

FINAL

2023 Sewer Service Charges Study

Prepared for
Mt. View Sanitary District
Martinez, California
March 2023

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Table of Contents

List of Figures.....	ii
List of Tables	ii
List of Abbreviations	ii
Executive Summary	ES-1
Projected Cash Flow	ES-1
Customer Wastewater Discharge Characteristics.....	ES-2
Recommended Sewer Service Charges.....	ES-3
1. Introduction.....	1-1
1.1 Wastewater Management System Description	1-1
1.2 Regulatory Requirements.....	1-2
1.3 Rate Setting Process.....	1-2
1.4 Financial and Parcel Data	1-2
1.5 Sewer Service Charges Approved in 2020.....	1-4
1.6 Private Meter Agreements.....	1-4
2. Summary of Users and Wastewater Discharge Characteristics.....	2-1
2.1 Customer Wastewater Discharge Characteristics	2-1
2.2 Number of Accounts	2-2
3. Revenue Required from Sewer Service Charges.....	3-1
3.1 Fund 3409 Projected Cash Flow.....	3-1
3.2 Capital Improvement Program	3-2
3.3 Debt Issuance and Service.....	3-3
3.4 Funds 3409, 3410, 3412 and 3415 Projected Cash Flow	3-4
4. Sewer Service Charges	4-1
4.1 Recommended Sewer Service Charges.....	4-1
4.2 Revenue from Sewer Service Charges	4-2
4.3 Single Family Monthly Bill Survey.....	4-2
5. Conclusions and Recommendations.....	5-1
5.1 Conclusions	5-1
5.2 Recommendations.....	5-1
6. Limitations	6-1
Appendix A: Funds Cash Flow Tables.....	A
Appendix B: Revenue from Sewer Service Charges Table	B

List of Figures

Figure 1-1. Overview of Rate Setting Analytical Steps.....	1-2
Figure 3-1. Projected Capital Program Expenditures FY23 – FY42.....	3-2
Figure 3-2. Debt Service Cumulative Interest and Remaining Principal, FY20 – FY42.....	3-3
Figure 3-3. Fund Balances, Revenue and Expenditures, FY22 – FY28	3-4
Figure 4-1. Single Family Monthly Bill Survey	4-2

List of Tables

Table ES-1. Fund Balances, Revenue and Expenditures for FY24 – FY28.....	ES-1
Table ES-2. Changes in Customer Wastewater Discharge Characteristics FY18 – FY22	ES-2
Table ES-3. Current and Recommended Unit Costs and Sewer Service Charges	ES-3
Table 1-1. Adopted Sewer Service Charges FY20 – FY 23	1-4
Table 2-1. Changes in Wastewater Discharge Characteristics FY18 – FY22	2-1
Table 2-2. Residential and Nonresidential Customer Classes, Groups and Wastewater Strength.....	2-2
Table 3-1. Fund 3409 Projected Cash Flow FY22 – FY28.....	3-1
Table 3-2. Projected Capital Program Expenditures FY23 – FY42.....	3-2
Table 3-3. Loan Agreements Payments FY20 – FY42.....	3-3
Table 3-4. Funds 3409, 3410, 3412 and 3415 Projected Cash Flow Summary.....	3-4
Table 4-1. Current and Recommended Unit Costs and Sewer Service Charges	4-1
Table 4-2. Revenue from Current and Recommended Sewer Service Charges	4-2

List of Abbreviations

BOD	Biochemical Oxygen Demand	NPDES	National Pollutant Discharge Elimination System
CCCSD	Central Contra Costa Sanitary District	O&M	Operation and maintenance
CIP	Capital Improvement Program	PMA	Private Meter Agreement
Code	Mt. View Sanitary District Code	SOI	Sphere of Influence
District	Mt. View Sanitary District	SSC	Sewer Service Charges
FRP	Facilities Rehabilitation Program	TSS	Total Suspended Solids
FY	Fiscal year (July 1 to June 30)		
FY24	July 1, 2023 to June 30, 2024		
gpd	Gallons per Day		
HCF	Hundred Cubic Feet (~ 748.1 gallons)		
MVSD	Mt. View Sanitary District		

Executive Summary

In February 2022 the Mt. View Sanitary District (MVSD or District) contracted with Municipal Financial Services to evaluate sewer service charges and recommend a revised schedule of Sewer Service Charges (SSCs). Sewer Service Charges are intended to recover revenues sufficient to adequately fund sewer utility operations, maintenance, and capital replacement expenditures, meet debt service obligations, keep rates as competitive as possible and maintain a prudent level of reserves.

Projected Cash Flow

Beginning and ending fund balances, expenditures and revenues for the next five fiscal years, FY24 – FY28, are summarized in the table below.

Sewer Service Charges recommended for FY24 – FY28 are based on the expenditures and transfers summarized in the table. FY23 revenue from SSCs is projected to be approximately \$8,550,000. Based on recommended SSC increases that average 9.1 percent per year, revenue from SSCs will increase by approximately \$13,000,000 during the five-year period.

Projected capital expenditures for FY24 – FY28 are based on the annual projected capital expenditures provided by the District for minor capital expenditures (\$4,100,000) and major capital expenditures (\$51,500,000) from the District’s 20-year plan. Major capital projects from the 20-year plan are funded at 80 percent of the planned expenditures. For example, FY25 capital expenditures of approximately \$6,400,000 in the 20-year plan are funded at approximately \$5,100,000. The total difference for FY24 – FY28 is approximately \$4,700,000. Annual debt service for the 2018 loan and 2021 loan totals approximately \$847,000. Both loans have 20-year maturities.

Table ES-1. Fund Balances, Revenue and Expenditures for FY24 – FY28						
Item, \$ millions	3409	3410	3412	3415	Total	% of Total
Beginning Balances, July 1, 2023	3.9	0.7	6.9	0.0	11.5	
Revenues						
Sewer Service Charges	55.8	0.0	0.0	0.0	55.8	91.9%
Ad Valorem Taxes	2.2	0.0	0.0	0.0	2.2	3.6%
Interest	0.1	0.03	0.1	0.0	0.3	0.5%
Other	2.2	0.0	0.2	0.0	2.5	4.0%
Total Revenues	60.3	0.03	0.3	0.0	60.7	100%
Expenditures						
Operations & Maintenance	41.4	0.0	0.0	0.0	41.4	62%
Capital Projects	0.0	2.0	18.7	0.0	20.7	31%
Debt Service	0.0	0.0	0.0	4.2	4.2	6%
Total Expenditures	41.4	2.0	18.7	4.2	66.3	100%
Interfund Transfers	(17.9)	2.2	11.5	4.2	0.0	
Ending Balances, July 1, 2028	4.9	0.9	0.1	0.0	5.9	
Ending Balance Reserve Target, July 1, 2028	5.3	1.0	1.5		7.8	

Total fund balances are projected to decrease from \$11,500,000 to \$5,900,000. Total FY28 ending balances of \$5,900,000 are approximately \$1,900,000 below the target level of \$7,800,000. Ending balances for the following year, FY29, are projected to exceed target levels.

Customer Wastewater Discharge Characteristics

As part of the 2017 Study, customer characteristics for Flow, BOD and TSS were evaluated to ensure that those characteristics approximately represent the volume of wastewater and pounds of conventional pollutants (BOD and TSS) entering the District’s Wastewater Treatment Plant and represent the approximate amount of volume and pounds of BOD and TSS generated by each customer or customer class connected to the District wastewater system. Changes in Flow and BOD/TSS concentrations for Apartments/Mobile Homes and General Commercial customer classes were implemented over a five-year period – from FY18 through FY22. Changes to customer characteristics are now fully incorporated into the rates. Changes in flow and strength adopted as part of the 2017 Study are listed in the table below. Text in red color indicates values that are changed from the prior year.

Table ES-2. Changes in Customer Wastewater Discharge Characteristics FY18 – FY22

Rate Structure Feature	Adopted Flows and BOD/TSS				
	FY18	FY19	FY20	FY21	FY22
SINGLE FAMILY FLOW AND BOD/TSS CONCENTRATIONS					
Residential Average Daily Flow (gpd)	150	150	150	150	150
Residential Average BOD/TSS (mg/L)	287	287	287	287	287
APARTMENT/MOBILE HOME UNITS FLOW AND BOD/TSS CONCENTRATIONS					
Apartment Units Average Daily Flow (gpd)	143	138	129	120	113
<i>Percent of Residential Flow</i>	95%	92%	86%	80%	75%
Apartment Units Average BOD/TSS (mg/L)	287	287	287	287	287
COMMERCIAL GROUP 1 BOD/TSS CONCENTRATIONS					
General Commercial Average Daily Flow (gpd)	varies	varies	varies	varies	varies
General Commercial Average BOD/TSS (mg/L)	250	259	268	277	287
<i>Percent of Residential BOD/TSS</i>	87%	90%	93%	97%	100%

Note: Text in red color indicates values changed from the prior year.

Recommended Sewer Service Charges

Recommended sewer service charges are shown in the table below. Note that except for about 20 accounts, sewer service charges are collected on the Contra Costa County tax roll. Charges not collected on the tax roll are billed directly to customers by the District.

