recommended water rate structure maintains the fixed charges by meter size structure, however modifies the current uniform volume charge rate structure. The variable rate structure for Residential customers is modified to a tiered rate structure while Commercial and Irrigation customers is modified to an individual class uniform volume rate structure. The design of the water fixed and variable charges is discussed below.

### Proposed Fixed Charges

It is proposed that the current fixed charges by meter size structure be maintained. The proposed fixed charges recover Customer and Meters and Services costs identified from Table 12 and allocated Public Fire Protection

costs. Customer and Public Fire Protection costs are recovered based on the number of bills issued. Meters and Services costs are recovered based on meter and service ratios provided by AWWA. The allocation of costs to Public Fire Protection is provided in Table A-3. Private Fire Protection charges are calculated and provided in Appendix A-4 and A-5.

Tables 13 below presents the design of the proposed monthly fixed charges for customers for FY 2022-23 for a 3/4-inch meter. The current fixed charges generate about 56 percent of revenue from water rates. The proposed fixed charges generate approximately 47 percent of the revenue from water rates.

**Table 13  
Design of Fixed Charges**

<b>Customer Service Cost</b>		<b>FY 22-23</b>
Customer Cost		\$37,088
Public Fire Protection		534,275
Customer Cost		<u>\$571,363</u>
Number of Bills		15,588
Customer Cost per Unit		<u>\$36.65</u>
<b>Meters and Services Cost</b>		<b>FY 22-23</b>
Meters and Services Cost		\$86,451
Number of Equivalent Meters & Services		16,127
Meters and Services Cost per Unit		<u>\$5.36</u>
Monthly 3/4" Fixed Charge		<u>\$42.01</u>

Fixed charges for meter sizes greater than 3/4-inch are increased as shown below in Table 14 for FY 2022-23. The Meter and Services charge increase with meter and service ratios while the Customer and Public Fire Protection charges do not increase with meter size.

**Table 14  
Design of Fixed Charges by Meter Size  
FY 22-23**

<b>Meter Size</b>	<b>Meter &amp; Service Ratio</b>	<b>Meter &amp; Services Charge</b>	<b>Public Fire Protection</b>	<b>Customer Charge</b>	<b>Total Monthly Charge</b>
inches					
3/4"	1.00	\$5.36	\$34.27	\$2.38	\$42.01
3/4" x 1"	1.00	\$5.36	\$34.27	\$2.38	\$42.01
1"	1.27	\$6.82	\$34.27	\$2.38	\$43.47
1.5"	1.64	\$8.77	\$34.27	\$2.38	\$45.42
2"	2.64	\$14.13	\$34.27	\$2.38	\$50.78
3"	10.00	\$53.60	\$34.27	\$2.38	\$90.25
4"	12.73	\$68.22	\$34.27	\$2.38	\$104.87

## Proposed Variable Charges

Variable charges are designed to recover the costs that were allocated to the Groundwater, Delivery, and Peaking components shown in Table 12. Consumption and peaking characteristics of water system customers were analyzed to allocate costs to customer classification as well as between each tier. The groundwater, delivery, and peaking costs are discussed below.

### Groundwater Supply Costs

The District's water supply costs relate to pumping groundwater. These costs consist of electricity, chemicals, and related capital costs that are shared uniformly by all customers of the water system.

### 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 include a portion of distribution system, reservoirs, treatment, and other related to water consumption under average demand conditions. These costs are also shared uniformly by all customers of the system.

### Peaking Costs (Max Day and Max Hour)

Peaking costs are costs associated with meeting peak rates of demand 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 demand requirements and are apportioned to customer classes based on their system use characteristics. Peaking costs include a portion of distribution, reservoirs, utilities, and other costs to meet peak demands and may be assigned to customer classifications and to tiers in a tiered-rate structure based on the customers within the tier that are causing the peak demand.

## Proposed Residential Variable Rates

It is proposed that the current uniform volume rate structure be modified to a three-tier rate structure for Residential customers and that individual uniform volume rate structures (no tiers) be established for Commercial and Irrigation customers.

For Residential customers, Tier 1 is defined as consumption to provide basic indoor water use. It is based on 4 persons per household (pph) using 55 gallons per capita per day (gpcd) resulting in a Tier 1 breakpoint of 9 HCF ( $4 \text{ pph} \times 55 \text{ gpcd} \times 365 \text{ days per year} \div 748 \text{ HCF}/1,000 \text{ gal} \div 12 \text{ billing periods per year}$ ). Tier 2 is defined as consumption related to outdoor water use up to the average SFR summer peak demand which was determined from billing information to be 19 HCF. Tier 3 is defined as water use above Tier 2.

Table 15 provides a summary of the variable rate components applicable to the Residential classification consisting of Groundwater, Delivery, and Peaking costs. Groundwater and Delivery costs are allocated to tiers based on water consumption in each tier. Peaking costs are allocated to the defined tiers based on the peaking factors that occur from customers 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 15  
Design of Residential Tiered Rate Structure  
FY 22-23

Groundwater Supply Component					
Tier	Tier Range	Consumption	% Share	Groundwater Costs	Unit Rate
Tier 1	0 - 9	106,066	51.2%	\$54,432	\$0.51
Tier 2	10 - 19	49,751	24.0%	\$25,532	\$0.51
Tier 3	Over 19	51,155	24.7%	\$26,252	\$0.51
		206,972	100.0%	\$106,216	

Delivery Component					
Tier	Tier Range	Consumption	% Share	Delivery Costs	Unit Rate
Tier 1	0 - 9	106,066	51.2%	\$135,803	\$1.28
Tier 2	10 - 19	49,751	24.0%	\$63,699	\$1.28
Tier 3	Over 19	51,155	24.7%	\$65,497	\$1.28
		206,972	100.0%	\$264,999	

Peaking Component					
Tier	Tier Range	Peaking Factor	Weighted Consumption	Peaking Costs	Unit Rate
Tier 1	0 - 9	1.00	106,066	\$54,699	\$0.52
Tier 2	10 - 19	1.51	75,120	\$38,740	\$0.78
Tier 3	Over 19	4.00	204,592	\$105,509	\$2.06
			385,777	\$198,947	

The sum of the three component's unit rates equals the water rates in the tiers for the Residential classification. Table 16 provides the resulting water rate by tier from summing the Groundwater, Delivery, and Peaking unit rates. Residential customers pay for the same Groundwater and Delivery costs per HCF, however they pay for their individual peaking requirements and associated costs depending on which tier their consumption falls into.

Table 16  
Residential Tiered Water Rates  
FY 22-23

Description	Range	Groundwater Rate	Delivery Rate	Peaking Rate	Total Rate
	HCF	\$/HCF	\$/HCF	\$/HCF	\$/HCF
Tier 1	0 - 9	\$0.51	\$1.28	\$0.52	\$2.31
Tier 2	10 - 19	\$0.51	\$1.28	\$0.78	\$2.57
Tier 3	Over 19	\$0.51	\$1.28	\$2.06	\$3.85

## Proposed Non-Residential Variable Rates

It is proposed that the Commercial and Irrigation 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 Commercial classes as they are intended to have separate irrigation meters. Table 17 below provides the non-residential variable rates.

