ROSAMOND COMMUNITY SERVICES DISTRICT

Water and Sewer Rate Study

Final Report

March 24th, 2021

ROSAMOND COMMUNITY SERVICES DISTRICT
WATER AND SEWER RATE STUDY

FINAL REPORT

Prepared for:

Rosamond Community Services District
3179 35th Street West
Rosamond, CA 93560

Prepared by:

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RDN Project Number 303

March 24, 2020
Mr. Steve Perez
General Manager
Rosamond Community Services District
3179 35th Street West
Rosamond, CA 93560

Subject: Water and Sewer Rate Study, and Proposition 218 Process and Public Hearing Support

Dear Mr. Perez,

Robert D. Niehaus, Inc. is pleased to provide this Financial Planning, Revenue Requirements, Cost of Service and Rate Setting Analysis Report to the Rosamond Community Services District. This rate study includes a financial plan to determine the revenue requirements for the next five years and comprehensive review of the District's current rates based on cost of service principles. This Report outlines the approach, methodology, findings and recommendations of the study. The Report also includes an extensive customer billing impact study, and a rate comparison survey. Each of the components of this study have enhanced the accuracy and equitability of the rates we propose.

The proposed rates were developed utilizing the District's customer usage data, billing records, accounting, operating and management records, capital plan, and reserve policies. Based on the District provided data, key assumptions were made for the study using appropriate resources and our econometric and finance expertise. We are confident that the rates proposed in this Report are cost-based, and are fully compliant with Proposition 218 and other legal requirements.

It has been an absolute pleasure and honor to work with your District. We thank you, Mr. Brach Smith, Mr. Brad Rockabrand, and the Board of Directors for the support provided during this study.

Respectfully submitted,

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Managing Director/Principal Economist

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Program Manager/Sr. Financial Analyst

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EXECUTIVE SUMMARY

Study Overview

Rosamond Community Services District (District, RCSD) retained Robert D. Niehaus, Inc. (RDN) to develop a comprehensive water and sewer rate study, which includes financial planning, revenue requirements, cost of service, and rate-setting analyses (Study). The overall goal of this Study is to develop a financial plan to identify necessary revenues to meet the District's financial needs and design rates which recover the costs from ratepayers commensurate with their service requirements. RDN collaborated with RCSD staff to evaluate utility's financial stability, given the District's current and future financial conditions, and amended the District's current rates to further improve equity, promote water use efficiency, and ensure compliance with Proposition 218 (Prop 218) requirements and other legal mandates. This study updates previous studies conducted in 2016 and 2009.

The objectives of the Study include:

1. Projecting water demand and sewer flow by customer class for the study period (FY 2021-22 – FY 2025-26) based on historical data and inputs from District staff;
2. Developing ten-year financial plans for the District's water and sewer systems to ensure financial sufficiency to fund a day-to-day operation and maintenance, capital improvement and replacement projects, and debt service obligations, while building up reserves to the District's target level;
3. Conducting a Cost of Service (COS) analysis to equitably allocate the costs of providing service to customers in accordance with Prop 218;
4. Designing rates based on the results of COS analysis to establish a strong nexus between costs and pricing of rates;
5. Performing a bill impact study to minimize impact on customers while ensuring sufficient revenue recovery;
6. Conducting a rate comparison survey to assess how the District's rates compare with neighboring agencies; and
7. Developing an administrative record, which effectively communicates the findings of the Study.

Water System

A specific objective for the water system is to reevaluate the financial assumptions made in the 2016 rate study. At the time of the study, the District was facing the potential reduction of pumping allowances due to the Antelope Valley-East Kern Water Agency (AVEK) adjudications and expected a need to purchase significant amounts of water from outside sources. The proposed financial plan evaluated financial impact of the District's purchasing additional production rights (1,176 Acre Feet) to mitigate the need for future water purchases.

Summary of Recommendations

The following recommendations were considered during the rate making process and incorporated into the proposed water rates:

- Reducing the number of tiers for the water volumetric rates from current four tiers to three tiers as no water purchases (from AVEK or other suppliers) are included in the District's 10-year financial plan
- Allocating peaking related costs and conservation related costs to the upper tiers (Tier 2 and 3)
- Adjusting the tier widths for Residential customers' volumetric charges to reflect efficient indoor and outdoor water use for the District's average customer in compliance with the new state water budget regulations; AB 1686 and SB 606
- Creating alternative rates for Commercial I and Commercial II customers which reflect the cost of service required to serve each customer class
- Removing the 3 hundred cubic feet (hcf) of water allotment included in the fixed charges and charging tiered rates based on all usage

Financial Overview

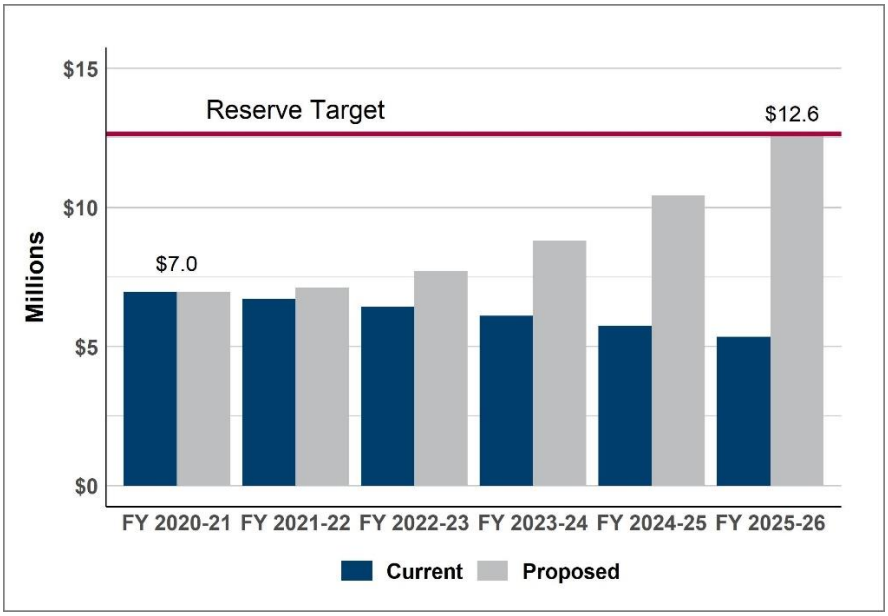
In collaboration with the District's staff, RDN determined that the necessary revenue adjustments for the water system during the five-year study period are as follows:

Table ES- 1. Proposed Revenue Adjustments for the Water System, FY 2021-22 – FY 2025-26

Water	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
Revenue Adjustment	*8.80%*	*8.80%*	*8.80%*	*8.80%*	*8.80%*

With the proposed revenue adjustments, the District will meet its reserve target of $12.6 million by the end of FY 2025-26. Figure ES- 1 presents annual change of reserve levels with or without proposed revenue adjustments for the study period.

Figure ES- 1. Cash Reserve Balance with or without Proposed Revenue Adjustments



Current Water Rates

Currently, a customer with a 5/8-inch meter (the most common meter size District-wide) pays a fixed service charge of $35.16 per month which includes the first 3 hcf of water. Additionally, the customer is billed volumetric charges for all usage over 3 hcf at the rates of corresponding tiers. Table ES- 2 shows the current water rates by meter size and by tier width, all customers currently use the same rate schedule.

Table ES- 2. Current Water Rates

Fixed Charge		
Water	**Meter Size**	**Per Month**
All Customers	5/8 in	$35.16
Includes 3 hcf	3/4 in	$35.16
	1 in	$49.69
	1 1/2 in	$85.67
	2 in	$129.03
	3 in	$230.28
	4 in	$374.67
	6 in	$736.07
Volumetric Charge		
	Tier Width	**Per HCF**
Tier 1	4 to 15 hcf	$2.91
Tier 2	16 to 30 hcf	$3.40
Tier 3	31 to 50 hcf	$3.59
Tier 4	All Additional Use	$3.88

Proposed Water Rates

The proposed volumetric rates and fixed charges vary by customer class based on each's service requirements placed on the system. The allotment of water for each tier varies depending on the usage pattern each customer class demonstrates.

Proposed Residential Rates

Residential customer's rates are designed based on efficient water use for indoor (Tier 1) and outdoor (Tier 2) consumption. Approximately 20 percent of peaking related to costs are included in Tier 2 and Tier 3 rates while Tier 1 rate is designed to recover the costs of basic services such as delivery and supply related costs. The fixed charges include meter services, customer service, and 80 percent of peaking related costs. Table ES- 3 and Table ES- 4 display Residential customer's proposed volumetric rates and fixed charges for FY 2021-22 through FY 2025-26 respectively.

Table ES- 3. Proposed Volumetric Rates for Residential Customers

Volumetric Charges per HCF						
Rates	Width	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
Tier 1	1-7 hcf	$2.91	$3.16	$3.44	$3.74	$4.07
Tier 2	8-21 hcf	$3.21	$3.49	$3.80	$4.13	$4.49
Tier 3	All Additional	$4.03	$4.39	$4.77	$5.19	$5.64

Table ES- 4. Proposed Monthly Fixed Service Charges for Residential Customers

Fixed Charge Monthly					
Rates	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
5/8-in	$30.50	$33.17	$36.07	$39.23	$42.66
3/4-in	$30.50	$33.17	$36.07	$39.23	$42.66
1-in	$48.21	$52.43	$57.02	$62.01	$67.44
1 1/2-in	$92.49	$100.59	$109.39	$118.96	$129.37
2-in	$145.63	$158.37	$172.23	$187.30	$203.69
3-in	$269.62	$293.21	$318.87	$346.77	$377.11
4-in	$446.75	$485.84	$528.35	$574.58	$624.86
6-in	$889.56	$967.40	$1,052.05	$1,144.10	$1,244.21

Proposed Commercial I Rates

Commercial I customer's rates are designed by allocating approximately 35 percent of peaking related costs to the volumetric charges. Commercial I customers' median usage is 12 hcf per month, and average usage is 53 hcf. Some Commercial I customers place much higher service requirements on the system when compared to Residential customers. In order to mitigate customers' rate impacts, RDN examined the customers' usage pattern in the historical billing data. Approximately 50 percent of customers use less than 10 hcf per month while 80 percent of customers use less than 40 hcf of water monthly. RDN thus designed tier widths for Tier 1 and Tier 2 to be 10 hcf and 30 hcf, respectively. Table ES- 5 and Table ES- 6 display the Commercial I proposed volumetric rates and fixed charges for FY 2021-22 through FY 2025-26, respectively.

Table ES- 5. Proposed Volumetric Rates for Commercial I Customers

Volumetric Charges per HCF						
Rates	Width	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
Tier 1	1-10 hcf	$2.97	$3.23	$3.51	$3.82	$4.15
Tier 2	11-40 hcf	$3.50	$3.81	$4.14	$4.50	$4.89
Tier 3	All Additional	$4.28	$4.65	$5.06	$5.50	$5.98

Table ES- 6. Proposed Fixed Service Charges for Commercial I Customers

Fixed Charge Monthly					
Rates	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
5/8-in	$35.09	$38.16	$41.50	$45.13	$49.08
3/4-in	$35.09	$38.16	$41.50	$45.13	$49.08
1-in	$55.87	$60.75	$66.07	$71.85	$78.14
1 1/2-in	$107.80	$117.23	$127.49	$138.65	$150.78
2-in	$170.13	$185.01	$201.20	$218.81	$237.96
3-in	$315.55	$343.16	$373.19	$405.84	$441.35
4-in	$523.29	$569.08	$618.87	$673.02	$731.91
6-in	$1,042.65	$1,133.89	$1,233.11	$1,341.01	$1,458.35

Proposed Commercial II Rates

Commercial II customers have the highest monthly average usage among all customer classes. The median usage for Commercial II customers is 35 hcf, and the average usage is 56 hcf per month. RDN also examined the customers' usage pattern in the bills for Commercial II customers. Approximately 50 percent of customers use less than 30 hcf per month and 80 percent of customers use less than 95 hcf of. RDN thus designed tier widths for Tier 1 and Tier 2 to be 30 hcf and 65 hcf respectively. Table ES- 7 and Table ES- 8 display the proposed Commercial II volumetric rates and fixed charges for FY 2021-22 through FY 2025-26 respectively.

Table ES- 7. Proposed Volumetric Rates for Commercial II Customers

Volumetric Charges per HCF						
Rates	Width	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
Tier 1	1-30 hcf	$2.97	$3.23	$3.51	$3.82	$4.15
Tier 2	31-95 hcf	$3.50	$3.81	$4.14	$4.50	$4.89
Tier 3	All Additional	$4.28	$4.66	$5.07	$5.51	$5.99

Table ES- 8. Proposed Fixed Service Charges for Commercial II Customers

Fixed Charge Monthly					
Rates	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
5/8-in	$38.75	$42.14	$45.83	$49.84	$54.20
3/4-in	$38.75	$42.14	$45.83	$49.84	$54.20
1-in	$61.96	$67.39	$73.29	$79.70	$86.67
1 1/2-in	$120.00	$130.50	$141.92	$154.34	$167.84
2-in	$189.64	$206.23	$224.28	$243.90	$265.24
3-in	$352.14	$382.95	$416.46	$452.90	$492.53
4-in	$584.28	$635.40	$691.00	$751.46	$817.21
6-in	$1,164.62	$1,266.53	$1,377.35	$1,497.87	$1,628.93

Sewer System

A primary requirement for the sewer system financial planning was to meet the debt service coverage ratio (DSCR) of 1.2 and reserve target goal of $4.5 million by the end of the study period. The total debt service payment included in the financial plan is approximately between $1.2 to $1.3 million annually (State Water Resources Control Board Clean Water State Revolving Fund with outstanding principal balance of $3.8 million and Opus Bank Note with an expected outstanding principal balance of $10.0 million).

Summary of Recommendations

The recommendations for the sewer rates are as follows:

- Designing rates for each customer class (Residential, Commercial I, Commercial II) based on the service requirements each places on the sewer system
- Reclassifying some of the Commercial customers to reflect their flow and relative strength of discharge
- Using the State Water Resources Control Board (SWRCB) sewer strength averages; 250 mg/l for Residential and Commercial I, and 485 mg/l for Commercial II to measure relative strength of customer discharge

Financial Overview

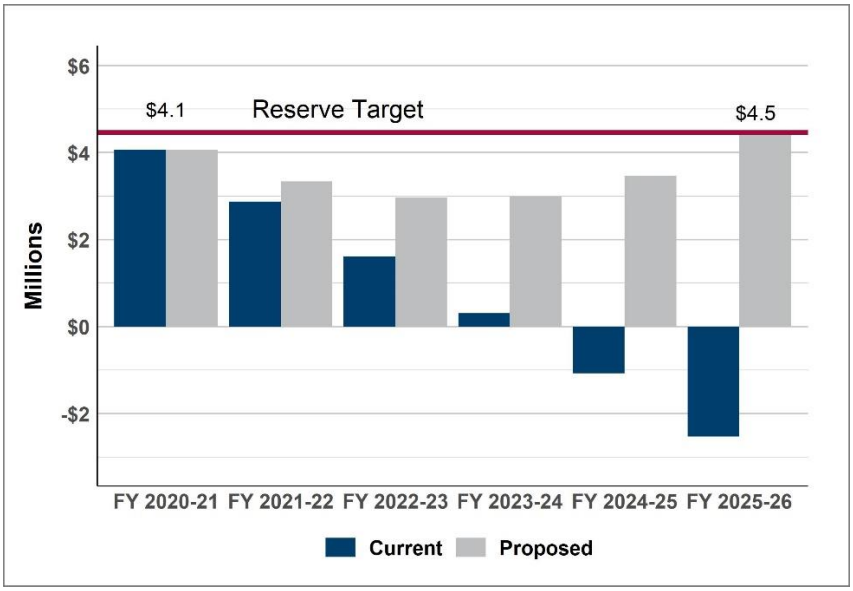
In collaboration with District staff, RDN determined that the necessary revenue adjustments needed to meet the District's financial goals for the next five years are as follows:

Table ES- 9. Proposed Revenue Adjustments for the Water System, FY 2021-22 – FY 2025-26

Sewer	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
Revenue Adjustment	*14.50%*	*10.90%*	*10.90%*	*10.90%*	*10.90%*

With the proposed revenue adjustments, the District will meet its reserve target of $4.5 million by the end of FY 2025-26. Figure ES- 2 presents annual change of reserve levels with or without proposed revenue adjustments for the study period.

Figure ES- 2. Cash Reserve Balance with or without Proposed Revenue Adjustments



Current Sewer Rates

The current sewer rates were established based on the number of connections. Each connection pays a fixed service charge of $39.31 per month regardless of the type of customer class. Customers also pays volumetric charges, which vary for Commercial II customers while Commercial I and Residential customers pay the same rate.

Table ES- 10. Current Sewer Rates

Fixed Charge		
Sewer	Meter Size	Per Month
All Customers	All Meters	$39.31
Volumetric Charge		
	Tier Width	Per HCF
Residential	Average Winter to 20 hcf	$0.29
Commercial I	All Flow	$0.29
Commercial II	All Flow	$1.16

Proposed Sewer Rates

The proposed volumetric rates vary by customer class based on the service requirements placed on the system, while the fixed charge is the same for all connections and all meter sizes. RDN identified significant changes in the COS analysis, which resulted in considerable differences in the cost allocations among the three identified customer classes when compared to the current cost allocations.

Proposed Residential Rates

Residential customers will pay $0.34 per hcf for the volumetric charges based on the average winter consumption data from the previous year, and the total charges will be capped at 20 hcf. The monthly fixed service charge will be applied to all connections, keeping the same methodology established by the previous study.

Table ES- 11. Proposed Sewer Rates for Residential Customers

Residential Rates					
Adopted Rates	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
Volumetric Rate	$0.34	$0.38	$0.42	$0.46	$0.52
Fixed Charge	$43.57	$48.30	$53.54	$59.35	$65.78

Proposed Commercial I Rates

Commercial I customers will pay a volumetric rate of $0.68 per hcf for all the usage reported for the water service. The fixed service charge is applied to customers on a per-connection basis.

Table ES- 12. Proposed Sewer Rates for Commercial I Customers

Commercial I Rates					
Adopted Rates	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
Volumetric Rate	$0.68	$0.76	$0.84	$0.93	$1.03
Fixed Charge	$87.83	$97.36	$107.93	$119.64	$132.62

Proposed Commercial II Rates

Commercial II customers will pay a volumetric rate of $3.04 per hcf for all the usage reported for the water service. The fixed service charge is also applied to customers on a per-connection basis.

