



2023 Financial Planning, Revenue Requirements, and Rate Setting Analysis

Presented by: California Rural Water Association

In Collaboration With:

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**GREENFIELD COUNTY WATER DISTRICT
FINANCIAL PLANNING, REVENUE REQUIREMENTS,
AND RATE SETTING ANALYSIS**

FINAL REPORT

Prepared for:

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EXECUTIVE SUMMARY

Background

The Greenfield County Water District (GCWD) was established in 1955 by the Kern County Board of Supervisors. The GCWD is located within the census-designated place of Greenfield, approximately 7 miles south of metropolitan Bakersfield. The District is classified as a special district within Kern County. The District service area is 3.35 square miles of which 2.07 square miles is developed with urban land uses such as residential, commercial, and schools. The remaining undeveloped area is primarily farmland; however, the District has no agricultural customers and does not supply water to the undeveloped area. The District currently has a service population of approximately 10,801 people. In 2020, approximately 2,564 acre-feet of water was delivered to an estimated 3,273 water service connections of which approximately 3,124 are residential services. The remainder are for commercial, landscape, and industrial uses. Approximately 194 customers are still unmetered and pay a flat rate based on parcel size.

The District currently utilizes local groundwater as its sole source of water supply. Groundwater is extracted by seven wells located within the District's sphere of influence. In addition to production wells, the District has six storage tanks. All water distributed through the District service area is potable drinking water. The District produces all its water supply through pumping groundwater using District facilities. There are no current plans to purchase wholesale water. **Figure 1** shows the current boundaries of the District in red.

Recommendation and Proposed Rates

Recommendations:

- Make annual revenue (rate) adjustments of 20 percent, 13 percent, 8 percent, 6 percent, and 6 percent, respectively for the five years 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
- Implement a uniform rate structure for all retail customer classes
- Reduce the number of usage tiers from four to one to ensure Proposition 218 compliance

Current Rates

Currently, District water customers pay a monthly fixed fee based on each customer’s meter size, the most common meter is 1-inch, which is billed \$27.81 per month. In addition, the District charges variable rates using an inclining block four-tiered rate schedule which is priced the same for all customers. Customers who are unmetered pay a flat monthly rate regardless of usage. The current rates and tier widths as described are displayed in **Table 1**.

Table 1. Current Rates

Fixed Charges		
Customer Class	Meter Size	Monthly Fee
Metered Customers	5/8"	\$27.81
	3/4"	\$27.81
	1"	\$27.81
	1-1/2"	\$34.01
	2"	\$37.86
	3"	\$86.49
	4"	\$117.81
	6"	\$199.44
	8" & Larger	\$299.20
Flat Rate	6000 sq. ft. or less	\$48.47
	6000 sq. ft. to 10000 sq. ft.	\$55.60
	10000 sq. ft. to 16000 sq. ft.	\$72.72
	16000 sq.ft. or more	\$92.71

Variable Charges		
Customer Class	Tier - Width	Unit Cost
All Customers	Tier 1: 100-1500 Cu. Ft.	\$0.84
	Tier 2: 1501-2500 Cu. Ft.	\$0.91
	Tier 3: 2501-4000 Cu. Ft.	\$0.97
	Tier 4: 4001 + Cu. Ft.	\$1.29

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 based on optimized levels of capital spending and contributions to reserves. **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	FY 2027	FY 2028
Recommended Adjustment	20.0%	13.0%	8.0%	6.0%	6.0%
Cumulative Adjustment	1.20	1.36	1.46	1.55	1.65
Cumulative Adjustment	20.0%	35.6%	46.4%	55.2%	64.5%

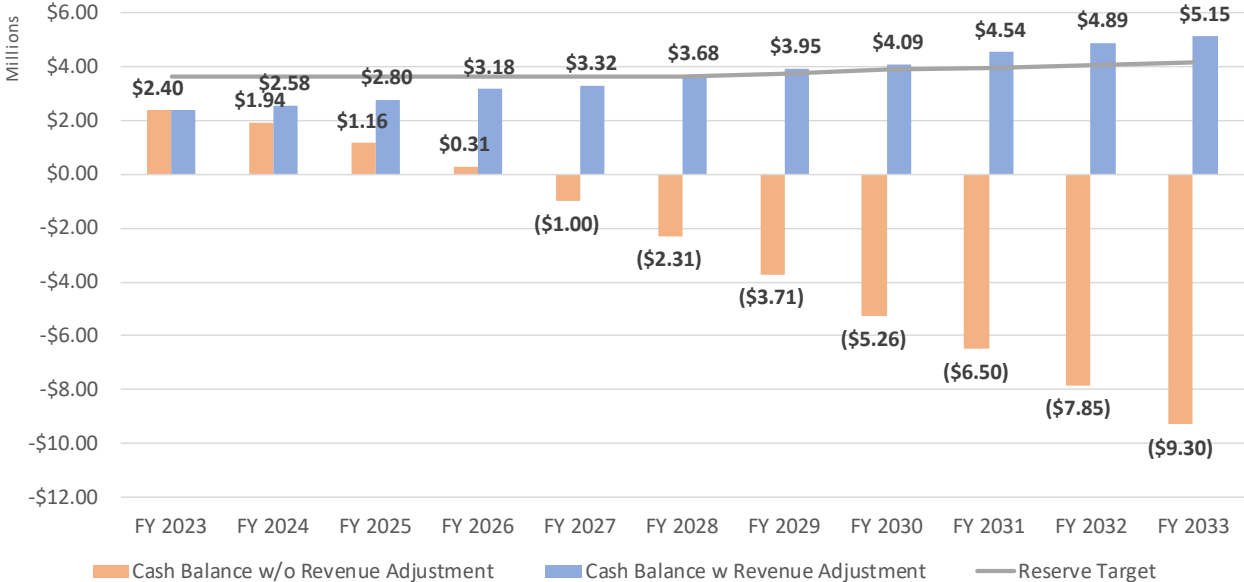
Table 3 shows the proposed fixed and variable rates under the revenue adjustment schedule.

