April 25, 2023 Water and Sewer Rate Study Report

Presented by: California Rural Water Association

In Collaboration With:

Robert D. Niehaus, Inc.





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REDWAY COMMUNITY SERVICES DISTRICT FINANCIAL PLANNING, REVENUE REQUIREMENTS, AND RATE SETTING ANALYSIS

FINAL REPORT APRIL 25, 2023

Prepared for:

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RDN Project Number 322.01

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EXECUTIVE SUMMARY

Background

Redway Community Services District (RCSD, District) was formed in 1965 from a private water system. The District maintains and operates a water and wastewater system which provides water and sewer service to most of the residences and businesses in Redway, a census designated place in Humboldt County.

The water system has a single water source, an infiltration gallery located on the banks of the South Fork of the Eel River. The total capacity of the District's three storage tanks is approximately 815,000 gallons. The District maintains approximately 30 miles of distribution piping ranging in size from 1 ½ inches to 10 inches consisting of iron, cement, and plastic pipe. The District's wastewater collection system incorporates both gravity mains and five lift stations. The Wastewater Treatment Plant includes a 300,000-gallon oxidation ditch and a clarification and chlorination system. Effluent is primarily discharged to upland percolation ponds located on land owned by the District. The wastewater system's average flow ranges between 140,000 gpd during dry weather and 430,000 gpd during wet weather. The facility has a permitted dry weather design flow of 186,000 gpd and a peak wet weather design flow of 615,000 gpd. **Figure 1** shows the limits of the Redway CSD in Blue.



Figure 1. Redway Community Services District

Purpose of Study

The purpose of this analysis is to conduct a rate study which evaluates the District's current rates and financial data and propose new rates, if necessary, that meet the District's financial and strategic goals. In June 2022, the California Rural Water Association (CRWA) retained Robert D. Niehaus, Incorporated (RDN) to develop comprehensive water and sewer rate studies (Study) for the RCSD.

The primary objectives of this Study include:

- Projecting revenues and expenses for a five-year study period
- Proposing revenue adjustments to fund the District's projected financial needs
- Proposing rates which do not overly impact customers
- Producing an administrative record which effectively summarizes all findings
- Supporting the District through the Proposition 218 process as necessary

Rate Recommendations and Proposed Rates

Recommendations:

- Build specific reserve funds by making annual contributions from revenue generated from rates
- Implement the proposed annual revenue and rate adjustments for both water and sewer utilities
- Adjust the water tier widths for single family residential customers to reflect current average household sizes
- Reduce the number of tiers for single family residential customers so that variable rates can be based on actual costs to provide service
- Bill only one tier of use for multi-family and commercial water customers
- Bill water customers based on their meter size rather than the number of units
- Maintain the current sewer rate structure with relative rates based on the cost of service analysis

Current Water Rates

Currently, District water customers pay a \$29.00 monthly account charge per connection unit. In addition, customers pay variable charges based on water use. All customers are billed based on a six tiered inclining block rate per hundred cubic feet (hcf) of water used. The first five tiers include 5 hcf of water each, and the sixth tier includes all water used above 25 hcf in a month. The current rates as described are displayed in **Table 1**.

Fixed Charges					
Customer Cl	e Month	ly Fee			
All Customers		All Meters		\$29.00	
Variable Charges					
Customer Class		Tier - Wi	dth	Unit Cost	
All Customers	Tier	1 - 5 hcf		\$0.95	
	Tier	2 - 5 hcf		\$2.45	
	Tier	3 - 5 hcf		\$3.45	
	Tier	4 - 5 hcf		\$4.45	
	Tier	5 - 5 hcf		\$5.45	
	Tier	6 - All Addi	tional hcf	\$6.45	

Table 1. Current Water Rates

Proposed Rates

RDN proposes the following rate and revenue adjustments to accomplish the District's goals of capital and reserve funding. **Table 2** shows the proposed revenue adjustments for the five-year rate study period. In the first year of the study, the District should raise revenues by 20.0 percent in year one and two, followed by 15.0 percent the third year, and 10.0 percent each year after. In addition to revenue adjustments, RDN proposes aligning the rates with the cost of service analysis outlined in this report. The resulting rates form an equitable rate structure which is based on the actual cost to provide service for each customer class. Additionally, the District should bill customers based on their meter size rather than on billing units, as meter size accounts for a reasonable way to determine the relative capacity requirements of each type of customer. One final proposed adjustment to the water rates is to reduce the number of tiers and align them to the cost of providing water service at each level for each customer class. The rates which result from these adjustments are shown in **Table 3**.

	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Recommended Adjustment	20.0%	20.0%	15.0%	10.0%	10.0%
Multiplier	1.20	1.44	1.66	1.82	2.00
Cumulative Adjustment	20.0%	44.0%	65.6%	82.2%	100.4%

Table 2. Proposed Revenue	Adjustments FY	(2023-24 to FY (2027-28
---------------------------	----------------	-------------------	---------

		Fixe	ed Charges	;		
Customer C	Class F	Y 2024	FY 2025	FY 2026	FY 2027	FY 2028
Residential						
5/8x3/4"		\$38.16	\$45.80	\$52.67	\$57.93	\$63.73
1"		\$56.26	\$67.51	\$77.64	\$85.40	\$93.94
1-1/2"		\$101.09	\$121.31	\$139.51	\$153.46	\$168.81
2"		\$155.11	\$186.13	\$214.06	\$235.46	\$259.01
3"		\$281.24	\$337.49	\$388.12	\$426.93	\$469.62
4"		\$461.39	\$553.67	\$636.72	\$700.39	\$770.43
Commercial						
5/8x3/4"		\$35.59	\$42.71	\$49.11	\$54.02	\$59.42
1"		\$51.96	\$62.35	\$71.70	\$78.87	\$86.76
1-1/2"		\$92.52	\$111.02	\$127.67	\$140.44	\$154.48
2"		\$141.38	\$169.66	\$195.11	\$214.62	\$236.08
3"		\$255.48	\$306.58	\$352.57	\$387.82	\$426.61
4"		\$418.45	\$502.14	\$577.46	\$635.21	\$698.73
MFR						
5/8x3/4"		\$57.01	\$68.41	\$78.68	\$86.54	\$95.20
1"		\$87.74	\$105.28	\$121.07	\$133.18	\$146.50
1-1/2"		\$163.86	\$196.63	\$226.12	\$248.74	\$273.61
2"		\$255.57	\$306.68	\$352.69	\$387.96	\$426.75
3"		\$469.72	\$563.66	\$648.21	\$713.03	\$784.34
4"		\$775.58	\$930.70	\$1,070.30	\$1,177.33	\$1,295.07
		Varia	ble Charge	S		
Tier	Width	FY 202	24 FY 2025	5 FY 2026	FY 2027 F	Y 2028
Res						
Tier 1	1-4 HCF	\$1.	17 \$1.40) \$1.61	\$1.77	\$1.95
Tier 2	5-11 HFC	\$4.	61 \$5.53	3 \$6.36	\$7.00	\$7.70
Tier 3	All Additiona	al \$11.	78 \$14.14	4 \$16.26	\$17.88	\$19.67
Commercial						
Tier 1	All Use	\$3.	48 \$4.17	7 \$4.80	\$5.28	\$5.81
MFR						
Tier 1	All use	\$3.	01 \$3.6	1 \$4.16	\$4.57	\$5.03