Table ES-3. Current and Recommended Unit Costs and Sewer Service Charges							
Customer Class	Billing Units	Current FY23	Recommended Five-Year Rate Plan				
			FY24	FY25	FY26	FY27	FY28
Unit Costs							
Flow	\$ per million gallons	\$8,965	\$9,771	\$10,651	\$11,609	\$12,654	\$13,793
BOD	\$ per 1000 pounds	\$1.18	\$1.29	\$1.40	\$1.53	\$1.67	\$1.82
TSS	\$ per 1000 pounds	\$1.29	\$1.40	\$1.53	\$1.67	\$1.82	\$1.98
SSCs	% incr. >	10.0%	9.1%	9.5%	8.6%	9.1%	9.4%
Residential *	Annual	\$814.20	\$888	\$972	\$1,056	\$1,152	\$1,260
Apt/MH Units	Annual	\$652.20	\$708	\$768	\$840	\$912	\$996
Nonresidential							
Group 1	\$ per HCF	\$11.04	\$12.05	\$13.15	\$14.35	\$15.65	\$17.05
Group 1A	\$ per HCF	\$11.04	\$12.05	\$13.15	\$14.35	\$15.65	\$17.05
Group 2	\$ per HCF	\$12.12	\$13.20	\$14.40	\$15.70	\$17.10	\$18.65
Group 3	\$ per HCF	\$15.36	\$16.75	\$18.25	\$19.90	\$21.70	\$23.65
Group 4	\$ per HCF	\$16.68	\$18.20	\$19.85	\$21.65	\$23.60	\$25.70
Group 5	\$ per HCF	\$18.96	\$20.65	\$22.50	\$24.55	\$26.75	\$29.15
PMA's **	\$ per HCF	\$14.80	\$16.15	\$17.60	\$19.20	\$20.95	\$22.85
VA Clinic	\$ per HCF	\$11.04	\$12.05	\$13.15	\$14.35	\$15.65	\$17.05
* Recommended and Forecast SSCs for Residential and Apt/MH are rounded to the nearest \$12. Recommended and Forecast SSCs based on HCF are rounded to the nearest \$0.05.							
** The SSCs for accounts with PMA's (Private Meter Agreements) are the average for the class.							

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Section 1

Introduction

Sewer Service Charges are intended to recover revenues sufficient to adequately fund sewer utility operations, maintenance, and capital replacement expenditures, meet debt service obligations, keep rates as competitive as possible and maintain a prudent level of reserves.

1.1 Wastewater Management System Description

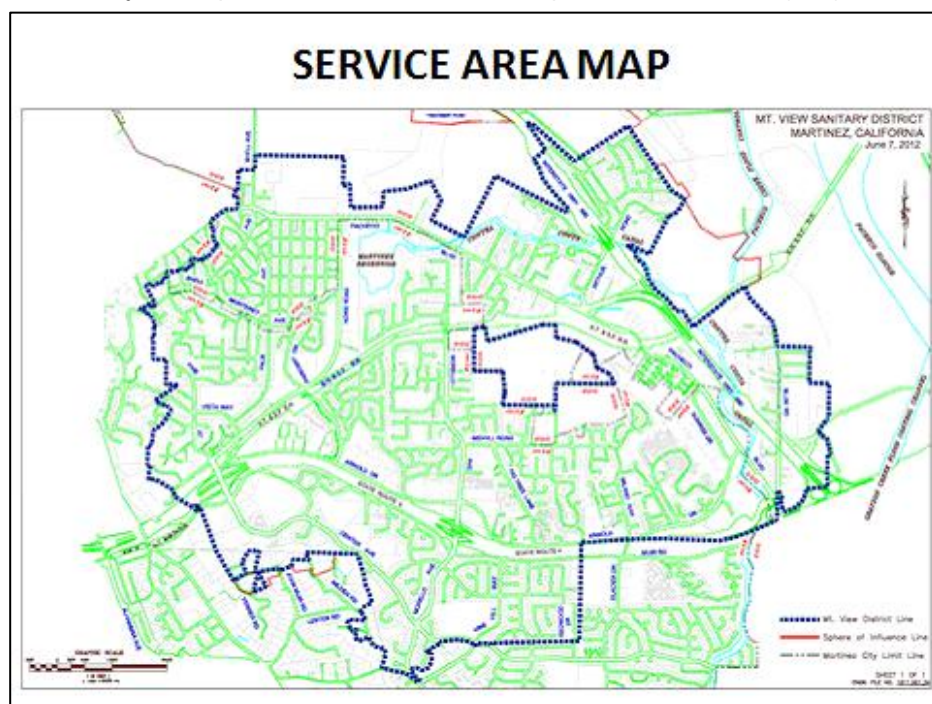
MVSD is an independent district, formed in 1923 pursuant to the Sanitary District Act of 1923 (Health & Safety Code §6400 et seq.). MVSD serves an estimated population of 22,000 residents consisting of approximately 7,912 residential and 314 commercial, industrial and institutional sewer connections. The District's service area is approximately 4.7 square miles. The District's sphere of influence (SOI)

encompasses an additional 1.6 square miles and primarily includes an area of 1.46 square miles of industrially zoned land to the north of the District's boundary as well as an island within the center of the District of 0.14 square miles that is in agricultural use. The SOI area to the north of the District is designated as heavy industrial to the west of I-680 and open space and parks and recreation to the east of I-680.

The District's wastewater collection system is located in the rolling hills in and surrounding Martinez and serves three zones or watersheds. The collection system includes four pumping stations and 73 miles of sewer pipelines ranging in diameter from 6 to 24 inches.

MVSD provides wastewater collection, treatment, and disposal services for the northeasterly portion of the City of Martinez and adjacent unincorporated lands to the northeast. The plant receives approximately 1.45 million gallons per day during dry weather.

The District collaborates with the Central Contra Costa Sanitary District (CCCSD) to provide a permanent Household Hazardous Waste Collection facility and disposal services for the central portion of the county. MVSD has a franchise agreement with Allied Waste (parent company to Pleasant Hill Bayshore Disposal) for Allied Waste to provide trash collection, recycling, and disposal services within the unincorporated area of MVSD's boundaries. The effluent is comprised of approximately 90% residential and 10% small business waste.

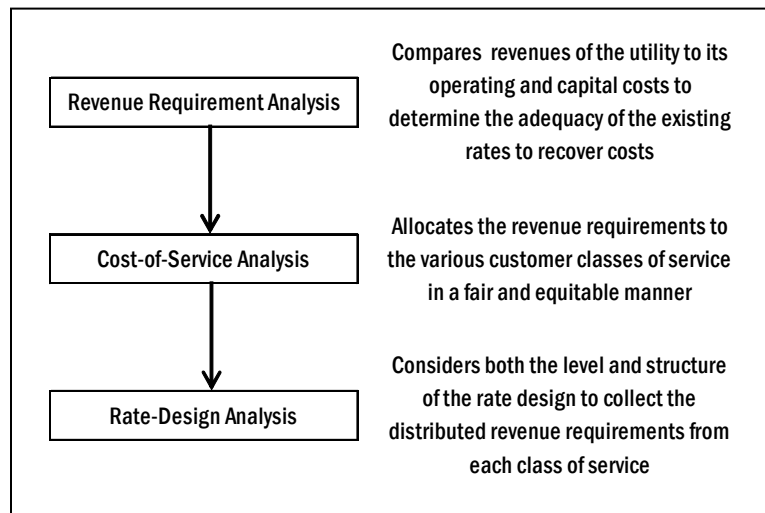


1.2 Regulatory Requirements

The updated Sewer Service Charges (SSCs) recommended in this study will fulfill the requirements found in the *Revenue Program Guidelines* published by the California Environmental Protection Agency’s State Water Resource Control Board from its Policy for Implementing the State Revolving Fund for Construction of Wastewater Treatment Facilities.

1.3 Rate Setting Process

Sewer rate studies classically have three categories of technical analysis – the development of revenue required from rates, the allocation of costs among functional cost categories (cost-of-service analysis) and the design of a rate structure. An overview of the rate-setting analytical steps is shown in Figure 1-1.



The District previously completed a sewer rate study in 2017 (2017 Study). The study included a revenue analysis, cost-of-service analysis and rate-design analysis.

The current rate study includes an updated revenue requirement analysis. Rate-design changes and cost-of-service allocation adjustments recommended in the 2017 Study are now fully incorporated into the current and recommended rate structures.

Figure 1-1. Overview of Rate Setting Analytical Steps

1.4 Financial and Parcel Data

Information and data for the development of wastewater rates include a number of documents provided by the District. The list of documents, and the key information and data from each used in this study, are summarized below.

Mt. View Sanitary District 2022-23 Fiscal Year Budget

MVSD operates under a fiscal year budget cycle beginning July 1 and ending June 30. The District’s Budget is balanced and consistent in its commitment to provide for the long-term continued provision of services to the District’s ratepayers.

Mt. View Sanitary District Financial Statements

The Financial Statements provide discussion and analysis of District financial performance and financial activities for a fiscal year ended June 30. The District’s financial statements present a balance sheet; statement of revenues, expenses and changes in net position; and statement of cash flows.

Mt. View Sanitary District, District Financial Reserves Policy, No. 3125

The District Financial Reserves Policy sets policy to enable realistic long-term planning, to assist with effective development of annual budgets, and to promote clear communications with the general public and District.

Mt. View Sanitary District Capital Project Expenditure Program

Capital expenditures are from the District’s “10-year CIP Update” spreadsheet provided on June 16, 2022. The document includes capital expenditure estimates for FY23 – FY42.

2018 Installment Sales Agreement #18-015

The District and Municipal Finance Corporation entered into an Installment Sale Agreement on October 1, 2018, to affect the issuance of debt and acquisition of \$6,000,000 in funds by the District to pay for capital projects defined in the Installment Sale Agreement.¹ Installment payments for the Series 2018 Debt Agreement are \$449,344.52 due every October from 2019 through 2038 (20 years). Covenants of the District in the Series 2018 Debt Agreement require the District to maintain rates and charges for the Sewer System at a level that yields “Net Revenues” (all revenues net of operation and maintenance expenses) at least greater or equal to 115 percent of the debt service installment payments for a fiscal year.