Table ES- 13. Proposed Sewer Rates for Commercial II Customers

Commercial II Rates					
Adopted Rates	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
Volumetric Rate	$3.04	$3.37	$3.74	$4.14	$4.59
Fixed Charge	$87.83	$97.36	$107.92	$119.63	$132.61

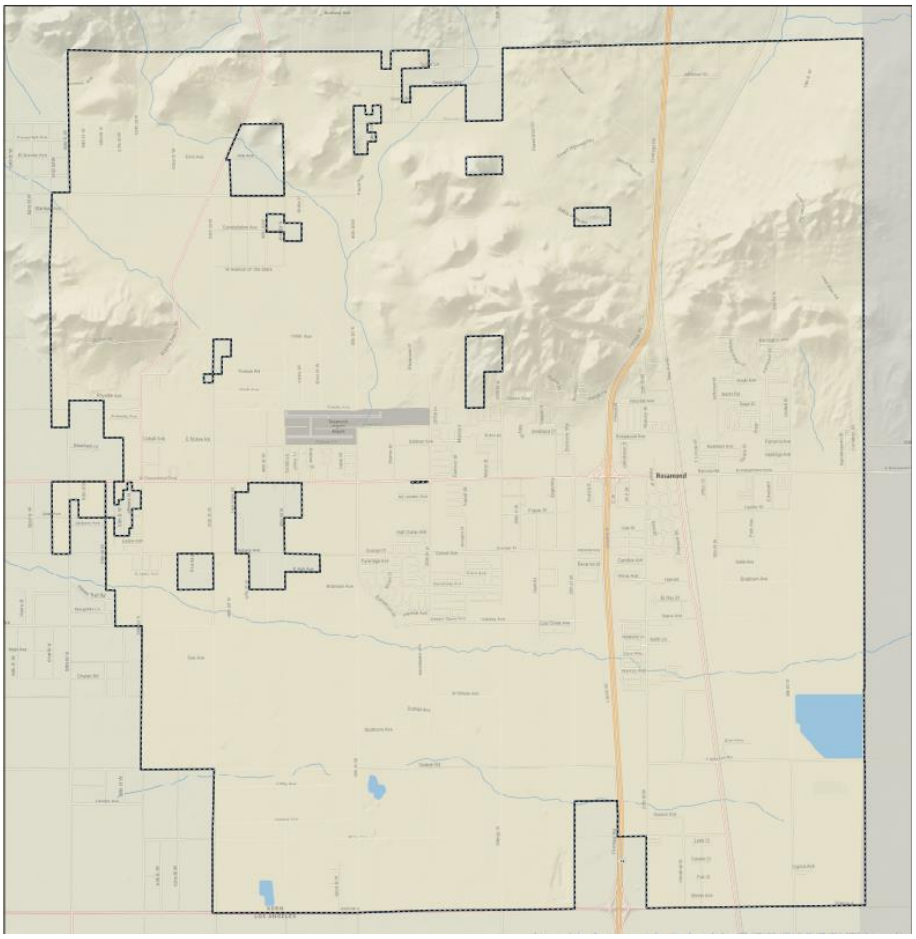
Reclassification of Customer Class

RDN analyzed the District's Commercial customer list and identified some customers which are likely misclassified between CI and CII based on their discharge strength and flows. RDN recommends that these customers be moved from Commercial II to Commercial I customer class or vice versa to better represent an equitable distribution of costs. A list of these customers will be submitted to the District in a separate memo.

1 INTRODUCTION

Rosamond is an unincorporated community in Kern County located in the northern section of the Antelope Valley Region. It is situated on the south slope of the Rosamond Hills, southeast of the Tehachapi Mountains, approximately 75 miles north of Los Angeles and 70 miles southeast of Bakersfield. RCSD was formed in 1966 and provides water and sewer service to Residential and Commercial customers for domestic, commercial, irrigation, and fire protection uses. Additionally, RCSD provides street lighting and graffiti abatement services. RCSD's service area boundary encompasses approximately 31 square miles of unincorporated residential, commercial, and undeveloped land. Figure 1-1 shows RCSD's current service area.

Figure 1-1. Rosamond Community Services District Service Area



RCSD currently serves over 5,000 water and sewer accounts, of which approximately 98 percent are Residential. Growth in the Rosamond area was minimal from the mid-sixties through the early part of the eighties. As the California economy started expanding in the early eighties, Rosamond started to feel a similar growth.

RCSD's current water supply comes from local groundwater. The District plans to acquire a tract of land that provides an additional 1,176 AF of production rights which will eliminate the need to purchase any water from AVEK and other outside sources. The District currently maintains nine wells, a wastewater treatment facility (with

a capacity of 14 million gallons per day (mgd), 16 evaporation ponds, and over 550 street lights. The Rosamond Water Treatment Plant is capable of providing water for 60,000 consumers.

1.1 Legal Framework

The primary goal of this study is to help RCSD establish a rate structure that achieves the District's objectives of revenue stability, equitable cost recovery, and ratepayer affordability. 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.

Article XIII C (Proposition 26), Article XIII D, Section 6 (Proposition 218) and Article X, Section 2 of the California Constitution govern the principles applicable to this rate study. This rate study also relies on AB 2882, which governs Allocation-Based Conservation Water Pricing (commonly referred to as "Water Budget Rate Structure"). Additionally, this rate study addresses statutes laid out in bills AB 1668 and SB 606 concerning water use efficiency at the District level.

California Constitution – Article XIII C (Proposition 26)

The application of Proposition 26 in the structuring of water rates is presently undetermined. The San Juan Capistrano decision briefly touched upon one aspect of the Article XIII C provisions enacted by Proposition 26, finding that tiered water charges would not appropriately be characterized as penalties. Other aspects of the application of Proposition 26 to tiered rate structures may be addressed in future judicial decisions and legislative enactments.

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:

1. Revenues derived from the fee or charge shall not exceed the funds required to provide the property related service
2. Revenues derived by the fee or charge shall not be used for any other purpose other than that for which the charge was imposed
3. The amount of the fee or charge imposed upon any parcel shall not exceed the proportional cost of service attributable to the parcel
4. 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

California Constitution – Article X, Section 2

Article X, Section 2 of the California Constitution (established in 1976) provides as follows:

"It is hereby declared that because of the conditions prevailing in this State the general welfare requires that the water resources of the State be put to beneficial use to the fullest extent of which they are capable, and that the waste or unreasonable use or unreasonable method of use of water be prevented, and that the conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare."

As such, public agencies are constitutionally mandated to maximize the beneficial use of water, prevent waste, and encourage efficiency, which this Study achieves.

Assembly Bill-AB 2882

In 2008, the California Legislature adopted AB 2882, establishing a body of law entitled "Allocation-Based Conservation Water Pricing." AB 2882 is consistent with the above referenced constitutional provisions.

Water Code Section 370 provides in part as follows:

"The Legislature hereby finds and declares all of the following:

a. *The use of allocation-based conservation water pricing by public entities that sell and distribute water is one effective means by which waste or unreasonable use of water can be prevented and water can be*

saved in the interest of the people and for the public welfare, within the contemplation of Section 2 of Article X of the California Constitution

b. *It is in the best interest of the people of California to encourage public entities to voluntarily use allocation-based conservation water pricing, tailored to local needs and conditions, as a means of increasing efficient uses of water, and further discouraging wasteful or unreasonable use of water under both normal and dry-year hydrologic conditions"*

Water Code Section 372 provides as follows:

(a) "A public entity may employ allocation-based conservation water pricing that meets all of the following criteria

(1) Billing is based on metered water use

(2) A basic use allocation is established for each customer account that provides a reasonable amount of water for the customer's needs and property characteristics. Factors used to determine the basic use allocation may include, but are not limited to, the number of occupants, the type or classification of use, the size of lot or irrigated area, and the local climate data for the billing period. Nothing in this chapter prohibits a customer of the public entity from challenging whether the basic use allocation established for that customer's account is reasonable under the circumstances. Nothing in this chapter is intended to permit public entities to limit the use of property through the establishment of a basic use allocation

(3) A basic charge is imposed for all water used within the customer's basic use allocation, except that at the option of the public entity, a lower rate may be applied to any portion of the basic use allocation that the public entity has determined to represent superior or more than reasonable conservation efforts

(4) A conservation charge shall be imposed on all increments of water use in excess of the basic use allocation. The increments may be fixed or may be determined on a percentage or any other basis, without limitation on the number of increments, or any requirement that the increments or conservation charges be sized, or ascend uniformly, or in a specified relationship. The volumetric prices for the lowest through the highest priced increments shall be established in an ascending relationship that is economically structured to encourage conservation and reduce the inefficient use of water, consistent with Section 2 of Article X of the California Constitution

(*b)* (1) Except as specified in subdivision

(a) The design of an allocation-based conservation pricing rate structure shall be determined in the discretion of the public entity

(1) The public entity may impose meter charges or other fixed charges to recover fixed costs of water service in addition to the allocation-based conservation pricing rate structure

(*c)* A public entity may use one or more allocation-based conservation water pricing structures for any class of municipal or other service that the public entity provides"

Assembly Bill-AB 1668 and Senate Bill-SB 606

In 2018, the California Legislature adopted AB 1668 and SB 606, establishing a standard for indoor water use, long-term standards for efficient water use of Commercial, industrial, and institutional customers, and penalties for customers who don't comply with use restrictions. The bill establishes *"55 gallons per capita daily as the standard for indoor Residential water use"* until January 1, 2025, *"52.5 gallons per capita daily or a standard recommended by the department and the board as the standard for indoor Residential water use"* until January 1, 2030, and establishes *"the greater of 50 gallons per capita daily or a standard recommended by the department and the board as the standard for indoor Residential water use"* thereafter. The bill also establishes principals for determining efficient outdoor water use. *"'Principles of the model water efficient landscape ordinance' means those provisions of the model water efficient landscape ordinance applicable to the establishment or determination of the amount of water necessary to efficiently irrigate both new and existing landscapes.*

These provisions include, but are not limited to, all of the following:

(a) Evapotranspiration adjustment factors, as applicable

(b) Landscape area

(c) Maximum applied water allowance

(d) Reference evapotranspiration

(e) Special landscape areas, including provisions governing evapotranspiration adjustment factors for different types of water used for irrigating the landscape"

"For landscape irrigated through dedicated or Residential meters or connections, water efficiency equivalent to the standards of the Model Water Efficient Landscape Ordinance set forth in Chapter 2.7 (commencing with Section 490) of Division 2 of Title 23 of the California Code of Regulations, as in effect the later of the year of the landscape's installation or 1992. An urban retail water supplier using the approach specified in this subparagraph shall use satellite imagery, site visits, or other best available technology to develop an accurate estimate of landscaped areas"

As noted in the referenced statutes, an "Allocation-Based Conservation Water Pricing Rate Structure" is a form of an increasing block rate structure where the amount of water within the first block or blocks is based on the estimated, efficient water needs of the individual customer, currently 55 gallons per day per person. This Study, in conjunction with the District's findings and determinations for individual customers, establishes a water budget for each customer. Each water budget defines how much water is considered efficient. Customers who use water in excess of their water budget pay a higher rate for their "inefficient or wasteful" usage due to the fact that water use in excess of budgeted amounts requires the District to purchase more expensive imported water

1.2 Methodology

RDN's water rate-making practices incorporate methods described in the American Water Works Association (AWWA) Principles of Water Rates, Fees and Charges Manual of Water Supply Practices Manual 1 (M1). This study uses the Base-Extra Capacity Method built on cost of service principles, in which the costs are distributed to customers commensurate with their service requirements. The Sewer cost of service analysis and rates are consistent with the guidelines detailed in the Water Environment Federation (WEF) Manual of Practice No. 27 Financing and Charges for Wastewater Systems (MOP #27).

The methodology of a rate study is broken into four steps which outline the basic procedures of rate-setting norms.

1. **Demand Projection**: project water demand for FY 2020-2021 and the five-year study period, FY 2021-22 through FY 2025-26, using District customers' historical usage data. Forecast revenues for the study period based on the projected water and sewer demand
2. **Financial Planning/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 is also to be considered as part of the financial planning. Based on the financial planning, revenue requirements and necessary revenue, the appropriate adjustments are determined for each year of the study period
3. **Cost of Service (COS) Analysis**: perform a COS analysis to allocate costs among the customers commensurate with their service requirements. For the water system, proportionate allocation of costs must consider not only the relative quantity of water used by a customer but also the peak rate of at which it is consumed. Flows (Volumes) and strengths of discharges are commonly used to allocate costs to sewer customers proportionally. Determine cost allocation among different types of users based on the demand they impose on the utility
4. **Rate Setting Analysis**: design rates to equitably recover the rate revenue requirements from each customer given the projected customer demand identified resulting from the COS analysis

1.3 Key Assumptions

A test year, FY 2021-22, was selected for which costs are to be analyzed and rates to be established for this study. The financial plan was built for the next 10 years, which includes the five year study period FY 2021-22 through FY 2025-26 with a detailed revenue adjustment plan. The District's fiscal year starts on July 1 and ends on June 30.

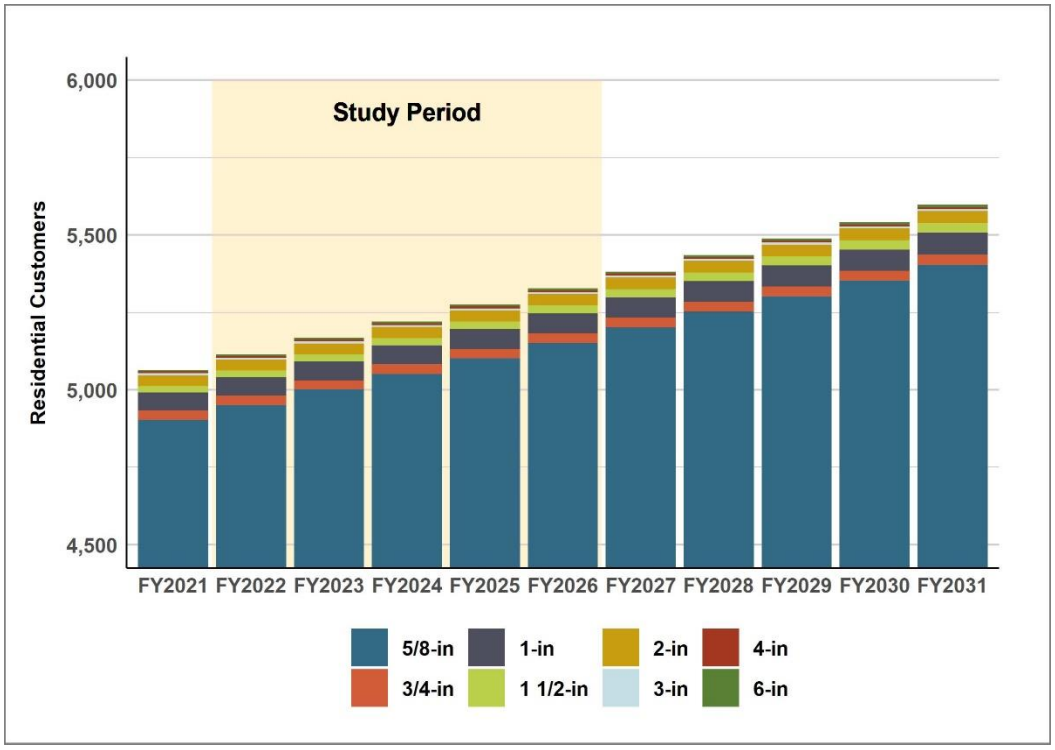
Account Growth

All the analyses performed for this Study were based on an assumption of customer account growth (described in detail in the Demand Projections section). Customer classes are defined based on the usage characteristics and service requirements placed on the system.

- Residential: single family residential and multi-family residential customers
- Commercial I: churches, retail stores, hair salons, liquor stores, dental offices
- Commercial II: restaurants, laundromats, dry cleaners, car washes

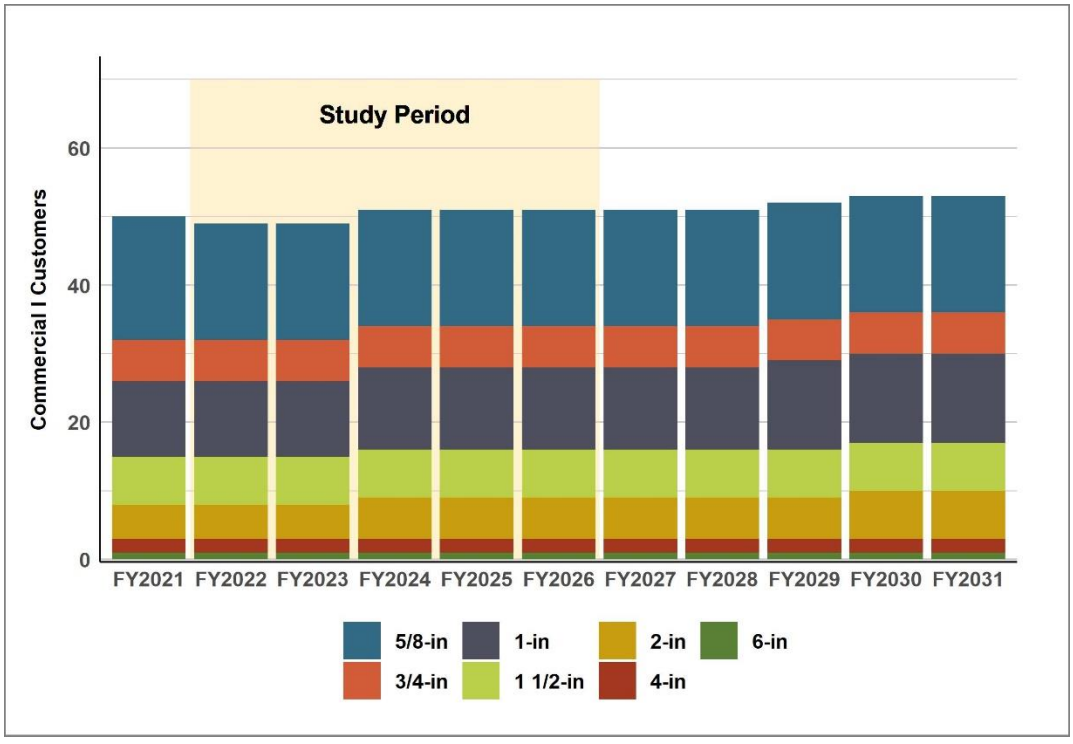
Figure 1-2 displays the account growth for Residential customers. The count for FY 2020-21 was derived from customers' billing records, and the numbers of accounts for the following 10 years were projected based on the historical data and input from the District. The current number of Residential customers is 5,064. This number is projected to increase by approximately 50 accounts per year, resulting in a total of 5,328 by FY 2025-26 (the end of the study period), and 5,597 by the end of FY 2030-31.