Table 3. Proposed Rates Under Revenue Adjustment Schedule

Fixed Charges					
Meter Size	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
5/8" - 3/4"	\$35.93	\$40.60	\$43.84	\$46.48	\$49.26
1"	\$35.93	\$40.60	\$43.84	\$46.48	\$49.26
1-1/2"	\$70.55	\$79.72	\$86.10	\$91.27	\$96.74
2"	\$112.10	\$126.67	\$136.81	\$145.01	\$153.72
3"	\$209.05	\$236.22	\$255.12	\$270.43	\$286.65
4"	\$347.54	\$392.72	\$424.14	\$449.59	\$476.56
6"	\$693.78	\$783.97	\$846.69	\$897.49	\$951.34
8"	\$1,109.27	\$1,253.47	\$1,353.75	\$1,434.97	\$1,521.07
10"	\$1,594.00	\$1,801.22	\$1,945.32	\$2,062.04	\$2,185.76
12"	\$2,978.96	\$3,366.22	\$3,635.52	\$3,853.65	\$4,084.87
Fire Service	\$59.86	\$67.64	\$73.05	\$77.44	\$82.08
Variable Charges					
Customer Class	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Retail Customers	\$1.16	\$1.32	\$1.42	\$1.51	\$1.60
Construction	\$3.19	\$3.61	\$3.90	\$4.13	\$4.38

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

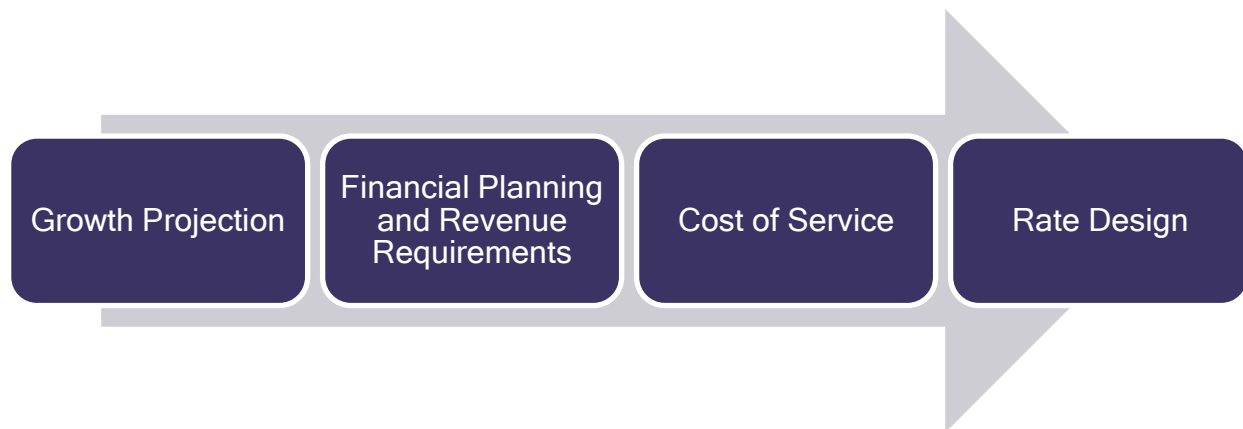
Figure 2. District Ending Fund Balances under the Proposed Financial Plan



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 ten-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 5-year rate 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.