Table 3. Proposed Rates for FY 2023-24 to FY 2027-28

Capital and Reserve Funding

The proposed rates fund \$140,000 a year in capital expenditures through rate funded PAYGO and maintain the current cash balances. **Figure 2** shows the water fund balance with no adjustments and **Figure 3** shows the water fund balance under the proposed financial plan through the study period. Fund balances are maintained in case emergency capital is needed, or some unforeseen event causes rate revenues to vary. Under the proposed rate plan, cash balances should continue to grow after the study period, which will allow the District to maintain operations well into the future.



Figure 2. Water Fund Balance with No Revenue Adjustment

Current Sewer Rates

Currently, District sewer customers pay a fixed equivalent unit rate per month and a usage rate per hcf of water used based on their customer class. Customers are assigned a value in

equivalent units when they join the system to account for differences in sewer flows and strengths between individual customers and classes. Single family residential customers are the baseline equivalent unit and are all assigned a value of one. Multi-residential units and the three levels of commercial accounts are each assigned a number of equivalent units based on their relative flow. Sewer strength differences are accounted for by an increased charge for equivalent unit and variable rates. The current rates as described are displayed in **Table 4**.

Fixed Undryes						
	Customer Clas	s Mont	hly Fee			
	Residential		\$42.50			
	Commercial A		\$46.50			
	Commercial B		\$48.70			
	Commercial C		\$49.75			
	Jail	\$	1,890.00	_		
	Variable	Charges				
	Valiable	Unarges		<u> </u>		
	Customer Class	Tier - Widt	h Unit	Cost		
Resi	dential	All Use		\$0.80		
Com	mercial A	All Use	:	\$0.80		
Com	mercial B	All Use		\$1.90		
Com	mercial C	All Use		\$1.90		
Jail		All Use		\$0.00		

Table 4. Current Rates

Proposed Rates

The recommended rates maintain the current rate structure overall but provide a revenue adjustment schedule designed to contribute to District reserves and fund the considerable capital expenditure needs. Additionally, the proposed sewer rates realign the costs for each customer class to match the relative differences in sewer strength and flow. **Table 5** shows the proposed revenue adjustments for the study period. RDN, working with District staff, determined that an increase of 55.0 percent was needed in the first year of the study because of cash flow issues, followed by increases of 20.0 precent, 10.0 percent, 10.0 percent, and 8.0 percent through the rest of the study period, respectively. The resulting rates are shown in **Table 6**.

Table 5. Proposed Revenue Adjustments FY 2023-24 to FY 2027-28

	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Recommended Adjustment	55.0%	20.0%	10.0%	10.0%	8.0%
Multiplier	1.55	1.86	2.05	2.25	2.43
Cumulative Adjustment	55.0%	86.0%	104.6%	125.1%	143.1%

Fixed Charges								
Customer Class	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028			
Residential	\$63.72	\$76.46	\$84.10	\$92.52	\$99.92			
Commercial A	\$48.04	\$57.65	\$63.41	\$69.75	\$75.33			
Commercial B	\$70.32	\$84.38	\$92.82	\$102.10	\$110.27			
Commercial C	\$136.29	\$163.55	\$179.90	\$197.89	\$213.72			
Prison Camp	\$3,273.31	\$3,927.97	\$4,320.77	\$4,752.85	\$5,133.08			
	Varia	ble Charge	es					
Customer Class	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028			
Residential	\$0.58	\$0.70	\$0.77	\$0.85	\$0.91			
Commercial A	\$0.58	\$0.70	\$0.77	\$0.85	\$0.91			
Commercial B	\$1.75	\$2.10	\$2.31	\$2.54	\$2.74			
Commercial C	\$2.62	\$3.15	\$3.46	\$3.81	\$4.11			
Prison Camp	\$0.98	\$1.17	\$1.29	\$1.42	\$1.53			

Table 6. Proposed Sewer Rates FY 2023-24 to FY 2027-28

Capital and Reserve Funding

-\$5,400

The proposed financial plan for the sewer utility contributes approximately \$140,000 a year to additional reserves as well as providing \$180,000 in capital PAYGO funding. **Figure 4** shows the sewer fund balances with no revenue adjustment and **Figure 5** shows the fund balances under the proposed financial plan through the study period.



Figure 4. Sewer Fund Balance with No Revenue Adjustment



Figure 5. Sewer Fund Balances under the Proposed Financial Plan

GENERAL METHODOLOGY

The water rates formulated in this study were developed using principles set forth by the American Water Works Association (AWWA). RDN rate-making practices incorporate methods described in the AWWA Manual 1 (M1)¹ for Water Systems the WEF Financing and Charges for Wastewater Systems². **Figure 6** presents the steps taken to develop the District's proposed rates.





- **Growth Projection:** project customer growth for the five-year study period, FY 2023-2024 through FY 2027-28, using the District's customers' historical growth data. Forecast revenues for the study period based on the projected customer growth.
- Financial Planning and Revenue Requirements: develop a five-year financial plan based on the projected revenues and annual costs which include both operating and capital expenses. The District's target reserve level should also be considered as part of the financial planning. Based on the financial planning, revenue requirements are determined for each year of the study period.
- Cost of Service: evaluate the customer classifications and allocate costs based on their service requirements.
- Rate Design: design rates to recover the rate revenue requirements from each customer.

¹ Principles of Water Rates, Fees, and Charges, Seventh Edition, Manual of Water Supply Practices, American Water Works Association

² Financing and Charges for Wastewater Systems, WEF Manual of Practice Number 27, Water Environment Federation

Legal Considerations

This section of the report describes the legal framework that was considered in the development of the rates to ensure that the calculated cost of service rates provide a fair and equitable allocation of costs to the different customer classes.