Figure 1-2. Residential Customers Account Growth, FY 2021-22 – FY 2030-31



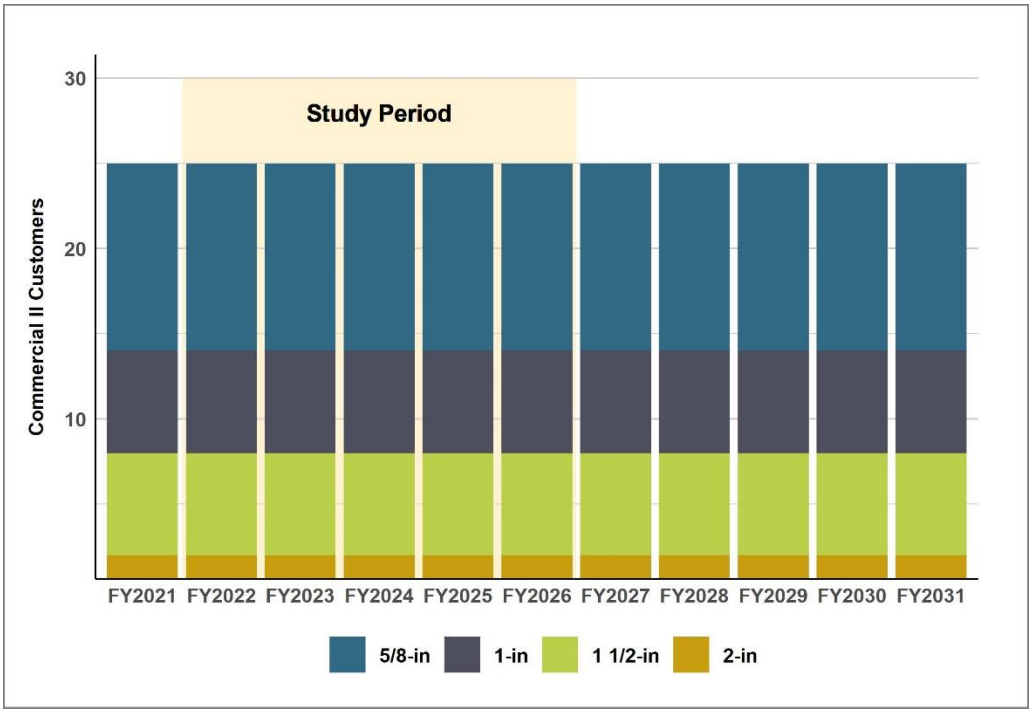
Forecasted account growth for Commercial I customers is displayed in Figure 1-3. It is projected that only two Commercial I accounts will be added to the system during the next five-year study period.

Figure 1-3. Commercial I Customers Account Growth, FY 2020-21 – FY 2030-31



The current number of Commercial II customer accounts is 25 and projected to remain the same for the study period.

Figure 1-4. Commercial II Customers Account Growth, FY 2020-21 – FY 2030-31



Escalation Factors

This study also makes an assumption in the projected escalation of revenues and expenses associated with both operations and maintenance (O&M) and capital improvement projects (CIPs). Escalation factors were calculated for eight independent variables using historical Consumer Price Index (CPI) data from Los Angeles-Riverside-Orange counties, CA, between the year 2000 and the most current calendar year, and projections by the California Department of Transportation (CADOT) and the California Department of Finance (CADOF). Construction costs were determined using a 20-year average building cost index (BCI) for the Los Angeles area published by Engineering News Record (ENR). Additionally, property tax increases were charted using audited financial statements published by the County of Los Angeles. All escalation factors were developed by calculating an average growth rate and projecting that rate into future years. Due to local contingencies, the cost of water and electricity inflation rates are expected to rise at the highest rate, 8.0 percent per year. The employee expenses inflation rate, which includes salaries, insurance, and payroll taxes, is only expected to rise 2.6 percent per year during the study period. Non-recurring expense (one-time expense) and some contracted service expenses are not escalated. Figure 1-5 and Figure 1-6 display escalation factors estimated for RCSD for the study period.

Figure 1-5. Revenue Escalation Factors Estimated for RCSD, FY 2021-22 - FY 2030-31

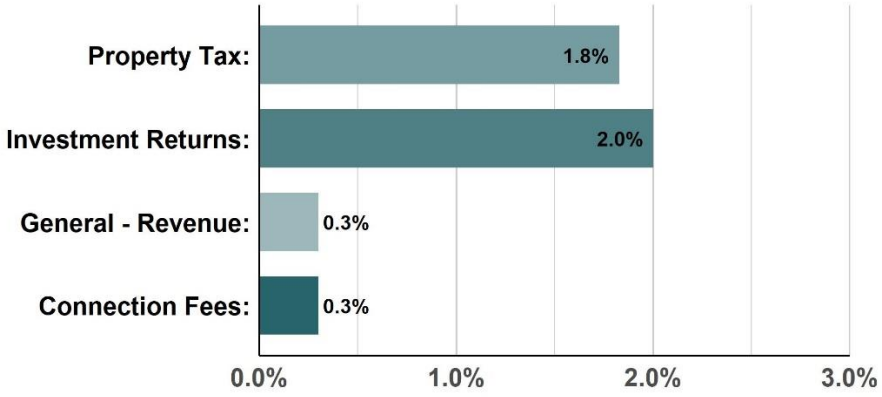
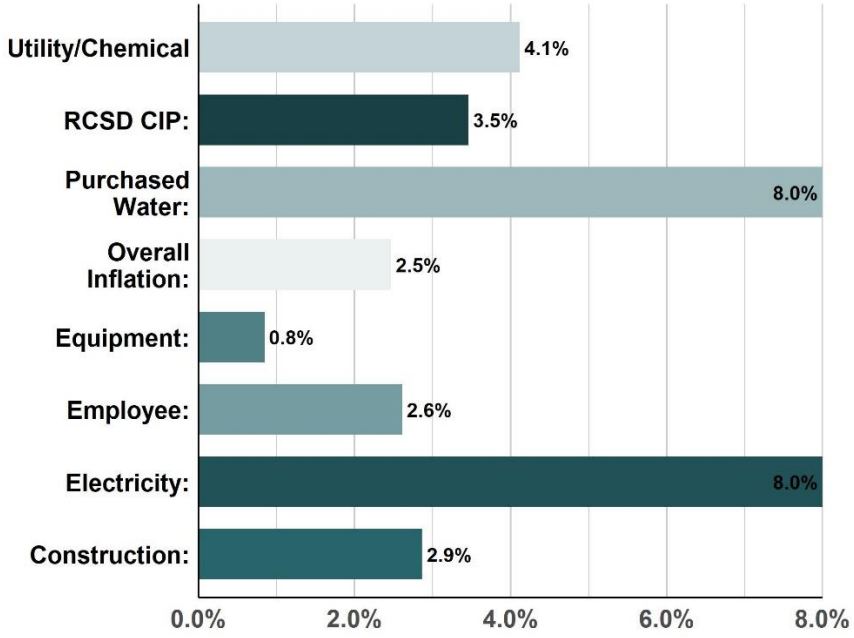


Figure 1-6. Expense Escalation Factors Estimated for RCSD, FY 2021-22 – FY 2030-31



Equivalent Meter Size

When designing a fixed monthly service charge, the potential demand or capacity requirements placed on the water system can be measured by the size of installed meters to receive services from the system. The safe operating flow (or capacity) of a particular size of meter is essentially the limiting factor in terms of the demand that can be exerted on the water system through the meter. The ratio of the safe operating capacity of various sizes of meters relative to the capacity of a base meter may be used to determine appropriate charges for the larger meter sizes[1]. It is the District's policy to consider all meters that are 3/4–inch and 5/8-inch meters as a base meter (equal to one equivalent meter). The capacity ratio is calculated using the meter capacities in gallons per minute (gpm) provided in the AWWA M1 for the meters larger than 3/4 inch.

Table 1-1. AWWA Equivalent Meter Ratios

Equivalent Meter Ratios	AWWA
5/8-in	1.00
3/4-in	1.00
1-in	1.67
1 1/2-in	3.33
2-in	5.33
3-in	10.00
4-in	16.67
6-in	33.33
8-in	53.33

[1] From "Principles of Water Rates, Fees, and Charges" by American Water Works Association, 2017, Seventh Edition, Appendix B, p. 385.

2 WATER SYSTEM

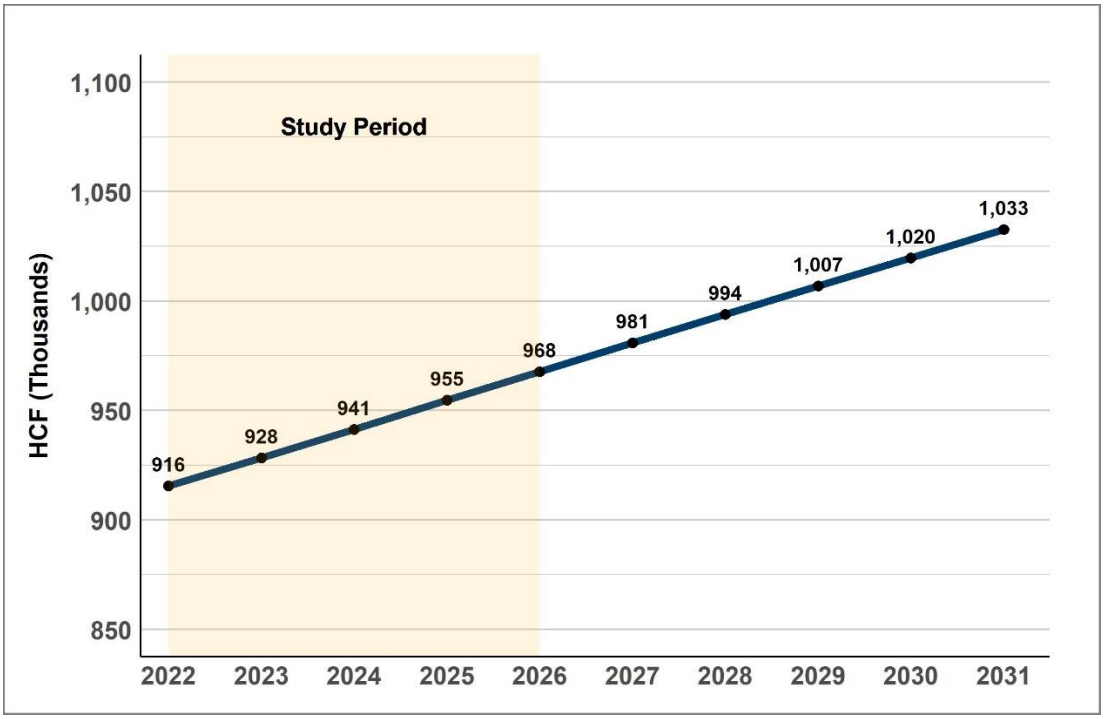
2.1 Financial Plan

RDN built a 10-year financial model for the water system to meet the District's long-term financial goals. The account growth and demand projections are presented for 10 years in this report.

Demand Projections

The methodology for forecasting accounts and aggregate water consumption is discussed in this section. First, RDN forecasted the number of accounts meter size for water connections according to the observed time trend. Next, the number of accounts and per-account usage by customer class are forecasted utilizing observed trends in the historical data. For per-account usage RDN introduced seasonal upper and lower bounds; the bounds inhibit forecasted per-account consumption values to deviate more than +/-10% from the average seasonal consumption value for the service/customer class combination. The bounds have been introduced to ensure that forecasted deviation is conservative in nature. Finally, the forecasted number of accounts and per-account usage were multiplied together to estimate aggregate usage by customer class. Figure 2-1 shows RCSD's total demand projected for the next 10 years.

Figure 2-1. Annual Water Demand Projections for FY 2021-22 – FY 2025-26



Revenues

Based on the account growth and water demand projections, RDN forecasted revenues generated from customer rates for the current year and the study period using the current water rates, which totaled approximately $4.8 to $5.0 million annually. Other operating revenues and non-operating revenue are estimated to provide supplemental revenue of approximately $0.3 million a year. The District's total revenues for the study period are estimated to be approximately $5.1 to $5.3 million annually under the status quo rate schedule. Table 2-1 shows projected revenue flow for the study period (FY 2020-21 – FY 2025-26) without any revenue adjustments.

Table 2-1. Revenue Forecast for Water System, FY 2020-21 (Current) and Study Period, FY 2021-22 – FY 2025-26

	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
Revenues from Rates						
Service Charges - Water	$2,345,918	$2,376,205	$2,400,474	$2,425,761	$2,450,626	$2,482,179
Usage Charges - Water	$2,577,054	$2,408,755	$2,442,655	$2,476,536	$2,512,218	$2,546,185
Rate Revenue Total	**$4,922,972**	**$4,784,960**	**$4,843,129**	**$4,902,297**	**$4,962,844**	**$5,028,364**
Other Operating Revenue	**$159,550**	**$159,550**	**$159,550**	**$159,550**	**$159,550**	**$159,550**
Non-Operating Revenues						
Interest Income - LAIF Unrestricted	$120,349	$122,756	$125,211	$127,715	$130,270	$132,875
Miscellaneous Revenue	$8,000	$8,000	$8,000	$8,000	$8,000	$8,000
Total Non-Operating Revenue	**$128,349**	**$130,756**	**$133,211**	**$135,715**	**$138,270**	**$140,875**
Total	**$5,210,871**	**$5,075,266**	**$5,135,890**	**$5,197,562**	**$5,260,663**	**$5,328,789**

Operating and Maintenance (O&M) Expense

Table 2-2 displays the total O&M expense by costs category through the study period. The major expense items included in the analysis are employees' wages and insurance, pension expense, power, and repair and maintenance expenses.

Table 2-2. O&M Expense Forecast for Water, FY 2020-21 (Current) and Study Period, FY 2021-22 – FY 2025-26

	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
Source of Supply	$391,330	$237,097	$243,317	$249,700	$256,253	$262,975
Pumping	$319,791	$332,663	$352,638	$374,088	$397,183	$421,951
Water Treatment	$91,640	$93,709	$96,278	$98,918	$101,634	$104,420
Transmission	$877,295	$897,584	$922,067	$947,219	$973,084	$999,628
Engineering	$30,505	$31,286	$32,105	$32,945	$33,807	$34,692
Customer Accounts	$382,140	$391,864	$402,247	$412,907	$423,853	$435,087
Administrative and General	$946,141	$970,462	$997,651	$1,025,788	$1,054,933	$1,085,102
Conservation	$27,952	$28,657	$29,388	$30,137	$30,906	$31,694
Total	**$3,066,795**	**$2,983,322**	**$3,075,692**	**$3,171,702**	**$3,271,653**	**$3,375,550**

Other Obligations

Other obligations included in the financial plan are capital improvement projects funded by PAYGO (Pay As You Go), debt service obligations, and reserve contributions made from rates.

Capital Improvement Projects

The District estimates approximately $1.5 million PAYGO per year with no inflation adjustment for the study period.

Debt Service

The District is seeking to purchase a piece of land which provides 1,176 acre feet of additional water production rights for an estimated $12.0 million in FY 2021-2022. The land purchase would be financed with a bank loan or some form of private placement note. The payment for this loan including interest and principal is estimated at approximately $0.8 million per year. The payments are estimated based on a 20-year loan with $250,000 issuance expense.

Reserves

The District must maintain an appropriate reserve balance in order to ensure that day-to-day operation will continue during emergencies and guarantee the future stability of the system. The District's financial goal is to build an appropriate level of cash reserves for each reserve fund included in the District's reserve policy document.

- **Operations and Maintenance Fund**: three months of budgeted Operating and Maintenance (O&M) expense of upcoming year
- **Repair and Replacement Fund**: 25 percent of accumulated depreciation
- **Rate Stabilization Fund**: 10 percent of the District's annual rate revenues
- **Catastrophe/Emergency Fund**: $476,000
- **Water Acquisition Fund**: sufficient funds to acquire additional water rights

The total reserve balance target at the end of FY 2025-26 is set at $12.6 million, and reserve contributions to reach this target are estimated to equal approximately $1.6 million per year.

Revenue Requirements

Table 2-3 displays RCSD's revenue requirements for FY 2021-22 through FY 2025-26. The total expense for each year is offset by other operating revenues and non-operating revenues to compute a pure portion of revenue requirements that need to be recovered from customers' rates. CIP expense, contributions to reserves, and debt service payments are included in the other obligations. RDN proposes 8.75 percent annual revenue adjustments to reach the financial goal set by the District.

Table 2-3. Revenue Requirements for Water System, FY 2021-22 – FY 2025-26

Description	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
	Test Year				
Other Operating Revenues	($159,550)	($159,550)	($159,550)	($159,550)	($159,550)
O&M Expenses	$2,983,322	$3,075,692	$3,171,702	$3,271,653	$3,375,550
Non-operating Revenues	($130,756)	($133,211)	($135,715)	($138,270)	($140,875)
Other Obligations	$3,864,048	$3,919,844	$3,920,712	$3,921,689	$3,923,025
Net Balance	($1,353,420)	($975,018)	($492,115)	$45,887	$650,293
Revenue Requirements	**$5,203,645**	**$5,727,757**	**$6,305,033**	**$6,941,409**	**$7,648,443**

Financial Plan

Based on the projected total revenue and necessary costs to be recovered during the study period, RDN built a financial plan that will generate sufficient revenues for the day-to-day operation and annual PAYGO, and make appropriate contributions to the reserves. Table 2-4 shows the proposed financial plan for the study period with 8.75 percent revenue adjustments per year. By adopting this plan, the District will reach its target reserve balance of $12.6 million by the end of FY 2025-26.

