



# SAUSALITO-MARIN CITY SANITARY DISTRICT

## Sewer Service Charge Study



HF&H Consultants, LLC

July 1, 2019 – Final Report



# **SAUSALITO-MARIN CITY SANITARY DISTRICT**

1 East Road  
Sausalito, California 94965



## **SEWER SERVICE CHARGE STUDY**

July 1, 2019

### **HF&H CONSULTANTS, LLC**

201 North Civic Drive, Suite 230  
Walnut Creek, CA 94596



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## HF&H CONSULTANTS, LLC

*Managing Tomorrow's Resources Today*

201 North Civic Drive, Suite 230  
Walnut Creek, California 94596  
Tel: (925) 977-6950  
Fax: (925) 977-6955  
[hfh-consultants.com](http://hfh-consultants.com)

Robert D. Hilton, Emeritus  
John W. Farnkopf, PE  
Laith B. Ezzet, CMC  
Richard J. Simonson, CMC  
Marva M. Sheehan, CPA  
Robert C. Hilton, CMC

July 1, 2019

Mr. Jeffrey Kingston  
General Manager  
Sausalito-Marin City Sanitary District  
1 East Road  
Sausalito, California 94965

**Subject: Sewer Service Charge Study - Final Report**

Dear Mr. Kingston:

HF&H Consultants, LLC, is pleased to submit this Final Sewer Service Charge Study. The report summarizes the projected revenue requirements over the next five fiscal years, updates the cost of service allocation among the customer classes, updates the annual supplemental charge for sewer collection services provided to unincorporated customers, and provides a detailed schedule of the recommended sewer service charges, for conveyance and treatment services, for the next five years.

Very truly yours,  
HF&H CONSULTANTS, LLC

John W. Farnkopf, P.E., Senior Vice President  
Richard J. Simonson, Vice President

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## APPENDIX A. RATE MODEL



## ACRONYMS

BOD	Biochemical Oxygen Demand; a component of wastewater strength
CII	Commercial, Institutional, Industrial customers
CIP	Capital Improvement Plan
EDU	Equivalent Dwelling Unit; A standard unit measure of wastewater utility service, based on the volume and strength of wastewater flow.
FH	Floating Home
FY	Fiscal Year
GPD	Gallons Per Day
HCF or CCF	Hundred Cubic Feet of metered water; 748 gallons; a cube of water 4.6 feet on edge
I&I	Inflow and Infiltration; stormwater runoff and shallow groundwater that enter collection systems through surface or subsurface connections, damaged pipes, open pipe joints, or other openings
MFR	Multi Family Residential: attached dwelling units including duplexes, triplexes, fourplexes, apartments, condos, and townhouses
MMWD	Marin Municipal Water District
O&M	Operations and Maintenance
OPEB	Other Post-Employment Benefits
PAYGo	Pay-As-You-Go, in reference to funding capital improvements from cash rather than from borrowed sources of revenue
SFR	Single Family Residential
TCSD	Tamalpais Community Services District
TSS	Total Suspended Solids; a component of wastewater strength

## **ACKNOWLEDGEMENTS**

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Cathy Bondanza, Board Secretary

### HF&H Consultants, LLC

John Farnkopf, Sr. Vice President  
Richard J. Simonson, Vice President  
Gabe Sasser, Associate Analyst

## 1. EXECUTIVE SUMMARY

### 1.1 FINDINGS AND RECOMMENDATIONS

- A. **Summary of Services.** The District provides sewer conveyance and treatment services to the incorporated areas of the City of Sausalito and the Tamalpais Community Services District (TCSD). The District provides conveyance, treatment, as well as sewer collection services, to Marin City and other unincorporated areas within the District's boundaries (e.g., floating homes).
- B. **Current Rates – Conveyance and Treatment Services.** All customers within the District's boundaries (incorporated and unincorporated) are provided conveyance and treatment services. **Figure 1-1** summarizes the current rates for conveyance and treatment service, by customer class. Residential customers are charged per dwelling. Non-residential customers are charged based on their metered flow and wastewater strength. Further details on how the non-residential equivalent dwelling units (EDUs) are calculated can be found in **Section 4.3** of this report.

**Figure 1-1. Current Rates – Sewer Conveyance and Treatment Services**

Customer Class	Current Rates
Single Family	\$866 per year per dwelling unit
Multi Family	\$771 per year per dwelling unit
Floating Home	\$659 per year per dwelling unit
Non-Residential	\$866 per year per equivalent dwelling unit

Note: customers located in the unincorporated areas pay an additional sewer collection charge to cover the District's cost for maintenance and repair of those facilities unique to the unincorporated area. The sewer collection systems located in the incorporated service areas (e.g., Sausalito, TCSD) are owned, maintained, and repaired by the respective agency. A summary of the current and recommended sewer collection rates for the unincorporated area is discussed in **Item E** below.

- C. **Revenue Requirement Projections.** The annual net revenue requirement projections to support the District's operation and capital improvement programs to provide conveyance and treatment services are shown in **Figure 1-2**.

**Figure 1-2. Annual Conveyance and Treatment Revenue Requirements**

Rate Year	Annual Revenue Requirement	Annual Change
Current Revenue	\$8,347,057	
FY 2019-20	\$8,347,057	0.0%
FY 2020-21	\$8,680,939	4.0%
FY 2021-22	\$9,028,176	4.0%
FY 2022-23	\$9,299,022	3.0%
FY 2023-24	\$9,577,992	3.0%

D. **Recommended Rates – Conveyance and Treatment.** Figure 1-3 summarizes the recommended annual rates, by customer class, to cover the increases in the District's revenue requirements (summarized in Figure 1-2) to provide sewer conveyance and treatment services during the five-year planning period. No increase in the conveyance and treatment rates is necessary for FY 2019-20.

**Figure 1-3. Recommended Rates – Conveyance and Treatment (\$/year/EDU)**

Customer Class	Current Rates	FY 2019-20			FY 2020-21			FY 2021-22			FY 2022-23			FY 2023-24		
	\$/EDU	\$/EDU	Change		\$/EDU	Change [1]		\$/EDU	Change		\$/EDU	Change		\$/EDU	Change	
Single Family	\$866	<b>\$866</b>	\$0	0.0%	<b>\$906</b>	\$40	4.6%	<b>\$942</b>	\$36	4.0%	<b>\$970</b>	\$28	3.0%	<b>\$999</b>	\$29	3.0%
Multi Family	\$771	<b>\$771</b>	\$0	0.0%	<b>\$793</b>	\$22	2.8%	<b>\$824</b>	\$32	4.0%	<b>\$849</b>	\$25	3.0%	<b>\$875</b>	\$25	3.0%
Floating Home	\$659	<b>\$659</b>	\$0	0.0%	<b>\$682</b>	\$23	3.5%	<b>\$710</b>	\$27	4.0%	<b>\$731</b>	\$21	3.0%	<b>\$753</b>	\$22	3.0%
Non-Residential	\$866	<b>\$866</b>	\$0	0.0%	<b>\$906</b>	\$40	4.6%	<b>\$942</b>	\$36	4.0%	<b>\$970</b>	\$28	3.0%	<b>\$999</b>	\$29	3.0%

[1] FY 2020-21 rate adjustments reflect a 4% average revenue increase; Actual rate increase percentages vary by customer class based on the cost of service analysis using FY 2020-21 projected expenses.

E. **Supplemental Sewer Collection Charge.** In addition to conveyance and treatment services, the District maintains the sewer collection system in the unincorporated areas of the District (e.g., Marin City, floating homes), as service that is not provided to the incorporated areas (e.g., Sausalito and TCSD). As such, customers within the unincorporated area pay an additional sewer collection charge in addition to the conveyance and treatment charges shown in Figure 1-3.

The current sewer collection charge for within the District's unincorporated service area is \$78 per EDU and generates approximately \$164,000 per year, which is much less than the projected costs, as shown in Figure 1-4.

**Figure 1-4. Annual Sewer Collection Revenue Requirement**

Rate Year	Annual Revenue Requirement	Annual Change
Current Revenue	\$164,619	
FY 2019-20	\$358,472	117.8%
FY 2020-21	\$369,226	3.0%
FY 2021-22	\$411,815	11.5%
FY 2022-23	\$543,666	32.0%
FY 2023-24	\$723,548	33.1%

An analysis of the costs to provide sewer collection services to the unincorporated areas of the District is included in **Section 6.2** of this report. To cover the annual costs to maintain the sewer collection system, the sewer collection charge rate will increase from the current \$78 per year to \$387 per year by FY 2023-24, for a single family customer, as shown in **Figure 1-5**. Historically, the sewer collection charge has been a uniform rate per EDU, regardless of customer class. However, since average flow differs between residential customer classes, we recommend factoring the multi family and floating home sewer collection system charge in the same manner as the conveyance and treatment rates (as shown in **Figure 1-3**). As a result of this recommended change in the rate structure, the actual rate increase percentages vary by customer class in FY 2019-20. Annually thereafter, each of the sewer collection charge rates increase at the same rate as the annual revenue requirements shown in **Figure 1-4**.

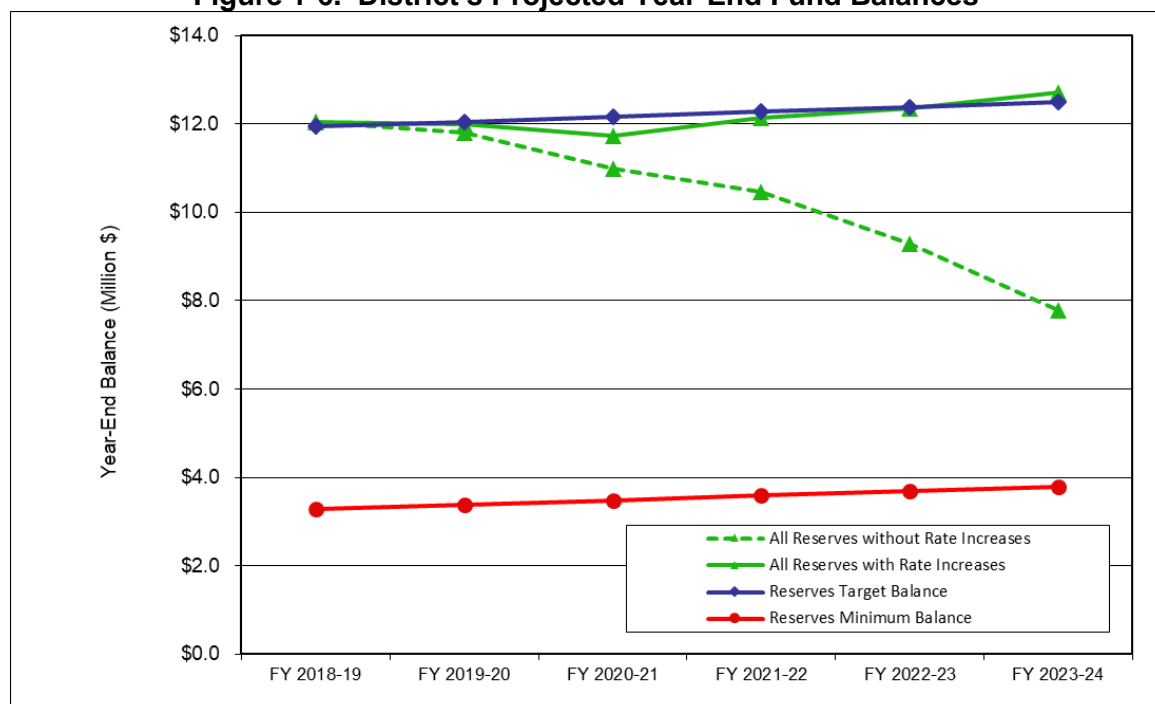
**Figure 1-5. Recommended Rates – Sewer Collection Charge (\$/year/EDU)**

	Current Rate per EDU	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
<u>Residential</u>						
Single family	\$78	\$192	\$198	\$220	\$291	\$387
Multi-Family	\$78	\$169	\$174	\$194	\$256	\$341
Floating Homes	\$78	\$144	\$148	\$165	\$218	\$290
Non Residential	\$78	\$192	\$198	\$220	\$291	\$387

F. **District's Reserve Fund Balance.** As shown in **Figure 1-6**, with the recommended rates in **Figures 1-3** and **1-5**, the District's reserve fund balance (solid green line with triangles) will remain at, or slightly above, the District's target reserve balance (solid blue line with diamonds), which covers the

operating, capital, and other reserve requirements. A description of the District's reserve funds and target balances is included in **Section 3.6** of this report. Without the recommended increases, the District's reserve fund balance quickly approaches the minimum balance (solid red line with circles). The minimum fund balance is necessary for the District to achieve its annual cash flow for its basic level of operations, but does not allow for capital spending or emergency reserves.

**Figure 1-6. District's Projected Year-End Fund Balances**



## 1.2 IMPLEMENTATION

- A. **General.** This report documents the rates proposed for adoption by the District, as shown in **Figure 1-7** below. The proposed rate plan should maintain adequate reserves for cash flow and emergency purposes. Actual revenues and expenses may differ from the projections included in the five-year financial model (included in **Appendix A**), which is the basis for these proposed rate increases. Each year, as part of the annual budget process, the District should confirm the need for the next incremental rate change. The District can implement a lower rate increase, if supported by the financial forecast, without going through the Proposition 218 notification process.
- B. **Summary of Current and Proposed Rates.** **Figure 1-7** summarizes the current and proposed rates for incorporated and unincorporated customers. The incorporated service area (e.g., Sausalito and TCSD) rates are for sewer conveyance and treatment services only (**Figure 1-3**). The unincorporated service

area (e.g., Marin City and floating homes) rates are for conveyance and treatment services (**Figure 1-3**) and sewer collection services (**Figure 1-5**).