2021 Installment Purchase Contract

On June 1, 2021, the District entered into an arrangement with Municipal Finance Corporation in the form of an installment purchase agreement to finance the acquisition, construction and installation of certain additions, betterments, extensions or improvements to the District sewer system. The agreement, fully funded in June 2021 and maturing in June 2041, calls for MFC to provide an advance payment of \$6,000,000 to the District in exchange for a series of twenty (40) semi-annual principal and interest installment payments. Interest accrues annually at a fixed rate of 2.90% on the unpaid principal. Title to the components of the 2021 Project immediately and automatically vest in the District upon their acquisition and construction. Covenants of the District in the Series 2018 Debt Agreement require the District to maintain rates and charges for the Sewer System at a level that yields “Net Revenues” (all revenues net of operation and maintenance expenses) at least greater or equal to 115 percent of the debt service installment payments for a fiscal year.

Parcel Billing Data

Parcel billing data is from the Mt. View Sanitary District 2022-23 Fiscal Year Sewer Service Charge Report and an extract from the District GIS (Geographic Information System) data base.

Evaluation of Sewer Service Charges

Current sewer service charges were based on recommendations presented in a report dated April 9, 2020, titled, “Revised Final 2020 Sewer Service Charges Study.” The recommended charges were revised by direction of the Board of Directors in their June 11, 2020, meeting.

¹ Municipal Finance Corporation and Municipal Financial Services have no affiliations or relations with each other. The similarity in names is a coincidence.

1.5 Sewer Service Charges Approved in 2020

During June 2020, the District's Board of Directors adopted Ordinance No. 2020-129, *Promulgating General Regulation No. 129 Adopting and Establishing a 3-year Schedule of Charges and Fees for Fiscal Years 2020-2021 through 2022-2023*. A list of prior (FY20) and FY21, FY22 and FY23 SSCs approved by the Board are shown in the table below.

Table 1-1. Adopted Sewer Service Charges FY20 – FY 23

Customer Class	Unit	Prior	Approved in June 2020			Percent Increase		
		FY20 Rates	FY21 Rates	FY22 Rates	FY23 Rates	FY21	FY22	FY23
Residential	Annual	\$615.60	\$672.84	\$740.16	\$814.20	9%	10%	10%
Apt/MH Units	Annual	\$530.16	\$539.04	\$592.92	\$652.20	2%	10%	10%
Group 1	\$ per HCF	\$8.16	\$9.20	\$10.08	\$11.04	13%	10%	10%
Group 1A	\$ per HCF	\$8.41	\$9.20	\$10.08	\$11.04	9%	10%	10%
Group 2	\$ per HCF	\$9.17	\$10.00	\$11.04	\$12.12	9%	10%	10%
Group 3	\$ per HCF	\$11.52	\$12.60	\$13.92	\$15.36	9%	10%	10%
Group 4	\$ per HCF	\$12.53	\$13.70	\$15.12	\$16.68	9%	10%	10%
Group 5	\$ per HCF	\$14.38	\$15.70	\$17.28	\$18.96	9%	10%	10%

1.6 Private Meter Agreements

Customers with Private Meter Agreements (PMAs) are charged based upon wastewater flows estimates for each wastewater discharge point source multiplied by the corresponding Sewer Service Charge for that source. Section 7.2.5.4 from the District Code that describes PMAs is included below.

7.2.5.4 Private Meter Agreement. When multiple non-residential establishments with different strength sewage are served by a single public potable water meter, the Owner may install at the Owner's expense, a submeter or meters of a type and at a location(s) approved by the District. Private meters shall be installed in such a manner as to clearly differentiate between or among the quantities discharged by each establishment according to strength of sewage and Sewer Service Charge rate. Such meter(s) shall be tested for accuracy at the expense of the User when deemed necessary by the District Manager. (Ord. No. 2013-111)

A Private Meter Agreement shall be entered into by property owner with the District in a form approved by the District Manager. The initial cost and minimum annual charge for development and annual administration of a Private Meter Agreement shall be the actual costs incurred by the District. The District's annual charge to administer Private Meter Agreements shall not be less than the amount shown in Table 7-1. (Ord. No. 2010-102). The form of the agreement shall be prescribed by the District Manager. The Owner shall pay all costs required for the preparation and administration of the agreement and for reading, recording and submitting sub-meter readings in a form and frequency required by the District Manager. The Private Meter Agreement shall be recorded in the office of the County Recorder. (Ord. No. 2013-111).

Section 2

Summary of Users and Wastewater Discharge Characteristics

The purpose of this section is to summarize the identification of residential and commercial users and their corresponding wastewater characteristics in terms of wastewater flow and wastewater strength.

2.1 Customer Wastewater Discharge Characteristics

As part of the 2017 Study, customer characteristics for Flow, BOD and TSS were evaluated to ensure that those characteristics approximately represent the volume of wastewater and pounds of conventional pollutants (BOD and TSS) entering the District's Wastewater Treatment Plant and represent the approximate amount of volume and pounds of BOD and TSS generated by each customer or customer class connected to the District's wastewater system.

Changes in Flow and BOD/TSS concentrations for Apartments/Mobile Homes and General Commercial accounts were to be implemented over a five-year period – from FY18 through FY22. As a result of the changes in flow and strength over time, the adopted sewer service charges vary from those developed for other customer classes with flow and strength characteristics that do not vary over those years.

Changes in flow and strength adopted as part of the 2017 Study are listed in the table below. Text in red color indicates values that are changed from the prior year. Changes to customer characteristics are now fully incorporated into the rates.

Table 2-1. Changes in Wastewater Discharge Characteristics FY18 – FY22

Rate Structure Feature	Adopted Flows and BOD/TSS				
	FY18	FY19	FY20	FY21	FY22
SINGLE FAMILY FLOW AND BOD/TSS CONCENTRATIONS					
Residential Average Daily Flow (gpd)	150	150	150	150	150
Residential Average BOD/TSS (mg/L)	287	287	287	287	287
APARTMENT/MOBILE HOME UNITS FLOW AND BOD/TSS CONCENTRATIONS					
Apartment Units Average Daily Flow (gpd)	143	138	129	120	113
<i>Percent of Residential Flow</i>	95%	92%	86%	80%	75%
Apartment Units Average BOD/TSS (mg/L)	287	287	287	287	287
COMMERCIAL GROUP 1 BOD/TSS CONCENTRATIONS					
General Commercial Average Daily Flow (gpd)	varies	varies	varies	varies	varies
General Commercial Average BOD/TSS (mg/L)	250	259	268	277	287
<i>Percent of Residential BOD/TSS</i>	87%	90%	93%	97%	100%

Note: Text in red color indicates values changed from the prior year.

2.2 Number of Accounts

Sewer Service Charges are developed for two residential customer classes and five nonresidential customer classes.

Residential. The residential customer class was changed in 2017 to separate Single Family accounts from Apartments and Mobile Homes accounts due to their significantly different wastewater discharge flows.

Nonresidential. Nonresidential customer classes were changed in 2017 to aggregate the 18 nonresidential customer classes into five customer classes. The classes were based on the combined strengths of BOD and TSS (as measured in mg/L).

The approximate number of accounts in each customer class for FY22 are summarized in the table below. The number of residential accounts is increased by 30 in FY24 and 30 in FY25 for planned occupancy in the *Tradition of Meadows* development.

Table 2-2. Residential and Nonresidential Customer Classes, Groups and Wastewater Strength

Customer Class	Customer Class Description	Approximate Number of Accounts	Wastewater Discharge Characteristics			
			BOD mg/L	TSS mg/L	BOD + TSS, mg/L	BOD + TSS Range for Customer Class
Residential	Residential Dwelling Unit	6,580	287	287	574	0 to 600
	Apartments and Mobile Homes	2,314	287	287	574	0 to 600
Commercial						
Group 1	Churches, Car wash, General commercial/office, Medical/dental, Public Agency, Schools	270	287	287	574	0 to 600
Group 1A	Hospital/nursing/clinics - I, Laundromats, Wheeled vehicle temp res/office	3	300	275	575	
Group 2	Café/limited on-site cooking, Hospital/nursing/clinics	11	350	350	700	601 to 1000
Group 3	Café/Fast Food-I-NG, Markets/Fast Food-I-NG, Restaurants/Fast Food-I-NG	12	600	500	1100	1001 to 1200
Group 4	Café/Fast Food-NI-NG	9	800	480	1280	1201 to 1500
Group 5	Markets/Fast Food-NI-NG, Restaurants/Fast Food-NI-NG	1	1000	600	1600	1501 to 1800

I=Interceptor; NI-No Interceptor; NG-No Food Grinder

Section 3

Revenue Required from Sewer Service Charges

Sewer Service Charges must adequately fund sewer utility operations, capital expenditures, maintenance of reserves, and bonded debt service payments related to the provision of sewer service. The revenue required from Sewer Service Charges is developed in this section.

Operating and maintenance expenditures and revenues are managed under Fund 3409. The District's program for funding capital improvement is administered under two separate funds, the Facilities Rehabilitation Program (FRP) typically consists of smaller and/or recurring annual capital expenditures and the Capital Improvement Program (CIP) which typically consists of larger capital projects. The FRP, which is managed under fund 3410, is funded primarily with *Ad Valorem* tax revenue. The CIP, which is managed under fund 3412, is funded with Connection Fee and Sewer Service Charge revenues. Fund 3415 is used to manage cash flow related to loan disbursements and payments.

3.1 Fund 3409 Projected Cash Flow

Operating and maintenance expenditures and revenues from Sewer Service Charges are accounted for in Fund 3409. Projected operating and maintenance expenditures for FY22 through FY28 are summarized in the table below.

