



2023 Financial Planning, Revenue Requirements, and Rate Setting Analysis

Presented by: California Rural Water Association

In Collaboration With:

Robert D. Niehaus, Inc.



**PALM RANCH IRRIGATION DISTRICT
FINANCIAL PLANNING, REVENUE REQUIREMENTS,
AND RATE SETTING ANALYSIS**

FINAL REPORT

Prepared for:

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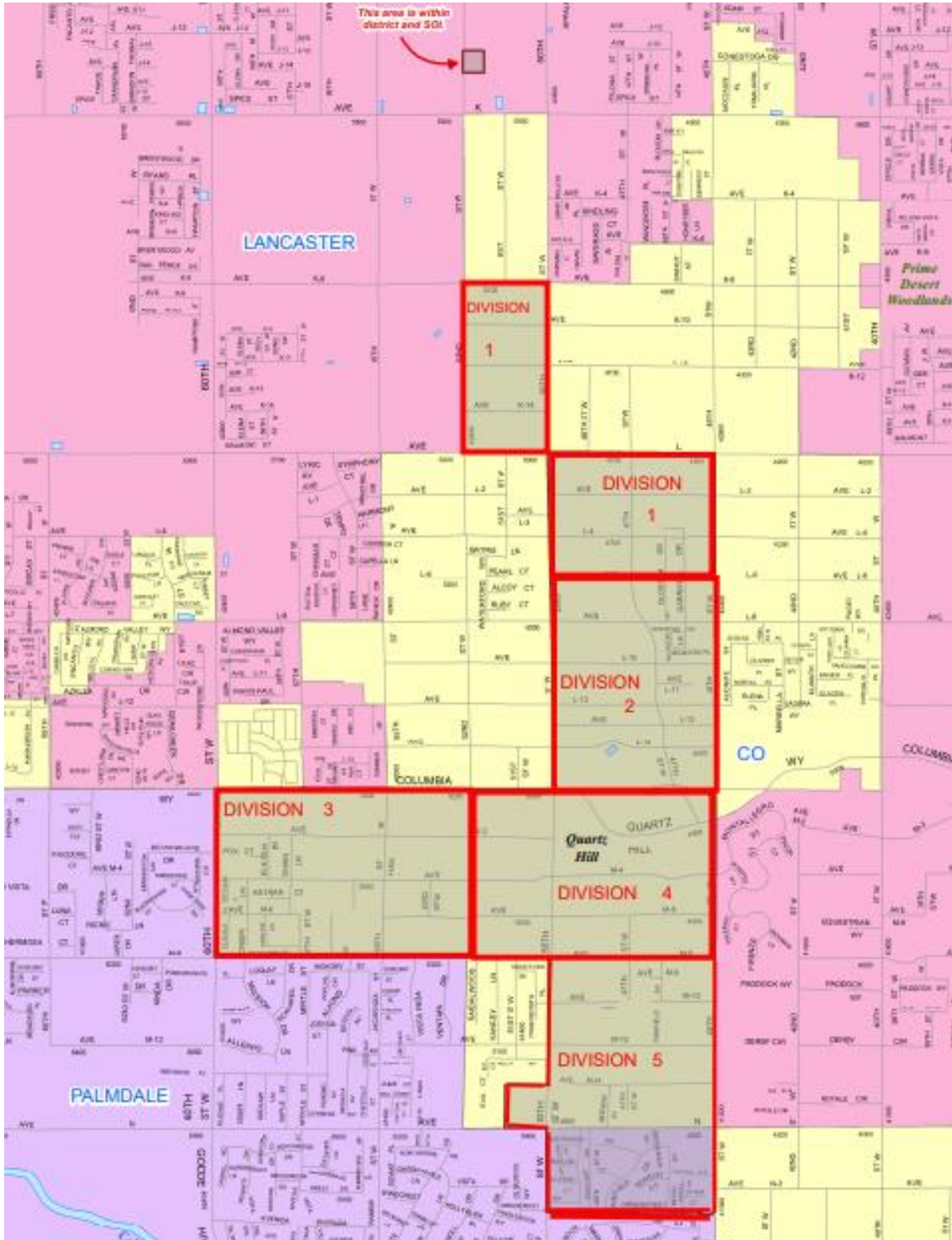
EXECUTIVE SUMMARY

Background

The Palm Ranch Irrigation District (PRID, District) was established in 1931 by investors from the Los Angeles area. The PRID is located within Quartz Hill, approximately 70 miles north of downtown Los Angeles. Palm Ranch Irrigation District became a public agency in 1959 and is served by a five-member Board of Directors and four full-time personnel. The District service area is approximately 1,500 acres and currently has a service population of over 1,700 connections comprised primarily of residential customers.

The District currently utilizes local groundwater as its primary source of water supply but also uses purchased water from the Antelope Valley East Kern (AVEK) water agency for supplemental water during the hot summer months or during scheduled repairs/upgrades. Groundwater is extracted through four wells located within the District's sphere of influence. **Figure 1** shows the current boundaries of the District in red.

Figure 1. Palm Ranch Irrigation District



Purpose of Study

The purpose of this analysis is to conduct a rate study which evaluates the District's current rates and financial data and propose new rates, if necessary, that meet the District's financial and strategic goals. In August 2022, the California Rural Water Association (CRWA) retained

Robert D. Niehaus, Incorporated (RDN) to develop a comprehensive water rate study (Study) for the Palm Ranch Irrigation District.

The primary objectives of this Study include:

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

Recommendation and Proposed Rates

Recommendations:

- Make annual revenue (rate) adjustments of 20 percent, 20 percent, 8 percent, respectively for the first three years of the study period
- No revenue adjustments are recommended in the fourth and fifth year of the study period
- Adjust the fixed rate ratios to reflect industry standards so that rates are based on the cost to provide service for each meter size
- Develop rates for each customer class commensurate with each class's impact on the water system

Current Rates

Currently, District water customers pay a bi-monthly fixed fee based on meter size, the most common meter is 3/4-inch, which is billed \$73.86 every other month. In addition, the District charges a fixed bi-monthly Improvement Fee added to each customer's fixed charge. Lastly, the District charges variable rates using an inclining block two-tiered rate schedule which is priced the same for all customers. Customers are allocated seven thousand gallons (tGal) of water in Tier 1 at a rate of \$0.00 per tGal. All usage above seven tGal is billed at the Tier 2 rate of \$1.62 per tGal. The current rates and tier widths as described are displayed in **Table 1**.