**Figure 1-7. Summary of Current and Proposed Rates (by Service Area)**

Customer Class	Current Rates	FY 2019-20			FY 2020-21			FY 2021-22			FY 2022-23			FY 2023-24		
	\$/EDU	\$/EDU	Change		\$/EDU	Change [3]		\$/EDU	Change		\$/EDU	Change		\$/EDU	Change	
<b>Incorporated Service Area</b> (conveyance and treatment)																
Single Family	\$866	<b>\$866</b>	\$0	0.0%	<b>\$906</b>	\$40	4.6%	<b>\$942</b>	\$36	4.0%	<b>\$970</b>	\$28	3.0%	<b>\$999</b>	\$29	3.0%
Multi Family	\$771	<b>\$771</b>	\$0	0.0%	<b>\$793</b>	\$22	2.8%	<b>\$824</b>	\$32	4.0%	<b>\$849</b>	\$25	3.0%	<b>\$875</b>	\$25	3.0%
Non-Residential	\$866	<b>\$866</b>	\$0	0.0%	<b>\$906</b>	\$40	4.6%	<b>\$942</b>	\$36	4.0%	<b>\$970</b>	\$28	3.0%	<b>\$999</b>	\$29	3.0%
<b>Unincorporated Service Area</b> (collection, conveyance, and treatment)																
Single Family	\$944	<b>\$1,058</b>	\$114	12.0%	<b>\$1,103</b>	\$46	4.3%	<b>\$1,162</b>	\$59	5.3%	<b>\$1,261</b>	\$99	8.5%	<b>\$1,386</b>	\$125	9.9%
Multi Family	\$849	<b>\$940</b>	\$91	10.7%	<b>\$966</b>	\$27	2.8%	<b>\$1,018</b>	\$52	5.4%	<b>\$1,105</b>	\$87	8.5%	<b>\$1,215</b>	\$110	10.0%
Floating Home	\$737	<b>\$803</b>	\$66	8.9%	<b>\$831</b>	\$28	3.5%	<b>\$875</b>	\$44	5.3%	<b>\$949</b>	\$74	8.5%	<b>\$1,043</b>	\$94	9.9%
Non-Residential	\$944	<b>\$1,058</b>	\$114	12.0%	<b>\$1,103</b>	\$46	4.3%	<b>\$1,162</b>	\$59	5.3%	<b>\$1,261</b>	\$99	8.5%	<b>\$1,386</b>	\$125	9.9%

## 2. INTRODUCTION

### 2.1 STUDY PURPOSE

The purpose of this study is to update the District's rates to ensure that they generate sufficient revenue and that the rate structure reflects the District's current rate-making objectives. The study was commissioned by the District to evaluate the effect of certain rate structure modifications in response to input from its customers.

### 2.2 RATE-MAKING OBJECTIVES

The District's current rate-making objectives include the following:

- Provide revenue sufficiency and financial stability to fund the projected capital and O&M costs of the District.
- Reflect the proportional impact to cost of service.
- Meet the District's operations and capital funds reserve targets.
- Rates should reflect equity of costs in proportion to the level of service.
- Provide for efficient administration and execution of utility billing.
- Minimize "rate shock" overall and to any specific customer class.
- Rates should be clear and understandable to the customers.
- The rates must comply with Proposition 218 and applicable State codes.

### 2.3 BACKGROUND

Sausalito-Marin City Sanitary District (District) is responsible for conveyance and treatment of wastewater from the 18,000 residents and businesses in its service area, which includes the City of Sausalito, TCSD, and Marin City. The District's facilities comprise six miles of sewer collection pipelines, 4.5 miles of gravity and pressurized transmission pipelines and 7 sewer pump stations, which convey 1.5 million gallons per day (average dry weather flow) to the District's wastewater treatment plant for treatment and disposal.

In addition, the District maintains the sewer collection system for Marin City and the floating homes in the unincorporated area of Sausalito. The City of Sausalito and TCSD own their respective sewer collection systems and have their own respective charges to maintain them.

### 2.4 REPORT ORGANIZATION

The report contains five sections:

1. **Executive Summary** – Summarizes our findings and recommendations.
2. **Introduction** – Provides context for the study.



3. **Projected Revenue Requirements** – Documents the annual revenue requirements and increases in rate revenue for the five-year planning period from FY 2019-20 through FY 2023-24.
4. **Rate Design** – Describes the recommended updates to the existing rate structure and the rationale for these updates.
5. **Cost of Service and Rate Analysis** – Documents the derivation of the rates.
6. **Five-year Rate Plan Recommendations** – Summarizes the recommended rates for the five-year planning period.

### 3. REVENUE REQUIREMENT PROJECTIONS

Rate analysis begins by determining the revenue requirements that must be provided from utility rates to cover the cost of service to provide conveyance and treatment services to the District's entire service area. For purposes of this study, a five-year rate projection period was developed using a spreadsheet model (see Appendix A). With this model, revenue requirements were projected for FY 2019-20 through FY 2023-24. **Figure 3-1** summarizes the major categories comprising the revenue requirements, indicating the annual change.

**Figure 3-1. Revenue Requirement Components**

	Budget	Projected				
	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Operating Expenses	\$3,714,323	\$3,825,753	\$3,940,525	\$4,058,741	\$4,180,503	\$4,305,918
Administrative Expenses	\$400,204	\$412,210	\$424,576	\$437,314	\$450,433	\$463,946
National Park Service Lease	\$263,569	\$263,569	\$274,112	\$285,076	\$293,629	\$302,437
Capital Projects: Debt Service	\$2,504,810	\$2,507,493	\$2,504,493	\$2,505,293	\$2,509,693	\$2,527,493
Capital Projects: PAYGo	\$735,110	\$3,334,983	\$3,334,983	\$3,334,983	\$3,334,983	\$3,334,983
Transfer to/(from) Reserves	\$1,808,729	(\$721,009)	(\$498,040)	(\$237,420)	\$28,617	\$333,442
Unincorporated Sewer Collection Revenue	(\$164,619)	(\$358,472)	(\$369,226)	(\$411,815)	(\$543,666)	(\$723,548)
Other Revenue Sources	(\$915,069)	(\$917,469)	(\$930,484)	(\$943,994)	(\$955,169)	(\$966,679)
<b>Net Revenue Requirement</b>	<b>\$8,347,057</b>	<b>\$8,347,057</b>	<b>\$8,680,939</b>	<b>\$9,028,176</b>	<b>\$9,299,022</b>	<b>\$9,577,992</b>
<i>Annual Change</i>		0.0%	4.0%	4.0%	3.0%	3.0%

The operating and capital components of the revenue requirements are based on projections prepared by the District and presented in the District's FY 2018-19 budget, adopted June 4, 2018, and subsequently updated by District staff. Factors driving future cost trends (and related revenue requirements) for each of these components are summarized here.

#### 3.1. OPERATING EXPENSES

This cost category includes salaries and benefits as well as non-personnel related operating and maintenance expenses, such as electrical utility costs, fuel, and non-capital materials and equipment. During the projection period, operating expenses have been escalated 3% annually from FY 2018-19 to FY 2023-24, per District estimate. The cost trend is driven primarily by cost of living adjustments set in labor agreements, and expected increases in health care benefit costs. No staff headcount increases are anticipated.

#### 3.2. ADMINISTRATIVE EXPENSES

Costs within this category account for office, legal, and insurance expenses. Assessor tax roll preparation fees are also included. The District's administrative costs are projected to increase gradually at 3% annually for the five-year planning period.

### **3.3. NATIONAL PARK SERVICE LEASE**

This cost category accounts for the District's National Park Service Lease at Fort Baker. However, this is a net zero cost, as the District receives lease payments annually from the National Park Service in the same amount (see further discussion below in **Section 3.8**).

### **3.4. CAPITAL PROJECTS: DEBT SERVICE**

In 2017, the District issued \$26 million in revenue bonds to fund major treatment plant capital improvements, which accounts for the majority of the District's annual debt service, at \$2.1 million per year. In addition, the District has a 30-year loan from the City National Bank in 2008 and a 30-year SRF loan from the State in 2011. These two older loans account for approximately \$400,000 in annual debt service payments. Additional detail is included in Table 6 of Appendix A – Rate Model.

Over the next five years, the District will continue to pay down its existing debt, without making additional debt issuances. As shown in **Figure 3-1**, The District's debt service level will remain fairly consistent at approximately \$2.5 million during the five-year planning period.

### **3.5. CAPITAL PROJECTS: PAYGO**

In addition to the major capital improvements funded with debt, the District maintains a capital improvement program for replacement and rehabilitation of its system, which is funded through rates on a pay-as-you go (PAYGo) basis. The District's capital improvement plan over the five-year planning period is summarized in **Figure 3-2**.

**Figure 3-2. PAYGo Capital Projects**

Figure 2-1: PAYGo Capital Projects						
Cash-funded (PAYGo) Projects	Projected					Total
	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	
<b>Treatment Plant Improvements</b>						
Shop/Operator/Equipment Facilities Study/Pre-Design	\$0	\$0	\$75,000	\$175,000	\$0	\$250,000
Biosolids Handling (Long Term)	\$100,000	\$400,000	\$0	\$0	\$0	\$500,000
Engineering and Project Management (10%)	\$10,000	\$40,000	\$7,500	\$17,500	\$0	\$75,000
Subtotal, Treatment Plant	\$110,000	\$440,000	\$82,500	\$192,500	\$0	\$825,000
<b>Conveyance System</b>						
Coloma/Whiskey Springs Pump Station Improvements	\$2,500,000	\$2,500,000	\$0	\$0	\$0	\$5,000,000
Beach Force Main Rehabilitation	\$200,000	\$200,000	\$2,000,000	\$0	\$0	\$2,400,000
Site Access Control & Security	\$0	\$0	\$50,000	\$50,000	\$50,000	\$150,000
Main St. to Alexander Ave Force Main Inspection	\$0	\$0	\$0	\$250,000	\$0	\$250,000
Locust St. Force Main Inspection	\$0	\$0	\$0	\$200,000	\$200,000	\$400,000
Princess St. Pump Station Study	\$0	\$0	\$0	\$400,000	\$0	\$400,000
Engineering and Project Management (10%)	\$270,000	\$270,000	\$205,000	\$90,000	\$25,000	\$860,000
Subtotal, Transport System	\$2,970,000	\$2,970,000	\$2,255,000	\$990,000	\$275,000	\$9,460,000
<b>Unincorporated Collection System</b>						
Pump Station Improvements	\$0	\$0	\$500,000	\$1,500,000	\$1,500,000	\$3,500,000
Collection System Rehabilitation, Phase II	\$0	\$0	\$0	\$350,000	\$1,000,000	\$1,350,000
Engineering and Project Management (10%)	\$0	\$0	\$50,000	\$185,000	\$250,000	\$485,000
Subtotal, Unincorporated Collection System	\$0	\$0	\$550,000	\$2,035,000	\$2,750,000	\$5,335,000
Total	\$3,080,000	\$3,410,000	\$2,887,500	\$3,217,500	\$3,025,000	\$15,620,000
Accumulated Construction Cost Inflation		3.30%	6.71%	10.23%	13.87%	
Grand Total Inflated Pay-As-You-Go Projects	\$3,080,000	\$3,522,530	\$3,081,219	\$3,546,660	\$3,444,504	\$16,674,913
					Annual Average	\$3,334,983

The project costs summarized in **Figure 3-2** include a 3.30% annual inflation factor, based on the historical annual change in the construction cost index published by Engineering News Record from 2008 through 2018.

The anticipated cost of the capital improvement projects from FY 2019-20 to FY 2023-24 fluctuates each year from \$3.0 to \$3.5 million. However, rates are not set to match these annual variations, which would lead to rate volatility, by increasing rates one year and decreasing the next. Instead, rates are based on multi-year averages. The net revenue requirement for capital improvement projects in this study assumes annually recurring costs of \$3,334,983.

### 3.6. TRANSFER TO/(FROM) RESERVES

In addition to covering annual expenses, rates need to generate revenue to maintain adequate operations and capital reserves. To determine what constitutes adequate reserve amounts, the District's reserve balance was subdivided into Operations, Capital, Disaster Recovery, Repair & Replacement, and Self-Insurance Deductible. In this way, it is possible to set recommended target balances for each purpose. On an annual basis, funds will be transferred to and from the reserves to allow the District to pay operating

and capital expenses in a timely manner. The following provides a description of the separate reserve funds and the recommended target balances.

### **3.6.1 Operations Reserve**

Because of the lag between collection and transfer of sewer service charge payments from the County tax assessor to the District, the Operations Reserve balance is set equal to 9 months of annual O&M expenses to provide adequate cash flow. If this minimum balance is maintained, the District should be able to fund its monthly operations cash flow over this extended period without relying on the use of a short-term loan. Maintaining the minimum balance for the Operations Reserve is recommended as the highest priority for the District.

### **3.6.2 Capital Reserve**

The Capital Reserve provides liquidity to fund construction for projects that are funded on a PAYGo basis (as opposed to those that are funded from debt). The capital allowance provides working capital to maintain sufficient funds in order to pay contractors so that work can proceed without delay. The Capital Reserve target depends on the level of construction and the target is equal to 1.5 times the average annual cash-funded capital project expenditures over the five-year planning period (~\$5.0 million).

### **3.6.3 Disaster Recovery Reserve**

The target balances for the Operations and Capital Reserves are sufficient to provide working capital on an ongoing basis, but do not provide for unforeseen contingencies such as emergencies. Should an emergency strike (e.g., earthquake), the District cannot suddenly raise rates to generate additional funds due to state law requirements for such rate increases (e.g., Proposition 218). Moreover, the District bills annually on the tax rolls. Therefore, the District has set a target for the Disaster Recovery reserve equal to the average annual cash-funded capital project expenditures over the five-year planning period (~3.3 million). With such a reserve, the District would have funds on hand to take immediate remedial steps without waiting to procure a loan or issue bonds.

