



2023 Sewer Rate Study

Final Report

May 9, 2023



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Mr. Dale McDonald
Administrative Services Manager
Las Gallinas Valley Sanitary District
101 Lucas Valley Rd. Suite 300
San Rafael, CA 94903

Re: 2023 Sewer Rate Study

Dear Mr. McDonald,

Hildebrand Consulting is pleased to present this 2023 Sewer Rate Study (Study) that we performed for Las Gallinas Valley Sanitary District (District). We appreciate the fine assistance provided by you and all of the members of the District staff who participated in the Study.

If you or others at the District have any questions, please do not hesitate to contact me at:

mhildebrand@hildco.com
(510) 316-0621

We appreciate the opportunity to be of service to the District and look forward to the possibility of doing so again in the near future.

Sincerely,



Mark Hildebrand

Hildebrand Consulting, LLC

Enclosure

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List of Acronyms

AWWA	American Water Works Association
BOD	biochemical oxygen demand
CIP	Capital improvement program
COSA	cost of service analysis
DCR	debt service coverage ratio
FY	Fiscal year (which ends on June 30 for the District)
ccf	hundred cubic feet (748 gallons)
LGVSD	Las Gallinas Valley Sanitary District
mg/l	milligrams per liter
mgd	millions of gallons per day
MMWD	Marin Municipal Water District
NMWD	North Marin Water District
O&M	operations and maintenance
TSS	total suspended solids
SSU	Sewer Service Unit
SWRCB	State Water Resources Control Board
WEF	Water Environment Federation
WWTP	wastewater treatment plant

Section 1. INTRODUCTION

Hildebrand Consulting, LLC was retained by Las Gallinas Valley Sanitary District (District or LGVSD) to conduct a comprehensive Sewer Rate Study (Study). This report describes in detail the assumptions, procedures, and results of the Study, including conclusions and recommendations.

1.1 DISTRICT BACKGROUND

LGVSD provides wastewater collection, treatment, and disposal services in the northern San Rafael area. The District serves over 32,000 customers and manages over 100 miles of collection lines. As a multi-faceted public utility, LGVSD also generates solar energy, operates a garbage franchise, and oversees a water reclamation project which provides the public with wildlife and recreational benefits. The LGVSD service area is challenged by a low topography, bayside location, and sensitive receiving bodies which limit the ability to discharge during the summer. As a result, during the summer about two thirds of the District's treated effluent is recycled in collaboration with Marin Municipal Water District (MMWD) and North Marin Water District (NMWD). Hildebrand Consulting is playing an active role as an independent consultant in refining those cost allocations between LGVSD and NMWD. The remainder of treated effluent is utilized at LGVSD's irrigation pastures. These discharge limitations are costs that may be borne by sewer customers and not recycled water customers (whose use of the recycled water can be seen as a service rendered).

LGVSD previously initiated a major capital program to upgrade its wastewater treatment plant (WWTP) and expand the existing LGVSD Recycled Water Treatment Facility in order to address aging infrastructure, changes in wastewater content, and new regulations. In addition, the District plans to complete additional WWTP upgrades to its primary treatment process and add ultraviolet filtration. The expansion has

created operational efficiencies and also allows the District to serve the present and future residents.

1.2 RATE STUDY BACKGROUND

LGVSD's last comprehensive rate study was conducted in 2021. Generally speaking, residential customers are charged a flat rate per dwelling unit. Non-residential rates are charged based on average winter and summer water usage as well as a strength factor (depending on the type of commercial operation).

The purpose of this Study is to update the District's financial plan and evaluate the structure of the existing sewer user charges by updating the cost-of-service analysis (COSA). The broader purpose of the 10-year financial plan is to provide the necessary information and analysis to the District's Board of Directors for it to set rates that adequately fund the operating, capital costs and debt service associated with the collection, treatment and disposal of wastewater for the next four years (fiscal year 2023/24 through FY 2026/27). Periodically updating the COSA is a best practice and necessary to comply with applicable law. Rate structure updates ensure that each class of customer continues to pay their fair and proportional share of costs. The cost to serve each class of customers may vary over time due to changes in water use, sewage strength, number of accounts and other factors.

In addition, the Study has reviewed the surcharge imposed on Captains Cove and Marin Lagoon to ensure that the rates equitably reflect the cost of operating the disproportionate number of pump stations needed to serve those areas.

1.3 SCOPE & OBJECTIVES OF STUDY

The scope of this Study was to prepare a multi-year financial plan, update the COSA, review the District's existing rate structure, and propose a 4-year rate schedule. The primary objectives of this Study were to:

- i. Develop a multi-year financial management plan that integrates the District's operational and capital project funding needs
- ii. Propose annual rate adjustments to the Sewer Service Charges that will ensure adequate revenues to meet the District's ongoing service and financial obligations
- iii. Determine the cost of providing sewer service to the District's customers using equitable and industry-accepted methodologies
- iv. Recommend specific modifications to the District's existing rate structure in order to ensure that the District is equitably recovering the cost of service and comporting with industry standards and California's legal requirements

1.4 STUDY METHODOLOGY

This Study applied methodologies that are aligned with industry standard practices for rate setting as promulgated by the Water Environment Federation (WEF) and all applicable law, including California Constitution Article XIII D, Section 6(b), commonly known as Proposition 218.

The Study began with development of a multi-year financial management plan that determined the level of annual rate revenue required to cover projected annual operating expenses, debt service (including coverage targets), and capital cost requirements while maintaining adequate reserves. A financial planning model was customized to reflect the District's financial dynamics and latest available data for the sewer operations in order to develop a long-term financial management plan, inclusive of projected annual revenue requirements and corresponding annual rate adjustments.

Revenue requirements calculated in the financial plan for FY 2023/24 were then used to perform a detailed COSA. The COSA and rate structure design were conducted based upon principles outlined by the WEF, legal requirements (Proposition 218) and other generally accepted industry practices to develop rates that reflect the cost of providing service.

Recommendations for the financial plan and updated rate structure have been presented to the District's Board of Directors and a Public Hearing to adopt the rates has been scheduled for late June of 2023.

Section 2. FINANCIAL PLAN

This Study’s 10-year financial plan was developed through interactive work sessions with District staff. As a result of this process, the Study has produced a robust financial plan that will allow the District to meet revenue requirements and financial performance objectives throughout the projection period while striving to minimize rate increases. This includes maintaining prudent reserves and ensuring that the District’s customers are all paying fair and equitable amounts for services provided.

2.1 FINANCIAL DATA & ASSUMPTIONS

The District provided historical and budgeted financial information associated with operation of the sewer system, including historical and budgeted operating costs, a multi-year capital improvement program (CIP), and outstanding debt service obligations. District staff also assisted in providing other assumptions and policies, operating and capital reserve targets, and escalation rates for operating costs (all of which are described in the following subsections).

2.1.1 BEGINNING FUND BALANCES

The District’s beginning fund balance for FY 2022/23 is summarized in **Table 1**.

Table 1: FY 2022/23 Beginning Cash Balance

Unrestricted Cash and Operating Reserve	\$27,909,000
Emergency Repair Reserve	\$1,000,000
Capital Reserve	\$2,951,500
Vehicle & Equipment Reserve	\$841,700
Total:	\$32,702,200
Restricted Debt Service Reserves	\$904,600
Restricted (Capital Facility Charges)	\$587,700
Total Reserves:	\$34,194,500

2.1.2 RESERVE TARGETS

Reserves for utilities are cash balances that are maintained in order to (a) comply with contractual obligations (e.g., bond covenants), (b) protect the utility from unexpected financial events, and/or (c) accommodate operational and capital program cash flow needs. Often multiple reserves or fund targets are maintained, each with a specific function. In addition to the direct benefits of financial stability, reserves can help utilities obtain higher credit rankings, which can then help qualify the utility for cheaper debt. Credit rating agencies evaluate utilities on their financial stability, which includes adherence to formally adopted reserve targets.

The following describes recommended reserve targets which are partially informed based on existing District reserve policies (Policies and Procedures F-50-10) and are consistent with 1) the author's industry experience for similar systems, 2) findings of reserve studies conducted by the American Water Works Association (AWWA), and 3) healthy reserve levels for public utilities per the evaluation criteria published by rating agencies (e.g., Fitch, Moody's, and Standard & Poor's).

Operating and Rate Stabilization Reserve Target – The Operating and Rate Stabilization Reserve target is maintained in order to meet the liquidity and cash flow needs for the District's day-to-day operations and debt service obligations. This reserve ensures continuity of service regardless of short-term changes in cash flow or sudden increases in operating costs. The District has a policy to maintain the Operating fund at a level equal to 7 months of the annual operating budget plus the annual debt service.

Given the FY 2022/23 estimated end of year expenses of \$10.4 million plus debt service of \$4.2 million, the targeted reserve for that year would be about \$8.5 million.

Emergency Reserve Target: This reserve is maintained with the intention of protecting the District from catastrophic failure of critical infrastructure and managing the inherent volatility of capital spending needs. By policy, the District maintains a target level of \$1 million.