Table 1. Current Rates

Fixed Charges		
Customer Class	Meter Size	Bi-Monthly Fee
All Customers	3/4"	\$73.86
All Customers	1"	\$84.61
All Customers	1 1/2"	\$115.63
All Customers	2"	\$149.04
All Customers	3"	\$232.54

Improvement Fees	
Customer Class	Bi-Monthly Fee
Residential	\$19.62
Commercial	\$19.62
Apartment	\$12.75 + \$1.87 per Unit

Variable Charges		
Customer Class	Tier - Width	Unit Cost
All Customers	Tier 1 - 7 tGal	\$0.00
All Customers	Tier 2 - All Additional	\$1.62

Proposed Rates

To allow the District to best accomplish its goals, RDN designed the financial plan which will be described in this report. The recommended financial plan is designed to keep pace with rising operating costs and contribute to District reserve funds. RDN recommended revenue adjustments are sufficient to cover operating costs and meet reserve targets in the first three years of the study. No adjustments are recommended in the fourth and fifth year of the study. The District plans to implement the first adjustment mid-way through FY 2024 on January 1st, 2024. **Table 2** shows the proposed revenue adjustments and resulting cumulative increases.

Table 2. Proposed Revenue Adjustments FY 2024 to FY 2028

	FY 2024	FY 2025	FY 2026
Recommended Adjustment	20.0%	20.0%	8.0%
Cumulative Adjustment	120%	144%	156%

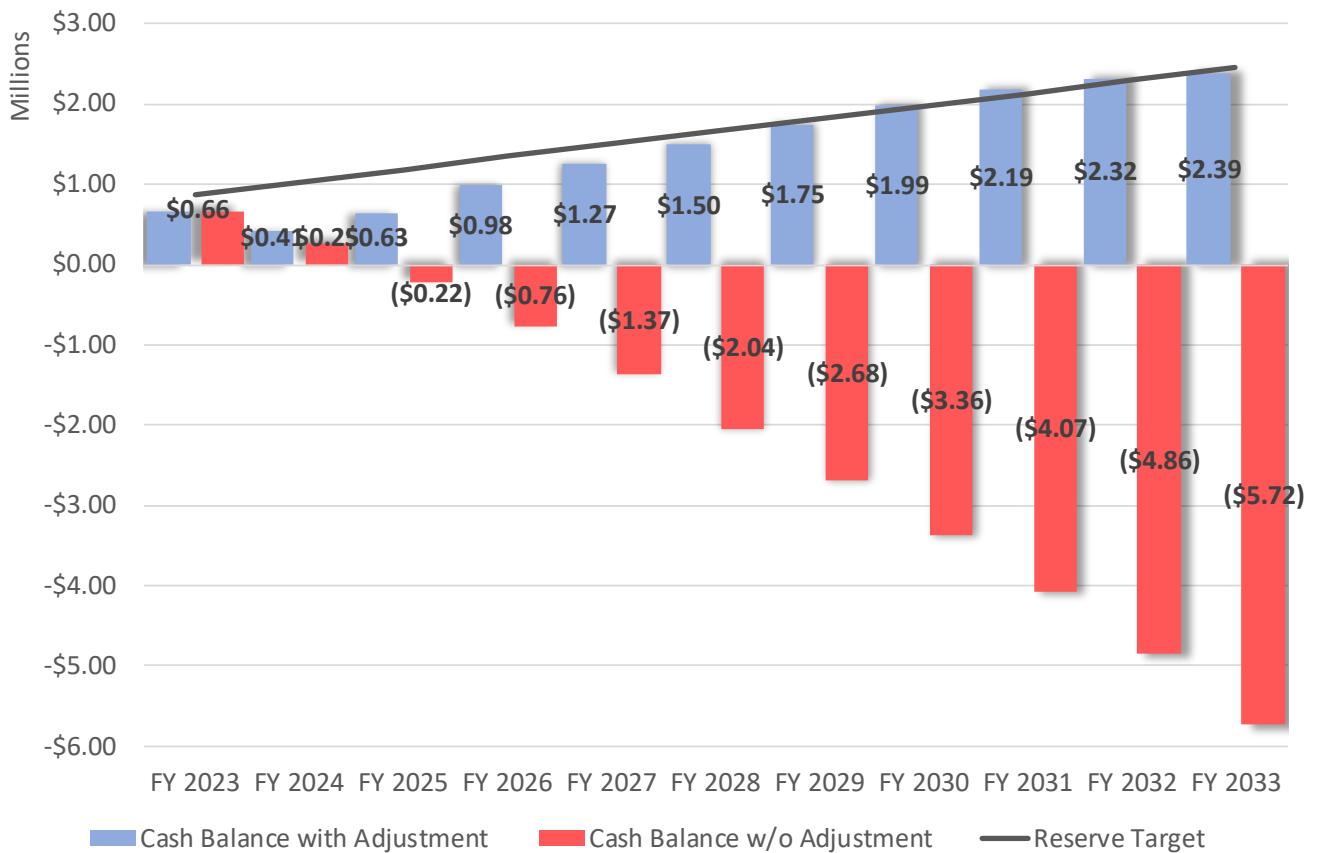
Table 3 shows the proposed fixed and variable rates under the revenue adjustment schedule.

Table 3. Proposed Rates Under Revenue Adjustment Schedule

Fixed Charges				
Fixed Charges	Meter Size	FY 2024	FY 2025	FY 2026
All Customers	3/4"	\$91.53	\$109.84	\$118.63
All Customers	1"	\$148.44	\$178.13	\$192.38
All Customers	1 1/2"	\$289.45	\$347.34	\$375.13
All Customers	2"	\$459.34	\$551.21	\$595.30
All Customers	3"	\$856.03	\$1,027.23	\$1,109.41
Variable Charges				
Variable Charges	Tier - Width	FY 2024	FY 2025	FY 2026
Residential	Tier 1 - 10 tGal	\$0.77	\$0.92	\$1.00
	Tier 2 - 10+ tGal	\$2.17	\$2.60	\$2.81
Apartment	Tier 1 - All Use	\$1.29	\$1.55	\$1.67
Commercial	Tier 1 - All Use	\$1.88	\$2.26	\$2.44

Figure 2 shows the water fund balance under the proposed financial plan through the 10-year planning period.