Table 2-4. Financial Plan for Water System, FY 2021-22 to FY 2025-26

Description	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
	Test Year				
Operating Revenues	**$5,363,195**	**$5,887,307**	**$6,464,583**	**$7,100,959**	**$7,807,993**
Water Sales - Existing	$4,784,960	$4,843,129	$4,902,297	$4,962,844	$5,028,364
Year 1 - 8.75 %	$418,684	$423,774	$428,951	$434,249	$439,982
Year 2 - 8.75 %		$460,854	$466,484	$472,246	$478,480
Year 3 - 8.75 %			$507,302	$513,567	$520,347
Year 4 - 8.75 %				$558,504	$565,878
Year 5 - 8.75 %					$615,392
Water Sales	$5,203,645	$5,727,757	$6,305,033	$6,941,409	$7,648,443
Other Operating Revenues	$159,550	$159,550	$159,550	$159,550	$159,550
O&M Expenses	**($2,983,322)**	**($3,075,692)**	**($3,171,702)**	**($3,271,653)**	**($3,375,550)**
Net Operating Revenues	$2,379,872	$2,811,615	$3,292,882	$3,829,306	$4,432,443
Non-operating Revenues	$130,756	$133,211	$135,715	$138,270	$140,875
Other Obligations	**($3,864,048)**	**($3,919,844)**	**($3,920,712)**	**($3,921,689)**	**($3,923,025)**
Debt Service Total	($847,456)	($847,456)	($847,456)	($847,456)	($847,456)
Contribution to Reserves	($1,516,592)	($1,572,388)	($1,573,256)	($1,574,234)	($1,575,569)
PAYGO	($1,500,000)	($1,500,000)	($1,500,000)	($1,500,000)	($1,500,000)
Net Balance	**($1,353,420)**	**($975,018)**	**($492,115)**	**$45,887**	**$650,293**
Beginning of the Year Balance	$2,126,102	$772,682	($202,336)	($694,451)	($648,564)
Ending Balance	**$772,682**	**($202,336)**	**($694,451)**	**($648,564)**	**$1,729**
DSCR	**2.81**	**3.32**	**3.89**	**4.52**	**5.23**
% Deficit/Surplus	-26.0%	-17.0%	-7.8%	0.7%	8.5%
% Cumulative Deficiency	**14.8%**	**-1.9%**	**-4.0%**	**-2.7%**	**0.0%**

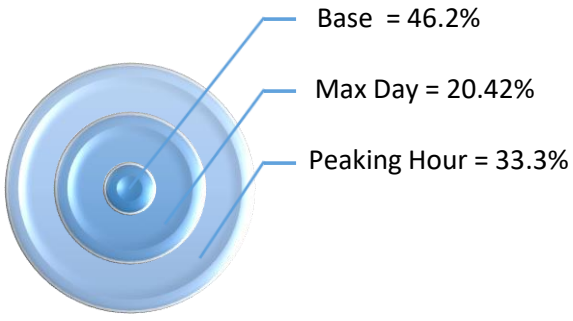
2.2 Cost of Service Analysis

The purpose of a Cost of Service (COS) analysis is to allocate costs among customers commensurate with their service requirements. RDN employs 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 functions 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.

Operating costs are functionalized based on input from District staff with expertise on the system and utility industry knowledge. RDN utilized distribution of the functionalized system asset values to allocate the costs included in the other obligations into the standardized functions. The functions of the water system for both operating and capital expenses include:

- Source of Supply – costs associated with source of water supply
- Pumping – costs associated with general pumping and energy use
- Water Treatment – costs associated with treatment of water
- Transmission and Distribution – costs associated with transmitting and distributing water to customers
- Administrative and General – costs associated with administrative and general functions
- Fire – costs associated with providing water service for fire protection
- Conservation – costs associated with conservation programs such as rebates to promote water conservation

Once all of the costs are functionalized, the next step in the COS analysis is to allocate the functionalized costs into the cost causative components. 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 percent 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). The MDD factor was computed using average month and maximum month usage (August) reported during FY 2019-20. 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. Accordingly, the costs associated with the functions which require extra capacity service requirements were distributed to the base, MDD, and PHD cost components for 46.2%, 20.4%, and 33.3%, respectively. The number of bills in one year (the number of accounts multiplied by 12) serves as the basis for distributing billing and customer service costs associated with meter reading, customer billing and collection, and other customer services costs. The number of equivalent meters is used to measure meter related service costs. The final step of a COS analysis determines how the total revenue requirements are allocated to each of the three customer classes.



Operating and Maintenance (O&M) Cost Allocation

Table 2-5 displays functionalized O&M costs allocated to cost causative components.

Table 2-5. O&M Functionalized Cost Allocation to Cost Causative Components, Water System

O&M Cost Allocation	Total Cost	Water Supply	Base	MDD	PHD	Meters	Customer Service	Conservation	Public Fire Protection Service
Source of Supply	**$237,097**	**$237,097**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
Pumping	**$332,663**	**$76,100**	**$177,894**	**$78,669**	**$0**	**$0**	**$0**	**$0**	**$0**
P-Purchased Power	$187,504	$72,852	$79,497	$35,156	$0	$0	$0	$0	$0
P-Other	$145,158	$3,248	$98,397	$43,514	$0	$0	$0	$0	$0
Water Treatment	**$93,709**	**$5,543**	**$61,132**	**$27,034**	**$0**	**$0**	**$0**	**$0**	**$0**
WT-Chemicals	$12,488	$2,498	$6,927	$3,063	$0	$0	$0	$0	$0
WT-Other	$81,221	$3,045	$54,205	$23,971	$0	$0	$0	$0	$0
Transmission and Distribution	**$897,584**	**$0**	**$385,983**	**$170,692**	**$278,337**	**$0**	**$0**	**$0**	**$62,573**
T&D-Storage	$125,146	$0	$57,848	$25,582	$41,715	$0	$0	$0	$0
T&D-Transmission Mains	$78,216	$0	$36,155	$15,989	$26,072	$0	$0	$0	$0
T&D-Distribution Mains	$93,859	$0	$43,386	$19,187	$31,286	$0	$0	$0	$0
T&D-Hydrants	$62,573	$0	$0	$0	$0	$0	$0	$0	$62,573
T&D-Other	$537,790	$0	$248,593	$109,934	$179,263	$0	$0	$0	$0
Engineering	**$31,286**	**$0**	**$14,462**	**$6,396**	**$10,429**	**$0**	**$0**	**$0**	**$0**
Customer Accounts	**$391,864**	**$0**	**$0**	**$0**	**$0**	**$180,886**	**$210,979**	**$0**	**$0**
C-Meters and Services	$180,886	$0	$0	$0	$0	$180,886	$0	$0	$0
C-Billing	$210,979	$0	$0	$0	$0	$0	$210,979	$0	$0
Administrative and General	**$970,462**	**$132,384**	**$300,811**	**$133,026**	**$157,065**	**$98,387**	**$114,755**	**$0**	**$34,034**
A&G-Salaries	$46,930	$6,402	$14,547	$6,433	$7,595	$4,758	$5,549	$0	$1,646
A&G-Employee Benefits	$46,930	$6,402	$14,547	$6,433	$7,595	$4,758	$5,549	$0	$1,646
A&G-Insurance	$31,286	$4,268	$9,698	$4,289	$5,064	$3,172	$3,700	$0	$1,097
A&G-Other	$845,316	$115,312	$262,020	$115,872	$136,810	$85,699	$99,956	$0	$29,646
Conservation	**$28,657**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$28,657**	**$0**
Total Test Year O&M	**$2,983,322**	**$451,124**	**$940,281**	**$415,817**	**$445,830**	**$279,273**	**$325,733**	**$28,657**	**$96,607**
Percent	100.0%	15.1%	31.5%	13.9%	14.9%	9.4%	10.9%	1.0%	3.2%

Other Obligations Cost Allocation

Table 2-6 displays functionalized capital assets allocated to the cost causative components. The percentage distribution derived from the asset value allocation was applied to the total cost of other obligations to distribute the costs into different cost components. The other obligations include debt service payments, reserve contributions, and capital improvement project costs, which are primary capital asset related expenses. This methodology is used when a utility does not have an extensive capital project list to represent overall capital needs for the system.

Table 2-6. Other Obligations Cost Allocation, Water System

Asset Cost Allocation	Total Cost	Water Supply	Base	Max Data	Max Hour	Meters	Customer Service	Conservation	Public Fire Protection Service
Source of Supply	**$1,551,083**	**$1,551,083**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
SS-Land	$1,245,828	$1,245,828	$0	$0	$0	$0	$0	$0	$0
SS-Reservoir	$305,255	$305,255	$0	$0	$0	$0	$0	$0	$0
Pumping	**$1,151,332**	**$0**	**$443,263**	**$324,676**	**$383,394**	**$0**	**$0**	**$0**	**$0**
P-Land	$0	$0	$0	$0	$0	$0	$0	$0	$0
P-Structures	$1,002,837	$0	$386,092	$282,800	$333,945	$0	$0	$0	$0
P-Electrical Pumping Equipment	$12,298	$0	$4,735	$3,468	$4,095	$0	$0	$0	$0
P-Other Pumping Equipment	$136,196	$0	$52,436	$38,407	$45,353	$0	$0	$0	$0
Water Treatment	**$133,986**	**$0**	**$51,585**	**$37,784**	**$44,617**	**$0**	**$0**	**$0**	**$0**
WT-Structures	$0	$0	$0	$0	$0	$0	$0	$0	$0
WT-Plant	$133,986	$0	$51,585	$37,784	$44,617	$0	$0	$0	$0
Transmission and Distribution	**$6,128,386**	**$0**	**$3,009,464**	**$1,250,819**	**$1,477,031**	**$386,462**	**$0**	**$0**	**$4,609**
T&D-Land	$1,301,786	$0	$1,301,786	$0	$0	$0	$0	$0	$0
T&D-Structures	$0	$0	$0	$0	$0	$0	$0	$0	$0
T&D-Distribution Storage	$0	$0	$0	$0	$0	$0	$0	$0	$0
T&D-Transmission Mains	$74,177	$0	$28,558	$20,918	$24,701	$0	$0	$0	$0
T&D-Distribution Mains	$4,361,352	$0	$1,679,121	$1,229,901	$1,452,330	$0	$0	$0	$0
T&D-Services	$0	$0	$0	$0	$0	$0	$0	$0	$0
T&D-Meters	$386,462	$0	$0	$0	$0	$386,462	$0	$0	$0
T&D-Hydrants	$4,609	$0	$0	$0	$0	$0	$0	$0	$4,609
General	**$2,624,270**	**$454,050**	**$1,025,821**	**$472,257**	**$557,665**	**$113,129**	**$0**	**$0**	**$1,349**
G-Land	$698,323	$120,823	$272,972	$125,668	$148,396	$30,104	$0	$0	$359
G-Structures	$1,837,775	$317,971	$718,381	$330,721	$390,532	$79,224	$0	$0	$945
G-Other	$88,173	$15,256	$34,467	$15,867	$18,737	$3,801	$0	$0	$45
Total Assets	**$11,589,057**	**$2,005,133**	**$4,530,132**	**$2,085,536**	**$2,462,707**	**$499,591**	**$0**	**$0**	**$5,958**
Total Other Obligations	**$3,864,048**	**$668,556**	**$1,510,446**	**$695,364**	**$821,121**	**$166,575**	**$0**	**$0**	**$1,987**
Percentage	100.0%	17.3%	39.1%	18.0%	21.3%	4.3%	0.0%	0.0%	0.1%

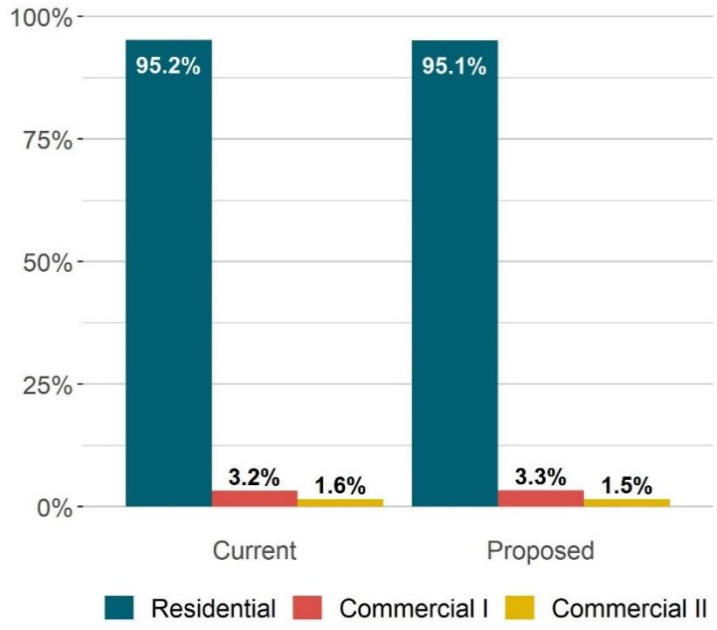
Cost Allocation to Customer Classes

In developing equitable rate structures, revenue requirements are allocated to Residential, Commercial I, and Commercial II 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. Based on the results of the unit of service analysis carried out during the COS analysis, the costs are allocated to three distinguished customer classes based on the demand each customer class placed on the system (Table 2-7). As a result of this analysis RDN identified slight shifts in the cost allocation among three customer class. Figure 2-2 presents the current cost allocation verses the proposed cost allocation determined in the COS analysis.

Table 2-7. Unit of Services, Water System

Unit of Service	Average Day			MDD			PHD			Meters	Customers
Description	Annual	%		Factor	Total	Extra	Factor	Total	Extra	EMs	# of Billing
	hcf		hcf/day		hcf/day	hcf/day		hcf/day	hcf/day		
Residential	870,823	95%	2,386	147%	3,495	1,109	220%	5,243	1,748	5,698	61,380
Commercial I	28,503	3%	78	172%	134	56	258%	202	67	158	588
Commercial II	16,235	2%	44	134%	60	15	202%	90	30	52	300
Total	915,561	100%	2,508		3,689	1,181		5,534	1,845	5,907	62,268

Figure 2-2. Current Cost Allocation vs. Proposed Cost Allocation by Customer Class



2.3 Water Rate Design

This study evaluated the current rates and financial condition of RCSD and determined necessary revenue adjustments for the study period, FY 2021-22 – FY 2025-26. RDN, in consultation with District staff, performed multi-level analysis to find the most effective and equitable way to recover necessary revenues from customer's rates. RDN proposes the following adjustments to RCSD's Residential, Commercial I, and Commercial II customers' water rate structures:

- Reducing the volumetric rates for the water system from four tiers to three tiers - RDN determined that the current tiered rate structure (four tiers) is no longer defensible as the water supply cost will be the same for all water produced. No water purchases from AVEK or other suppliers are included in the District's 10-year financial plan. The new three-tiered rate structure was constructed by allocating peaking related costs and conservation related costs to the upper tiers (Tier 2 and 3)
- Tier widths for Residential customers' volumetric charges reflect efficient indoor and outdoor water use for the District's average customer. This prepares the District for the new state water budget regulations; AB 1686 and SB 606

- Creating different sets of rates for Commercial I and Commercial II customers which reflect cost of services required to serve specific customer classes
- Removing the 3 hundred cubic feet (hcf) of water allotment included in the fixed charges. Under the current rates, a customer who uses only 1 hcf of water per month pays the same bill as a customer who uses 3 hcf of water. RDN recommends removing the water allotment to further improve equitability among all customers.

Residential Rates

RDN proposes to align the Tier 1 and Tier 2 widths for the Residential customers' volumetric rates to the new state water budget regulations AB 1668 and SB 606 and reflect efficient indoor and outdoor water allocation for the District's average customers.

Indoor Water Allocation

The following formula displays a standard indoor water budget calculation the state uses to calculate efficient indoor water use for Residential customers:

$$\textbf{\textit{Indoor Water Budget}} = \frac{55\ \textbf{\textit{gpcd}}}{748\ \textbf{\textit{gallons/hcf}}} \times \textbf{\textit{Household Size}} \times \textbf{\textit{Days of Service}}$$

Where:

- gpcd – gallons per capita per day, currently set at 55
- Household Size – 2019 American Community Survey data from Census Bureau indicated that the average household size for the District's renter's occupied unit is 3.21, and owner occupied is 2.91. The District has 2,423 renter occupied units and 4,484 owner occupied units. RDN calculated a weighted average of all household, which yielded to 3.03 persons per household
- Days of Service – number of days of service varies with each billing cycle for each customer. For the purpose of establishing the tier widths for this study, RDN used 30 days
- 748 is the conversion unit from gallons to a billing unit of one hundred cubic feet (hcf) currently used by the District.

Based on these parameters, an average Residential customer's indoor water budget is computed at 7 hcf a month.

Outdoor Water Allocation

The state uses the following equation to calculate efficient outdoor water use:

$$\textbf{\textit{Outdoor Water Budget}} = \frac{\textbf{\textit{Landscape Area}}\ (\textbf{\textit{Irrigable}})^2 \times \textbf{\textit{PF}} \times \textbf{\textit{Evapotranspiration Factor}}\ (\textbf{\textit{ET}}) \times 0.62}{748}$$

Where:

- Plant Factor (PF) is set to 0.7 (70 percent) for irrigation to encourage conservation, which is consistent with the State of California Code of Regulations Title 23, Section 491 and an expected parameter to be

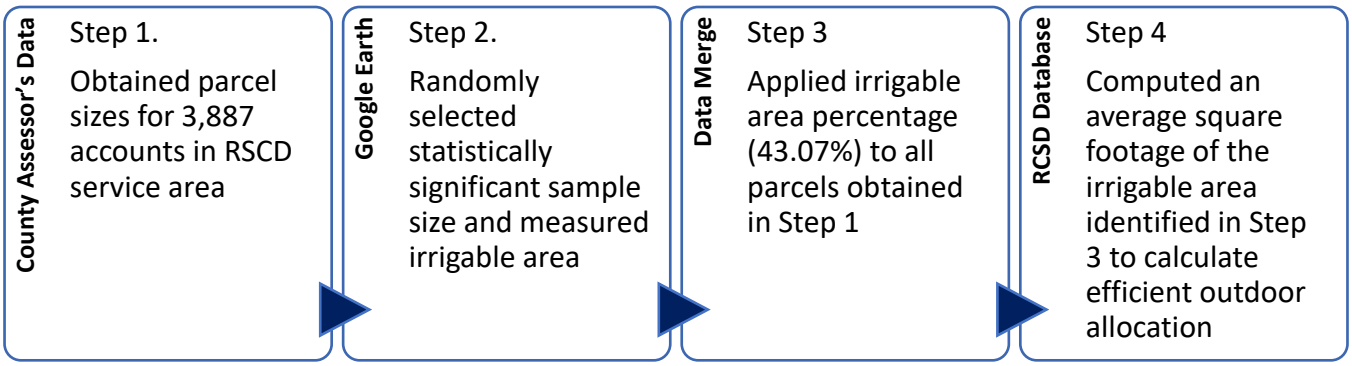
[2] *Landscape Area (or Irrigable Area in square feet) is the measured irrigable landscape area served by a customer's meter*

used for plant factor under Assembly Bill No. 1668 (AB 1668) and Senate Bill No. 606 (SB 606), approved in May, 2018.

- Evapotranspiration Factor (ET) is based on the historical data acquired from California Irrigation Management Information System (CIMIS), measured at Lancaster and Palmdale weather stations.
- 0.62 converts sq. ft. to gallons
- 748 converts gallons to hcf

RDN estimated the average percentage of irrigable area to apply to the District's Residential customers' parcels and computed an outdoor water budget to establish the Tier 2 width. The flowchart outlines a step-by-step process RDN followed.