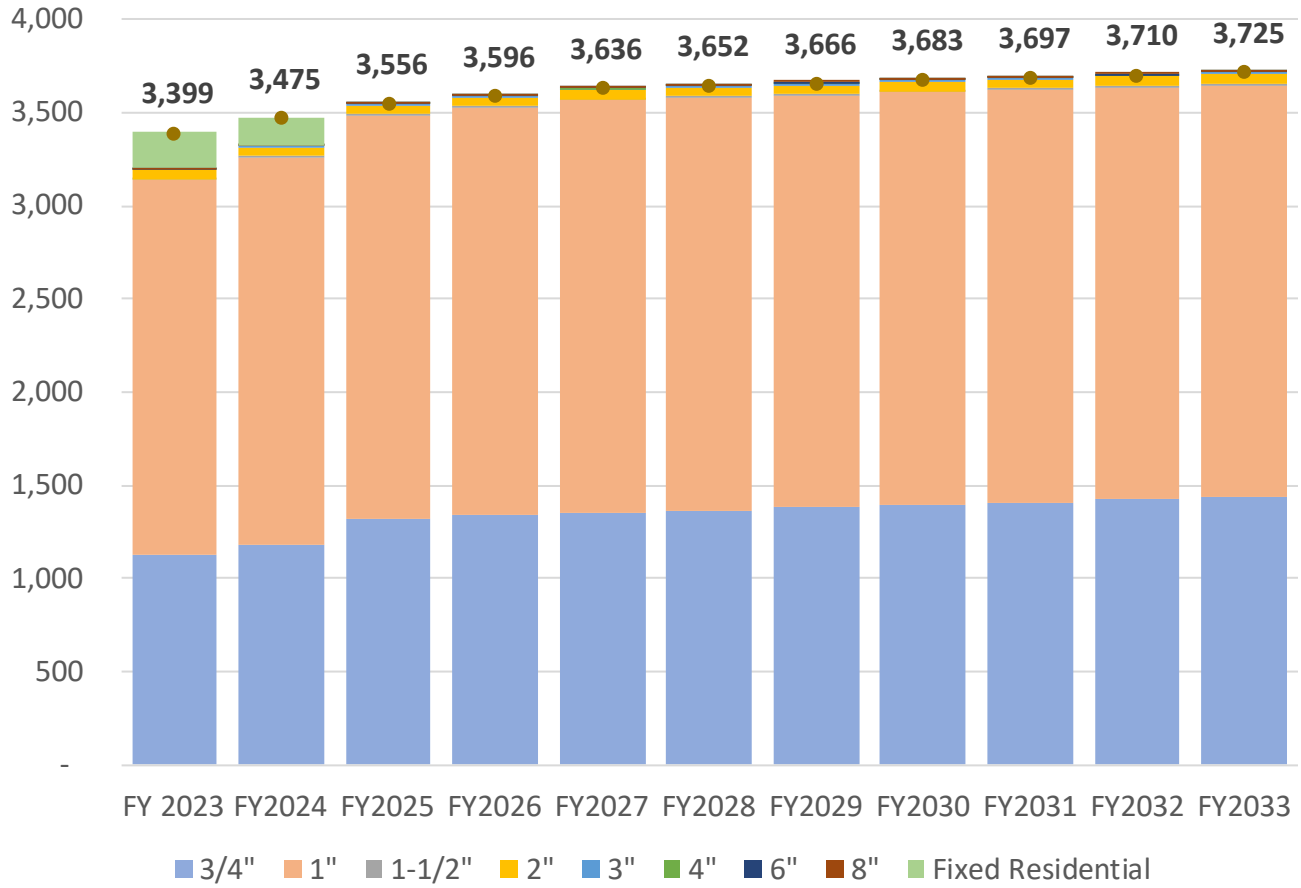
Key Assumptions

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 about 50 new accounts each year through the end of the study period (FY 2028). All Fixed Residential accounts are anticipated to transition to 3/4" meters by FY 2025.

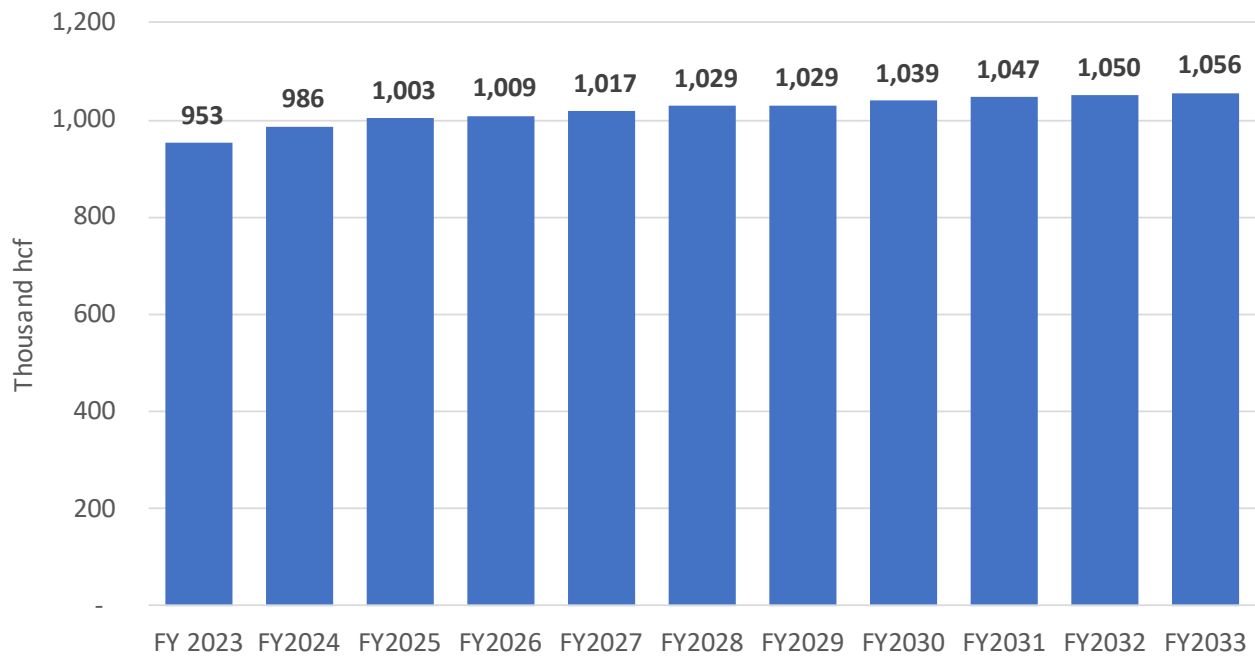
Figure 4. Customer Account Growth, FY 2023 – FY 2033



Demand Projections

Aggregate water consumption was calculated by multiplying the constant per account water usage with the number of accounts each year. Due to the conversion of flat rate customers to meters, annual demand is projected to increase 3.5 percent and 1.7 percent in FY 2024 and FY 2025, respectively. After all customers convert to meters, annual demand is expected to increase 0.8 percent on average each year for the remainder of the study period. The District’s water demand forecasts for the study period are displayed in **Figure 5**.