Table 3-1. Fund 3409 Projected Cash Flow FY22 – FY28

	Estimate	Budget	Projected				
	FY22	FY23	FY24	FY25	FY26	FY27	FY28
Beginning Fund Balance	5,754,464	6,129,200	3,853,700	4,127,400	4,799,300	4,921,100	5,243,300
Revenues		% inc SSC >	9.0%	9.0%	9.0%	9.0%	9.0%
Sewer Service Charges	7,622,000	8,374,200	9,127,900	9,949,400	10,844,800	11,820,800	12,884,700
Sewer Service Charges - VA Clinic	159,800	175,780	191,600	208,800	227,600	248,100	270,400
Ad Valorem Taxes	452,480	437,132	437,100	437,100	437,100	437,100	437,100
Connection Fees	36,500	37,595	37,600	37,600	37,600	37,600	37,600
Rents & Leases	190,296	196,005	196,000	196,000	196,000	196,000	196,000
Permits, Inspections & Fees	143,404	147,706	147,700	147,700	147,700	147,700	147,700
Interest on LAIF	4,536	28,200	25,000	26,800	31,200	32,000	34,100
Other Revenues	62,778	64,661	64,700	64,700	64,700	64,700	64,700
Total Revenues	8,671,793	9,461,279	10,227,600	11,068,100	11,986,700	12,984,000	14,072,300
Expenditures		Annual % inc >	6.0%	6.0%	6.0%	6.0%	4.0%
Salaries & Benefits	3,836,692	4,345,834	4,606,600	4,883,000	5,176,000	5,486,600	5,706,100
Insurance	208,809	257,570	273,000	289,400	306,800	325,200	338,200
Collections	171,314	171,160	181,400	192,300	203,800	216,000	224,600
Treatment Plant	815,768	887,950	941,200	997,700	1,057,600	1,121,100	1,165,900
Marsh	80,005	111,700	118,400	125,500	133,000	141,000	146,600
Admin & General	910,262	1,073,100	1,137,500	1,205,800	1,278,100	1,354,800	1,409,000
Lab	80,860	105,550	111,900	118,600	125,700	133,200	138,500
Total Expenditures	6,103,710	6,952,864	7,370,000	7,812,300	8,281,000	8,777,900	9,128,900
Transfers In/Out							
Transfer Out - 3410 (Ad Valorem)	(421,097)	(437,132)	(437,100)	(437,100)	(437,100)	(437,100)	(437,100)
Transfer Out - 3410 (Expenses)	(8,874)	-	-	-	-	-	-
Transfer Out - 3412 (Capital)	-	(3,500,000)	(1,300,000)	(1,300,000)	(2,300,000)	(2,600,000)	(4,000,000)
Transfer Out - 3415 (2018 Note)	(449,345)	(449,300)	(449,300)	(449,300)	(449,300)	(449,300)	(449,300)
Transfer Out - 3415 (2021 Note)	(397,458)	(397,500)	(397,500)	(397,500)	(397,500)	(397,500)	(397,500)
Total Transfers	(1,276,774)	(4,783,932)	(2,583,900)	(2,583,900)	(3,583,900)	(3,883,900)	(5,283,900)
Ending Fund Balance	7,045,773	3,853,682	4,127,400	4,799,300	4,921,100	5,243,300	4,902,800

3.2 Capital Improvement Program

The District has three funds related to capital project revenues and expenditures. Small capital projects that do not involve design and engineering such as smaller, recurring capital expenditures, equipment repair and replacement, and maintenance projects, are under Fund 3410. Projects identified in the District Capital Improvement Program (CIP) are managed under Fund 3412 and encompasses larger, long-term projects and studies related to repairs / improvements to, or rehabilitation / replacement of the District’s core capital assets.

Fund 3410 is funded with *Ad Valorem* tax revenue. Fund 3412 is funded with Connection Fee and Sewer Service Charge revenues, capacity charge revenues and loan disbursements. Fund 3415 tracks disbursements from loans, transfers from Fund 3409 and transfers to Fund 3412, and principal and interest components of the loan payments.

The following table and figure summarize the categories of capital program projects projected for FY23 – FY42 (20 years): 1) collection system and pump station (Collections); 2) wastewater treatment plant (Plant); 3) marsh-related (Marsh); and 4) strategic initiative (StratInit).

Category	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36	FY37	FY38	FY39	FY40	FY41	FY42	Total
Collections	986	1,157	2,369	3,304	320	4,152	238	3,422	1,645	2,024	264	2,035	3,022	1,979	250	2,028	2,179	202	285	4,796	36,657
Plant	3,062	603	3,943	2,055	2,877	660	10,692	2,319	2,128	145	1,848	239	3,283	893	4,632	3,526	1,213	251	1,449	1,338	47,156
Marsh	0	0	0	100	230	1,307	1,225	0	0	0	0	0	0	0	0	0	165	1,225	0	0	4,252
StratInit	224	105	75	75	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	529
Total, rounded	4,270	1,870	6,390	5,530	3,480	6,120	12,160	5,740	3,770	2,170	2,110	2,270	6,310	2,870	4,880	5,550	3,560	1,680	1,730	6,130	88,590
Cumulative	4,270	6,140	12,530	18,060	21,540	27,660	39,820	45,560	49,330	51,500	53,610	55,880	62,190	65,060	69,940	75,490	79,050	80,730	82,460	88,590	
% of Total	4.8%	6.9%	14.1%	20.4%	24.3%	31.2%	44.9%	51.4%	55.7%	58.1%	60.5%	63.1%	70.2%	73.4%	78.9%	85.2%	89.2%	91.1%	93.1%	100.0%	

Source: "CIP SCHEDULE COST MASTER FILE.xlsx" from Chris Elliot on 6/16/2022 Legend: "StratInit" = Strategic Initiative

The majority of capital expenditures are in the first ten years, FY23 – FY32. In the first five years expenditures are approximately \$21.5 million (24% of the total). In the second five years expenditures are approximately \$30.0 million (34% of the total).

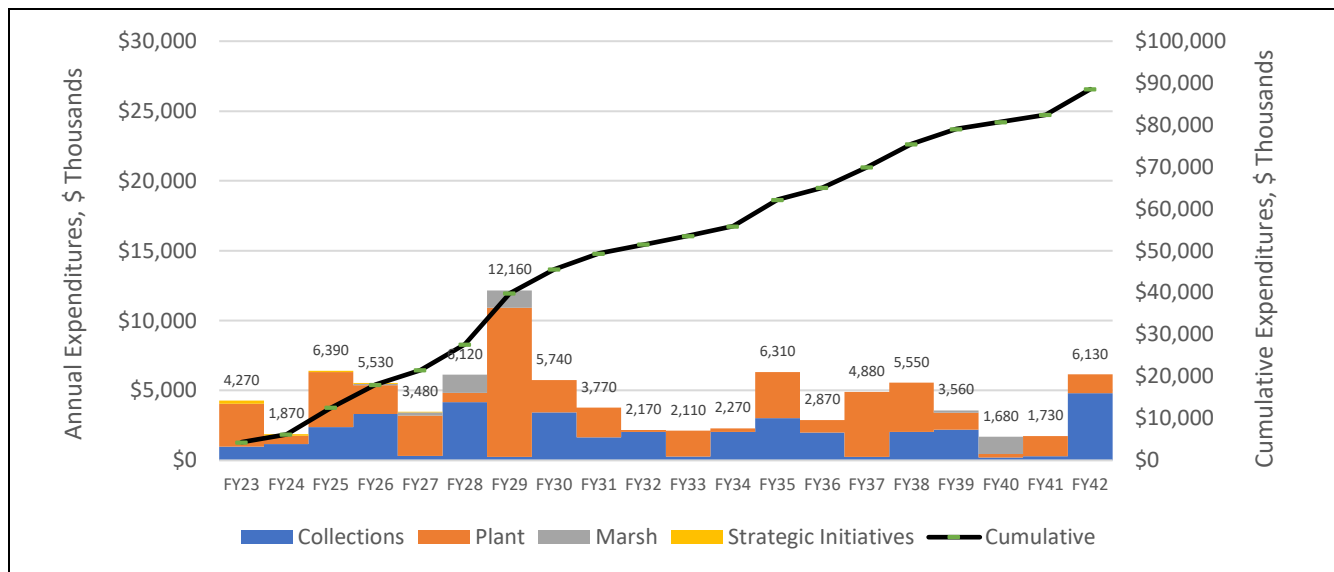


Figure 3-1. Projected Capital Program Expenditures FY23 – FY42

Capital projects from the 20-year plan are funded with revenue from SSCs at 80 percent of the planned expenditures shown in the table and figure. For example, FY25 capital expenditures of approximately \$6,400,000 in the 20-year plan are funded at approximately \$5,100,000. The total difference for FY24 – FY28 is approximately \$4,700,000. Funding for the \$10,692,000 Switchgear & Standby Generator Replacement project in FY29 (the fiscal year following the proposed rate plan) is not expected to be funded from SSC revenues.

3.3 Debt Issuance and Service

In late 2018, the District issued \$6,000,000 in debt to pay for capital projects related to the Phase B - Moorhen Marsh Western Pond Turtle Habitat Enhancement Project; Biotower and Biofilter Rotating Equipment Replacement; UV Disinfection Replacement Project; 2019 Sewage Collection System Project; and the 2019-2020 Plant Electrical Systems Upgrades. Installment payments for the Series 2018 Installment Sales Agreement are \$449,344.52 due every October from 2019 – 2038 (20 years).

In late 2021, the District issued \$6,000,000 in debt to pay for capital projects related to replacement of the UV disinfection system, the sludge dewatering centrifuge replacement, the headworks automatic screening replacement at the District’s wastewater treatment plant and various upgrades and replacements to the District’s collection system. Installment payments for the Series 2021 Installment Purchase Contract are \$397,458 per year from 2022 – 2041 (20 years). Payments for both loans are summarized in the following table and figure.