Figure 2-3. Process of Irrigable Area Computation



Once the tier widths were determined, RDN allocated approximately 20 percent of peaking related to costs to Tier 2 and Tier 3 rates, while Tier 1 rate is designed to recover the costs of basic services such as delivery and supply related costs. Fixed charges included meter services, customer service, and 80 percent of peaking related costs. Table 2-8 and Table 2-9 display Residential customer's proposed volumetric rates and fixed charges for FY 2021-22 through FY 2025-26, respectively.

Table 2-8. Residential Customer Proposed Water Volumetric Rates by Tier for FY 2021-22 – FY 2025-26

Volumetric Charges per HCF						
Rates	Width	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
Tier 1	1-7 hcf	$2.91	$3.16	$3.44	$3.74	$4.07
Tier 2	8-21 hcf	$3.21	$3.49	$3.80	$4.13	$4.49
Tier 3	All Additional	$4.03	$4.38	$4.76	$5.18	$5.63

Table 2-9. Residential Customers Proposed Monthly Fixed Service Charges by Meter Size

Fixed Charge Monthly					
Rates	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
5/8-in	$30.50	$33.17	$36.07	$39.23	$42.66
3/4-in	$30.50	$33.17	$36.07	$39.23	$42.66
1-in	$48.21	$52.43	$57.02	$62.01	$67.44
1 1/2-in	$92.49	$100.59	$109.39	$118.96	$129.37
2-in	$145.63	$158.37	$172.23	$187.30	$203.69
3-in	$269.62	$293.21	$318.87	$346.77	$377.11
4-in	$446.75	$485.84	$528.35	$574.58	$624.86
6-in	$889.56	$967.40	$1,052.05	$1,144.10	$1,244.21

Commercial I Rates

Commercial I customer's tier widths were determined using the Empirical Cumulative Distribution Function (ECDF) plot. The ECDF plot allows us to plot the District's usage data in order from the lowest usage to the greatest monthly usage per bill (X axis) and a percentage of bills (Y axis) at the corresponding usage level. Figure 2-4 indicates that 50 percent of Commercial I customers use approximately 10 hcf of water per month, and 80 percent of customers use 40 hcf of water per month. RDN set the tier widths for Tier 1 and 2 to be 10 hcf and 30 hcf using this data to ensure the District's majority of customers stay within the Tier 1 and Tier 2 usage levels.

Figure 2-4. ECDF Plot: Commercial I Customers Percentage of Bills and Corresponding Monthly Usage

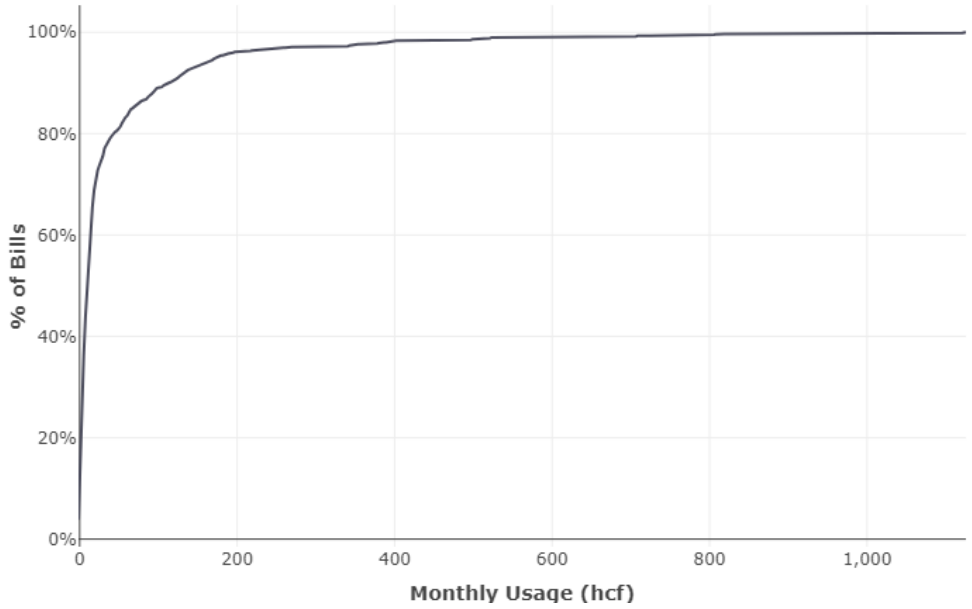


Table 2-10 and Table 2-11 present Commercial I customers' volumetric rates by tier and monthly fixed service charges by meter size. Commercial I customer's rates are designed by allocating approximately 35 percent of peaking related costs to volumetric charges.

Table 2-10. Commercial I Customers Proposed Volumetric Rates by Tier

Volumetric Charges per HCF						
Rates	Width	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
Tier 1	1-10 hcf	$2.97	$3.23	$3.51	$3.82	$4.15
Tier 2	11-40 hcf	$3.50	$3.81	$4.14	$4.50	$4.89
Tier 3	All Additional	$4.28	$4.65	$5.06	$5.50	$5.98

Table 2-11. Commercial I Customers Proposed Monthly Fixed Service Charges by Meter Size

Fixed Charge Monthly					
Rates	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
5/8-in	$35.09	$38.16	$41.50	$45.13	$49.08
3/4-in	$35.09	$38.16	$41.50	$45.13	$49.08
1-in	$55.87	$60.75	$66.07	$71.85	$78.14
1 1/2-in	$107.80	$117.23	$127.49	$138.65	$150.78
2-in	$170.13	$185.01	$201.20	$218.81	$237.96
3-in	$315.55	$343.16	$373.19	$405.84	$441.35
4-in	$523.29	$569.08	$618.87	$673.02	$731.91
6-in	$1,042.65	$1,133.89	$1,233.11	$1,341.01	$1,458.35

Commercial II Rates

Commercial II customer's tier widths were determined using the same methodology used for Commercial I customers. Figure 2-5 indicates that 50 percent of Commercial I customers use approximately 30 hcf of water per month, and 80 percent of customers use 95 hcf of water per month. RDN set the tier widths for Tier 1 and 2 to be 30 hcf and 65 hcf using this data to ensure the District's majority of customers stay within the first two tier widths.

Figure 2-5. ECDF Plot: Commercial II Customers Percentage of Bills and Corresponding Monthly Usage

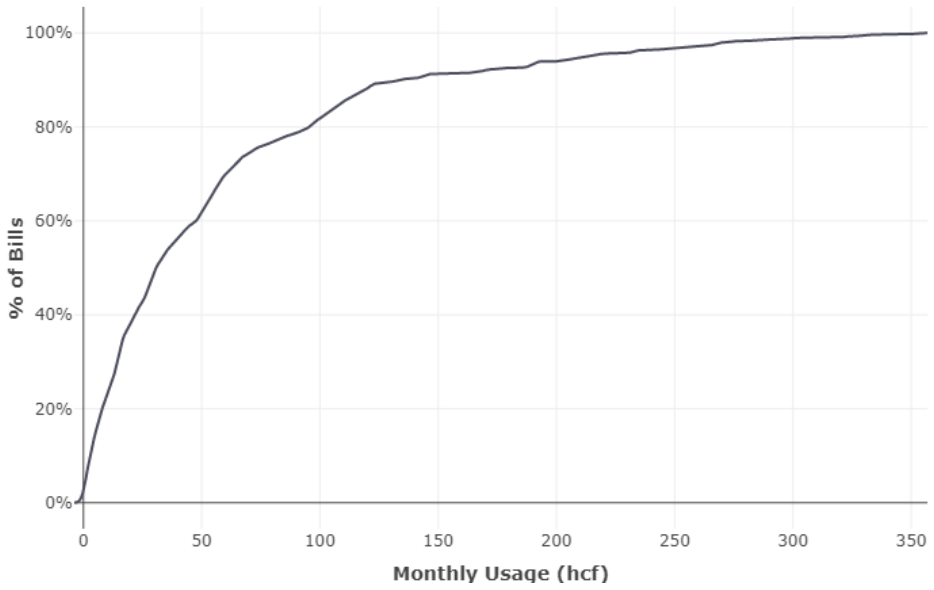


Table 2-12 and Table 2-13 present Commercial II customers' volumetric rates by tier and monthly fixed service charges by meter size.

Table 2-12. Commercial II Customers Proposed Volumetric Rates by Tier

Volumetric Charges per HCF						
Rates	Width	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
Tier 1	1-30 hcf	$2.97	$3.23	$3.51	$3.82	$4.15
Tier 2	31-95 hcf	$3.50	$3.81	$4.14	$4.50	$4.89
Tier 3	All Additional	$4.28	$4.66	$5.07	$5.51	$5.99

Table 2-13. Commercial II Customers Proposed Monthly Fixed Service Charges by Meter Size

Fixed Charge Monthly					
Rates	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
5/8-in	$38.75	$42.14	$45.83	$49.84	$54.20
3/4-in	$38.75	$42.14	$45.83	$49.84	$54.20
1-in	$61.96	$67.39	$73.29	$79.70	$86.67
1 1/2-in	$120.00	$130.50	$141.92	$154.34	$167.84
2-in	$189.64	$206.23	$224.28	$243.90	$265.24
3-in	$352.14	$382.95	$416.46	$452.90	$492.53
4-in	$584.28	$635.40	$691.00	$751.46	$817.21
6-in	$1,164.62	$1,266.53	$1,377.35	$1,497.87	$1,628.93

2.4 Bill Impact Analysis

RDN performed an extensive bill impact analysis to find the optimal rates with the least impact across all customers. Note that the bill impact shown below only reflect the test year rates.

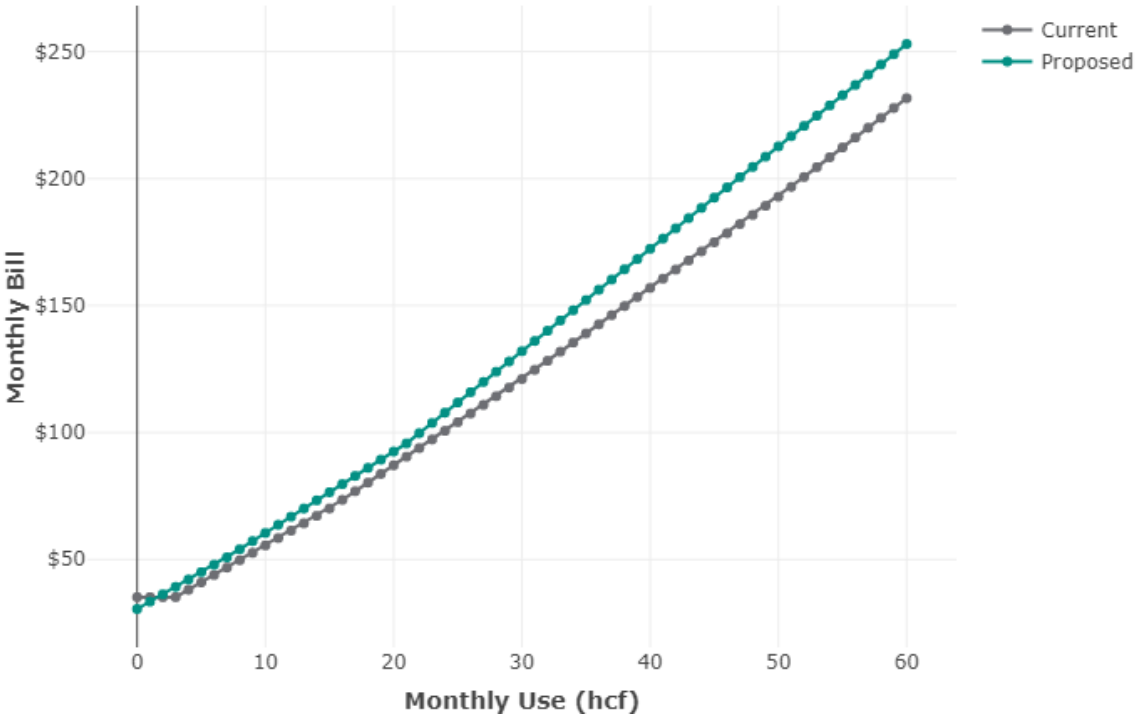
Residential Customers Bill Impact

This analysis compares a hypothetical customer's bill under current and proposed rates. Table 2-14 shows the dollar change in the bill based on the Residential customer's usage. The District's median Residential customer uses water for the amount of 9 hcf per month, which represents 50 percent of the District's total customers. An average Residential customer uses 14 hcf, which represents 70 percent of customers. Approximately 80 percent of customers use 20 hcf of water or less per month and 95 percent of customers use a maximum of 37 hcf of water monthly. Figure 2-6 presents Residential customers monthly bill impacts by usage

Table 2-14. Residential Customers' Bill Impacts by Usage for Median, Average, 20 hcf, and 37 hcf

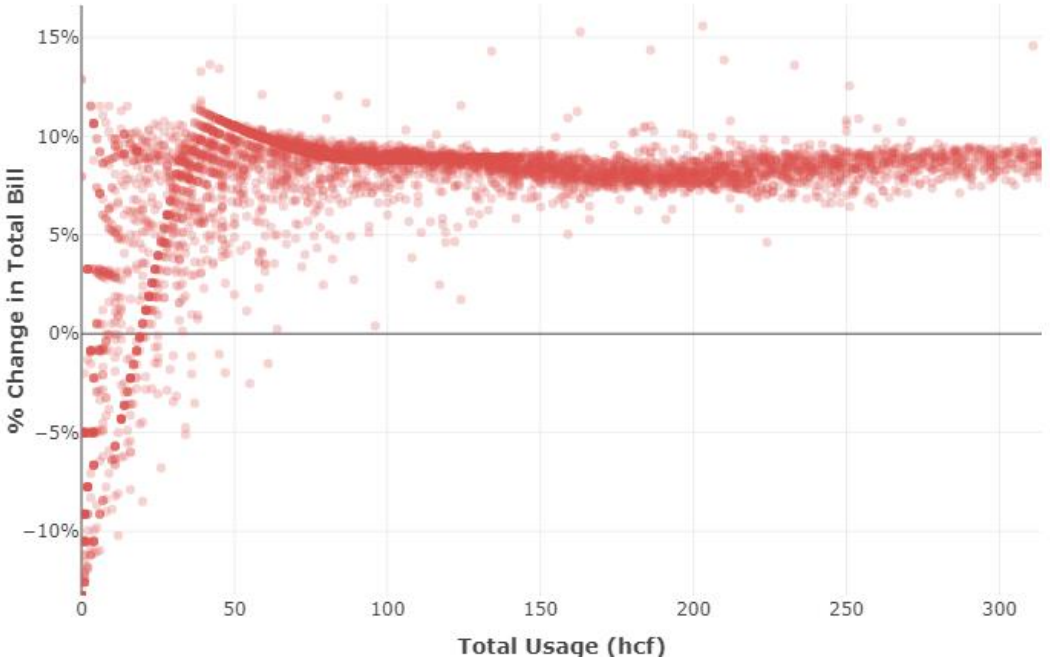
Use	Current	Proposed
9 hcf (Median, 50%)	$52.62	$57.25
14 hcf (Average, 70%)	$67.17	$73.28
20 hcf (80%)	$87.08	$92.51
37 hcf (95%)	$146.21	$160.25

Figure 2-6. Hypothetical Residential Customer's Bill Impact by Usage



RDN performed a bill impact analysis on the actual customers' annual bills. Figure 2-7 displays a percentage of change on their total annual bills for each of the District's customer accounts.

Figure 2-7. Annual Bill Impacts on Residential Customers' Actual Bills



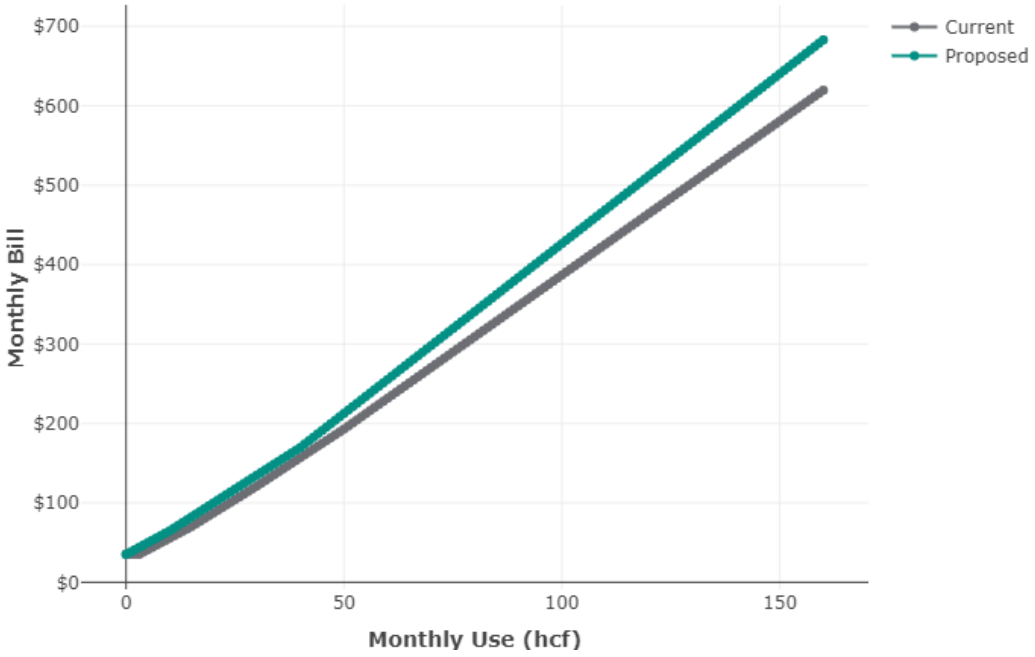
Commercial I Customers Bill Impact

Table 2-15 shows the dollar change in the bill based on the customer's usage. The District's median Commercial I customer uses 12 hcf of water per month, representing 55 percent of the District's total customers. An average Commercial I customer uses 53 hcf, which represents 81 percent of customers. Approximately 95 percent of customers use a maximum of 170 hcf of water monthly. Figure 2-8 presents Residential customers monthly bill impacts by usage.