Table 17  
Design of Non-Residential Variable Rates  
FY 22-23

Description	Groundwater Costs	Delivery Costs	Peaking Costs	Total Costs	Water Volume	Uniform Rate
	[1]	[2]	[3]	sum (1, 2, 3)	HCF	\$/HCF
Commercial	\$6,102	\$15,225	\$21,670	\$42,997	11,891	\$3.62
Irrigation	\$6,812	\$16,994	\$28,803	\$52,609	13,273	\$3.96
Hydrant Meter	\$41	\$101	\$385	\$527	79	\$6.67

## Proposed Water Rates

Table 18 presents the proposed fixed charges and variable charges for the water system for the next five years. Table 18 also includes the current fixed and variable rates as well as the future water rates for implementation beginning on October 1, 2022 with the new tiered rate structure. Water fixed and variable charges increase beginning July 1, 2023 with the percentage increases identified in Table 11.

Table 18  
Current and Proposed Water Fixed and Variable Charges

	Current Rate	October 1, FY 22-23	July 1, FY 23-24	July 1, FY 24-25	July 1, FY 25-26	July 1, FY 26-27
Fixed Charge (\$ per month)						
Meter Size						
3/4"	\$43.52	\$42.01	\$44.32	\$46.76	\$49.33	\$52.04
3/4" x 1" (residential only)	\$48.56	\$42.01	\$44.32	\$46.76	\$49.33	\$52.04
1"	\$48.56	\$43.47	\$45.86	\$48.38	\$51.04	\$53.85
1.5"	\$55.28	\$45.42	\$47.92	\$50.56	\$53.34	\$56.27
2"	\$73.74	\$50.78	\$53.57	\$56.52	\$59.63	\$62.91
3"	\$209.79	\$90.25	\$95.21	\$100.45	\$105.97	\$111.80
4"	\$260.18	\$104.87	\$110.64	\$116.73	\$123.15	\$129.92
Variable Charge (\$ per HCF)						
<b>Residential</b>						
Tier 1 - 0 to 9 units	\$2.46	\$2.31	\$2.44	\$2.57	\$2.71	\$2.86
Tier 2 - 10 to 19 units	\$2.46	\$2.57	\$2.71	\$2.86	\$3.02	\$3.19
Tier 3 - 19 and Over	\$2.46	\$3.85	\$4.06	\$4.28	\$4.52	\$4.77
<b>Commercial</b>						
All Consumption	\$2.46	\$3.62	\$3.82	\$4.03	\$4.25	\$4.48
<b>Irrigation</b>						
All Consumption	\$2.46	\$3.96	\$4.18	\$4.41	\$4.65	\$4.91
<b>Hydrant Meter</b>						
All Consumption	\$2.46	\$6.67	\$7.04	\$7.43	\$7.84	\$8.27

# Water Bill Impact Analysis

An impact analysis was performed to evaluate the change in SFR customer water bills that would occur from the implementation of the proposed water rates for the October 1, 2022 rate structure implementation. As shown in Table 19, a SFR customer with a 3/4-inch meter using the average consumption of 13 HCF monthly will experience a bill that will decrease from \$75.50 to \$73.08, a decrease of \$2.42 or -3.2 percent.

Table 19

Comparison of Current Single-family Residential Monthly Water Bill with 3/4-inch Meter Size with Proposed Bill Using October 2022 Water Rates

Description	Use (HCF)	Current Bill			Proposed FY 22-23 Bill				
		Service Charge	Volume Charge	Current Bill	Service Charge	Volume Charge	Proposed Bill	Dollar Difference	Percent Change
	0	\$43.52	\$0.00	\$43.52	\$42.01	\$0.00	\$42.01	(\$1.51)	-3.5%
Very Low	5	\$43.52	\$12.30	\$55.82	\$42.01	\$11.55	\$53.56	(\$2.26)	-4.0%
Low	8	\$43.52	\$19.68	\$63.20	\$42.01	\$18.48	\$60.49	(\$2.71)	-4.3%
Median	11	\$43.52	\$27.06	\$70.58	\$42.01	\$25.93	\$67.94	(\$2.64)	-3.7%
Average	13	\$43.52	\$31.98	\$75.50	\$42.01	\$31.07	\$73.08	(\$2.42)	-3.2%
	20	\$43.52	\$49.20	\$92.72	\$42.01	\$50.34	\$92.35	(\$0.37)	-0.4%
High	30	\$43.52	\$73.80	\$117.32	\$42.01	\$88.84	\$130.85	\$13.53	11.5%
Very High	50	\$43.52	\$123.00	\$166.52	\$42.01	\$165.84	\$207.85	\$207.64	24.8%

## Water Rate Survey

A water rate survey was conducted for neighboring communities to the Mission Hills Community Services District. Chart 1 compares the District's SFR average monthly water bill with those of neighboring communities at the same consumption of 13 HCF monthly. The rate survey includes rate schedules in effect April 2022. Water bills for the District are shown using the current rates and the proposed October 1, 2022 rates. The chart indicates that with the October 1, 2022 water rate structure change, a SFR customer with a 3/4-inch meter using the average monthly consumption of 13 HCF will experience a bill that is in the lower half of the communities listed.

**Chart 1**  
**Single-family Residential Monthly Water Bills with 3/4-inch Meter Using 13 HCF**



Note: Above table uses water rates in effect April 2022. Bills are not adjusted for property tax revenue received by an agency. Mission Hills Community Services District October 2022 bill is based on the rate structure and rates in Table 18.

# 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 the District’s annual operating and capital costs associated with the wastewater system.

This section discusses the current wastewater rates, user classifications, revenues and revenue requirements, planned CIP projects and financing sources, and proposed revenue adjustments.

## Current Wastewater Rates

The current wastewater rates consist of fixed charges to all customers and variable charges to Commercial customers only. All Residential and Commercial customers are charged the same monthly fixed charge whereas School customers are charged a fixed charge by the Average Daily Attendance (ADA), provided to the District annually from each school. The current rates are presented in Table 20.

Table 20  
Current Wastewater Rates

Customer Classification	Fixed Charge (\$/month)
Residential	\$63.83
Commercial	\$63.83
Schools (per ADA)	\$1.17

Customer Classification	Variable Rate (\$/HCF)
Commercial	\$3.87

## Wastewater User Classifications

### Number of Customers

The District currently classifies wastewater customers as Residential, Commercial, and School classifications. No growth is projected for the Study Period. Residential customers account for about 99 percent of the total accounts served by the wastewater system. Table 21 provides the historical and projected average number of customers and dwelling units by classification.

Table 21  
Historical and Projected Average Number of Wastewater Customers by Classification

Customer Class	Historical	Projected					
	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27
<b>Number of Accounts</b>							
Residential	1,279	1,279	1,279	1,279	1,279	1,279	1,279
Commercial	10	10	10	10	10	10	10
School	1	1	1	1	1	1	1
<b>Total Accounts</b>	1,290	1,290	1,290	1,290	1,290	1,290	1,290
<b>Number of Units</b>							
Residential	1,279	1,279	1,279	1,279	1,279	1,279	1,279
School (ADA)	479	479	479	479	479	479	479

### Number of Water Meters of Wastewater Customers

Table 22 provides a summary of the current and projected average number of wastewater customers by meter size. The majority of customers have 3/4-inch meters (70 percent) installed at the service location. It is assumed that all new residential customers will have 3/4 x 1-inch meters (residential only meters) installed and this is the minimum size for new meter installations for the District’s customer base.