Capital Reserve Target: The Capital Reserve is designed to allow the District to manage the inherent variability in annual capital spending. For example, in the current financial plan the annual capital spending is as high as \$26 million in one year and as low as \$4 million in another year. The District’s policies describe the reserve as a source of “capital for major capital projects that span two or more years” and that the targeted level should be informed by accumulated depreciation. The District’s current Capital Reserve Target is \$4 million.

Given that this reserve is designed to smooth the inherent variability of the capital spending program, the reserve may be drawn down during years of higher-than-average capital spending and conversely the reserve should be built up during years when capital spending is below average. Such an approach can help reduce the need for large rate adjustments and help ensure continuous funding for capital replacement and rehabilitation projects.

Vehicle and Equipment Reserve – Vehicle and equipment purchases can be cyclical and vary considerably from one year to the next, particularly when more expensive vehicles need to be replaced (e.g., vac trucks). Much like the Capital Reserve, the Vehicle and Equipment Reserve is designed to absorb this inherent volatility in the annual cost of vehicles and expensive equipment. The District’s current reserve target is \$1 million.

2.1.3 CUSTOMER GROWTH

Generally speaking, the District's service area is largely built-out with growth mostly coming in the form of densification. The recent average District capital facility charge revenue of about \$340 thousand per year over the last two years indicates that the annual growth rate has been approximately 0.3 percent. This Study assumes that this rate of growth will continue over the next 10 years.

2.1.4 RATE REVENUES

Rate revenue is the revenue generated by Sewer Service Charges from customers for sewer service. Sewer Service Charges are collected from individual residential and non-residential

customers within the District. This Study’s financial plan proposes annual rate revenue adjustments that will meet the District’s revenue requirements. Budget and projected Sewer Service Charge revenues are listed in Schedule 3¹. The rate revenue used for FY2022/23 is based on the District’s projected revenue for that year.

2.1.5 NON-RATE REVENUES

In addition to rate revenue, the District receives other revenue, including property taxes, miscellaneous fees, operating revenue, capital facility charge revenue², MMWD capacity purchase payments, recycled water rate revenue, grants, and interest revenue on investments. Estimates of interest income were calculated annually based upon estimated average fund balances and historic effective return of 0.30 percent on cash and invested funds, which is consistent with the District’s historical earnings. This financial plan assumes that property tax revenue will increase by 2 percent per year. Projections of all other non-rate revenues were based on FY 2022/23 budgeted revenues and were projected to remain flat. Connection fee revenue is not treated as restricted, but the revenues go to the Capital Improvement Fund and therefore are used to fund capital projects (which is consistent with the intended use of those fees). Budgeted revenues FY 2022/23 are depicted in Figure 2 below and listed in detail in **Schedule 3**.

¹ The rate revenue in Schedule 3 includes the proposed rate adjustment recommended by this Study, as described in Section 2.2

² It should be noted that California law (Government Code 66013 et. seq.) requires that Capital Facility Charge revenue be spent “solely for the purposes for which the charges were collected”.

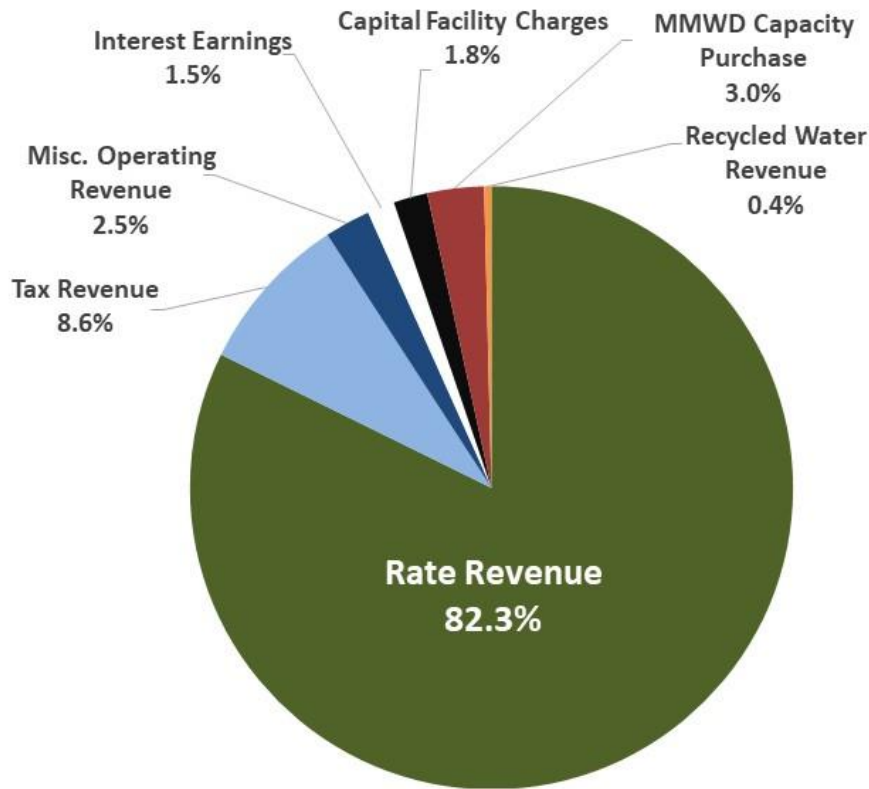


Figure 1: FY 2022/23 Budgeted Revenue Categories

2.1.6 OPERATION AND MAINTENANCE EXPENSES AND EXISTING DEBT SERVICE

For the purpose of this Study, the District’s operating and maintenance expenses include all ongoing collection, treatment, disposal, and administrative expenses, and debt service payments. The financial plans’ assumed annual operating and maintenance costs are based on the FY 2022/23 year-end estimates and are adjusted for future years based on inflation (see Section 2.1.7). The District currently has six outstanding revenue loans. The combined annual debt service is \$4.2 million in FY 2022/23 after accounting for the portion of the debt that is paid by MMWD. In 2026/27 the annual debt service will fall to approximately \$3.5 million.

Debt service coverage is a measure of how easily an entity is able to afford its outstanding debt. Typically, loans (such as revenue bonds) require a minimum debt coverage ratio (DCR) of 1.2. This Study recommends maintaining a DCR of at least 1.5 to ensure access to favorable borrowing terms in the future. The District currently has an estimated DCR of 2.47 (see Schedule 3) and the financial plan forecasts the DCR remaining above 1.85 over the next 10 years.

Budgeted expense categories for year-end estimates for FY 2022/23 are depicted in **Figure 2**. Budgeted and projected operating and debt expenses are listed in detail in **Schedule 1**. Capital program expenses are discussed in Section 2.1.8 and detailed in **Schedule 2**.

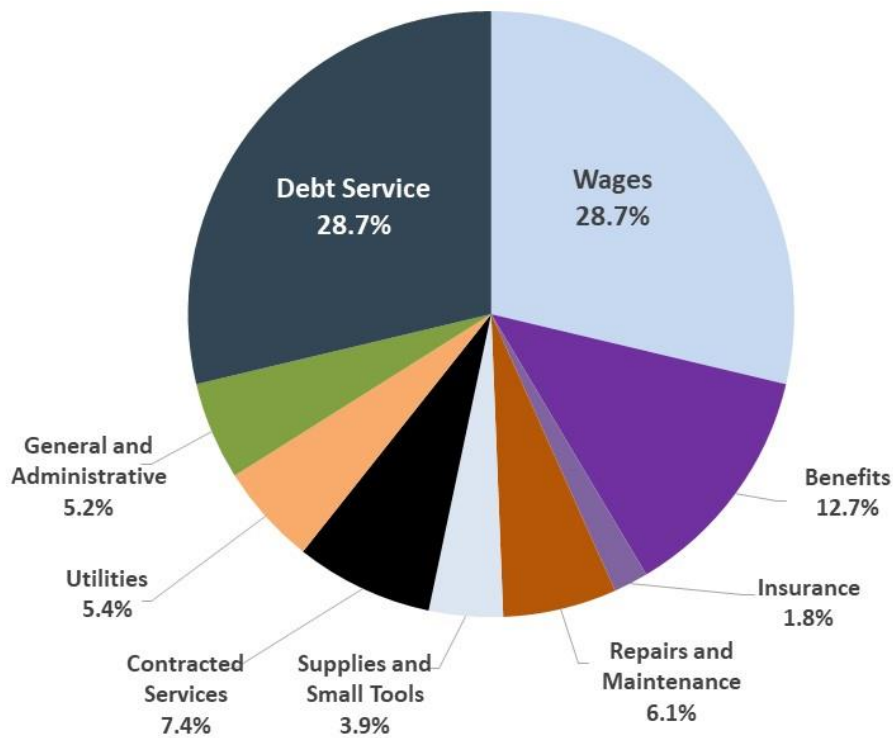


Figure 2: FY 2022/23 Expense Categories (Estimated Year End)

2.1.7 COST ESCALATION

Annual cost escalation factors for the various types of expenses were developed based upon a review of historical inflation trends, published inflation forecasts, industry experience, and discussions with District staff. During the projection period, all of the District’s operating and capital expenses are projected to increase gradually at 3 percent per year based on long-term historic average inflation rates.