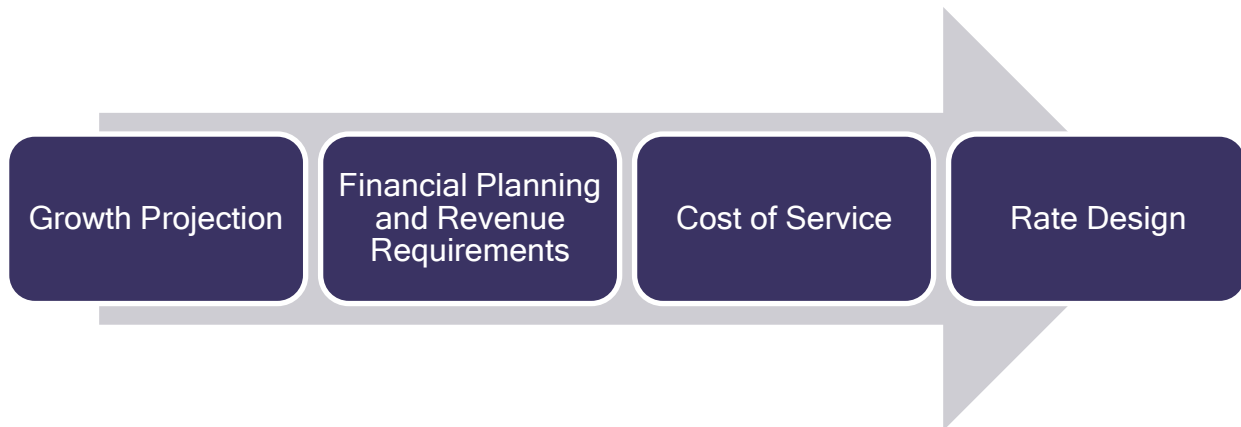
Figure 2. District Fund Balances under the Proposed Financial Plan



GENERAL METHODOLOGY

The water rates formulated in this study were developed using principles set forth by the American Water Works Association (AWWA). RDN rate-making practices incorporate methods described in the AWWA Manual 1 (M1)¹ for Water Systems. **Figure 3** presents the steps taken to develop the District's proposed rates.

Figure 3. Water Rate Study Process



- **Growth Projection:** project customer growth for the five-year study period, FY 2024 through FY 2028, using the District's customers' historical growth data. Forecast revenues for the study period based on the projected customer growth.
- **Financial Planning and Revenue Requirements:** develop a five-year financial plan based on the projected revenues and annual costs which include both operating and capital expenses. The District's target reserve level should also be considered as part of the financial planning. Based on the financial planning, revenue requirements are determined for each year of the study period.
- **Cost of Service:** evaluate the customer classifications and allocate costs based on their service requirements.
- **Rate Design:** design rates to recover the rate revenue requirements from each customer.

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

Legal Considerations

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

California Constitution - Article XIII C (Proposition 26)

The voters in the State approved Proposition 26 on November 2, 2010. Proposition 26 amended Article XIII C of the State Constitution to expand the definition of “tax” to include “any levy, charge, or exaction of any kind imposed by a local government” with listed exceptions. By means of these exceptions, Article XIII C classifies several types of charges, in addition to property-related charges, that are not taxes, such as charges for specific services or benefits, regulatory charges and penalties. Article XIII C’s definition of “tax” lists the following exceptions: (1) a charge imposed for a specific benefit conferred or privilege granted directly to the payer that is not provided to those not charged, and which does not exceed the reasonable costs to the local government of conferring the benefit or granting the privilege; (2) a charge imposed for a specific government service or product provided directly to the payer that is not provided to those not charged, and which does not exceed the reasonable costs to the local government of providing the service or product; (3) a charge imposed for the reasonable regulatory costs to a local government for issuing licenses and permits, performing investigations, inspections, and audits, enforcing agricultural marketing orders, and the administrative enforcement and adjudication thereof; (4) a charge imposed for entrance to or use of local government property, or the purchase, rental, or lease of local government property; (5) a fine, penalty, or other monetary charge imposed by the judicial branch of government or a local government, as a result of a violation of law; (6) a charge imposed as a condition of property development; and (7) assessments and property-related fees imposed in accordance with the provisions of Article XIII D.

Proposition 26 also provides that the local government bears the burden of proving by a preponderance of the evidence that a levy, charge, or other exaction is not a tax, that the amount is no more than necessary to cover the reasonable costs of the governmental activity, and that the manner in which those costs are allocated to a payer bear a fair or reasonable relationship to the payer’s burdens on, or benefits received from, the governmental activity. Like the proportionality requirements of Article XIII D, assessment of rates under these requirements, if applicable, would be supported by the cost of service approach.

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

In November 1996, California voters passed Proposition 218, the “Right to Vote on Taxes Act.” This constitutional amendment protects taxpayers by limiting the methods by which local governments can create or increase taxes, fees and charges without taxpayer consent. Between 2002 and 2017, California courts have ruled that fees associated with providing water services are “property-related” and thus under the jurisdiction of Prop 218. The principal requirements for fairness of the fees, as they relate to public water service, are as follows: Revenues derived from the fee or charge shall not

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

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

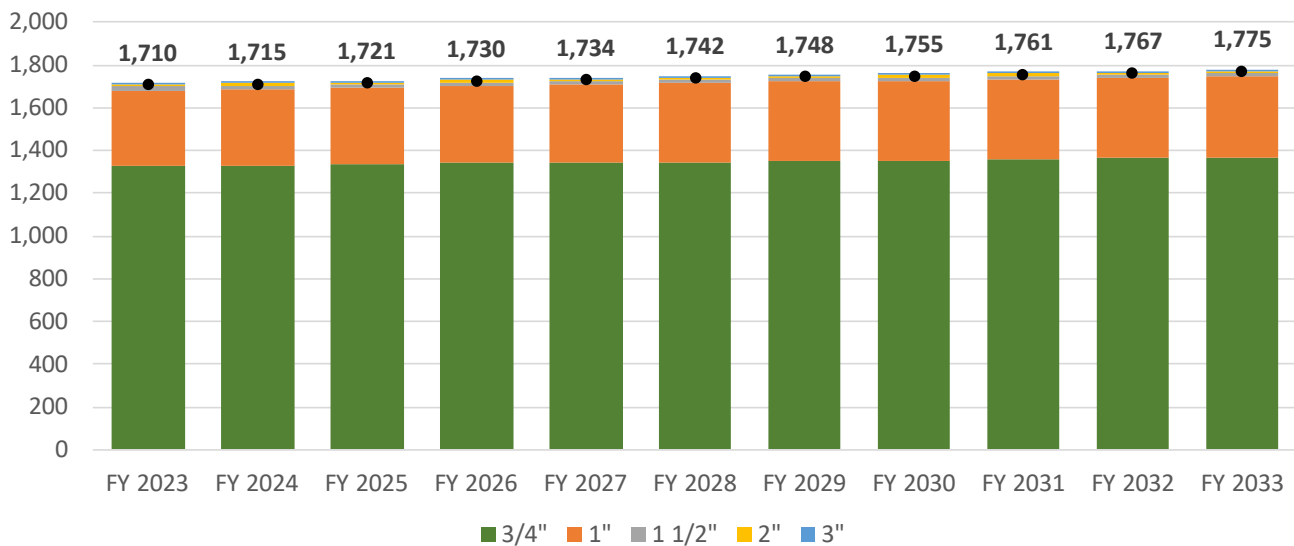
Key Assumptions

A test year, FY 2024, was selected for which costs are to be analyzed and rates to be established for this study. The District’s fiscal year starts on July 1 and ends on June 30.