Table 22  
Historical and Projected Number of Water Meters by Size of Wastewater Customers

Description	Historical	Projected					
	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27
Active Wastewater Meters/Accounts [1]							
3/4"	855	855	855	855	855	855	855
3/4" x 1"	428	428	428	428	428	428	428
1"	1	1	1	1	1	1	1
1.5"	1	1	1	1	1	1	1
2"	2	2	2	2	2	2	2
3"	1	1	1	1	1	1	1
4"	2	2	2	2	2	2	2
<b>Total Accounts</b>	<b>1,290</b>						

[1] Historical Sewer accounts for FY 20-21 were provided through District billing records.

## Water Sales Volumes of Wastewater Customers

Table 23 provides the historical and projected water sales volumes of wastewater customers by classification. Water sales volumes were projected by recognizing the growth in the number of accounts and the FY 2020-21 use per customer. Residential customers account for more than 94 percent of the water sales volumes of wastewater customers.

The water sales volumes of wastewater customers are used to calculate projected wastewater revenue and estimate wastewater discharge volumes. The wastewater discharge volumes are used for cost allocation purposes to assign cost responsibility based on wastewater flow of each class.

Table 23  
Historical and Projected Water Consumption of Wastewater Customers (in HCF)

Description	Historical	Projected <sup>[1]</sup>					
	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27
Residential	206,972	206,972	206,972	206,972	206,972	206,972	206,972
Commercial	3,647	3,647	3,647	3,647	3,647	3,647	3,647
School	8,244	8,244	8,244	8,244	8,244	8,244	8,244
<b>Total Projected Consumption</b>	<b>218,863</b>	<b>218,863</b>	<b>218,863</b>	<b>218,863</b>	<b>218,863</b>	<b>218,863</b>	<b>218,863</b>

[1] Forecast assumes that the use per customer from FY 20-21 and applied 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 expense and capital infrastructure requirements. Discussed below are the projection of revenue, O&M expense, CIP needs of the wastewater system and its financing, and revenue adjustments needed to maintain a sustainable wastewater enterprise.

## Revenues

The Sewer Fund receives revenue from charges for wastewater service and miscellaneous sources. Wastewater service revenue is received from rates and charges for wastewater service. Table 24 presents the projected fixed and variable rate revenue from current wastewater rates. The revenue is projected by applying the current wastewater rates from Table 20 to the projected number of accounts and consumption.

Table 24  
Projected Rate-based Wastewater Revenue Using Existing Rates

Description	Projected					
	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27
<b>Wastewater Service Revenues</b>						
Fixed Charges <sup>[1]</sup>	\$986,388	\$986,388	\$986,388	\$986,388	\$986,388	\$986,388
Variable Charges <sup>[2]</sup>	14,114	14,114	14,114	14,114	14,114	14,114
<b>Total Revenues From Current Rates</b>	<b>\$1,000,502</b>	<b>\$1,000,502</b>	<b>\$1,000,502</b>	<b>\$1,000,502</b>	<b>\$1,000,502</b>	<b>\$1,000,502</b>

[1] FY 21-22 and forecast revenue calculated by multiplying current water service rate by the number of projected meters.

[2] FY 21-22 and forecast revenue calculated by multiplying projected water sales by the current variable rates.

## Miscellaneous Revenue

Miscellaneous revenues are received from late charges. Table 25 below provides sources of wastewater miscellaneous revenue.

Table 25  
Projected Wastewater Miscellaneous Revenue

Description	Budget		Projected			
	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27
Late Fees/Charges	\$17,500	\$17,500	\$17,500	\$17,500	\$17,500	\$17,500
<b>Total Miscellaneous Revenues</b>	<b>\$17,500</b>	<b>\$17,500</b>	<b>\$17,500</b>	<b>\$17,500</b>	<b>\$17,500</b>	<b>\$17,500</b>

## Revenue Requirements

Revenue requirements of the wastewater system include expenses associated operating and maintaining the wastewater system as discussed below.

### Operation and Maintenance Expense

O&M are an on-going obligation of the wastewater system and such costs are normally met from wastewater service revenue. O&M includes the cost to operate and maintain the wastewater collection system, lift stations, and treatment and disposal facilities. Costs also include technical services and other general and administrative expenses.

O&M has been projected recognizing the major expense categories of personnel services, electric power expense, capital outlay, and all other expenses. Personnel costs consist of salaries and benefits expense of those personnel directly involved with providing wastewater service. Salaries expense is projected to increase by 2.5 percent annually while benefits expense is also projected to increase by 2.5 percent annually. Electric power expense is projected to increase annually at 3 percent while chemicals expense increases by 3 percent. All

other O&M expense is projected to increase by 2 percent annually. Capital outlay is projected to increase by 3 percent annually. Table 26 provides a summary of the wastewater O&M expenses for the Study period.

Table 26  
Projected Wastewater Operation and Maintenance Expense

Description	Budget		Projected			
	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27
<b>Wastewater Personnel Services</b>						
Salaries & Wages	\$348,187	\$365,596	\$383,876	\$403,070	\$423,223	\$444,385
Benefits	126,277	132,591	139,220	146,181	153,490	161,165
Subtotal	\$485,964	\$509,975	\$535,178	\$561,635	\$589,407	\$618,561
<b>Wastewater Operations and Maintenance</b>						
Chemicals	\$42,900	\$45,474	\$48,202	\$51,094	\$54,160	\$57,410
Contractual Services	31,200	32,448	33,746	35,096	36,500	37,960
Professional Services	69,000	15,000	15,600	16,224	16,873	37,548
Utilities	76,500	78,795	81,159	83,594	86,102	88,685
Repairs and Maintenance	35,001	36,401	37,856	39,370	40,945	42,583
All Other	139,923	144,980	150,239	155,709	161,397	167,311
Subtotal	\$394,524	\$353,098	\$366,802	\$381,087	\$395,977	\$431,497
Less Allocated Street Sweeping Costs	(\$6,173)	(6,296)	(6,422)	(6,551)	(6,682)	(6,815)
<b>Total Wastewater System O&amp;M Expense</b>	<b>\$874,315</b>	<b>\$856,777</b>	<b>\$895,558</b>	<b>\$936,171</b>	<b>\$978,702</b>	<b>\$1,043,243</b>

## Wastewater Capital Improvement Program

The District has developed a CIP that lists wastewater capital expenditures for FY 2021-22 through FY 2026-27, presented in Table 27. The CIP consists of various collection, lift station, treatment, equipment and other capital projects. The District projects that it would expend approximately \$1.9 million over this period. The CIP is funded through District reserves and rate revenue.