2.1.8 CAPITAL IMPROVEMENT PROGRAM AND DEBT STRATEGY

In the past three years (from FY 2019/20 to FY 2021/22) the District averaged \$21.2 million in annual capital spending, most of which (82 percent) was debt financed. Between FY 2022/23 and FY 2030/31 the District has budgeted an average capital spending level of \$17.9 million (after accounting for inflation). The budgeted capital spending is a product of the District’s master planning effort, evaluation of risk and priorities by management, as well as multiple meetings with Board committees.

Due to the spike in capital spending proposed in the near term, this financial study proposes to debt finance approximately \$65 million in capital spending over the next 7 years. The projects to be debt financed are identified in Schedule 2. The financial model assumes that the interest rate will be 3.56 percent with a 1 percent cost of issuance and a repayment period of 20 years.

This Study assumes that the annual capital spending during the “outyears” (the years beyond FY 2030/31, which have not been planned yet) will be equal to the average capital spending of the prior three years (about \$16.6 million).

Figure 3 shows the projected capital spending for the next 10 years. A detailed list of projected capital projects and associated costs is provided in **Schedule 2**.

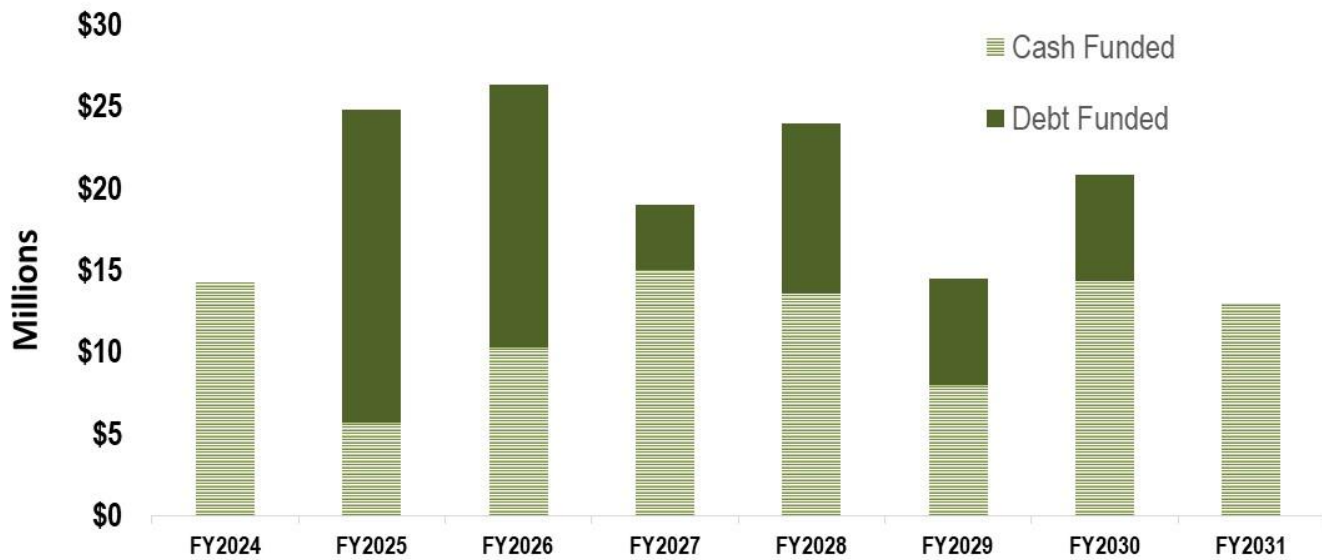
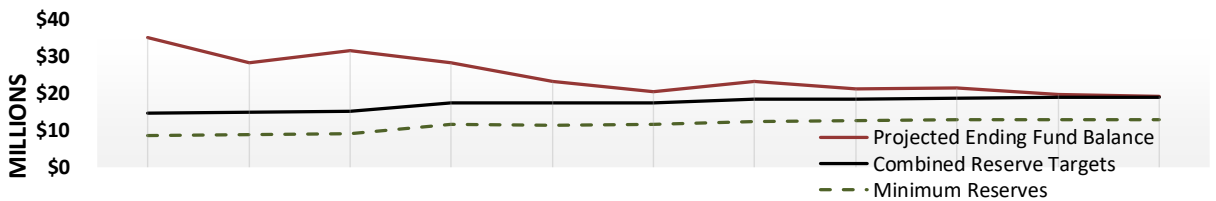
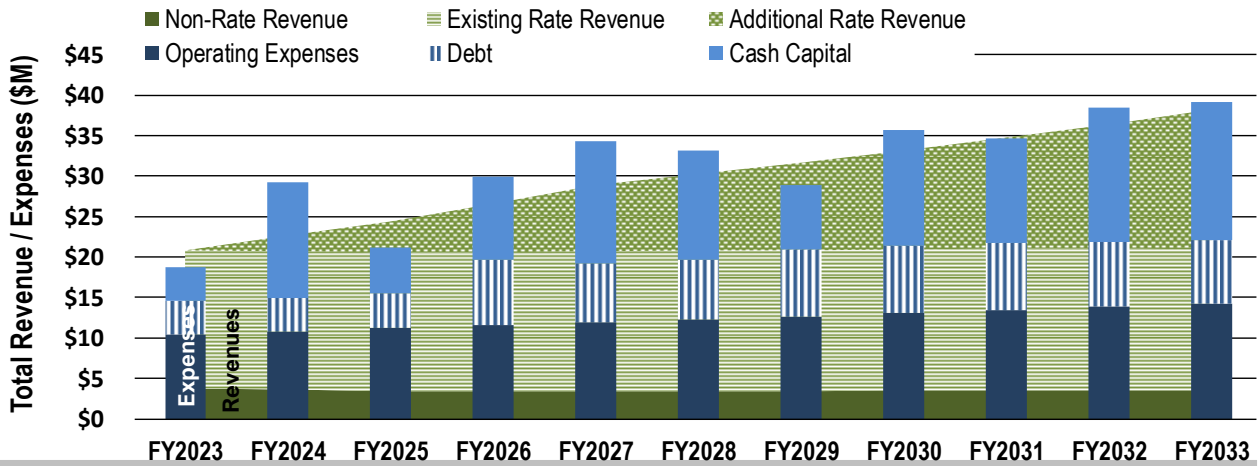


Figure 3: Historical and projected capital spending

2.2 PROPOSED RATE REVENUE INCREASES

All of the above information was entered into a financial planning model to produce a financial plan that evaluated the sufficiency of current revenues to meet current and estimated future financial obligations and determined the level of rate revenue increases necessary in each year of the planning period.

Based upon the previously discussed financial data, assumptions, and reserve targets, this Study proposes a 4-year schedule of rate revenue adjustments as shown at the bottom of **Figure 4**. The numbers provided in **Schedule 3** (cash flow proforma) are summarized graphically in Figure 4.



	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	FY2032	FY2033
		Proposed				Forecasted					
Rate Revenue Increase:		11.0%	10.0%	10.0%	10.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Debt Coverage Ratio:	2.47	2.78	3.12	1.87	2.34	2.48	2.31	2.45	2.60	2.84	3.13
Net Debt Proceeds:			\$19.1M	\$16.1M	\$4.0M	\$10.5M	\$6.5M	\$6.5M			

Figure 4: Financial Plan Estimates with Recommended Rate Increases

Note that the actual rate increases in Year 1 (FY 2023/24) will be slightly different for various customer classes, due to the minor structural changes that are being proposed for the rates (see Section 3). The structural changes will shift cost responsibilities among the District’s customers and will result in some customers experiencing slightly higher rate increases and some customers experiencing slightly lower rate increases. This phenomenon is limited to Year 1, with the remaining rate revenue increases (Year 2, 3 and 4) being the same for all customers. The cost-of-service findings, and resultant impact to the District’s customers, is explained in more detail in Section 3.

Section 3. COST-OF-SERVICE & RATE STRUCTURE

This section of the report explains the COSA and design of Sewer Service Charges intended to meet the District’s financial obligations for FY 2023/24 and beyond. Proposed Sewer Service Charges are intended to meet the utility’s financial needs, satisfy legal requirements, and achieve other rate-setting objectives. The Sewer Service Charge analyses and related recommendations address each of the following:

- Identification of Sewer Service Charge rate-setting objectives
- Evaluation of customer account and wastewater production data
- A COSA used to allocate costs to each customer and customer class in proportion with service demands
- Design of the Sewer Service Charge rate structure to meet revenue needs, satisfy legal requirements, and achieve rate-setting objectives in a fair and reasonable manner

3.1 RATE SETTING OBJECTIVES

There are two rate setting objectives that are primary and fundamental to guiding the rate-setting process. They include: (1) Sewer Service Charges must generate sufficient revenue to meet the utility’s service and financial obligations, and (2) Sewer Service Charges must be calculated consistent with the requirements of the California Constitution, Article XIII D (Proposition 218) and relevant case law. Other rate-setting objectives are secondary and can be addressed so long as the primary objectives are first achieved. Beyond the primary objectives, other rate-setting objectives identified to help guide the rate design process included the following:

- Sewer Service Charges should be viewed as fair and equitable by the public
- Sewer Service Charges should be simple, understandable, and easy to administer
- Sewer Service Charges should strike an appropriate balance between fixed and usage-based charges, with consideration of:

- Revenue stability
- Affordability for basic usage

3.2 CURRENT SEWER SERVICE CHARGES

The District's current Sewer Service Charges were last increased in July 2023 by about 9 percent and are presented in Table 2.