California Constitution - Article XIII C (Proposition 26)

The voters in the State approved Proposition 26 on November 2, 2010. Proposition 26 amended Article XIII C of the State Constitution to expand the definition of "tax" to include "any levy, charge, or exaction of any kind imposed by a local government" with listed exceptions. By means of these exceptions, Article XIII C classifies several types of charges, in addition to property-related charges, that are not taxes, such as charges for specific services or benefits, regulatory charges and penalties. Article XIII C's definition of "tax" lists the following exceptions: (1) a charge imposed for a specific benefit conferred or privilege granted directly to the payer that is not provided to those not charged, and which does not exceed the reasonable costs to the local government of conferring the benefit or granting the privilege; (2) a charge imposed for a specific government service or product provided directly to the payer that is not provided to those not charged, and which does not exceed the reasonable costs to the local government of providing the service or product; (3) a charge imposed for the reasonable regulatory costs to a local government for issuing licenses and permits, performing investigations, inspections, and audits, enforcing agricultural marketing orders, and the administrative enforcement and adjudication thereof; (4) a charge imposed for entrance to or use of local government property, or the purchase, rental, or lease of local government property; (5) a fine, penalty, or other monetary charge imposed by the judicial branch of government or a local government, as a result of a violation of law; (6) a charge imposed as a condition of property development; and (7) assessments and property-related fees imposed in accordance with the provisions of Article XIII D. Proposition 26 also provides that the local government bears the burden of proving by a preponderance of the evidence that a levy, charge, or other exaction is not a tax, that the amount is no more than necessary to cover the reasonable costs of the governmental activity, and that the manner in which those costs are allocated to a payer bear a fair or reasonable relationship to the payer's burdens on, or benefits received from, the governmental activity. Like the proportionality requirements of Article XIII D, assessment of rates under these requirements, if applicable, would be supported by the cost of service approach.

California Constitution - Article XIII D, Section 6 (Proposition 218)

In November 1996, California voters passed Proposition 218, the "Right to Vote on Taxes Act." This constitutional amendment protects taxpayers by limiting the methods by which local governments can create or increase taxes, fees and charges without taxpayer consent. Between 2002 and 2017, California courts have ruled that fees associated with providing water services are "property-related" and thus under the jurisdiction of Prop 218. The principal requirements for fairness of the fees, as they

relate to public water service, are as follows: Revenues derived from the fee or charge shall not exceed the funds required to provide the property related service. Revenues derived by the fee or charge shall not be used for any other purpose other than that for which the charge was imposed. The amount of the fee or charge imposed upon any parcel shall not exceed the proportional cost of service attributable to the parcel. Reliance by an agency on any parcel map, including, but not limited to, an assessor's parcel map, may be considered a significant factor in determining whether a fee or charge is imposed as an incident of property ownership for purposes of this article.

The rates developed in this Report use a methodology to establish an equitable system of charges that recover the cost of providing service and fairly apportion costs to each customer as required by Proposition 218.

Key Assumptions

A test year, FY 2023-24, was selected for which costs are to be analyzed and rates to be established for this study. The District's fiscal year starts on July 1 and ends on June 30.

Escalation Factors

Escalation Factors were calculated for ten independent variables using historical Consumer Price Index (CPI) data from West Class B/C cities between 2000 and the most current calendar year, and projections by the California Department of Transportation (CADOT), and the California Department of Finance (CADOF). The analysis for the status quo assumes that Operating Revenues will continue to be stable. The escalation factors capture the effects of price inflation for this period. **Figure 7** displays the projected escalation factors for the study period. Due to local contingencies, the Utility Inflation Rate is expected to rise at the highest rate, representing 7.2 percent in the test year. The Payroll Expenses Inflation Rate, which includes salaries, is expected to rise 4.0 percent during the test year. The analysis assumes that inflation will level out in later years of the study when the current record inflation calms down. Expenses that are not expected to increase during the study period were not escalated as those costs are fixed.





Customer Growth

All analyses performed during the study were based on an assumption of customer account growth. The analysis assumes that there will be no customer growth for either water or sewer utilities. Additionally, it was assumed that water use would remain stable over the study period.

Meter Ratios

This study calculates equivalent meter counts using the American Water Works Association (AWWA) standards shown in **Table 7**. The majority of District customers have 5/8x3/4 -inch meters, thus ratios established based on the 5/8x3/4-inch meter as 1.00 unit were used for this study. These ratios were used when the service requirements of system capacity for each meter size was measured.

Meter Size	Meter Ratio
5/8x3/4"	1.00
1"	1.67
1-1/2"	3.33
2"	5.33
3"	10.00
4"	16.67

Table 7. AWWA Meter Ratios

WATER FINANCIAL PLAN

Revenues

Based on the customer growth and water demand projected through the study period, rate revenues under the current rates were calculated for each year of the study. Additionally, non-rate revenues were estimated based on historical values and District input. With no rate increases, the District is expected to collect \$593,000 per year in operating revenue. Additional non-operating revenues total approximately \$69,000 a year from various property taxes and interest income and will be used to offset future revenue requirements.

Operating and Maintenance Expense

This District's FY 2022-23 Budget anticipated approximately \$613,00 in expenses which were classified as O&M expense. Based on the sum of all O&M expense line items, the overall inflation rate for FY 2023-24 is 5.1 percent, which is consistent with the District's budget projections. For the rest of the study period, annual inflation is projected to be approximately between 4.9 and 3.9 percent per year. Total O&M expenses will reach \$762,000 by FY 2027-28.

Capital Expenses

In addition to the costs of daily operation and maintenance, the District has identified necessary capital improvements to maintain a high level of service and water quality for its customers. For this study, an average of \$140,000 in annual PAYGO (pay as you go) capital expenditures was projected.

Target Reserves

The District currently has no reserve policy, but does have some cash balance. At the time of writing, the water fund balance is approximately \$560,000. Optimally, the District should have a detailed reserve plan which separates different funds based on their proposed uses. For example, similar sized utilities will often have an operating fund which totals three months of operating revenue, approximately \$150,000 in FY 2023-24, that can be used in times of revenue shortfall. Additionally, the District should maintain capital reserves which are set aside to address depreciating assets. The proposed financial plan maintains the current water fund balance and projects that positive cash flow will begin in FY 2025-26. Before the next rate study,

the District should develop a formal reserve policy and set target levels for operating and capital reserves.

Debt Funding

The District currently pays \$98,000 per year in debt service payments on various loans, including SFR loans and USDA loans. These payments will continue through the study period. No additional loans are planned at this time.

Revenue Requirements

Revenue requirements include CIP expense and all O&M expenses. The total expense of each year is offset by other operating revenues and non-operating revenues to compute the pure portion of revenue requirements, which need to be collected from water rates. The negative net balance indicates that cash reserves are used to supplement the shortfall for the year and positive net balance indicates that the amount is contributed to the cash reserves. The revenue requirement of \$501,604 for the test year was used to compute cost distribution among distinctive cost components and then allocated to customers equitably in the COS analysis. **Table 8** shows the revenue requirements for each year of the study.