Table 27  
Wastewater Capital Improvement Program

Description	Budget		Projected			
	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27
<b>Capital Improvement Program (CIP) Projects [1]</b>						
<b>Collection</b>						
Video and Clean Sewer Lines	\$40,000	\$51,500	\$53,000	\$54,600	\$56,300	\$58,000
<b>Equipment</b>						
Replace Vehicle 2007 GMC Pickup	-	-	63,700	-	-	-
Case / Tractor Backhoe	-	61,800	-	-	-	-
Replace Ops Truck	-	-	-	43,700	-	58,000
Jetter	40,000	-	-	-	-	-
<b>Lift Stations</b>						
Replace Lift Station with Backup Power	165,000	206,000	79,600	-	-	-
SCADA Install	-	25,800	26,500	16,400	-	-
Pond #8 Liner (Lift Station overflow Impact Reduction)	-	-	53,000	54,600	56,300	-
<b>Wastewater Treatment</b>						
Pond Valve Stem Replacement	40,000	51,500	42,400	43,700	-	-
Aeration System Replacement	-	-	-	-	112,600	115,900
Pond Rehabilitation or Upgrade	-	-	53,000	109,300	112,600	115,900
Bio-Remediation (sludge removal)	-	-	-	54,600	56,300	-
<b>Solar/Battery Energy</b>						
Bid Documents, Specifications, PM Estimate	-	15,500	26,500	-	-	-
Contingency	27,075	41,200	39,800	37,700	39,400	34,800
<b>Total Water CIP</b>	<b>\$312,075</b>	<b>\$453,300</b>	<b>\$437,500</b>	<b>\$414,600</b>	<b>\$433,500</b>	<b>\$382,600</b>

[1] CIP Source: FY 21-22 District CIP document.

## 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 plan is presented in Table 28 and incorporates specific financial planning goals to provide guidance to maintain the health of the wastewater utility on an on-going basis. The goals included the following items.

- Generate positive levels of income in each year of the Study period
- Fund capital improvement program requirements
- Maintain the operating and capital reserves at or greater than target levels
- Fund the required debt service reserve
- Maintain debt service coverage ratios at or greater than the minimum required

Table 28  
Wastewater Financial Plan

Description	Projected					
	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27
<b>Proposed Revenue Increase (October 1)</b>		<b>8.4%</b>				
<b>Proposed Revenue Increase (July 1)</b>			<b>8.4%</b>	<b>8.4%</b>	<b>8.4%</b>	<b>8.4%</b>
<b>Wastewater Operations</b>						
<b>Revenue</b>						
Revenues from Existing Sewer Rates [1]	\$1,000,502	\$1,000,502	\$1,000,502	\$1,000,502	\$1,000,502	\$1,000,502
Total Additional Wastewater Service Revenue [2]	0	56,028	175,144	273,898	380,948	496,990
Miscellaneous Income [3]	17,500	17,500	17,500	17,500	17,500	17,500
Interest Income [4]	8,174	7,235	6,425	6,110	6,169	6,644
<b>Total Revenues</b>	<b>\$1,026,176</b>	<b>\$1,081,265</b>	<b>\$1,199,571</b>	<b>\$1,298,010</b>	<b>\$1,405,119</b>	<b>\$1,521,636</b>
<b>Revenue Requirements</b>						
Operation and Maintenance Expense	\$880,488	\$863,073	\$901,980	\$942,722	\$985,384	\$1,050,058
General Expense Allocation [5]	(6,173)	(6,296)	(6,422)	(6,551)	(6,682)	(6,815)
Capital Replacement Transfer	183,285	194,700	219,200	232,300	255,200	278,600
<b>Total Revenue Requirements</b>	<b>\$1,057,600</b>	<b>\$1,051,477</b>	<b>\$1,114,758</b>	<b>\$1,168,471</b>	<b>\$1,233,902</b>	<b>\$1,321,843</b>
<b>Net Funds Available Before Capital</b>	<b>(\$31,424)</b>	<b>\$29,788</b>	<b>\$84,813</b>	<b>\$129,539</b>	<b>\$171,217</b>	<b>\$199,793</b>
<b>Wastewater Capital</b>						
<b>Capital Sources of Funds</b>						
Capital Replacement Transfer	\$183,285	\$194,700	\$219,200	\$232,300	\$255,200	\$278,600
<b>Total Capital Sources</b>	<b>\$183,285</b>	<b>\$194,700</b>	<b>\$219,200</b>	<b>\$232,300</b>	<b>\$255,200</b>	<b>\$278,600</b>
<b>Capital Uses of Funds</b>						
Capital Improvement Program [6]	\$312,075	\$440,000	\$412,500	\$379,500	\$385,000	\$330,000
<b>Total Capital Improvement Spending</b>	<b>\$312,075</b>	<b>\$440,000</b>	<b>\$412,500</b>	<b>\$379,500</b>	<b>\$385,000</b>	<b>\$330,000</b>
<b>Net Funds After Capital</b>	<b>(\$160,214)</b>	<b>(\$215,512)</b>	<b>(\$108,487)</b>	<b>(\$17,661)</b>	<b>\$41,417</b>	<b>\$148,393</b>
<b>Available Operating and Capital Reserves</b>						
<b>Available Reserves</b>						
Beginning available reserves [7]	\$1,714,987	\$1,554,773	\$1,339,261	\$1,230,774	\$1,213,113	\$1,254,530
Additions (reductions)	(160,214)	(215,512)	(108,487)	(17,661)	41,417	148,393
<b>Ending available reserves</b>	<b>1,554,773</b>	<b>1,339,261</b>	<b>1,230,774</b>	<b>1,213,113</b>	<b>1,254,530</b>	<b>1,402,923</b>
<b>Target Reserves [8]</b>	<b>1,492,400</b>	<b>1,600,400</b>	<b>1,722,400</b>	<b>1,851,700</b>	<b>1,989,200</b>	<b>2,140,300</b>
<b>Above (below) Target</b>	<b>\$62,373</b>	<b>(\$261,139)</b>	<b>(\$491,626)</b>	<b>(\$638,587)</b>	<b>(\$734,670)</b>	<b>(\$737,377)</b>

[1] Projected using the existing rates.

[2] Additional revenue from proposed rate adjustments.

[3] Includes capacity charges and late fees.

[4] Interest earnings on the average fund balance calculated at 0.50%.

[5] Excludes street sweeping expenses.

[6] From Table 27.

[7] The available beginning FY 21-22 cash balance provided by District.

[8] Target reserve includes Operation Maintenance, Capital Replacement, and Emergency Reserves.

### Proposed Revenue Adjustments

Table 28 provides the annual revenue increases recommended to meet the financial planning goals for the five-year Study period. The financial plan indicates that annual revenue increases of 8.4 percent are recommended on October 1, 2022 and on each July 1 through FY 2026-27. The increases are necessary to meet the planning goals discussed above.

A graphical depiction of the revenue and revenue requirements from Table 28 is presented in Figure 3. Revenue using the current rates is shown as the black line while revenue with increases is shown as the red line. The figure shows that implementation of the revenue increases will provide sufficient revenue to allow the wastewater enterprise to meet annual obligations, capital requirements, and reserve contributions which are represented by columns in the figure.