Customer Growth

All the analyses performed for this Study were based on an assumption of account growth. **Figure 4** displays the account growth for all meter sizes. The count for FY 2023 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. Although growth trends vary by meter size, the District expects around six new accounts each year through the end of the study period (FY 2028).

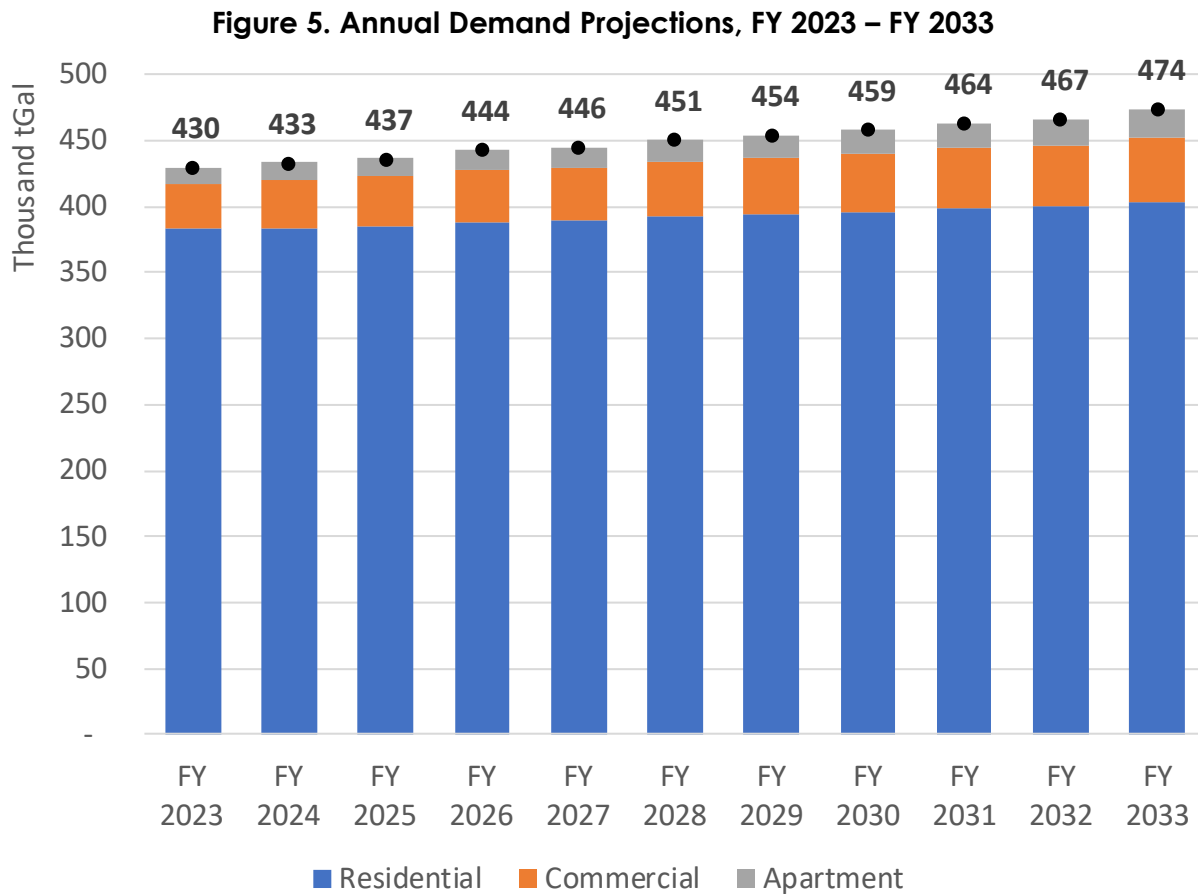
Figure 4. Customer Account Growth, FY 2023 – 2033



Demand Projections

Aggregate water consumption was calculated by multiplying the constant per account water usage with the number of accounts each year. Annual demand is projected to increase

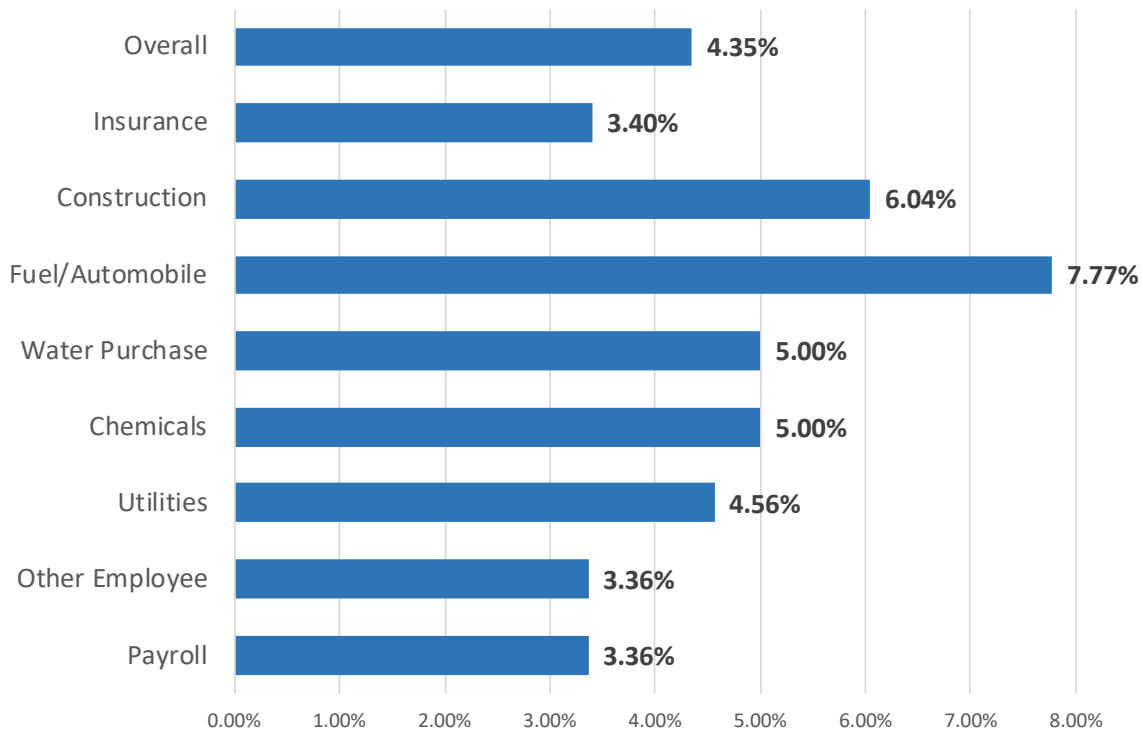
roughly 1.0 percent per year during the study period. The District’s water demand forecasts for the study period are displayed in **Figure 5**.