Table 3-3. Loan Agreements Payments FY20 – FY42

	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36	FY37	FY38	FY39	FY40	FY41	FY42		
2018 Note																									
Pymt #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20			Total		
Interest	252	244	235	226	217	207	197	186	175	164	152	139	126	112	98	84	68	52	35	18			2,987	33%	
Principal	197	206	214	223	233	242	253	263	274	286	298	310	323	337	351	366	381	397	414	431			6,000	67%	
Total	449	449	449	449	449	449	449	449	449	449	449	449	449	449	449	449	449	449	449	449	449			8,987	100%
2021 Note																									
Pymt #			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total		
Interest			172	166	159	152	145	138	130	122	114	106	97	88	79	70	61	51	41	30	20	8	1,949	25%	
Principal			225	232	238	245	253	260	268	275	283	292	300	309	318	327	337	347	357	367	378	389	6,000	75%	
Total			397,458	397	397	397	397	397	397	397	397	397	397	397	397	397	397	397	397	397	397	397	7,949	100%	
Total																									
Interest	252	244	407	392	376	359	342	324	305	286	266	245	223	201	178	154	129	103	76	48	20	8	4,936	29%	
Principal	197	206	439	455	471	488	505	523	542	561	581	602	624	646	669	693	718	744	771	798	378	389	12,000	71%	
Total	449	449	847	847	847	847	847	847	847	847	847	847	847	847	847	847	847	847	847	847	397	397	16,936	100%	
Cumulative Interest	0	252	496	903	1,295	1,671	2,030	2,371	2,695	3,000	3,286	3,551	3,796	4,019	4,220	4,398	4,552	4,681	4,784	4,860	4,908	4,928	4,936		
Remaining Principal	12,000	11,803	11,597	11,158	10,703	10,232	9,744	9,239	8,716	8,174	7,613	7,031	6,429	5,806	5,160	4,491	3,798	3,080	2,336	1,565	767	389	0		

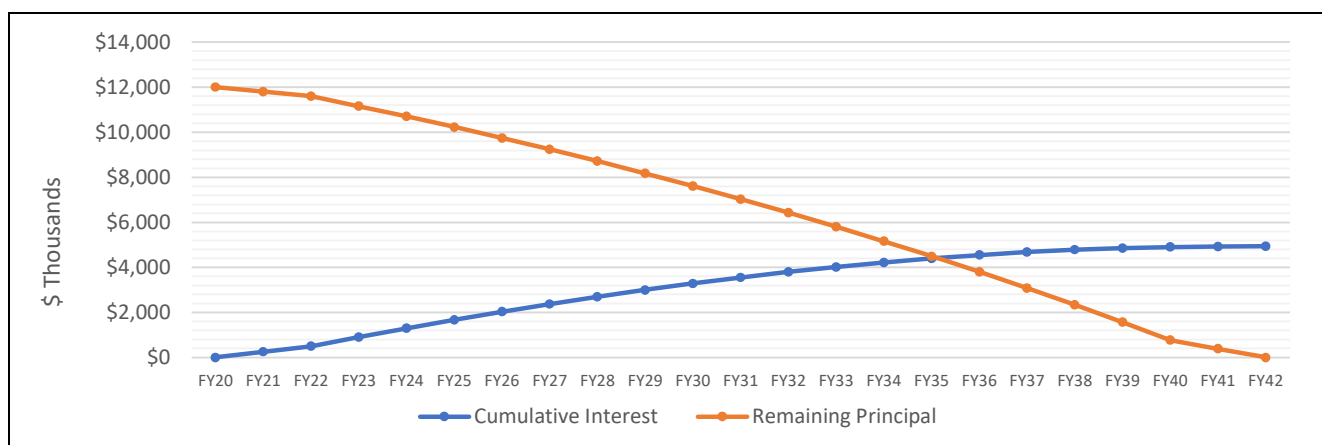


Figure 3-2. Debt Service Cumulative Interest and Remaining Principal, FY20 – FY42

3.4 Funds 3409, 3410, 3412 and 3415 Projected Cash Flow

Beginning and ending fund balances, expenditures and revenues for FY22 – FY28, are summarized in the table below. Detailed data for each fund is included in Appendix A, Table A-1, Fund 3409; Table A-2, Fund 3410; Table A-3, Fund 3412; Table A-4, Fund 3415; and Table A-5, All Funds Summary.

	Prior FY22	Current FY23	Based on Annual 9% Increase in SSC				
			FY24	FY25	FY26	FY27	FY28
Total Beginning Fund Balances, July 1	14,029,957	13,223,200	11,464,600	11,698,497	8,705,294	6,812,891	7,045,388
Revenues							
Fund 3409	8,671,793	9,461,279	10,227,600	11,068,100	11,986,700	12,984,000	14,072,300
Fund 3410	493	2,900	4,500	4,900	5,300	5,600	5,900
Fund 3412	26,051	338,668	89,500	88,900	64,700	51,300	50,400
Fund 3415	8,215	27,200	0	0	0	0	0
Total Revenues	8,706,552	9,830,047	10,321,600	11,161,900	12,056,700	13,040,900	14,128,600
Expenditures							
Fund 3409	6,103,710	6,952,864	7,370,000	7,812,300	8,281,000	8,777,900	9,128,900
Fund 3410	180,481	371,250	378,700	386,200	393,900	401,900	409,900
Fund 3412	958,203	3,417,600	1,492,000	5,109,600	4,427,200	2,781,600	4,895,200
Fund 3415	846,857	847,003	847,003	847,003	847,003	847,003	847,003
Total Expenditures	8,089,251	11,588,717	10,087,703	14,155,103	13,949,103	12,808,403	15,281,003
Net Transfers, In/(Out)							
Fund 3409	(1,276,774)	(4,783,932)	(2,583,900)	(2,583,900)	(3,583,900)	(3,883,900)	(5,283,900)
Fund 3410	429,971	437,132	437,100	437,100	437,100	437,100	437,100
Fund 3412	0	9,440,000	1,300,000	1,300,000	2,300,000	2,600,000	4,000,000
Fund 3415	846,803	(5,093,200)	846,800	846,800	846,800	846,800	846,800
Total Net Transfers	0	0	0	0	0	0	0
Ending Fund Balance							
Fund 3409	7,045,773	3,853,682	4,127,400	4,799,300	4,921,100	5,243,300	4,902,800
Fund 3410	772,525	693,782	756,700	812,500	861,000	901,800	934,900
Fund 3412	840,060	6,914,468	6,812,000	3,091,300	1,028,800	898,500	53,700
Fund 3415	5,988,901	2,597	2,397	2,194	1,991	1,788	1,586
Total Ending Fund Balance, June 30	14,647,258	11,464,529	11,698,497	8,705,294	6,812,891	7,045,388	5,892,986

Fund balances, expenditures and revenues for FY22 – FY28 are summarized in the figure below.

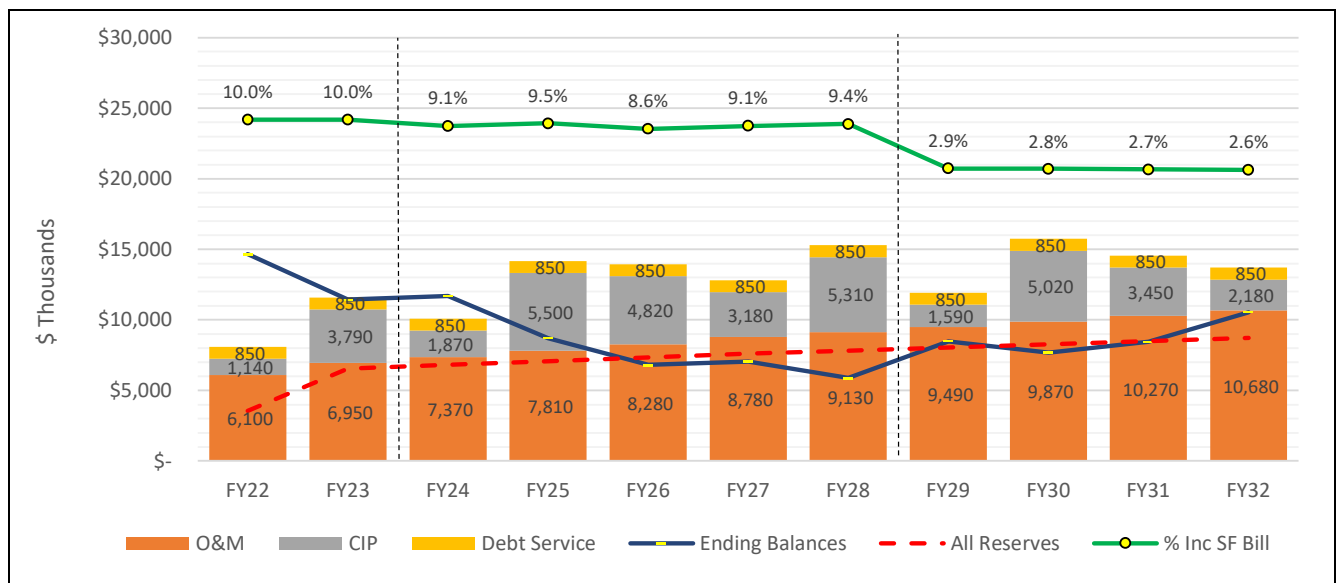


Figure 3-3. Fund Balances, Revenue and Expenditures, FY22 – FY28

Section 4

Sewer Service Charges

The District's current and recommended sewer service charges and unit costs for Flow, BOD and TSS, are summarized in this section. Revenues from recommended sewer service charges is also summarized.

4.1 Recommended Sewer Service Charges

Recommended sewer service charges are shown in the table below. Note that except for about 20 accounts, sewer service charges are collected on the Contra Costa County tax roll. Charges not collected on the tax roll are billed directly by the District to customers.

