

# **SAN BERNARDINO COUNTY**

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*County Service Area 70 SP2 (High Country)  
Sewer Rate Study Report*

*Final Report*

**March 2026**



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# 1. Introduction

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## 1.1 Purpose

San Bernardino County (County) retained NBS to conduct a comprehensive utility rate study for its sewer enterprise funds for County Service Area 70 SP2 High Country (CSA 70 SP2). The County had several objectives and goals in mind for this study including meeting revenue requirements, reviewing the rising costs of providing services, and complying with certain legal requirements (e.g., California Constitution Article XIII D, Section 6, which is commonly referred to as Proposition 218 [Prop 218]). The County's broader objectives in this study include ensuring adequate funding for operating costs, maintaining reasonable reserves, ensuring revenue stability in utility rates. The rates resulting from this study were developed in a manner that is consistent with industry standard cost-of-service principles. In addition to documenting the rate study methodology, this report is provided with the intent to assist the County in its continuing effort to maintain transparent communications with the residents and community it serves.

In developing new rates for CSA 70 SP2's enterprise fund, NBS worked cooperatively with County staff and the Board of Supervisors (Board) in selecting the appropriate rate alternatives that address the County's goals and objectives. Based on input provided by County staff, NBS proposes the rates summarized in this report. The Board has the final decision regarding the adoption of the proposed rates and whether to proceed with the Prop 218 approval process.

## 1.2 Overview of the Study

Comprehensive rate studies, such as this one, typically include three components: (1) preparation of a financial plan that identifies the net revenue requirements for the utility; (2) analysis of the cost to serve each customer class, and (3) the rate structure design. These steps are shown in Figure 1 and are intended to follow industry standards and reflect the fundamental principles of cost-of-service rate making embodied in the Water Environment Federation's *Financing and Charges for Wastewater Systems* (Manual of Practice No. 27).<sup>1</sup>

Rate studies also address requirements under Prop 218 that rates not exceed the cost of providing the service and be proportionate to the cost of providing service for all customers. In terms of the chronology of the study, the three steps shown in Figure 1 represent the order in which they were performed in this study.

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<sup>1</sup> *Financing and Charges for Wastewater Systems*, Manual of Practice No. 27, Water Environment Federation, Fourth Edition, 2018.

**Figure 1. Primary Components of a Rate Study**



NBS projected revenues and expenditures, developed net revenue requirements, performed cost-of-service rate analyses, and developed new sewer rates for the County using this approach. The following sections in this report present an overview of the methodologies, assumptions, and data used along with the financial plans and rates developed. Detailed tables and figures documenting the development of the proposed rates are provided in the Appendices.

The County provided NBS with the data necessary to conduct the study, including historical, current, and projected revenues and expenditures, number of customer accounts, and water consumption data along with other operational and capital cost information.

### **FINANCIAL PLAN**

As a part of the rate study, NBS projected revenues and expenditures on a cash-flow basis for the next five (5) years. The amount of rate revenue required, that will allow reserves to be maintained at the recommended levels, is known as the net revenue requirement. As current rate revenue falls short of the net revenue requirement, rate adjustments – or more accurately, adjustments in the total revenue collected from rates – are recommended. This report presents an overview of the methodologies, assumptions, and data used along with the financial plan and proposed rates developed in this study.<sup>2</sup>

### **COST-OF-SERVICE ANALYSIS**

The basic purpose of the cost-of-service analysis (COSA) is to fairly and equitably allocate costs to customer classes. The cost-of-service analysis consists of two major components: (1) the classification of expenses, and (2) the allocation of costs to customer classes. In the case of CSA 70 SP2, volume data is not available by customer and there is a single customer class. Due to the County's desire to maintain a consistency, NBS has developed a fixed rate structure. Further details are discussed below and documented in the Appendix.

### **RATE DESIGN ANALYSIS**

During the rate design phase of the study, NBS and County staff worked together to develop rate alternatives that will meet the County's objectives. It is important for the County to send proper price

<sup>2</sup> The complete financial plans are available in the *Appendices*.

signals to its customers about the actual cost of providing service. This objective is typically addressed through both the magnitude of the rate adjustments and the rate structure design. In other words, both the amount of revenue collected and the way in which the revenue is collected from customers are important.

Several criteria are typically considered in setting rates and developing sound rate structures. The fundamentals of this process have been well documented in several rate-setting manuals, such as AWWA's Manual M1. The foundation for evaluating rate structures is generally credited to James C. Bonbright in *Principles of Public Utility Rates*,<sup>3</sup> which outlines pricing policies, theories, and economic concepts along with various rate designs. The following is a simplified list of the attributes of a sound rate structure:

- Rates should be easy to understand from the customer's perspective.
- Rates should be easy to administer from the utility's perspective.
- Rates should be equitable and non-discriminating (i.e., cost-based).
- Rates should promote the efficient allocation of the resource.
- There should be continuity in the rate making philosophy over time.
- Rates should provide month-to-month and year-to-year revenue stability.

## KEY FINANCIAL ASSUMPTIONS

The following is a summary of the key financial assumptions used in the analyses. The following capital and operational fund targets reflect input from County staff to meet specific utility objectives.

**Funding of Capital Projects** – There are no planned capital improvement projects or costs.

**Reserve Targets** – For the sewer utility, the County maintains reserves for operations, capital, and other specific needs. The details of each utility's reserve targets are covered in their respective sections of this report.

**Inflation and Growth Projections** – Assumptions were made in the analysis regarding cost inflation to project future revenues and expenses for the study period. The following inflation factors were used in the analysis:

- Customer growth is estimated at 0.00% per year.
- General cost inflation is set at 3.20% annually.
- Labor cost inflation is set at 0.00% annually.

These inflation factors are based on long-term trends; therefore, the County should re-examine these factors in another year to assess the impacts on utility costs and whether projected rate increases will be sufficient for the remainder of the rate adoption period.

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<sup>3</sup> James C. Bonbright, Albert L. Danielsen, and David R. Kamerschen, *Principles of Public Utility Rates*, Arlington, VA: Public Utilities Report, Inc., Second Edition, 1988, pp. 383-384.

## 2. Sewer Rate Study

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### 2.1 Key Sewer Rate Study Issues

The County's sewer rate analysis was undertaken with a few specific objectives, including:

- Ensuring equity among customer classes by collecting rate revenue through the cost-of-service process by Equivalent Dwelling Unit.
- Maintain adequate reserve levels to ensure continuity in operations.
- Comply with Prop 218 requirements to ensure costs are properly allocated between user classifications.