Revenue Requirements	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
O&M Expenses	\$644,241	\$675,689	\$704,683	\$733,429	\$762,183
Debt Service	\$97,719	\$97,719	\$80,590	\$80,590	\$80,590
Capital Expenditures	\$134,290	\$139,185	\$143,921	\$150,281	\$133,104
Other Operating Revenue	(\$174,906)	(\$174,906)	(\$174,906)	(\$174,906)	(\$174,906)
Non-Operating Revenue	(\$68,549)	(\$68,549)	(\$68,549)	(\$68,549)	(\$68,549)
Net Balance From Operations	(\$131,192)	(\$67,214)	\$6,473	\$40,588	\$105,154
Rate Revenue Requirement	\$501,604	\$601,925	\$692,213	\$761,435	\$837,578

Table 8. Revenue Requirements from Rates FY 2023-24 through FY 2027-28

Recommended Financial Plan

The proposed financial plan includes annual revenue adjustments of 20.0 percent in the test year, 20.0 percent the second year, and 15.0 percent in the third year, and 10.0 percent the fourth through fifth year of the study period. Under this plan the District will be able to sufficiently cover their operating expenses and an average of \$140,000 in capital expenditures per year. **Table 9** shows the proposed financial plan and ending reserve balances for the study period. RDN recommends this plan because it best balances the future repair needs of the water system with impacts on ratepayers. The Cost of Service section will use this financial plan as a basis for calculations.

Category	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
	20.0%	20.0%	15.0%	10.0%	10.0%
Rate Revenue (Base)	\$418,003	\$418,003	\$418,003	\$418,003	\$418,003
FY 2024	\$83,601	\$83,601	\$83,601	\$83,601	\$83,601
FY 2025		\$100,321	\$100,321	\$100,321	\$100,321
FY 2026			\$90,289	\$90,289	\$90,289
FY 2027				\$69,221	\$69,221
FY 2028					\$76,143
Total Rate Revenue	\$501,604	\$601,925	\$692,213	\$761,435	\$837,578
Other Operating Revenue	\$174,906	\$174,906	\$174,906	\$174,906	\$174,906
Non-Operating Revenue	\$68,549	\$68,549	\$68,549	\$68,549	\$68,549
Total Revenue	\$745,058	\$845,379	\$935,668	\$1,004,889	\$1,081,033
Total Operating Expense	\$644,241	\$675,689	\$704,683	\$733,429	\$762,183
Total Non-operating Expense	\$232,009	\$236,904	\$224,511	\$230,872	\$213,695
Net Revenue after adjustment (expense)	(\$131,192)	(\$67,214)	\$6,473	\$40,588	\$105,154
Total Available Funds	\$426,495	\$359,281	\$365,754	\$406,342	\$511,497

Table 9. Study Period Water Financial Plan, FY 2023-24 to FY 2027-28

Proposed Reserve Balances

Figure 6 shows the water fund balances under the proposed financial plan through the study period.



Figure 8. District Fund Balances under the Proposed Financial Plan

WATER COST OF SERVICE

Methodology

The purpose of a Cost of Service (COS) analysis is to allocate costs among customers commensurate with their service requirements. RDN employed the "base-extra capacity" cost-of-service method promulgated in AWWA's M1, whereby costs are first allocated to individual functions, which are typical industry standard activities, then the costs of each function are distributed to appropriate cost causative components, which are defined by the cost driving elements. The results of the COS form a reasonable, equitable, basis for designing rates.

Cost Components

Operating costs are functionalized based on input from District staff with expertise in the system and utility industry. Non-operating expense was functionalized based on ten years of total capital expense. The functions of the water system for both operating and capital expenses include:

- Water Source costs associated with source of water supply
- Pumping costs associated with general pumping and energy use
- Transmission and Distribution costs associated with transmitting and distributing water to customers
- Customer Accounts costs associated with billing and customer services
- Administrative and General costs associated with administrative and general functions
- Fire costs associated with water service for fire protection provided to property and structures

Figure 9 shows the percentage of costs allocated to each cost function.

Figure 9. Total Functionalized Costs



COS Allocation

For the system to reliably provide adequate service to its customers, it must be capable of meeting not only the annual volume requirements, but also the peak demand - the maximum rate at which water is consumed. Therefore, the capacities of the various facilities must meet the maximum coincidental demand of all customers.

Each water service facility within the system has an underlying average demand, exerted by the customers for whom the base cost component applies. For those facilities designed solely to meet average daily demand, 100% of the cost should go to the base cost component. Extra capacity requirements associated with demand in excess of average use consist of Max Day Demand (MDD) and Peak Hourly Demand (PHD). Based on the MDD factor, RDN estimated the average hourly flow during MDD and multiplied it by a peaking factor of 1.5 (the lowest factor recommended by the State Board's Division of Drinking Water) to compute a PHD factor. requirements were distributed to the base, MDD, and PHD cost components for 35.2%, 31.4%,

and 33.3%, respectively. The number of bills in one year (the number of accounts multiplied by 12) serves as the basis for distributing customer service related costs. The number of equivalent meters is used to measure meter related service costs.

The cost causative components therefore include:

- Base delivering water to customers under average demand conditions
- Maximum Day Demand (MDD) the costs of delivering water to customers on the day with the highest demand
- Peaking Hourly Demand (PHD) the costs of delivering water to customers on the hour with the highest demand on highest day
- Meters the costs of servicing meters, billing, and other customer service-related costs
- Direct Fire Protection Service the costs of providing water service for public and private fire protection services
- Customer Service the costs of providing general customer related services to each customer

The result of the COS analysis determines how the total revenue requirements should be allocated to each of the cost components, which are categorized and grouped based on the similar cost driving elements. **Figure 10** shows the total Test Year Revenue Requirements allocated to each cost component.



Figure 10. Cost of Service Cost Components by Category

Table 10 shows the revenue requirements by cost causative components under the proposed financial plan. The test year capital expense, debt service payments, and other obligations are allocated to each cost causative component using the percentages derived from the cost allocation.