Figure 3  
Wastewater Financial Plan  
Comparison of Revenue with Annual Obligations

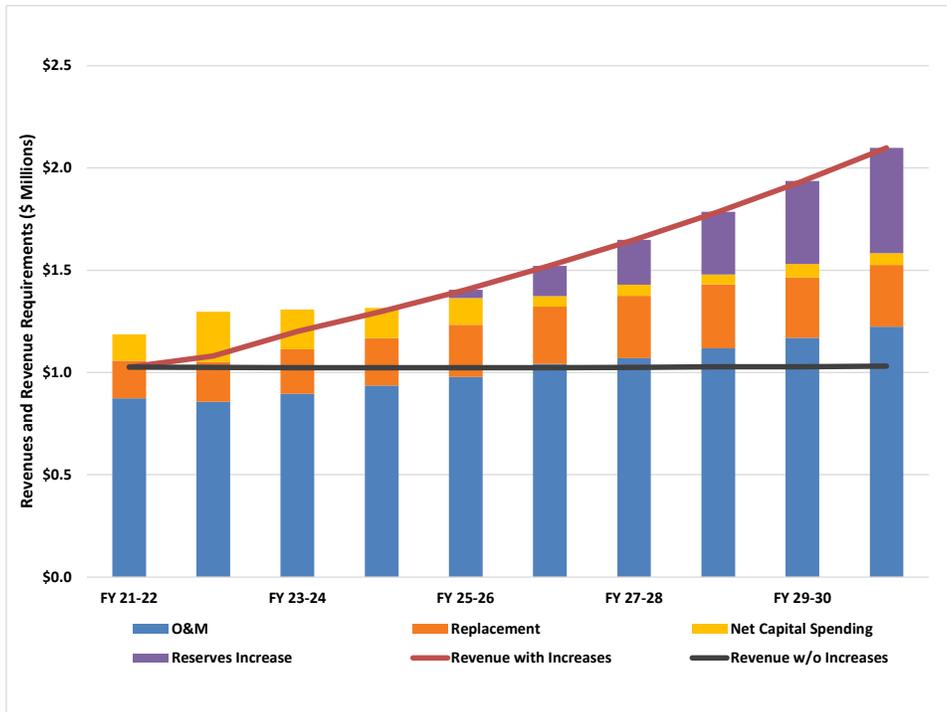
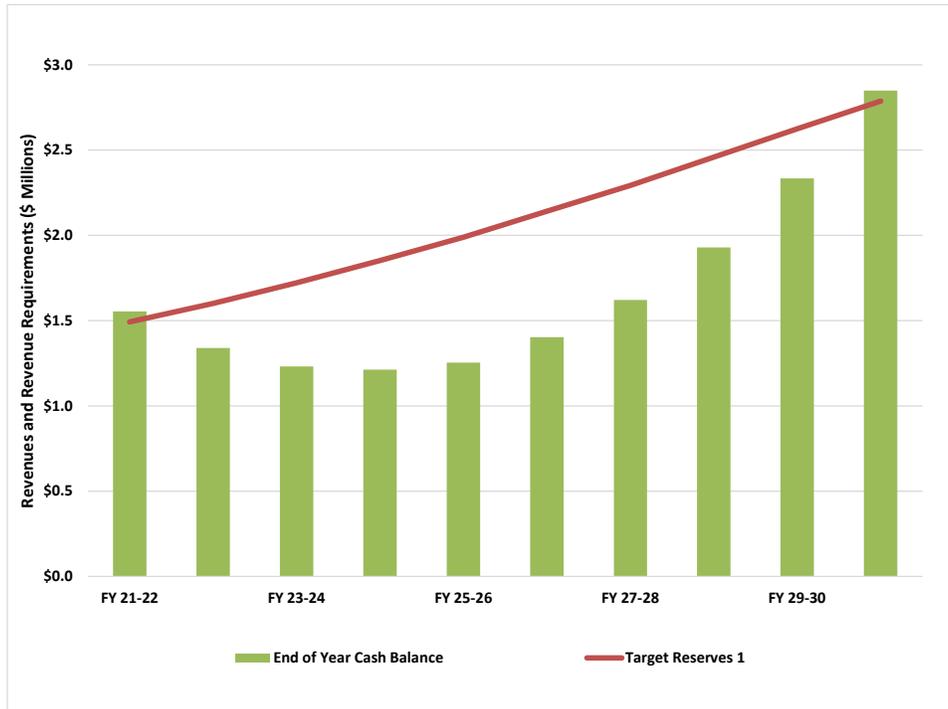


Figure 4 compares the wastewater system cash reserves with the Target Reserves. The green columns represent the cash reserve balance at the end of year while the red line indicates the Target Reserve level. The figure shows that the operating and capital fund reserve balance (green columns) are below the Target Reserve (red line) in the initial years of the Study Period, however, returns to meet the target reserve in the later years of the Study.

Figure 4  
Comparison of Wastewater System Cash Reserves with Target Reserves



## Wastewater Cost of Service

This section of the report discusses how the wastewater system’s operating and capital costs are allocated for use in designing rates. Establishing rates in California requires that the agency responsible for imposing property-related fees create a nexus between the cost of providing service and the rates to be imposed.

### Industry Methodology

Methodology from the Water Environment Federation (WEF) is used in this Study to allocate wastewater costs in an appropriate manner. Similar to AWWA, WEF is an industry trade organization that provides guidance on operations, technical training, education, and management of wastewater utilities. General principles are provided to assist agencies with the design of wastewater rates and charges that are consistent with local requirements while also recognizing state laws and legal framework.

### Costs of Service to be Allocated

The five-year average annual revenue requirement for years FY 2021-22 through FY 2025-26 is defined as the Test Year used for wastewater rate setting. The annual costs will be used to evaluate the fairness and equity of the current wastewater rates and will form the basis for the proposed rates.

The cost of service consists of O&M expense and capital funding needs. To establish the cost of providing service to the users of the wastewater system, costs need to first be allocated to wastewater parameters.

## Cost Allocation to Wastewater Parameters

For the approach used for this Study, the cost allocation components for wastewater service are Flow, Biochemical Oxygen Demand (BOD), suspended solids (SS), and Customer. Operating and capital costs are assigned to each parameter based on the functional operation and design of the facilities.

The total cost to be recovered FY 2022-23 from the users of the wastewater system is presented in Table 29. The annual revenue requirement is allocated to each wastewater parameter based on a detailed review of expenses and capital requirements and is used in calculating the unit costs of service. A detailed allocation is provided in Appendix B-1.

Table 29  
Allocation of Revenue Requirements to Cost Components

Year	Total Revenue Requirement	Flow	Strength		
			BOD	SS	Customer
FY 22-23	\$1,084,544	\$181,655	\$359,523	\$359,526	\$183,841

## Unit Costs of Service

Each customer classification's responsibility for a portion of the cost of service is established through developing unit costs of service for each of the wastewater parameters described above. Costs of service by component are then distributed to each user customer classification by identifying how each group uses the wastewater system, or their units of service. By applying the unit costs to each customer class's units of service, the cost of service by customer class is established.