### 2.2 Financial Plan

It is important for the sewer utility to ensure rates provide sufficient funding to cover operating and maintenance costs, planned capital expenditures, and maintain reasonable reserves. The sewer utility's rate increases are governed by these needs, and the current state of the County's sewer utility is as follows:

**Meeting Net Revenue Requirements:** For FY 2026/27 through FY 2030/31, the projected net revenue requirements (that is, total operating expenses plus rate-funded capital costs less non-rate revenues) for the County averages approximately \$324 thousand annually. Current revenues are sufficient to cover operating costs and maintain reserves.

**Maintaining Reserve Funds:** Reserve funds provide a basis for a utility to cope with fiscal emergencies such as revenue shortfalls, asset failure, and natural disasters, among other events. Reserve policies provide guidelines for sound financial management, with an overall long-range perspective to maintain financial solvency and mitigate financial risks associated with revenue instability, volatile capital costs, and emergencies. The reserve funds for the sewer utility are considered unrestricted reserves and consist of the following:

- **Operating Reserve:** The target ending fund balance for the operating reserve is equal to 90 days of operating expenses, or approximately \$40 thousand in FY 2026/27. An operating reserve is intended to promote financial viability in the event of any short-term fluctuation in revenues and/or expenditures. Fluctuations in revenue can be caused by weather patterns, the natural inflow and outflow of cash during billing cycles, and – particularly in periods of economic distress – changes or trends in age of receivables.
- **Capital Rehabilitation & Replacement Reserve** equal to 3% of net asset value, or approximately \$575 thousand. This reserve is set aside to address long-term capital system replacement and rehabilitation needs.

**Figure 2** summarizes the sources and uses of funds, net revenue requirements, and the recommended annual increases in sewer rate revenue proposed for the next five years. **Figure 3** summarizes the projected reserve fund balances and reserve targets for the sewer utility's unrestricted funds.

**Figure 2. Summary of Sewer Revenue Requirements**

Summary of Sources and Uses of Funds and Net Revenue Requirements	Budget		5-Year Projected Rate Period			
	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31
<b>Sources of Sewer Funds</b>						
Rate Revenue Under Current Rates	\$ 310,000	\$ 310,000	\$ 310,000	\$ 310,000	\$ 310,000	\$ 310,000
Non-Rate Revenues	21,435	21,435	21,435	21,435	21,435	21,435
<b>Total: Sources of Funds</b>	<b>\$ 331,435</b>	<b>\$ 331,435</b>	<b>\$ 331,435</b>	<b>\$ 331,435</b>	<b>\$ 331,435</b>	<b>\$ 331,435</b>
<b>Uses of Sewer Funds</b>						
Operating Expenses	\$ 154,956	\$ 159,664	\$ 164,522	\$ 169,536	\$ 174,711	\$ 180,051
Debt Service	-	-	-	-	-	-
Rate-Funded Capital Expenses	-	-	-	-	-	-
<b>Total: Use of Funds</b>	<b>\$ 154,956</b>	<b>\$ 159,664</b>	<b>\$ 164,522</b>	<b>\$ 169,536</b>	<b>\$ 174,711</b>	<b>\$ 180,051</b>
<b>Surplus (Deficiency) before Rate Increase</b>	<b>\$ 176,479</b>	<b>\$ 171,771</b>	<b>\$ 166,913</b>	<b>\$ 161,899</b>	<b>\$ 156,724</b>	<b>\$ 151,384</b>
Additional Revenue from Rate Increases <sup>1</sup>	-	14,322	14,322	14,322	14,322	14,322
<b>Surplus (Deficiency) after Rate Increase</b>	<b>\$ 176,479</b>	<b>\$ 186,093</b>	<b>\$ 181,235</b>	<b>\$ 176,221</b>	<b>\$ 171,046</b>	<b>\$ 165,706</b>
<b>Projected Increases in Rate Revenue</b>	<b>0.00%</b>	<b>4.62%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>
<b>Total Rate Revenue Requirement<sup>2</sup></b>	<b>\$ 310,000</b>	<b>\$ 324,322</b>	<b>\$ 324,322</b>	<b>\$ 324,322</b>	<b>\$ 324,322</b>	<b>\$ 324,322</b>

1. Assumes new rates are implemented July 1, 2026.

2. Total use of funds less non-rate revenues and interest earnings.

**Figure 3. Summary of Sewer Reserve Funds**

Beginning Reserve Fund Balances and Recommended Reserve Targets	Budget		5-Year Projected Rate Period			
	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31
<b>Unrestricted Reserves</b>						
<b>Operating Reserve</b>						
Ending Balance	\$ 39,000	\$ 40,000	\$ 41,000	\$ 42,000	\$ 44,000	\$ 45,000
<i>Recommended Minimum Target</i>	<i>39,000</i>	<i>40,000</i>	<i>41,000</i>	<i>42,000</i>	<i>44,000</i>	<i>45,000</i>
<b>Capital Rehabilitation &amp; Replacement Reserve</b>						
Ending Balance	\$ 2,159,549	\$ 2,345,032	\$ 2,525,667	\$ 2,701,297	\$ 2,870,763	\$ 3,035,909
<i>Recommended Minimum Target</i>	<i>575,000</i>	<i>575,000</i>	<i>575,000</i>	<i>575,000</i>	<i>575,000</i>	<i>575,000</i>
<b>Total Ending Balance</b>	<b>\$ 2,198,549</b>	<b>\$ 2,385,032</b>	<b>\$ 2,566,667</b>	<b>\$ 2,743,297</b>	<b>\$ 2,914,763</b>	<b>\$ 3,080,909</b>
<i>Total Recommended Minimum Target</i>	<i>\$ 614,000</i>	<i>\$ 615,000</i>	<i>\$ 616,000</i>	<i>\$ 617,000</i>	<i>\$ 619,000</i>	<i>\$ 620,000</i>

A more detailed version of the utility’s proposed five-year financial plan is included in the Appendix. The appendix tables include revenue requirements, reserve funds, revenue sources, proposed rate increases, and the County’s capital improvement program.

### 2.3 Cost-of-Service Analysis

Once the net revenue requirements are determined, the cost-of-service analysis (COSA) proportionately distributes the revenue requirements to the single customer class. The COSA consists of the classification of expenses and then the allocation of those expenses to customer classes based on allocation factors, such as number of equivalent dwelling units (EDUs). Ultimately, a COSA is intended to result in rates that are proportional to the cost of providing service to each customer class.

#### DISTRIBUTION OF COSTS OF SERVICE TO CUSTOMER CLASSES

We arrive at the customer class responsibility for service by applying the unit costs of service to the number of units, in this case Equivalent Dwelling Units, for which the customer class is responsible. In other words, the total cost of service revenue requirement is divided by the number of Equivalent Dwelling Units.