Table 2-15. Commercial I Customers' Bill Impacts by Usage for Median, Average, and 170 hcf

Use	Current	Proposed
12 hcf (Median, 55%)	$61.35	$71.76
53 hcf (Average, 81%)	$204.52	$225.42
170 hcf (95%)	$658.48	$725.87

Figure 2-8. Hypothetical Commercial I Customer's Bill Impact by Usage



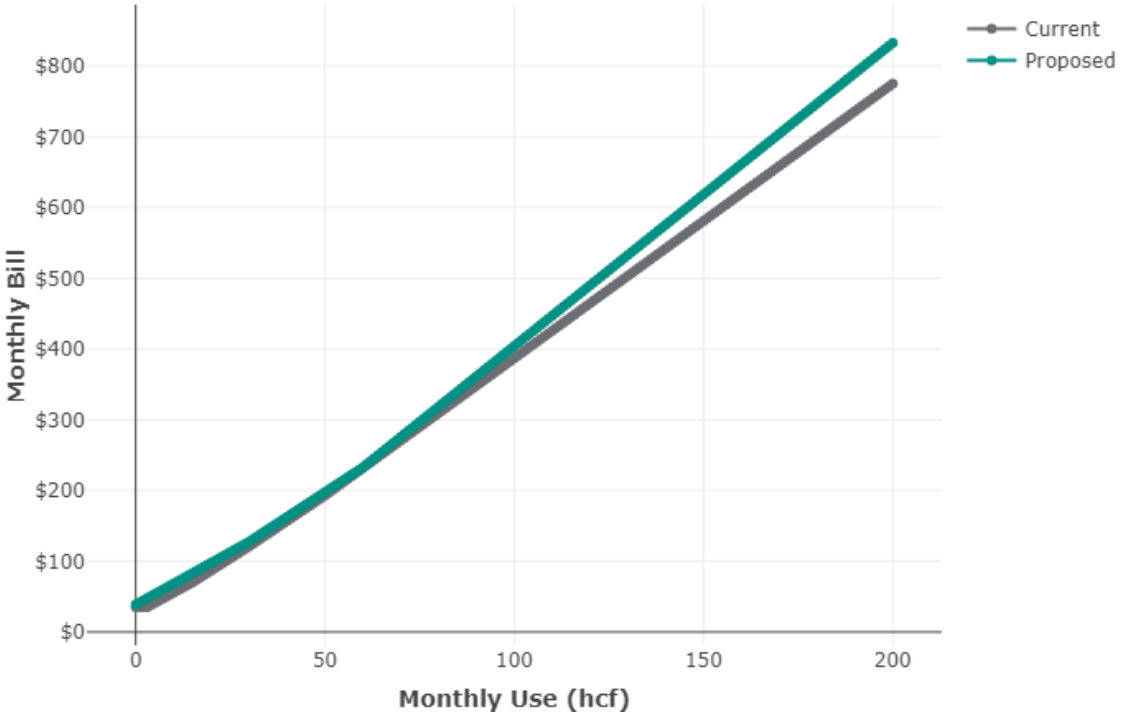
Commercial II Customers Bill Impact

Commercial II customers have the highest per account usage among all customer classes. Table 2-16 shows the dollar change in the bill based on the customer's usage. The District's median Commercial II customer uses 35 hcf of water monthly, representing 53 percent of the District's total Commercial II customers. An average Commercial II customer uses 56 hcf, which represents 67 percent of customers. Approximately 80 percent of customers use as much as 95 hcf of water per month, and 95 percent of customers use 200 hcf of water monthly. Figure 2-9 presents Residential customers monthly bill impacts by usage.

Table 2-16. Commercial II Customers' Bill Impacts by Usage for Median, Average, 95 hcf, and 200 hcf

Use	Current	Proposed
35 hcf (Median, 53%)	$139.03	$145.24
56 hcf (Average, 67%)	$216.16	$218.72
95 hcf (80%)	$367.48	$355.18
200 hcf (95%)	$774.88	$805.09

Figure 2-9. Hypothetical Commercial II Customer's Bill Impact by Usage



2.5 Rate Comparison Survey

There are significant differences in the rates and rate structures of water providers in the neighboring communities of RCSD. Some of the differences are because of administrative paradigms, which are unique to each agency. For example, investor-owned utilities are allowed to make a profit on their water service, whereas municipal ones are not. Customer rates can be affected by outside funding sources such as property taxes and transfers. Furthermore, the costs associated with different water sources may affect rates. Finally, the rate structure itself may influence which types of users pay a proportion of costs. Figure 2-10 shows projected Residential water rates in July 2021 for 15 local providers at 14 hcf of use. The usage level at 14 hcf was chosen because it represents the average customer usage for RCSD residential customers. The rate structure of each agency dictates the price differences between usage levels. Individual water rates range between $37.16 and $87.75 at 14 hcf of usage.

Figure 2-11 shows projected Commercial water rates in July 2021 for 15 local providers at 35 hcf of monthly use. The 35 hcf usage level represents the median Commercial II customer usage. At 35 hcf of usage commercial water

rates range between $50.79 and $231.22 between the sampled providers. The new rates proposed by RCSD will fund O&M expenses, contribute to reserves, and allow significant CIP spending.

Figure 2-10. Rate Comparison for Residential Customers Using 14 hcf

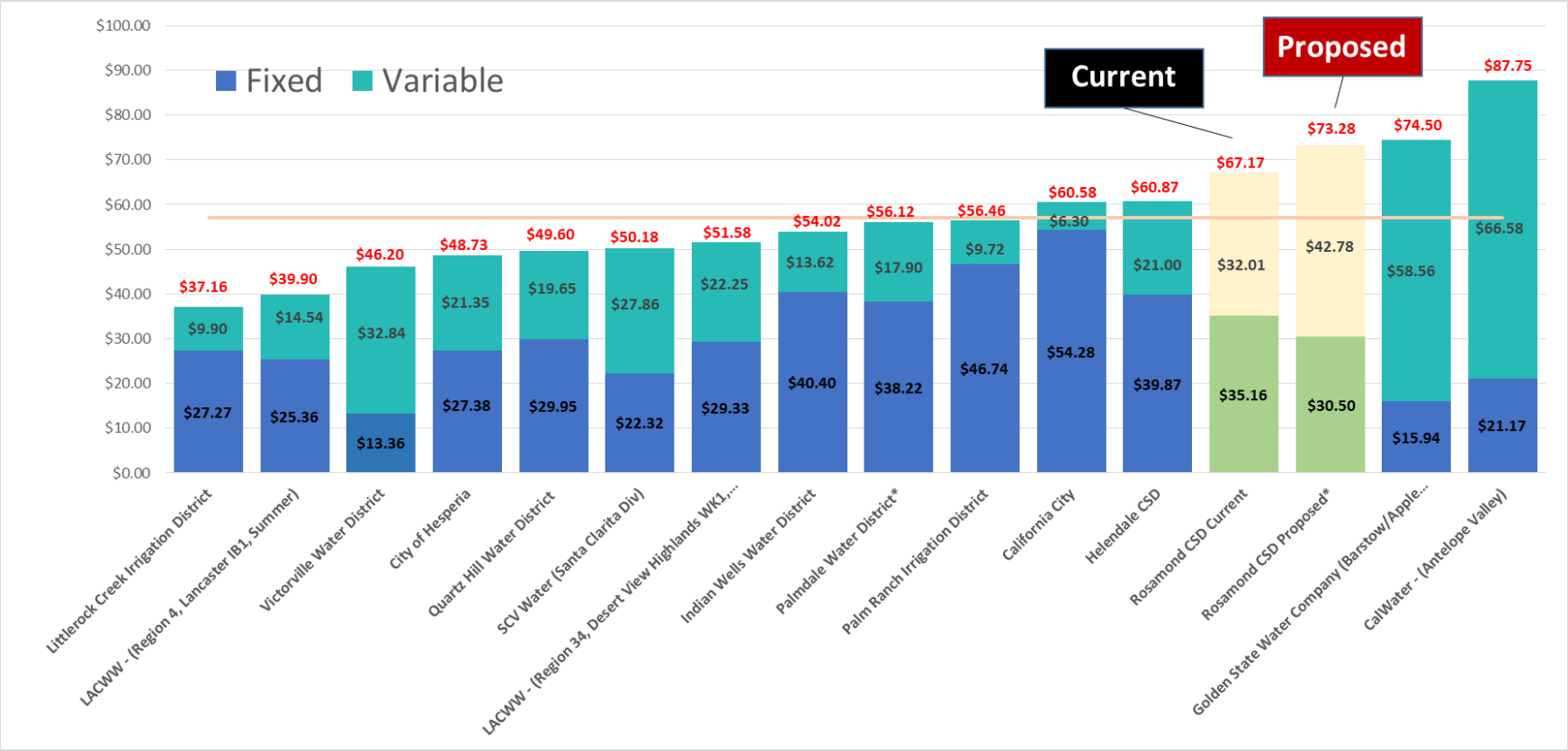
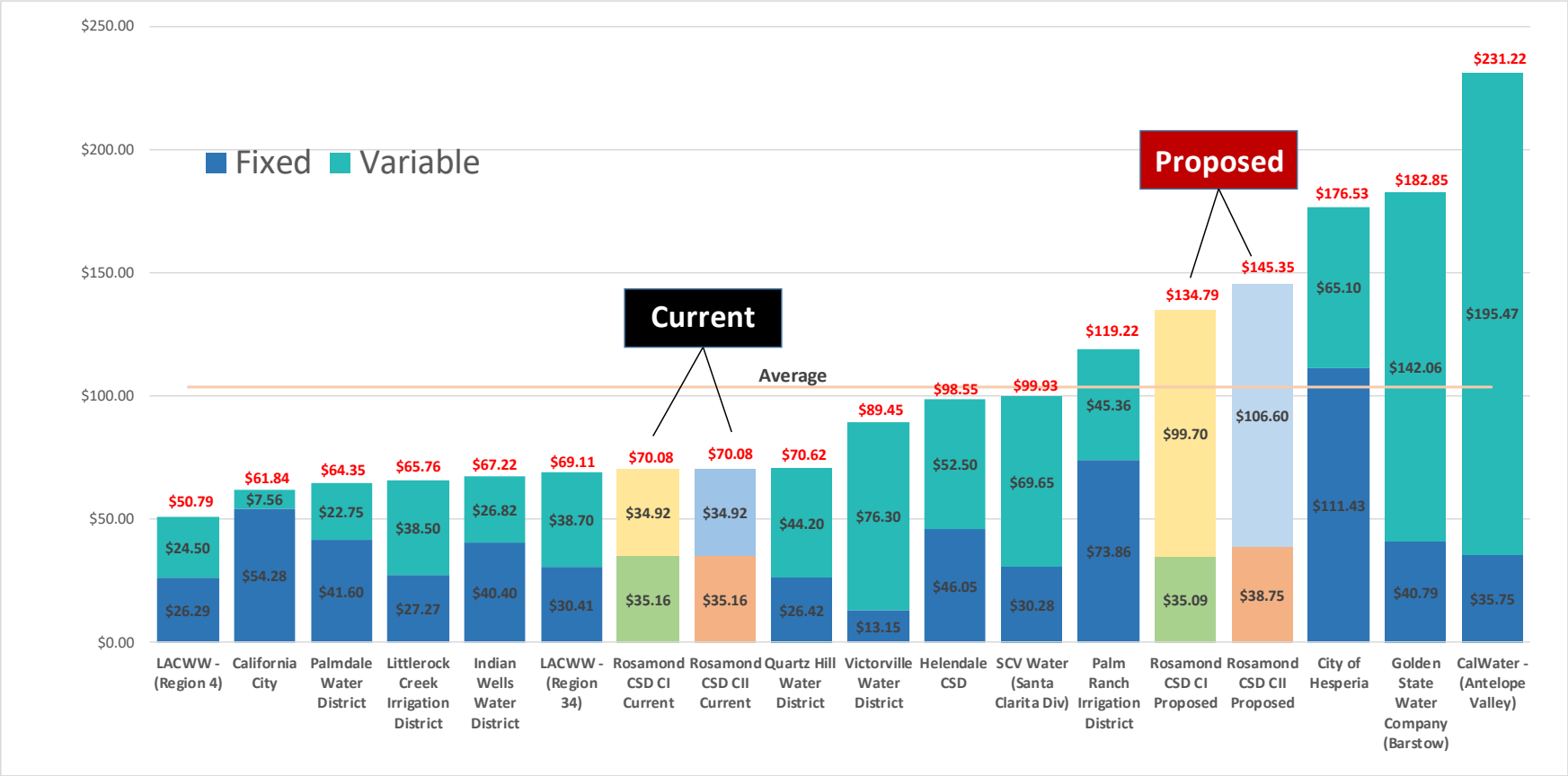


Figure 2-11. Rate Comparison for Commercial Customers Using 35 hcf



3 SEWER SYSTEM

3.1 Financial Plan

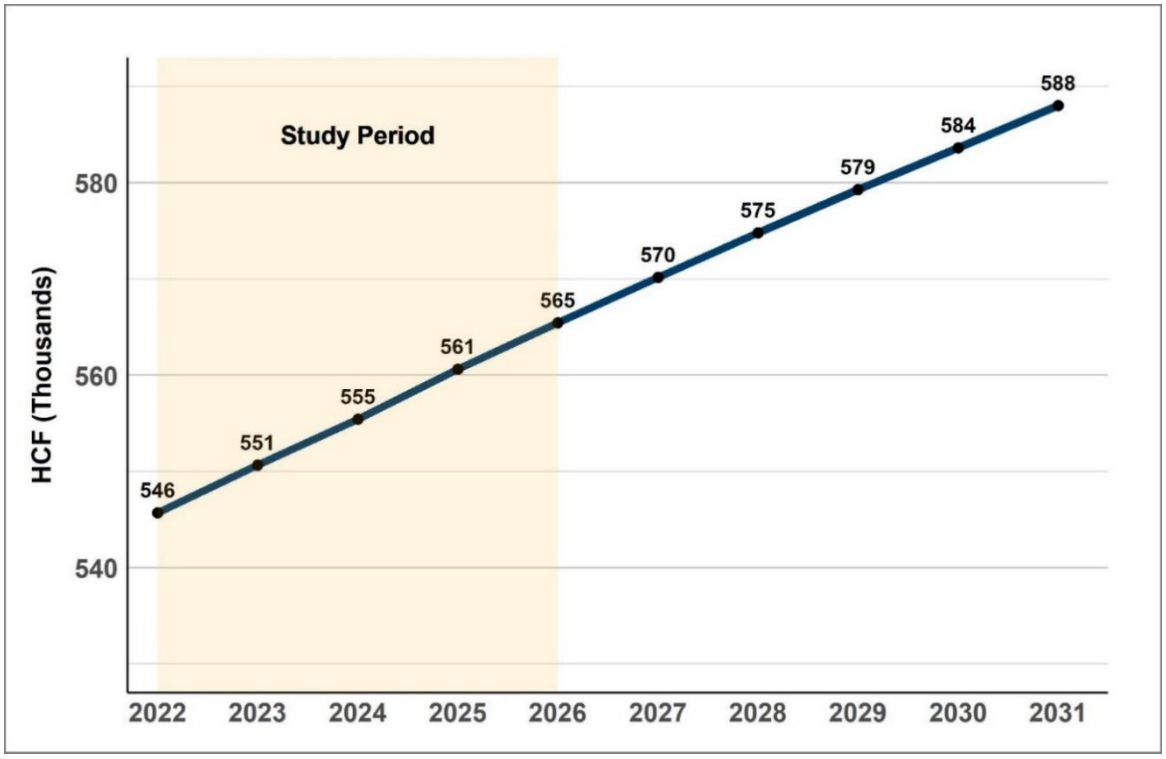
RDN built a 10-year financial model for RCSD's sewer system to meet the system's long-term financial goals. The account growth and demand projections are presented for 10 years in this report. The detailed rate analysis was performed for the first five years because rate recommendations designed under Prop 218 cannot exceed five years.

Demand Projections

Sewer customers are charged a standard fixed charge for each of their sewer connections. It follows that one account can be associated with multiple fixed charges each month if there are multiple sewer connections. Therefore, we forecasted the number of connections by meter size for sewer connections according to the observed time trend.

Next, we forecasted the number of connections and per-connection usage by customer class utilizing observed trends in the historical data. For per-connection consumption we introduced seasonal upper and lower bounds; the bounds inhibit forecasted per-account consumption values to deviate more than +/-10% from the average seasonal consumption value for the service/customer class combination. The bounds have been introduced to ensure that forecasted deviation is conservative in nature. Finally, the forecasted number of connections and per-connection consumption were multiplied together to estimate aggregate usage by customer class.

Figure 3-1. Annual Sewer Demand Projections for FY 2021-22 – FY 2025-26



Revenues

Based on the demand projections RDN conducted a revenue analysis using the current sewer rates. The District currently collects revenues from fixed charges, volumetric charges, and other operating revenues such as late charges, reconnection fees, account start up fees, and inspection fees. The revenue analysis also includes non-operating revenues such as interest income and other miscellaneous revenues. These revenues are used to offset the revenue requirements that need to be recovered from customers' rates. This projection was created under the status quo and does not include proposed revenue adjustments.

Table 3-1. Revenue Forecasted for Sewer System, FY 2020-21 (Current) and Study Period (FY 2021-22 – FY 2025-26)

	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
Revenues from rates						
Service Charges - Sewer	$3,023,725	$3,052,028	$3,081,275	$3,112,409	$3,142,127	$3,171,845
Usage Charges - Sewer	$174,534	$172,251	$173,943	$175,476	$177,126	$178,591
Rate Revenue Total	**$3,198,259**	**$3,224,279**	**$3,255,218**	**$3,287,884**	**$3,319,253**	**$3,350,436**
Other operating revenues	**$281,000**	**$72,000**	**$72,000**	**$72,000**	**$72,000**	**$72,000**
Non-operating revenues						
Interest	$5,334	$4,962	$4,588	$4,214	$3,838	$3,462
Interest Income - LAIF Unrestricted	$255,471	$260,580	$265,792	$271,108	$276,530	$282,061
Miscellaneous Revenue	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000
Total Non-Operating Revenues	**$262,805**	**$267,542**	**$272,380**	**$277,322**	**$282,368**	**$287,523**
Total	**$3,742,064**	**$3,563,822**	**$3,599,598**	**$3,637,206**	**$3,673,621**	**$3,709,959**

Operating and Maintenance (O&M) Expense

The itemized O&M expenses were carefully reviewed by the District and forecasted for the study period using escalation factors discussed in the Key Assumptions section (Figure 1-6). Table 3-2 shows RCSDs projected O&M expenses for the study period. O&M Expenses are expected to increase by 4.0 percent annually.

Table 3-2. O&M Expense Forecast for Sewer, FY 2020-21 (Current) and Study Period, FY 2021-22 – FY 2025-26

	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
Sewer Collection	$486,637	$508,284	$530,946	$554,671	$579,511	$605,518
Pumping	$231,516	$241,437	$252,425	$263,908	$275,955	$288,530
Sewer Treatment	$777,887	$597,649	$621,160	$645,675	$671,240	$697,900
Customer Accounts	$134,522	$140,819	$147,420	$154,340	$161,596	$169,203
Administrative and General	$1,112,415	$939,419	$970,439	$1,002,787	$1,036,525	$1,071,716
Total	**$2,742,977**	**$2,427,609**	**$2,522,390**	**$2,621,381**	**$2,724,827**	**$2,832,868**

Other Obligations

Other obligations included in the sewer system financial plan are capital improvement projects funded by PAYGO (Pay As You Go), debt service obligations, and reserve contributions made through rates.