### **3.6.4 Repair & Replacement Reserve**

The District's Repair & Replacement Reserve provides capital for the renewal and replacement of equipment. The target balance for this reserve is 2.0 times the District's average annual expenditures on replacement equipment (~\$250,000).

### **3.6.5 Self-Insurance Deductible Reserve**

The District maintains a reserve of \$100,000 to cover the deductibles on the various insurance policies carried by the District.

## **3.7. UNINCORPORATED SEWER COLLECTION SYSTEM REVENUE**

In addition to providing treatment services, the District maintains the sewer collection system for customers in the unincorporated areas of its service area (e.g., Marin City,

floating homes). As such, these customers pay a supplemental charge, in addition to cost of treatment, for the costs associated with the operations, maintenance, repair, and improvements to the collection system in these areas. Costs associated with sewer collection are expected to increase based on increased O&M costs, as well as capital improvements beginning FY 2021-22 and continuing through FY 2023-24. (Additional detail is included in Table 8 of Appendix A – Rate Model).

### 3.8. OTHER REVENUE SOURCES

This revenue category mainly includes the revenue from the ad valorem taxes received from Marin County. During this rate study period, the ad valorem taxes are conservatively assumed to remain flat. This revenue category also accounts for the payment of the National Park Service lease at Fort Baker and revenues generated from the Sausalito Pump Station.

### 3.9 PROJECTED RATE REVENUE INCREASES

The District's net revenue requirements increase over the next five years primarily due to inflationary increases in O&M expenses and a slight increase in annual capital spending compared to previous years. The increases in revenue from rates that will be needed to fund the increasing revenue requirements are shown in **Figure 3-3**.

**Figure 3-3. Projected Rate Revenue Increases**

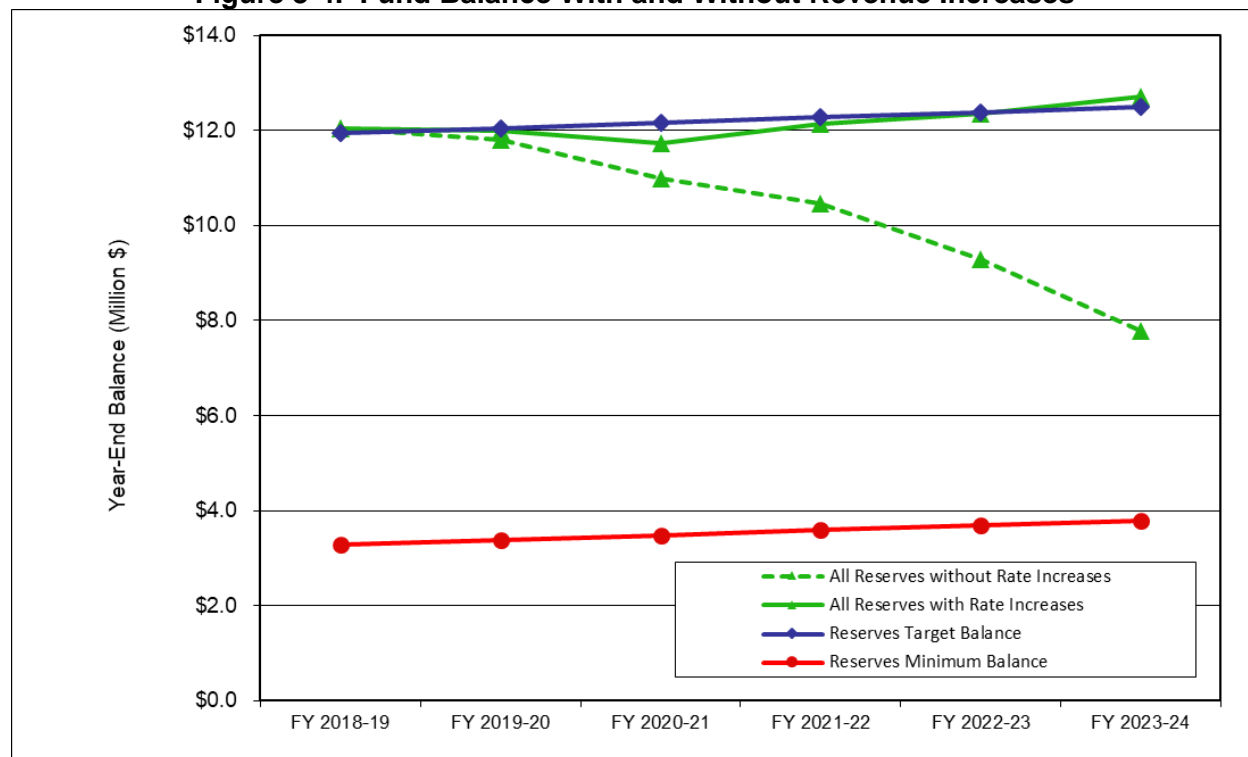
Rate Year	Annual Revenue Requirement	Annual Change
Current Revenue	\$8,347,057	
FY 2019-20	\$8,347,057	0.0%
FY 2020-21	\$8,680,939	4.0%
FY 2021-22	\$9,028,176	4.0%
FY 2022-23	\$9,299,022	3.0%
FY 2023-24	\$9,577,992	3.0%

### 3.10 RESERVE FUND BALANCE

**Figure 3-4** shows the projected annual fund balances with the rate revenue increases recommended in **Figure 3-3** (solid green line) and without the rate increases (dashed green line). Although the projections show straight lines between years, the fund balance will be drawn down substantially during each year. In other words, the reserves are actively drawn on at all times during the year, but only periodically added to when payments are received from the County. The reserves are not simply

accumulated without being used. The recommended revenue increases will reach, and slightly exceed, the target balance by FY 2023-24.

**Figure 3-4. Fund Balance With and Without Revenue Increases**



### **3.10.1 Minimum Fund Balance**

The minimum balance (red line) is the balance that is required to meet the District's O&M expenses during the year. The minimum fund balance is necessary for the District to achieve its annual cash flow needs and because the District bills annually on the tax rolls and receives reimbursement from the County only twice each year. As a result, there are several months over which the District must rely on its operating reserve to meet its monthly cash flow requirements. Because of the lag between payments from the County, the minimum Operations Reserve balance is set equal to nine months of O&M expenses.

### **3.10.2 Target Fund Balance**

The proposed revenue increases move the fund balance (solid green line) upward and just above the target balance (blue line) by Fiscal Year 2023-24. The target balance is the sum of the minimum balance for operations (red line) plus an allowance for the District's other reserves: Capital, Disaster Recovery, Repair & Replacement, and Self-Insurance Deductible, whose target balances were discussed in **Section 3.6** above.

## 4. RATE DESIGN

### 4.1 INTRODUCTION

The District's current rate structure charges customers per equivalent dwelling unit (EDU). An EDU is the basic unit of wastewater utility service and reflects the average concentration and strength of flows from a single dwelling unit, which make up most of the District's customer base.

### 4.2 RESIDENTIAL CUSTOMER RATE DESIGN

The District provides conveyance and treatment services to three residential customer classes: single family, multi family, and floating homes. All residential customers pay the sum of a base component and a volumetric component. The base component is the same for all three customer classes. The volumetric component differs between the three classes based on demonstrated differences in the average wastewater contribution by each customer class (i.e., flow ratio). The flow ratio reflects a reduced wastewater contribution from multi family and floating home customers in relationship to single family customers.

The residential rate structure will not change during this five-year planning period. However, the current flow ratios (which were established based on actual water demand patterns measured over five years ago) have been reviewed and updated based on more-recent actual water use patterns for each residential customer class (see discussion in **Section 5.3.2.** of this report).

### 4.3 NON-RESIDENTIAL CUSTOMER RATE DESIGN

To calculate the charges for non-residential customers, the District has established a set of strength factors and a standard flow rate per EDU. The strength factor for a commercial customer reflects the pollutant content of their wastewater and the resulting ease or difficulty of treatment. For example, offices are assigned a strength factor of 1.0 because their wastewater strength is considered equal to a single family residence. A deli or market is assigned a strength factor of 1.7 because of its moderate strength characteristics. A restaurant is assigned a strength factor of 2.4 because of its high strength characteristics. A flow factor is established for each non-residential customer as the ratio of its flow based on water use to the standard flow rate of 200 gallons per day per EDU.

Non-residential customers pay per EDU based on a formula that determines each commercial customer's number of EDUs. Each non-residential customer's flow and strength is considered in the determination of their individual sewer bills as shown below:



Non-residential EDUs = Flow factor multiplied times Strength factor

Flow factor = annualized metered water use<sup>1</sup>, converted to gallons per day divided by the standard flow rate of 200 gallons per day per EDU, and

Strength factor = either 1.00 for low strength, 1.70 for medium strength, or 2.40 for high strength customers.

**Non-Residential Charge = (Charge per EDU) x (flow factor) x (strength factor)**

The non-residential rate structure will not change during the five-year planning period.

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<sup>1</sup> A non-residential customer's annualized metered water use is estimated by summing the most-recent actual February and August water use, as reported by Marin Municipal Water District, multiplied by 6.

## 5. COST OF SERVICE AND RATE ANALYSIS

A cost of service analysis determines the cost of providing service to each customer class. The cost of service depends on the characteristics of the rate design (discussed in **Section 4**), which defines the services charged to each class of customers. For residential customers, single family, multi family and floating home EDUs are factored in proportion to the differences in flow based on average flow per EDU for each class. Rates for non-residential EDUs are equal to single family residential rates and EDUs are factored based on both flow and strength.

### 5.1 COST OF SERVICE ANALYTICAL APPROACH

The cost of service analysis needs to determine the portion of costs that will be allocated to customers in proportion to flow. *Not all costs are proportionate to flow; in fact the majority of costs are independent of flow.* Certain operating costs, such as personnel costs, which are a significant portion of the District's costs, would be incurred regardless of how much flow was produced by customers. There are also capital costs that provide capacity for average customer flows with no allowance for peak flows or inflow and infiltration. These are essentially equivalent capital costs per EDU that do not recognize differences in flows among classes or for peak flows. The combination of these fixed operating and capital costs are referred to as the "base cost component."

Other costs fluctuate based on variations in flow among customer classes and for peak capacity. Such variable operating costs include power for pumping and for chemicals and solids disposal at the treatment plant. The capital costs that are dependent on flow are related to the additional peak capacity that must be provided for customers that discharge more and for overall peak wet weather capacity that is attendant with the capacity that is provided for customer flows.<sup>2</sup> The combination of these flow related operating and capital costs is referred to as the "volumetric cost component."

The cost of service analysis employed in this report for purposes of calculating rates segregates the revenue requirements into the base and volumetric cost components. The base cost component represents the common costs for conveyance and treatment of wastewater. The volumetric cost component apportions the costs associated with above average flows among the customer classes in proportion to their respective flows. The sum of the base and volumetric cost components determines each class' charge per EDU.

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<sup>2</sup>Based on District flow studies, 80% of peak flow is related to I&I and 20% is related to customer wastewater discharges.

## 5.2 COST ALLOCATION FACTORS

Separate cost allocation factors were developed to allocate operating and capital costs to the base and volumetric cost components. The derivation of the cost allocation factors is described in the next section.

### 5.2.1 O&M and Capital Cost Allocations

The cost allocation factors were derived as shown in **Figures 5-1** and **5-2**. For purposes of deriving the O&M cost allocation factors, the FY 2019-20 projections were used, which are representative of future years. 89% of the District's O&M cost is fixed; in other words, the District would incur virtually all of these costs regardless of the amount of wastewater flow.

**Figure 5-1. O&M Cost Allocation Factors**

Operating and Administrative Expenses	FY 2019/20		BASE		VOLUMETRIC
	From Table 1	%	\$	%	\$
<u>Salaries and Benefits</u>					
Salary	\$1,669,748	100%	\$1,669,748	0%	\$ -
Payroll Taxes	119,105	100%	119,105	0%	-
Retirement	310,361	100%	310,361	0%	-
Employee Benefits	405,027	100%	405,027	0%	-
Workers Comp	49,900	100%	49,900	0%	-
<u>Operations</u>					
Chemicals	190,418	20%	38,084	80%	152,335
Fuel	13,236	100%	13,236	0%	-
Permits & Fees	130,804	100%	130,804	0%	-
Waste Disposal	111,951	20%	22,390	80%	89,561
Parts, Tools, Materials & Supplies	63,612	100%	63,612	0%	-
Vehicles	14,214	100%	14,214	0%	-
Safety	36,853	20%	7,371	80%	29,483
<u>System &amp; Plant Maintenance</u>					
Treatment & Collection System	217,280	100%	217,280	0%	-
Unincorporated Area Collection System	72,100	100%	72,100	0%	-
City of Sausalito Pump Stations	17,253	20%	3,451	80%	13,802
Wastewater Monitoring & Testing	83,691	100%	83,691	0%	-
<u>Utilities &amp; Communication</u>					
Communication	31,146	100%	31,146	0%	-
Electricity	283,390	20%	56,678	80%	226,712
Water	5,665	100%	5,665	0%	-
<u>Administrative</u>					
Professional Development	29,664	100%	29,664	0%	-
Professional Services	253,895	100%	253,895	0%	-
Insurance	50,092	100%	50,092	0%	-
Administrative	78,559	100%	78,559	0%	-
NPS Lease	263,569	100%	263,569	0%	-
<b>Total Operating and Admin Expenses</b>	<b>\$ 4,501,532</b>		<b>\$3,989,640</b>		<b>\$ 511,892</b>
<b>% of Total</b>	<b>100%</b>		<b>89%</b>		<b>11%</b>

For purposes of deriving the capital cost allocation factors, the five-year capital improvement plan was used (FY 2019-20 through FY 2023-24). In this case, the capital improvement plan reflects the future capital projects, which is more representative than using the just one year's projected capital expenditures.