Cost Allocation Summary	Total	Source of Supply	Base	MDD	PHD	Meters	Public Fire	Customer Service
O&M Revenue Requirements	\$644,241	\$0	\$145,575	\$93,719	\$36,451	\$104,149	\$129,886	\$134,459
Non-Operating Revenue Requirements	\$232,009	\$0	\$70,829	\$63,108	\$65,208	\$0	\$32,865	\$0
	\$876,250	\$0	\$216,404	\$156,827	\$101,659	\$104,149	\$162,751	\$134,459
		0%	25%	18%	12%	12%	19%	15%
Other Operating Revenue	(\$174,906)	\$0	(\$43,196)	(\$31,304)	(\$20,292)	(\$20,789)	(\$32,486)	(\$26,839)
Non-Operating Revenue	(\$68,549)	\$0	(\$16,929)	(\$12,269)	(\$7,953)	(\$8,148)	(\$12,732)	(\$10,519)
Net Balance From Operations	(\$131,192)	\$0	(\$32,400)	(\$23,480)	(\$15,220)	(\$15,593)	(\$24,367)	(\$20,131)
Rate Revenue Requirement	\$501,604	\$0	\$123,879	\$89,775	\$58,194	\$59,619	\$93,166	\$76,970

Table 10. Rate Revenue Requirements for Test Year, FY 2024

Allocation to Units

The final step of the COS analysis is to allocate the cost causative components back to the customers. In order to perform this, unit values were determined for each cost component. **Table 11** shows the number of systemwide units under each category. Equivalent meters are determined by multiplying the total meters by their equivalent meter value. All use categories (Water Use, Max Month, Average Day, Max Day, and Peak Hourly) are expressed in hcf.

Table 11. Cost of Service, Total Units of Service

Unit	Count of Units
Customers	575
EMs	664
Water Use	53,285
Max Month	8,588
Average Day	146
Max Day	277
Peak Hourly	416

Dividing total cost of service per cost causative component by the number of applicable units produces a cost per unit which is then reallocated to each customer class based on the total number of units which is attributable to each. **Table 12** the unit costs for each cost causative component.

	Source of Supply	Base	MDD	PHD	Meters	Public Fire	Customer Service
Rate Revenue Requirement	\$0.00	\$123,879.22	\$89,774.83	\$58,194.12	\$59,619.48	\$93,165.84	\$76,970.29
Units	53,285	53,285	277	416	664	664	575
Unit Cost	\$0.00	\$2.32	\$324.06	\$140.04	\$89.78	\$140.30	\$133.86

Table 12. Total Cost of Service Divided by Units

Allocation to Customer Classes

The final step of the COS analysis is to allocate the cost causative components back to the customers. In developing equitable rate structures, revenue requirements were allocated to Single Family, Multi-Family, and Commercial customers commensurate with the customer demand and services rendered. The costs are allocated to customer classes according to the amount of water consumed, required peaking demand, number of customers and other relevant factors. The costs allocated to each distinguished customer class determined in the COS analysis are shown in **Table 13**.

Customer Class	Total	Base	MDD	PHD	Meters	Public Fire	Customer Service
Residential	\$369,213	\$86,937	\$69,198	\$44,856	\$41,511	\$64,868	\$61,844
Commercial	\$98,616	\$22,636	\$13,671	\$8,862	\$16,103	\$25,163	\$12,181
Multi-Unit	\$33,774	\$14,306	\$6,906	\$4,477	\$2,006	\$3,134	\$2,945

Table 13. Cost Allocation between Customer Classes

WATER RATE SETTING

The last step of a rate study is designing rates. Rates must be designed to equitably recover the rate revenue requirements from each customer given the projected customer demand identified as a result of the COS analysis. In reviewing the District's water rates and finances, RDN used the following criteria in developing our recommendations:

- 1) Revenue sufficiency: rates should recover the annual cost of service and provide revenue stability.
- 2) Rate impacts: while rates are calculated to generate sufficient revenue to cover all costs, they should be designed to minimize, as much as possible, the impacts on ratepayers.
- 3) Equitability: rates should be fairly allocated among all customers based on their estimated demand characteristics.
- 4) Practicality: rates should be simple in form and, therefore, adaptable to changing conditions, easy to administer, and easy to understand.

Recommendations

The financial plan and COS analysis provides a rate structure which increases overall customer equity by allocating costs based on each customer's relative strain on the system. The proposed revenue requirements include funding for both the capital plan and sufficient funding for the daily operations of the District. If the District is able to secure additional funding sources, or if customer growth is higher than expected, resulting in increased revenues, the District can choose to not implement increases in any year.

Proposed Water Rates

The District needs revenue increases to fund critical capital projects necessary to maintain compliance with state regulations. The proposed revenue requirements include funding for both the capital plan and sufficient funding for the daily operations of the water utility.

Base, customer service, meter, and fire protection service costs in the fixed charge components are distributed among various meter sizes using the AWWA ratio discussed in the Key Assumptions section (**Table 7**). While the majority of costs incurred by the District are fixed, in that they aren't affected by changes in customer demand, in order to balance revenue stability with customer affordability and the interest to promote conservation, a proportion of fixed costs are also allocated to variable rates. **Table 14** shows the total costs allocated to fixed and variable charges for each customer class based on their share of the total cost of service and their service requirements.

Customer Class	Cost of Service	Variable	Percent	Fixed	Percent
Residential	\$369,213	\$157,522	42.7%	\$211,691	57.3%
Commercial	\$98,616	\$33,851	34.3%	\$64,766	65.7%
Multi-Unit	\$33,774	\$18,536	54.9%	\$15,238	45.1%
Total	\$501,604	\$209,909	41.8%	\$291,695	58.2%

Table 14. Costs Allocated to Fixed and Variable Rates

Fixed Rates

Currently, all customers are billed the same base fixed charge despite their meter size. Customers, particularly commercial customers, who are deemed to require a higher level of service are billed multiple fixed charges each month. To better align the rates with rate setting norms, the proposed rates instead bill each customer based on their meter size, which is representative of their cost of service. To derive fixed rates, the total fixed costs allocated to each customer class are divided by the number of equivalent meters for each customer class and the number of bills per year, which gives the rate for the base meter, 5/8"x3/4". Larger meter rates are multiplied by the number of equivalent meters each represents according to the AWWA M1. The resulting rates for the test year for each customer class are shown in **Table 15**.

Meter Size	Residential	Commercial	MFR
5/8x3/4"	\$38.16	\$35.59	\$57.01
1"	\$56.26	\$51.96	\$87.74
1-1/2"	\$101.09	\$92.52	\$163.86
2"	\$155.11	\$141.38	\$255.57
3"	\$281.24	\$255.48	\$469.72
4"	\$461.39	\$418.45	\$775.58

Table 15. Proposed Fixed Rates, FY 2023-24

Variable Rates

The current variable rates bill all customers on a six-tiered inclining block rate structure where each tier increases in price in 5 unit increments. During the study, it was deemed that this tier structure is not defensible under Proposition 218 as tier widths and prices are not tied to the costs to provide service at each level. The proposed variable rate structure includes three tiers for single family residential customers, and one tier for commercial and multi-unit customers which aligns costs to peak use at each level and between customers.