Table 4-1. Current and Recommended Unit Costs and Sewer Service Charges

Customer Class	Billing Units	Current FY23	Recommended Five-Year Rate Plan				
			FY24	FY25	FY26	FY27	FY28
Unit Costs							
Flow	\$ per million gallons	\$8,965	\$9,771	\$10,651	\$11,609	\$12,654	\$13,793
BOD	\$ per 1000 pounds	\$1.18	\$1.29	\$1.40	\$1.53	\$1.67	\$1.82
TSS	\$ per 1000 pounds	\$1.29	\$1.40	\$1.53	\$1.67	\$1.82	\$1.98
SSCs		<i>% incr. ></i>					
Residential *	Annual	10.0%	9.1%	9.5%	8.6%	9.1%	9.4%
Apt/MH Units	Annual	\$814.20	\$888	\$972	\$1,056	\$1,152	\$1,260
Nonresidential		\$652.20	\$708	\$768	\$840	\$912	\$996
Group 1	\$ per HCF	\$11.04	\$12.05	\$13.15	\$14.35	\$15.65	\$17.05
Group 1A	\$ per HCF	\$11.04	\$12.05	\$13.15	\$14.35	\$15.65	\$17.05
Group 2	\$ per HCF	\$12.12	\$13.20	\$14.40	\$15.70	\$17.10	\$18.65
Group 3	\$ per HCF	\$15.36	\$16.75	\$18.25	\$19.90	\$21.70	\$23.65
Group 4	\$ per HCF	\$16.68	\$18.20	\$19.85	\$21.65	\$23.60	\$25.70
Group 5	\$ per HCF	\$18.96	\$20.65	\$22.50	\$24.55	\$26.75	\$29.15
PMA's **	\$ per HCF	\$14.80	\$16.15	\$17.60	\$19.20	\$20.95	\$22.85
VA Clinic	\$ per HCF	\$11.04	\$12.05	\$13.15	\$14.35	\$15.65	\$17.05

* Recommended and Forecast SSCs for Residential and Apt/MH are rounded to the nearest \$12.
Recommended and Forecast SSCs based on HCF are rounded to the nearest \$0.05.

** The SSCs for accounts with PMA's (Private Meter Agreements) are the average for the class.

4.2 Revenue from Sewer Service Charges

Revenue from current and recommended Sewer Service Charges is summarized in the table below. Detailed calculation of revenues for each year are shown in Appendix B, Table B-1.

Table 4-2. Revenue from Current and Recommended Sewer Service Charges								
Customer Class	Current FY23	Recommended Five-Year Rate Plan					FY24 - FY28 Total	% of Total
		FY24	FY25	FY26	FY27	FY28		
Residential	\$5,360,000	\$5,870,000	\$6,450,000	\$7,010,000	\$7,650,000	\$8,370,000	\$35,350,000	63%
Apt/MH Units	\$1,510,000	\$1,640,000	\$1,780,000	\$1,940,000	\$2,110,000	\$2,300,000	\$9,770,000	17%
Nonresidential								
Group 1	\$820,000	\$890,000	\$970,000	\$1,060,000	\$1,160,000	\$1,260,000	\$5,340,000	9.5%
Group 1A	\$50,000	\$60,000	\$60,000	\$70,000	\$80,000	\$80,000	\$350,000	0.6%
Group 2	\$110,000	\$120,000	\$130,000	\$150,000	\$160,000	\$170,000	\$730,000	1.3%
Group 3	\$130,000	\$140,000	\$150,000	\$170,000	\$180,000	\$200,000	\$840,000	1.5%
Group 4	\$70,000	\$80,000	\$80,000	\$90,000	\$100,000	\$110,000	\$460,000	0.8%
Group 5	\$20,000	\$20,000	\$30,000	\$30,000	\$30,000	\$30,000	\$140,000	0.3%
PMA's	\$280,000	\$300,000	\$330,000	\$360,000	\$400,000	\$430,000	\$1,820,000	3.3%
VA Clinic	\$170,000	\$190,000	\$210,000	\$230,000	\$250,000	\$270,000	\$1,150,000	2.1%
Total	\$8,520,000	\$9,310,000	\$10,190,000	\$11,110,000	\$12,120,000	\$13,220,000	\$55,950,000	100%

4.3 Single Family Monthly Bill Survey

The District's current (FY23) and recommended (FY24) Sewer Service Charges were compared to the sewer service charges of seven other agencies. The comparison is for single family dwelling units. Results of the survey are shown in Figure 4-1.

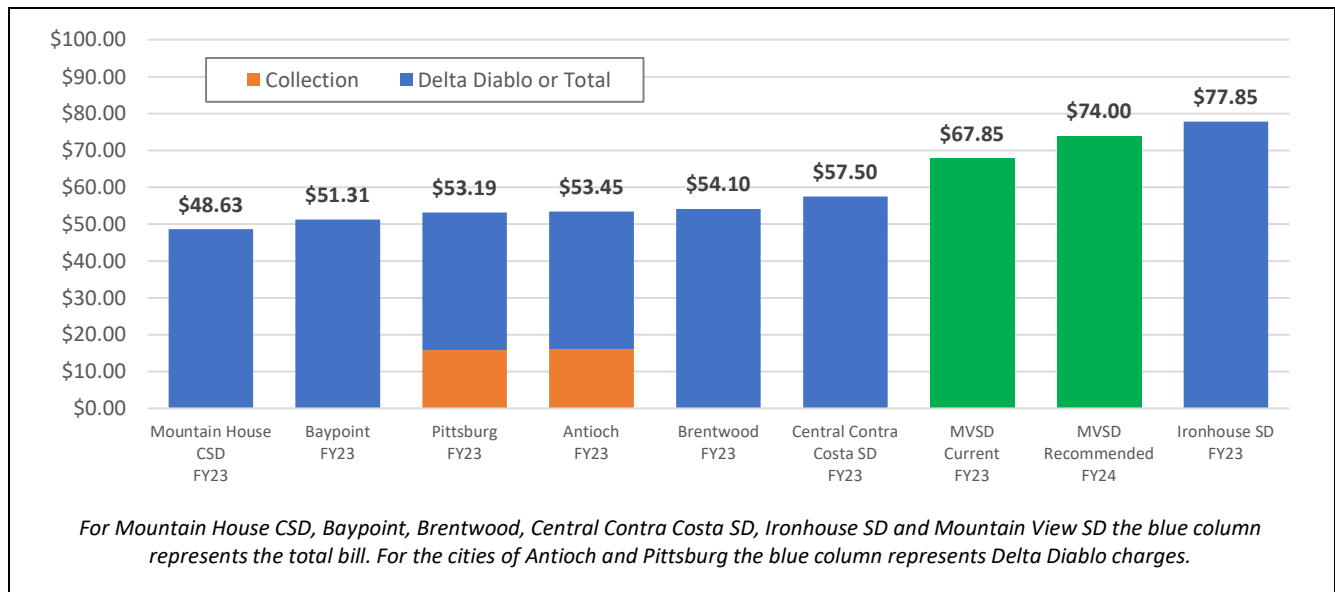


Figure 4-1. Single Family Monthly Bill Survey

Section 5

Conclusions and Recommendations

5.1 Conclusions

Based on our evaluation of the District's sewer service charges we have drawn the following conclusions:

- The District's Operating projected expenditures for FY24 – FY28 are approximately \$41.4 million.
- The District's projected capital expenditures for FY24 – FY28 are approximately \$20.7 million.
- The District's projected debt service expenditures for FY24 – FY28 are approximately \$4.2 million.
- The District's projected total expenditures for FY24 – FY28 are approximately \$66.3 million.
- The District's revenues, without an increase in Sewer Service Charges for FY24 – FY28, would be approximately \$42.7 million.
- The District's total expenditures for FY24 – FY28 would exceed revenues from SSCs by approximately \$23.5 million without an increase in Sewer Service Charges.
- During FY24 – FY28, the District must collect approximately \$13.0 million of additional revenue from Sewer Service Charges, use approximately \$5.6 million of fund balance, and collect approximately \$4.9 million in other revenues to meet capital and operating expenditures, maintain a prudent level of reserves and meet debt service obligations.

5.2 Recommendations

The following recommendations are offered to ensure the financial viability and flexibility of the wastewater fund:

Recommendation 1. Adopt and implement the Sewer Service Charges recommended for FY24 – FY28.

Recommendation 2. Update cash flow projections in the event of a significant change to any expenditure or revenue assumption.

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Section 6

Limitations

This document was prepared solely for the Mt. View Sanitary District in accordance with professional standards at the time the services were performed and in accordance with Task Order No. 1 to Contract 22-0005 between Mt. View Sanitary District and Municipal Financial Services. This document is governed by the specific scope of work authorized by Mt. View Sanitary District; it is not intended to be relied upon by any other party. We have relied on information or instructions provided by Mt. View Sanitary District and, unless otherwise expressly indicated, have made no independent investigation as to the validity, completeness, or accuracy of such information.