**Figure 5-2. Capital Cost Allocation Factors**

CAPITAL PROJECTS	5-Yr Total	BASE		VOLUMETRIC	
	(from Table 5, Appendix A)	%	\$	%	\$
<b><u>Treatment Plant Improvements</u></b>					
Shop/Operator/Equipment Facilities Study/Pre-Design	\$250,000	100%	\$ 250,000	0%	\$ -
Biosolids Handling (Long Term)	\$500,000	20%	\$ 100,000	80%	\$ 400,000
Engineering and Project Management	\$75,000	100%	\$ 75,000	0%	\$ -
<b><u>Conveyance System</u></b>					
Coloma/Whiskey Springs Pump Station Improvements	\$5,000,000	20%	\$1,000,000	80%	\$ 4,000,000
Beach Force Main Rehabilitation	\$2,400,000	20%	\$480,000	80%	\$ 1,920,000
Site Access Control & Security	\$150,000	20%	\$30,000	80%	\$ 120,000
Main St. to Alexander Ave Force Main Inspection	\$250,000	20%	\$50,000	80%	\$ 200,000
Locust St. Force Main Inspection	\$400,000	20%	\$80,000	80%	\$ 320,000
Princess St. Pump Station Study	\$400,000	20%	\$80,000	80%	\$ 320,000
Engineering and Project Management	\$860,000	100%	\$860,000	0%	\$ -
<b><u>Unincorporated Collection System</u></b>					
Pump Station Improvements	\$3,500,000	20%	\$ 700,000	80%	\$ 2,800,000
Collection System Rehabilitation, Phase II	\$1,350,000	20%	\$ 270,000	80%	\$ 1,080,000
Engineering and Project Management	\$485,000	100%	\$ 485,000	0%	\$ -
<b>Total Capital Expenses (5-yr period)</b>	<b><u>\$15,620,000</u></b>		<b><u>\$ 4,460,000</u></b>		<b><u>\$ 11,160,000</u></b>
<b>Average Annual Capital</b>	<b><u>\$3,124,000</u></b>		<b><u>\$ 892,000</u></b>		<b><u>\$ 2,232,000</u></b>
<b>% of Total</b>	<b>100%</b>		<b>29%</b>		<b>71%</b>

By contrast with the District's O&M costs, the District's planned infrastructure costs are heavily dependent on providing capacity for peak flow. The facilities are sized to provide significant additional capacity for above-average customer flows and Inflow & Infiltration (I&I).

### 5.2.2 Base and Volumetric Cost Allocations

The combination of the O&M and capital cost allocation factors indicates that 64% of the revenue requirement is the base component and 36% is the volumetric component (see **Figure 5-3**). These percentages are applied to the FY 2019-20 net revenue requirement to determine the respective base and volumetric cost components of the residential and non-residential rates. The derivation of the corresponding charges is described in the next section.

**Figure 5-3. Base and Volumetric Allocation Factors**

REVENUE REQUIREMENT	BASE	VOLUMETRIC	TOTAL
	\$	\$	
FY 2019-20 Operating & Admin. Expenses [1]	\$ 3,989,640	\$ 511,892	\$4,501,532
Average Annual Capital Expenses [2]	\$ 892,000	\$2,232,000	\$3,124,000
Grand Total	\$ 4,881,640	\$2,743,892	\$7,625,532
% of Total	64%	36%	100%

[1] from Figure 5-1

[2] from Figure 5-2

### 5.3 BASE AND VOLUMETRIC EDUs

This section describes how the base and volumetric cost allocation factors developed in **Figure 5-3** are applied to the District's FY 2019-20 net revenue requirement to determine the base and volumetric charges for residential and non-residential charges. Deriving the charges requires determining the number of base and volumetric EDUs.

#### 5.3.1 Base EDUs

The base charge is determined by dividing the base cost component by the total base EDUs for residential and non-residential customers. For residential customers, each dwelling unit is considered to be one EDU. For non-residential customers, the number of EDUs depends on how the flow rate for each non-residential customer compares with the single family standard flow rate of 200 gpd per EDU, as well as the strength factor for each commercial customer class. The standard flow rate allows for adequate capacity to convey and treat wastewater from all customers in the District's service area. It is recommended that the standard flow rate remain as 200 GPD based on the District's recent wastewater system flow monitoring data.

#### 5.3.2 Volumetric EDUs

The historical winter water use for the most-recent three year period was analyzed in order to determine flow factors for each residential customer class. The residential flow data is shown in **Figure 5-4** and includes flow from all residential customers whose wastewater flow is treated at the Districts' wastewater treatment plant, including the Tamalpais Community Services District (TCSD). We note that these flows represent MMWD winter water demands. For single family customers, there is a small amount of unsewered outside water use such as for irrigation and washing that was excluded (i.e., 5% was considered unsewered, leaving a return rate of 95%).

**Figure 5-4. Estimated Residential Flows**

Customer Classes	3-Year		MMWD Annual Total (GPD)	Return Rate (%)	Annual Total (GPD) - Adjusted	FY18-19 EDUs Reported to County	GPD per EDU	Factors based on GPD per EDU
	3-Year	Average						
	Average	Total						
	Total (HCF)	Annualized (HCF)						
Residential (1 winter bill)								
Single Family	36,196	217,176	445,093	95%	424,204	3,188	133	1.00
Multi-Family	34,183	205,098	420,340	100%	420,340	4,584	92	0.69
Floating Homes	1,663	9,978	20,449	100%	20,449	398	51	0.39
Subtotal - Residential	72,042	432,252	885,882		864,993	8,170		

The volumetric charge is determined by dividing the volumetric cost component by the total volumetric EDUs. The resulting unit cost represents the cost associated with above-average flow and capacity. This cost is then proportioned among the residential classes on the basis of the average flow per class. For non-residential customers, the cost is proportioned on the basis of that part of their EDUs that is related to their flows, as distinct from the portion that is related to strength.

The average flow per residential class is shown in **Figure 5-4**. Single family, multi family, and floating home flows per EDU were determined to be 133, 92, and 51 GPD, respectively, which means that multi family flow is 69% of single family flow, and floating home flow is 39% of single family flow. The single family residential customer class is assigned a flow factor of 1.0. The multi family residential class was factored down to 69% of a single family EDU for use in apportioning the volumetric-related costs, and floating home EDUs were factored down to 39% of a single family EDU.

**Figure 5-5** shows how the multi-family and floating home dwelling units (i.e., customers) were factored to yield their volumetric EDUs for purposes of determining volumetric charges.

**Figure 5-5. Multi Family and Floating Home Volumetric EDU Calculation**

Residential Customer Class	# of Dwelling Units [1]	Volume Factors [2]	Volumetric EDUs
	(a)	(b)	(c) = (a)*(b)
Single family	3,188	1.00	3,188
Multi-Family	4,584	0.69	3,159
Floating Homes	398	0.39	154
Total	8,170		6,501

## 5.4 COST OF SERVICE – SEWER CONVEYANCE AND TREATMENT

**Figure 5-6** summarizes the derivation of the sewer conveyance and treatment rates, by customer class in FY 2020-21, based on the cost of service. Note: the cost of service is being calculated for FY 2020-21 (the second year of the five-year planning period) because the District is not changing the sewer conveyance and treatment rates for FY 2019-20.

**Figure 5-6. Cost of Service –Sewer Conveyance and Treatment (by customer class)**

							Ratio
	Base EDUs	Volume Factors	Volumetric EDUs	Base	Volumetric	Total	Compared to SFR
<i>Cost Allocation Factors [1]</i>				<b>64%</b>	<b>36%</b>		
<i>Conveyance and Treatment Revenue Requirement [2]</i>				\$ 5,555,801	\$ 3,125,138	\$ 8,680,939	
			EDUs	10,254	8,585		
			\$/EDU	\$542	\$364		
<u>Residential</u>	(a)	(b)	(c) = (a)*(b)				
Single family	3,188	1.00	3,188	\$542	\$364	\$906	1.00
Multi-Family	4,584	0.69	3,159	\$542	\$251	\$793	0.88
Floating Homes	398	0.39	154	\$542	\$141	\$682	0.75
Total Residential	8,170		6,501				
Non Residential	2,080	1.00	2,080	\$542	\$364	\$906	1.00
Growth	4	1.00	4	\$542	\$364	\$906	1.00
Total	10,254		8,585				

[1] Cost allocation factors from Figure 5-3.

[2] FY 2020-21 net revenue requirement from Figure 3-1.

The District's net revenue requirement for FY 2020-21, totaling \$8,680,939, is used to allocate base and volumetric costs. Approximately 64% of the \$8,680,939, or \$5,555,801, constitutes the base cost and is divided by the 10,254 base EDUs. This results in a base charge, common to all customer classes, of \$542 per year. Approximately 36% of the \$8,680,939, or \$3,125,138, constitutes the volumetric cost and is divided by the 8,585 volumetric EDUs. This results in a volumetric charge of \$364 per EDU. The results are volumetric charge components of \$364, \$251 and \$141 for single family, multi family and floating home EDUs, respectively. These amounts are the unit costs of service for each residential class that reflect their average flows per EDU.

Note that the combined cost of \$793 per multi family EDU is 88% of the \$906 single family cost, and the \$682 cost per EDU for floating homes is 75%. This occurs even though multi family residential flow is 69% of single family residential flow because 64% of the costs (i.e., Base costs) are not related to differences in flow or the need for peak capacity; the same relationship is true for floating homes.

## 6. FIVE-YEAR RATE PLAN RECOMMENDATION

### 6.1. PROPOSED ANNUAL SEWER CONVEYANCE AND TREATMENT RATES

A five-year rate plan was prepared based on the District's net revenue requirements. The rates included in the five-year plan reflect the cost of service analysis, which establishes the allocation of the revenue requirement among the user classes based on their relative proportionate shares of base and volumetric cost components. The proposed five-year rate plan is shown in **Figure 6-1**. It should be noted that this five-year financial plan assumes no change in the sewer conveyance and treatment rates for the first year; therefore, the cost of service remains unchanged for FY 2019-20.

**Figure 6-1. Proposed Annual Sewer Conveyance and Treatment Rates**

Customer Class	Current Rates	FY 2019-20			FY 2020-21			FY 2021-22			FY 2022-23			FY 2023-24		
	\$/EDU	\$/EDU	Change		\$/EDU	Change		\$/EDU	Change		\$/EDU	Change		\$/EDU	Change	
Single Family	\$866	<b>\$866</b>	\$0	0.0%	<b>\$906</b>	\$40	4.6%	<b>\$942</b>	\$36	4.0%	<b>\$970</b>	\$28	3.0%	<b>\$999</b>	\$29	3.0%
Multi Family	\$771	<b>\$771</b>	\$0	0.0%	<b>\$793</b>	\$22	2.8%	<b>\$824</b>	\$32	4.0%	<b>\$849</b>	\$25	3.0%	<b>\$875</b>	\$25	3.0%
Floating Home	\$659	<b>\$659</b>	\$0	0.0%	<b>\$682</b>	\$23	3.5%	<b>\$710</b>	\$27	4.0%	<b>\$731</b>	\$21	3.0%	<b>\$753</b>	\$22	3.0%
Non-Residential	\$866	<b>\$866</b>	\$0	0.0%	<b>\$906</b>	\$40	4.6%	<b>\$942</b>	\$36	4.0%	<b>\$970</b>	\$28	3.0%	<b>\$999</b>	\$29	3.0%

Note that customers located in the District's unincorporated service area, including Marin City and floating homes, are subject to an additional sewer collection system charge, as discussed below.

### 6.2. SEWER COLLECTION SYSTEM CHARGE

The District's customers that are located in the unincorporated service area (e.g., Marin City and floating homes), are subject to a supplemental charge to recover the cost of maintenance, repair and upgrade of their sewer collection systems, which are owned and operated by the District. Customers within Sausalito and TCSD are not subject to this supplemental charge as the District does not own and/or maintain the sewer collection systems within Sausalito and TCSD. The District only provides conveyance and treatment services. The City of Sausalito and TCSD own their respective sewer pipeline collection systems and has their own respective charges to maintain them.

#### 6.2.1. Sewer Collection System Revenue Requirement

**Figure 6-2** summarizes the projected annual O&M and capital costs to maintain the unincorporated sewer collection system.