## 2.4 Rate Design Analysis

The cost of service analysis described in previous sections of this report provide a basis for the design of the sewer rates. Ultimately, the rate alternative selected by County staff is one similar to the existing rate design. The reasons for selecting this alternative are (1) it maintains the existing rate design developed during the last study (2) it provides continuity for sewer customers, and (3) it is easy to understand from a customer’s perspective and easy to administrate from County staff’s perspective.

### FIXED CHARGES

The fixed charge recognizes that the sewer utility incurs fixed costs regardless of whether customers send any sewer into the County’s collection system. The factor used to develop the fixed change is the number of Equivalent Dwelling Units associated with each account. The monthly fixed charge is calculated by taking 100% of total revenue requirements and dividing by the number of Equivalent Dwelling Units.

The charge calculations are summarized in **Figure 4**.

**Figure 4. Calculation of Fixed Charges**

Customer Class	Number of Billing Units	Net Revenue Requirement	Estimated Fixed Revenue	Monthly Fixed Charge Per Unit
All Customers	517	\$ 324,322	\$ 324,322	\$ 52.28
<b>Total</b>	<b>517</b>	<b>\$ 324,322</b>	<b>\$ 324,322</b>	

## 2.5 Proposed Sewer Rates

The proposed sewer rates are similar to existing rates in terms of the rate design and rate methodology.

**Figure 5. Current vs. Proposed Sewer Rates**

Sewer Rate Schedule <sup>1</sup>	Current Rates	Proposed Sewer Rates				
		FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31
<b>Monthly Fixed Service Charge Per EDU</b>						
All Customers		Per Dwelling Unit				
All Customers	\$52.28	\$52.28	\$52.28	\$52.28	\$52.28	\$52.28

compares the current and proposed rates for FY 2026/27 through FY 2030/31 by customer class. More detailed tables on the development of the proposed rates are documented in Appendix A.

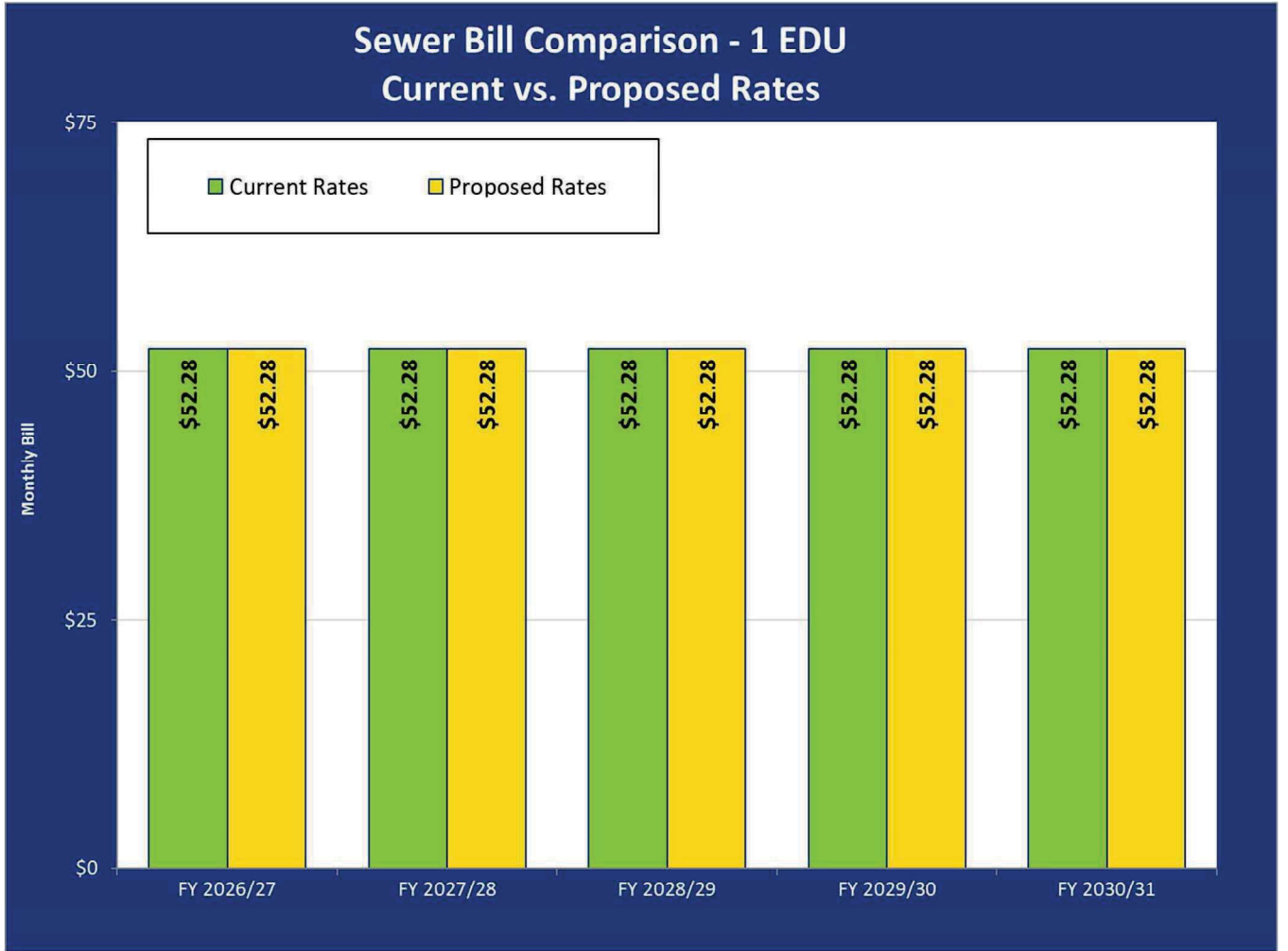
**Figure 5. Current vs. Proposed Sewer Rates**

Sewer Rate Schedule <sup>1</sup>	Current Rates	Proposed Sewer Rates				
		FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31
<b>Monthly Fixed Service Charge Per EDU</b>						
All Customers		Per Dwelling Unit				
All Customers	\$52.28	\$52.28	\$52.28	\$52.28	\$52.28	\$52.28

## 2.6 Comparison of Current and Proposed Sewer Bills

The following figures compare monthly sewer bills under current and proposed rates for a customer with one Equivalent Dwelling Unit over the 5-year rate period.

Figure 6. Sewer Bill Comparison



## 3. Recommendations and Next Steps

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### 3.1 Consultant Recommendations

NBS recommends the County take the following actions:

- **Approve and Accept this Study:** NBS recommends the County Board formally approve and adopt this Study and its recommendations and proceed with the next steps outlined below to implement the proposed rates. This will provide documentation of the rate study analyses and the basis for analyzing potential changes to future rates.
- **Implement Recommended Levels of Rate Increases and Proposed Rates:** Based on successfully meeting the Prop 218 procedural requirements, the County should proceed with implementing the 5-year schedule of proposed rates and rate increases previously shown in **Figure 5**. This will help ensure the continued financial health of CSA 70 SP2's utilities.

