Rohnert Park

2024 Sewer Rate Study

Final Report

July 17, 2024

HILDEBRAND CONSULTING

July 17, 2024

Betsy Howze, Interim Finance Director
City of Rohnert Park
130 Avram Avenue
Rohnert Park, CA 94928-3126

Re: 2024 Sewer Rate Study

Dear Ms. Howze,

Hildebrand Consulting is pleased to present this 2024 Sewer Rate Study (Study) that we performed for the City of Rohnert Park (City). We appreciate the fine assistance provided by you and all of the members of the City staff who participated in the Study.

If you or others at the City 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 City 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
ESFD	equivalent single-family dwellings
FY	Fiscal year (which ends on June 30 for the City)
gpm	gallons per minute
I&I	inflow and infiltration
mg/l	milligrams per liter
O&M	operations and maintenance
Pay-Go	refers to cash financing capital projects (as opposed to debt)
PFFF	Public Facilities Financing Fund
TGAL	thousand gallons
TSS	total suspended solids
SSU	Sonoma State University
SWRCB	State Water Resources Control Board
WEF	Water Environment Federation
WWTP	wastewater treatment plant

Section 1. INTRODUCTION

Hildebrand Consulting, LLC was retained by the City of Rohnert Park (City) 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 SEWER UTILITY BACKGROUND

The City's sewer system has two primary functions: (1) collect the City's wastewater and (2) transport it for treatment to the Santa Rosa Subregional Water Reclamation System of Santa Rosa. The City's sanitary sewer system facilities include 100 miles of gravity sewers, 7.5 miles of sewer force mains, 16 inverted siphons, and three pump stations. The majority of facilities were installed between 1965 and 1980. The diameter of the collection system's underground network of pipes ranges from six to forty-two inches.

1.2 RATE STUDY BACKGROUND

The City's last sewer rate study was conducted by The Reed Group in 2018. While the public hearing process that was followed in 2018 gave the City the authority to raise rates for five (5) years (every June through 2022), the City stopped implementing rate increases in June of 2020. This means that the City has the authority to charge sewer rates that are higher than the current rates (as presented in the 2018 218 Notification Letter).

The purpose of this Study is to update the City'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 City Council 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 five years (fiscal year 2024/25 through FY 2028/29). 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.

1.3 SCOPE & OBJECTIVES OF STUDY

The scope of this Study was to prepare a multi-year financial plan, update the COSA, review the City's existing sewer rate structure, and propose a 5-year rate schedule. The primary objectives of this Study were to:

i. Develop a multi-year financial management plan that integrates the City's operational and capital project funding needs

ii. Propose annual rate adjustments to the sewer rates that will ensure adequate revenues to meet the sewer enterprise's ongoing service and financial obligations

iii. Determine the cost of providing sewer service to the City's customers using equitable and industry-accepted methodologies

iv. Recommend specific modifications to the City's existing rate structure in order to ensure that the City 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 City'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 2024/25 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 City Council and a Public Hearing to adopt the rates has been scheduled for the Summer of 2024.

Section 2. FINANCIAL PLAN

This Study's 10-year financial plan was developed through interactive work sessions with City staff. As a result of this process, the Study has produced a robust financial plan that will allow the City 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 City's customers are all paying fair and equitable amounts for services provided.

2.1 FINANCIAL DATA & ASSUMPTIONS

The City 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. City 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 FUND STRUCTURE & BEGINNING FUND BALANCES

The financial plan is an annual cash flow model. As a cash flow model, it differs from standard accounting income statements, and balance sheets. The financial plan models sources and uses of funds into, out of, and between the various funds and reserves of the sewer utility.

An understanding of the fund structure is helpful in understanding the financial plan worksheets that model estimated annual cash flows through the sewer utility from one year to the next. The fund/reserve structure is comprised of:

Sewer Operating Fund (3420) – The Operating Fund is the primary fund within the sewer utility. Most of the sewer system's revenues, including sewer rate revenues, flow

into the Operating Fund and all operating and maintenance costs, including subregional treatment costs, are paid out of this fund. Funds are also transferred from the Operating Fund to the Sewer CIP Fund to help pay for capital projects intended to rehabilitate and upgrade facilities, as well as to the Debt Service Fund for debt service payment.

Sewer CIP Fund (7420) – The CIP Fund is used to account for revenues and funds available for capital project expenditures. Capital projects funded from this fund are intended to preserve (rehabilitate and upgrade) the sewer system, rather than expand the sewer system to serve new growth. The financial plan model generally seeks to maintain a positive balance in the Capital Fund while also covering the varying costs of planned annual preservation project expenditures. This is achieved through an annual transfer of funds from the Operating Fund to the CIP Fund (as needed) in support of the capital improvement program.

Capital Preservation Fund (3425) – This fund was created to receive funds from the "capital preservation charge" (adopted as part of the 2018 Sewer Rate Study) which was designed to ensure adequate long-term funding of the capital program and the rehabilitation and upgrade of the sewer system. Based conversations with City staff, this Study recommends that the capital preservation charge be combined with the Sewer Base Charge to make single fixed charge (see Section 3.3) and by extension the Capital Preservation Fund be eliminated (i.e., combined with the Operating Fund). The existence of the Capital Preservation Fund does not serve a vital purpose given the overlap with the purpose of the Sewer CIP Fund.

Public Facilities Financing Fund (4250) – The City's Public Facilities Financing Fund (PFFF) is used to account for capacity fees and other revenues from new development that help cover the costs of expanding capacity in the sewer system, including subregional treatment capacity, for the benefit of new development. Those revenues, and the use of those revenues, are not reflected in the sewer financial plan model.

Likewise, the costs of expanding sewer system capacity for the benefit of new development are also excluded from the financial plan model.

The City's combined sewer funds beginning cash (and cash equivalents) fund balance for the beginning of FY 2023/24 was $21,803,000.

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 City reserve practices 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 Reserve*** – The City maintains an Operating Reserve equal to 50 percent of annual operating and maintenance costs, including debt service when applicable, for the sewer system. The purpose of the Operating Reserve is to provide working capital and funds for unplanned operating and maintenance expenditures. The reserve target for FY 2023/24 was about $8.04 million.
- **Rate Stabilization Reserve** – The City also maintains Rate Stabilization Reserve of $1.5 million within the Operating Fund (as permitted under the terms of the 2017 Sewer System Revenue Refunding Bonds). This reserve bolsters financial stability

and can be drawn upon to smooth annual rate adjustments or for emergency purposes and would reduce the utility's financial risk.

The Operating Reserve and Rate Stabilization Reserve are both targets that are sometimes met and other times not met. In addition to these targets, this Study proposes to introduce the concept of a minimum reserve level, which is a combined fund balance level that the sewer funds should never plan to drop below. For the purposes of this Study, we propose a minimum fund balance equal to 4 months of operating costs (or about $5.3 million in FY 2023/24).

2.1.3 CUSTOMER GROWTH

Consistent with the assumptions used as part of the 2021 Water Rate Study (which included conversations with the City's Development Department), this Study assumes that growth in Rohnert Park will average about 1 percent over the next 10 years.