Single Family Tiers

Tier widths for Single Family customer classes were determined based on efficient water use standards as defined by the State of California and peak summer use as expressed in the customer billing data. Tier 1 allocation of 4 hcf per month provides 55 gallons of water per capita per day, assuming an average household size of 1.72 people per household³. At the projected usage levels for FY 2024, the Tier 1 water usage includes approximately 17,130 hcf of usage by Single Family customers.

The Tier 2 width is based on the maximum month of historical use reported in District billing records. Dividing the use during July by the number of customers yields a total use of 11 hcf in the max month, thus, the Tier 2 width was designed to include up to 11 hcf, or an additional 7 hcf beyond the essential water use included in Tier 1.

Tier 3 is not capped for Single Family customers. All usage exceeding Tier 2 is considered Tier 3 usage.

Table 16 shows the cost matrix where proposed variable costs are assigned to each tier level.

		Base Assigned to Volumetric Rates	Max Day Demand	Peak Hourly Demand
	Units (hcf)	\$43,468.58	\$69,197.73	\$44,855.57
All Use	37,223	\$1.17	\$1.17	\$1.17
Tier 2 and Tier 3	20,093		\$3.44	\$3.44
Tier 3	6,257			\$7.17
		Tier 1	Tier 2	Tier 3
	Proposed Rates	\$1.17	\$4.61	\$11.78
	Tier Use	17,130	13,836	6,257
	Revenue	\$20,004	\$63,808	\$73,710

Table 16. Variable Costs Assigned to Single Family Tiered Rates

Other Variable Rates

Other customer classes, such as Commercial and Multi-Unit customers are billed on a uniform rate structure because peaking levels do not fluctuate as drastically as with single family residences and master meters may reduce the ability of the District to determine use for individual units. To develop rates for these classes, the allocated costs to each customer class were divided by the projected water use. **Table 17** shows the proposed test year variable rates for Commercial and Multi-Unit customers.

³ Source: Bureau of Labor Statistics (2022)

Customer Class	Base Assigned to Volumetric Rates	Max Day Demand	Peak Hourly Demand	Units (hcf)	Variable Rate
Com	\$11,318.00	\$13,670.78	\$8,861.72	9,737	\$3.48
MFR	\$7,153.03	\$6,906.32	\$4,476.84	6,154	\$4.01

Table 17. Variable Rates for Other Customer Classes

Based on the proposed water financial plan outlined in this report, **Table 18** show the proposed fixed and variable rates for each year of the study period.

		Fixe	ed Charges	5		
Custome	r Class F	Y 2024	FY 2025	FY 2026	FY 2027	FY 2028
Residential						
5/8x3/4"		\$38.16	\$45.80	\$52.67	\$57.93	\$63.73
1"		\$56.26	\$67.51	\$77.64	\$85.40	\$93.94
1-1/2"		\$101.09	\$121.31	\$139.51	\$153.46	\$168.81
2"		\$155.11	\$186.13	\$214.06	\$235.46	\$259.01
3"		\$281.24	\$337.49	\$388.12	\$426.93	\$469.62
4"		\$461.39	\$553.67	\$636.72	\$700.39	\$770.43
Commercial						
5/8x3/4"		\$35.59	\$42.71	\$49.11	\$54.02	\$59.42
1"		\$51.96	\$62.35	\$71.70	\$78.87	\$86.76
1-1/2"		\$92.52	\$111.02	\$127.67	\$140.44	\$154.48
2"		\$141.38	\$169.66	\$195.11	\$214.62	\$236.08
3"		\$255.48	\$306.58	\$352.57	\$387.82	\$426.61
4"		\$418.45	\$502.14	\$577.46	\$635.21	\$698.73
MFR						
5/8x3/4"		\$57.01	\$68.41	\$78.68	\$86.54	\$95.20
1"		\$87.74	\$105.28	\$121.07	\$133.18	\$146.50
1-1/2"		\$163.86	\$196.63	\$226.12	\$248.74	\$273.61
2"		\$255.57	\$306.68	\$352.69	\$387.96	\$426.75
3"		\$469.72	\$563.66	\$648.21	\$713.03	\$784.34
4"		\$775.58	\$930.70	\$1,070.30	\$1,177.33	\$1,295.07
		Varial	ole Charg	es		
Tier	Width	FY 202	24 FY 202	25 FY 202	6 FY 2027	FY 2028
Res						
Tier 1	1-4 HCF	\$1.1	17 \$1.4	40 \$1.6	\$1.77	\$1.95
Tier 2	5-11 HFC	\$4.6	61 \$5.5	53 \$6.3	6 \$7.00	\$7.70
Tier 3	All Additional	\$11.7	78 \$14.1	4 \$16.2	6 \$17.88	\$19.67
Commercial				-		
Tier 1	All Use	\$3.4	48 \$4.1	17 \$4.8	0 \$5.28	\$5.81
MFR						
Tier 1	All use	\$4.0	01 \$4.8	31 \$5.5	4 \$6.09	\$6.70

Table 18. Proposed Rates

SEWER FINANCIAL PLANNING

Revenues

Based on the projected customer growth through the study period, rate revenues under the current rates were calculated for each year of the study. Additionally, non-rate revenues were estimated based on historical values and District input. With no rate increases, the District is expected to collect around \$423,000 a year from rates. Other operating revenues contribute approximately \$126,000 a year to total revenues. Additional non-operating revenues total approximately \$69,000 a year from investment income and will be used to offset future revenue requirements.

Operating and Maintenance Expense

This District's FY 2022-23 Budget anticipated approximately \$624,000 in expenses which were classified as O&M expense. Based on the sum of all O&M expense line items, a total overall inflation rate for FY 2023-24 is 5.1 percent, which accounts for the current record inflation being experienced across the country. For the rest of the study period, annual inflation is projected to be approximately 4.4 percent per year. Total O&M expenses will reach \$741,000 by FY 2027-28.

Capital Expenses

In addition to the costs of daily operation and maintenance, the District has capital expenses which average \$182,000 per year for the sewer system. Capital expenses include main replacements, vehicle replacements, and general office repairs.

Target Reserves

The District currently has no reserve policy for the sewer fund and a minimal cash balance. Optimally, the District should have a detailed reserve plan which separates different funds based on their proposed uses. For example, similar sized utilities will often have an operating fund which totals three months of operating revenue, approximately \$180,000 in FY 2027-28 for the RCSD, that can be used in times of revenue shortfall. Additionally, the District should maintain capital reserves which are set aside to address depreciating assets. The proposed financial plan includes annual contributions of approximately \$140,000 a year to the District's sewer reserves, reaching a target balance of \$690,000 by the end of the study.