Residential Rates

Residential customers are charged per dwelling unit, with multifamily dwelling units paying 90 percent of the rate of a single-family dwelling unit. This has been a long-standing policy of the District based on past studies and is not proposed to be changed in this study.

Non-Residential Rates

The Sewer Service Charge for non-residential accounts is based on the assignment of sewer service units (SSU). One SSU is assigned for every 8 ccf (hundred cubic feet, or 748 gallons) of average water usage during the summer and winter, as reported by Marin Municipal Water District (MMWD). Each account pays a minimum of one (1) SSU. As an exception, schools are assigned one SSU for each 100 ADA (average daily student attendance).

The rate per SSU paid by non-residential accounts depends on the type of account and the associated strength of the sewage produced by the commercial activities. The strength is measured in terms of biochemical oxygen demand (BOD) and total suspended solids (TSS), both of which affect the cost of treating the sewage that the treatment plant. The proposed strength factors are discussed in more detail in Section 3.4.

Table 2: Current Sewer Service Charge Schedule

Residential (per dwelling unit per year)

Single Family	\$1,122
Multi-Family	\$1,010
Mobile Home	\$1,122

Non-Residential (per SSU per year)¹

Domestic Strength	\$1,122
Dry Industry	\$1,122
Schools	\$1,122
Mortuaries	\$2,244
Hotels w/ Restaurants	\$2,244
Mixed Uses	\$2,244
Restaurants/Café	\$2,693
Markets w/ Disposals	\$2,917
Bakeries	\$3,590

¹ Non-residential accounts are assigned one SSU for every 8 ccf of average water usage during the summer and winter, as reported by MMWD. As an exception, schools are assigned one SSU per 100 ADA.

3.3 PROPOSED RATE STRUCTURE MODIFICATIONS

The District’s current rate structure and cost of service methodology is consistent with established and common industry practices. The only proposed modifications are to update the cost-of-service calculations and to simplify the list of non-residential customer types, as described in Section 3.4.

3.4 WASTEWATER COST-OF-SERVICE ANALYSIS

There are three steps to determining Sewer Service Charges. These are:

- Determine annual Sewer Service Charge revenue requirements
- Analyze the cost of providing service and proportionately allocate costs to each customer class and customer
- Design Sewer Service Charges to recover costs from each customer class and customer

The District's ten-year financial plan (see Section 2) was used to identify the wastewater rate revenue required to meet financial obligations for each fiscal year of the planning period. As presented in Section 2.2 of this report, no rate revenue increase is proposed for FY 2022/23, however an update to the cost-of-service analysis will result in a change to the sewer rates.

Once the annual Sewer Service Charge revenue requirement has been determined, the next step in the rate-setting process is to evaluate the cost of providing service. The COSA is intended to allocate the costs of providing wastewater service to customers in proportion to the extent to which each customer contributes to the utility's incursion of costs. The COSA evaluates the cost of providing wastewater services and allocates those costs to rate structure components to ensure the proposed rates are aligned with the costs to provide service.

3.4.1 CUSTOMER FLOW AND LOADINGS

To develop equitable Sewer Service Charges, the revenue requirement is allocated to various customer classifications according to the services provided and the demands placed on the wastewater system. This Study allocates costs based on estimated wastewater flows and sewage strength. Collection system costs are allocated entirely based on flow, whereas treatment costs are allocated on the basis of both flow and strength.

Sewer Service Charges calculations are based on several factors related to how wastewater customers impact the cost to provide service. The rates are calculated based on the cost to provide service. Costs are allocated to each customer class (residential and non-residential) based on their respective estimated wastewater flows and loadings. "Loading" refers to the quantities of BOD and TSS that are delivered to the WWTP, both of which drive the cost to treat wastewater.

The wastewater flows for the non-residential customers are estimated based on the average of summer and winter water usage as reported by MMWD, while single family and mobile home dwelling units are assumed to produce an average of 8 ccf per month.

Multifamily dwelling units are assumed to produced 7.2 ccf (90 percent of single-family homes)

This study proposes to simplify the list of non-residential customer classes from the current list of 9 types (see Table 2) to three broader categories (Domestic Strength, Elevated Strength, and High Strength). This will simplify the administration of the billing system and make it easier for the District to classify its customers. It is recommended that the District retain the right to categorize non-residential customers at its sole discretion and judgement. Table 3 provides an example of how various commercial enterprises could be classified.

Table 3: Customer Classifications and Example Customer Types

	Domestic	Elevated	High
	Approximate Strength		
BOD	175 mg/L	500 mg/L	900 mg/L
TSS	175 mg/L	500 mg/L	800 mg/L
	Example Customer Types		
Residential	Hotel with food	Restaurants	
Mobile Home	Commercial laundry	Coffee shops	
Retail/office		Café	
Dry industry		Bakery	
Schools/institutions		Market with disposal	
Bar (no food)			
Car wash			
Hotel without food			
Laundromat			
Auto repair			

Strength assumptions for elevated and high strength non-residential customers are based on previous wastewater rate analyses, SWRCB guidelines³ and industry standards (see Table 4).

The flow and loading assumptions for all customer classes have been assessed and updated as needed by this Study. **Table 4** summarizes customer account and water usage data obtained from the utility billing system for FY 2021/22. Table 4 also summarizes the assumed strength characteristics and the resulting estimated loading characteristics for each customer class.

³ Revenue Guidelines, Appendix G, March 1998, SWRCB

Table 4: Customer Account Data and Estimated Flows and Loadings

Customer Class	No. of Accounts ¹	Number of Units	Estimated Annual Sewer Flow ³	BOD Strength ⁴	Annual BOD Loading	TSS Strength ⁴	Annual TSS Loading
			MG	mg/l	lbs	mg/l	lbs
Residential							
Single Family	9,293	9,330 Accounts	667.3	175	973,941	175	973,941
Multi-Family	100	2,446 dwelling units	158.1	175	230,715	175	230,715
Mobile Home	2	715 dwelling units	51.3	175	74,935	175	74,935
Non-Residential							
Domestic Strength	354	2,261 SSUs ²	162.4	175	236,961	175	236,961
Elevated Strength	31	302 SSUs	21.7	500	90,431	500	90,431
High Strength	33	156 SSUs	11.2	900	84,083	800	74,740
Totals	9,813	15,210	1,072.0		1,691,066		1,681,723

Notes:

¹ Customer count based on District billing records.

² Includes schools, which were assigned SSUs based on an ADA of 4,964 students. One (1) SSU is assigned per 100 ADA per historical District practice.

³ Assumes 8 ccf of monthly wastewater production per single family and mobile home dwelling units and 90 percent of that amount per multi-family dwelling unit.

⁴ Assigned for defined customer classes based on SWRCB guidelines.

3.4.2 ALLOCATION OF COSTS

The sum of the rate revenue to be recovered in FY 2023/24 is \$19.035 million (see Schedule 3). Table 5 shows how these revenue requirements have been split between three cost categories (54 percent to flow, 23 percent to BOD and 23 percent to TSS). The allocation of costs to these three categories is consistent with past District practices and is also consistent with the author’s experience with other studies and common industry practices. A more in-depth analysis of the exact proportion of costs associated with flow, BOD treatment and TSS handling is beyond the scope of this study. Once these costs are allocated, unit costs are determined by dividing the cost for each component by the number of system units identified in Table 4.

Table 5: Determination of Unit Costs

Cost Category	Parameter Allocation Percentages¹	Annual Cost Allocated to Each Parameter	Total Annual Quantities²	Unit Cost for Each Parameter
Flow (MG)	54%	\$10,279,062	1,072.0 MG	\$9,588.87 /MG
BOD (lbs)	23%	\$4,378,119	1,691,066 lbs	\$2.59 /lbs
TSS (TSS)	23%	\$4,378,119	1,681,723 lbs	\$2.60 /lbs
Total Annual Rate Revenue Requirement for FY 2023/24:		\$19,035,300		

Notes:

¹ Collection and treatment costs are allocated 54 percent to flow and 23 percent to each strength factor based on the District's historical practices, which are consistent with common industry standards.

² Quantities are derived from Table 4.

In **Table 6** the unit costs from Table 5 are applied to the annual wastewater flows, BOD loadings and TSS loadings associated with residential and non-residential customers to arrive at the allocation of total costs to each customer class.