### 3.2 Next steps

**Annually Review Rates and Revenue** – Any time an agency adopts new utility rates or rate structures, those new rates should be closely monitored over the next several years to ensure the revenue generated is sufficient to meet the annual revenue requirements. Changing economic and water consumption patterns underscore the need for this review, as well as potential and unseen changing revenue requirements — particularly those related to environmental regulations that can significantly affect capital improvements and repair and replacement costs.

*Note: The attached Appendix provides more detailed information on the analysis of the financial plan, revenue requirements, cost-of-service, and the rate design analyses that have been summarized in this report.*

### 3.3 NBS' Principal Assumptions and Considerations

In preparing this report and the opinions and recommendations included herein, NBS has relied on several principal assumptions and considerations regarding financial matters, conditions, and events that may occur in the future. This information and these assumptions, including the County's budgets, capital improvement costs, customer accounts and consumption, and information from County staff were provided by sources we believe to be reliable, although NBS has not independently verified this data.

While we believe NBS' use of such information and assumptions is reasonable for the purpose of this report and its recommendations, some assumptions will invariably not materialize as stated herein and may vary significantly due to unanticipated events and circumstances. Therefore, the actual results can be expected to vary from those projected to the extent that actual future conditions differ from those assumed by us or provided to us by others.

# Appendix A. Sewer Rate Study Tables and Figures

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TABLE 1 : FINANCIAL PLAN AND SUMMARY OF REVENUE REQUIREMENTS

RATE REVENUE REQUIREMENTS SUMMARY	Rate Period					
	Projected FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31
<b>Sources of Sewer Funds</b>						
<b>Rate Revenue</b>						
070-Charges for Current Services	\$ 435	\$ 435	\$ 435	\$ 435	\$ 435	\$ 435
075-Charges for Current Services-Fee Ord	310,000	310,000	310,000	310,000	310,000	310,000
<b>Other Revenue</b>						
000-Taxes	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
030-Revenue From Use of Money & Property	21,000	21,000	21,000	21,000	21,000	21,000
080-Other Revenue	-	-	-	-	-	-
<b>Total: Sources of Funds</b>	<b>\$ 331,435</b>	<b>\$ 331,435</b>	<b>\$ 331,435</b>	<b>\$ 331,435</b>	<b>\$ 331,435</b>	<b>\$ 331,435</b>
<b>Uses of Sewer Funds</b>						
<b>Operating Expenses:</b>						
200-Services & Supplies-General	\$ 103,580	\$ 106,868	\$ 110,261	\$ 113,763	\$ 117,376	\$ 121,106
530-Other Financ Uses-Operating Trsf Out	-	-	-	-	-	-
540-Intra Entity Reimbursement Out	51,376	52,796	54,262	55,774	57,335	58,945
Subtotal: Operating Expenses	\$ 154,956	\$ 159,664	\$ 164,522	\$ 169,536	\$ 174,711	\$ 180,051
<b>Other Expenditures:</b>						
Existing Debt Service	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Future Debt Service	-	-	-	-	-	-
Rate-Funded Capital Expenses	-	-	-	-	-	-
Subtotal: Other Expenditures	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total: Uses of Funds</b>	<b>\$ 154,956</b>	<b>\$ 159,664</b>	<b>\$ 164,522</b>	<b>\$ 169,536</b>	<b>\$ 174,711</b>	<b>\$ 180,051</b>
<b>Plus: Revenue from Rate Increases<sup>3</sup></b>						
<b>Annual Surplus/(Deficit)</b>	<b>\$ 176,479</b>	<b>\$ 186,093</b>	<b>\$ 181,235</b>	<b>\$ 176,221</b>	<b>\$ 171,046</b>	<b>\$ 165,706</b>
<b>Net Revenue Req. (Total Uses less Non-Rate Revenue)</b>	<b>\$ 133,956</b>	<b>\$ 138,664</b>	<b>\$ 143,522</b>	<b>\$ 148,536</b>	<b>\$ 153,711</b>	<b>\$ 159,051</b>
<b>Total Rate Revenue After Rate Increases</b>	<b>\$ 435</b>	<b>\$ 435</b>	<b>\$ 435</b>	<b>\$ 435</b>	<b>\$ 435</b>	<b>\$ 435</b>
<b>Projected Annual Rate Revenue Increase</b>	<b>0.00%</b>	<b>4.62%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>
<b>Cumulative Increase from Annual Revenue Increases</b>	<b>0.00%</b>	<b>4.62%</b>	<b>4.62%</b>	<b>4.62%</b>	<b>4.62%</b>	<b>4.62%</b>
<b>Debt Coverage After Rate Increase<sup>4</sup></b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>

1. Revenue and expenses for FY 2024/25 provided by the District. Revenues and expenses for all other years are escalated based on the forecasting assumptions in Table 8.
2. Interest earnings for FY 2024/25 are from the District's Budget. For all other years, it is calculated based on historical LAIF returns.
3. Revenue from rate increases assumes an implementation date of January 1, 2026 for new rates. For each year thereafter, the assumption is that new rates will be implemented on July 1st of each year.
4. The District must maintain a debt service coverage of 125% under the Installment Purchase Contract with Municipal Finance Corporation. Conditional formatting has been applied to highlight years where the debt coverage ratio is not met.  
Source file: Item 7 Installment Purchase Sewer Project.pdf.

2	←-- Select Financial Plan Scenario Here	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31
<b>Financial Plan Alternatives</b>							
1	Alternative 1 - Custom Rate Increase	0.00%	10.00%	10.00%	10.00%	10.00%	3.00%
2	Alternative 2 - Custom Rate Increase	0.00%	4.62%	0.00%	0.00%	0.00%	0.00%
3	Alternative 3 - Custom Rate Increase	0.00%	25.00%	7.00%	5.00%	5.00%	3.00%
4	Alternative 4 - No Rate Increases	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