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Appendix A: Funds Cash Flow Tables

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Table A-1
Fund 3409 Cash Flow

	Estimate FY22	Budget FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32
Beginning Fund Balance	5,754,464	6,129,200	3,853,700	4,127,400	4,799,300	4,921,100	5,243,300	4,902,800	5,589,600	5,807,500	6,350,600
Revenues		% inc SSC >	9.0%	9.0%	9.0%	9.0%	9.0%	3.0%	3.0%	3.0%	3.0%
Sewer Service Charges	7,622,000	8,374,200	9,127,900	9,949,400	10,844,800	11,820,800	12,884,700	13,271,200	13,669,300	14,079,400	14,501,800
Sewer Service Charges - VA Clinic	159,800	175,780	191,600	208,800	227,600	248,100	270,400	278,500	286,900	295,500	304,400
Ad Valorem Taxes	452,480	437,132	437,100	437,100	437,100	437,100	437,100	437,100	437,100	437,100	437,100
Connection Fees	36,500	37,595	37,600	37,600	37,600	37,600	37,600	37,600	37,600	37,600	37,600
Rents & Leases	190,296	196,005	196,000	196,000	196,000	196,000	196,000	196,000	196,000	196,000	196,000
Permits, Inspections & Fees	143,404	147,706	147,700	147,700	147,700	147,700	147,700	147,700	147,700	147,700	147,700
Interest on LAIF	4,536	28,200	25,000	26,800	31,200	32,000	34,100	31,900	36,300	37,700	41,300
Other Revenues	62,778	64,661	64,700	64,700	64,700	64,700	64,700	64,700	64,700	64,700	64,700
Total Revenues	8,671,793	9,461,279	10,227,600	11,068,100	11,986,700	12,984,000	14,072,300	14,464,700	14,875,600	15,295,700	15,730,600
Expenditures		Annual % inc >	6.0%	6.0%	6.0%	6.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Salaries & Benefits	3,836,692	4,345,834	4,606,600	4,883,000	5,176,000	5,486,600	5,706,100	5,934,300	6,171,700	6,418,600	6,675,300
Insurance	208,809	257,570	273,000	289,400	306,800	325,200	338,200	351,700	365,800	380,400	395,600
Collections	171,314	171,160	181,400	192,300	203,800	216,000	224,600	233,600	242,900	252,600	262,700
Treatment Plant	815,768	887,950	941,200	997,700	1,057,600	1,121,100	1,165,900	1,212,500	1,261,000	1,311,400	1,363,900
Marsh	80,005	111,700	118,400	125,500	133,000	141,000	146,600	152,500	158,600	164,900	171,500
Admin & General	910,262	1,073,100	1,137,500	1,205,800	1,278,100	1,354,800	1,409,000	1,465,400	1,524,000	1,585,000	1,648,400
Lab	80,860	105,550	111,900	118,600	125,700	133,200	138,500	144,000	149,800	155,800	162,000
Total Expenditures	6,103,710	6,952,864	7,370,000	7,812,300	8,281,000	8,777,900	9,128,900	9,494,000	9,873,800	10,268,700	10,679,400
Transfers In/Out											
Transfer Out - 3410 (Ad Valorem)	(421,097)	(437,132)	(437,100)	(437,100)	(437,100)	(437,100)	(437,100)	(437,100)	(437,100)	(437,100)	(437,100)
Transfer Out - 3410 (Expenses)	(8,874)	-	-	-	-	-	-	-	-	-	-
Transfer Out - 3412 (Capital)	-	(3,500,000)	(1,300,000)	(1,300,000)	(2,300,000)	(2,600,000)	(4,000,000)	(3,000,000)	(3,500,000)	(3,200,000)	(3,700,000)
Transfer Out - 3415 (2018 Note)	(449,345)	(449,300)	(449,300)	(449,300)	(449,300)	(449,300)	(449,300)	(449,300)	(449,300)	(449,300)	(449,300)
Transfer Out - 3415 (2021 Note)	(397,458)	(397,500)	(397,500)	(397,500)	(397,500)	(397,500)	(397,500)	(397,500)	(397,500)	(397,500)	(397,500)
Total Transfers	(1,276,774)	(4,783,932)	(2,583,900)	(2,583,900)	(3,583,900)	(3,883,900)	(5,283,900)	(4,283,900)	(4,783,900)	(4,483,900)	(4,983,900)
Ending Fund Balance	7,045,773	3,853,682	4,127,400	4,799,300	4,921,100	5,243,300	4,902,800	5,589,600	5,807,500	6,350,600	6,417,900

Source: Values for FY22 and FY23 are from "MVSD FY22-23 FINAL Budget Book_06.09.22.xlsx" provided by Denise Gray on 6/16/2022. The FY23 Beginning Fund Balance is changed from the Budget Book value to the value shown in the "MVSD Final Financial Statement Report FY2022", Combining Statement of Net Position, page 49. All values for FY24 and onward are estimated as part of the study.

Table A-2
Fund 3410 Cash Flow

	Estimate FY22	Budget FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32
Beginning Fund Balance	522,542	625,000	693,800	756,700	812,500	861,000	901,800	934,900	960,100	977,000	985,700
Revenues											
Interest on LAIF	493	2,900	4,500	4,900	5,300	5,600	5,900	6,100	6,200	6,400	6,400
Total Revenues	493	2,900	4,500	4,900	5,300	5,600	5,900	6,100	6,200	6,400	6,400
Expenditures		% inc Exp >									
Collections	-	150,000	153,000	156,100	159,200	162,400	165,600	168,900	172,300	175,700	179,200
Treatment Plant	131,048	56,000	57,100	58,200	59,400	60,600	61,800	63,000	64,300	65,600	66,900
Marsh	-	50,000	51,000	52,000	53,000	54,100	55,200	56,300	57,400	58,500	59,700
Admin & General	31,009	65,250	66,600	67,900	69,300	70,700	72,100	73,500	75,000	76,500	78,000
Lab	18,425	50,000	51,000	52,000	53,000	54,100	55,200	56,300	57,400	58,500	59,700
Total Expenditures	180,481	371,250	378,700	386,200	393,900	401,900	409,900	418,000	426,400	434,800	443,500
Transfers In/Out											
Transfer In - 3409 (Ad Valorem)	421,097	437,132	437,100	437,100	437,100	437,100	437,100	437,100	437,100	437,100	437,100
Transfer In - 3409 (Expenses)	8,874	-	-	-	-	-	-	-	-	-	-
Total Transfers	429,971	437,132	437,100	437,100	437,100	437,100	437,100	437,100	437,100	437,100	437,100
Ending Fund Balance	772,525	693,782	756,700	812,500	861,000	901,800	934,900	960,100	977,000	985,700	985,700

Source: Values for FY22 and FY23 are from "MVSD FY22-23 FINAL Budget Book 06.09.22.xlsx" provided by Denise Gray on 6/16/2022. The FY23 Beginning Fund Balance is changed from the Budget Book value to the value shown in the "MVSD Final Financial Statement Report FY2022", Combining Statement of Net Position, page 49. All values for FY24 and onward are estimated as part of the study.

Table A-3
Fund 3412 Cash Flow

	Estimate FY22	Budget FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32
Beginning Fund Balance	1,772,212	553,400	6,914,500	6,812,000	3,091,300	1,028,800	898,500	53,700	1,928,200	892,500	1,124,500
Revenues											
Permits & Inspections	-	20,853	20,900	20,900	20,900	20,900	20,900	20,900	20,900	20,900	20,900
Capacity Fees	23,668	315,315	23,700	23,700	23,700	23,700	23,700	23,700	23,700	23,700	23,700
Interest on LAIF	2,383	2,500	44,900	44,300	20,100	6,700	5,800	300	12,500	5,800	7,300
Grant Disbursement	-	-	-	-	-	-	-	-	-	-	-
Total Revenues	26,051	338,668	89,500	88,900	64,700	51,300	50,400	44,900	57,100	50,400	51,900
Expenditures											
Collections	479,524	788,800	925,600	1,895,200	2,643,200	256,000	3,321,600	190,400	2,737,600	1,316,000	1,619,200
Treatment Plant	422,628	2,449,600	482,400	3,154,400	1,644,000	2,301,600	528,000	-	1,855,200	1,702,400	116,000
Marsh	21,966	-	-	-	80,000	184,000	1,045,600	980,000	-	-	-
Strategic Initiatives	34,085	179,200	84,000	60,000	60,000	40,000	-	-	-	-	-
Lab	-	-	-	-	-	-	-	-	-	-	-
Total Expenditures	958,203	3,417,600	1,492,000	5,109,600	4,427,200	2,781,600	4,895,200	1,170,400	4,592,800	3,018,400	1,735,200
Transfers In/Out											
Transfer In - 3415 (2021 IPC)	-	5,940,000	-	-	-	-	-	-	-	-	-
Transfer In - 3409 (Capital)	-	3,500,000	1,300,000	1,300,000	2,300,000	2,600,000	4,000,000	3,000,000	3,500,000	3,200,000	3,700,000
Total Transfers	-	9,440,000	1,300,000	1,300,000	2,300,000	2,600,000	4,000,000	3,000,000	3,500,000	3,200,000	3,700,000
Ending Fund Balance	840,060	6,914,468	6,812,000	3,091,300	1,028,800	898,500	53,700	1,928,200	892,500	1,124,500	3,141,200

Source: Values for FY22 and FY23 are from "MVSD FY22-23 FINAL Budget Book_06.09.22.xlsx" provided by Denise Gray on 6/16/2022. The FY23 Beginning Fund Balance is changed from the Budget Book value to the value shown in the "MVSD Final Financial Statement Report FY2022", Combining Statement of Net Position, page 49. All values for FY24 and onward are estimated as part of the study.