Table 6: Wastewater Allocation of Annual Costs to Users

No. of Accounts	Customer Class	Usage-Based Costs ¹			Allocation of Total Costs
		Flow Cost = \$9,588.87 /MG	Unit BOD Unit Cost = \$2.59 /lb	TSS Unit Cost = \$2.60 /lb	
Residential					
9,293	Single Family	\$6,398,800	\$2,521,500	\$2,535,500	\$11,455,800
100	Multi-Family	\$1,515,800	\$597,300	\$600,600	\$2,713,700
2	Mobile Home	\$492,300	\$194,000	\$195,100	\$881,400
Non-Residential					
354	Domestic Strength	\$1,556,800	\$613,500	\$616,900	\$2,787,200
31	Elevated Strength	\$207,900	\$234,100	\$235,400	\$677,400
33	High Strength	\$107,400	\$217,700	\$194,600	\$519,700
9,813	Totals:	\$10,279,000	\$4,378,100	\$4,378,100	\$19,035,200

Notes:

¹ Costs are derived by multiplying the units costs (see Table 5) by the estimated sewer flows, BOD loading and TSS loadings for each customer class (see Table 4).

Finally, in Table 7 the Sewer Service Charge rates are calculated by adding the strength-adjusted flow rates, which are derived by dividing the usage-based costs from Table 6 by the estimated wastewater flows for the respective customer classes, which yields an effective usage rate (per ccf).

The total residential annual fixed rate is then calculated by multiplying the effective usage rate by the assumed volume of wastewater per dwelling unit per year (8 ccf per month for single family and mobile homes and 7.2 ccf per month for multifamily dwelling units).

Similarly, the total non-residential annual rate per SSU is calculated by multiplying the effective usage rate by the assumed 8 ccf per month per SSU. It is the District’s policy that all customers pay a minimum of 1 SSU.

Table 7: Wastewater Rate Determination

No. of Accounts	Customer Class	Estimated Annual Sewer Flow (ccf)	Strength Adjusted Flow			Total Effective Usage Rate (\$/ccf)	Annual Fixed Rate per Unit	Annual Revenue
			Flow	Rates (\$/ccf) BOD	TSS			
Residential ¹								
9,293	Single Family	892,128	\$7.17	\$2.83	\$2.84	\$12.841	\$1,233 per DU	\$11,455,800
100	Multi-Family	211,334	\$7.17	\$2.83	\$2.84	\$12.841	\$1,109 per DU	\$2,713,700
2	Mobile Home	68,640	\$7.17	\$2.83	\$2.84	\$12.841	\$1,233 per DU	\$881,400
Non-Residential								
354	Domestic Strength	217,056	\$7.17	\$2.83	\$2.84	\$12.841	\$1,233 per SSU	\$2,787,200
31	Elevated Strength	28,992	\$7.17	\$8.08	\$8.12	\$23.368	\$2,243 per SSU	\$677,500
33	High Strength	14,976	\$7.17	\$14.54	\$12.99	\$34.701	\$3,331 per SSU	\$519,700
9,813	Totals	1,433,126						\$19,035,300

Notes:

¹The residential annual fixed rate is calculated by multiplying the effective usage rate by the assumed volume of wastewater per dwelling per year (8 ccf per month).

3.4.4 PROPOSED RATES

Table 8 summarizes the proposed wastewater rate schedule for the next four years starting on July 1, 2023. The proposed wastewater rates will increase annually in accordance with the percent increases presented in Table 8 (as explained in Section 2.2) to continue to meet service and financial obligations.

Table 8: 4-Year Schedule of Proposed Sewer Service Charges

	Effective Date			
	July 1, 2023	July 1, 2024	July 1, 2025	July 1, 2026
District's rate revenue increase ¹ :	11%	10%	10%	10%
Residential (per dwelling unit per year)				
Single Family	\$1,233	\$1,356	\$1,492	\$1,641
Multi-Family	\$1,109	\$1,220	\$1,342	\$1,476
Mobile Home	\$1,233	\$1,356	\$1,492	\$1,641
Non-Residential (per SSU per year) ²				
Domestic Strength	\$1,233	\$1,356	\$1,492	\$1,641
Elevated Strength	\$2,243	\$2,467	\$2,714	\$2,985
High Strength	\$3,331	\$3,664	\$4,030	\$4,433

Notes:

¹ Actual rate increases may vary by customer class during Year 1 due to updates to cost allocation

² Non-residential accounts are assigned one (1) SSU for every 8 ccf of average water usage during the summer and winter, as reported by Marin Municipal Water District. Each account shall pay a minimum of one (1) SSU.

The proposed wastewater rates reflect the cost of providing wastewater service to customers. In particular, the proposed wastewater rates reflect a proportionate distribution of costs to all customers and customer classes, and better reflect the cost of providing service.

Section 4. CONCLUSION

This Study used methodologies that are aligned with industry standard practices for rate setting as promulgated by WEF, AWWA and all applicable laws, including California’s Proposition 218. The proposed annual adjustments to the rates will allow the District to continue to provide reliable sewer service to customers while meeting the state’s mandates.

The Sewer Service Charges will need to be adopted in accordance with Proposition 218, which will require a detailed notice describing the proposed rates to be mailed to each affected property owner or customer at least 45 days prior to conducting a public hearing to adopt the rates.

SCHEDULES

Schedule 1 - Budgeted and Projected Cash Outflows

Schedule 2 – 5-Year Capital Spending Plan

Schedule 3 - Cash Flow Pro Formas

Budgeted and Projected Cash Outflows (1 of 3)

Schedule 1

	FY2023/24	FY2024/25	FY2025/26	FY2026/27	FY2027/28	FY2028/29	FY2029/30	FY2030/31	FY2031/32	FY2033/34
EMPLOYEE WAGES										
1 Regular Staff Salaries (1901)	\$3,709,000	\$3,821,000	\$3,935,000	\$4,053,000	\$4,175,000	\$4,300,000	\$4,429,000	\$4,562,000	\$4,699,000	\$4,840,000
2 Extra Hire (1005)	\$74,000	\$76,000	\$78,000	\$80,000	\$83,000	\$85,000	\$88,000	\$91,000	\$93,000	\$96,000
3 Over Time (1011)	\$91,000	\$94,000	\$97,000	\$99,000	\$102,000	\$106,000	\$109,000	\$112,000	\$115,000	\$119,000
4 Stand By	\$81,000	\$84,000	\$86,000	\$89,000	\$91,000	\$94,000	\$97,000	\$100,000	\$103,000	\$106,000
5 Emergency Response Stipend	\$58,000	\$59,000	\$61,000	\$63,000	\$65,000	\$67,000	\$69,000	\$71,000	\$73,000	\$75,000
6 Certification Stipend	\$135,000	\$139,000	\$143,000	\$147,000	\$151,000	\$156,000	\$161,000	\$166,000	\$171,000	\$176,000
7 Longevity Pay	\$104,000	\$107,000	\$110,000	\$113,000	\$117,000	\$120,000	\$124,000	\$127,000	\$131,000	\$135,000
8 Directors Fees	\$76,000	\$78,000	\$80,000	\$83,000	\$85,000	\$88,000	\$90,000	\$93,000	\$96,000	\$99,000
EMPLOYEE BENEFITS										
9 Directors Benefits	\$117,000	\$120,000	\$124,000	\$127,000	\$131,000	\$135,000	\$139,000	\$143,000	\$148,000	\$152,000
10 Payroll Taxes (SSI)	\$249,000	\$256,000	\$264,000	\$272,000	\$280,000	\$288,000	\$297,000	\$306,000	\$315,000	\$325,000
11 Group Life Insurance	\$10,000	\$10,000	\$11,000	\$11,000	\$11,000	\$12,000	\$12,000	\$12,000	\$13,000	\$13,000
12 PERS	\$744,000	\$766,000	\$789,000	\$813,000	\$837,000	\$862,000	\$888,000	\$915,000	\$942,000	\$971,000
13 Health Insurance	\$716,000	\$738,000	\$760,000	\$783,000	\$806,000	\$831,000	\$856,000	\$881,000	\$908,000	\$935,000
14 Dental Insurance	\$40,000	\$41,000	\$43,000	\$44,000	\$45,000	\$47,000	\$48,000	\$50,000	\$51,000	\$53,000
15 Vision Insurance	\$4,000	\$4,000	\$4,000	\$4,000	\$4,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
16 Long Term Disability	\$29,000	\$30,000	\$31,000	\$32,000	\$33,000	\$34,000	\$35,000	\$36,000	\$37,000	\$38,000
17 Auto Allowance	\$9,000	\$9,000	\$10,000	\$10,000	\$10,000	\$11,000	\$11,000	\$11,000	\$12,000	\$12,000
INSURANCE										
18 Workers' Comp Insurance	\$143,000	\$147,000	\$152,000	\$156,000	\$161,000	\$166,000	\$171,000	\$176,000	\$181,000	\$187,000
19 Pooled Liability & Property Insurance	\$134,000	\$138,000	\$142,000	\$146,000	\$151,000	\$155,000	\$160,000	\$165,000	\$170,000	\$175,000
20 Fidelity Bond	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
REPAIRS AND MAINTENANCE										
21 Vehicle Parts & Maintenance	\$27,000	\$28,000	\$28,000	\$29,000	\$30,000	\$31,000	\$32,000	\$33,000	\$34,000	\$35,000
22 Building maintenance	\$56,000	\$58,000	\$60,000	\$61,000	\$63,000	\$65,000	\$67,000	\$69,000	\$71,000	\$73,000
23 Grounds Maintenance	\$105,000	\$109,000	\$112,000	\$115,000	\$119,000	\$122,000	\$126,000	\$130,000	\$134,000	\$138,000
24 Reclamation Pasture and Pond Maint.	\$184,000	\$190,000	\$196,000	\$201,000	\$207,000	\$214,000	\$220,000	\$227,000	\$233,000	\$240,000
25 Power Generation Maint & Repair	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
26 Equipment Maintenance	\$54,000	\$56,000	\$58,000	\$59,000	\$61,000	\$63,000	\$65,000	\$67,000	\$69,000	\$71,000
27 Equipment Repair	\$274,000	\$282,000	\$290,000	\$299,000	\$308,000	\$317,000	\$327,000	\$336,000	\$347,000	\$357,000
28 Capital Repairs/Replacements	\$213,000	\$220,000	\$226,000	\$233,000	\$240,000	\$247,000	\$255,000	\$262,000	\$270,000	\$278,000