TABLE 2 : RESERVE FUND SUMMARY

SUMMARY OF CASH ACTIVITY SEWER FUND RESERVES	Projected FY 2025/26	Rate Period				
		FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31
<b>Total Beginning Cash<sup>1</sup></b>						
<b>Unrestricted Reserves:</b>						
<b>Operating Reserve</b>						
Beginning Reserve Balance	\$ 875,966	\$ 39,000	\$ 40,000	\$ 41,000	\$ 42,000	\$ 44,000
Plus: Net Cash Flow (After Rate Increases)	176,479	186,093	181,235	176,221	171,046	165,706
Plus: Transfer of Debt Reserve Surplus	-	-	-	-	-	-
Plus: Interest Earnings	8,760	390	400	410	420	440
Less: Transfer Out to Capital Replacement Reserve	(1,022,205)	(185,483)	(180,635)	(175,631)	(169,466)	(165,146)
<b>Ending Operating Reserve Balance</b>	<b>\$ 39,000</b>	<b>\$ 40,000</b>	<b>\$ 41,000</b>	<b>\$ 42,000</b>	<b>\$ 44,000</b>	<b>\$ 45,000</b>
<b>Target Ending Balance (90 days of O&amp;M)<sup>2</sup></b>	<b>\$ 39,000</b>	<b>\$ 40,000</b>	<b>\$ 41,000</b>	<b>\$ 42,000</b>	<b>\$ 44,000</b>	<b>\$ 45,000</b>
<b>Capital Rehabilitation &amp; Replacement Reserve</b>						
Beginning Reserve Balance	\$ 1,137,344	\$ 2,159,549	\$ 2,345,032	\$ 2,525,667	\$ 2,701,297	\$ 2,870,763
Plus: Grant Proceeds	-	-	-	-	-	-
Plus: Transfer of Operating Reserve Surplus	1,022,205	185,483	180,635	175,631	169,466	165,146
Less: Use of Reserves for Capital Projects	-	-	-	-	-	-
<b>Ending Capital Rehab &amp; Replacement Reserve Balance</b>	<b>\$ 2,159,549</b>	<b>\$ 2,345,032</b>	<b>\$ 2,525,667</b>	<b>\$ 2,701,297</b>	<b>\$ 2,870,763</b>	<b>\$ 3,035,909</b>
<b>Target Ending Balance (3% of net assets)</b>	<b>\$ 575,000</b>	<b>\$ 575,000</b>	<b>\$ 575,000</b>	<b>\$ 575,000</b>	<b>\$ 575,000</b>	<b>\$ 575,000</b>
<b>Ending Cash Balance - Excl. Restricted Reserves</b>	<b>\$ 2,198,549</b>	<b>\$ 2,385,032</b>	<b>\$ 2,566,667</b>	<b>\$ 2,743,297</b>	<b>\$ 2,914,763</b>	<b>\$ 3,080,909</b>
<b>Min. Target Ending Cash Balance - Excl. Restricted Reser</b>	<b>\$ 614,000</b>	<b>\$ 615,000</b>	<b>\$ 616,000</b>	<b>\$ 617,000</b>	<b>\$ 619,000</b>	<b>\$ 620,000</b>
<b>Ending Surplus/(Deficit) Compared to Reserve Targets</b>	<b>\$ 1,584,549</b>	<b>\$ 1,770,032</b>	<b>\$ 1,950,667</b>	<b>\$ 2,126,297</b>	<b>\$ 2,295,763</b>	<b>\$ 2,460,909</b>
<b>Days Cash on Hand</b>	<b>5,179</b>	<b>5,453</b>	<b>5,695</b>	<b>5,907</b>	<b>6,090</b>	<b>6,246</b>
<b>Annual Interest Earnings Rate<sup>3</sup></b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>

1. Beginning cash balances are as of July 1, 2024.

2. The target ending balance is set equal to 90-days of O&M expenses.

3. Historical interest earning rates are per the average annual yields for funds invested in LAIF (2018-2024). The source is the California State Treasurer's website: <https://www.treasurer.ca.gov/pmia-laif/historical/annual.asp>.

CSA 70 SP2 High Country  
SEWER RATE STUDY  
Operating Revenue and Expenses

TABLE 4 : REVENUE FORECAST<sup>1</sup>

DESCRIPTION	Basis	Budget		Projected		Rate Period					
		FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31			
<b>Sewer Operating Revenue</b>											
40008145 INT & PEN DELINQUENT TAXES	1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
000-Taxes											
40308500 INTEREST	1	\$ 21,000	\$ 21,000	\$ 21,000	\$ 21,000	\$ 21,000	\$ 21,000	\$ 21,000	\$ 21,000	\$ 21,000	\$ 21,000
030-Revenue From Use of Money & Property											
40708170 SP ASSMNT CUR YR TX ROLL SEWER	1	\$ 235	\$ 235	\$ 235	\$ 235	\$ 235	\$ 235	\$ 235	\$ 235	\$ 235	\$ 235
070-Charges for Current Services											
40755700 FEE ORD-SANITATION SERVICES	1	\$ 310,000	\$ 310,000	\$ 310,000	\$ 310,000	\$ 310,000	\$ 310,000	\$ 310,000	\$ 310,000	\$ 310,000	\$ 310,000
40759800 FEE ORD-OTHER SERVICES	1	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200
075-Charges for Current Services-Fee Ord											
40809930 OTHER SALES	1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
080-Other Revenue											
<b>TOTAL REVENUE</b>		<b>\$ 331,435</b>	<b>\$ 331,435</b>	<b>\$ 331,435</b>	<b>\$ 331,435</b>	<b>\$ 331,435</b>	<b>\$ 331,435</b>	<b>\$ 331,435</b>	<b>\$ 331,435</b>	<b>\$ 331,435</b>	<b>\$ 331,435</b>

TABLE 5 : REVENUE SUMMARY

DESCRIPTION	Basis	Budget		Projected		Rate Period					
		FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31			
<b>Rate Revenue</b>											
070-Charges for Current Services		\$ 435	\$ 435	\$ 435	\$ 435	\$ 435	\$ 435	\$ 435	\$ 435	\$ 435	\$ 435
075-Charges for Current Services-Fee Ord		\$ 310,000	\$ 310,000	\$ 310,000	\$ 310,000	\$ 310,000	\$ 310,000	\$ 310,000	\$ 310,000	\$ 310,000	\$ 310,000
<b>Other Revenue</b>											
000-Taxes		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
030-Revenue From Use of Money & Property		\$ 21,000	\$ 21,000	\$ 21,000	\$ 21,000	\$ 21,000	\$ 21,000	\$ 21,000	\$ 21,000	\$ 21,000	\$ 21,000
080-Other Revenue		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>TOTAL REVENUE</b>		<b>\$ 331,435</b>	<b>\$ 331,435</b>	<b>\$ 331,435</b>	<b>\$ 331,435</b>	<b>\$ 331,435</b>	<b>\$ 331,435</b>	<b>\$ 331,435</b>	<b>\$ 331,435</b>	<b>\$ 331,435</b>	<b>\$ 331,435</b>