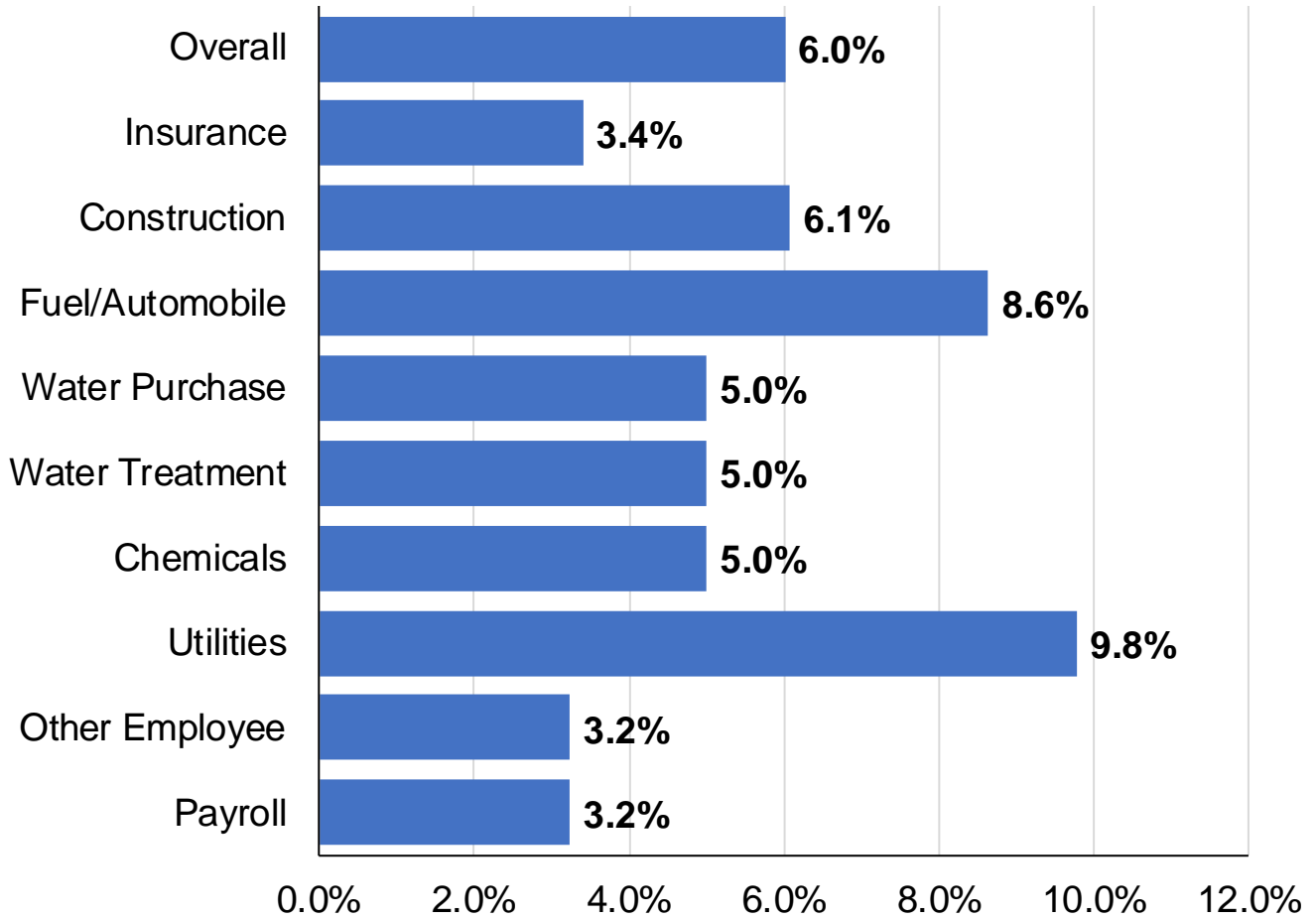
Figure 5. Annual Demand Projections, FY 2023 – FY 2033



Escalation Factors

Escalation Factors were calculated for ten independent variables using historical Consumer Price Index (CPI) data from West Class B/C cities between 2000 and the most current calendar year, and projections by the California Department of Transportation (CADOT), and the California Department of Finance (CADO). 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 prior to 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. Since all small meters have the same effect use patterns, 5/8” to 1” meters were treated as the base meter size in terms of capacity requirements. **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 between \$2.3 million and \$2.4 million per year in operating revenue. Additional non-operating revenues total approximately \$60,000 per year and will be used to offset future revenue requirements.

Operating and Maintenance Expense

This District's FY 2023 Budget anticipates approximately \$2.1 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 5.8 percent, which is consistent with the District's budget projections. For the rest of the study period, annual inflation is projected to average approximately 5.1 percent per year. Total O&M expenses will reach \$2.8 million by FY 2028.