Budgeted and Projected Cash Outflows (2 of 3)

Schedule 1

	FY2023/24	FY2024/25	FY2025/26	FY2026/27	FY2027/28	FY2028/29	FY2029/30	FY2030/31	FY2031/32	FY2033/34
SUPPLIES & SMALL TOOLS										
29 Hypochlorite	\$266,000	\$274,000	\$283,000	\$291,000	\$300,000	\$309,000	\$318,000	\$328,000	\$337,000	\$348,000
30 Bisulfite	\$44,000	\$46,000	\$47,000	\$49,000	\$50,000	\$52,000	\$53,000	\$55,000	\$56,000	\$58,000
31 Miscellaneous Chemicals	\$45,000	\$46,000	\$48,000	\$49,000	\$51,000	\$52,000	\$54,000	\$56,000	\$57,000	\$59,000
32 General Operating & Lab Supplies	\$51,000	\$53,000	\$54,000	\$56,000	\$58,000	\$59,000	\$61,000	\$63,000	\$65,000	\$67,000
33 Fuel, Oil, and CNG for Vehicles	\$51,000	\$53,000	\$54,000	\$56,000	\$57,000	\$59,000	\$61,000	\$63,000	\$65,000	\$67,000
34 Safety Equipment & Supplies	\$64,000	\$66,000	\$68,000	\$70,000	\$72,000	\$75,000	\$77,000	\$79,000	\$81,000	\$84,000
35 Safety Services	\$58,000	\$60,000	\$62,000	\$64,000	\$66,000	\$68,000	\$70,000	\$72,000	\$74,000	\$76,000
36 Small Tools	\$13,000	\$13,000	\$14,000	\$14,000	\$15,000	\$15,000	\$16,000	\$16,000	\$16,000	\$17,000
CONTRACTED SERVICES										
37 Lab Contract Services	\$39,000	\$41,000	\$42,000	\$43,000	\$44,000	\$46,000	\$47,000	\$48,000	\$50,000	\$51,000
38 Pollution Prevention Program	\$15,000	\$16,000	\$16,000	\$17,000	\$17,000	\$18,000	\$18,000	\$19,000	\$19,000	\$20,000
39 Outside Services	\$140,000	\$144,000	\$148,000	\$153,000	\$157,000	\$162,000	\$167,000	\$172,000	\$177,000	\$182,000
40 Janitorial	\$23,000	\$24,000	\$25,000	\$26,000	\$26,000	\$27,000	\$28,000	\$29,000	\$30,000	\$31,000
41 Uniform Service	\$15,000	\$15,000	\$16,000	\$16,000	\$16,000	\$17,000	\$18,000	\$18,000	\$19,000	\$19,000
42 Sludge Disposal Inject	\$106,000	\$109,000	\$112,000	\$116,000	\$119,000	\$123,000	\$126,000	\$130,000	\$134,000	\$138,000
43 SCADA Engineering Support	\$79,000	\$82,000	\$84,000	\$87,000	\$89,000	\$92,000	\$95,000	\$98,000	\$101,000	\$104,000
44 Regulatory Consultant	\$180,000	\$186,000	\$191,000	\$197,000	\$203,000	\$209,000	\$215,000	\$222,000	\$228,000	\$235,000
45 Engin. Pass-thru & Gen. Small Projects	\$52,000	\$54,000	\$55,000	\$57,000	\$59,000	\$60,000	\$62,000	\$64,000	\$66,000	\$68,000
46 Feasibility Studies	\$68,000	\$70,000	\$72,000	\$74,000	\$77,000	\$79,000	\$81,000	\$84,000	\$86,000	\$89,000
47 Consultants - Other	\$201,000	\$207,000	\$214,000	\$220,000	\$227,000	\$233,000	\$240,000	\$248,000	\$255,000	\$263,000
48 Legal	\$111,000	\$114,000	\$117,000	\$121,000	\$124,000	\$128,000	\$132,000	\$136,000	\$140,000	\$144,000
49 Audit	\$23,000	\$24,000	\$25,000	\$26,000	\$26,000	\$27,000	\$28,000	\$29,000	\$30,000	\$31,000
50 Financial Services	\$2,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000
51 Private Lateral Rehab Assist. Program	\$52,000	\$53,000	\$55,000	\$56,000	\$58,000	\$60,000	\$61,000	\$63,000	\$65,000	\$67,000
52 Low-Income Rate Assistance Program	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000

Budgeted and Projected Cash Outflows (3 of 3)

Schedule 1

	FY2023/24	FY2024/25	FY2025/26	FY2026/27	FY2027/28	FY2028/29	FY2029/30	FY2030/31	FY2031/32	FY2033/34
UTILITIES										
53 Internet	\$9,000	\$9,000	\$9,000	\$9,000	\$10,000	\$10,000	\$10,000	\$11,000	\$11,000	\$11,000
54 Telephone	\$39,000	\$40,000	\$41,000	\$42,000	\$44,000	\$45,000	\$46,000	\$48,000	\$49,000	\$51,000
55 Utility Power	\$731,000	\$753,000	\$776,000	\$799,000	\$823,000	\$847,000	\$873,000	\$899,000	\$926,000	\$954,000
56 Water	\$34,000	\$35,000	\$36,000	\$37,000	\$38,000	\$39,000	\$40,000	\$42,000	\$43,000	\$44,000
GENERAL & ADMINSTRATIVE										
58 Payroll Processing	\$12,000	\$13,000	\$13,000	\$14,000	\$14,000	\$14,000	\$15,000	\$15,000	\$16,000	\$16,000
59 Conferences	\$44,000	\$45,000	\$47,000	\$48,000	\$50,000	\$51,000	\$53,000	\$54,000	\$56,000	\$57,000
60 Mileage and Travel	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000
61 Office Supplies	\$46,000	\$47,000	\$49,000	\$50,000	\$52,000	\$53,000	\$55,000	\$56,000	\$58,000	\$60,000
62 Meeting Supplies	\$4,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$6,000	\$6,000	\$6,000
63 Computer Services and Software	\$100,000	\$103,000	\$106,000	\$109,000	\$113,000	\$116,000	\$120,000	\$123,000	\$127,000	\$131,000
64 Bank Charges	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000
65 User Charge Collection Fee	\$34,000	\$35,000	\$36,000	\$37,000	\$38,000	\$40,000	\$41,000	\$42,000	\$43,000	\$45,000
66 Publication and Legal Ads	\$12,000	\$12,000	\$12,000	\$13,000	\$13,000	\$14,000	\$14,000	\$14,000	\$15,000	\$15,000
67 Public Education and Outreach (1)	\$73,000	\$75,000	\$77,000	\$79,000	\$82,000	\$84,000	\$87,000	\$89,000	\$92,000	\$95,000
68 Taxes, Other	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$3,000
69 Memberships	\$68,000	\$70,000	\$72,000	\$74,000	\$76,000	\$79,000	\$81,000	\$83,000	\$86,000	\$88,000
70 Permits	\$86,000	\$89,000	\$91,000	\$94,000	\$97,000	\$100,000	\$103,000	\$106,000	\$109,000	\$112,000
71 Fines	\$69,000	\$71,000	\$73,000	\$75,000	\$77,000	\$80,000	\$82,000	\$85,000	\$87,000	\$90,000
72 Rents and Leases	\$147,000	\$151,000	\$156,000	\$160,000	\$165,000	\$170,000	\$175,000	\$180,000	\$186,000	\$191,000
73 Employee Recognition (1)	\$8,000	\$8,000	\$8,000	\$9,000	\$9,000	\$9,000	\$9,000	\$10,000	\$10,000	\$10,000
74 Employee Training and Education	\$11,000	\$12,000	\$12,000	\$12,000	\$13,000	\$13,000	\$13,000	\$14,000	\$14,000	\$15,000
75 Miscellaneous expense	\$67,000	\$69,000	\$72,000	\$74,000	\$76,000	\$78,000	\$81,000	\$83,000	\$85,000	\$88,000
76 Existing Debt Service	\$4,221,000	\$4,232,000	\$4,234,000	\$3,504,000	\$3,506,000	\$3,503,000	\$3,506,000	\$3,503,000	\$3,255,000	\$2,993,000
77 Total Operating Expenses	\$14,959,000	\$15,297,000	\$15,630,000	\$15,237,000	\$15,591,000	\$15,954,000	\$16,331,000	\$16,714,000	\$16,859,000	\$17,008,000