2.1.4 RATE REVENUES

Rate revenue is the revenue generated from customers for sewer service. The City collects rate revenue on a monthly basis (until recently it was collected on a bi-monthly basis) from sewer customers in the form of a fixed "Base Charge" and "Capital Preservation Charge" (both assessed based on meter size) and a "Flow Charge" applied to estimate indoor water use (measured in thousands of gallons or "TGAL").

The City also has formal service agreements with two large customers (Sonoma State University (SSU) and Graton Casino. The City charges these two entities "contract rates", which are tailored to the needs of those two unusually large customers. The rates are consistent with the rates charged to the City's other customers, while also accounting for the additional costs associated with their size and location (outside of City limits).

This Study's financial plan proposes annual rate revenue adjustments that will meet the City's revenue requirements. The Financial Plan starts with calculated expected rate

revenue levels for FY 2024/25 based on the current number of accounts and water usage (detailed in Section 3.2). The rate revenues for FY 2023/24 are expected to be similar to the revenues from the previous year (FY 2022/23) since no rate increases have been implemented since June 2020 (see Section 1.2).

The impact of the recently ended drought on indoor water usage is not yet understood therefore no changes in water usage behavior has been assumed for this year nor future years. As such, estimated future indoor water demand and rate revenues include the small amount of customer growth (see Section 2.1.3) as well as the annual rate revenue adjustments proposed by this Study but no changes in water usage behavior. Budgeted and projected rate revenues (including proposed rate adjustments) are listed in **Schedule 3**.

2.1.5 NON-RATE REVENUES

In addition to rate revenue, the City receives additional "non-rate revenue" from sources such as operating revenue (i.e., miscellaneous service fees and penalties), and interest revenue on investments. Projections of all non-rate revenues were based on FY 2023/24 budgeted revenues, as directed by City staff, with the exception of interest income which was calculated annually based upon projected fund balances and an assumed interest rate of 0.97%. While sewer capacity charges collected from developers are related to the sewer system, that revenue goes to the City's Public Facilities Financing Fund (PFFF) and used to pay for expansion-related capital projects. Projecting those revenues is outside of the scope of this study. Forecasted non-rate revenues are listed in **Schedule 3**.

Figure 1 below depicts the relative amount of Sewer Enterprise revenues for FY 2022/23.

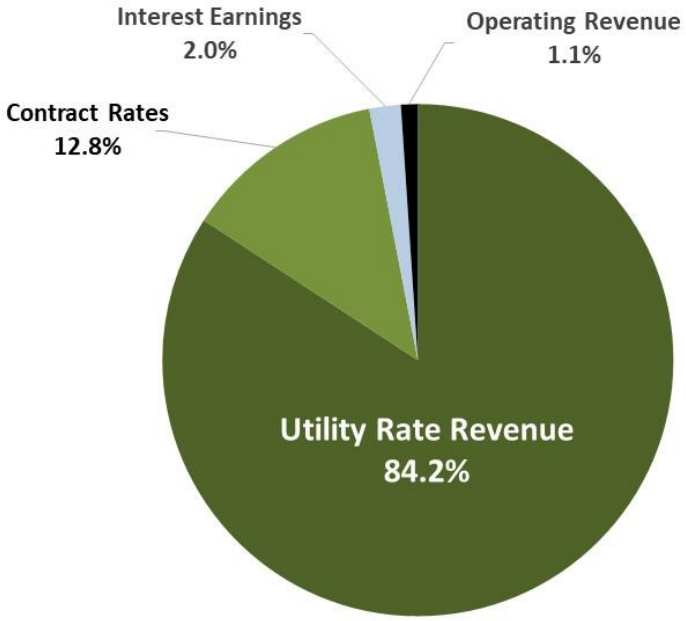


Figure 1: FY 2022/23 Actual Revenues by Category

2.1.6 OPERATION AND MAINTENANCE EXPENSES AND EXISTING DEBT SERVICE

For the purpose of this Study, the sewer enterprise's operating and maintenance expenses include all ongoing collection, transmission, Subregional, and administrative expenses and debt service payments. The financial plans' assumed annual operating and maintenance costs are based on the FY 2023/24 budget and are adjusted for future years based on inflation (see Section 2.1.7). The sewer enterprise currently has one outstanding bond loan. The annual debt service is about $700 thousand in FY 2024/25 and will remain at that level until 2036 when the bond will be defeased.

Debt service coverage is a measure of how easily an entity is able to afford its outstanding debt. The covenants of the current bond require that the sewer enterprise maintain 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 City currently has an estimated DCR of 1.07 (see Schedule 3). The proposed

rate increases will have an immediate affect by increasing the DCR to above 2.45 starting in FY 2024/25.

Budgeted expenses for FY 2023/24 are depicted by cost category in **Figure 2**, which shows that the Subregional payment (which includes operating costs, debt service and capital expenses) is easily the sewer enterprise's largest single expense. Budgeted and projected operating and debt expenses are listed in detail in **Schedule 1**. Capital program expenses are discussed in Section 2.1.8.

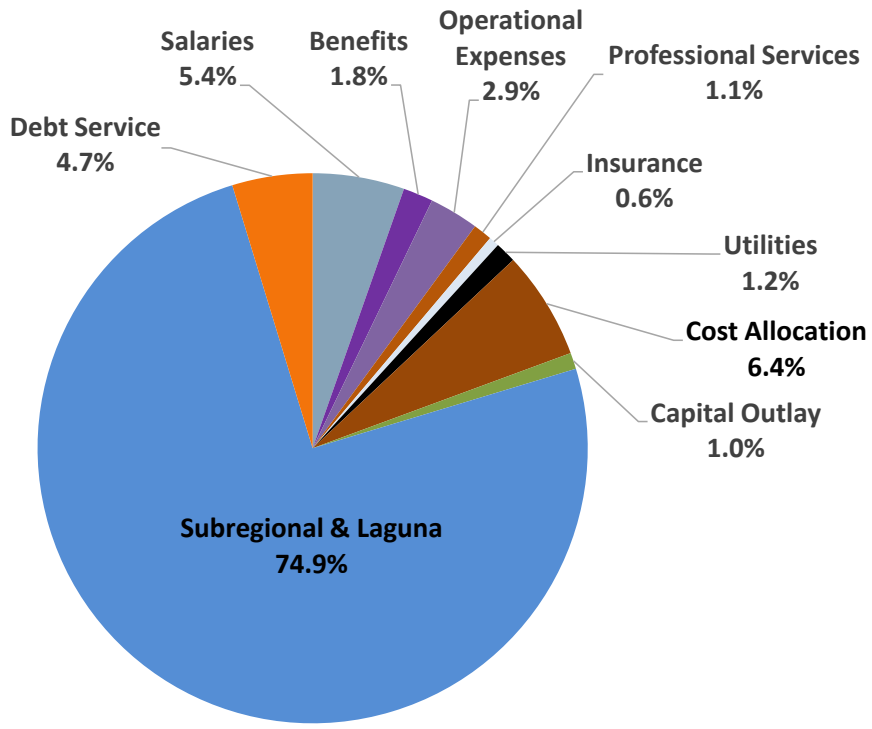


Figure 2: FY 2022/23 Actual Expenses by Category

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 City staff. The following escalation assumptions were made for the projection period:

- 4 percent per year for salaries and benefits
- 5 percent per year for utilities and insurance
- Subregional expenses have been forecasted based on information provided by the City of Santa Rosa and range between 2.2 percent to 5.5 percent per year. While recent information has unofficially suggested that these cost increases may be significantly higher, we do not have sufficient information at this time to assume larger increases. In the future, the City may wish to consider a pass-through provision for Subregional costs given the magnitude of those costs on the Sewer Fund.
- 3 percent per year for all other costs

2.1.8 CAPITAL IMPROVEMENT PROGRAM AND DEBT STRATEGY

Figure 3 shows that from FY 2020/21 to FY 2022/23 the City averaged $1.3 million in cash financed ("Pay-Go") capital spending. Over the next five years (between FY 2023/24 and FY 2027/28), the City is planning to spend an average of $3.6 million per year (not including inflation). The City's capital spending program is designed to pro-actively address sewer system rehabilitation needs associated with aging pipes and other system deficiencies. Many of these efforts will help address inflow and infiltration (I&I) issues which drive up costs at the Subregional plant. A detailed list of capital projects and associated costs over the next 9 years is provided in **Schedule 2.** Annual capital spending in FY 2032/33 and FY 2033/34 was assumed to be $3 million (in today's dollars).

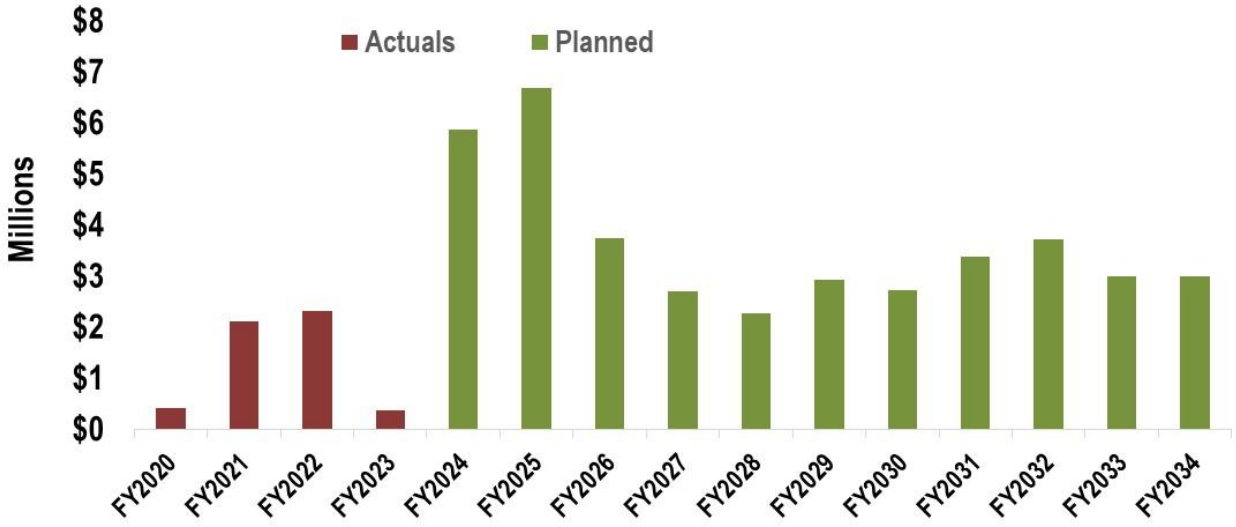
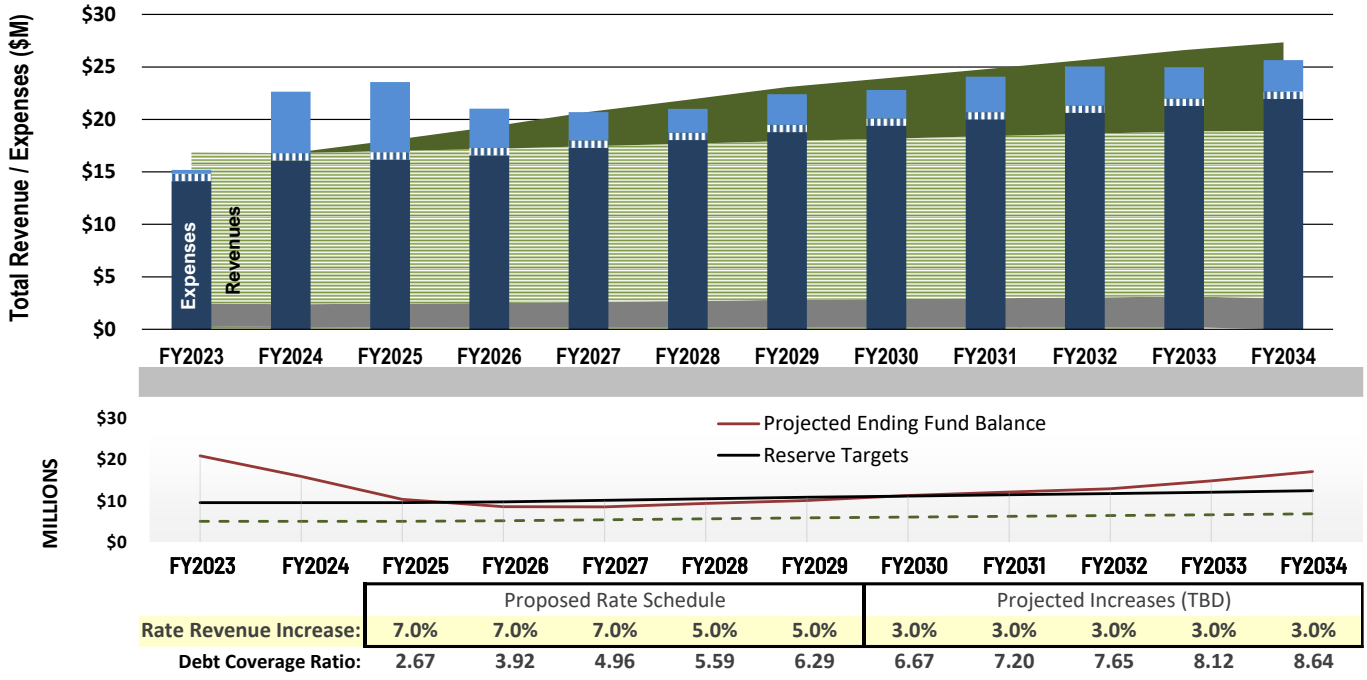


Figure 3: Historical and Projected Capital Spending

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 5-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.



	Proposed Rate Schedule					Projected Increases (TBD)				
Rate Revenue Increase:	7.0%	7.0%	7.0%	5.0%	5.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Debt Coverage Ratio:	2.67	3.92	4.96	5.59	6.29	6.67	7.20	7.65	8.12	8.64

Figure 4: Cash Flow Projection with Proposed Rate Revenue Increases

Note that the actual rate increases in Year 1 (FY 2024/25) 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 are a result of calibrating cost responsibilities among the City'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 (Years 2, 3, 4, and 5) being the same for all customers. The COSA findings, and resultant impact to the City's customers, is explained in more detail in Section 3.

Section 3. COST-OF-SERVICE ANALYSIS & RATE STRUCTURE

This section of the report explains the COSA and design of sewer rates intended to meet the City's financial obligations for FY 2024/25 and beyond. Proposed sewer rates are intended to meet the utility's financial needs, satisfy legal requirements, and achieve other rate-setting objectives. The sewer rate analyses and related recommendations address each of the following:

- Identification of 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 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 rates must generate sufficient revenue to meet the utility's service and financial obligations, and (2) sewer rates 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 rates should be viewed as fair and equitable by the public
- Sewer rates should be simple, understandable, and easy to administer
- Sewer rates should strike an appropriate balance between fixed and usage-based charges, with consideration of:
  - Revenue stability

- Affordability for basic usage

3.2 CURRENT SEWER RATES

The City's current sewer rates were last increased in June 2020 and are presented in Table 1.

The structure for the City's current sewer rates follows a common industry practice with a two-part structure that is comprised of a fixed component and a consumption-based "Flow Charge". The fixed charge has two components: a Base Charge and a Capital Preservation Charge, both of which are charged based on the individual account's meter size. Together the fixed charges currently recover approximately 28 percent of total rate revenue. The flow charge for non-residential customers is assessed based on actual monthly water usage. The flow charge for residential customers is based on the lesser of (1) the previous average winter water usage or (2) the actual water usage for that month.

The current sewer rate schedule is summarized in **Table 1**. Bills are sent to customers every month (historically the City has sent bills on a bimonthly basis).

Table 1: Current Sewer Rates

Flow Charges			
Residential			
All residential	$0.01177 per gallon		
Non-Residential			
Low Strength	$0.01233 per gallon		
Medium Strength	$0.01675 per gallon		
High Strength	$0.02554 per gallon		
Fixed Monthly Charges	**Base Charge**	**Capital Preservation Charge**	**Total**
Single Family Account	$10.31	$6.00	$16.31
Non-Residential & Multi-Family			
Up to 3/4"	$31.24	$15.00	$46.24
1" meter	$47.63	$25.00	$72.63
1.5" meter	$88.20	$50.00	$138.20
2" meter	$137.09	$80.00	$217.09
3" meter	$251.25	$160.00	$411.25
4" meter	$414.31	$250.00	$664.31
6" meter	$821.55	$500.00	$1,321.55
8" meter	$1,310.46	$800.00	$2,110.46

3.3 PROPOSED RATE STRUCTURE MODIFICATIONS

The City's current rate structure and cost of service methodology is generally consistent with established and common industry practices. Given that the two fixed charges (the Base Charge and the Capital Preservation Charge) are both assessed based on the size of each account's meter, this study proposes to combine the two charges into a single Service Charge. This will simplify customer bills. This same recommendation was accepted as part of the City's 2021 Water Rate Study. All rate revenue collected by the City will first be deposited in Fund 3420, and then will be transferred to Fund 7420 to fund capital preservation project as needed.

Combining the two fixed charges will simplify customer bills and simplify the City's accounting processes. We understand that recent audits of the City's books have recommended the elimination of unnecessary funds, such as the Capital Preservation Fund.

The only additional proposed modifications are to update the cost-of-service calculations, as described in Section 3.4.

3.4 WASTEWATER COST-OF-SERVICE ANALYSIS

There are three steps to determining sewer rates. These are:

- Determine annual sewer rate revenue requirements
- Analyze the cost of providing service and proportionately allocate costs to each customer class and customer
- Design sewer rates to recover costs from each customer class and customer

The sewer enterprise's ten-year financial plan (see Section 2) was used to identify the sewer rate revenue required to meet financial obligations for each fiscal year of the planning period.

Once the annual sewer rate 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 rates, 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. Sewer rate 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, loadings, and number of accounts. "Loading" refers to the quantities of biochemical demand (BOD) and total suspended solids (TSS) that are delivered to the Santa Rosa Laguna Wastewater Treatment Plan (WWTP), both of which drive the cost to treat wastewater.

Strength assumptions for each customer class are based on the City's historical practices, which are consistent with State Water Resources Control Board (SWRCB) guidelines[1] and industry standards. This study assumes that residential sewage has a strength of 175 mg/L of BOD and 175 mg/L of TSS. The assumed strength characteristics of various commercial enterprises is provided in Table 2.

[1] Revenue Guidelines, Appendix G, March 1998, SWRCB

Table 2: Customer Classifications by Sewer Strength and Customer Types

	Low Strength	Medium Strength	High Strength
BOD	200 mg/L	400 mg/L	1000 mg/L
TSS	200 mg/L	400 mg/L	600 mg/L
	Bar without food	Auto repair facilities	Bakery
	Beauty Salon	Auto service stations	Bar with food
	Car wash	Commercial laundry	Grocery w/ bakery, butcher, or food waste grinder
	Church	Hotel/motel w/ restaurant	
	Convalescent home	Mixed use, incl. restaurants	Mortuary
	Dry cleaners	Restaurant w/ grease interceptor	Restaurant w/o grease interceptor
	Health club/spa	Retail with food services	
	Hospital		
	Hotel/motel w/o restaurant		
	Laundromat		
	Manufacturing w/o process disch.		
	Office building		
	Public/municipal building		
	Retail stores		
	Schools		

Table 3 summarizes the count of meters and estimated wastewater usage data by customer class obtained from the utility billing system for FY 2021/22. As previously explained, the wastewater flow for non-residential customers is based on actual monthly water usage while residential customer flows are (generally) based on average winter water usage. This table also converts the meter count into "equivalent single-family dwelling" by measuring the relative peak flow capacity ("hydraulic capacity factor") of each meter relative to the flow capacity of a typical single-family meters (which is a ¾" meter). As shown on Row 6 of Table 4, the ¾" meter size (and all single-family accounts) is assigned a hydraulic capacity factor of 1.0 and the larger meters are assigned a larger factor based on their respective peak capacity (measured in gallons per minute (gpm)). The hydraulic capacity factor is used for calculating ESFDs, which is used when calculating the relative difference in fixed monthly service charges for different meter sizes.

Table 4 summarizes the assumed strength characteristics and the resulting estimated loading characteristics for each customer class. This Study uses the same customer class strength assumptions as the 2018 Sewer Rate Study, which are consistent with industry norms.