Capital Expenses

To fund upgrades and maintenance of the water system, the District has outlined 10 years of capital projects fully funded through customer rates (PAYGo). Rate funded capital expenses include a comprehensive Storage Tank Maintenance program, replacement of aged meters, arsenic plant media replacements, and District Office refurbishments. Annual capital expenses average just under \$450,000 for the ten-year planning period. The District plans to offset capital expenditures with Capacity Fee revenues, expected to total approximately \$200,000 per year, commensurate with anticipated customer growth.

Debt Funding

The District makes debt payments of about \$356,000 annually on a Series 2018 bond. These payments are scheduled to continue through the length of the ten-year planning horizon. The District does not plan to issue any new debt during the study period.

Target Reserves

In the current fiscal year, the District's water fund balance is approximately \$2.5 million split between an operating fund, capital improvement fund and other investments. The proposed reserve policy recommends the District maintain twelve months of operating expenses in the operating fund and contribute 30.0 percent of the District's annual depreciation expense to a capital improvement fund. This policy ensures the District can maintain operations during periods of revenue insufficiency and guarantee the future stability of the system. By the end of the study period (FY 2028) the District's total reserve target is projected to be approximately \$3.7 million.

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 \$2,872,117 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, 13.0 percent the second year, 8.0 percent in the third year, and 6.0 percent in the final two years of the study period. Under this plan the fund balances will increase to meet reserve targets; additionally, the District will be able to sufficiently cover their operating expenses and fund necessary capital improvements. **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. The Cost of Service section will use this financial plan as a basis for all calculations.

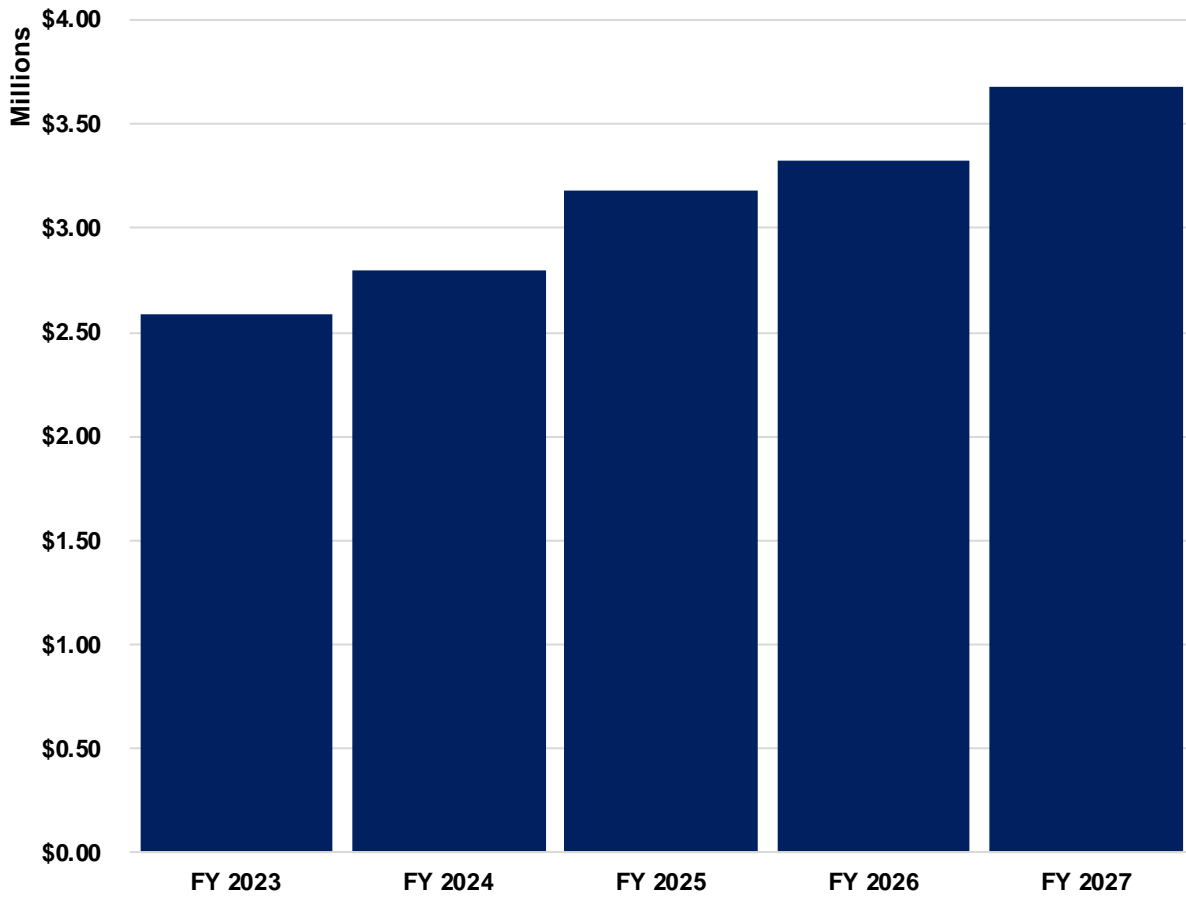
Table 6. Study Period Financial Plan, FY 2023 to FY 2028