Escalation Factors

Escalation Factors were calculated for nine independent variables using historical Consumer Price Index (CPI) data from West Class B/C cities between 2000 and the most current calendar year, and projections by the California Department of Transportation (CADOT), and the California Department of Finance (CADOFF). The analysis for the status quo assumes that Operating Revenues will continue to be stable, with some increases due to customer growth, for the next five years. The escalation factors capture the effects of price inflation for this period. **Table 4** displays the projected escalation factors for the study period. Due to extreme fluctuations in inflation over the previous two years, expenses are expected to rise quickly in the short-term. In the long-term, we project inflation to return to the more stable levels seen before the COVID-19 pandemic. Expenses that are not expected to increase during the study period were not escalated as those costs are fixed.

Table 4. Expense Escalation Factors



Meter Ratios

In order to calculate the ratio of customer capacity on the system RDN used industry standard meter capacity ratios provided by the M1. **Table 5** shows the ratios used to allocate meter costs to each customer in this study.

Table 5. AWWA Meter Ratios

Meter Size	Meter Ratio
5/8"	1.00
3/4"	1.00
1"	1.00
1-1/2"	2.00
2"	3.20
3"	6.00
4"	10.00
6"	20.00
8"	32.00
10"	46.00
12"	86.00

FINANCIAL PLANNING

Revenues

Based on customer water demand projected through the study period, rate revenues under the current rates were calculated for each year of the study. Additionally, non-rate revenues were estimated based on historical values and District input. With no rate increases, the District is expected to collect approximately \$1.6 million per year in operating revenue. Additional non-operating revenues total approximately \$7,000 per year and will be used to offset future revenue requirements.

Operating and Maintenance Expense

This District's FY 2023 Budget anticipates approximately \$1.7 million in expenses which were classified as O&M expense. Based on the sum of all O&M expense line items, the overall inflation rate for FY 2024 is 4.4 percent, which is consistent with the District's budget projections. For the rest of the study period, annual inflation is projected to be approximately 3.9 percent per year. Total O&M expenses are projected to reach \$2.1 million by FY 2028.

Capital Expenses

PRID does not have any rate funded capital projects scheduled during the study period.

Target Reserves

The District currently has no formal reserve policy but does have a cash balance. At the time of writing, the District's water fund balance is approximately \$1.0 million. The proposed financial plan includes approximately \$166,000 a year in reserve funding. This level of contribution achieves an operating fund balance equal to six months of operating expenses, and contributes approximately \$120,000 each year to a capital project reserve. Generating healthy reserve levels will help the District maintain sufficient operating reserves and increase capital improvement fund levels in line with annual depreciation expenses.

Debt Funding

The District currently makes total debt service payments of about \$170,000 annually split between two different bonds. These payments are scheduled to continue until FY 2030. The District does not plan to issue any new debt during the study period.

Revenue Requirements

Revenue requirements were developed based on the financial plan outlined above. Revenue requirements include all expenses and are offset by other operating revenues and non-operating revenues to compute the pure portion of revenue requirements, which need to be collected from water rates. A positive net balance indicates the amount contributed to the cash reserves in a given year. The revenue requirement of \$1.9 million for the test year was used to compute cost distribution among distinctive cost components and then allocated to customers equitably in the COS analysis.

Recommended Financial Plan

Based on the revenue requirements outlined above, the proposed financial plan includes annual revenue adjustments of 20.0 percent in the test year, 20.0 percent the second year, and 8.0 percent in the third year. Under this plan the fund balances will increase to meet reserve targets; additionally, the District will be able to sufficiently cover their operating expenses. **Table 6** shows the proposed financial plan and ending fund balances for the study period. RDN recommends this plan because it best balances the long-term funding of the water utility with customer impacts. Rate Revenues in FY 2024 are adjusted to reflect the proposed implementation date of January 1st, 2024. This ensures revenues are reflected accurately in the financial plan. The Cost of Service section will use this financial plan as a basis for all calculations.

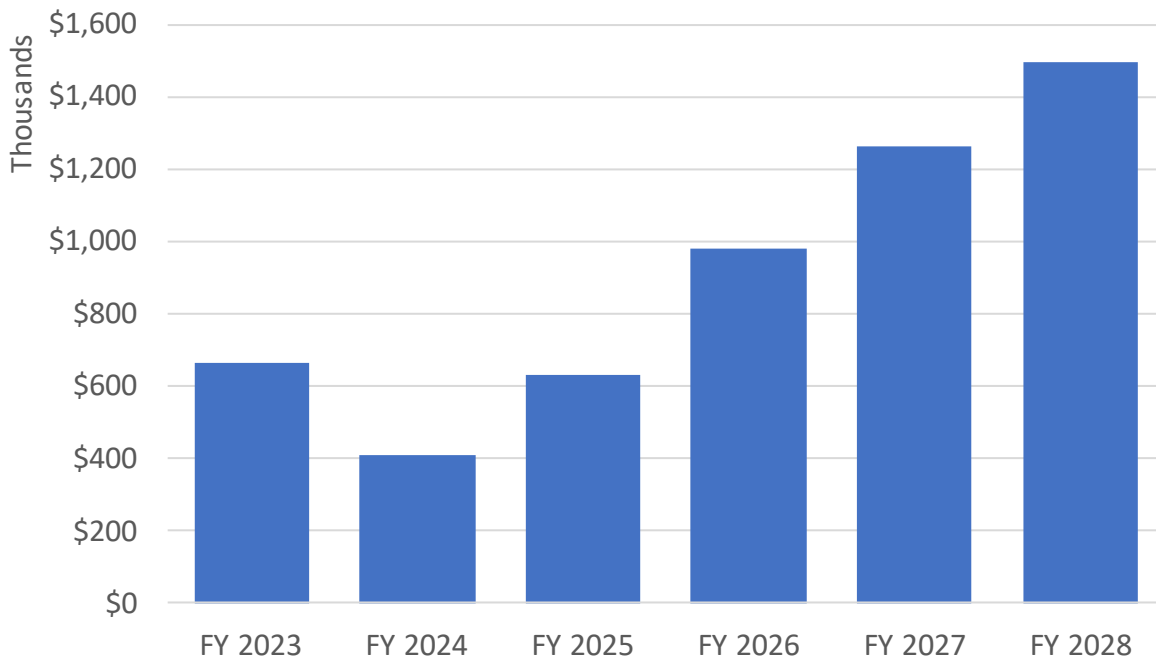
Table 6. Study Period Financial Plan, FY 2023 to FY 2028