Table 3: Customer Class Metrics (meter count, ESFDs and estimated wastewater)

	Number of Accounts									**Totals**	**Estimated Wastewater (TGAL)**
1	Single Family Residential	9,518								**9,518**	384,300
		3/4"	**1"**	**1.5"**	**2"**	**3"**	**4"**	**6"**	**8"**		
2	Multi-Family and Mobile Home	5	160	39	52	18	17	39	1	**331**	315,000
3	Non-Residential Low Strength	22	194	67	76	10	16	2	1	**388**	92,300
	Non-Residential Medium Strength	3	29	22	24	2		1		**81**	43,300
	Non-Residential High Strength		4	4	6			1		**15**	7,100
4	**Total Accounts**	**9,548**	**387**	**132**	**158**	**30**	**33**	**43**	**2**	**10,333**	**842,000**
5	Meter Rating (gpm) [1]	30	50	100	160	300	500	1,000	1,600		
6	Hydraulic Capacity Factor	1.00	1.67	3.33	5.33	10.00	16.67	33.33	53.33		
7	**Equivalent Single Family Dwellings:**	**9,548**	**646**	**440**	**842**	**300**	**550**	**1,433**	**107**	**13,866**	

[1] AWWA M1 Manual, 7th Edition, Table B-2

Table 4: Customer Class Estimated Flows and Loadings

	Customer Class	No. of Accounts [1]	No. of ESFDs [2]	Estimated Annual Sewer Flow [3]	Estimated Annual Sewer Flow	BOD Strength [4]	Annual BOD Loading	TSS Strength [4]	Annual TSS Loading
1				1,000 Gal.	MG	mg/L	lbs	mg/L	lbs
	Single Family Residential								
2	Single Family	9,518	9,518	384,300	384.3	175	560,886	175	560,886
	Multi-Family and Non-Residential								
3	Multi-Family	331	2,496	315,000	315	175	459,743	175	459,743
4	Low Strength	388	1,461	92,300	92.3	200	153,956	200	153,956
5	Medium Strength	81	306	43,300	43.3	400	144,449	400	144,449
6	High Strength	15	85	7,100	7.1	1000	59,214	600	35,528
7	**Totals**	**10,333**	**13,866**	**842,000**	**842**		**1,378,248**		**1,354,562**

Notes:

[1] Based on data from City's utility billing system from FY 2021/22.

[2] Equivalent single family dwelling units (ESFDs) are based on meter capacity for multi-family and non-residential accounts.

[3] Based on lesser of average winter water use or actual monthly use for residential accounts, and total annual water use for non-residential accounts.

[4] Assigned for defined customer classes based on compiled industry data, SWRCB guidelines and historical City practices.

3.4.2 ALLOCATION OF COSTS

The sum of the rate revenue to be recovered from existing customers in FY 2024/25 is $15.412 million (see Row 9 of **Table 5**, which derived from the sum of Rows 2 and 4 of Schedule 3). The cost-of-service analysis does not include the City's two contract customers (SSU and Graton Casino) since those rates were calculated separately and those revenues are collected separately. Table 5 shows how the revenue requirement has been split between the City's collection system costs (37.1 percent) and the Subregional treatment costs (62.9 percent). These percentages were calculated based on the budgeted operational costs during the test year (FY 2024/25) as well as the average annual capital spending and debt over the past two years ($3.8 million). An average value was used for capital spending because of the volatile nature of capital expenses.

The collection system costs are then further split into "revenue recovery" categories based on how those costs will be recovered through sewer rates. In keeping with historical City practices, and consistent with industry standards, the sewer rates will recover 16.1 percent of the collection system costs through variable rates (which are charged based on estimated indoor water flow). This percentage is based on the percentage of operating costs that are variable in nature, such as utilities, maintenance and minor capital. The remaining 83.9 percent of collection system costs will be recovered through fixed rates (charged based on meter size). All collection costs are allocated to the respective customers classes based on total annual estimated wastewater flows.

The Subregional treatment costs are split into four rate categories: 45 percent will be recovered through fixed rates (charged based on meter size). This percentage is based on the percentage of Subregional costs that are incurred by the City based on its assigned capacity at the Laguna WWTP (which is a fixed value). The remaining 55 percent of treatment costs will be recovered through flow and strength-based charges: 30 percent based on estimated wastewater flows, 35 percent through a BOD loading charge, and 35 percent through a TSS loading charge (see Rows 7 through 9 of Table 5).

The allocation of costs to these categories is consistent with past City practices and is also consistent with the author's experience with other studies and common industry practices. Once the costs have been allocated to each revenue recovery category, a unit cost for each is calculated by dividing the cost by the number of total system units, as shown in the last column of Table 5.

Table 5: Determination of Unit Costs

	Cost Category	Cost Allocation Method	Allocation Percentage	Allocated Cost	Total Annual System Quantities	Unit Costs
1	***City Collection Costs***		**37.1%**			
2	Variable Costs	Annual Flows (gal.)	100.0%	$5,717,852	842.0 MG	$6,790.80 /MG
5	***Subregional Treatment Costs***		**62.9%**			
6	Fixed Treatment Costs	Annual Flows (gal.)	45.0%	$4,362,367	842.0 MG	$5,180.96 /MG
7	Variable Flow Costs	Annual Flows (gal.)	16.5%	$1,599,534	842.0 MG	$1,899.68 /MG
8	Variable BOD Costs	Pounds of BOD	19.3%	$1,866,123	1,378,248 lbs	$1.3540 /lbs
9	Variable TSS Costs	Pounds of TSS	19.3%	$1,866,123	1,354,562 lbs	$1.3777 /lbs
10	**Total Overall Annual Revenue Requirement for FY 2023/24:**			**$15,412,000**		

In **Table 6**, the unit costs (as calculated in Table 5) are applied to the total annual wastewater flows, BOD loadings and TSS loadings associated with each customer class to arrive at an allocation of total costs to each customer class.

Table 6: Wastewater Allocation of Annual Costs to Users

			Customer Class Allocation Basis [1]				
1			**$5,180.96 / MG**	**$8,690.48 / MG**	**$1.3540 / lb.**	**$1.3777 / lb.**	
			Rate Basis				
	Number of Accounts	**Customer Class**	Fixed Rate (per ESFD)	Flow-Based Rate (per TGAL)	Strength-Based Rate (TSS)	Strength-Based Rate (BOD)	**Total Allocation**
	Single Family Residential						
2	9,518	Single Family	$1,991,000	$3,339,800	$759,400	$772,700	**$6,862,900**
	Multi-Family and Non-Residential						
3	331	Multi-Family	$1,632,000	$2,737,500	$622,500	$633,400	**$5,625,400**
4	388	Low Strength	$478,200	$802,100	$208,500	$212,100	**$1,700,900**
5	81	Medium Strength	$224,300	$376,300	$195,600	$199,000	**$995,200**
6	15	High Strength	$36,800	$61,700	$80,200	$48,900	**$227,600**
7	**10,333**	**Totals: [2]**	**$4,362,300**	**$7,317,400**	**$1,866,200**	**$1,866,100**	**$15,412,000**

Footnotes:

[1] Unit costs at the top of each column, and obtained from the previous table, are multiplied by the estimated sewer flow, number of accounts, BOD loading, or TSS loading for each customer class.