Revenue Adjustment		20.0%	13.0%	8.0%	6.0%	6.0%
Rate Month Implemented		July	July	July	July	July
	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Cash Position Opening Balance	\$ 2,553,687	\$ 2,397,954	\$ 2,584,100	\$ 2,796,552	\$ 3,180,853	\$ 3,323,766
Revenues						
Rate Revenue	\$ 2,190,364	\$ 2,670,617	\$ 3,001,047	\$ 3,269,544	\$ 3,501,744	\$ 3,744,038
Other Operating Revenue	\$ 93,250	\$ 93,250	\$ 93,250	\$ 93,250	\$ 93,250	\$ 93,250
Non-Operating Revenue	\$ 59,070	\$ 59,070	\$ 59,070	\$ 59,070	\$ 59,070	\$ 59,070
Total Revenues	\$ 2,342,684	\$ 2,822,936	\$ 3,153,367	\$ 3,421,864	\$ 3,654,064	\$ 3,896,358
Operating Expenses	\$ 2,142,090	\$ 2,266,140	\$ 2,427,997	\$ 2,520,554	\$ 2,639,848	\$ 2,765,204
Current Debt Service	\$ 356,327	\$ 356,327	\$ 356,327	\$ 356,327	\$ 356,327	\$ 356,327
Proposed Debt Service	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Operating and Debt Service	\$ 2,498,417	\$ 2,622,467	\$ 2,784,324	\$ 2,876,881	\$ 2,996,175	\$ 3,121,531
Net Revenues	\$ (155,733)	\$ 200,469	\$ 369,043	\$ 544,982	\$ 657,889	\$ 774,826
Capital Expenditure	\$ -	\$ 215,823	\$ 358,091	\$ 362,181	\$ 716,477	\$ 615,113
Capacity Fee Revenue	\$ -	\$ 201,500	\$ 201,500	\$ 201,500	\$ 201,500	\$ 201,500
Grants	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Cash	\$ -	\$ 14,323	\$ 156,591	\$ 160,681	\$ 514,977	\$ 413,613
Net Income	\$ (155,733)	\$ 186,146	\$ 212,452	\$ 384,301	\$ 142,912	\$ 361,213
Ending Balance	\$ 2,397,954	\$ 2,584,100	\$ 2,796,552	\$ 3,180,853	\$ 3,323,766	\$ 3,684,979
Cash as Percent of Operations	105%	93%	90%	95%	92%	96%

Proposed Fund Balances

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

Figure 6. District Fund Balances 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.

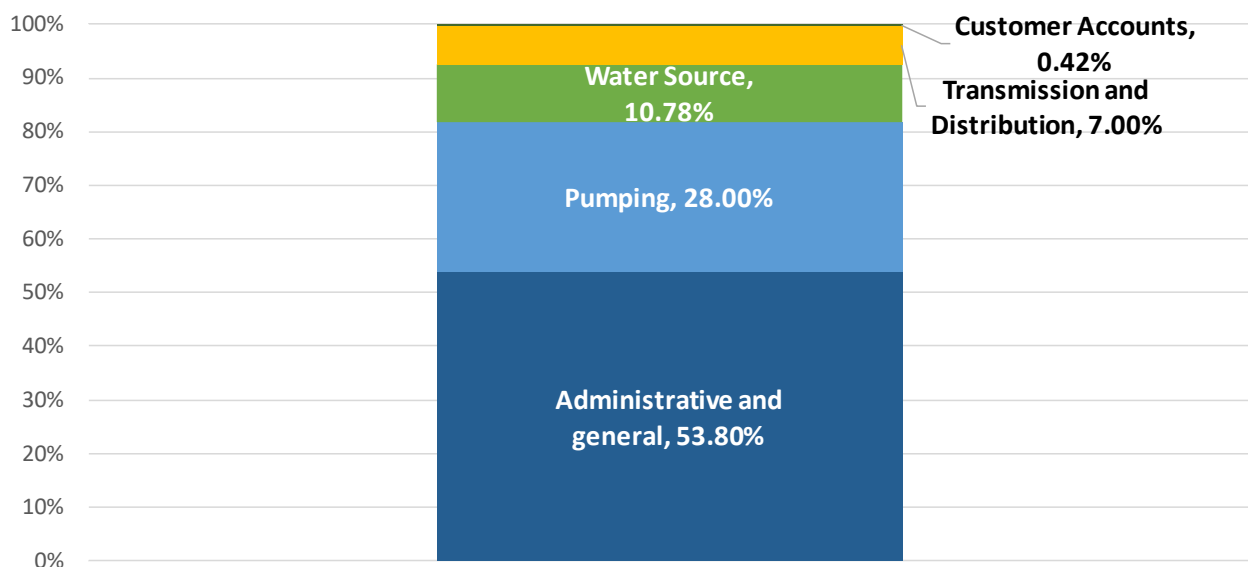
Cost Components

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

- Water Source - costs associated with the procurement of water supply
- Pumping - costs associated with general pumping and energy use
- Transmission and Distribution - costs associated with transmitting and distributing water to customers
- Customer Accounts - costs associated with billing and customer service
- Administrative and General - costs associated with administrative and general functions

Figure 7 shows the percent of test year expenses allocated to each cost component.