Revenue Adjustment	20.0%		20.0%		8.0%		0.0%		0.0%	
Rate Month Implemented	January		July		July		July		July	
	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028				
Cash Position Opening Balance	\$ 1,001,862	\$ 663,114	\$ 412,733	\$ 634,314	\$ 982,480	\$ 1,266,459				
Revenues										
Rate Revenue	\$ 1,570,235	\$ 1,735,087	\$ 2,283,202	\$ 2,489,253	\$ 2,497,059	\$ 2,516,804				
Other Operating Revenue	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -				
Non-Operating Revenue	\$ 6,913	\$ 6,913	\$ 6,913	\$ 6,913	\$ 6,913	\$ 6,913				
Total Revenues	\$ 1,577,148	\$ 1,742,000	\$ 2,290,115	\$ 2,496,167	\$ 2,503,973	\$ 2,523,717				
Operating Expenses										
Operating Expenses	\$ 1,745,722	\$ 1,822,207	\$ 1,898,361	\$ 1,977,826	\$ 2,049,821	\$ 2,124,067				
Current Debt Service	\$ 170,174	\$ 170,174	\$ 170,174	\$ 170,174	\$ 170,174	\$ 170,174				
Proposed Debt Service	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -				
Total Operating and Debt Service	\$ 1,915,896	\$ 1,992,381	\$ 2,068,535	\$ 2,148,000	\$ 2,219,994	\$ 2,294,241				
Net Revenues	\$ (338,748)	\$ (250,381)	\$ 221,581	\$ 348,167	\$ 283,978	\$ 229,476				
Capital Expenditure	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -				
Mid-Year Adjustment	\$ -	\$ (157,735)	\$ -	\$ -	\$ -	\$ -				
Grants	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -				
Cash	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -				
Net Income	\$ (338,748)	\$ (250,381)	\$ 221,581	\$ 348,167	\$ 283,978	\$ 229,476				
Ending Balance	\$ 663,114	\$ 412,733	\$ 634,314	\$ 982,480	\$ 1,266,459	\$ 1,495,935				
Cash as Percent of Operations	42%	24%	28%	39%	51%	59%				

Proposed Fund Balances

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

Figure 6. District Fund Balance under the Proposed Financial Plan



COST OF SERVICE

Methodology

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

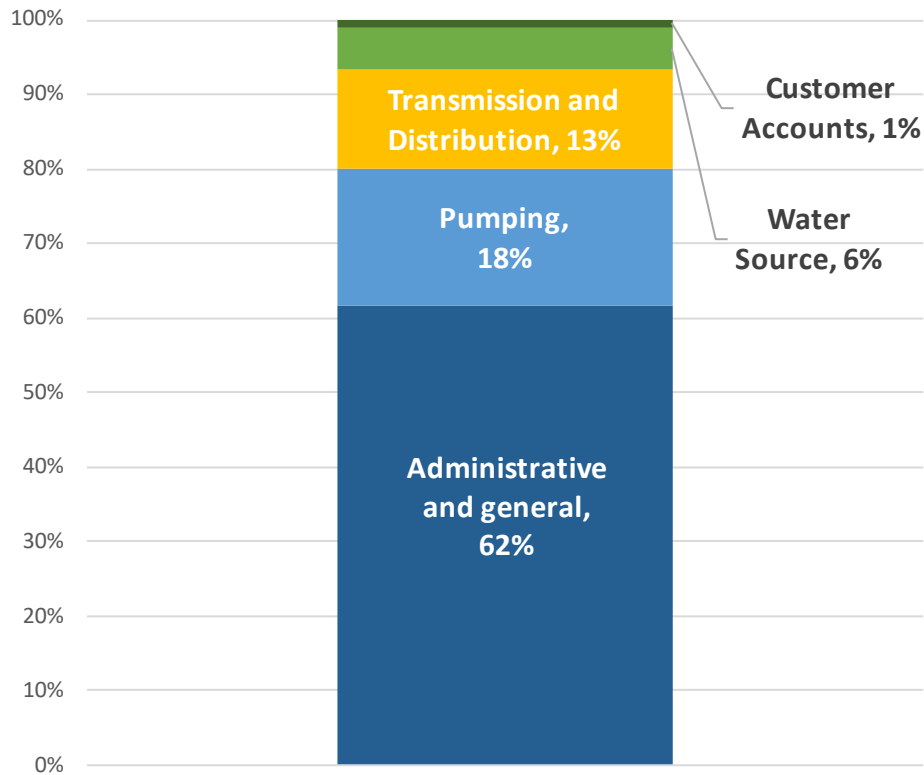
Cost Functions

Operating costs are functionalized based on utility industry knowledge. The functions of the water system for both operating and capital expenses include:

- Water Supply - costs associated with source of water supply
- Pumping - costs associated with general pumping and energy use
- Transmission and Distribution - costs associated with transmitting and distributing water to customers
- Treatment - costs associated with maintaining water quality and providing treatment
- Engineering - costs associated with design, repair, and replacement functions
- Customer Accounts - costs associated with billing and customer services
- Administrative and General - costs associated with administrative and general functions

Figure 7 shows the test year expenses allocated to each cost function.