A wastewater mass balance was performed that reconciled estimated wastewater flow from District customers to the influent flow received at the wastewater treatment plant. The units of service for wastewater flow, BOD, and SS by customer classification were identified from the analysis for FY 2019-20.

Table 30 presents the unit costs of providing service for the wastewater system. Unit costs are determined by dividing the costs by parameter from Table 29 by the units of service provided in Appendix B-2.

Table 30  
FY 22-23 Development of Unit Costs

Description	FY 22-23		Strength		
	Total Costs	Flow	BOD	SS	Customer
<b>Total Costs of Service</b>	\$1,084,544	\$181,655	\$359,523	\$359,526	\$183,841
Units of Service		135,067	271,282	240,367	15,480
<b>Unit Costs of Service</b>		\$1.3449	\$1.3253	\$1.4957	\$11.8760
Units of Measure		HCF	lb	lb	Bills

## User Class Costs

The unit costs from Table 30 are applied to each customer classifications' flow, BOD, SS, and customer units of service to establish user class costs. The cost of service responsibility of each class is provided in Table 31.

**Table 31**  
**Distribution of Costs to Customer Classes FY 22-23**

Description	Allocated Total Cost	Flow	Strength		
			BOD	SS	Customer
Unit Costs of Service		\$1.3449	\$1.3253	\$1.4957	\$11.8760
Units of Measure		HCF	lb	lb	Bills
<b>Residential</b>					
Units of Service		130,786	261,950	234,663	15,348
Allocated Cost of Service	\$1,056,318	\$175,896	\$347,154	\$350,994	\$182,273
<b>Commercial</b>					
Units of Service		2,553	7,457	4,261	120
Allocated Cost of Service	\$21,114	\$3,433	\$9,882	\$6,373	\$1,425
<b>School</b>					
Units of Service		1,729	1,876	1,443	12
Allocated Cost of Service	\$7,112	\$2,325	\$2,486	\$2,158	\$143
<b>Total Costs of Service</b>	<b>\$1,084,544</b>	<b>\$181,655</b>	<b>\$359,523</b>	<b>\$359,526</b>	<b>\$183,841</b>

## Wastewater Rates

The goal of the rate design is to achieve fairness while ensuring 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 wastewater rates and charges are designed and includes the proposed schedule of wastewater rates for implementation.

### Proposed Wastewater Rates

The recommended wastewater rate structure is the same at the District's current rate structure. The design of the wastewater fixed and variable charges is discussed below.

#### Proposed Fixed Charges

For Residential customers, fixed charges are designed by taking the total allocated cost and dividing it by the number of bills issued for this class. Commercial customers are charged the same fixed charge as Residential customers. School customers fixed charges are calculated by taking the total allocated cost and dividing it by the number of ADA. Table 32 provides the fixed charges for FY 2022-23.

## Proposed Variable Charges

Variable charges calculated for this Study only apply to Commercial customers. All Commercial costs that are not recovered from the fixed charges are recovered from a variable charge calculated to equal to the remaining costs that were not recovered from the fixed charges, divided by the water consumption of this class.

Tables 32 presents the design of the proposed monthly fixed and variable charges for all customers for FY 2022-23. The current fixed charges generate about 99 percent of revenue from wastewater rates. The proposed fixed charges also generate approximately 99 percent of the revenue from wastewater rates.

Table 32  
Design of Wastewater Rates

Customer Classification	Total Cost of Service	Number of Bills [1]	Mo. Fixed Charge [2]	Avg Winter Water Volume	Variable Rate [3]
Residential	\$1,056,318	15,348	\$68.82		
Commercial	\$21,114	120	\$68.82	2,553	\$5.04
School	\$7,112	479	\$1.24		
Total	\$1,084,544				

[1] Number of bills except for Schools which is Average Daily Attendance (ADA).

[2] For Residential, total costs divided by number of bills. Commercial charge set equal to Residential Charge.

[3] Total Commercial costs greater than monthly charge multiplied by number of bills is divided by average winter water volume.

## Proposed Wastewater Rates

Table 33 presents the proposed fixed charges and variable charges for the wastewater system for the next five years. The current fixed and variable rates are provided in the table as well as the future wastewater rates for implementation beginning on October 1, 2022. Wastewater fixed and variable charges increase beginning July 1, 2023 with the percentage increases identified in Table 28.

Table 33  
Current and Proposed Wastewater Fixed and Variable Charges

Rate Description	Current Rate	October 1, FY 22-23	July 1, FY 23-24	July 1, FY 24-25	July 1, FY 25-26	July 1, FY 26-27
<b>Monthly Fixed Charges</b>						
Residential	\$63.83	\$68.82	\$74.60	\$80.87	\$87.66	\$95.02
Commercial	\$63.83	\$68.82	\$74.60	\$80.87	\$87.66	\$95.02
School (per ADA)	\$1.17	\$1.24	\$1.34	\$1.46	\$1.58	\$1.71
<b>Variable Charges</b>						
Commercial	\$3.87	\$5.04	\$5.46	\$5.92	\$6.42	\$6.96

# Wastewater Bill Impact Analysis

An impact analysis was performed to evaluate the change in SFR customer wastewater bills that would occur from the implementation of the proposed wastewater rates for the October 1, 2022 increase. As shown in Table 34, a SFR customer will experience a bill that will increase from \$63.83 to \$68.82, an increase of \$4.99 or 7.8 percent.

Table 34  
Comparison of Current Single-family Residential Monthly Wastewater Bill with Proposed Bill Using October 2022 Wastewater Rates

Description	Use (HCF)	Current Bill			Proposed FY 22-23 Bill				
		Service Charge	Volume Charge	Current Bill	Service Charge	Volume Charge	Proposed Bill	Dollar Difference	Percent Change
	0	\$63.83	\$0.00	\$63.83	\$68.82	\$0.00	\$68.82	\$4.99	7.8%
Very Low	5	\$63.83	\$0.00	\$63.83	\$68.82	\$0.00	\$68.82	\$4.99	7.8%
Low	10	\$63.83	\$0.00	\$63.83	\$68.82	\$0.00	\$68.82	\$4.99	7.8%
Median	10	\$63.83	\$0.00	\$63.83	\$68.82	\$0.00	\$68.82	\$4.99	7.8%
Average	13	\$63.83	\$0.00	\$63.83	\$68.82	\$0.00	\$68.82	\$4.99	7.8%
	20	\$63.83	\$0.00	\$63.83	\$68.82	\$0.00	\$68.82	\$4.99	7.8%
High	30	\$63.83	\$0.00	\$63.83	\$68.82	\$0.00	\$68.82	\$4.99	7.8%
Very High	50	\$63.83	\$0.00	\$63.83	\$68.82	\$0.00	\$68.82	\$4.99	7.8%

## Wastewater Rate Survey

A wastewater rate survey was conducted for neighboring communities to the Mission Hills Community Services District. Chart 2 compares the District's SFR monthly wastewater bill using 13 HCF with those of neighboring communities at the same consumption level. The rate survey includes rate schedules in effect April 2022. Wastewater bills for the District are shown using the current rates and the proposed rates for implementation October 1, 2022. The chart indicates that a District SFR customer will experience a bill that is in the mid-range of the communities listed.

**Chart 2**  
Single-family Residential Monthly Wastewater Bills with 3/4-inch Meter Using 13 HCF



Note: Above table uses wastewater rates in effect April 2020. Bills are not adjusted for property tax revenue received by and agency. Cities of Santa Barbara and Lompoc assume 10 HCF per month. Mission Hills Community Services District October 2022 bill is based on the rate structure and rates in Table 36.

## Street Sweeping Rates

A comparison of revenue received from street sweeping charges with projected street sweeping expenses is provided in Table 35 below. Expenses are increased in FY 2022-23 as specified by the District and are projected to increase by 2 percent annually. Revenues are stated as budgeted for FY 2021-22 and are based on the current rate of \$1.32 per account. The table indicates that no changes to the street sweeping rate is required at this time.

**Table 35**  
Street Sweeping Financial Plan

Description	Budget		Forecast			
	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27
<b>Proposed Revenue Increase (July 1)</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Sources of Funds</b>						
Street Sweeping Revenues, Existing Rates [1]	\$18,707	\$18,707	\$18,707	\$18,707	\$18,707	\$18,707
Additional Street Sweeping Revenue [2]	0	0	0	0	0	0
Late Fees/Charges	288	300	300	300	300	300
<b>Total Sources of Funds</b>	<b>\$18,995</b>	<b>\$19,007</b>	<b>\$19,007</b>	<b>\$19,007</b>	<b>\$19,007</b>	<b>\$19,007</b>
<b>Uses of Funds</b>						
Operation and Maintenance Expense [3]	\$16,200	\$16,975	\$17,315	\$17,661	\$18,014	\$18,374
<b>Total Uses of Funds</b>	<b>\$16,200</b>	<b>\$16,975</b>	<b>\$17,315</b>	<b>\$17,661</b>	<b>\$18,014</b>	<b>\$18,374</b>
<b>Additions (reductions) to cash</b>	<b>\$2,795</b>	<b>\$2,032</b>	<b>\$1,692</b>	<b>\$1,346</b>	<b>\$993</b>	<b>\$633</b>

[1] Projected using the existing rates.  
 [2] Additional street sweeping revenue from rate increases.  
 [3] Operation and maintenance expense inflates at 2.0% annually.

# Appendix A

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Water System Allocation of Revenue Requirements, Units of Service, Cost of Service Allocation, and Private Fire Protection Charges are provided in Appendix A.

Appendix A-1  
Allocation of Water Revenue Requirements to Cost Component

Description	5 Year		Delivery	Peaking		Customer		Fire	
	Average	Groundwater	Fixed	Max Day	Max Hour	Meters/Serv	Customer	Protection	General
<b>Water Salaries and Benefits Expense</b>									
Salaries and Benefits	\$552,579	\$0	\$117,422	\$117,423	\$234,847	\$55,258	\$16,577	\$11,052	\$0
Total Personnel Services	\$552,579	\$0	\$117,422	\$117,423	\$234,847	\$55,258	\$16,577	\$11,052	\$0
<b>Water Operations and Maintenance</b>									
Operating Supplies	\$21,322	\$0	\$6,203	\$5,927	\$8,068	\$860	\$0	\$264	\$0
Chemicals	38,023	38,023	-	-	-	-	-	-	-
Contractual Services	50,697	-	-	-	-	-	-	-	50,697
Professional Services	34,969	-	-	-	-	-	-	-	34,969
Monitoring (Lab Samples)	15,599	-	-	-	-	-	15,599	-	-
Utilities	99,281	89,353	-	9,928	-	-	-	-	-
Government Fees	44,759	-	-	-	-	-	-	-	44,759
Repairs and Maintenance	-	-	-	-	-	-	-	-	-
Distribution	41,291	-	8,774	8,774	17,549	4,129	-	2,065	-
Reservoirs	6,079	-	608	5,471	-	-	-	-	-
Shop & Equipment Repair	5,295	-	-	-	-	-	-	-	5,295
Treatment Plant	4,847	-	2,424	2,423	-	-	-	-	-
Wells & Pumping	32,246	-	16,123	16,123	-	-	-	-	-
Meters	-	-	-	-	-	-	-	-	-
Miscellaneous	50,898	-	-	-	-	-	-	-	50,898
All Other	79,598	-	-	-	-	-	-	-	79,598
Subtotal Water Operations and Maintenance	\$524,902	\$127,375	\$34,131	\$48,646	\$25,617	\$4,989	\$15,599	\$2,329	\$266,216
General and Administration Expense	-	-	-	-	-	-	-	-	-
Allocation of Total General Expense	-	41,798	49,732	54,495	85,471	19,770	10,559	4,391	(266,216)
Total Operation and Maintenance Expense	\$1,077,482	\$169,173	\$201,286	\$220,564	\$345,935	\$80,017	\$42,735	\$17,772	\$0
<b>Capital Costs</b>									
Capital Improvement Program [6]	\$394,020	\$0	\$114,635	\$109,519	\$149,091	\$15,900	\$0	\$4,875	\$0
Total Capital Costs	\$598,373	\$0	\$174,090	\$166,319	\$226,415	\$24,146	\$0	\$7,403	\$0
<b>Adjustments</b>									
Revenue Offsets	(\$30,214)	\$0	(\$6,696)	(\$7,337)	(\$11,507)	(\$2,662)	(\$1,421)	(\$591)	\$0
Adjustments for Annual Cash Balance	41,201	-	9,130	10,005	15,692	3,630	1,938	806	-
Adjustments to Annualize Rate Increase	199,734	-	44,263	48,501	76,070	17,595	9,397	3,908	-
Total Adjustments	\$210,721	\$0	\$46,697	\$51,169	\$80,255	\$18,563	\$9,914	\$4,123	\$0
<b>Total Cost of Service</b>	<b>\$1,886,575</b>	<b>\$169,173</b>	<b>\$422,072</b>	<b>\$438,052</b>	<b>\$652,605</b>	<b>\$122,726</b>	<b>\$52,649</b>	<b>\$29,298</b>	<b>\$0</b>
Percent Allocation		9.0%	22.4%	23.2%	34.6%	6.5%	2.8%	1.6%	
FY 2022-23 Cost of Service	\$1,328,954	119,170	297,319	308,576	459,712	86,451	37,088	20,638	

Table A-2  
FY 22-23 Units of Service

Customer Class	FY 22-23 Annual Use	Average Daily Use	Max Day		Max Hour		Meter Capacity	Meters & Services	Customer Bills	Direct Fire Protection
			Extra Capacity	Extra Capacity	Extra Capacity	Extra Capacity				
	HCF	HCF	HCF/day	HCF/day	Eq. Mtr	Eq. Mtr/Srv		Bills	Eq. Hyd	
Residential	206,972	567	231	1,357	15,348	15,348		15,348		
Commercial	11,891	33	36	101	983	572		132		
Irrigation	13,273	36	51	124	285	192		96		
Hydrant Meter	79	0	1	1	15	15		12		
<b>Fire Protection</b>										
Public Fire Hydrants			536	3,755					1,272	
Private Fire Protection			5	35						
<b>Total System</b>	<b>232,215</b>	<b>636</b>	<b>860</b>	<b>5,373</b>	<b>16,631</b>	<b>16,127</b>		<b>15,588</b>	<b>1,272</b>	