**Figure 6-2. Projected Annual Sewer Collection Costs**

Unincorporated Collection System Costs	Projected				
	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
<b>Operations and Maintenance</b>					
Labor & Benefits	\$206,715	\$212,916	\$219,304	\$225,883	\$232,660
Expenses	\$105,000	\$108,150	\$111,395	\$114,736	\$118,178
Overhead	\$46,757	\$48,160	\$49,605	\$51,093	\$52,626
Subtotal - O&M Costs	<b>\$358,472</b>	<b>\$369,226</b>	<b>\$380,303</b>	<b>\$391,712</b>	<b>\$403,464</b>
<b>Capital Projects</b>					
Pump Station Improvements	\$0	\$0	\$500,000	\$1,500,000	\$1,500,000
Collection System Rehabilitation	\$0	\$0	\$0	\$350,000	\$1,000,000
Engineering and Project Mgmt	\$0	\$0	\$50,000	\$185,000	\$250,000
Subtotal - Capital Projects	\$0	\$0	\$550,000	\$2,035,000	\$2,750,000
Construction Cost Inflation		3.30%	6.71%	10.23%	13.87%
Subtotal, Adjusted Capital Project Costs	<b>\$0</b>	<b>\$0</b>	<b>\$586,899</b>	<b>\$2,243,186</b>	<b>\$3,131,367</b>
<b>Total Annual Costs</b>	<b>\$358,472</b>	<b>\$369,226</b>	<b>\$967,202</b>	<b>\$2,634,899</b>	<b>\$3,534,831</b>

The current sewer collection charge for the approximately 2,100 dwelling units within the unincorporated area is \$78 per EDU, and generates approximately \$164,000 per year (see Appendix A – Table 1), much less than the projected costs. Therefore, the current sewer collection charge will need to increase over the five-year planning period. In addition, as shown in **Figure 6-2**, the District anticipates significant capital expenses in the last few years of the five-year planning period (over \$3 million in FY 2023-24). The capital project costs portion of the revenue requirements was calculated assuming the capital projects will be “debt funded” using the District’s reserves. This methodology is recommended in an effort to reduce rate volatility, and not cause the sewer collection charge to spike in FY 2022-23 and FY 2023-24, only to drop significantly thereafter, as the need for major rehabilitation diminishes. Debt financing the capital projects will spread the cost of the capital projects over a 30-year period. **Figure 6-3** summarizes the annual debt service payments for the use of the District’s reserves to fund the sewer collection system capital projects. Note: The annual debt service payments include interest at 3.4% per year (based on the State’s LAIF rate as of 12/31/2018 plus 1%). It is appropriate to include interest even though the District is not actually procuring a loan, because the sewer collection services are only provided to a small subset (approximately 20%) of the District’s service area and the reserves are contributed to by the entire service area.

**Figure 6-3. Projected Annual Sewer Collection System Debt-Service Payments**

Fiscal Year	System Capital Project Costs	Annual Debt Service (30 years @ 3.4%)				
		FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
	(from Figure 6-2)					
2019/2020	\$0	\$0	\$0	\$0	\$0	\$0
2020/2021	\$0	\$0	\$0	\$0	\$0	\$0
2021/2022	\$586,899	\$0	\$0	\$31,512	\$31,512	\$31,512
2022/2023	\$2,243,186	\$0	\$0	\$0	\$120,442	\$120,442
2023/2024	\$3,131,367	\$0	\$0	\$0	\$0	\$168,130
	\$5,961,452	\$0	\$0	\$31,512	\$151,954	\$320,084

Figure 6-4 summarizes the adjusted annual revenue requirement to provide the sewer collection services to the unincorporated areas of the District.

**Figure 6-4. Annual Sewer Collection System Revenue Requirement**

Collection System Costs	Projected				
	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
<b>Annual Operations and Maintenance Costs</b>					
Labor & Benefits	\$206,715	\$212,916	\$219,304	\$225,883	\$232,660
Expenses	\$105,000	\$108,150	\$111,395	\$114,736	\$118,178
Overhead	\$46,757	\$48,160	\$49,605	\$51,093	\$52,626
Subtotal - O&M Costs	\$358,472	\$369,226	\$380,303	\$391,712	\$403,464
<b>Annual Debt Service - Capital Projects</b>	\$0	\$0	\$31,512	\$151,954	\$320,084
<b>Total Annual Costs</b>	<b>\$358,472</b>	<b>\$369,226</b>	<b>\$411,815</b>	<b>\$543,666</b>	<b>\$723,548</b>

### 6.2.2. Recommended Sewer Collection Rates

Figure 6-5 presents the five-year recommended sewer collection rates based on the annual costs above. The sewer collection rate will increase from the current \$78 per year to \$387 per year in FY 2023-24.

**Figure 6-5. Supplemental Charge Five-Year Rate Projections**

		Projected					
Collection System Costs	Current Rate	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	
Costs							
Labor & Benefits		\$206,715	\$212,916	\$219,304	\$225,883	\$232,660	
Expenses		\$105,000	\$108,150	\$111,395	\$114,736	\$118,178	
Overhead		\$46,757	\$48,160	\$49,605	\$51,093	\$52,626	
Subtotal - O&M Costs		\$358,472	\$369,226	\$380,303	\$391,712	\$403,464	
Annual Debt Service - Capital Projects		\$0	\$0	\$31,512	\$151,954	\$320,084	
Total Costs [1]		\$358,472	\$369,226	\$411,815	\$543,666	\$723,548	
Total Effective EDUs [2]		1,869	1,869	1,869	1,869	1,869	
Annual Sewer Collection Charge (\$/EDU) - SFR and Non Residential		\$78	\$192	\$198	\$220	\$291	\$387
Annual % Increase		146%	3%	12%	32%	33%	

[1] From Figure 6-3

[2] From Figure 6-5

Historically, the supplemental sewer collection charge has been a uniform rate per EDU, regardless of customer class. However, since flow differs between residential customer classes (as shown in **Figure 5-4**), we recommend factoring the multi family and floating home sewer collection system charge in the same manner as the conveyance and treatment rates (as shown in **Figure 5-6**). **Figure 6-6** calculates the effective EDUs (to account for the differences in flow) used to calculate the per EDU rates in **Figure 6-5**. **Figure 6-7** calculates the per dwelling unit rates for multi family and floating home customers to reflect the differences in average flow compared to single family customers

**Figure 6-6. Equivalent Dwelling Unit Calculation – Sewer Collection Services**

	Dwelling Units/EDUs	Ratio Compared to SFR	Adjusted Dwelling Units/EDUs
		(from Fig. 5-6)	
<u>Residential Dwelling Units</u>	(a)		(c) = (a)*(b)
Single family	84	1.00	84
Multi-Family	1,180	0.88	1,038
Floating Homes	398	0.75	299
Total Residential	1,662		1,420
Non Residential EDUs	449	1.00	449
Total	2,111		1,869

**Figure 6-7. Summary of Annual Supplemental Sewer Collection Charge**

Customer Class	Ratio Compared to SFR	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
	(from Fig. 5-6)					
Rate per EDU (from Fig. 6-4)		\$192	\$198	\$220	\$291	\$387
<u>Residential</u>						
Single family	1.00	\$192	\$198	\$220	\$291	\$387
Multi-Family	0.88	\$169	\$174	\$194	\$256	\$341
Floating Homes	0.75	\$144	\$148	\$165	\$218	\$290
Non Residential	1.00	\$192	\$198	\$220	\$291	\$387

### 6.3 SUMMARY OF RECOMMENDED RATES

**Figure 6-8** reiterates the five-year rate projections presented in **Figure 6-1** for conveyance and treatment services provided to the District's incorporated service area, as well as the total rate per EDU to the District's customers located in the

unincorporated service area (e.g., Marin City and floating homes), which includes sewer collection rates (presented in **Figure 6-7**) in addition to the conveyance and treatment services provided to the incorporated service area.

**Figure 6-8. Annual Recommended Rates**

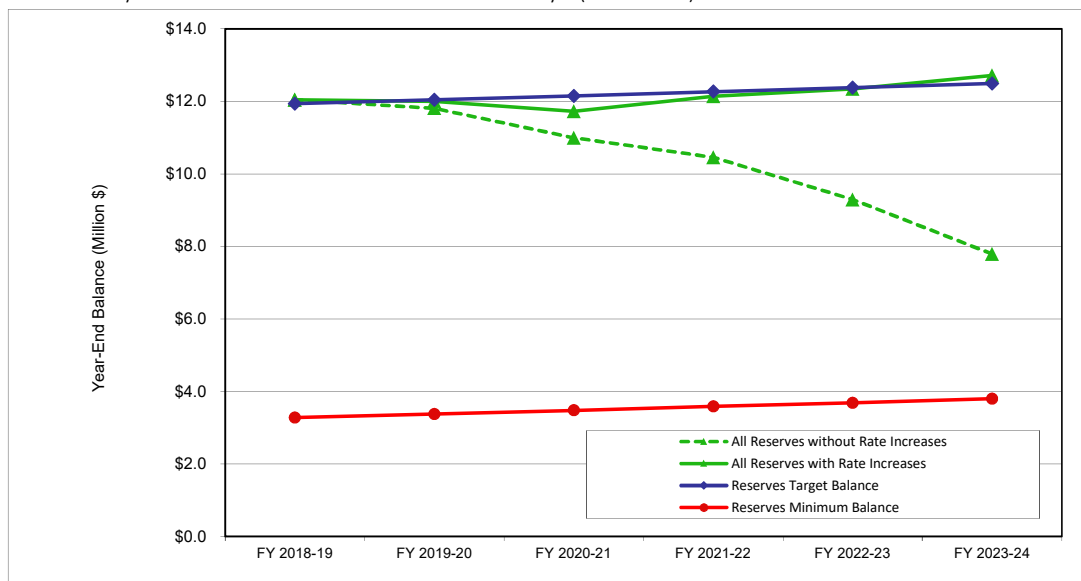
Customer Class	Current Rates	FY 2019-20			FY 2020-21			FY 2021-22			FY 2022-23			FY 2023-24		
	\$/EDU	\$/EDU	Change		\$/EDU	Change [1]		\$/EDU	Change		\$/EDU	Change		\$/EDU	Change	
<b>Incorporated Service Area</b> (conveyance and treatment)																
Single Family	\$866	<b>\$866</b>	\$0	0.0%	<b>\$906</b>	\$40	4.6%	<b>\$942</b>	\$36	4.0%	<b>\$970</b>	\$28	3.0%	<b>\$999</b>	\$29	3.0%
Multi Family	\$771	<b>\$771</b>	\$0	0.0%	<b>\$793</b>	\$22	2.8%	<b>\$824</b>	\$32	4.0%	<b>\$849</b>	\$25	3.0%	<b>\$875</b>	\$25	3.0%
Non-Residential	\$866	<b>\$866</b>	\$0	0.0%	<b>\$906</b>	\$40	4.6%	<b>\$942</b>	\$36	4.0%	<b>\$970</b>	\$28	3.0%	<b>\$999</b>	\$29	3.0%
<b>Unincorporated Service Area</b> (collection, conveyance, and treatment)																
Single Family	\$944	<b>\$1,058</b>	\$114	12.0%	<b>\$1,103</b>	\$46	4.3%	<b>\$1,162</b>	\$59	5.3%	<b>\$1,261</b>	\$99	8.5%	<b>\$1,386</b>	\$125	9.9%
Multi Family	\$849	<b>\$940</b>	\$91	10.7%	<b>\$966</b>	\$27	2.8%	<b>\$1,018</b>	\$52	5.4%	<b>\$1,105</b>	\$87	8.5%	<b>\$1,215</b>	\$110	10.0%
Floating Home	\$737	<b>\$803</b>	\$66	8.9%	<b>\$831</b>	\$28	3.5%	<b>\$875</b>	\$44	5.3%	<b>\$949</b>	\$74	8.5%	<b>\$1,043</b>	\$94	9.9%
Non-Residential	\$944	<b>\$1,058</b>	\$114	12.0%	<b>\$1,103</b>	\$46	4.3%	<b>\$1,162</b>	\$59	5.3%	<b>\$1,261</b>	\$99	8.5%	<b>\$1,386</b>	\$125	9.9%

[1] 4% revenue increase varies by customer class based on FY 2020-21 cost of service analysis

# **Appendix A: Rate Model**



	A	B	C	D	E	F	G	H	I	J
1	Sausalito-Marin City Sanitary District									
2	Wastewater Financial Plan									
3	Summary & Assumptions									
4										
5	Current		Proposed							
6		FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24			
7	Annual Revenue Increases									
8	Sewer Conveyance and Treatment Rate		0.0%	4.0%	4.0%	3.0%	3.0%	To Table 3		
9	Unincorporated Sewer Collection Rate		145.8%	3.0%	11.5%	32.0%	33.1%	From Table 8		
10										
11	Annual Rate (\$/EDU)									
12	Sewer Transport and Treatment			[1]						
13	Single Family/Commercial (per EDU)	\$866	\$866	\$906	\$942	\$970	\$999			
14	Multi Family (per DU)	\$771	\$771	\$793	\$824	\$849	\$875			
15	Floating Homes (per DU)	\$658	\$658	\$682	\$710	\$731	\$753			
16										
17	Unincorporated Sewer Collection									
18	Single Family/Commercial (per EDU)	\$78	\$192	\$198	\$220	\$291	\$387			
19	Multi Family (per DU)	\$78	\$169	\$174	\$194	\$256	\$341			
20	Floating Homes (per DU)	\$78	\$144	\$148	\$165	\$218	\$290			
21										
22	Unincorporated Collection, Transport, and Treatment									
23	Single Family/Commercial (per EDU)	\$944	\$1,058	\$1,103	\$1,162	\$1,261	\$1,386			
24	Multi Family (per DU)	\$849	\$940	\$966	\$1,018	\$1,105	\$1,215			
25	Floating Homes (per DU)	\$736	\$802	\$831	\$875	\$949	\$1,043			
26	[1] 4% average revenue increase varies by customer class based on FY 2020-21 cost of service analysis (from Table 10)									
27										
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52										
53	Inflation Assumptions	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	Notes		
54	a. Interest on Reserve Balances	2.40%	2.40%	2.40%	2.40%	2.40%	2.40%	2.40% Dec 2018 LAIF rate		
55	b. General Inflation	Budget	3.00%	3.00%	3.00%	3.00%	3.00%	3.00% District estimate		
56	c. OPEB reserve transfer	Budget	4.12%	4.12%	4.12%	4.12%	4.12%	4.12% District estimate		
57	d. Construction Cost Inflation	Budget	3.30%	3.30%	3.30%	3.30%	3.30%	3.30% ENR SF CCI - 2008 to 2018 Avg.		
58										