Figure 7. Operating Costs Allocated to Cost Components



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 41.3%, 24.9%, and 33.8%, respectively. The number of bills in one year (the number of accounts multiplied by 12) 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
- Public Fire - the cost of providing capacity for public fire protection

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

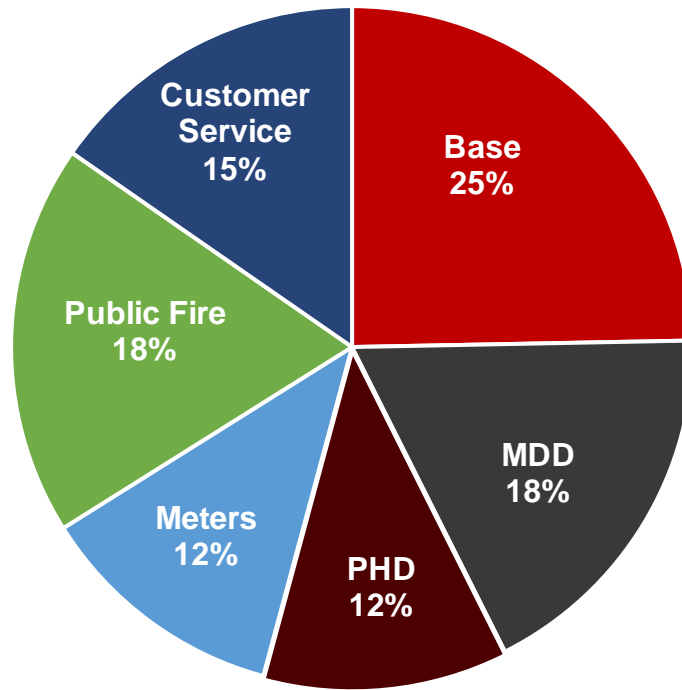


Table 7 shows the revenue requirements by cost causative components under the proposed financial plan. The test year costs and offsets are allocated to each cost causative component using the percentages derived from the cost allocation.

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

Cost Allocation Summary	Total	Source of Supply	Base	MDD	PHD	Meters	Public Fire	Customer Service
O&M Revenue Requirements	\$2,266,140	\$244,361	\$1,081,361	\$455,530	\$381,778	\$51,555	\$0	\$51,555
Non-Operating Revenue Requirements	\$572,150	\$430,105	\$60,321	\$36,203	\$22,736	\$12,534	\$10,252	\$0
	\$2,838,290	\$674,466	\$1,141,682	\$491,733	\$404,514	\$64,089	\$10,252	\$51,555
		24%	40%	17%	14%	2%	0%	2%
Other Operating Revenue	(\$93,250)	(\$22,159)	(\$37,509)	(\$16,156)	(\$13,290)	(\$2,106)	(\$337)	(\$1,694)
Non-Operating Revenue	(\$59,070)	(\$14,037)	(\$23,760)	(\$10,234)	(\$8,419)	(\$1,334)	(\$213)	(\$1,073)
Net Balance From Operations	\$186,146	\$44,234	\$74,876	\$32,250	\$26,530	\$4,203	\$672	\$3,381
Rate Revenue Requirement	\$2,872,117	\$682,504	\$1,155,288	\$497,593	\$409,334	\$64,853	\$10,374	\$52,170

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	Public Fire	Customer Service
Rate Revenue Requirement	\$682,504	\$1,154,792	\$498,582	\$408,842	\$64,853	\$10,374	\$52,170
Units	992,497	992,497	4,367	6,602	3,662	40,044	3,337
Unit Cost	\$0.69	\$1.16	\$114.16	\$61.93	\$17.71	\$0.26	\$15.63

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	Public Fire	Customer Service
Retail Customers	\$2,846,673	\$678,264	\$1,147,617	\$492,733	\$400,954	\$64,711	\$10,349	\$52,045
Construction	\$19,697	\$4,240	\$7,175	\$4,566	\$3,716	\$0	\$0	\$0
Fire Service	\$5,747	\$0	\$0	\$1,282	\$4,173	\$142	\$25	\$125
Total	\$2,872,117	\$682,504	\$1,154,792	\$498,582	\$408,842	\$64,853	\$10,374	\$52,170

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 Greenfield County Water 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 to 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 the rate plan outlined in this report to begin to be used in fiscal year 2023-24, starting July 1, 2023. The District needs revenue increases to cover increases in operating expenses and fund future capital projects. 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. The proposed revenue requirements include sufficient funding for the daily operations of the District. If the District can secure additional funding sources, or if customer growth or water use is higher than expected, resulting in increased revenues, the District can choose to not implement increases in any year.

Fixed Charge

Base, peaking, and meter service 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 is then divided by the number of bills per year which results in a proposed monthly service charge of \$35.93 for base meters. A total of 60.0 percent of revenues will be collected from customers' fixed charges. The District also has unmetered Residential customers billed at a flat monthly rate. RDN developed new flat rates for these customers by applying the proposed revenue adjustment (20.0 percent) to the current unmetered rates. The proposed flat rates for unmetered customers are shown in **Table 10**. GCWD plans to transition all unmetered customers to 3/4-inch meters by the end of FY 2024.