CSA 70 SP2 High Country  
SEWER RATE STUDY  
Operating Revenue and Expenses

TABLE 6 : OPERATING EXPENSE FORECAST<sup>1</sup>

DESCRIPTION	Basis	Budget		Projected		Rate Period					
		FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31			
<b>Operating Expenses</b>											
<b>Operating Expenses</b>											
52002085 LEGAL NOTICES	2	\$ 60	\$ 62	\$ 64	\$ 66	\$ 68	\$ 70	\$ 72			
52002135 SPECIAL DEPARTMENT EXPENSE	2	537	82,560	85,202	87,928	90,742	93,646	96,643			
52002187 UTILITIES-SEWER	2	80,000	8,256	8,520	8,793	9,074	9,365	9,664			
52002310 PRESORT & PACKAGING (ISF ONLY)	2	8,000	834	834	834	834	834	834			
52002415 COUNTY SERVICES (INCL LOWCAP)	3	5,000	5,160	5,325	5,496	5,671	5,853	6,040			
52002445 OTHER PROFESSIONAL & SPEC SVCS	2	6,500	6,708	6,923	7,144	7,373	7,609	7,852			
52002458 PERMIT COSTS	2	100,931	103,580	106,868	110,261	113,763	117,376	121,106			
<b>200- Services &amp; Supplies-General</b>											
55305030 OPERATING TRANSFERS OUT	2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -			
<b>530-Other Financ Uses-Operating Trcf Out</b>											
55405010 SALARIES & BENEF TRANSFERS OUT	3	\$ 7,000	\$ 7,000	\$ 7,000	\$ 7,000	\$ 7,000	\$ 7,000	\$ 7,000			
55405012 SERVICES & SUPPLY TRANSFERS OUT	2	800	826	852	879	907	936	966			
55405018 INTERNAL COST ALLOCA OUT	2	42,200	43,350	44,944	46,582	47,866	49,398	50,979			
540-Intra Entity Reimbursement Out		\$ 50,000	\$ 51,376	\$ 52,796	\$ 54,262	\$ 55,774	\$ 57,335	\$ 58,945			
<b>Subtotal - Operating Expenses</b>		\$ 150,931	\$ 154,956	\$ 159,664	\$ 164,522	\$ 169,536	\$ 174,711	\$ 180,051			
<b>GRAND TOTAL SEWER EXPENSES</b>		\$ 150,931	\$ 154,956	\$ 159,664	\$ 164,522	\$ 169,536	\$ 174,711	\$ 180,051			

1. Revenue and expenses for FY 2024/25 provided by the District. Revenues and expenses for all other years are escalated based on the forecasting assumptions in Table 7.

TABLE 7 : FORECASTING ASSUMPTIONS

INFLATION FACTORS <sup>1</sup>	Basis	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31
Customer Growth <sup>2</sup>	1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
General Cost Inflation <sup>3</sup>	2	0.00%	3.20%	3.20%	3.20%	3.20%	3.20%	3.20%
Labor Cost Inflation <sup>4</sup>	3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Interest on Investments <sup>5</sup>	4	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Electricity <sup>6</sup>	5	0.00%	2.62%	2.62%	2.62%	2.62%	2.62%	2.62%
No Escalation	6	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

- Expenses are inflated each year by the following annual inflation factor categories.
- Customer growth is based on the population projections provided by the County.
- General cost inflation is based on the 5-year average annual change in the Consumer Price Index for all Urban Consumers in the San Bernardino-Riverside-Ontario, CA area.
- Labor cost inflation is provided by County.
- Interest rate inflation is provided by the County.
- Electricity cost inflation is based on the 5-year average change in the Consumer Price Index for Electricity for the San Bernardino-Riverside-Ontario, CA area.

CSA 70 SP2 High Country  
SEWER RATE STUDY  
Capital Improvement Plan Expenditures

TABLE 8 : CAPITAL FUNDING SUMMARY

CAPITAL FUNDING FORECAST		5-Year Projected Rate Period						
Funding Sources:	Budget	Projected	5-Year Projected Rate Period					
	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31	
Grants	-	-	-	-	-	-	-	
Use of Capacity Fee Reserves	-	-	-	-	-	-	-	
SRF Loan Funding	-	-	-	-	-	-	-	
Use of Future Revenue Bond Proceeds	-	-	-	-	-	-	-	
Use of Capital Rehabilitation and Replacement Reserve	-	-	-	-	-	-	-	
Rate Revenue	-	-	-	-	-	-	-	
<b>Total Sources of Capital Funds</b>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
<b>Uses of Capital Funds:</b>								
Total Project Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
<b>Capital Funding Surplus (Deficiency)</b>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
<b>SFR Loan Funding</b>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
<b>Future Revenue Bond Proceeds</b>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
<b>CAPITAL IMPROVEMENT PROGRAM FUNDING OPTIONS</b>								
Policy Choice	Total Planned CIP - FY 2024/25 through FY 2028/29							
	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31	
1 Alternative 1 - Full Funding of CIP	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
2 Alternative 2 - 75% Funding of CIP	-	-	-	-	-	-	-	
3 Alternative 3 - 50% Funding of CIP	-	-	-	-	-	-	-	
1	Select CIP Funding Option							
<b>Capital Improvement Program Funding Choice</b>		FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31
Effective Annual Funding Amount		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

CSA 70 SP2 High Country  
SEWER RATE STUDY  
Capital Improvement Plan Expenditures

CAPITAL IMPROVEMENT PROGRAM

TABLE 9 : CAPITAL IMPROVEMENT PROGRAM COSTS  
(In Current-Year Dollars)

Project Description	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31
<b>Capital Projects<sup>1</sup></b>							
52147 Sludge Bin							
52198 WW PEIR and Master Plan							
52159 Wastewater Cost of Service Study							
52160 Solar Upgrade Project (Sewer Facilities)							
TBD Wastewater Master Plan							
TBD Plant/Lift Station Rehabilitation Program							
<b>Subtotal - Capital Projects</b>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Estimated Future Projects</b>							
Future Projects <sup>4</sup>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total: Capital Improvement Program Costs (Current-Year Dollars)</b>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

TABLE 10 : CAPITAL IMPROVEMENT PROGRAM COSTS  
(in Future-Year Dollars)<sup>5</sup>

Project Description	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31
<b>Capital Projects<sup>1</sup></b>							
52147 Sludge Bin	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
52198 WW PEIR and Master Plan							
52159 Wastewater Cost of Service Study							
52160 Solar Upgrade Project (Sewer Facilities)							
TBD Wastewater Master Plan							
TBD Plant/Lift Station Rehabilitation Program							
<b>Subtotal - Capital Projects</b>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Estimated Future Projects</b>							
Future Projects <sup>4</sup>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total: Capital Improvement Program Costs (Future-Year Dollars)</b>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

TABLE 11 : FORECASTING ASSUMPTIONS

Economic Variables	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31
Annual Construction Cost Inflation, Per Engineering News Record <sup>6</sup>	0.00%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%
Cumulative Construction Cost Multiplier from FY 2024/25	1.00	1.04	1.07	1.11	1.15	1.19	1.23

1. Source file: 2023-24 Preliminary Budget Worksheet.xlsx.  
 4. Estimated future expenditures are the average of the previous 10 years.  
 5. Capital improvement projects are inflated to future year estimated costs with ENR CCI for the region. Source: Engineering News Record website (<http://enr.construction.com>).  
 6. For reference purposes, the annual Construction Cost Inflation percentage is the 10-year average annual change in the Construction Cost Index for 2013-2023 (3.5%).