	A	B	C	D	E	F	G	H
1	Sausalito-Marín City Sanitary District							
2	Wastewater Financial Plan							
3	Table 1. Revenue Requirements							
4								
5								
6		Budgeted	Projected					
7		FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	Notes
8	Sewer Conveyance and Treatment Rate							
9	Salaries and Benefits							
10	Salary	\$1,621,115	\$1,669,748	\$1,719,841	\$1,771,436	\$1,824,579	\$1,879,317	
11	Payroll Taxes	\$115,636	\$119,105	\$122,678	\$126,359	\$130,149	\$134,054	
12	Retirement	\$301,321	\$310,361	\$319,671	\$329,262	\$339,139	\$349,314	
13	Employee Benefits	\$393,230	\$405,027	\$417,178	\$429,693	\$442,584	\$455,861	
14	Workers Comp	\$48,447	\$49,900	\$51,397	\$52,939	\$54,528	\$56,163	
15	Subtotal	\$2,479,749	\$2,554,141	\$2,630,766	\$2,709,689	\$2,790,979	\$2,874,709	
16								
17	Operations							
18	Chemicals	\$184,872	\$190,418	\$196,131	\$202,015	\$208,075	\$214,317	
19	Fuel	\$12,850	\$13,236	\$13,633	\$14,042	\$14,463	\$14,897	
20	Permits & Fees	\$126,994	\$130,804	\$134,728	\$138,770	\$142,933	\$147,221	
21	Waste Disposal	\$108,690	\$111,951	\$115,309	\$118,768	\$122,332	\$126,001	
22	Parts, Tools, Materials & Supplies	\$61,759	\$63,612	\$65,520	\$67,486	\$69,510	\$71,596	
23	Vehicles	\$13,800	\$14,214	\$14,640	\$15,080	\$15,532	\$15,998	
24	Safety	\$35,780	\$36,853	\$37,959	\$39,098	\$40,271	\$41,479	
25	Subtotal	\$544,745	\$561,087	\$577,920	\$595,258	\$613,115	\$631,509	
26								
27	System & Plant Maintenance							
28	Treatment & Collection System	\$210,951	\$217,280	\$223,798	\$230,512	\$237,427	\$244,550	
29	Unincorporated Area Collection System	\$70,000	\$72,100	\$74,263	\$76,491	\$78,786	\$81,149	
30	City of Sausalito Pump Stations	\$16,750	\$17,253	\$17,770	\$18,303	\$18,852	\$19,418	
31	Subtotal	\$297,701	\$306,632	\$315,831	\$325,306	\$335,065	\$345,117	
32								
33	Wastewater Monitoring & Testing	\$81,253	\$83,691	\$86,201	\$88,787	\$91,451	\$94,194	
34								
35	Utilities & Communication							
36	Communication	\$30,239	\$31,146	\$32,081	\$33,043	\$34,034	\$35,055	
37	Electricity	\$275,136	\$283,390	\$291,892	\$300,649	\$309,668	\$318,958	
38	Water	\$5,500	\$5,665	\$5,835	\$6,010	\$6,190	\$6,376	
39	Subtotal	\$310,875	\$320,201	\$329,807	\$339,702	\$349,893	\$360,389	
40								
41	General & Administrative							
42	Professional Development	\$28,800	\$29,664	\$30,554	\$31,471	\$32,415	\$33,387	
43	Professional Services	\$246,500	\$253,895	\$261,512	\$269,357	\$277,438	\$285,761	
44	Insurance	\$48,633	\$50,092	\$51,595	\$53,143	\$54,737	\$56,379	
45	Administrative	\$76,271	\$78,559	\$80,916	\$83,343	\$85,844	\$88,419	
46	Subtotal	\$400,204	\$412,210	\$424,576	\$437,314	\$450,433	\$463,946	
47								
48	Other Expenses							
49	NPS Lease	\$263,569	\$263,569	\$274,112	\$285,076	\$293,629	\$302,437	From NPS Payments below
50	Subtotal Other Expenses	\$263,569	\$263,569	\$274,112	\$285,076	\$293,629	\$302,437	
51								
52	Subtotal Ops & Admin	\$4,378,096	\$4,501,532	\$4,639,213	\$4,781,131	\$4,924,565	\$5,072,302	
53	Annual increase		2.8%	3.1%	3.1%	3.0%	3.0%	



	A	B	C	D	E	F	G	H
1	Sausalito-Marín City Sanitary District							
2	Wastewater Financial Plan							
3	Table 1. Revenue Requirements							
4								
5								
6		Budgeted	Projected					
7		FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	Notes
54								
55	Debt Service							
56	2008 City National Bank Loan	\$221,262	\$221,262	\$221,262	\$221,262	\$221,262	\$221,262	From Table 6
57	2011 SRF Loan - Locust St	\$148,830	\$148,830	\$148,830	\$148,830	\$148,830	\$148,830	From Table 6
58	2017 Revenue Bonds	\$2,134,717	\$2,137,400	\$2,134,400	\$2,135,200	\$2,139,600	\$2,157,400	From Table 6
59	Subtotal	\$2,504,810	\$2,507,493	\$2,504,493	\$2,505,293	\$2,509,693	\$2,527,493	
60	Annual increase		0.1%	-0.1%	0.0%	0.2%	0.7%	
61								
62	Non-Operating & Other Revenue							
63	Sausalito Pump Station	(\$80,000)	(\$82,400)	(\$84,872)	(\$87,418)	(\$90,041)	(\$92,742)	
64	Unincorporated Sewer Collection Revenue	(\$164,619)	(\$358,472)	(\$369,226)	(\$411,815)	(\$543,666)	(\$723,548)	From Table 8
65	Tax Allocation	(\$570,000)	(\$570,000)	(\$570,000)	(\$570,000)	(\$570,000)	(\$570,000)	
66	Miscellaneous	(\$1,500)	(\$1,500)	(\$1,500)	(\$1,500)	(\$1,500)	(\$1,500)	
67	NPS Payments	(\$263,569)	(\$263,569)	(\$274,112)	(\$285,076)	(\$293,629)	(\$302,437)	
68	Subtotal	(\$1,079,688)	(\$1,275,941)	(\$1,299,710)	(\$1,355,810)	(\$1,498,835)	(\$1,690,227)	
69								
70	Transfers							
71	To/(From) Capital Reserve	\$735,110	\$3,334,983	\$3,334,983	\$3,334,983	\$3,334,983	\$3,334,983	From Table 4
72	To/(From) Operating Reserve	\$1,567,552	(\$975,009)	(\$758,096)	(\$503,783)	(\$244,311)	\$53,678	From Table 4
73	To/(From) R/R Reserve	\$0	\$107,000	\$107,000	\$107,000	\$107,000	\$107,000	From Table 4
74	To/(From) Self-Insurance, Deductible Reserve	\$100,000	\$0	\$0	\$0	\$0	\$0	From Table 4
75	To/(From) OPEB	\$141,177	\$147,000	\$153,056	\$159,362	\$165,928	\$172,764	From Table 4
76	Subtotal	\$2,543,839	\$2,613,973	\$2,836,943	\$3,097,562	\$3,363,599	\$3,668,425	
77								
78	Net Revenue Requirement	\$8,347,057	\$8,347,057	\$8,680,939	\$9,028,176	\$9,299,022	\$9,577,992	
79	Annual increase		0.0%	4.0%	4.0%	3.0%	3.0%	
80	Cumulative increase		0.0%	4.0%	8.2%	11.4%	14.7%	
81								
82	FY 2018-19 Budget Figures from Adopted Budget FY 2018/19							
83								
84								
85								

	A	B	C	D	E	F	G	H
1	<b>Sausalito-Marin City Sanitary District</b>							
2	<b>Wastewater Financial Plan</b>							
3	<b>Table 2. Revenue Calculation at Current Rates (incl. Growth)</b>							
4								
5								
6								
7		<b>Tax Roll</b>	<b>Projected</b>					
8		<b>FY 2018-19</b>	<b>FY 2019-20</b>	<b>FY 2020-21</b>	<b>FY 2021-22</b>	<b>FY 2022-23</b>	<b>FY 2023-24</b>	<b>Notes</b>
9	<b>Sewer Conveyance and Treatment Rate</b>							
10	<u>Single Family Dwelling Units</u>							
11	Sausalito	1,351	1,355	1,359	1,363	1,367	1,371	includes growth at 4 EDUs per year
12	Unincorporated	84	84	84	84	84	84	
13	TCSD	1,753	1,753	1,753	1,753	1,753	1,753	
14	Total Units	3,188	3,192	3,196	3,200	3,204	3,208	
15	Transport and Treatment Charge per DU	\$866	\$866	\$866	\$866	\$866	\$866	
16	Single Family Transport and Treatment Revenue	\$2,760,808	\$2,764,272	\$2,767,736	\$2,771,200	\$2,774,664	\$2,778,128	
17	<u>Multi Family Dwelling Units</u>							
18	Sausalito	2,704	2,704	2,704	2,704	2,704	2,704	
19	Marin Housing Authority	290	290	290	290	290	290	
20	Unincorporated	904	904	904	904	904	904	
21	TCSD	686	686	686	686	686	686	
22	Total Units	4,584	4,584	4,584	4,584	4,584	4,584	
23	Transport and Treatment Charge per DU	\$771	\$771	\$771	\$771	\$771	\$771	
24	Multi Family Transport and Treatment Revenue	\$3,534,264	\$3,534,264	\$3,534,264	\$3,534,264	\$3,534,264	\$3,534,264	
25	<u>Floating Home Dwelling Units</u>							
26	Sausalito	0	0	0	0	0	0	
27	Unincorporated	398	398	398	398	398	398	
28	TCSD	0	0	0	0	0	0	
29	Total Units	398	398	398	398	398	398	
30	Transport and Treatment Charge per DU	\$658	\$658	\$658	\$658	\$658	\$658	
31	Floating Home Rate Revenue	\$261,884	\$261,884	\$261,884	\$261,884	\$261,884	\$261,884	
32	<u>Non Residential EDUs</u>							
33	Sausalito	1,561	1,561	1,561	1,561	1,561	1,561	
34	Unincorporated	449	449	449	449	449	449	
35	TCSD	70	70	70	70	70	70	
36	Total Units	2,080	2,080	2,080	2,080	2,080	2,080	
37	Transport and Treatment Charge per EDU	\$866	\$866	\$866	\$866	\$866	\$866	
38	Non Residential Rate Revenue	\$1,801,280	\$1,801,280	\$1,801,280	\$1,801,280	\$1,801,280	\$1,801,280	
39	Total Transport and Treatment Revenue	\$8,358,236	\$8,361,700	\$8,365,164	\$8,368,628	\$8,372,092	\$8,375,556	
40	Less: Marin Housing Authority 5% Credit	(\$11,180)	(\$11,180)	(\$11,180)	(\$11,180)	(\$11,180)	(\$11,180)	
41	<b>Adjusted Transport and Treatment Revenue</b>	<b>\$8,347,057</b>	<b>\$8,350,521</b>	<b>\$8,353,985</b>	<b>\$8,357,449</b>	<b>\$8,360,913</b>	<b>\$8,364,377</b>	
42	Transport and Treatment - Total EDUs	10,250	10,254	10,258	10,262	10,266	10,270	Total EDUs served by the District
43	TCSD Subtotal							
44	Single Family Dwelling Units	\$1,518,098						
45	Multi Family Dwelling Units	\$528,906						
46	Non Residential EDUs	\$60,620						
47		\$2,107,624						

	A	B	C	D	E	F	G
1	<b>Sausalito-Marin City Sanitary District</b>						
2	<b>Wastewater Financial Plan</b>						
3	<b>Table 3. Rate Revenue Increases</b>						
4							
5		<b>Budget</b>	<b>Projected</b>				
6		<b>FY 2018-19</b>	<b>FY 2019-20</b>	<b>FY 2020-21</b>	<b>FY 2021-22</b>	<b>FY 2022-23</b>	<b>FY 2023-24</b>
7							
8	<b>Sewer Conveyance and Treatment Rate</b>						
9	Transport and Treatment Charges - Existing	\$8,347,057	\$8,347,057	\$8,347,057	\$8,347,057	\$8,347,057	\$8,347,057
10	Transport and Treatment Charges - Growth	\$0	\$3,464	\$6,928	\$10,392	\$13,856	\$17,320
11	Revenue at Current Rates	\$8,347,057	\$8,350,521	\$8,353,985	\$8,357,449	\$8,360,913	\$8,364,377
12	Net Revenue Requirement	\$8,347,057	\$8,347,057	\$8,680,939	\$9,028,176	\$9,299,022	\$9,577,992
13	<b>Surplus/(Deficit) before Rate Increase</b>	<b>\$0</b>	<b>\$3,464</b>	<b>(\$326,954)</b>	<b>(\$670,728)</b>	<b>(\$938,109)</b>	<b>(\$1,213,616)</b>
14							
15							
16	<b>Transport and Treatment Revenue Analysis</b>						
17	Annual Increase in Rate		<b>0.0%</b>	<b>4.0%</b>	<b>4.0%</b>	<b>3.0%</b>	<b>3.0%</b>
18	Cumulative Increase		0.0%	4.0%	8.2%	11.4%	14.7%
19							
20	Revenue at Current Rates (incl. growth)	\$8,347,057	\$8,347,057	\$8,347,057	\$8,347,057	\$8,347,057	\$8,347,057
21	Revenue From Rate Increases Effective:						
22	July 1, 2019		\$0	\$0	\$0	\$0	\$0
23	July 1, 2020			\$333,882	\$333,882	\$333,882	\$333,882
24	July 1, 2021				\$347,238	\$347,238	\$347,238
25	July 1, 2022					\$270,845	\$270,845
26	July 1, 2023						\$278,971
27	Subtotal, Transport and Treatment Revenue Increase	\$0	\$0	\$333,882	\$681,120	\$951,965	\$1,230,936
28							
29	<b>Total Transport and Treatment Revenue (after rate adjs)</b>	<b>\$8,347,057</b>	<b>\$8,347,057</b>	<b>\$8,680,939</b>	<b>\$9,028,176</b>	<b>\$9,299,022</b>	<b>\$9,577,992</b>
30							
31	<b>Total Revenue at Proposed Rates</b>	<b>\$8,347,057</b>	<b>\$8,347,057</b>	<b>\$8,680,939</b>	<b>\$9,028,176</b>	<b>\$9,299,022</b>	<b>\$9,577,992</b>
32	Net Revenue Requirement	\$8,347,057	\$8,347,057	\$8,680,939	\$9,028,176	\$9,299,022	\$9,577,992
33	<b>Surplus/(Deficit) after Rate Increase</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

	A	B	C	D	E	F	G	H
1	<b>Sausalito-Marín City Sanitary District</b>							
2	<b>Wastewater Financial Plan</b>							
3	<b>Table 4. Reserves</b>							
4								
5		<b>Budgeted</b>	<b>Projected</b>					
6		<b>FY 2018-19</b>	<b>FY 2019-20</b>	<b>FY 2020-21</b>	<b>FY 2021-22</b>	<b>FY 2022-23</b>	<b>FY 2023-24</b>	<b>Notes</b>
7	<b>Operating Reserves with increase</b>							
8	Sewer Conveyance and Treatment Rate	\$2,634,562	\$4,788,886	\$4,421,842	\$4,265,505	\$4,362,781	\$4,724,976	
9	Operating Surplus/(Deficit)	\$0	\$0	\$0	\$0	\$0	\$0	From Table 3
10								
11	<b>TCSD Payments (non-service charge):</b>							
12	Capital deferral repayment	\$183,855	\$183,855	\$183,855	\$183,855	\$183,855	\$183,855	per draft agreement
13	Interdistrict Loan P&I	\$74,892	\$74,892	\$74,892	\$74,892	\$74,892	\$74,892	per draft agreement
14	Mediated Settlement	\$240,000	\$240,000	\$240,000	\$240,000	\$240,000	\$0	\$1.2M settlement paid off in FY 2022-23; per draft agreement
15	<b>Transfers:</b>							
16	(To)/From Revenue Requirements	\$1,567,552	(\$975,009)	(\$758,096)	(\$503,783)	(\$244,311)	\$53,678	
17	(To)/From R&R Reserve	\$0	\$0	\$0	\$0	\$0	\$0	
18	(To)/From Capital Reserve	\$0	\$0	\$0	\$0	\$0	\$0	
19	Subtotal	\$4,700,861	\$4,312,624	\$4,162,493	\$4,260,469	\$4,617,216	\$5,037,401	
20	Estimated Interest Income	\$88,025	\$109,218	\$103,012	\$102,312	\$107,760	\$117,149	Assumption a.
21	<b>Year-End Balance</b>	<b>\$4,788,886</b>	<b>\$4,421,842</b>	<b>\$4,265,505</b>	<b>\$4,362,781</b>	<b>\$4,724,976</b>	<b>\$5,154,549</b>	
22	Target Balance	\$3,280,000	\$3,380,000	\$3,480,000	\$3,590,000	\$3,690,000	\$3,800,000	9 mos. of O&M Expenses
23	% of target	146%	131%	123%	122%	128%	136%	
24	<b>Capital Reserve</b>							
25	Beginning Balance	\$6,264,840	\$6,322,396	\$6,635,832	\$6,505,302	\$6,814,486	\$6,656,193	To Above
26	<b>Transfers:</b>							
27	(To)/From Revenue Requirements	\$735,110	\$3,334,983	\$3,334,983	\$3,334,983	\$3,334,983	\$3,334,983	To Table 1
28	(To)/From Operating Reserve	\$0	\$0	\$0	\$0	\$0	\$0	From Above
29	(To)/From Disaster Recovery	\$0	\$0	\$0	\$0	\$0	\$0	To Below
30	Connection Fee Revenues	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	4 EDUs per year
31	Capital outlay	(\$116,700)	(\$120,201)	(\$123,807)	(\$127,521)	(\$131,347)	(\$135,287)	FY 2018/19 from Adopted budget; inflation adj all other years
32	CIP expenditures (PAYGo)	(\$735,110)	(\$3,080,000)	(\$3,522,530)	(\$3,081,219)	(\$3,546,660)	(\$3,444,504)	From Table 5
33	Subtotal	\$6,173,140	\$6,482,177	\$6,349,478	\$6,656,543	\$6,496,462	\$6,436,384	
34	Estimated Interest Income	\$149,256	\$153,655	\$155,824	\$157,942	\$159,731	\$157,111	Assumption a.
35	<b>Year-End Balance</b>	<b>\$6,322,396</b>	<b>\$6,635,832</b>	<b>\$6,505,302</b>	<b>\$6,814,486</b>	<b>\$6,656,193</b>	<b>\$6,593,495</b>	
36	Target Balance	\$5,002,474	\$5,002,474	\$5,002,474	\$5,002,474	\$5,002,474	\$5,002,474	1.5 x Avg Annual PAYGo CIP expenditures
37								
38	<b>Repair &amp; Replacement Reserve</b>							
39	Beginning Balance	\$423,318	\$319,628	\$318,317	\$313,457	\$304,857	\$292,319	
40	<b>Transfers:</b>							
41	(To)/From Revenue Requirements	\$0	\$107,000	\$107,000	\$107,000	\$107,000	\$107,000	To Table 1
42	Annual R&R Contributions	\$0	\$0	\$0	\$0	\$0	\$0	To Above
43	(To)/From Capital Reserve	\$0	\$0	\$0	\$0	\$0	\$0	
44	R&R Expenditures	(\$112,500)	(\$115,875)	(\$119,351)	(\$122,932)	(\$126,620)	(\$130,418)	FY 2018/19 from Adopted budget; inflation adj all other years
45	Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	
46	Subtotal	\$310,818	\$310,753	\$305,966	\$297,526	\$285,238	\$268,900	
47	Estimated Interest Income	\$8,810	\$7,565	\$7,491	\$7,332	\$7,081	\$6,735	Assumption a.
48	<b>Year-End Balance</b>	<b>\$319,628</b>	<b>\$318,317</b>	<b>\$313,457</b>	<b>\$304,857</b>	<b>\$292,319</b>	<b>\$275,635</b>	
49	Target Balance	\$220,000	\$228,375	\$235,226	\$242,283	\$249,552	\$257,038	2x Avg R&R Cost
50								
51	<b>Disaster Recovery Reserve</b>							
52	Beginning Balance	\$500,000	\$512,000	\$524,288	\$536,871	\$549,756	\$562,950	
53	Transfers (To)/From Capital Reserve	\$0	\$0	\$0	\$0	\$0	\$0	From Above
54	Subtotal	\$500,000	\$512,000	\$524,288	\$536,871	\$549,756	\$562,950	
55	Estimated Interest Income	\$12,000	\$12,288	\$12,583	\$12,885	\$13,194	\$13,511	Assumption a.
56	<b>Year-End Balance</b>	<b>\$512,000</b>	<b>\$524,288</b>	<b>\$536,871</b>	<b>\$549,756</b>	<b>\$562,950</b>	<b>\$576,461</b>	
57	Target Balance	\$3,334,983	\$3,334,983	\$3,334,983	\$3,334,983	\$3,334,983	\$3,334,983	Avg Annual PAYGo Capital Expense
58								

	A	B	C	D	E	F	G	H
1	<b>Sausalito-Marín City Sanitary District</b>							
2	<b>Wastewater Financial Plan</b>							
3	<b>Table 4. Reserves</b>							
4								
5		<b>Budgeted</b>	<b>Projected</b>					
6		<b>FY 2018-19</b>	<b>FY 2019-20</b>	<b>FY 2020-21</b>	<b>FY 2021-22</b>	<b>FY 2022-23</b>	<b>FY 2023-24</b>	<b>Notes</b>
59	<b>Self-Insurance &amp; Deductible Reserve</b>							
60	Beginning Balance	\$0	\$101,200	\$103,629	\$106,116	\$108,663	\$111,271	
61	Transfers:							
62	(To)/From Revenue Requirements	\$100,000	\$0	\$0	\$0	\$0	\$0	
63	Subtotal	\$100,000	\$101,200	\$103,629	\$106,116	\$108,663	\$111,271	
64	Estimated Interest Income	\$1,200	\$2,429	\$2,487	\$2,547	\$2,608	\$2,670	
65	<b>Year-End Balance</b>	<b>\$101,200</b>	<b>\$103,629</b>	<b>\$106,116</b>	<b>\$108,663</b>	<b>\$111,271</b>	<b>\$113,941</b>	
66	<i>Target Balance</i>	<i>\$100,000</i>	<i>\$100,000</i>	<i>\$100,000</i>	<i>\$100,000</i>	<i>\$100,000</i>	<i>\$100,000</i>	
67								
68								
69								
70	<b>Operating Reserves <u>without</u> increase</b>							
71	Beginning Balance	\$2,634,562	\$4,788,886	\$4,229,168	\$3,530,266	\$2,680,957	\$1,669,827	From Below
72	Operating Surplus/(Deficit)	\$0	\$3,464	(\$326,954)	(\$670,728)	(\$938,109)	(\$1,213,616)	From Table 3
73	Unincorporated Collection System Revenue	\$0	(\$193,853)	(\$204,607)	(\$247,196)	(\$379,047)	(\$558,929)	If no change to \$78 collection system charge
74	TCSD Payments (non-service charge):							
75	Capital deferral repayment	\$183,855	\$183,855	\$183,855	\$183,855	\$183,855	\$183,855	
76	Interdistrict Loan P&I	\$74,892	\$74,892	\$74,892	\$74,892	\$74,892	\$74,892	
77	Mediated Settlement	\$240,000	\$240,000	\$240,000	\$240,000	\$240,000	\$0	
78	Transfers:							
79	(To)/From Revenue Requirements	\$1,567,552	(\$975,009)	(\$758,096)	(\$503,783)	(\$244,311)	\$53,678	
80	(To)/From R&R Reserve	\$0	\$0	\$0	\$0	\$0	\$0	
81	(To)/From Capital Reserve	\$0	\$0	\$0	\$0	\$0	\$0	
82	Subtotal	\$4,700,861	\$4,122,234	\$3,438,257	\$2,607,306	\$1,618,237	\$209,707	
83	Estimated Interest Income	\$88,025	\$106,933	\$92,009	\$73,651	\$51,590	\$22,554	
84	<b>Year-End Balance</b>	<b>\$4,788,886</b>	<b>\$4,229,168</b>	<b>\$3,530,266</b>	<b>\$2,680,957</b>	<b>\$1,669,827</b>	<b>\$232,262</b>	
85								
86	<b>Retirement Reserve for New Pensions (GASB 45)</b>							
87	Beginning Unfunded Balance	\$0	\$0	\$0	\$0	\$0	\$0	
88	Annual OPEB Cost	(\$141,177)	(\$147,000)	(\$153,056)	(\$159,362)	(\$165,928)	(\$172,764)	From 2018-19 Budget and with input from District
89	Transfers:							
90	(To)/From Operating Reserve	\$0	\$0	\$0	\$0	\$0	\$0	
91	(To)/From Revenue Requirements	\$141,177	\$147,000	\$153,056	\$159,362	\$165,928	\$172,764	To Table 1
92	<b>Net OPEB Obligation at EOY</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	
93								
94	<b>All Reserves without Rate Increases</b>	<b>12,044,109</b>	<b>11,811,234</b>	<b>10,992,012</b>	<b>10,458,719</b>	<b>9,292,559</b>	<b>7,791,794</b>	
95	<b>All Reserves with Rate Increases</b>	<b>12,044,109</b>	<b>12,003,908</b>	<b>11,727,250</b>	<b>12,140,542</b>	<b>12,347,708</b>	<b>12,714,081</b>	
96	<b>Reserves Target Balance</b>	<b>\$11,937,456</b>	<b>\$12,045,831</b>	<b>\$12,152,683</b>	<b>\$12,269,740</b>	<b>\$12,377,008</b>	<b>\$12,494,495</b>	
97	<b>Reserves Minimum Balance</b>	<b>\$3,280,000</b>	<b>\$3,380,000</b>	<b>\$3,480,000</b>	<b>\$3,590,000</b>	<b>\$3,690,000</b>	<b>\$3,800,000</b>	

	A	B	D	E	F	G	H	I	J
1	Sausalito-Marin City Sanitary District								
2	Wastewater Financial Plan								
3	Table 5. Capital Improvement Program								
4									
5									
6	Projected						5-year Total		
7	Cash-funded (PAYGo) Projects	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	(FY 2019-20 to FY 2023-24)	Notes	
8	Sewer Conveyance and Treatment Rate								
9	Shop/Operator/Equipment Facilities Study/Pre-Design	\$0	\$0	\$75,000	\$175,000	\$0	\$250,000		
10	Biosolids Handling (Long Term)	\$100,000	\$400,000	\$0	\$0	\$0	\$500,000		
11	Engineering and Project Management (10%)	\$10,000	\$40,000	\$7,500	\$17,500	\$0	\$75,000		
12	Subtotal, Treatment Plant	\$110,000	\$440,000	\$82,500	\$192,500	\$0	\$825,000		
15									
16	Conveyance System (excl. Marin City collection system)								
17	Coloma and Whiskey Springs Pump Station Improvements	\$2,500,000	\$2,500,000	\$0	\$0	\$0	\$5,000,000		
18	Beach Force Main Rehabilitation	\$200,000	\$200,000	\$2,000,000	\$0	\$0	\$2,400,000		
19	Site Access Control & Security	\$0	\$0	\$50,000	\$50,000	\$50,000	\$150,000		
20	Main St. to Alexander Ave Force Main Inspection	\$0	\$0	\$0	\$250,000	\$0	\$250,000		
21	Locust St. Force Main Inspection	\$0	\$0	\$0	\$200,000	\$200,000	\$400,000		
22	Princess St. Pump Station Study	\$0	\$0	\$0	\$400,000	\$0	\$400,000		
23	Engineering and Project Management (10%)	\$270,000	\$270,000	\$205,000	\$90,000	\$25,000	\$860,000		
24	Subtotal, Conveyance System	\$2,970,000	\$2,970,000	\$2,255,000	\$990,000	\$275,000	\$9,460,000		
27									
28	Unincorporated Collection System								
29	Pump Station Improvements	\$0	\$0	\$500,000	\$1,500,000	\$1,500,000	\$3,500,000		
30	Collection System Rehabilitation	\$0	\$0	\$0	\$350,000	\$1,000,000	\$1,350,000		
31	Engineering and Project Management (10%)	\$0	\$0	\$50,000	\$185,000	\$250,000	\$485,000		
32	Subtotal, Unincorporated Collection System	\$0	\$0	\$550,000	\$2,035,000	\$2,750,000	\$5,335,000	To Table 9	
35									
36								Avg. Annual	
37	Grand Total Pay-As-You-Go Projects	\$3,080,000	\$3,410,000	\$2,887,500	\$3,217,500	\$3,025,000	\$15,620,000	\$3,124,000	
38	Construction Cost Inflation	0.00%	3.30%	6.71%	10.23%	13.87%			
39	Grand Total Inflated Pay-As-You-Go Projects	\$3,080,000	\$3,522,530	\$3,081,219	\$3,546,660	\$3,444,504	\$16,674,913	\$3,334,983	
40	To Table 4								
41									
42	INFORMATIONAL ONLY								
43	Projected								
44	Bond Funded Projects	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	Notes		
45									
46	Treatment Plant Improvements								
47	Treatment and Wet Weather Flow Upgrade	\$12,500,000	\$0	\$0	\$0	\$0			
48	Generator Reliability Improvements & Princess Controls Relocation	\$1,000,000	\$1,000,000	\$0	\$0	\$0			
49	Primary Clarifier & Digester Upgrades	\$400,000	\$1,200,000	\$400,000	\$0	\$0			
50	Storm Drain Rehabilitation	\$0	\$150,000	\$0	\$0	\$0			
51	Engineering and Project Management (10%)	\$1,390,000	\$235,000	\$40,000	\$0	\$0			
52		\$15,290,000	\$2,585,000	\$440,000	\$0	\$0			

	A	B	C	D	E	F	G	H	I
1	<b>Sausalito-Marín City Sanitary District</b>								
2	<b>Wastewater Financial Plan</b>								
3	<b>Table 6. Debt Service</b>								
4									
5									
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	A	B	C	D	E	F	G
1	<b>Sausalito-Marin City Sanitary District</b>						
2	<b>Wastewater Financial Plan</b>						
3	<b>Table 7. FY 2019-20 Fixed vs Variable Expense Analysis</b>						
4							
5	<b>Operating and Administrative Expenses</b>	<b>FY 2019-20</b>	<b>BASE</b>	<b>VOLUMETRIC</b>	<b>NOTES</b>		
6		From Table 1	%	\$	%	\$	
7	<u>Salaries and Benefits</u>						
8	Sewer Conveyance and Treatment Rate	\$1,669,748	100%	\$ 1,669,748	0%	\$ -	
9	Payroll Taxes	119,105	100%	119,105	0%	-	
10	Retirement	310,361	100%	310,361	0%	-	
11	Employee Benefits	405,027	100%	405,027	0%	-	
12	Workers Comp	49,900	100%	49,900	0%	-	
13							
14	<u>Operations</u>						
15	Chemicals	190,418	20%	38,084	80%	152,335	
16	Fuel	13,236	100%	13,236	0%	-	
17	Permits & Fees	130,804	100%	130,804	0%	-	
18	Waste Disposal	111,951	20%	22,390	80%	89,561	
19	Parts, Tools, Materials & Supplies	63,612	100%	63,612	0%	-	
20	Vehicles	14,214	100%	14,214	0%	-	
21	Safety	36,853	20%	7,371	80%	29,483	
22							
23	<u>System &amp; Plant Maintenance</u>						
24	Treatment & Collection System	217,280	100%	217,280	0%	-	
25	Unincorporated Area Collection System	72,100	100%	72,100	0%	-	
26	City of Sausalito Pump Stations	17,253	20%	3,451	80%	13,802	
27							
28	Wastewater Monitoring & Testing	83,691	100%	83,691	0%	-	
29							
30	<u>Utilities &amp; Communication</u>						
31	Communication	31,146	100%	31,146	0%	-	
32	Electricity	283,390	20%	56,678	80%	226,712	
33	Water	5,665	100%	5,665	0%	-	
34							
35	<u>Administrative</u>						
36	Professional Development	29,664	100%	29,664	0%	-	
37	Professional Services	253,895	100%	253,895	0%	-	
38	Insurance	50,092	100%	50,092	0%	-	
39	Administrative	78,559	100%	78,559	0%	-	
40							
41	NPS Lease	263,569	100%	263,569	0%	-	
42							
43	<b>Total Operating and Admin Expenses</b>	<b>\$ 4,501,532</b>		<b>\$ 3,989,640</b>		<b>\$ 511,892</b>	
44	<b>% of Total</b>	<b>100%</b>		<b>89%</b>		<b>11%</b>	
45							
46							
47							



	A	B	C	D	E	F	G
1	Sausalito-Marin City Sanitary District						
2	Wastewater Financial Plan						
3	Table 7. FY 2019-20 Fixed vs Variable Expense Analysis						
4							
48	CAPITAL PROJECTS	5-Yr Total		BASE		VOLUMETRIC	
49		From Table 5	%	\$		%	\$
50							
51	Treatment Plant Improvements						
52	Shop/Operator/Equipment Facilities Study/Pre-Di	\$250,000	100%	\$	250,000	0%	\$ -
53	Biosolids Handling (Long Term)	\$500,000	20%	\$	100,000	80%	\$ 400,000
54	Engineering and Project Management	\$75,000	100%	\$	75,000	0%	\$ -
55							
56	Conveyance System						
57	Coloma/Whiskey Springs Pump Station Improver	\$5,000,000	20%		\$1,000,000	80%	\$ 4,000,000
58	Beach Force Main Rehabilitation	\$2,400,000	20%		\$480,000	80%	\$ 1,920,000
59	Site Access Control & Security	\$150,000	20%		\$30,000	80%	\$ 120,000
60	Main St. to Alexander Ave Force Main Inspection	\$250,000	20%		\$50,000	80%	\$ 200,000
61	Locust St. Force Main Inspection	\$400,000	20%		\$80,000	80%	\$ 320,000
62	Princess St. Pump Station Study	\$400,000	20%		\$80,000	80%	\$ 320,000
63	Engineering and Project Management	\$860,000	100%		\$860,000	0%	\$ -
64							
65	Unincorporated Collection System						
66	Pump Station Improvements	\$3,500,000	20%	\$	700,000	80%	\$ 2,800,000
67	Collection System Rehabilitation, Phase II	\$1,350,000	20%	\$	270,000	80%	\$ 1,080,000
68	Engineering and Project Management	\$485,000	100%	\$	485,000	0%	\$ -
69							
70	Total Capital Expenses (5-yr period)	\$15,620,000		\$	4,460,000		\$ 11,160,000
71	Average Annual Capital	\$3,124,000		\$	892,000		\$ 2,232,000
72	% of Total	100%			29%		71%
73							
74							
75	REVENUE REQUIREMENT	BASE	VOLUMETRIC	TOTAL			
76		\$	\$				
77	FY 2019-20 Operating & Admin. Expenses [1]	\$ 3,989,640	\$ 511,892	\$	4,501,532		
78	Average Annual Capital Expenses [2]	\$ 892,000	\$ 2,232,000	\$	3,124,000		
79	Grand Total	\$ 4,881,640	\$ 2,743,892	\$	7,625,532		
80	% of Total	64%	36%		100%		
81							

	A	B	C	D	E	F	G	H
1	<b>Sausalito-Marin City Sanitary District</b>							
2	<b>Wastewater Financial Plan</b>							
3	<b>Table 8. Unincorporated Collection System Costs</b>							
4								
5								
6	<b>Collection System Costs</b>	<b>Current Rate</b>	<b>Projected</b>					
7	<b>Annual Operations and Maintenance Costs</b>		<b>FY 2019-20</b>	<b>FY 2020-21</b>	<b>FY 2021-22</b>	<b>FY 2022-23</b>	<b>FY 2023-24</b>	<b>Notes</b>
8	Sewer Conveyance and Treatment Rate		\$206,715	\$212,916	\$219,304	\$225,883	\$232,660	Provided by District
9	Expenses		\$105,000	\$108,150	\$111,395	\$114,736	\$118,178	Provided by District
10	Overhead		\$46,757	\$48,160	\$49,605	\$51,093	\$52,626	Provided by District
11	Subtotal - O&M Costs		\$358,472	\$369,226	\$380,303	\$391,712	\$403,464	
12								
13	<b>Annual Debt Service - Capital Projects</b>		\$0	\$0	\$31,512	\$151,954	\$320,084	From Table 9
14	Total Costs		\$358,472	\$369,226	\$411,815	\$543,666	\$723,548	To Table 1
15	Total Adjusted EDUs		1,869	1,869	1,869	1,869	1,869	From Below
16	<b>Annual Charge (\$/EDU) - SFR and Comm</b>	<b>\$78</b>	<b>\$192</b>	<b>\$198</b>	<b>\$220</b>	<b>\$291</b>	<b>\$387</b>	To Table 3 and Summary & Assumptions
17	Annual % Increase		146%	3%	12%	32%	33%	
18								
19								
20	<b>Dwelling Units</b>							
21	Single Family Dwelling Units	84	84	84	84	84	84	
22	Multi Family Dwelling Units	1,180	1,180	1,180	1,180	1,180	1,180	Marin Housing Authority at 0.95 to reflect 5% discount
23	Floating Home Dwelling Units	398	398	398	398	398	398	
24	Non Residential EDUs	449	449	449	449	449	449	
25		2,111	2,111	2,111	2,111	2,111	2,111	
26								
27								
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**EDU Calculation**

	Dwelling Units/EDUs	Rate Differential Factor	Adjusted Dwelling Units/EDUs
<b>Residential Dwelling</b>	(a)	(b)	(c) = (a)*(b)
Single family	84	1.00	84
Multi-Family	1,180	0.88	1,038
Floating Homes	398	0.75	299
Total Residential	1,662		1,420
Non Residential ED	449	1.00	449
Total	2,111		1,869

To Above

	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1														
2	<b>Sausalito-Marín City Sanitary District</b>													
3	<b>Wastewater Financial Plan</b>													
4	<b>Table 9. Unincorporated Collection System Costs - Debt Service</b>													
5						Assumptions:								
6						Term	30	years						
						Interest Rate	3.40%	12/31/2018 LAIF rate + 1.0%						
7	<b>Fiscal Year</b>	<b>Annual Collection System Capital Project Costs</b>	<b>FY 2019-20</b>	<b>FY 2020-21</b>	<b>FY 2021-22</b>	<b>FY 2022-23</b>	<b>FY 2023-24</b>	<b>FY 2024-25</b>	<b>FY 2025-26</b>	<b>FY 2026-27</b>	<b>FY 2027-28</b>	<b>FY 2028-29</b>		
8	Per Conveyance and (From Table 5)													
9	2019/2020	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
10	2020/2021	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
11	2021/2022	\$586,899			\$31,512	\$31,512	\$31,512	\$31,512	\$31,512	\$31,512	\$31,512	\$31,512	\$31,512	\$31,512
12	2022/2023	\$2,243,186				\$120,442	\$120,442	\$120,442	\$120,442	\$120,442	\$120,442	\$120,442	\$120,442	\$120,442
13	2023/2024	\$3,131,367					\$168,130	\$168,130	\$168,130	\$168,130	\$168,130	\$168,130	\$168,130	\$168,130
14	2024/2025	\$0												
15	2025/2026	\$0												
16	2026/2027	\$0												
17	2027/2028	\$0												
18		\$5,961,452	\$0	\$0	\$31,512	\$151,954	\$320,084	\$320,084	\$320,084	\$320,084	\$320,084	\$320,084	\$320,084	\$320,084
19			Annual Debt Service											
20														

	B	C	D	E	F	G	H	I	J
2	<b>Sausalito-Marin City Sanitary District</b>								
3	<b>Wastewater Financial Plan</b>								
4	<b>Table 10. Calculation of Transport and Treatment Rate by Customer Class</b>								
5									
6	veyance and Treatment Rate								
7									
8		<b>Volume</b>	<b>Volumetric</b>					<b>Ratio</b>	
9	<b>Base EDUs</b>	<b>Factors</b>	<b>EDUs</b>		<b>Base</b>	<b>Volumetric</b>	<b>Total</b>	<b>Compared</b>	<b>Notes</b>
10								<b>to SFR</b>	
11									
12									
13									
14	<b>Residential</b>	(a)	(b)	(c) = (a)*(b)					
15	Single family	3,188	1.00	3,188	\$ 5,555,801	\$ 3,125,138	\$ 8,680,939		From Table 7
16	Multi-Family	4,584	0.69	3,159	10,254	8,585			From Table 1; FY FY 2020/21 Net Revenue Requirement
17	Floating Homes	398	0.39	154	\$542	\$364			
18	Total Residential	8,170		6,501					
19									
20	Non Residential	2,080	1.00	2,080	\$542	\$364	\$906	1.00	Total Rate to Summary & Assumptions Table
21									
22	Growth	4	1.00	4	\$542	\$364	\$906	1.00	Total Rate to Summary & Assumptions Table
23									
24	Total	10,254		8,585					
25		From	As						
26		Table 2	calculated						
27									