Table 10. Proposed Monthly Flat Rates, FY 2024

Fixed Charges	
Meter Size	Monthly Fee
6000 sq. ft. or less	\$58.16
6000 sq. ft. to 10000 sq. ft.	\$66.72
10000 sq. ft. to 16000 sq. ft.	\$87.26
16000 sq.ft. or more	\$111.25

Variable Charge

Volumetric charges are established based on variable costs such as pumping costs and water banking fees. The total projected variable costs (\$1,147,918) were divided by the projected water use, 986,331 hcf, to develop a unit cost of \$1.16 per hcf. Customers may reduce their overall bill through water conservation measures and customers who use the most water will have the largest impact on expenses. RDN designed a uniform rate for all customers to increase compliance with Proposition 218 as no direct cost basis was found to justify the Districts previous four-tiered rate structure. Additionally, a uniform rate is simpler for the District to administer.

Construction customer variable charges were developed using the same methodology. The total costs allocated to Construction customers were divided by the projected water use resulting in a unit cost of \$3.19 per hcf. **Table 11** shows the proposed fixed and variable rates for the 5-year rate study.

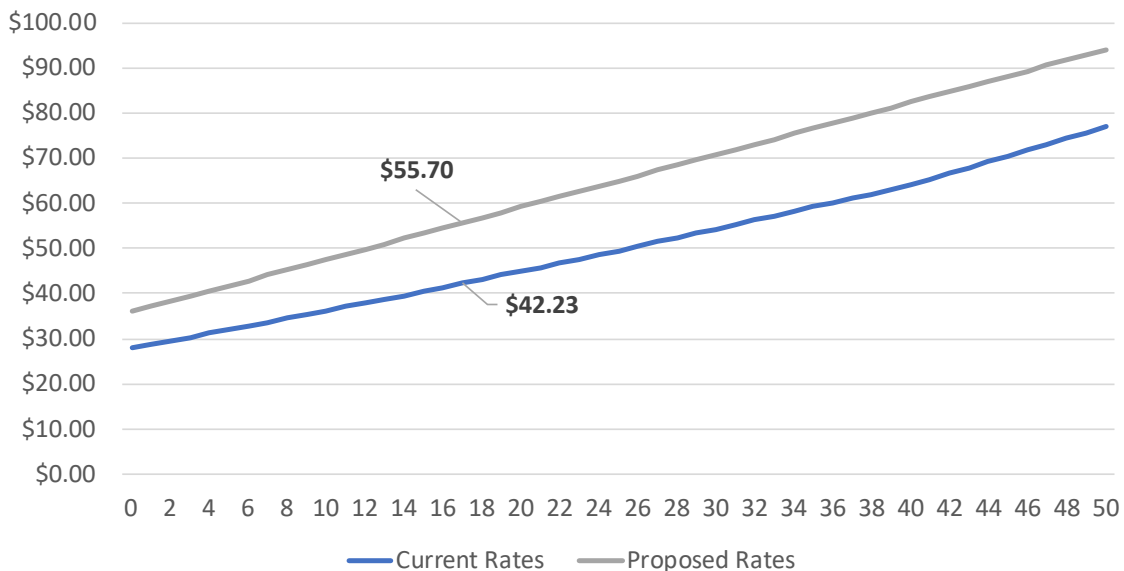
Table 11. Proposed Rates

Fixed Charges					
Meter Size	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
5/8" - 3/4"	\$35.93	\$40.60	\$43.84	\$46.48	\$49.26
1"	\$35.93	\$40.60	\$43.84	\$46.48	\$49.26
1-1/2"	\$70.55	\$79.72	\$86.10	\$91.27	\$96.74
2"	\$112.10	\$126.67	\$136.81	\$145.01	\$153.72
3"	\$209.05	\$236.22	\$255.12	\$270.43	\$286.65
4"	\$347.54	\$392.72	\$424.14	\$449.59	\$476.56
6"	\$693.78	\$783.97	\$846.69	\$897.49	\$951.34
8"	\$1,109.27	\$1,253.47	\$1,353.75	\$1,434.97	\$1,521.07
10"	\$1,594.00	\$1,801.22	\$1,945.32	\$2,062.04	\$2,185.76
12"	\$2,978.96	\$3,366.22	\$3,635.52	\$3,853.65	\$4,084.87
Fire Service	\$59.86	\$67.64	\$73.05	\$77.44	\$82.08
Variable Charges					
Customer Class	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Retail Customers	\$1.16	\$1.32	\$1.42	\$1.51	\$1.60
Construction	\$3.19	\$3.61	\$3.90	\$4.13	\$4.38

Bill Impact

Figure 9 shows the potential impacts on a customer with a 1-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 uses 17 hcf per month and under the current rates would pay \$42.23 per month. The same usage level under the proposed rates would result in a monthly bill of \$55.70. Customers transitioning from unmetered to metered service would experience a 4.2 percent reduction in their monthly bill, assuming usage does not exceed the average usage of 17 hcf per month.

Figure 9. Hypothetical Bills 1-in Meter at Different Use Levels



CONCLUSION

Recommendations:

- The District should make annual revenue (rate) adjustments of 20 percent, 13 percent, 8 percent, 6 percent, and 6 percent, respectively for the five years of the study period
- The District must adjust the fixed rate ratios to reflect industry standards so that rates are based on the cost to provide service for each meter size
- Implement a uniform rate structure for all retail customer classes
- Reduce the number of usage tiers from four to one to ensure Proposition 218 compliance