[2] Some minor discrepancies may appear in the Totals due to rounding.

Table 7 and **Table 8** show the calculated sewer rates for FY 2024/25. The monthly service charges are calculated by dividing the fixed rate costs for the respective customer classes in Table 6 by the number of ESFDs in those customer classes. For example, the fixed rate costs for Single Family accounts in **Table 6** ($1.99 million) are divided by the number of Single Family ESFD (9,518) which yields a service charge of $17.43 per month per account. Note that the fixed rate costs for all non-single-family customers are grouped together and divided by the total number of ESFDs for those customers (4,348). This yields a monthly service charge of $45.45 for a ¾" meters as shown in **Table 8**. The monthly service charge for larger meters is calculated by multiplying the ¾" meter rate by the respective hydraulic capacity factor of the larger meters (see Row 6 of

Table 3).

The strength-adjusted usage rates are calculated by dividing the usage-based costs in Table 6 by the estimated wastewater flows for the respective customer classes, which yields an effective usage rate (per gallon). For example, usage-based costs for Single Family accounts in **Table 6** ($3.34 million, $759 thousand, and $772 thousand for a total of $4.87 million) are divided by annual estimated Single Family wastewater flows (384,300 TGALs) which yields a rate of $0.01268 per gallon.

Table 7: Wastewater Rate Determination

	Number of ESFDs	Customer Class	Estimated Annual Sewer Flow	BOD Strength	TSS Strength	Monthly Fixed Service Charge	Flow Charge	Fixed Charge Revenue	Usage Charge Revenue	Total Annual Revenue
			TGAL	mg/L	mg/L	$/Account	$/gal.			
	Single Family Residential									
1	9,518	Single Family	384,300	175	175	**$17.43**	**$0.01268**	$1,990,800	$4,872,900	$6,863,700
	Multi-Family and Non-Residential									
2	2,496	Multi-Family	315,000	175	175	See Table 8 Below	**$0.01268**	$1,632,000	$3,993,400	$5,625,400
3	1,461	Low Strength	92,300	200	200		**$0.01325**	$478,200	$1,222,700	$1,700,900
4	306	Medium Strength	43,300	400	400		**$0.01780**	$224,300	$770,900	$995,200
5	85	High Strength	7,100	1000	600		**$0.02688**	$36,800	$190,800	$227,600
6	13,866	**Totals:** [1]	842,000					**$4,362,100**	**$11,050,700**	**$15,412,800**

[1] Some minor discrepancies may appear in the Totals due to rounding.

Table 8: Fixed Monthly Service Charges

Single Family (per account)	$17.43
3/4" meter	$45.45
1" meter	$75.75
1 1/2" meter	$151.50
2" meter	$242.40
3" meter	$454.50
4" meter	$757.50
6" meter	$1,515.00
8" meter	$2,424.00

3.4.4 PROPOSED RATES

Table 9 summarizes the proposed wastewater rate schedule for the next five years starting on July 1, 2024. The proposed wastewater rates will increase annually in accordance with the percent increases presented in Table 9 (as explained in Section 2.2) to continue to meet service and financial obligations.

Table 9: 5-Year Schedule of Proposed Sewer Rates

	Effective Date				
	Oct 1, 2024 [1]	July 1, 2025	July 1, 2026	July 1, 2027	July 1, 2028
Flow Charges ($ per gallon)					
Residential					
All residential [2]	$0.01268	$0.01357	$0.01452	$0.01525	$0.01601
Non-Residential					
Low Strength	$0.01325	$0.01418	$0.01517	$0.01593	$0.01673
Medium Strength	$0.01780	$0.01905	$0.02038	$0.02140	$0.02247
High Strength	$0.02688	$0.02876	$0.03077	$0.03231	$0.03393
Fixed Monthly Service Charges[2]					
Single Family Account	$17.43	$18.65	$19.96	$20.95	$22.00
SF Sewer Only Flat Rate	$60.09	$64.31	$68.81	$72.26	$75.87
Non-Residential & Multi-Family					
Up to 3/4"	$45.45	$48.63	$52.04	$54.64	$57.37
1" meter	$75.75	$81.05	$86.73	$91.06	$95.62
1.5" meter	$151.50	$162.11	$173.45	$182.12	$191.23
2" meter	$242.40	$259.37	$277.52	$291.40	$305.97
3" meter	$454.50	$486.32	$520.36	$546.37	$573.69
4" meter	$757.50	$810.53	$867.26	$910.62	$956.16
6" meter	$1,515.00	$1,621.05	$1,734.52	$1,821.25	$1,912.31
8" meter	$2,424.00	$2,593.68	$2,775.24	$2,914.00	$3,059.70

[1] The rates in the first year include structural changes due to the cost-of-service update. While the overall rate revenue received by the City will increase by 7.0 percent, the individual components of the rates have changed by different percentages.

[2] Individual dwelling units with individual City-owned meters shall be categorized as single family residential customers. Multi-family units with master meters shall be charged as multi-family residential.

As is currently the City's policy, the flow charge for non-residential customers is assessed based on actual monthly water usage and the flow charge for residential customers is based on the lesser of (1) the previous average winter water usage or (2) the actual water usage for that month.

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 wastewater rates reflect the cost of providing wastewater service to customers reflect a proportionate distribution of costs among customers and customer classes. The proposed annual adjustments to the rates will allow the City to continue to provide reliable sewer service to customers while meeting the state's mandates.