Figure 7. Operating Costs Allocated to Functions



COS Allocation

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

Each water service facility within the system has an underlying average demand, exerted by the customers for whom the base cost component applies. For those facilities designed solely to meet average daily demand, 100% of the cost should go to the base cost component. Extra capacity requirements associated with demand in excess of average use consist of Max Day Demand (MDD) and Peak Hourly Demand (PHD). Based on the MDD factor, RDN estimated the average hourly flow during MDD and multiplied it by a peaking factor of 1.5 (the lowest factor recommended by the State Board's Division of Drinking Water) to compute a PHD factor. Revenue requirements were distributed to the base, MDD, and PHD cost components for 32.7%, 33.9%, and 33.3%, respectively. The number of bills in one year (the number of accounts multiplied by 6) serves as the basis for distributing customer costs. Accordingly, the costs associated with the functions which require extra capacity service 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 cost causative components therefore include:

- Source of Supply - the direct cost of water
- Base - delivering water to customers under average demand conditions
- Maximum Day Demand (MDD) - the costs of delivering water to customers on the day with the highest demand
- Peaking Hourly Demand (PHD) - the costs of delivering water to customers on the hour with the highest demand on highest day
- Meters - the costs of servicing meters
- Customer Service - the cost of billing, and other customer service-related costs

The result of the COS analysis determines how the total revenue requirements should be allocated to each of the cost components, which are categorized and grouped based on the similar cost driving elements. **Figure 8** shows the percent of Test Year Revenue Requirements allocated to each cost component.

Figure 8. Cost of Service Cost Components by Category

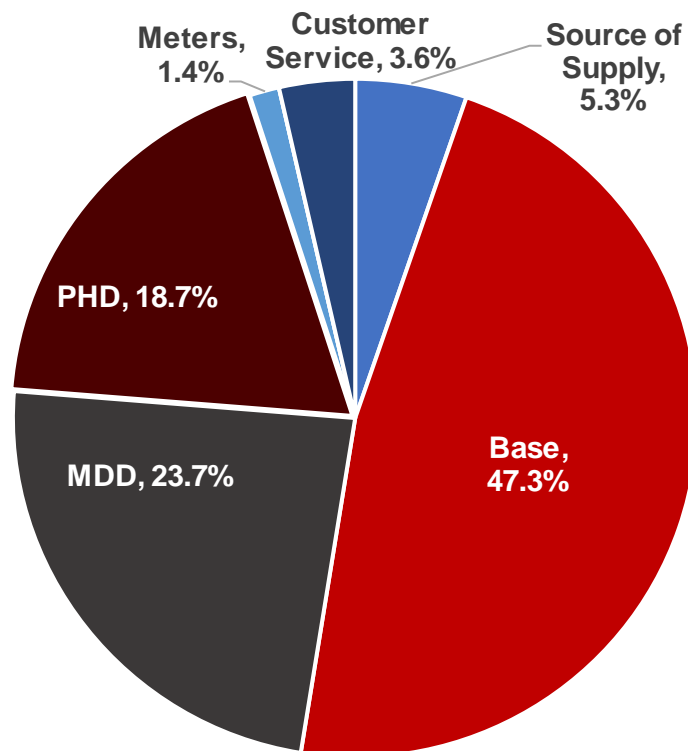


Table 7 shows the revenue requirements by cost causative components under the proposed financial plan. The test year costs and offsets are allocated to each cost causative component using the percentages derived from the cost allocation.

Table 7. Rate Revenue Requirements for Test Year, FY 2023

Cost Allocation Summary	Total	Source of Supply	Base	MDD	PHD	Meters	Customer Service
O&M Revenue Requirements	\$1,822,207	\$105,000	\$882,363	\$411,337	\$325,571	\$26,574	\$71,362
Non-Operating Revenue Requirements	\$170,174	\$0	\$59,536	\$61,256	\$47,950	\$1,431	\$0
	\$1,992,381	\$105,000	\$941,899	\$472,593	\$373,521	\$28,005	\$71,362
		5%	47%	24%	19%	1%	4%
Other Operating Revenue	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Non-Operating Revenue	(\$6,913)	(\$364)	(\$3,268)	(\$1,640)	(\$1,296)	(\$97)	(\$248)
Net Balance From Operations	(\$92,646)	(\$4,883)	(\$43,798)	(\$21,976)	(\$17,369)	(\$1,302)	(\$3,318)
Rate Revenue Requirement	\$1,892,822	\$99,753	\$894,832	\$448,978	\$354,857	\$26,606	\$67,796

Allocation to Units

The next step of the COS analysis is to calculate the per unit cost of each cost causative component. To perform this, unit values were determined for each cost component by dividing the revenue requirement by the unit of service for each. **Table 8** shows the unit cost for each cost component. The cost per unit is used for rate setting.

Table 8. Total Cost and Unit Cost Reallocation to Rates

	Source of Supply	Base	MDD	PHD	Meters	Customer Service
Rate Revenue Requirement	\$99,753	\$894,832	\$448,978	\$354,857	\$26,606	\$67,796
Units	437,053	437,053	2,445	3,668	2,043	1,715
Unit Cost	\$0.23	\$2.05	\$183.62	\$96.75	\$13.02	\$39.53

Allocation to Customer Classes

The final step of the COS analysis is to allocate the cost causative components back to the customers. In developing equitable rate structures, revenue requirements were allocated to Retail Customers, Construction, and Private Fire Customers commensurate with the customer demand and services rendered. The costs are allocated to customer classes by multiplying the unit costs shown in **Table 8** by each customer classes relative share of units for all cost components. The total costs allocated to each customer class are shown in **Table 9**.

Table 9. Revenue Requirements Allocated to Customer Classes

Customer Class	Total	Source of Supply	Base	MDD	PHD	Meters	Customer Service
Residential	\$1,719,433	\$90,551	\$812,282	\$406,219	\$321,061	\$24,409	\$64,910
Apartment	\$41,296	\$2,393	\$21,465	\$9,138	\$7,223	\$603	\$474
Commercial	\$132,092	\$6,810	\$61,085	\$33,621	\$26,573	\$1,593	\$2,411
Total	\$1,892,822	\$99,753	\$894,832	\$448,978	\$354,857	\$26,606	\$67,796

RATE SETTING

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

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

Recommendations

RDN recommends the District implement an inclining block two-tiered rate structure for Single Family customers in which all water usage is billed. For Commercial and Apartment customers, RDN recommends a uniform rate structure to recover costs from each customer commensurate with their respective impacts on the water system. The rate plan outlined in this report is recommended to begin midway through fiscal year 2023-24, starting January 1, 2024. The District needs additional revenue to cover increases in operating expenses and achieve healthy reserve balances. The financial plan and COS analysis provides a rate structure which increases overall customer equity by allocating costs based on each customer's relative strain on the system by directly tying all water usage to the rates to be imposed. RDN recommended revenue adjustments in the first three years of the study are sufficient to cover operating costs and meet reserve targets. No adjustments are recommended in the fourth and fifth year of the study. If the District is able to secure additional funding sources, or if customer growth and water use is higher than expected, resulting in increased revenues, the District can choose to not implement increases in any year.