Debt Funding

The District currently pays \$52,000 in debt service payments per year on a USDA Loan. These payments will continue through the study period. The current financial plan maintains debt service coverage ratios well above the industry standard of 1.20 through the duration. No additional loans are planned at this time.

Revenue Requirements

Under the recommended rates revenue requirements include reserve contributions. The total revenue requirements are offset by the sum of Other Operating Revenues and Non-operating Revenues.

Recommended Financial Plan

Based on the revenue requirements outlined, the proposed financial plan includes annual revenue adjustments of 55.0 percent in the test year, 20.0 percent the second year, 10.0 percent in years 3 and 4, and 8.0 percent in the final year of the study period. Under this plan a total of \$690,000 will be contributed to fund balances; additionally, the District will be able to sufficiently cover their operating expenses and an average of \$182,000 in capital expenditures per year. Table 19 shows the proposed financial plan and ending reserve balances for the study period. RDN recommends this plan because it best balances the future repair needs of the sewer system with customer impacts. The Cost of Service section will use this financial plan as a basis for calculations.

Category	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
	55.0%	20.0%	10.0%	10.0%	8.0%
Rate Revenue (Base)	\$422,512	\$422,512	\$422,512	\$422,512	\$422,512
FY 2024	\$232,382	\$232,382	\$232,382	\$232,382	\$232,382
FY 2025		\$130,979	\$130,979	\$130,979	\$130,979
FY 2026			\$78,587	\$78,587	\$78,587
FY 2027				\$86,446	\$86,446
FY 2028					\$76,072
Total Rate Revenue	\$654,894	\$785,873	\$864,460	\$950,906	\$1,026,979
Other Operating Revenue	\$125,725	\$125,725	\$125,725	\$125,725	\$125,725
Non-Operating Revenue	\$68,549	\$68,549	\$68,549	\$68,549	\$68,549
Total Revenue	\$849,168	\$980,146	\$1,058,734	\$1,145,180	\$1,221,252
Total O&M Expense	\$624,255	\$655,199	\$684,027	\$712,597	\$741,173
Total Non-operating Expense	\$238,684	\$192,151	\$196,821	\$203,271	\$336,075
Net Revenue after adjustment (expens	(\$13,771)	\$132,797	\$177,886	\$229,312	\$144,005
Total Available Funds	\$5,195	\$137,992	\$315,878	\$545,190	\$689,194

Table 19. Study Period Financial Plan, FY 2023-24 to FY 2027-28

Proposed Reserve Balances

Figure 11 shows the sewer fund balances under the proposed financial plan through the study period.



Figure 11. District Sewer Fund Balances under the Proposed Financial Plans

SEWER COST OF SERVICE

Methodology

A sewer system's COS analysis utilizes a three-step approach to allocate costs equitably among customers. These steps include 1) functionalization of cost and asset items, 2) cost classification, and 3) cost allocation to customers. The typical major functions included in a sewer study are collection, sewer treatment, customer accounts, and other general and administrative costs. RDN determined that the District current sewer rates follow generally accepted cost of service principles, so the proposed rates maintain the current rate structure with slight adjustments to the total cost allocations between each customer class.

Equivalent Units

Sewer customers are billed by the number of equivalent units in each charge category. For example, a residential or commercial customer is billed a fixed charge for each unit and a variable charge based on the total amount of water used by that customer. Equivalent units and commercial category are applied to customers by District engineers at the time they join the sewer system and reflect the relative impact each has on the system. To determine each customer's cost allocation, estimated representative sewer strengths and actual water use were used.

COS Allocation

The total Test Year revenue requirement developed in the financial planning stage, \$655,000, was functionalized into five cost causative functions: Collection, Pumping, Treatment, Customer Accounts, and Administrative and General. **Figure 12** shows the percentage of Test Year revenue requirements allocated to each function.



Figure 12. Functionalized Costs by Category

COS Allocation

The result of the COS allocation determines how the total revenue requirements should be allocated to each of the cost components, which are categorized and grouped based on the similar cost driving elements.

The cost causative components for the sewer rate study include:

- Volume the amount of sewer flow produced by each customer
- Biological Oxygen Demand (BOD) a measure of wastewater strength
- Total Suspended Solids (TSS) a measure of wastewater strength
- Sewer Service the costs of providing general customer related services to each customer

Figure 13 shows the total Test Year Revenue Requirements allocated to each cost component.



Figure 13. Cost of Service Cost Components by Category

Table 20 shows the revenue requirements by cost causative components under the proposed financial plan. The test year capital expense, debt service payments, and other obligations are allocated to each cost causative component using the percentages derived from the cost allocation.

Cost Allocation Summary	Total	Volume	BOD	TSS	Sewer Service
O&M Revenue Requirements	\$624,255	\$173,929	\$75,994	\$75,994	\$298,337
Non-Operating Revenue Requirements	\$238,684	\$120,328	\$58,948	\$58,948	\$461
	\$862,939	\$294,257	\$134,942	\$134,942	\$298,798
	0%	34%	16%	16%	35%
Other Operating Revenue	(\$125,725)	(\$42,872)	(\$19,660)	(\$19,660)	(\$43,533)
Non-Operating Revenue	(\$68,549)	(\$23,375)	(\$10,719)	(\$10,719)	(\$23,735)
Net Balance From Operations	(\$13,771)	(\$4,696)	(\$2,153)	(\$2,153)	(\$4,768)
Rate Revenue Requirement	\$654,894	\$223,315	\$102,409	\$102,409	\$226,761

Table 20. Rate Revenue Requirements for Test Year, FY 2024

Allocation to Units

The final step of the COS analysis is to allocate the cost causative components back to the customers. To perform this analysis, unit values were determined for each cost component. **Table 21** shows the number of systemwide units under each category. The flow category is expressed in hcf and strength categories (BOD and TSS) are expressed in pounds per year (LBS/year).

le 21.	Cost of Service	, lotal Units a	of Serv
	l loit	Count of	
	Unit	Units	
	Customers	595	
	Flow	53,356	
	BOD	88,494	

86,979

. Table vice

Dividing total cost of service per cost causative component by the number of applicable units produces a cost per unit which is then reallocated to each customer class based on the total number of units which is attributable to each. Table 22 the unit costs for each cost causative component.

TSS

Table 22. Total Cost of Service Divided by Units					
	Volume	BOD	TSS	Sewer Service	
Rate Revenue Requirement	\$223,315	\$102,409	\$102,409	\$226,761	
Units	53,356	88,494	86,979	595	
Unit Cost	\$4.19	\$1.16	\$1.18	\$381.11	

Allocation to Customer Classes

The final step of the COS analysis is to allocate the cost causative components back to the customers. In developing equitable rate structures, revenue requirements were allocated to Single Family, Multi-Family, and Commercial customers commensurate with the customer demand and services rendered. The costs are allocated to customer classes according to the amount of water consumed, required peaking demand, number of customers and other relevant factors. The costs allocated to each distinguished customer class determined in the COS analysis are shown in Table 23.

Table 23: Cost Allocation between Customer Classes					
Customer Class	Total	Volume	BOD	TSS	Sewer Service
Residential	\$466,732	\$167,064	\$57,675	\$58,679	\$183,314
Commercial A	\$58,259	\$16,819	\$5,806	\$5,907	\$29,727
Commercial B	\$30,711	\$6,857	\$7,101	\$7,225	\$9,528
Commercial C	\$55,221	\$12,445	\$21,481	\$17,484	\$3,811
Prison Camp	\$43,972	\$20,131	\$10,346	\$13,114	\$381

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SEWER RATE SETTING

Recommendations

RDN recommends the District implement the rates outlined in this report in fiscal year 2023-24. The District needs revenue increases to fund needed capital improvement projects and to develop reserve balances. The financial plan and COS analysis provides a Proposition 218 compliant rate structure. The proposed revenue requirements include funding for both the sewer reserves and Capital expenditures as well as sufficient funding for the daily operations of the sewer utility. If the District is able to secure additional funding sources, or if customer growth is higher than expected, resulting in increased revenues, the Board of Directors can choose to not implement increases in any year.

Proposed Sewer Rates

Generally speaking, the majority of costs incurred by the sewer utility are fixed, in that they aren't affected by changes in customer demand, in order to balance revenue stability with customer affordability, a proportion of fixed costs are also allocated to variable rates. **Table 24** shows the total costs allocated to fixed and variable charges for each customer class based on their share of the total cost of service and their service requirements. Some costs associated with sewer treatment will fluctuate based on total BOD and TSS, thus 20 percent of the costs allocated to those categories are allocated to variable rates.

Customer Class	Cost of Service	Variable	Percent	Fixed	Percent
Residential	\$466,732	\$23,271	5.0%	\$443,461	95.0%
Commercial A	\$58,259	\$2,343	4.0%	\$55,916	96.0%
Commercial B	\$30,711	\$2,865	9.3%	\$27,845	90.7%
Commercial C	\$55,221	\$7,793	14.1%	\$47,428	85.9%
Prison Camp	\$43,972	\$4,692	10.7%	\$43,972	100.0%

Table 24. Costs Allocated to Fixed and Variable Rates

Fixed Rates

To develop fixed rates for the sewer utility, the total cost of service allocated to the fixed portion of rates was divided by the number of customer billing units and bills per year. The proposed monthly fixed charge for each customer is shown in **Table 25**.

Customer	Fixed
Class	Charge
Residential	\$63.72
Commercial A	\$48.04
Commercial B	\$70.32
Commercial C	\$136.29
Prison Camp	\$3,273.31

Table 25. Proposed Fixed Rates, FY 2023-24

Variable Rates

The proposed variable rate structure was designed by dividing the costs allocated to the variable rate category by the projected water use for each customer class. **Table 26** shows the proposed test year variable rates for all customers.

Table 26. Variable Rates for All Customer Classes

Customer	Variable
Class	Rate
Residential	\$0.58
Commercial A	\$0.58
Commercial B	\$1.75
Commercial C	\$2.62
Prison Camp	\$0.98

Based on the proposed sewer financial plan outlined in this report, **Table 27** show the proposed fixed and variable rates for each year of the study period.

Fixed Charges							
Customer Class	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028		
Residential	\$63.72	\$76.46	\$84.10	\$92.52	\$99.92		
Commercial A	\$48.04	\$57.65	\$63.41	\$69.75	\$75.33		
Commercial B	\$70.32	\$84.38	\$92.82	\$102.10	\$110.27		
Commercial C	\$136.29	\$163.55	\$179.90	\$197.89	\$213.72		
Prison Camp	\$3,273.31	\$3,927.97	\$4,320.77	\$4,752.85	\$5,133.08		
Variable Charges							
	Varia	ble Charge	es				
Customer Class	Varia FY 2024	ble Charge FY 2025	es FY 2026	FY 2027	FY 2028		
Customer Class Residential	Varia FY 2024 \$0.58	ble Charge FY 2025 \$0.70	es FY 2026 \$0.77	FY 2027 \$0.85	FY 2028 \$0.91		
Customer Class Residential Commercial A	Varia FY 2024 \$0.58 \$0.58	ble Charge FY 2025 \$0.70 \$0.70	es FY 2026 \$0.77 \$0.77	FY 2027 \$0.85 \$0.85	FY 2028 \$0.91 \$0.91		
Customer Class Residential Commercial A Commercial B	Varia FY 2024 \$0.58 \$0.58 \$1.75	ble Charge FY 2025 \$0.70 \$0.70 \$2.10	FY 2026 \$0.77 \$0.77 \$2.31	FY 2027 \$0.85 \$0.85 \$2.54	FY 2028 \$0.91 \$0.91 \$2.74		
Customer Class Residential Commercial A Commercial B Commercial C	Varia FY 2024 \$0.58 \$0.58 \$1.75 \$2.62	ble Charge FY 2025 \$0.70 \$0.70 \$2.10 \$3.15	FY 2026 \$0.77 \$0.77 \$2.31 \$3.46	FY 2027 \$0.85 \$0.85 \$2.54 \$3.81	FY 2028 \$0.91 \$0.91 \$2.74 \$4.11		

Table 27. Proposed Sewer Rates

CONCLUSION

Recommendations:

- Build specific reserve funds by making annual contributions from revenue generated from rates
- Implement the proposed annual revenue and rate adjustments for both water and sewer utilities
- Adjust the water tier widths for single family residential customers to reflect current average household sizes
- Reduce the number of tiers for single family residential customers so that variable rates can be based on actual costs to provide service
- Bill only one tier of use for multi-family and commercial water customers
- Bill water customers based on their meter size rather than the number of units
- Maintain the current sewer rate structure with relative rates based on the cost of service analysis

Water Rate Impacts:

Because of the proposed changes to the rate structure, customers will have slightly different impacts based on their water use. **Figure 14** shows the potential impacts of rate changes in the test year for Single Family Residential customers with a 5/8" meter at different use levels. A single family residence with a 5/8" meter and water and sewer service who uses 6 hcf of water in a month will have a bill of \$119.27 (\$148.27 when the additional SEF and Loan fees are included) compared to the current bill of \$85.00 (\$114.00 with included fees) an overall increase of approximately \$34 a month. Due to the changes in the water rate structure, customers who use more water will see a greater change in rates than customers who use less water.



Figure 14. Single Family Residential with 5/8" Meter Water Rates Under Various Use Levels