Table A-4
Fund 3415 Cash Flow

	Estimate FY22	Budget FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32
Beginning Fund Balance	5,980,740	5,915,600	2,600	2,397	2,194	1,991	1,788	1,586	1,383	1,180	977
Revenues											
Interest on LAIF	8,215	27,200	-	-	-	-	-	-	-	-	-
Total Revenues	8,215	27,200	-	-	-	-	-	-	-	-	-
Expenditures											
County Professional Services	54	200	200	200	200	200	200	200	200	200	200
Interest on 2018 Note	235,075	226,076	216,698	206,927	196,746	186,137	175,082	163,563	151,560	139,053	126,021
Principal on 2018 Note	214,270	223,269	232,646	242,417	252,599	263,208	274,263	285,782	297,785	310,292	323,324
Interest on 2022 Note	172,368	165,793	159,025	152,060	144,892	137,514	129,921	122,105	114,062	105,783	97,263
Principal on 2022 Note	225,090	231,666	238,433	245,398	252,567	259,944	267,538	275,353	283,397	291,675	300,196
Total Expenditures	846,857	847,003	847,003	847,003	847,003	847,003	847,003	847,003	847,003	847,003	847,003
Transfers In/Out											
Transfer In - 3409 (2018 Note)	449,345	449,300	449,300	449,300	449,300	449,300	449,300	449,300	449,300	449,300	449,300
Transfer In - 3409 (2021 Note)	397,458	397,500	397,500	397,500	397,500	397,500	397,500	397,500	397,500	397,500	397,500
Transfer Out - 3412 (2021-2022 Projects)	-	(5,940,000)	-	-	-	-	-	-	-	-	-
Total Transfers	846,803	(5,093,200)	846,800	846,800	846,800	846,800	846,800	846,800	846,800	846,800	846,800
Ending Fund Balance	5,988,901	2,597	2,397	2,194	1,991	1,788	1,586	1,383	1,180	977	774

Source: Values for FY22 and FY23 are from "MVSD FY22-23 FINAL Budget Book_06.09.22.xlsx" provided by Denise Gray on 6/16/2022. The FY23 Beginning Fund Balance is changed from the Budget Book value to the value shown in the "MVSD Final Financial Statement Report FY2022", Combining Statement of Net Position, page 49. All values for FY24 and onward are estimated as part of the study.

Table A-5
Fund 3409, 3410, 3412 and 3415 Cash Flow Summary

	Prior FY22	Current FY23	Based on Annual 9% Increase in SSC				Next Four Years Based on Annual 3% Increase in SSC				
			FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32
Total Beginning Fund Balances, July 1	14,029,957	13,223,200	11,464,600	11,698,497	8,705,294	6,812,891	7,045,388	5,892,986	8,479,283	7,678,180	8,461,777
Revenues											
Fund 3409	8,671,793	9,461,279	10,227,600	11,068,100	11,986,700	12,984,000	14,072,300	14,464,700	14,875,600	15,295,700	15,730,600
Fund 3410	493	2,900	4,500	4,900	5,300	5,600	5,900	6,100	6,200	6,400	6,400
Fund 3412	26,051	338,668	89,500	88,900	64,700	51,300	50,400	44,900	57,100	50,400	51,900
Fund 3415	8,215	27,200	0	0	0	0	0	0	0	0	0
Total Revenues	8,706,552	9,830,047	10,321,600	11,161,900	12,056,700	13,040,900	14,128,600	14,515,700	14,938,900	15,352,500	15,788,900
Expenditures											
Fund 3409	6,103,710	6,952,864	7,370,000	7,812,300	8,281,000	8,777,900	9,128,900	9,494,000	9,873,800	10,268,700	10,679,400
Fund 3410	180,481	371,250	378,700	386,200	393,900	401,900	409,900	418,000	426,400	434,800	443,500
Fund 3412	958,203	3,417,600	1,492,000	5,109,600	4,427,200	2,781,600	4,895,200	1,170,400	4,592,800	3,018,400	1,735,200
Fund 3415	846,857	847,003	847,003	847,003	847,003	847,003	847,003	847,003	847,003	847,003	847,003
Total Expenditures	8,089,251	11,588,717	10,087,703	14,155,103	13,949,103	12,808,403	15,281,003	11,929,403	15,740,003	14,568,903	13,705,103
Net Transfers, In/(Out)											
Fund 3409	(1,276,774)	(4,783,932)	(2,583,900)	(2,583,900)	(3,583,900)	(3,883,900)	(5,283,900)	(4,283,900)	(4,783,900)	(4,483,900)	(4,983,900)
Fund 3410	429,971	437,132	437,100	437,100	437,100	437,100	437,100	437,100	437,100	437,100	437,100
Fund 3412	0	9,440,000	1,300,000	1,300,000	2,300,000	2,600,000	4,000,000	3,000,000	3,500,000	3,200,000	3,700,000
Fund 3415	846,803	(5,093,200)	846,800	846,800	846,800	846,800	846,800	846,800	846,800	846,800	846,800
Total Net Transfers	0	0	0	0	0	0	0	0	0	0	0
Ending Fund Balance											
Fund 3409	7,045,773	3,853,682	4,127,400	4,799,300	4,921,100	5,243,300	4,902,800	5,589,600	5,807,500	6,350,600	6,417,900
Fund 3410	772,525	693,782	756,700	812,500	861,000	901,800	934,900	960,100	977,000	985,700	985,700
Fund 3412	840,060	6,914,468	6,812,000	3,091,300	1,028,800	898,500	53,700	1,928,200	892,500	1,124,500	3,141,200
Fund 3415	5,988,901	2,597	2,397	2,194	1,991	1,788	1,586	1,383	1,180	977	774
Total Ending Fund Balance, June 30	14,647,258	11,464,529	11,698,497	8,705,294	6,812,891	7,045,388	5,892,986	8,479,283	7,678,180	8,461,777	10,545,574

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Appendix A: Funds Cash Flow Tables

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Table B-1
Current and Recommended SSCs and Revenue from SSCs

Customer Class	Billing Units	Current FY23	Recommended Five-Year Rate Plan				
			FY24	FY25	FY26	FY27	FY28
Unit Costs							
Flow	\$ per million gallons	\$8,965	\$9,771	\$10,651	\$11,609	\$12,654	\$13,793
BOD	\$ per 1000 pounds	\$1.18	\$1.29	\$1.40	\$1.53	\$1.67	\$1.82
TSS	\$ per 1000 pounds	\$1.29	\$1.40	\$1.53	\$1.67	\$1.82	\$1.98
SSCs							
	<i>% incr. ></i>	<i>10.0%</i>	<i>9.1%</i>	<i>9.5%</i>	<i>8.6%</i>	<i>9.1%</i>	<i>9.4%</i>
Residential *	Annual	\$814.20	\$888	\$972	\$1,056	\$1,152	\$1,260
Apt/MH Units	Annual	\$652.20	\$708	\$768	\$840	\$912	\$996
Nonresidential							
Group 1	\$ per HCF	\$11.04	\$12.05	\$13.15	\$14.35	\$15.65	\$17.05
Group 1A	\$ per HCF	\$11.04	\$12.05	\$13.15	\$14.35	\$15.65	\$17.05
Group 2	\$ per HCF	\$12.12	\$13.20	\$14.40	\$15.70	\$17.10	\$18.65
Group 3	\$ per HCF	\$15.36	\$16.75	\$18.25	\$19.90	\$21.70	\$23.65
Group 4	\$ per HCF	\$16.68	\$18.20	\$19.85	\$21.65	\$23.60	\$25.70
Group 5	\$ per HCF	\$18.96	\$20.65	\$22.50	\$24.55	\$26.75	\$29.15
PMA's **	\$ per HCF	\$14.80	\$16.15	\$17.60	\$19.20	\$20.95	\$22.85
VA Clinic	\$ per HCF	\$11.04	\$12.05	\$13.15	\$14.35	\$15.65	\$17.05
Units of Use							
Residential ***	# Accts	6,580	6,610	6,640	6,640	6,640	6,640
Apt/MH	# Units	2,314	2,314	2,314	2,314	2,314	2,314
Nonresidential							
Group 1	HCF	73,840	73,840	73,840	73,840	73,840	73,840
Group 1A	HCF	4,823	4,823	4,823	4,823	4,823	4,823
Group 2	HCF	9,328	9,328	9,328	9,328	9,328	9,328
Group 3	HCF	8,304	8,304	8,304	8,304	8,304	8,304
Group 4	HCF	4,167	4,167	4,167	4,167	4,167	4,167
Group 5	HCF	1,116	1,116	1,116	1,116	1,116	1,116
PMA's	HCF	18,867	18,867	18,867	18,867	18,867	18,867
VA Clinic	HCF	15,773	15,773	15,773	15,773	15,773	15,773
Revenue							
Residential		\$5,357,436	\$5,869,680	\$6,454,080	\$7,011,840	\$7,649,280	\$8,366,400
Apt/MH		\$1,509,191	\$1,638,312	\$1,777,152	\$1,943,760	\$2,110,368	\$2,304,744
Nonresidential							
Group 1		\$815,194	\$889,772	\$970,996	\$1,059,604	\$1,155,596	\$1,258,972
Group 1A		\$53,246	\$58,117	\$63,422	\$69,210	\$75,480	\$82,232
Group 2		\$113,055	\$123,130	\$134,323	\$146,450	\$159,509	\$173,967
Group 3		\$127,549	\$139,092	\$151,548	\$165,250	\$180,197	\$196,390
Group 4		\$69,506	\$75,839	\$82,715	\$90,216	\$98,341	\$107,092
Group 5		\$21,159	\$23,045	\$25,110	\$27,398	\$29,853	\$32,531
PMA's		\$279,263	\$304,702	\$332,059	\$362,246	\$395,264	\$431,111
VA Clinic		\$174,134	\$190,065	\$207,415	\$226,343	\$246,847	\$268,930
Total		\$8,519,733	\$9,311,754	\$10,198,821	\$11,102,316	\$12,100,735	\$13,222,369

* Recommended and Forecast SSCs for Residential and Apt/MH are rounded to the nearest \$12.

Recommended and Forecast SSCs based on HCF are rounded to the nearest \$0.05.

** The SSCs for accounts with PMA's (Private Meter Agreements) are the average for the class.

*** Residential accounts are increased by 30 in FY24 and 30 in FY25 for occupancy in the Tradition of Meadows development

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