Capital Spending Plan (1 of 2)

	FY2023/24	FY2024/25	FY2025/26	FY2026/27	FY2027/28	FY2028/29	FY2029/30	FY2030/31
PLANNING, SOFTWARE, & OTHER ENGINEERING								
1	Integrated Wastewater Master Plan Phase 2 and Phase 3	\$100,000						
2	Biosolids Program Monitoring Research Support& Flood Protection	\$340,000	\$350,200					
3	Asset Management CMMS Centricity (Plant, PS, Rec Phases 2-4)	\$500,000	\$250,000	\$116,600				
4	Sea Level Rise Mitigation Program Planning	\$100,000						
5	Hydraulic Modeling of Collection System	\$75,000	\$77,250	\$79,500	\$81,750	\$84,000	\$86,250	
6	Emergency Bypass Pumping Analysis & Response Plan	\$35,000	\$36,050					
7	On-Call Engineering Contract	\$200,000	\$206,000	\$212,180	\$218,545	\$225,102	\$231,855	\$238,810
8	On-Call Inspection	\$60,000	\$61,800	\$63,600	\$65,400	\$67,200	\$69,000	\$71,070
9	On-Call Construction Contract (2021-2023)	\$250,000	\$257,500	\$265,225	\$273,182	\$281,377	\$289,818	\$298,513
10	Standard Specifications and Drawings Update Project	\$35,000						
11	Accounting Caselle ERP Integration	\$20,000						
12	Website Improvement Design and Implementation	\$25,000						
13	Arc Flash Study	\$10,000						
14	Lab Software LIMS for TNI Standards Reporting	\$45,000						
FLEET & EQUIPMENT AND OTHER EQUIPMENT								
15	Fleet Replacement Vehicles	\$100,000			\$109,000	\$115,000		
16	Utility Collection System Replacement Trucks				\$560,000			
17	Equipment for Collection System Reponse (trailers, hoses)	\$10,000	\$10,300	\$10,609	\$10,927	\$11,255	\$11,593	\$11,593
18	Standby/Towable Generators for Minor Pump Stations	\$281,125						
19	2023 Vac-Con Flusher Truck - clean diesel	\$332,476						
COLLECTION SYSTEM								
20	John Duckett PS & HWY 101 Terra Linda Trunk Sewer Design	\$1,520,368						
21	Electrical System VFD Upgrade & SCADA Integration for (7) PS	\$500,000	\$1,030,000	\$1,060,000				
22	Automatic Transfer Switches for Pump Stations	\$225,000						
23	Pump Station Site Lighting, Safety, & Security Improvements	\$206,877						
24	Annual Site Improvement - Paving, Fencing, Lighting	\$35,000	\$36,050	\$37,100	\$38,150	\$39,200	\$40,250	\$40,250
25	Captains Cove Pump Station Upgrades (2)	\$25,000						
26	Marin Lagoon Pump Stations Upgrades (2)	\$20,000	\$60,000	\$61,800	\$63,654	\$65,564	\$67,531	\$69,557
27	Smith Ranch Pump Station Generator Diesel Conversion				\$109,000	\$560,000		
28	Rafael Meadows Pump Station - Fencing	\$150,000						
29	Force Main Assessment, Install Ports, Cleaning, Location Marking, & Mapping	\$380,000	\$250,000	\$257,500	\$265,225	\$273,182		
30	Smith Ranch Rd Combined Force Main			\$257,500	\$2,650,000			
31	Lower Marinwood TS Capacity Upgrade & Relocation			\$257,500	\$1,590,000			
32	Sewer Main Collection System Rehabilitation Program	\$2,000,000	\$1,030,000	\$1,060,000	\$1,090,000	\$1,122,700	\$1,156,381	\$1,191,072
33	Sewer I&I Reduction Program (annual per SSMP)	\$500,000	\$515,000	\$530,000	\$545,000	\$560,000	\$575,000	\$592,250
34	Manhole Frame & Cover Adjustment Allowance	\$50,000	\$51,500	\$53,000	\$54,500	\$56,000	\$57,500	\$59,225
35	Upper Terra Linda TS & Siphon Improvements		\$500,000	\$4,000,000				
36	Northgate Industrial Park 8" Hwy 101 Undercrossing				\$180,250	\$1,855,000		
37	Mulligan PS & 18" TS and Hwy 101 Undercrossing Capacity Upgrades				\$981,000	\$6,720,000		
38	IWMP Pump Station & Force Main Projects					\$1,700,000	\$5,900,000	\$4,100,000
39	Sea Level Rise Mitigation Construction						\$1,090,000	\$1,120,000

Capital Spending Plan (2 of 2)

RECLAMATION										
40	Reclamation Pump Station Improvements - MCC, Pumps, Wet Well	\$150,000	\$257,500							
41	St. Vincent's Pump Station Improvements					\$100,000	\$257,500	\$530,000		
42	Solar PV System Replacement	\$250,000								
43	Center Pivot No. 1 Replacement	\$25,500								
44	Sludge Lagoon Liner Replacement/Repair	\$75,000	\$77,250	\$79,500						
45	Storage Pond 1 Transfer Pipe Repair					\$100,000				
46	Marsh Pond Vegetation Removal & Long-Term Vegetation Management Plan		\$61,800			\$67,200				
47	Miller Creek Vegetation Maintenance Repair, Maintenance	\$75,000								
48	Levee Road Restoration			\$63,600		\$67,200				
49	Reclamation Levee Capping - SLR mitigation					\$567,500				
50	Biosolids Program Implementation & Construction					\$2,300,000	\$2,300,000	\$2,300,000		
51	Sea Level Rise Mitigation Construction						\$1,090,000	\$1,120,000		
TREATMENT PLANT										
52	Laboratory Building Design (Lab / Education Center / Boardroom)	\$750,000								
53	Operations & Admin Building Design			\$1,200,000						
54	Corporation Yard Design		\$500,000							
55	Primary Clarifier #1 Repair	\$1,000,000								
56	Primary Clarifier Sludge Pump Addition	\$150,000								
57	Treatment Plant Upgrade Phase 2 Design - Primary Clarifiers	\$400,000								
58	Treatment Plant Upgrade Phase 3 Design - Flow Eq, UV, Headworks			\$500,000						
59	Digester Room MCC #2 Upgrade Design & Construction	\$1,400,000								
60	TWAS Enclosure / Sludge Basin and Reception Pad	\$1,400,000								
61	Fueling Station Project (diesel & gas)	\$300,000								
62	Plant Lighting Improvements and Other Electrical Ethan.	\$110,000								
63	Annual Site Improvement - Paving, Fencing, Lighting	\$60,000	\$61,800	\$63,600	\$65,400	\$67,200	\$69,000			
64	Boiler Relocation Project						\$515,000			
65	Vac Truck Recycled Water Filling Station & Wash Rack				\$63,600					
66	Digester Replacement and Solids Improvement Design					\$1,300,000				
67	Sea Level Rise Mitigation Construction						\$1,090,000	\$1,120,000		
FINANCED AND BOND PROJECTS										
68	John Duckett PS & HWY 101 Terra Linda TS Crossing	Debt	\$7,612,500	\$7,612,500						
69	Laboratory Building Construction - (Lab / Education Center / Boardroom) (Financed)	Debt	\$4,000,000	\$3,500,000						
70	Corporation Yard Construction	Debt		\$5,000,000						
71	Operations & Admin Building (Cash)				\$6,000,000					
72	Operations & Admin Building (Financed)	Debt				\$6,500,000				
73	Treatment Plant Upgrade Phase 2 Construction - Primary Clarifiers	Debt	\$7,500,000							
74	Treatment Plant Upgrade Phase 3 Construction - Flow Eq, UV, Headworks	Debt			\$3,975,000	\$3,975,000				
75	Digester Replacement and Solids Improvement Construction	Debt					\$6,540,000	\$6,540,000		
76	Total Capital Spending		\$14,276,346	\$24,792,500	\$26,341,314	\$18,989,583	\$23,997,180	\$14,491,678	\$20,839,840	\$12,937,956

Cash Flow Proforma (1 of 2)