TABLE 12 : EXISTING DEBT OBLIGATIONS

EXISTING DEBT OBLIGATIONS	Budget		Projected	5-Year Projected Rate Period				
	FY 2024/25	FY 2025/26		FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31
Annual Repayment Schedules:								
N/A								
Principal Payment	-	-	-	-	-	-	-	-
Interest Payment	-	-	-	-	-	-	-	-
<b>Subtotal: Annual Debt Service</b>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Coverage Requirement (\$-Amt above annual payment)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Reserve Requirement (total fund balance)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Grand Total: Existing Annual Debt Service</b>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Grand Total: Existing Annual Coverage Requirement</b>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Grand Total: Existing Debt Reserve Target</b>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

1. Source file: SWRCB Complete Loan Agreement.pdf

TABLE 13 : EXISTING ANNUAL DEBT OBLIGATIONS TO BE SATISFIED BY SEWER RATES

Annual Obligations	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31
Existing Annual Debt Service	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Existing Annual Coverage Requirement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Existing Debt Reserve Target	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

CSA 70 SP2 High Country  
 SEWER RATE STUDY  
 Projected Sewer Rates Under Existing Rate Schedule

Exhibit 4 - Current Rates

TABLE 14 : CURRENT SEWER RATE SCHEDULE

Sewer Rate Schedule		Current Rates
<i>Monthly Fixed Service Charge Per EDU</i>		
All Customers		Per Dwelling Unit
All Customers		\$52.28

TABLE 15 : PROPOSED SEWER RATES

Customer Class	Number of Billing Units	Net Revenue Requirement	Estimated Fixed Revenue	Monthly Fixed Charge Per Unit
All Customers	517	\$ 324,322	\$ 324,322	\$ 52.28
<b>Total</b>	<b>517</b>	<b>\$ 324,322</b>	<b>\$ 324,322</b>	

CSA 70 SP2 High Country  
 SEWER RATE STUDY  
 Cost-of-Service Analysis & Rate Design

Current vs. Proposed Rates

**TABLE 16 : CURRENT VS. PROPOSED SEWER RATES**

Sewer Rate Schedule <sup>1</sup>	Current Rates	NET REVENUE REQUIREMENTS (100% FIXED / 0% VARIABLE)			
		Proposed Sewer Rates			
		FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30
<b>Monthly Fixed Service Charge Per EDU</b>					
All Customers	\$52.28	\$52.28	\$52.28	\$52.28	\$52.28
All Customers	\$52.28	\$52.28	\$52.28	\$52.28	\$52.28
		Per Dwelling Unit			
		\$52.28	\$52.28	\$52.28	\$52.28

# **SAN BERNARDINO COUNTY**

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*County Service Area 70 W-3 (Hacienda Heights)  
Water Rate Study Report*

*Final Report*

**March 2026**



[nbsgov.com](http://nbsgov.com)

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# 1. Introduction

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## 1.1 Purpose

San Bernardino County (County) retained NBS to conduct a comprehensive utility rate study for its water enterprise fund for County Service Area 70 W-3 Hacienda Heights (CSA 70 W-3). The County had several objectives and goals in mind for this study including meeting revenue requirements, reviewing the rising costs of providing services, and complying with certain legal requirements (e.g., California Constitution Article XIII D, Section 6, which is commonly referred to as Proposition 218 [Prop 218]). The County's broader objectives in this study include ensuring adequate funding for operating costs and ensuring revenue stability in utility rates. The rates resulting from this study were developed in a manner that is consistent with industry standard cost-of-service principles. In addition to documenting the rate study methodology, this report is provided with the intent to assist the County in its continuing effort to maintain transparent communications with the residents and community it serves.

In developing new rates for CSA 70 W-3's enterprise fund, NBS worked cooperatively with County staff and the Board of Supervisors (Board) in selecting the appropriate rate alternatives that address the County's goals and objectives. Based on input provided by CSA 70 W-3 staff, NBS proposes the rates summarized in this report. The Board has the final decision regarding the adoption of the proposed rates and whether to proceed with the Prop 218 approval process.

## 1.2 Overview of the Study

Comprehensive rate studies, such as this one, typically include three components: (1) preparation of a financial plan that identifies the net revenue requirements for the utility; (2) analysis of the cost to serve each customer class, and (3) the rate structure design. These steps are shown in **Figure 1** and are intended to follow industry standards and reflect the fundamental principles of cost-of-service rate making embodied in the American Water Works Association's (AWWA) *Principles of Water Rates, Fees, and Charges*,<sup>1</sup> also referred to as Manual M1.

Rate studies also address requirements under Prop 218 that rates not exceed the cost of providing the service and be proportionate to the cost of providing service for all customers. In terms of the chronology of the study, the three steps shown in **Figure 1** represent the order in which they were performed in this study.

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<sup>1</sup> *Principles of Water Rates, Fees, and Charges*, Manual of Water Supply Practices, Manual M1, American Water Works Association (AWWA), 7<sup>th</sup> Edition, 2017.

**Figure 1. Primary Components of a Rate Study**



NBS projected revenues and expenditures, developed net revenue requirements, performed cost-of-service rate analyses, and developed new water rates for the County using this approach. The following sections in this report present an overview of the methodologies, assumptions, and data used along with the financial plans and rates developed. Detailed tables and figures documenting the development of the proposed rates are provided in the Appendices.

The County provided NBS with the data necessary to conduct the study, including historical, current, and projected revenues and expenditures, number of customer accounts, and water consumption data along with other operational and capital cost information.

### **FINANCIAL PLAN**

As a part of the rate study, NBS projected revenues and expenditures on a cash-flow basis for the next five (5) years. The amount of rate revenue required, that will allow reserves to be maintained at the recommended levels, is known as the net revenue requirement. As current rate revenue falls short of the net revenue requirement, rate adjustments – or more accurately, adjustments in the total revenue collected from rates – are recommended. This report presents an overview of the methodologies, assumptions, and data used along with the financial plan and proposed rates developed in this study.<sup>2</sup>

### **COST-OF-SERVICE ANALYSIS**

The basic purpose of the cost-of-service analysis (COSA) is to fairly and equitably allocate costs to customer classes and/or meter sizes. The cost-of-service analysis consists of two major components: (1) the classification of expenses, and (2) the allocation of costs to customer classes. For example, a key task is the “classification” of the water revenue requirements into the following categories:

- Commodity related costs
- Capacity related costs
- Customer service related costs

<sup>2</sup> The complete financial plans are available in the *Appendices*.