Table A-3  
Distribution of Costs to Customer Classes FY 22-23

Description	Allocated		Delivery		Peaking		Customer		Direct Fire Protection
	Total Cost	Groundwater	Fixed	Max Day	Max Hour	Meters/Serv	Customer		
Unit Costs of Service		\$0.51	\$1.28	\$358.71	\$85.55	\$5.36	\$2.38	\$16.22	
Units of Measure		HCF	HCF	HCF/day	HCF/day	Eq. Mtr/Srv	Bills	Eq. Hyd	
<b>Residential</b>									
Units of Service		206,972	206,972	231	1,357	15,348	15,348	0	
Allocated Cost of Service	\$688,954	\$106,216	\$264,999	\$82,845	\$116,102	\$82,276	\$36,517	\$0	
<b>Commercial</b>									
Units of Service		11,891	11,891	36	101	572	132	0	
Allocated Cost of Service	\$46,375	\$6,102	\$15,225	\$13,065	\$8,605	\$3,064	\$314	\$0	
<b>Irrigation</b>									
Units of Service		13,273	13,273	51	124	192	96	0	
Allocated Cost of Service	\$53,867	\$6,812	\$16,994	\$18,163	\$10,640	\$1,029	\$228	\$0	
<b>Hydrant Meter</b>									
Units of Service		79	79	1	1	15	12	0	
Allocated Cost of Service	\$637	\$41	\$101	\$281	\$104	\$82	\$29	\$0	
<b>Public Fire Hydrants</b>									
Units of Service			0	536	3,755	0	0	1,272	
Allocated Cost of Service	\$534,275		\$0	\$192,406	\$321,231	\$0	\$0	\$20,638	
<b>Private Fire Protection</b>									
Units of Service			0	5	35	0	0	0	
Allocated Cost of Service	\$4,846		\$0	\$1,815	\$3,030	\$0	\$0	\$0	
<b>Total Costs of Service</b>	<b>\$1,328,954</b>	<b>\$119,170</b>	<b>\$297,319</b>	<b>\$308,576</b>	<b>\$459,712</b>	<b>\$86,451</b>	<b>\$37,088</b>	<b>\$20,638</b>	

Appendix A-4  
Design of Private Fire Protection Charges

Fire Protection	FY 22-23
Private Fire Protection Cost	\$4,846
Private Fire Protection Eq. 6" Hydrants	12
Private Fire Protection 6" Charge	\$403.80

Appendix A-5  
Proposed Monthly Private Fire Protection Charges

Fireline Size	Hydrant Ratio	October 1, FY 22-23	July 1, FY 23-24	July 1, FY 24-25	July 1, FY 25-26	July 1, FY 26-27
inches						
3/4" x 1"	0.00	\$1.70	\$1.80	\$1.90	\$2.00	\$2.11
1"	0.01	\$3.63	\$3.83	\$4.04	\$4.26	\$4.49
1.5"	0.03	\$10.54	\$11.12	\$11.73	\$12.38	\$13.06
2"	0.06	\$22.46	\$23.69	\$24.99	\$26.36	\$27.81
3"	0.16	\$65.23	\$68.82	\$72.61	\$76.60	\$80.81
4"	0.34	\$139.01	\$146.66	\$154.73	\$163.24	\$172.22
6"	1.00	\$403.80	\$426.01	\$449.44	\$474.16	\$500.24
8"	2.13	\$860.51	\$907.84	\$957.77	\$1,010.45	\$1,066.02

# Appendix B

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Wastewater System Allocation of Revenue Requirements and Units of Service are provided in Appendix B.

Appendix B-1  
Allocation of Wastewater Revenue Requirements to Cost Component

Description	5 Year		Strength		Customer	General
	Average	Flow	BOD	SS		
<b>Wastewater Personnel Services</b>						
Salaries and Benefits [1]	\$536,432	\$0	\$241,393	\$241,396	\$53,643	\$0
Total Personnel Services	\$536,432	\$0	\$241,393	\$241,396	\$53,643	\$0
<b>Wastewater Operations and Maintenance</b>						
Chemicals	\$48,366	\$48,366	-	-	-	-
Contractual Services	33,798	-	-	-	-	33,798
Professional Services	26,539	-	-	-	-	26,539
Utilities	81,230	81,230	-	-	-	-
Repairs and Maintenance	-	-	-	-	-	-
Lift Stations	9,408	9,408	-	-	-	-
Collection	2,455	-	-	-	2,455	-
Treatment Plant	24,634	-	12,317	12,317	-	-
Shop Equipment and Repair	711	-	-	-	-	711
Miscellaneous	707	-	-	-	-	707
All Other	150,450	-	1,184	1,184	22,477	125,604
Total Wastewater Operating Expense	\$378,298	\$139,004	\$13,501	\$13,501	\$24,932	\$187,360
Allocation of Total General Costs	-	2,949	79,891	79,892	24,628	(187,360)
General and Administrative Expense [3]	-	-	-	-	-	-
Total Operation and Maintenance Expense	\$914,730	\$141,953	\$334,785	\$334,789	\$103,203	\$0
<b>Capital Costs</b>						
Capital Replacement Transfer	\$216,937	\$46,280	\$44,040	\$44,040	\$82,577	
Total Capital Costs	\$216,937	\$46,280	\$44,040	\$44,040	\$82,577	
<b>Adjustments</b>						
Revenue Offsets	(\$24,323)	(\$3,775)	(\$8,902)	(\$8,902)	(\$2,744)	
Adjustments for Annual Cash Balance	92,091	14,291	33,705	33,705	10,390	
Adjustments to Annualize Rate Increase	(174,481)	(27,076)	(63,859)	(63,860)	(19,686)	
Total Adjustments	(\$106,712)	(\$16,559)	(\$39,056)	(\$39,057)	(\$12,040)	
Total Cost of Service	\$1,024,955	\$171,674	\$339,769	\$339,772	\$173,740	
Percentage Allocation		16.7%	33.1%	33.1%	17.0%	
FY 2021-22 Cost of Service	\$1,084,544	\$181,655	\$359,523	\$359,526	\$183,841	

Appendix B-2  
FY 22-23 Units of Service

Customer Class	FY 22-23 Annual Use	Overall Return Factor	Total Wastewater Volume	Strength		Strength		Equivalent Meters	Customer Bills
				BOD	SS	BOD	SS		
	HCF		HCF	mg/l	mg/l	lb	lb	Eq. Mtr & Serv	Bills
Residential	206,972	63%	130,786	240	215	261,950	234,663	15,862	15,348
Commercial	3,647	70%	2,553	350	200	7,457	4,261	456	120
School	8,244	21%	1,729	130	100	1,876	1,443	168	12
<b>Total System</b>	<b>218,863</b>		<b>135,067</b>			<b>271,282</b>	<b>240,367</b>	<b>16,486</b>	<b>15,480</b>