Schedule 3

	Estimate FY 2023	Forecast FY2024	Forecast FY2025	Forecast FY2026	Forecast FY2027	Forecast FY2028	Forecast FY2029	Forecast FY2030	Forecast FY2031	Forecast FY2032	Forecast FY2033	
1	Rate Revenue Increase:		11.0%	10.0%	10.0%	10.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
Rate Revenue												
2	Service Charge Revenue	\$17,102,300	\$17,102,300	\$19,035,000	\$20,997,000	\$23,161,000	\$25,547,000	\$26,902,000	\$28,329,000	\$29,831,000	\$31,414,000	\$33,080,000
3	Change due to growth & use		\$52,000	\$58,000	\$64,000	\$70,000	\$78,000	\$82,000	\$86,000	\$91,000	\$95,000	\$100,000
4	Increase due to rate adjustments		\$1,881,000	\$1,904,000	\$2,100,000	\$2,316,000	\$1,277,000	\$1,345,000	\$1,416,000	\$1,492,000	\$1,571,000	\$1,792,000
Non-Rate Revenues												
5	Tax Revenue	\$1,778,000	\$1,802,000	\$1,827,000	\$1,852,000	\$1,878,000	\$1,904,000	\$1,931,000	\$1,958,000	\$1,986,000	\$2,015,000	\$2,044,000
6	Miscellaneous Fees	\$194,000	\$194,000	\$194,000	\$194,000	\$194,000	\$194,000	\$194,000	\$194,000	\$194,000	\$194,000	\$194,000
7	Interest Earnings	\$303,000	\$104,980	\$84,700	\$94,582	\$84,941	\$69,284	\$61,142	\$69,983	\$63,208	\$64,183	\$58,858
8	Operating Revenue	\$291,000	\$291,000	\$291,000	\$291,000	\$291,000	\$291,000	\$291,000	\$291,000	\$291,000	\$291,000	\$291,000
9	Grants	\$25,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
10	Capital Facility Charges	\$379,000	\$354,000	\$354,000	\$354,000	\$354,000	\$354,000	\$354,000	\$354,000	\$354,000	\$354,000	\$354,000
11	MMWD Capacity Purchase	\$631,000	\$631,000	\$631,000	\$631,000	\$631,000	\$631,000	\$631,000	\$631,000	\$631,000	\$631,000	\$631,000
12	Recycled Water Revenue	\$81,000	\$81,000	\$81,000	\$81,000	\$81,000	\$81,000	\$81,000	\$81,000	\$81,000	\$81,000	\$81,000
13	Total Revenue	\$20,784,300	\$22,493,280	\$24,459,700	\$26,658,582	\$29,060,941	\$30,426,284	\$31,872,142	\$33,409,983	\$35,014,208	\$36,710,183	\$38,625,858
O&M Costs												
14	Wages	\$4,201,000	\$4,327,000	\$4,656,000	\$4,796,000	\$4,940,000	\$5,088,000	\$5,241,000	\$5,398,000	\$5,560,000	\$5,727,000	\$5,899,000
15	Benefits	\$1,863,000	\$1,919,000	\$1,976,000	\$2,036,000	\$2,097,000	\$2,160,000	\$2,224,000	\$2,291,000	\$2,360,000	\$2,431,000	\$2,503,000
16	Insurance	\$270,000	\$278,000	\$286,000	\$295,000	\$304,000	\$313,000	\$322,000	\$332,000	\$342,000	\$352,000	\$363,000
17	Repairs and Maintenance	\$888,000	\$915,000	\$942,000	\$971,000	\$1,000,000	\$1,030,000	\$1,061,000	\$1,093,000	\$1,125,000	\$1,159,000	\$1,194,000
18	Supplies and Small Tools	\$577,000	\$594,000	\$612,000	\$630,000	\$649,000	\$668,000	\$688,000	\$709,000	\$730,000	\$752,000	\$775,000
19	Contracted Services	\$1,076,000	\$1,108,000	\$1,141,000	\$1,176,000	\$1,211,000	\$1,247,000	\$1,285,000	\$1,323,000	\$1,363,000	\$1,404,000	\$1,446,000
20	Utilities	\$788,000	\$812,000	\$837,000	\$862,000	\$887,000	\$914,000	\$942,000	\$970,000	\$999,000	\$1,029,000	\$1,060,000
21	General and Administrative	\$765,000	\$788,000	\$811,000	\$836,000	\$861,000	\$886,000	\$913,000	\$940,000	\$969,000	\$998,000	\$1,028,000
22	Total Operating Expenses	\$10,428,000	\$10,741,000	\$11,261,000	\$11,602,000	\$11,949,000	\$12,306,000	\$12,676,000	\$13,056,000	\$13,448,000	\$13,852,000	\$14,268,000
Capital Costs												
23	Total Capital Spending	\$4,153,000	\$14,276,000	\$24,793,000	\$26,341,000	\$18,990,000	\$23,997,000	\$14,492,000	\$20,840,000	\$12,938,000	\$16,573,000	\$17,070,000
24	Bond Proceeds	\$0	\$0	\$19,113,000	\$16,113,000	\$3,975,000	\$10,475,000	\$6,540,000	\$6,540,000	\$0	\$0	\$0
25	Existing Debt Service	\$4,201,000	\$4,221,000	\$4,232,000	\$4,234,000	\$3,504,000	\$3,506,000	\$3,503,000	\$3,506,000	\$3,503,000	\$3,255,000	\$2,993,000
26	Cash Funded Capital Projects	\$4,153,000	\$14,276,000	\$5,680,000	\$10,229,000	\$15,015,000	\$13,522,000	\$7,952,000	\$14,300,000	\$12,938,000	\$16,573,000	\$17,070,000
27	New Debt Service	\$0	\$0	\$0	\$3,800,000	\$3,800,000	\$3,800,000	\$4,801,000	\$4,801,000	\$4,801,000	\$4,801,000	\$4,801,000
28	Total Capital Expenses	\$8,354,000	\$18,497,000	\$9,912,000	\$18,263,000	\$22,319,000	\$20,828,000	\$16,256,000	\$22,607,000	\$21,242,000	\$24,629,000	\$24,864,000
Transfers In / (Out)												
29	Capital Reserve		\$1,048,500									
30	Vehicle & Equipment Reserve		\$158,300									
31	Capital Facility Reserve	(\$379,000)	(\$354,000)	(\$354,000)	(\$354,000)	(\$354,000)	(\$354,000)	(\$354,000)	(\$354,000)	(\$354,000)	(\$354,000)	(\$354,000)
32	Total Revenue Requirement	\$18,782,000	\$28,031,200	\$21,173,000	\$29,865,000	\$34,268,000	\$33,134,000	\$28,932,000	\$35,663,000	\$34,690,000	\$38,481,000	\$39,132,000



Cash Flow Proforma (2 of 2)

Schedule 3

	Estimate FY2023	Forecast FY2024	Forecast FY2025	Forecast FY2026	Forecast FY2027	Forecast FY2028	Forecast FY2029	Forecast FY2030	Forecast FY2031	Forecast FY2032	Forecast FY2033
33 Beginning Year Balance	\$27,909,000	\$29,532,300	\$23,640,380	\$26,573,080	\$23,012,662	\$17,451,603	\$14,389,887	\$16,976,029	\$14,369,012	\$14,339,220	\$12,214,403
34 Surplus/(Shortfall)	\$1,623,300	(\$5,891,920)	\$2,932,700	(\$3,560,418)	(\$5,561,059)	(\$3,061,716)	\$2,586,142	(\$2,607,017)	(\$29,792)	(\$2,124,817)	(\$860,142)
35 End of Year Balance	\$29,532,300	\$23,640,380	\$26,573,080	\$23,012,662	\$17,451,603	\$14,389,887	\$16,976,029	\$14,369,012	\$14,339,220	\$12,214,403	\$11,354,261
36 <i>Reserve Target</i>	\$8,533,583	\$8,727,833	\$9,037,583	\$11,454,333	\$11,230,917	\$11,440,333	\$12,238,333	\$12,461,750	\$12,688,667	\$12,779,667	\$12,869,500
37 <i>Available Cash</i>	\$20,998,717	\$14,912,547	\$17,535,496	\$11,558,329	\$6,220,686	\$2,949,553	\$4,737,696	\$1,907,262	\$1,650,553	(\$565,264)	(\$1,515,239)
Other Reserves (beginning balance)											
38 <i>Emergency Repair Reserve</i>	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000
39 <i>Capital Reserve</i>	\$2,951,500	\$1,903,000	\$1,903,000	\$1,903,000	\$1,903,000	\$1,903,000	\$1,903,000	\$1,903,000	\$1,903,000	\$1,903,000	\$1,903,000
40 <i>Vehicle & Equipment Reserve</i>	\$841,700	\$683,400	\$683,400	\$683,400	\$683,400	\$683,400	\$683,400	\$683,400	\$683,400	\$683,400	\$683,400
41 <i>Capital Facility Reserve</i>	\$587,700	\$941,700	\$1,295,700	\$1,649,700	\$2,003,700	\$2,357,700	\$2,711,700	\$3,065,700	\$3,419,700	\$3,773,700	\$4,127,700
Debt Coverage Calculations											
42 Debt Coverage Ratio	2.47	2.78	3.12	1.87	2.34	2.48	2.31	2.45	2.60	2.84	3.13