Capital Improvement Projects

The District estimates approximately $1.0 million PAYGO per year with no inflation adjustment for the study period.

Debt Service

The District's sewer system's debt service payments are currently scheduled for the amount of approximately $1.3 million annually. The payments include $0.5 million for the Clean Water State Revolving Fund and $0.8 million for Opus Bank Note loan, which is a drawn down note that only accrues interest for the amount that has been drawn down.

Reserves

The District must maintain an appropriate reserve balance in order to ensure a day-to-day operation will continue during emergencies and guarantee the future stability of the system. The District's financial goal at the end of the study period is to build an appropriate level of cash reserves for each reserve fund included in the District's policy.

Operations and Maintenance Fund: three months of budgeted Operating and Maintenance (O&M) expense of upcoming year

Repair and Replacement Fund: 25 percent of accumulated depreciation

Rate Stabilization Fund: 10 percent of the District's annual rate revenues

Catastrophe/Emergency Fund: equal to $477,000

The total reserve balance target at the end of FY 2025-26 is set at $4.5 million, and reserve contributions to reach this target is estimated at approximately $0.2 million per year.

Revenue Requirements

Table 3-3 displays RCSD's revenue requirements for FY 2021-22 through FY 2025-26. The total expense of each year is offset by other operating revenues and non-operating revenues to compute a pure portion of revenue requirements that need to be recovered from customers' rates. CIP expense, contributions to reserves, and debt service payments are included in the other obligations. RDN proposes 14.5 percent for the first year, and an annual adjustment of 10.9 percent for the subsequent years.

Table 3-3. Revenue Requirements for Sewer System, FY 2021-22 – FY 2025-26

Description	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
	Test Year				
Other Operating Revenues	($72,000)	($72,000)	($72,000)	($72,000)	($72,000)
O&M Expenses	$2,427,609	$2,522,390	$2,621,381	$2,724,827	$2,832,868
Non-operating Revenues	($267,542)	($272,380)	($277,322)	($282,368)	($287,523)
Other Obligations	$2,544,611	$2,566,300	$2,564,110	$2,565,108	$2,565,868
Net Balance	($940,878)	($612,681)	($210,300)	$241,132	$753,068
Revenue Requirements	**$3,691,800**	**$4,131,629**	**$4,625,870**	**$5,176,699**	**$5,792,281**

Financial Plan

Based on the projected total revenue and necessary costs to be covered during the study period. Table 3-4 shows the reserve balance through the study period under the proposed rate plan. By adopting this plan, the District will reach its target reserve balance ($4.5 million) by the end of FY 2025-26.

Table 3-4. Financial Plan for Sewer System, FY 2021-22 to FY 2025-26

Description	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
	Test Year				
Operating Revenues	**$3,763,800**	**$4,203,629**	**$4,697,870**	**$5,248,699**	**$5,864,281**
Water Sales - Existing	$3,224,279	$3,255,218	$3,287,884	$3,319,253	$3,350,436
Year 1 - 14.5 %	$467,521	$472,007	$476,743	$481,292	$485,813
Year 2 - 10.85 %		$404,404	$408,462	$412,359	$416,233
Year 3 - 10.85 %			$452,780	$457,100	$461,394
Year 4 - 10.85 %				$506,695	$511,456
Year 5 - 10.85 %					$566,949
Water Sales	$3,691,800	$4,131,629	$4,625,870	$5,176,699	$5,792,281
Other Operating Revenues	$72,000	$72,000	$72,000	$72,000	$72,000
O&M Expenses	**($2,427,609)**	**($2,522,390)**	**($2,621,381)**	**($2,724,827)**	**($2,832,868)**
Net Operating Revenues	$1,336,191	$1,681,239	$2,076,489	$2,523,872	$3,031,414
Non-operating Revenues	$267,542	$272,380	$277,322	$282,368	$287,523
Other Obligations	**($2,544,611)**	**($2,566,300)**	**($2,564,110)**	**($2,565,108)**	**($2,565,868)**
Debt Service Principal	($963,157)	($988,519)	($1,014,176)	($1,041,135)	($1,068,404)
Debt Service Interest	($365,285)	($339,860)	($313,760)	($286,963)	($259,448)
Contribution to Reserves	($216,170)	($234,921)	($236,174)	($237,010)	($238,015)
PAYGO	($1,000,000)	($1,003,000)	($1,000,000)	($1,000,000)	($1,000,000)
Net Balance	**($940,878)**	**($612,681)**	**($210,300)**	**$241,132**	**$753,068**
Beginning of the Year Balance	$760,000	($180,878)	($793,559)	($1,003,859)	($762,726)
Ending Balance	**($180,878)**	**($793,559)**	**($1,003,859)**	**($762,726)**	**($9,658)**
DCSR without SRF	**2.02**	**2.46**	**2.97**	**3.54**	**4.18**
DSCR	**1.21**	**1.47**	**1.77**	**2.11**	**2.50**
% Deficit/Surplus	-4.9%	-14.8%	-4.5%	4.7%	13.0%
% Cummulative Deficiency	**-4.9%**	**-10.1%**	**-8.1%**	**-4.3%**	**0.0%**

3.2 Cost of Service Analysis

In the same way as the water system's Cost of Service (COS) analysis was performed, a sewer system's COS analysis also 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. Provided below is a detailed discussion of the sewer COS analysis conducted for the District, and the specific steps taken for the analysis.

The typical major functions included in a sewer study are collection, pumping, sewer treatment, and other sewer services. The District staff carefully distributed each of the O&M expenses and the asset items into these functions. Special attention was paid to staff's salaries and wages as one employee's salary often applies to multiple functions of the system. Once costs were functionalized, RDN further classified the costs into four different types of service categories (cost causative components):

- Volume related costs - those costs which tend to vary with the total quantity of wastewater collected and treated
- Strength related costs - those costs associated with the additional handling and treatment of high "strength" sewer. Strength of sewer is typically measured in biochemical oxygen demand (BOD) and total suspended solids (TSS). Increased levels of BOD or TSS generally equate to increased treatment costs.
- Other sewer service related costs – those costs which are a function of the number of customers served. Customer related costs typically include the costs of billing, collecting, and accounting.

Once this process was complete, and the customer classes were identified, the unit cost of these classified costs were calculated and further allocated to different customer classes using the unit of services specific to the class.

RDN analyzed the District's Commercial customer list and identified some customers which are likely misclassified between CI and CII based on their discharge strength and flows, RDN recommends that these customers should be moved from Commercial II to Commercial I customer class or vice versa to better represent an equitable distribution of costs. A list of these customers will be submitted to the District in a separate memo.

Operating and Maintenance (O&M) Cost Allocation

Table 3-5 displays functionalized O&M costs allocated to cost causative components.

Table 3-5. O&M Functionalized Cost Allocation to Cost Causative Components, Sewer System

O&M Cost Allocation	Total by Function	Volume	Strength	Sewer Service
Sewer Collection	**$508,284**	**$508,284**	**$0**	**$0**
Pumping	**$241,437**	**$226,223**	**$15,214**	**$0**
Purchased Power	$76,069	$60,855	$15,214	$0
Other	$165,368	$165,368	$0	$0
Sewer Treatment	**$597,649**	**$199,322**	**$49,830**	**$348,498**
Chemicals	$45,199	$36,159	$9,040	$0
Transmission	$0	$0	$0	$0
Storage	$42,431	$33,944	$8,486	$0
Land Application	$42,431	$33,944	$8,486	$0
Structures	$119,092	$95,273	$23,818	$0
ST-Other	$348,498	$0	$0	$348,498
Customer Accounts	**$140,819**	**$0**	**$0**	**$140,819**
Meter Reading/Bill Collections	$45,518	$0	$0	$45,518
CA-Other	$95,300	$0	$0	$95,300
Administrative and General	**$939,419**	**$0**	**$0**	**$939,419**
Total Test Year O&M	**$2,427,609**	**$933,829**	**$65,044**	**$1,428,736**
Percent	100.0%	38.5%	2.7%	58.9%

Other Obligations Cost Allocation

Table 3-6 displays functionalized capital assets. The percentage distribution derived from the asset value for each of the cost components was applied to the total cost of other obligations.

Table 3-6. Other Obligations Cost Allocation, Sewer System

Asset Cost Allocation	Total by Function	Volume	Strength	Sewer Service
Sewer Treatment	**$9,130,843**	**$7,304,675**	**$1,826,169**	**$0**
Structures	$0	$0	$0	$0
Sewer Treatment Plant	$9,130,843	$7,304,675	$1,826,169	$0
Collection and Disposal	**$293,032**	**$293,032**	**$0**	**$0**
Land	$0	$0	$0	$0
Electrical Pumping Equipment	$0	$0	$0	$0
Other Pumping Equipment	$126,590	$126,590	$0	$0
Structures	$0	$0	$0	$0
Collection System	$165,444	$165,444	$0	$0
Force Mains	$998	$998	$0	$0
Services	$0	$0	$0	$0
Storage	$0	$0	$0	$0
Land Application	$0	$0	$0	$0
Sewer General	**$541,224**	**$0**	**$0**	**$541,224**
G-Land	$434,297	$0	$0	$434,297
G-Structures	$23,166	$0	$0	$23,166
Other	$83,760	$0	$0	$83,760
Total Assets	**$9,965,099**	**$7,597,707**	**$1,826,169**	**$541,224**
Total Other Obligations	**$2,544,611**	**$1,940,092**	**$466,316**	**$138,203**
Percent	100.0%	76.2%	18.3%	5.4%

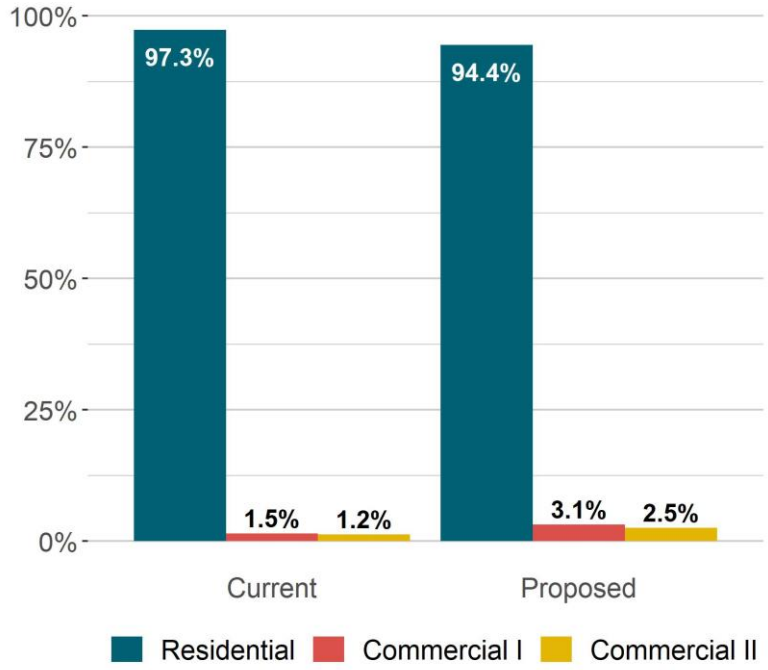
Cost Allocation to Customer Classes

In developing equitable rate structures, revenue requirements are allocated to Residential, Commercial I, and Commercial II customers commensurate with the customer demand and services rendered. The costs are allocated to customer classes according to the volume of discharge, the relative strength of discharge, and number of connections. Based on the results of the unit of service analysis carried out during this study, there are significant shifts in the cost allocation among three identified customer classes. Table 3-7 displays different service requirements based on the type of services provided by the system. As a result of this analysis RDN identified slight shifts in the cost allocation among three customer class. Figure 3-2 presents the current cost allocation verses the proposed cost allocation determined in the COS analysis.

Table 3-7. Unit of Service, Sewer System

Unit of Service	Volume		Strength				WW Service	
Description	Annual Flow	% Flow	Strength	Volume	Total Strength	% Strengh	# of Connections	% Connections
	hcf		mg/L	hcf	lbs/year			
Residential	508,256	93.1%	250	508,256	793,232	90.6%	6,335	97.9%
Commercial 1	21,377	3.9%	250	21,377	33,363	3.8%	95	1.5%
Commercial 2	16,235	3.0%	485	16,235	49,155	5.6%	40	0.6%
Total	545,868	100.0%			875,751	100.0%	6,470	100.0%

Figure 3-2. Current Cost Allocation vs. Proposed Cost Allocation by Customer Class

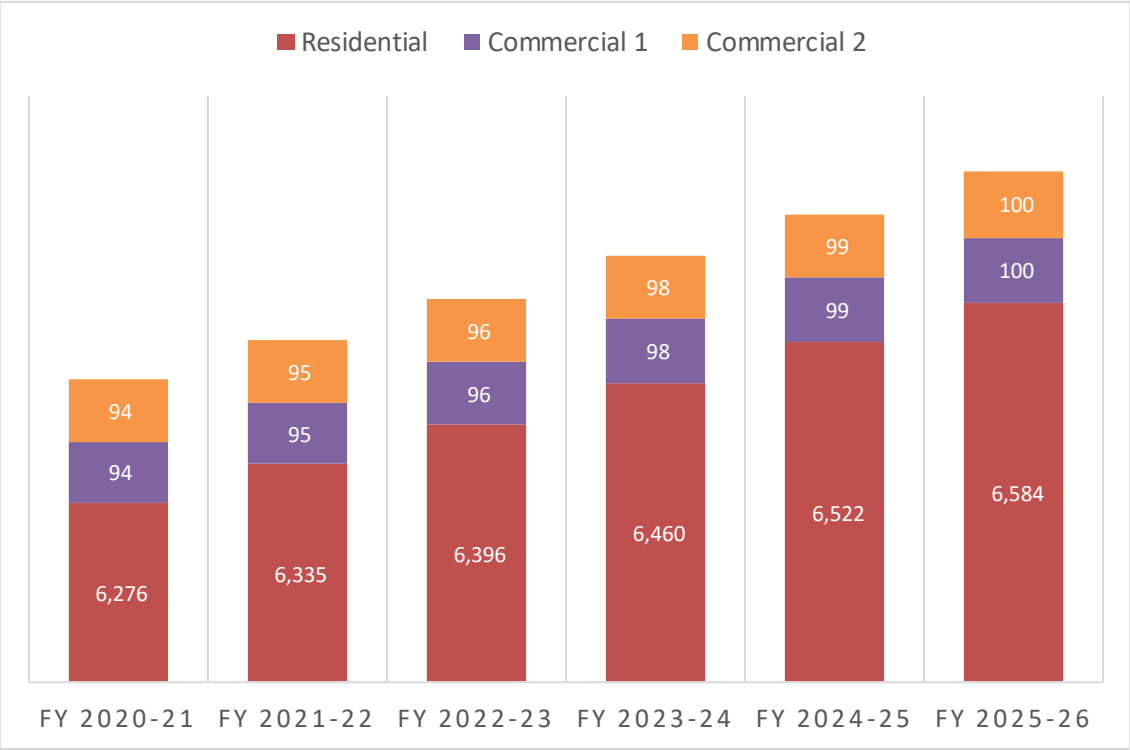


3.3 RATE DESIGN

The District's sewer rates are comprised of a fixed monthly service charge and a uniformed volumetric charge. The fixed service charge is applied to each of the District's connections. The number of connections were projected for the study period using the methodology described in the Demand Projections section. The District projects 59 to 62 additional connections being added to the Residential customer class, and one or two connections being added to Commercial I and II customers each year during the study period.

Figure 3-3 presents the annual change in the number of connections by customer class.

Figure 3-3. Number of Connections by Customer Class



RCSD does not directly meter sewer discharges, thus metered water data is used to estimate contributed average sewer volume units of service. For Residential customers, RCSD determines quantity of the sewer discharged into the system using the winter time water usage. In recognition of the significant amount of water used for outdoor (e.g., irrigation of landscaping) are not discharged into the sewer system during winter months, the District identifies an average usage of the two lowest months from the previous year as sewer usage for each Residential customer. The District also caps the maximum usage as not to exceed 20 hcf to recognize there may be some irrigation during the winter months. For Commercial classes 1 and 2, the volumetric charge will apply to all water discharged to the sewer sewer based on the monthly metered flow to buildings. RDN was unable to verify the District's Commercial I customers' sewer usage data (some accounts are assumed to have a separate irrigation meter that should be excluded in the sewer rate setting), 75 percent of "Return to Sewer" ratio was estimated and applied to the customers' usage. This is an effort to recognize some of the usage reported for the water service may not return to the sewer system to be treated. This adjustment was only applied to Commercial I customer class because their usage data had shown significant discrepancies from their water usage (Commercial customers' volumetric sewer charges were determined based on their water usage).

Effluent strength factors are typically determined using the actual strength of effluent received at the treatment plant, however the State Water Resources Control Council (SWRCB) Revenue Program Guidelines are often used when this data is not available. RDN used 250 mg/l for Residential and Commercial I customers for an effluent strength factor and 485 mg/l for Commercial II customers.

Residential Rates

Residential customers' volumetric rate was designed to recover 50 percent of discharge strength related costs. Sewer service related costs and costs associated with volume (flow) are recovered from the monthly fixed service charge.

Table 3-8. Residential Customers Proposed Sewer Rates for FY 2021-22 – FY 2025-26

Residential Rates					
Adopted Rates	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
Volumetric Rate	$0.34	$0.38	$0.42	$0.46	$0.52
Fixed Charge	$43.57	$48.30	$53.54	$59.35	$65.78

Commercial I Rates

A Commercial I customer is any property owner or customer whose use of property for Commercial, industrial, or institutional purposes does not discharge fat, oil, grease or chemicals into the sewer system in quantities that significantly impact the operations of the sewer system. Commercial I customers' monthly average flow is 19 hcf per connection compared to 7 hcf for Residential customers. The highest monthly discharge reported in FY 2020 was 115 hcf. RDN designed a volumetric rate and fixed charge to reflect the service requirements for Commercial I customers and included 100 percent of discharge strength costs to be recovered from the volumetric charge.