The sewer rates 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 Forma

Budgeted and Projected Operating Expenses

Schedule 1

		FY2024/25	FY2025/26	FY2026/27	FY2027/28	FY2028/29	FY2029/30	FY2030/31	FY2031/32	FY2032/33	FY2033/34
	PERSONNEL SERVICES										
1	Salaries & Wages	$1,477,100	$1,536,200	$1,597,600	$1,661,500	$1,728,000	$1,797,100	$1,869,000	$1,943,800	$2,021,500	$2,102,400
2	Supplemental Earnings	$11,900	$12,400	$12,900	$13,400	$13,900	$14,500	$15,100	$15,700	$16,300	$16,900
3	Annual Admin Pay	$4,800	$5,000	$5,200	$5,400	$5,700	$5,900	$6,100	$6,400	$6,600	$6,900
4	Stipend Pay	$10,000	$10,400	$10,800	$11,300	$11,700	$12,200	$12,700	$13,200	$13,700	$14,300
5	Stand-By Weekends	$2,100	$2,200	$2,300	$2,400	$2,500	$2,600	$2,700	$2,800	$2,900	$3,000
6	Overtime	$21,300	$22,100	$23,000	$23,900	$24,900	$25,900	$26,900	$28,000	$29,100	$30,300
7	Medicare	$21,200	$22,000	$22,900	$23,800	$24,800	$25,700	$26,800	$27,800	$29,000	$30,100
8	Medical Benefits	$202,800	$210,900	$219,300	$228,100	$237,200	$246,700	$256,600	$266,800	$277,500	$288,600
9	Vision Benefits	$2,100	$2,100	$2,200	$2,300	$2,400	$2,500	$2,600	$2,700	$2,800	$2,900
10	Life Insurance	$3,800	$4,000	$4,100	$4,300	$4,500	$4,700	$4,800	$5,000	$5,200	$5,500
11	Dental Benefits	$12,700	$13,200	$13,700	$14,300	$14,800	$15,400	$16,100	$16,700	$17,400	$18,100
12	EAP Expense	$500	$500	$600	$600	$600	$600	$700	$700	$700	$700
13	Long Term Disability	$7,800	$8,100	$8,400	$8,700	$9,100	$9,400	$9,800	$10,200	$10,600	$11,000
14	Short Term Disability	$4,300	$4,500	$4,700	$4,900	$5,100	$5,300	$5,500	$5,700	$5,900	$6,200
15	PERS Employer	$174,400	$181,300	$188,600	$196,100	$204,000	$212,100	$220,600	$229,400	$238,600	$248,200
16	RHSA Plan	$13,200	$13,700	$14,300	$14,900	$15,500	$16,100	$16,700	$17,400	$18,100	$18,800
17	Workers Comp	$47,400	$49,300	$51,300	$53,300	$55,500	$57,700	$60,000	$62,400	$64,900	$67,500
	SERVICES AND SUPPLIES										
18	Postage & Shipping	$36,100	$37,100	$38,200	$39,400	$40,600	$41,800	$43,000	$44,300	$45,700	$47,000
19	Office Supplies	$2,100	$2,100	$2,200	$2,300	$2,300	$2,400	$2,500	$2,500	$2,600	$2,700
20	Software License & Maint	$39,900	$41,100	$42,300	$43,600	$44,900	$46,300	$47,700	$49,100	$50,600	$52,100
21	Liability Ins Premium	$52,700	$55,300	$58,100	$61,000	$64,100	$67,300	$70,600	$74,200	$77,900	$81,800
22	Equip Rentals	$7,700	$8,000	$8,200	$8,400	$8,700	$9,000	$9,200	$9,500	$9,800	$10,100
23	Equip Lease	$1,200	$1,300	$1,300	$1,400	$1,400	$1,400	$1,500	$1,500	$1,600	$1,600
24	Uniform Purchase	$8,100	$8,400	$8,600	$8,900	$9,200	$9,400	$9,700	$10,000	$10,300	$10,600
25	Dues & Subscription	$2,600	$2,700	$2,700	$2,800	$2,900	$3,000	$3,100	$3,200	$3,300	$3,400
26	Special Department Expense	$64,400	$66,300	$68,300	$70,300	$72,500	$74,600	$76,900	$79,200	$81,500	$84,000
27	System Repairs	$30,900	$31,800	$32,800	$33,800	$34,800	$35,800	$36,900	$38,000	$39,100	$40,300
28	Water Conservation Measures	$25,800	$26,500	$27,300	$28,100	$29,000	$29,900	$30,700	$31,700	$32,600	$33,600
29	License & Permit Fees	$20,600	$21,200	$21,900	$22,500	$23,200	$23,900	$24,600	$25,300	$26,100	$26,900
30	Training & Travel	$16,500	$17,000	$17,500	$18,000	$18,500	$19,100	$19,700	$20,300	$20,900	$21,500
31	Contract Services	$300,000	$309,000	$318,300	$327,800	$337,700	$347,800	$358,200	$369,000	$380,000	$391,400
32	Legal Svcs	$10,300	$10,600	$10,900	$11,300	$11,600	$11,900	$12,300	$12,700	$13,000	$13,400
33	IT Services	$54,700	$56,300	$58,000	$59,800	$61,600	$63,400	$65,300	$67,300	$69,300	$71,400
34	Auto Ins	$4,400	$4,600	$4,800	$5,100	$5,300	$5,600	$5,900	$6,200	$6,500	$6,800
35	Fleet Services	$27,300	$28,100	$29,000	$29,800	$30,700	$31,600	$32,600	$33,600	$34,600	$35,600
36	Vehicle Rep & Maint	$3,900	$4,000	$4,200	$4,300	$4,400	$4,500	$4,700	$4,800	$5,000	$5,100
37	Gas and Oil	$26,800	$27,600	$28,400	$29,300	$30,100	$31,000	$32,000	$32,900	$33,900	$34,900
38	Vehicle Replacement Charge	$117,400	$120,900	$124,600	$128,300	$132,200	$136,100	$140,200	$144,400	$148,800	$153,200
39	Property Ins Premium	$24,500	$25,200	$26,000	$26,800	$27,600	$28,400	$29,300	$30,100	$31,100	$32,000
40	Repair & Maintenance	$87,600	$90,200	$92,900	$95,700	$98,500	$101,500	$104,500	$107,700	$110,900	$114,200
41	Communications	$7,500	$7,700	$8,000	$8,200	$8,500	$8,700	$9,000	$9,200	$9,500	$9,800
42	Utility Expense - Electric	$152,300	$159,900	$167,900	$176,200	$185,100	$194,300	$204,000	$214,200	$224,900	$236,200
43	Cost Allocation Plan Expense	$340,000	$350,200	$360,700	$371,500	$382,700	$394,200	$406,000	$418,200	$430,700	$443,600
44	Luguna Plant & SubRegional Exp	$12,569,000	$12,844,400	$13,420,200	$14,015,400	$14,631,000	$15,069,900	$15,522,000	$15,987,600	$16,467,300	$16,961,300
45	**Total Operating Expenses**	**$16,173,700**	**$16,580,400**	**$17,294,200**	**$18,032,200**	**$18,796,300**	**$19,387,200**	**$19,999,800**	**$20,631,400**	**$21,281,300**	**$21,953,900**

Capital Spending Plan

Schedule 2

		FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032
1	WW-34 Utilities Office (Sewer Portion)	$200,000	$3,608,000							
2	WW-35 2019 Incerceptor Outfill - Phase 2	$79,000	$79,000							
3	WW-48 Pump Station Mechanical	$139,000	$310,000							
4	Pump Station Replacement Projects		$200,000	$200,000	$200,000	$200,000	$200,000	$200,000	$200,000	$200,000
5	I/I Reduction manholes		$75,000							
6	I/I Reduction Basin 4	$4,924,000								
7	I/I Reduction Basin 5				$557,000	$1,773,000	$1,861,000			
8	I/I Reduction Basin 11								$536,000	$1,705,000
9	I/I Reduction Basin 13 (H Section)						$538,000	$2,177,000	$2,286,000	
10	Incr. Capacity Basin 5&6	$168,000	$144,000							
11	Incr. Capacity Basin 5&6	$2,000	$243,000	$3,267,000						
12	WW-39 Station #2 Motor Replacement		$101,000							
13	Rehab/Replace Pump Station 2	$350,000	$1,297,000							
14	Forcemain Rehab Ph. 3		$304,000		$1,665,000					
15	WW-52 Siphon Digesters		$60,000							
16	Meter replacement program (sewer portion)		$263,000	$276,000	$289,000	$304,000	$319,000	$335,000	$352,000	$369,000
17	I & I Study									$1,158,000
18	Sewer Master Plan Update									$289,000
	Total:	**$5,862,000**	**$6,684,000**	**$3,743,000**	**$2,711,000**	**$2,277,000**	**$2,918,000**	**$2,712,000**	**$3,374,000**	**$3,721,000**

Cash Flow Proforma

Schedule 3

		Budget FY 2024	Forecast FY2025	Forecast FY2026	Forecast FY2027	Forecast FY2028	Forecast FY2029	Forecast FY2030	Forecast FY2031	Forecast FY2032	Forecast FY2033	Forecast FY2034
1	**Rate Revenue Increase:**	**7.00%**	**7.00%**	**7.00%**	**5.00%**	**5.00%**	**3.00%**	**3.00%**	**3.00%**	**3.00%**	**3.00%**	
	Rate Revenue											
2	**Utility Rate Revenue**	$14,404,000	$14,404,000	$15,556,000	$16,801,000	$18,145,000	$19,233,000	$20,387,000	$21,203,000	$22,051,000	$22,934,000	$23,851,000
3	Change due to growth & use		$144,000	$156,000	$168,000	$181,000	$192,000	$204,000	$212,000	$221,000	$229,000	$239,000
4	Increase due to rate adjustments		$1,008,000	$1,089,000	$1,176,000	$907,000	$962,000	$612,000	$636,000	$662,000	$688,000	$716,000
	Non-Rate Revenues											
5	Interest Earnings	$169,200	$54,000	$35,000	$29,000	$28,000	$31,000	$33,000	$37,000	$40,000	$42,000	$49,000
6	Operating Revenue	$93,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000
7	Graton Casino	$1,309,000	$1,364,000	$1,423,000	$1,487,000	$1,535,000	$1,586,000	$1,618,000	$1,651,000	$1,684,000	$1,719,000	$1,755,000
7	Sonoma State Univ.	$860,000	$907,000	$927,000	$969,000	$1,012,000	$1,056,000	$1,088,000	$1,120,000	$1,154,000	$1,189,000	$1,224,000
8	**Total Revenue**	**$16,835,200**	**$17,944,000**	**$19,249,000**	**$20,693,000**	**$21,871,000**	**$23,123,000**	**$24,005,000**	**$24,922,000**	**$25,875,000**	**$26,864,000**	**$27,897,000**
	O&M Costs											
9	Salaries	$1,468,500	$1,527,300	$1,588,300	$1,651,900	$1,718,000	$1,786,700	$1,858,100	$1,932,500	$2,009,800	$2,090,200	$2,173,800
10	Benefits	$471,200	$490,100	$509,700	$530,100	$551,300	$573,300	$596,300	$620,100	$644,900	$670,700	$697,500
11	Operational Expenses	$465,200	$479,100	$493,500	$508,300	$523,500	$539,200	$555,400	$572,100	$589,200	$606,900	$625,100
12	Professional Services	$435,600	$416,500	$429,000	$441,900	$455,100	$468,800	$482,800	$497,300	$512,200	$527,600	$543,400
13	Insurance	$78,200	$81,600	$85,200	$88,900	$92,900	$97,000	$101,300	$105,800	$110,500	$115,400	$120,500
14	Utilities	$148,000	$152,300	$159,900	$167,900	$176,200	$185,100	$194,300	$204,000	$214,200	$224,900	$236,200
15	Cost Allocation	$304,700	$340,000	$350,200	$360,700	$371,500	$382,700	$394,200	$406,000	$418,200	$430,700	$443,600
16	Capital Outlay	$114,000	$117,400	$120,900	$124,600	$128,300	$132,200	$136,100	$140,200	$144,400	$148,800	$153,200
17	Subregional & Laguna	$12,600,000	$12,569,000	$12,844,400	$13,420,200	$14,015,400	$14,631,000	$15,069,900	$15,522,000	$15,987,600	$16,467,300	$16,961,300
18	***Total Operating Expenses***	**$16,085,400**	**$16,173,300**	**$16,581,100**	**$17,294,500**	**$18,032,200**	**$18,796,000**	**$19,388,400**	**$20,000,000**	**$20,631,000**	**$21,282,500**	**$21,954,600**
	Capital & Debt Expenses											
19	Capital Spending	$5,863,000	$6,684,000	$3,742,000	$2,711,000	$2,276,000	$2,919,000	$2,712,000	$3,374,000	$3,722,000	$3,000,000	$3,000,000
19	Existing Debt	$700,000	$700,000	$698,000	$696,000	$697,000	$698,000	$702,000	$694,000	$696,000	$698,000	$699,000
20	***Total Capital and Debt Expenses***	**$6,563,000**	**$7,384,000**	**$4,440,000**	**$3,407,000**	**$2,973,000**	**$3,617,000**	**$3,414,000**	**$4,068,000**	**$4,418,000**	**$3,698,000**	**$3,699,000**
	Transfers											
21	Transfer Out of Sewer	$63,000	$64,000	$68,000	$70,000	$75,000	$77,000	$79,000	$73,000	$76,000	$79,000	$68,000
22	**Total Revenue Requirement**	**$22,711,400**	**$23,621,300**	**$21,089,100**	**$20,771,500**	**$21,080,200**	**$22,490,000**	**$22,881,400**	**$24,141,000**	**$25,125,000**	**$25,059,500**	**$25,721,600**
23	**Beginning Year Balance**	**$21,803,000**	**$15,926,800**	**$10,250,000**	**$8,409,900**	**$8,331,400**	**$9,122,200**	**$9,755,200**	**$10,878,800**	**$11,659,800**	**$12,409,800**	**$14,214,300**
24	Surplus/(Shortfall)	($5,876,200)	($5,677,300)	($1,840,100)	($78,500)	$790,800	$633,000	$1,123,600	$781,000	$750,000	$1,804,500	$2,175,400
25	**End of Year Balance**	**$15,926,800**	**$10,249,500**	**$8,409,900**	**$8,331,400**	**$9,122,200**	**$9,755,200**	**$10,878,800**	**$11,659,800**	**$12,409,800**	**$14,214,300**	**$16,389,700**
26	*Combined Reserve Target*	$9,587,000	$9,587,000	$9,791,000	$10,147,000	$10,516,000	$10,898,000	$11,194,000	$11,500,000	$11,816,000	$12,141,000	$12,477,000
	Debt Coverage Calculations											
27	*Revenue Available for Debt Service*	$749,800	$1,770,700	$2,667,900	$3,398,500	$3,838,800	$4,327,000	$4,616,600	$4,922,000	$5,244,000	$5,581,500	$5,942,400
28	*Total Yearly Parity Debt Payment*	*$700,000*	$700,000	*$698,000*	*$696,000*	*$697,000*	*$698,000*	*$702,000*	*$694,000*	*$696,000*	*$698,000*	*$699,000*
29	**Debt Coverage Ratio**	**1.07**	**2.53**	**3.82**	**4.88**	**5.51**	**6.20**	**6.58**	**7.09**	**7.53**	**8.00**	**8.50**