Fixed Charge

Base, meter service, and some peaking costs in the fixed charge components are distributed among various meter sizes using the AWWA ratio discussed in the Key Assumptions section (**Table 5**). The total allocated to fixed charges are then divided by the number of bills per year. A total of 60.0 percent of revenues will be collected from customers' fixed charges.

Variable Charge

Volumetric charges are established based on variable costs such as water purchases and pumping costs. The peaking and delivery costs on the volumetric side are the remaining fixed costs intended to be recovered from volumetric charges.

Tier widths for Single Family Residential customers were determined based on indoor efficient water standards as defined by the State of California. Tier 1 allocation of 10 tGal per bi-monthly period provides 55 gallons of water per capita per day, assuming an average household size of three people per household². At the projected usage levels for FY 2023, the Tier 1 water usage yields approximately 95,891 tGal of usage by Single Family customers. All usage exceeding Tier 1 is considered Tier 2 usage and is billed at a higher rate based on peaking costs associated with additional capacity needs for increased water use.

Under the proposed rates, commercial and apartment customers are billed on a uniform rate structure because the heterogeneous nature of these customer classes does not allow equitable tiers without further refinement. Less overall peaking and multiple connections on one meter are two factors that interfere with setting tiered rates for apartment and commercial type customers, generally. To develop the uniform rates for these classes, the variable costs allocated to each customer class are divided by the projected water use. **Table 10** shows the proposed fixed and variable rates for the 5-year rate study.

Table 10. Proposed Rates

Fixed Charges				
Fixed Charges	Meter Size	FY 2024	FY 2025	FY 2026
All Customers	3/4"	\$91.53	\$109.84	\$118.63
All Customers	1"	\$148.44	\$178.13	\$192.38
All Customers	1 1/2"	\$289.45	\$347.34	\$375.13
All Customers	2"	\$459.34	\$551.21	\$595.30
All Customers	3"	\$856.03	\$1,027.23	\$1,109.41
Variable Charges				
Variable Charges	Tier - Width	FY 2024	FY 2025	FY 2026
Residential	Tier 1 - 10 tGal	\$0.77	\$0.92	\$1.00
	Tier 2 - 10+ tGal	\$2.17	\$2.60	\$2.81
Apartment	Tier 1 - All Use	\$1.29	\$1.55	\$1.67
Commercial	Tier 1 - All Use	\$1.88	\$2.26	\$2.44

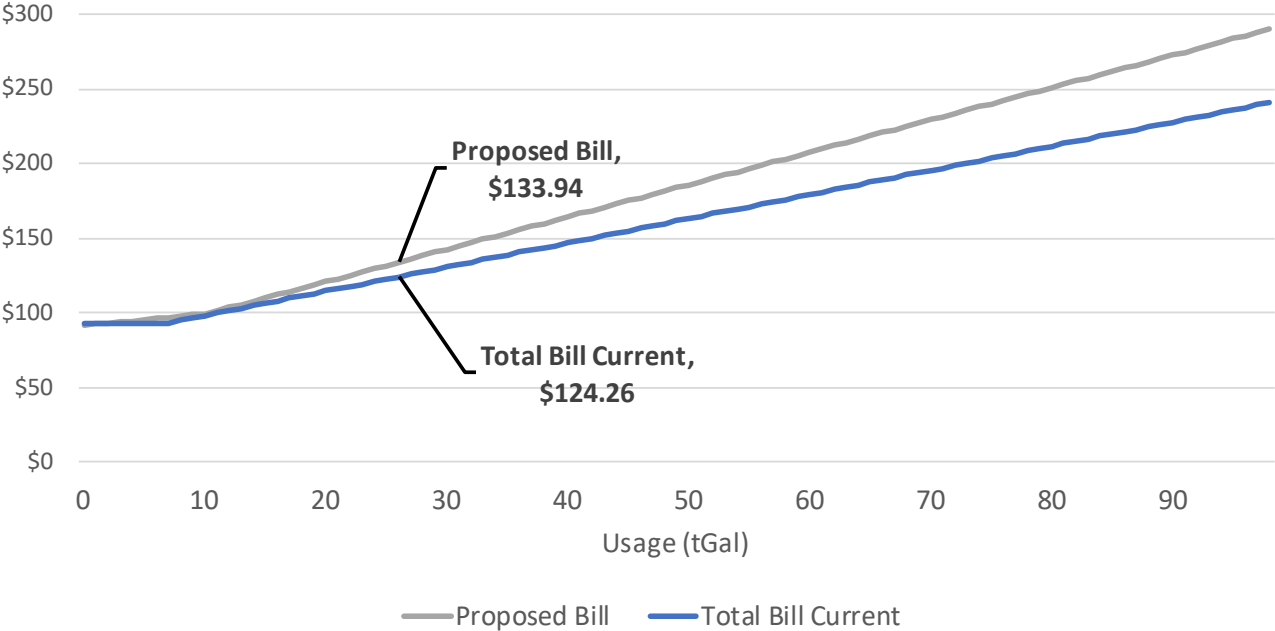
Bill Impact

Figure 9 shows the potential impacts on a customer with a 3/4-inch meter at various use levels. Under the proposed rates, customers who use minimal water will have a lower impact on their monthly bill. Impacts increase as customer use increases. An average customer in the District

² Source: Bureau of Labor Statistics (2023)

uses 26 tGal per bi-monthly period and under the current rates would pay \$124.26 every other month. The same usage level under the proposed rates would result in a bi-monthly bill of \$133.94.

Figure 9. Hypothetical Bills 3/4-in Meter at Different Use Levels



CONCLUSION

Recommendations:

- Make annual revenue (rate) adjustments of 20 percent, 20 percent, 8 percent, respectively for the first three years of the study period
- No revenue adjustments are recommended in the fourth and fifth year of the study period
- Adjust the fixed rate ratios to reflect industry standards so that rates are based on the cost to provide service for each meter size
- Develop rates for each customer class commensurate with each class's impact on the water system