Table 3-9. Commercial I Customers Proposed Sewer Rates for FY 2021-22 – FY 2025-26

Commercial I Rates					
Adopted Rates	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
Volumetric Rate	$0.68	$0.76	$0.84	$0.93	$1.03
Fixed Charge	$87.83	$97.36	$107.93	$119.64	$132.62

Commercial II Rates

A Commercial II customer is any Commercial, industrial or institutional property owner or customer who, as a result of his or her use of a parcel of property, discharges fat, oil, grease or chemicals into the sewer system in quantities that significantly impact the operations of the sewage system. Commercial II customer classifications include but are not limited to any customer or property owner whose property has been or is being used as a restaurant, a commercial kitchen, a laundromat, a commercial laundry facility, manufacturing facility, a hospital/clinic, or a commercial car wash that does not recycle its water[3]. RDN designed the volumetric rate to include 55 percent of the flow related costs to create marginally higher volumetric rate compared to Commercial I customers. Commercial II customers average usage is 34 hcf per month, which is significantly higher than the Commercial I customers' usage.

Table 3-10. Commercial II Customers Proposed Sewer Rates for FY 2021-22 – FY 2025-26

Commercial II Rates					
Adopted Rates	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
Volumetric Rate	$3.04	$3.37	$3.74	$4.14	$4.59
Fixed Charge	$87.83	$97.36	$107.92	$119.63	$132.61

[3] Rosamond CSD Engineer's Report by Glenn M. Reiter & Associates, June 19, 2009, Page 22

3.4 BILL IMPACTS

RDN performed an extensive bill impact analysis to find the optimal rates with least impact across all customers. Note that the bill impact shown below only reflect the test year rates.

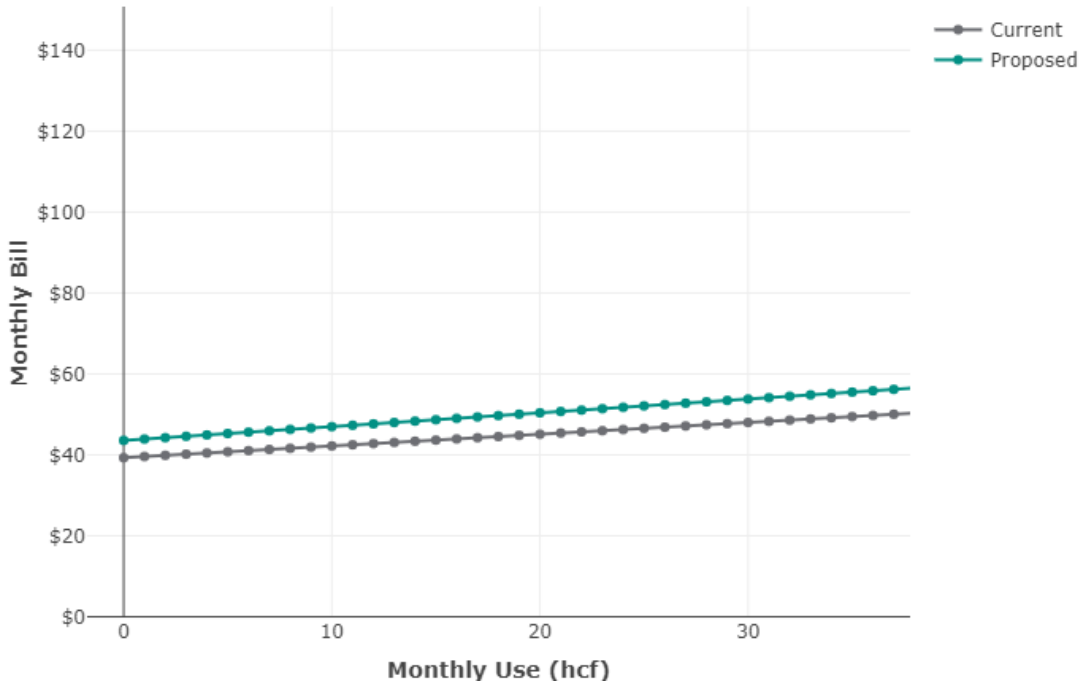
Residential Customers Bill Impact

This analysis compares a hypothetical customer's bill under current and proposed rates. Table 3-11 shows the dollar change in the bill based on the Residential customer's usage. An average Residential customer uses 7 hcf, which represents 37 percent of customers. Approximately 80 percent of customers use 9 hcf or less per month and 95 percent of customers use a maximum of 14 hcf monthly. Figure 3-4 presents Residential customers monthly bill impacts by usage under proposed rates.

Table 3-11. Residential Customers' Bill Impacts by Usage for 7 hcf (Average), 9 hcf, and 14 hcf

Use	Current	Proposed
7 hcf (Average, 37%)	$41.34	$45.96
9 hcf (80%)	$41.92	$46.64
14 hcf (95%)	$43.37	$48.35

Figure 3-4. Hypothetical Residential Customer's Bill Impact by Usage



Commercial I Customers Bill Impact

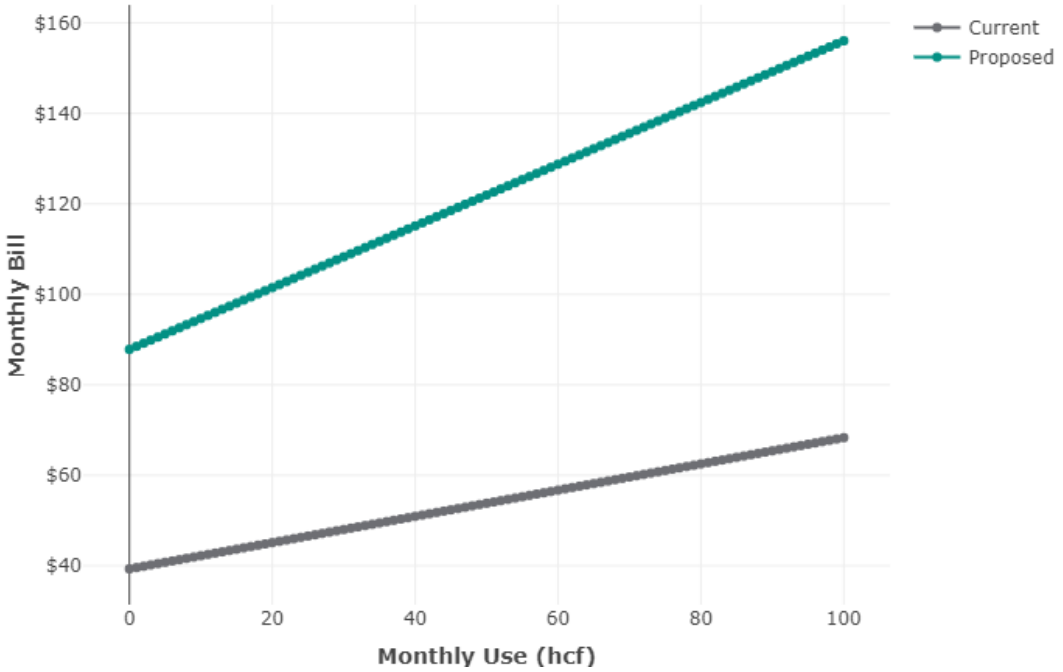
Table 3-12 shows the dollar change in the bill based on the customer's usage. The District's average Commercial I customer uses 19 hcf, which represents 80 percent of customers. Approximately 50 percent of customers use a 9

hcf monthly, and 95 percent of customers use 55 hcf. Figure 2-8 presents Residential customers monthly bill impacts by usage.

Table 3-12. Commercial I Customers' Bill Impacts by Usage for 9 hcf, 19 hcf (Average), and 55 hcf

Use	Current	Proposed
9 hcf (50%)	$41.92	$93.97
19 hcf (Average, 80%)	$44.82	$100.80
55 hcf (95%)	$55.26	$125.36

Figure 3-5. Hypothetical Commercial I Customer's Bill Impact by Usage



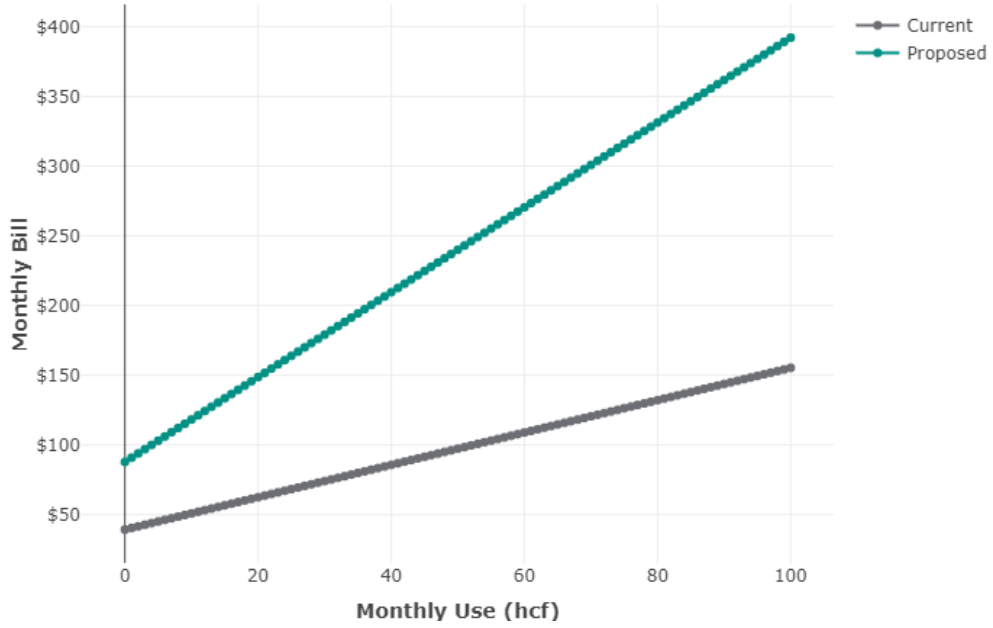
Commercial II Customers Bill Impact

Commercial II customers have the highest per account usage among all customer classes. Table 3-13 shows the dollar change in the bill based on the customer's usage. The District's median Commercial II customer uses 35 hcf of water monthly, representing 53 percent of the District's total Commercial II customers. An average Commercial II customer uses 56 hcf, which represents 67 percent of customers. Approximately 80 percent of customers use as much as 95 hcf of water per month, and 95 percent of customers use 200 hcf of water monthly. Figure 3-6 presents Residential customers monthly bill impacts by usage.

Table 3-13. Commercial II Customers' Bill Impacts by Usage for 34 hcf (Average), 96 hcf, and 212 hcf

Use	Current	Proposed
34 hcf (Average, 52%)	$78.75	$191.27
96 hcf (80%)	$150.67	$379.90
212 hcf (95%)	$285.23	$732.82

Figure 3-6. Hypothetical Commercial II Customer's Bill Impact by Usage



3.5 Rate Comparison Survey

Figure 3-7 shows projected residential sewer rates in July 2021 for 8 local providers at 9 hcf of use. The usage level at 9 hcf was chosen because it represents the median customer usage for RCSD customers. Also shown are the proposed rates for RCSD. Individual residential sewer rates range between $29.76 and $52.43 at 9 hcf of usage.

Figure 3-8 shows projected commercial water rates in July 2021 for the same 8 local sewer service providers at 19 hcf of usage. The usage level of 19 hcf represents the average usage for RCSD Commercial I customers. Individual commercial sewer rates range between $29.76 and $145.64 at 19 hcf of usage. The new rates proposed by RCSD will fund O&M expenses, contribute to reserves, and allow significant CIP spending.

Figure 3-7. Rate Comparison for Residential Customers Using 9 hcf

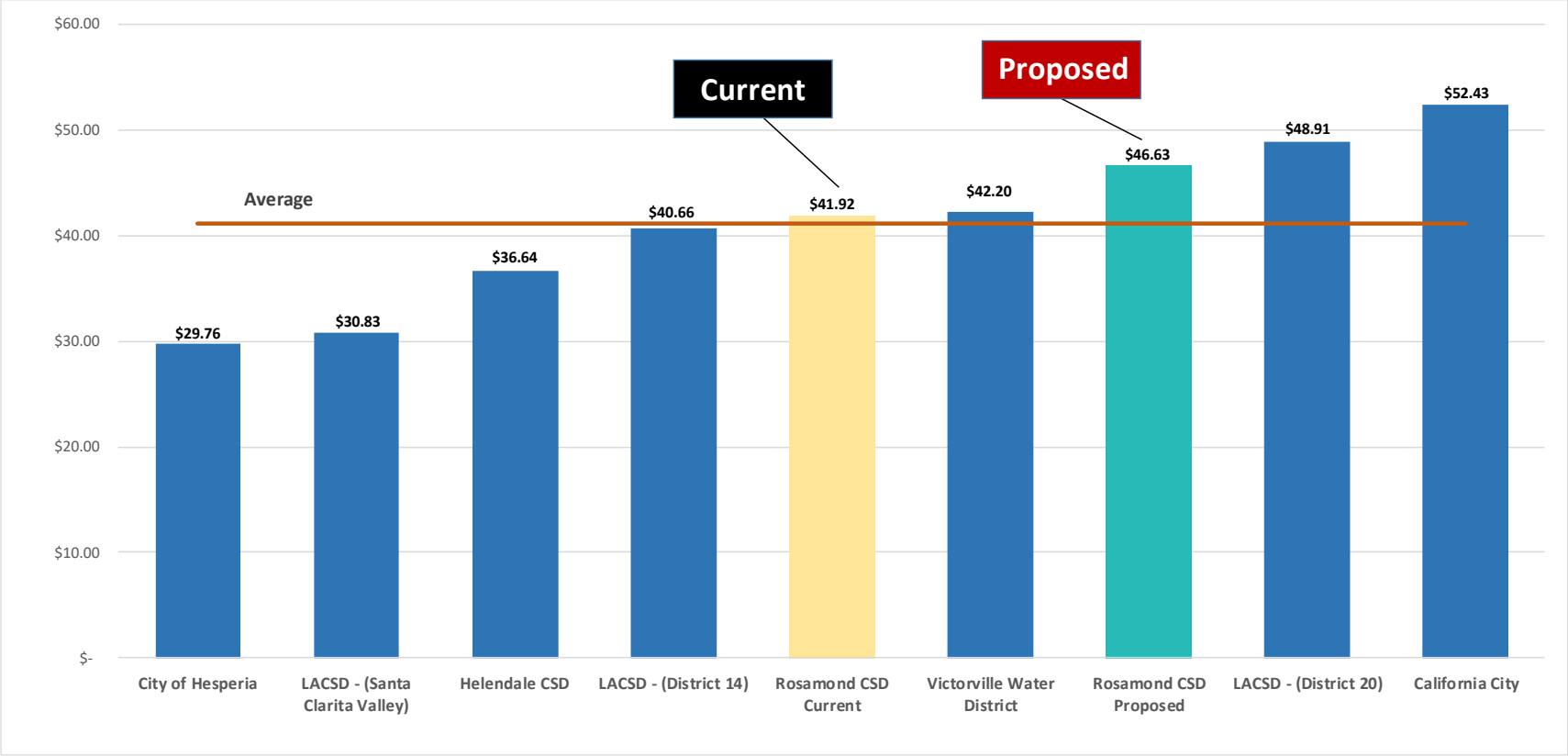
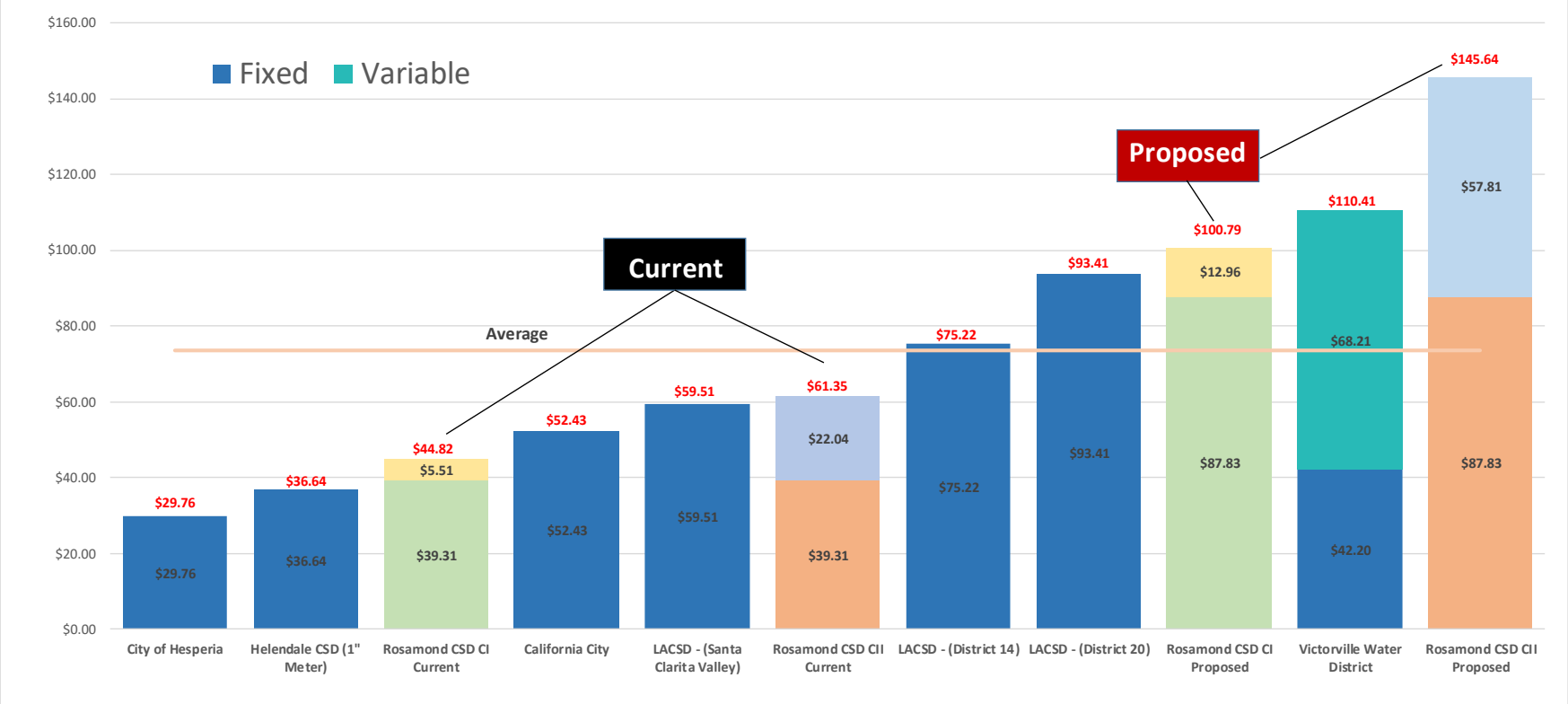


Figure 3-8. Rate Comparison for Commercial Customers Using 19 hcf




RDN