## RATE DESIGN ANALYSIS

During the rate design phase of the study, NBS and County staff worked together to develop rate alternatives that will meet the County’s objectives. It is important for the County to send proper price signals to its customers about the actual cost of providing service. This objective is typically addressed through both the magnitude of the rate adjustments and the rate structure design. In other words, both the amount of revenue collected and the way in which the revenue is collected from customers are important.

Several criteria are typically considered in setting rates and developing sound rate structures. The fundamentals of this process have been well documented in several rate-setting manuals, such as AWWA’s Manual M1. The foundation for evaluating rate structures is generally credited to James C. Bonbright in *Principles of Public Utility Rates*,<sup>3</sup> which outlines pricing policies, theories, and economic concepts along with various rate designs. The following is a simplified list of the attributes of a sound rate structure:

- Rates should be easy to understand from the customer’s perspective.
- Rates should be easy to administer from the utility’s perspective.
- Rates should be equitable and non-discriminating (i.e., cost-based).
- There should be continuity in the rate making philosophy over time.
- Rates should address other utility policies (e.g., conservation and economic development).
- Rates should provide month-to-month and year-to-year revenue stability.

## RATE STRUCTURE TERMINOLOGY

This section covers basic rate design criteria that NBS and County staff considered as a part of their review of the rate structure alternatives. One of the most fundamental points in considering rate structures is the relationship between fixed and variable costs. Fixed costs, such as debt service and personnel costs, typically do not vary with the amount of water consumed. In contrast, variable costs, such as the cost of purchased water, chemicals, and electricity, tend to change with the quantity of water sold. Most rate structures contain a fixed, or minimum, charge in combination with a volumetric charge.

**Fixed Charges** – Fixed charges can be called base charges, minimum monthly charges, customer charges, fixed meter charges, etc. Fixed charges for water utilities typically increase by meter size. For example, a customer with a 2-inch meter has a fixed meter charge that is more than five times greater than the typical residential customer based on the safe operating capacity of the meter.<sup>4</sup> Since a large portion of utility costs are typically related to meeting capacity requirements, individual capacity demands are important in establishing equitable rates for customers.

**Variable (Consumption-Based) Charges** – In contrast to fixed charges, variable costs, such as purchased water, groundwater replenishment costs, and the cost of electricity used in pumping water and chemicals for treatment, tend to change with the quantity of water produced. For a water utility, variable charges are calculated based on a metered consumption per unit price (e.g., per 100 cubic feet, or HCF).

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<sup>3</sup> James C. Bonbright, Albert L. Danielsen, and David R. Kamerschen, *Principles of Public Utility Rates*, Arlington, VA: Public Utilities Report, Inc., Second Edition, 1988, pp. 383-384.

<sup>4</sup> *Principles of Water Rates, Fees, and Charges*, Manual of Water Supply Practices, Manual M1, AWWA, 7<sup>th</sup> Edition, 2017, pp. 151-152.

**Uniform (Single-Tier) Water Rates** – There are significant variations in the basic philosophy of variable charge rate structure alternatives. Under a uniform (single tier) rate structure, the cost per unit does not change with consumption and, therefore, provides a simple and straightforward approach from the customer’s perspective and in terms of the County’s rate administration.

## **KEY FINANCIAL ASSUMPTIONS**

The following is a summary of the key financial assumptions used in the analyses. The following capital and operational fund targets reflect input from County staff to meet specific utility objectives.

**Funding of Capital Projects** – The capital improvement costs are anticipated to be funded using debt financing. NBS notes that the planned rate revenue increases may not support the debt financing as modeled. Projects may need to be delayed or omitted if sufficient revenues are not available to pay debt service and provide for required bond coverage ratios.

**Reserve Targets** – For the water utility, the County maintains reserves for operations, capital, and other specific needs. The details of each utility’s reserve targets are covered in their respective sections of this report.

**Inflation and Growth Projections** – Assumptions were made in the analysis regarding cost inflation to project future revenues and expenses for the study period. The following inflation factors were used in the analysis:

- Customer growth is estimated at 0.00% per year.
- General cost inflation is set at 3.20% annually.
- Labor cost inflation is set at 0.00% annually.
- Electricity cost inflation is set at 8.35% annually.

These inflation factors are based on long-term trends; therefore, the County should re-examine these factors in another year to assess the impacts on utility costs and whether projected rate increases will be sufficient for the remainder of the rate adoption period.

## 2. Water Rate Study

---

### 2.1 Key Water Rate Study Issues

The County's water rate analysis was undertaken with a few specific objectives, including:

- Generating sufficient revenue to meet anticipated operating and maintenance costs for the next five years.
- Continuing with a rate design that promotes revenue stability.
- Verifying the cost-of-service linkage between the current rate structure and the proposed water rates.
- Complying with the legal requirements of Prop 218 to ensure the cost of providing service is properly allocated amongst user classifications. This was the basis for eliminating tiered volumetric water rates.

NBS developed various water rate alternatives as requested by County staff over the course of this study. All rate structure alternatives relied on industry standards and cost-of-service principles. The rate alternative that will ultimately be implemented is the decision of the Board. The fixed and volume-based charges were calculated based on the net revenue requirements, number of customer accounts, water consumption and estimated water discharge, and other relevant data provided by the County.

The following are the basic components included in this analysis:

**Developing Cost Allocations** – The water revenue requirements were “functionalized” into three categories: (1) commodity (or volume-based) costs; (2) fixed capacity costs; and (3) customer service costs. These functionalized costs were then used to develop unit costs based on various factors, such as water consumption, peaking factors, and number of accounts by meter size.

**Determining Revenue Requirements by Customer Class** – The total revenue that needs to be collected from each customer class, in this case by meter size, was determined using the functional costs and allocation factors. For example, customer costs are allocated based on the number of meters, while volume-related costs are allocated based on the water consumption of each customer class. Once the costs are allocated and the net revenue requirement for each customer class is determined, collecting the revenue requirements from each customer class is addressed within the rate design.

**Evaluating Rate Design (Fixed vs. Variable Charges)** – The revenue requirements for each customer class are collected through a combination of fixed monthly service charges and volumetric rates. Based on direction from County staff, the rates proposed in this report will collect 50.5% of the rate revenue from the fixed charge and 49.5% from the variable charges, which is consistent with the current rate design.

### 2.2 Financial Plan

It is important for municipal utilities to not only collect sufficient revenues every year, but to also maintain reasonable reserves to handle emergencies, fund working capital, maintain a good credit rating, and generally follow sound financial management practices. Rate adjustments are governed by the need to meet operating and capital costs as well as maintain reasonable reserve levels. The current state of the County's water utility, regarding these objectives, is as follows: