

# VALLEY OF THE MOON WATER DISTRICT

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## Water Rate Study Report

March 2022

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# Section 1. EXECUTIVE SUMMARY

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## Background and Purpose

### BACKGROUND

In 2015, with the San Juan Capistrano court decision, water rates in California now must be calculated under a more restrictive cost-of-service standard that required water utilities such as Valley of the Moon Water District (District) to “demonstrate the cost basis” for tiered volumetric rates<sup>1</sup>. Because of this, the District changed its 4-tiered rate structure to a 2-tiered schedule, primarily based on advice of legal counsel and because the District’s water supply was limited to surface supplies from Sonoma County Water Agency and District wells<sup>2</sup>.

As a result, the customers with the highest levels of consumption saw a reduction in their monthly water bills. The District would now like to better address conservation concerns, along with customers that are using more system capacity than what is allowed under District regulations. Part of the solution to this excess use of meter capacity problem is to implement a fixed charge that reflects the meter “right-sizing” and account for the mismatch between meter capacities and the limitations per District regulations. The current 2-tiered rate structure was also re-evaluated to determine if it could be modified to better encourage conservation, including the possibility of adding a third tier.

These evaluations have resulted in the proposed updated rates, a new meter right-sizing fixed charge, and the continuation of the current two-tiered residential volumetric rates.

### PURPOSE

The District provides water service approximately 23,000 people through 6,969 connections in areas extending from the Trinity Oaks Subdivision, located north of the town of Glen Ellen, to the Temelec Subdivision located at the southern end of the Sonoma Valley, and encompasses a total area of approximately 7,545 acres. It is important for the District to routinely update its cost-of-service basis for the rates it charges its customers, as required by California statutes.

This report summarizes the rates and fees developed in this study, which are based on industry standards and intended to meet the requirements of Proposition 218 (or Prop 218)<sup>3</sup>. This report is part of the District’s efforts to document the study for Prop 218 purposes and to ensure the District communicates the results of this study with its customers. The results were presented at a January 27, 2022, public workshop. The District Board will decide whether to direct staff to prepare Prop 218 public notices and set the rate hearing in a public hearing that may be as late as June 2022; rates will go into effect on July 1, 2022.

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*1 This court decision required that tiered rates demonstrate the actual amount of water and the costs included in each tier.*

*2 The District’s water supply has historically been about 75-80 percent SCWA and 25-20 percent from District wells.*

*3 California Constitutional Provision, Article XIII D, Section 6.*

## Key Findings

### PROPOSED WATER RATE DESIGN

The District's has two distinct sources of water supply – well water from District owned or leased wells and purchased water from Sonoma County Water Agency (SCWA). This makes it difficult for the District to justify more than two tiers because each tier must demonstrate the amount and cost of each tier.

After review of additional tiers and discussions with the District staff and board, at this time continuing with a monthly fixed charge, two tiers for residential customers, and a uniform tier for all other customer classes is recommended. Fixed monthly charges will continue to be based on meter sizes, vary by customer class, and continue to collect 30 percent of rate revenue from fixed charges and 70 percent from volumetric charges.<sup>4</sup>

### METER RIGHT SIZING CHARGES

The District has documented that there are approximately 1,380 residential customers that are exceeding their demand capacity based on their meter sizes: about 900 significantly so (by more than 25 percent). District Regulations expressly state the maximum consumption assumed to occur for each meter size and, when that consumption is exceeded, the customer is required to upsize to a larger meter. Since the process of upsizing is expensive and the District lacks the resources to enforce the District's meter sizing regulations with every customer that is exceeding their demand capacity, the District has developed a meter right-size charge that would be imposed on such customers. This charge is a component of the fixed meter charges, which ensures that customers are being fairly charged for their full demand on the District's system, even if they have not yet gone through the process of upsizing their meter.

### REVENUE REQUIREMENTS AND PROJECTED RATES

The District needs to complete ongoing rehabilitation and replacement projects that include significant costs for wells, pipelines, and maintenance projects such as valve, water service and vehicle replacements. These projects average almost \$2.5 million per year over the next five years<sup>5</sup> compared to approximately \$2 million per year in the District's last rate study. In addition, the costs to purchase SCWA supplies continue to increase, Sonoma Valley Groundwater Sustainability Agency (SVGSA) will be charging additional fees, and general inflation appears to be increasing at a much higher rate than historically seen.

The District's annual net revenue requirements (i.e., total revenue requirements less non-rate revenues) are projected to vary from year-to-year but overall remain relatively flat, beginning at \$8.3 million in FY 2022/23, peaking at \$8.9 million in FY 2024/25, and ending at \$8.1 million in FY 2026/27. This assumes the District fully funds the adopted CIP program over the next five years. Assuming the proposed rate increases are adopted, total rate revenue would increase from \$7.35 million in FY 2022/23 and end at just under \$10.0 million in FY 2026/27.

**Figure 1. CIP Funding by Rate Alternative**

Rate Alternative	Description	Annual Rate Increases (FY'22/23 - FY'26/27)	Total CIP Funded
Recommended Rate Alternative	Funds 100% of Approved CIP	10%, 7%, 7%, 7%, 7%	\$12.6 mil.
No Rate Increases	Funds 30% of CIP	0% each Year	\$3.8 mil.

<sup>4</sup> The District's previously transitioned rates from a 20/80 fixed/volumetric design to a 30/70 rate design over a five-year period.

<sup>5</sup> This amounts to approximately \$12.6 million in capital improvement program (CIP) costs.

## Section 2. RATE STUDY METHODOLOGY

### Overview of Rate Study Methodology

The methodology followed in this rate study is similar to the District’s previous study, and focused on rate design, accurately assessing projected water demands. The District and NBS also developed a meter right-sizing charge and explored the creation of a third tier for residential customers.

The three components typically included in rate studies are summarized in Figure 2 and are intended to follow industry standards and reflect the fundamental principles of cost-of-service ratemaking embodied in the American Water Works Association (AWWA) Principles of Water Rates, Fees, and Charges<sup>6</sup>, also referred to as Manual M1. This methodology also addresses Prop 218 requirements that rates not exceed the cost of providing the service (i.e., rates must be proportionate to the cost of providing service for all customers).

**FIGURE 2. PRIMARY COMPONENTS OF A RATE STUDY**



As a result of this water rate study, rate increases – or more accurately, increases in the total revenue collected from rates – are recommended for each of the next five years. The recommended volumetric rates continue to use two tiers for residential customers. After the cost-of-service adjustments in the first year, the remaining four years (i.e., FY 2023/24 through FY 2026/27) are then adjusted in an across-the-board manner each year (that is, the increase is applied equally to all fixed charges and volumetric rates).

### Rate Design Criteria

It is important for utilities to send proper price signals to its customers about the actual cost of providing service, and a third tier for residential customers can be an effective means of accomplishing this objective. However, since water rates must be calculated based on the District’s actual costs of service, the District cannot charge a third tier unless the higher rate is supported by actual costs.

The 2015 San Juan Capistrano court decision held that water agencies may only charge tiered rates if they can show that the tiered rates are proportionate to the District’s higher costs to serve those customers, meaning that caution must be used to ensure that customers are appropriately allocated costs that meet

<sup>6</sup> *Principles of Water Rates, Fees, and Charges, Manual of Water Supply Practices, M1, AWWA, seventh edition, 2017.*



legal requirements. While the possibility of a third tier was carefully evaluated in the District's case, it was determined that it could not be supported by actual measurable costs at this time.

However, sending proper price signals can also be addressed through the magnitude of the rates and the rate structure design. In other words, both the amount of revenue collected and the way in which it is collected from customers are important. The District's variable costs are relatively high which supports the District's decision to continue with a rate design that collects 70 percent of rate revenue from volumetric rates and 30 percent from fixed charges.

Several more general criteria are also considered in setting rates and developing sound rate structures. The fundamentals of this process have been documented in various rate-setting manuals<sup>7</sup>. The following is a list of common rate structure objectives:

- Rates should yield the necessary revenue in a stable and predictable manner.
- Rates should minimize unexpected changes to customer bills.
- Rates should promote fairness (i.e., cost based).
- Rates should avoid discrimination.
- Rates should maintain simplicity, certainty, convenience, and freedom from controversy.
- Rates should comply with all applicable laws (in California, this specifically includes Prop 218).

## KEY FINANCIAL ASSUMPTIONS

The following are the key assumptions used in the water rate analysis:

- **Funding Capital Projects** – The analysis assumes:
  - Capital costs are funded with rate revenue and reserve funds, with no additional debt issued.
  - All capital projects listed in the financial plans are assumed to be funded.
- **Reserve Targets** – Reserves for operations and capital needs are set at levels established by District staff and adopted by the District Board. Reserve targets used in the analysis are as follows:
  - Operating & Maintenance Reserve – 90 days of O&M costs.
  - Capital Rehabilitation and Replacement Reserve – \$820,000.
  - Rate Stabilization Reserve – \$610,000.
- **Inflation and Growth Projections** – Annual inflation and growth assumptions were determined using the District's historical data, government publications, and assumptions in published plans such as the Water Master Plan and Urban Water Management Plan; they are as follows:
  - General cost inflation is assumed to be 6 percent annually based on significant inflation as widely reported over the last six to nine months as non-transitory.
  - Customer growth is 0.92 percent.
  - Labor cost inflation is 4.0 percent per District staff.
  - Benefit cost inflation is 7.5 percent per District staff.
  - Energy cost inflation is 6.6 percent annually based on the District's historical experience.
  - Fuel and utilities costs is 5.0 percent based on the District's historical experience.

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<sup>7</sup> From M1 Manual, AWWA, seventh edition, 2017, p. 105. Also, James C. Bonbright; Albert L. Danielsen and David R. Kamerschen, *Principles of Public Utility Rates*, (Arlington, VA: Public Utilities Report, Inc., Second Edition, 1988), p. 383-384.

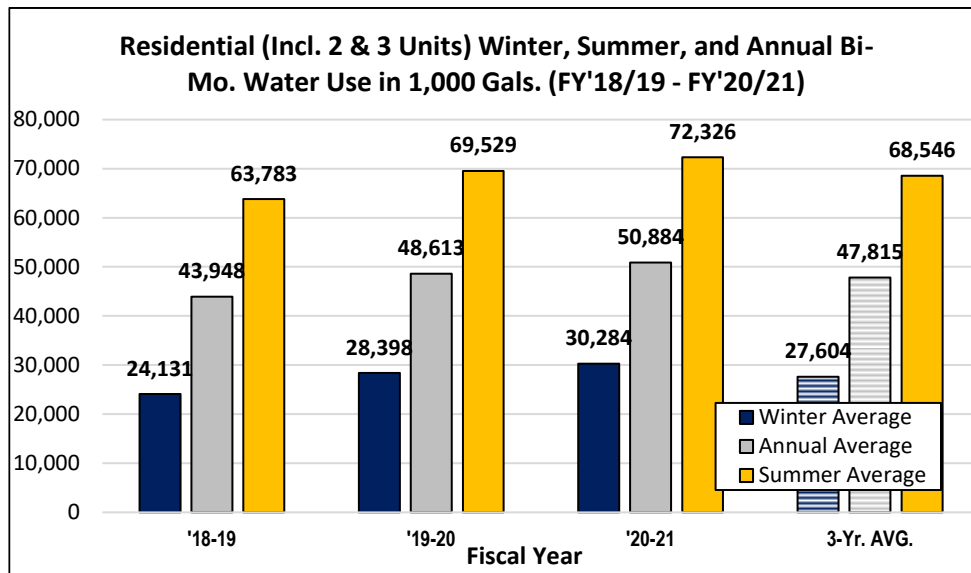
- Purchased water (SCWA) cost inflation is 5.6 percent annually based on the District’s historical experience and discussions with SCWA.
- **Pass-Through Costs** – This provision allows the District to adjust for certain operating costs that are beyond the District’s control. This would include costs associated with purchased water, and regulatory requirements like outside agency charges (e.g., SVGSA charges). These pass-through costs will only be implemented if future increases exceeded the inflation factors used in the rate model. For the District to pass through these cost increases, it must specify that intention in the Prop 218 notices.

## Water Consumption Trends

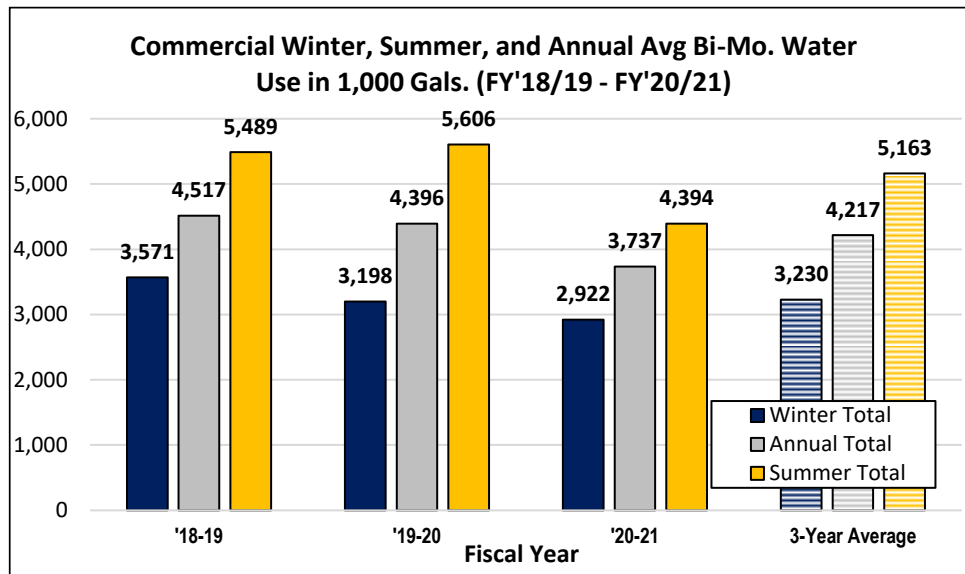
Uncertainty about the amount of water sold each year presents a challenge to how rates should be designed. The impacts of the COVID-19 restrictions on water consumption in the District is the most significant concern going forward, and whether those impacts will continue, consumption patterns will return to “normal”, or there will be new trends developing. There is also the question of how much “drought-hardening” has taken place, where customers have made permanent changes in their consumption patterns, such as installing low-water landscaping and appliances. Recent consumption records indicate the water sales are lower than expected the last few months.

Figure 3 and Figure 4 indicate that, while the seasonal average water uses of single-family customers increased over the last three years, commercial customers reduced their consumption, likely due to the COVID-19 restrictions. Figure 5 shows the District’s total annual consumption has steadily increased each year over the last three years, indicating that there is not likely to be any significant declines in consumption going forward. We suspect that the increases in residential usage and the decrease in commercial usage is at least partially due to more employees working from home. It is unclear if, or how long, this trend will continue.

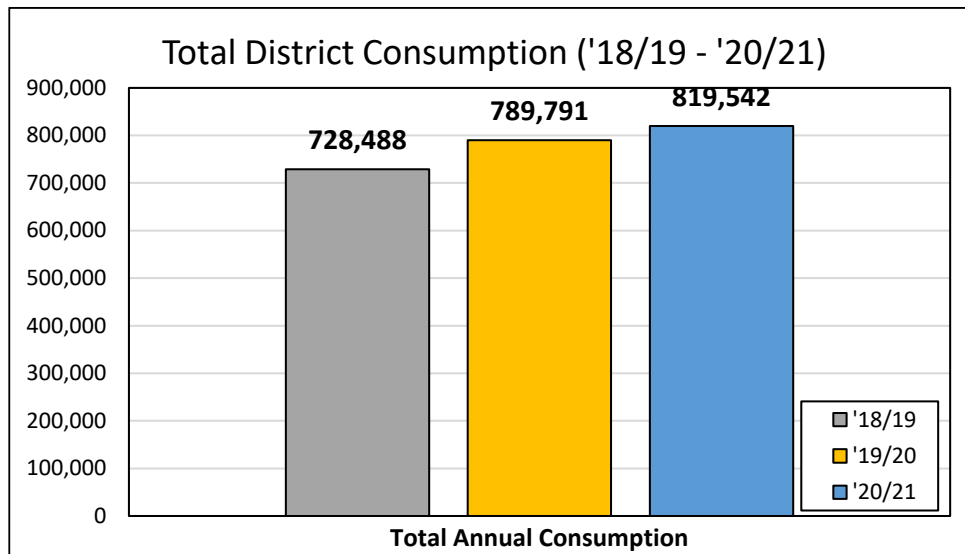
**FIGURE 3. RESIDENTIAL SEASONAL WATER CONSUMPTION**



**FIGURE 4. COMMERCIAL SEASONAL WATER CONSUMPTION**



**FIGURE 5. TOTAL DISTRICT WATER CONSUMPTION**



**Assumed Conservation** – We anticipate that projected consumption levels will return in large part to the levels of consumption seen in the previous three-year period, due to a significant drought in fiscal year '21-'22 and uncertainty about when and if it will end, combined with pandemic uncertainties. Based on that presumption, we have incorporated a 10 percent conservation component into the rate calculations in Year 1 (FY '22/23) as compared to FY '20/21, and zero-percent conservation in Years 2-5 (FY' 23/24 through FY' 26/27).

The next section discusses the water study in further detail.

## Section 3. DEVELOPING RECOMMENDED WATER RATES

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### Overview: Developing the Recommended Water Rates

The following are the basic tasks included in the cost-of-service and rate design analyses:

- **Developing Revenue Requirements:** The water revenue requirements were projected based on the current annual budget and input from District staff. Recommended water rates fully fund the District's adopted CIP program. If no rate increases were adopted, only about 30 percent of the CIP program could be funded and, therefore, additional debt-funding of CIP projects would need to be considered.
- **Developing Cost Allocations:** The cost-of-service study used these projected water revenue requirements to "functionalize" them into categories: (1) fixed capacity costs; (2) variable (or volume-based) costs; (3) customer service costs; and (4) fire service costs. Each of these functional costs has a distinct allocation factor used to determine revenue requirements by customer class.
- **Determining Revenue Requirements by Customer Class:** Revenue requirements for each customer class were then determined based on allocation factors such as water consumption, capacity peaking factors, and number of accounts by meter size. For example, volume-related costs are allocated based on the annual water consumption for each class, fixed/capacity related costs are allocated based on peaking factors, and customer costs are allocated based on number of accounts in each customer class
- **Evaluating Rate Design and Fixed vs. Variable Costs:** These revenue requirements by class are used to evaluate rate-design alternatives, which include determining how much revenue to collect from fixed charges versus variable rates. Industry practices provide flexibility regarding the actual percentages collected from fixed vs. variable rates, and the District has decided to continue with current rated design that includes rates that collect 30 percent from fixed charges. The remaining 70 percent of rate revenue is collected from volumetric rates, including two tiers for residential customers and a uniform tier for non-residential.
- **Evaluating Rate Alternatives:** As noted above, the proposed rate alternative assumes full funding of the District's CIP program. The level of CIP funding for no rate increases was also evaluated. As the District's rate consultant, NBS is tasked with the technical analysis of these alternatives while the District Board decides what alternative should be implemented.

It is important for public utilities to maintain reasonable reserves to handle emergencies, fund working capital, maintain a good credit rating, and generally follow sound financial management practices. Rate increases typically consider the need to meet several objectives:

- **Meeting Operating Costs:** For Fiscal Years 2022/23 through 2026/27, the net revenue requirements (total revenue requirements less non-rate revenues) are projected to vary from year-to-year but overall remain relatively flat, beginning at \$8.3 million in FY 2022/23, peaking at \$8.9 million in FY 2024/25, and ending at \$8.1 million in FY 2026/27. However, if rate increases are not implemented over this period, annual deficits increase to more than \$2.2 million by FY 2024/25 (assuming CIP is still funded at 100 percent).
- **Maintaining Reserve Funds:** If rate increases are not implemented, reserves will drop below the sustainable levels needed to fund ongoing water utility operations. In fact, if no rate increases are

adopted in the next five years, the annual reserve fund level is projected to reach a deficit of roughly \$4.8 million. Therefore, annual rate increases are necessary to meet reserve fund target levels and maintain the District's healthy financial position. District staff provided the following reserve targets:

- **Operating Reserves** equal to 90-days of operations and maintenance. For Fiscal Year 2022/23, this is estimated to be \$1.4 million.
- **Capital Reserves** target based on three percent of asset values is \$820,000 in FY 2022/23, gradually increasing to \$1.0 million by FY 2026/27.
- **Rate Stabilization Reserves** is targeted to have one-month of rate revenue to help buffer revenue instability results from collecting a relatively high percentage of revenue from volumetric rates. This is \$610,000 in FY 2022/23 but grows to about \$830,000 by FY 2026/27.
- **Undesignated Reserves** includes funds the District has currently set aside for specific projects and operating costs. This fund does not have any future contributions, or a target balance, and will be exhausted by year 5 of the rate study.

## Water Utility Revenue Requirements

Figure 6. Financial Plan - Summary of Water Revenue Requirements summarizes the sources and uses of funds and net revenue requirements for the next five years and includes the recommended annual rate increases. Figure 7. Summary of Water Reserve Funds

summarizes the projected reserve fund balances and reserve targets. A summary of the District's proposed 10-year financial plan, which is included in Appendix C – Water Rate Study Summary Tables, includes revenue requirements, reserve funds, revenue sources, proposed rate increases, and the District's capital improvement program. Please note that the projected surplus in FY 2026/27 will be used for future year's CIP including a proposed new storage tank.

**FIGURE 6. FINANCIAL PLAN - SUMMARY OF WATER REVENUE REQUIREMENTS**

Summary of Sources and Uses of Funds and Net Revenue Requirements	Budget	Projected				
	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27
<b>Sources of Water Funds</b>						
Rate Revenue Under Prevailing Rates	\$ 6,620,880	\$ 6,682,000	\$ 6,743,463	\$ 6,805,491	\$ 6,868,088	\$ 6,931,260
Revenue from Meter Right-Sizing Charges	n.a.	n.a.	330,000	353,100	377,817	404,264
Other Non-Rate Revenue	88,807	62,540	62,076	61,749	61,965	69,554
<b>Total Sources of Funds</b>	<b>\$ 6,709,687</b>	<b>\$ 6,744,540</b>	<b>\$ 7,135,539</b>	<b>\$ 7,220,340</b>	<b>\$ 7,307,870</b>	<b>\$ 7,405,079</b>
<b>Uses of Water Funds</b>						
Operating Expenses	\$ 5,120,477	\$ 5,701,986	\$ 6,024,977	\$ 6,366,985	\$ 6,729,167	\$ 7,112,757
Debt Service	57,895	-	-	-	-	-
Rate-Funded Capital Expenses	1,998,898	2,655,615	2,323,561	2,971,650	2,419,542	1,413,044
<b>Total Use of Funds</b>	<b>\$ 7,177,270</b>	<b>\$ 8,357,601</b>	<b>\$ 8,348,538</b>	<b>\$ 9,338,635</b>	<b>\$ 9,148,709</b>	<b>\$ 8,525,801</b>
<b>Surplus (Deficiency) before Rate Increase</b>	<b>\$ (467,583)</b>	<b>\$ (1,613,061)</b>	<b>\$ (1,212,999)</b>	<b>\$ (2,118,295)</b>	<b>\$ (1,840,839)</b>	<b>\$ (1,120,722)</b>
Additional Revenue from rate revenue increases <sup>1</sup>	-	668,200	1,193,584	1,765,251	2,386,935	3,062,670
<b>Surplus (Deficiency) after Rate Revenue Increase</b>	<b>\$ (467,583)</b>	<b>\$ (944,861)</b>	<b>\$ (19,415)</b>	<b>\$ (353,044)</b>	<b>\$ 546,096</b>	<b>\$ 1,941,948</b>
<b>Projected Annual Rate Revenue Increase</b>	<b>0.00%</b>	<b>10.00%</b>	<b>7.00%</b>	<b>7.00%</b>	<b>7.00%</b>	<b>7.00%</b>
<b>Cumulative Rate Revenue Increases</b>	<b>0.00%</b>	<b>10.00%</b>	<b>17.70%</b>	<b>25.94%</b>	<b>34.75%</b>	<b>44.19%</b>
<b>Net Revenue Requirement<sup>2</sup></b>	<b>\$ 7,088,463</b>	<b>\$ 8,295,061</b>	<b>\$ 7,956,462</b>	<b>\$ 8,923,785</b>	<b>\$ 8,708,927</b>	<b>\$ 8,051,983</b>

1. Assumes new rates are implemented July 1, 2022.

2. Total Use of Funds less Meter Right Sizing Charges and Other Non-Rate Revenue. This is the annual amount needed from water rates.

The rate model developed for this rate study includes mechanisms that can be used to adjust the financial plan going forward: (1) if **grant funding** becomes available, that funding can be included in the capital project funding calculations to reduce the amount of CIP costs that are funded. (2) The **meter right-size**



**charges** are projected to begin generating revenue in the second year of the rate period (FY '23/24). Because it is difficult to gauge the number of customers that will adjust their consumption levels to avoid these charges, this revenue can and should be adjusted annually as needed. (3) Although the District Board has not directed staff to implement a **low-income assistance program**, unrestricted revenues could be used to fund such a program. This would entail establishing the annual amount committed to this program, creating an applicant form and process, and placing qualified customers into the billing system, thereby reducing their water bills.

**FIGURE 7. SUMMARY OF WATER RESERVE FUNDS**

Beginning Reserve Fund Balances and Recommended Reserve Targets	Budget	Projected				
	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27
<b>Operating Reserve</b>						
Ending Balance	\$ 1,280,000	\$ 1,160,000	\$ 1,050,000	\$ 1,050,000	\$ 1,596,096	\$ 1,778,000
<i>Recommended Minimum Target</i>	<i>1,280,000</i>	<i>1,425,000</i>	<i>1,506,000</i>	<i>1,592,000</i>	<i>1,682,000</i>	<i>1,778,000</i>
<b>Capital Rehabilitation &amp; Replacement Reserve</b>						
Ending Balance	\$ 760,000	\$ 830,000	\$ 900,000	\$ 900,000	\$ 900,000	\$ 1,930,010
<i>Recommended Minimum Target</i>	<i>760,000</i>	<i>820,000</i>	<i>870,000</i>	<i>930,000</i>	<i>980,000</i>	<i>1,010,000</i>
<b>Rate Stabilization Reserve</b>						
Ending Balance	\$ 550,000	\$ 432,425	\$ 453,010	\$ 99,966	\$ 99,966	\$ 830,000
<i>Recommended Minimum Target</i>	<i>550,000</i>	<i>610,000</i>	<i>660,000</i>	<i>710,000</i>	<i>770,000</i>	<i>830,000</i>
<b>Undesignated Reserves</b>						
Ending Balance	\$ 777,286	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total Ending Balance</b>	<b>\$ 3,367,286</b>	<b>\$ 2,422,425</b>	<b>\$ 2,403,010</b>	<b>\$ 2,049,966</b>	<b>\$ 2,596,062</b>	<b>\$ 4,538,010</b>
<i>Total Recommended Minimum Target</i>	<i>\$ 2,590,000</i>	<i>\$ 2,855,000</i>	<i>\$ 3,036,000</i>	<i>\$ 3,232,000</i>	<i>\$ 3,432,000</i>	<i>\$ 3,618,000</i>

## Customer Class Cost Allocation Factors

Three cost-of-service factors are used to allocate revenue requirements to each customer class, including:

- **Water consumption** (Figure 8. Water Consumption by Customer Class)
- ) – which allocates variable costs
- **Peaking factors**, or the percentages of system peak demands, (Figure 9. Peaking Factors by Customer Class)
- ) – which allocates capacity-related costs based on peaking factors<sup>8</sup>
- **Number of accounts** (Figure 10. Number of Accounts by Customer Class)
- ) – which allocates customer-related costs

Because these factors tend to change over time, we have provided a comparison of these factors from 2018 and the current (2021) factors in Appendix B to show the changes since the last rate study.

<sup>8</sup> Peaking factors are peak month consumption divided by 12-month average monthly consumption. While peak day data is preferred, this data is not available by customer class and is rarely available for most water agencies in our experience.

**FIGURE 8. WATER CONSUMPTION BY CUSTOMER CLASS**

Customer Class	'20/21 Volume (1,000 gal) <sup>1</sup>	% Adjustment for Conservation	'20/21 Volume Adjusted for Conservation	Percent of Total Volume
Residential	614,232	10%	552,809	75.0%
Commercial (Incl. MFR ≥ 4 Units)	163,268	10%	146,941	19.9%
Institutional	24,359	10%	21,923	3.0%
Irrigation (Comm. & MFR)	16,693	10%	15,024	2.0%
Fire Lines <sup>2</sup>	111	10%	100	0.01%
<b>Total</b>	<b>818,663</b>	<b>10%</b>	<b>736,797</b>	<b>100.0%</b>
Fire Hydrants <sup>3</sup>	2,930	0%	2,930	N.A.
<b>Grand Total</b>	<b>821,593</b>	<b>10%</b>	<b>739,727</b>	<b>100.0%</b>

1. Data is based on the District's FY 2020/21 customer billing data.

2. Fire service line provide emergency services which only have incidental water use.

3. Hydrants are temporary flow meters that connect to Hydrants for construction and misc. uses.

**FIGURE 9. PEAKING FACTORS BY CUSTOMER CLASS**

Customer Class	Avg. Bi-Mo. Usage (1,000 gal)	Peak Bi-Mo. Use (1,000 gal) <sup>1</sup>	Peak Bi-Monthly Factor	Max Bi-Monthly Capacity Factor
Residential	51,098	76,208	1.49	69.0%
Commercial (Incl. MFR ≥ 4 Units)	13,643	25,108	1.84	22.7%
Institutional	2,030	5,441	2.68	4.9%
Irrigation (Comm. & MFR)	1,397	3,658	2.62	3.3%
Fire Lines	9	19	2.05	0.0%
<b>Total</b>	<b>68,176</b>	<b>110,434</b>	<b>1.62</b>	<b>100.0%</b>
Fire Hydrants <sup>2</sup>	244	860	3.52	0.00%
<b>Grand Total</b>	<b>68,420</b>	<b>111,294</b>	<b>1.63</b>	<b>100.0%</b>

1. Based on peak bi-monthly data (peak day data not available).

2. Hydrants are temporary meters and not considered a permanent part of the system. Since usage is unpredictable, revenue is considered miscellaneous revenue.

**FIGURE 10. NUMBER OF ACCOUNTS BY CUSTOMER CLASS**

Customer Class <sup>1</sup>	FY'20/21 Data		For Cost Alloc. (FY'22/23)	
	Number of Meters <sup>2</sup>	Percent of Total	Number of Meters <sup>3</sup>	Percent of Total
Residential	6,615	94.9%	6,737	94.9%
Commercial (Incl. MFR ≥ 4 Units)	263	3.8%	268	3.8%
Institutional	31	0.44%	31	0.44%
Irrigation (Comm. & MFR)	40	0.57%	40	0.56%
Fire Lines	20	0.29%	20	0.28%
<b>Grand Total</b>	<b>6,969</b>	<b>100%</b>	<b>7,096</b>	<b>100%</b>
Fire Hydrants <sup>4</sup>	20	n.a.	20	n.a.

1. Residential Customers include: Single Family, Multi-Family with 2 or 3 Units, Outside District - Residential, & SCWA Residential customers. Commercial Customers include Multi-Family Residential with 4+ units.

2. Meter Count data is based on the District's customer billing data for FY'20/21.

3. Residential and Commercial Customers include projected growth of 0.92%/year for 2 years.

4. Hydrants are temporary meters and not considered a permanent part of the system. Use is unpredictable.

## Cost of Service Analysis

The net revenue requirements previously identified in Figure 4 are allocated to each customer class using the allocation factors shown above in Figure 8, 9 and 10. The results of this cost-allocation process are summarized in Figure 11. Appendix D shows how fixed and variable costs are allocated in more detail.

**FIGURE 11. SUMMARY OF REVENUE REQUIREMENTS BY CUSTOMER CLASS (FY 2022/23)**

Customer Classes	Classification Components				Cost of Service Net Rev. Req'ts	% of COS Net Revenue Req'ts
	Commodity-Related Costs	Capacity-Related Costs	Customer-Related Costs	Fire-Related Costs		
Residential <sup>1</sup>	\$ 3,860,330	\$ 1,417,768	\$ 109,610	\$ -	\$ 5,387,709	73.3%
Commercial (Incl. MFR ≥ 4 Units)	1,026,108	467,107	4,360	-	1,497,576	20.4%
Institutional	153,092	101,224	504	-	254,820	3.5%
Irrigation	104,912	68,053	651	-	173,616	2.4%
Fire Lines	698	353	325	35,103	36,479	0.5%
<b>Total Net Revenue Requirement</b>	<b>\$ 5,145,140</b>	<b>\$ 2,054,506</b>	<b>\$ 115,451</b>	<b>\$ 35,103</b>	<b>\$ 7,350,200</b>	<b>100%</b>
<i>Total Net Revenue Requirement by Classification Component</i>	<u>VARIABLE</u> \$5,145,140	<u>FIXED</u> \$2,205,060			\$7,350,200	
	70%	30%			100%	

1. Residential Customers include: Single Family, Multi-Family with 2 or 3 Units, Outside District - Residential, & SCWA

Residential customers. Commercial Customers include Multi-Family Residential with 4+ units.

2. Fire services and Hydrants are emergency services with incidental water use. Hydrants are largely valve-exercising and system checking, not consumption.

## Current vs. Proposed Water Rates

The District recently adopted the last year of the five-year transitioning from an 80/20 to a 70/30 variable/fixed rate structure, as a result of the District's January 2018 rate study<sup>9</sup>. The proposed rate design continues collecting 70 percent of revenue from volumetric rates and 30 percent from fixed charges and continues with two tiers for residential customers and a uniform tier for non-residential.

### Fixed/Volumetric Rate Calculations:

The following is a summary of how fixed charges and volumetric rates were calculated.

- **Fixed Charges:** Figure 12 summarizes the number of meters and equivalent meters by customer class and meter size. Equivalent meters are the basis for calculating fixed monthly capacity-related charges, while the number of meters is used to calculate customer-related charges. Figure 13 shows the calculation of these fixed capacity-related and customer-related charges by meter size and customer class.

<sup>9</sup> To improve revenue stability, the 2018 rate study proposed to transition rates from an 80/20 variable/fixed rate design to a 70/30 variable/fixed design over a five-year period.

**FIGURE 12. SUMMARY OF METERS BY CUSTOMER CLASS (FY 2022/23)**

Number of Meters by Class and Size <sup>1</sup>	Number of Meters for FY 2022/23										Total
	5/8 inch	3/4 inch	1 inch	1.5 inch	2 inch	3 inch	4 inch	6 inch	8 inch	10 inch	
Residential (all) & MFR 2 & 3 Units	6,248	177	269	40	2	1	-	-	-	-	6,737
Commercial/MFR 4+	112	14	56	29	36	14	2	5	-	-	268
Institutional	4	1	7	5	9	2	1	2	-	-	31
Irrigation	6	8	17	4	4	1	-	-	-	-	40
<b>Total Meters/Accounts</b>	<b>6,370</b>	<b>200</b>	<b>349</b>	<b>78</b>	<b>51</b>	<b>18</b>	<b>3</b>	<b>7</b>	<b>-</b>	<b>-</b>	<b>7,076</b>
<b>Hydraulic Capacity Factor<sup>2</sup></b>	<b>1.00</b>	<b>1.50</b>	<b>2.50</b>	<b>5.00</b>	<b>8.00</b>	<b>16.00</b>	<b>25.00</b>	<b>50.00</b>	<b>80.00</b>	<b>210.00</b>	
<b>Total Equivalent Meters</b>	<b>6,370</b>	<b>300</b>	<b>873</b>	<b>390</b>	<b>408</b>	<b>288</b>	<b>75</b>	<b>350</b>	<b>-</b>	<b>-</b>	<b>9,054</b>
Residential (all) & MFR 2 & 3 Units	6,248	266	673	200	16	16	-	-	-	-	7,418
Commercial/MFR 4+	112	21	140	145	288	224	50	250	-	-	1,230
Institutional	4	2	18	25	72	32	25	100	-	-	277
Irrigation	6	12	43	20	32	16	-	-	-	-	129
<b>Total Equivalent Meters</b>	<b>6,370</b>	<b>300</b>	<b>873</b>	<b>390</b>	<b>408</b>	<b>288</b>	<b>75</b>	<b>350</b>	<b>-</b>	<b>-</b>	<b>9,054</b>
<b>Fire Lines</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>3</b>	<b>10</b>	<b>5</b>	<b>2</b>	<b>20</b>
<b>Hydraulic Capacity Factor<sup>3</sup></b>	<b>1.00</b>	<b>1.50</b>	<b>2.50</b>	<b>5.00</b>	<b>8.00</b>	<b>17.50</b>	<b>35.00</b>	<b>80.00</b>	<b>140.00</b>	<b>210.00</b>	
<b>Total Equivalent Meters</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>105</b>	<b>800</b>	<b>700</b>	<b>420</b>	<b>2,025</b>

1. Meter by Class and Size are based on District customer billing data. Source file: 9.3 Usage and Service Charge Revenue FY21.xlsx. Residential and Comm. customers were assumed to include growth of 0.92%/year (Instit. and Irrig. customer classes were not inflated by growth).
2. Source: AWWA Manual M1, "Principles of Water Rates, Fees, and Charges", Table B-2.
3. Fire Service hydraulic capacity factors are from AWWA M-6, Table 5-3.

**FIGURE 13. FIXED CHARGE CALCULATIONS BY CUSTOMER CLASS (FY 2022/23)**

Number of Meters by Class and Size <sup>1</sup>	Bi-Monthly Service Charges for FY 2022/23								Total
	5/8 inch	3/4 inch	1 inch	1.5 inch	2 inch	3 inch	4 inch	6 inch	
Annual Fixed Costs Allocated to Bi-Monthly Meter Charges									
Customer Costs	\$ 115,125								
Capacity Costs									
Residential (Incl. MFR 2 & 3 Units)	\$ 1,417,768								
Commercial/MFR 4+	\$ 467,107								
Institutional	\$ 101,224								
Irrigation	68,053								
Total Fixed Meter Costs	\$ 2,169,278								
Bi-Monthly Fixed Service Charges									
Customer Costs (\$/Acct/2-months) <sup>2</sup>	\$2.71	\$2.71	\$2.71	\$2.71	\$2.71	\$2.71	\$2.71	\$2.71	
Capacity Costs (\$/Acct/2-months) <sup>3</sup>									
Residential (all) & MFR 2 & 3 Units	\$31.85	\$47.78	\$79.64	\$159.27	\$254.83	\$509.67	\$796.36	\$1,592.71	
Commercial/MFR 4+	\$63.29	\$94.94	\$158.23	\$316.47	\$506.35	\$1,012.70	\$1,582.34	\$3,164.68	
Institutional	\$60.90	\$91.36	\$152.26	\$304.52	\$487.24	\$974.48	\$1,522.62	\$3,045.25	
Irrigation	\$88.27	\$132.40	\$220.67	\$441.33	\$706.13	\$1,412.26	\$2,206.65	\$4,413.31	
Annual Revenue from Bi-Monthly Meter Charges									
Customer Charges	\$ 103,639	\$ 3,254	\$ 5,678	\$ 1,269	\$ 830	\$ 293	\$ 49	\$ 114	\$ 115,125
Capacity Charges									
Residential (all) & MFR 2 & 3 Units	\$ 1,194,152	\$ 50,744	\$ 128,532	\$ 38,225	\$ 3,058	\$ 3,058	\$ -	\$ -	\$ 1,417,768
Commercial/MFR 4+	42,533	7,975	53,167	55,066	109,372	85,067	18,988	94,941	467,107
Institutional	1,462	548	6,395	9,136	26,311	11,694	9,136	36,543	101,224
Irrigation	3,178	6,355	22,508	10,592	16,947	8,474	-	-	68,053
Total Revenue from Bi-Monthly Meters	\$ 1,344,963	\$ 68,876	\$ 216,280	\$ 114,287	\$ 156,517	\$ 108,585	\$ 28,173	\$ 131,597	\$ 2,169,278

1. Meter by Class and Size are based on '20/21 customer billing data.
2. Customer costs are allocated to each customer by dividing the total customer costs by the total number of customers.
3. Capacity costs are allocated by meter size and the hydraulic capacity of the meter.

- **Volumetric Rates:** Currently all residential customers have two tiers and non-residential customers pay a uniform rate per 1,000 gallons. Although there are costs that could be used to create tiered rates for non-residential customers, those customers have significant variations in consumption levels that would results is many customers never reaching the second tier and others having most of their volumetric charges coming from the second tier. Because of this, it would not be equitable to implement tiered rates for non-residential customers. The proposed rates continue with two tiers for residential customers and the uniform rate for all other customer classes. Figure 14 shows the calculation of the uniform tier rates by customer class, which are simply the volumetric revenue for each class divided by their estimated annual water consumption.

**Figure 14. Calculations of Uniform Volumetric Rates by Customer Class (FY 2022/23)**

Customer Classes	Number of Meters	Water Consumption (1,000 gal./yr.) <sup>1</sup>	Total Target Rev. Req't from Volumetric Charges	Uniform Commodity Rates (\$/1,000 gal.)	Proposed Rate Structure
Residential	6,737	552,809	\$ 3,860,330	\$6.98	Uniform
Commercial (Incl. MFR ≥ 4 Units)	268	146,941	1,026,108	\$6.98	Uniform
Institutional	31	21,923	153,092	\$6.98	Uniform
Irrigation	40	15,024	104,912	\$6.98	Uniform
Fire Lines	20	100	698	\$6.98	Uniform
<b>Total</b>	<b>7,096</b>	<b>736,797</b>	<b>5,145,140</b>	<b>\$6.98</b>	
Volumetric Revenue as % of Total Revenue Requirements			70%		

1. Consumption data is based on the District's FY 2020/21 customer billing data.

- **Tiered Residential Rates:** Calculating two tiers for residential customers requires identifying both the costs and the amount of water included in each tier. Figure 15 summarizes the amount of water provided by the District's two water supplies over the last three years, along with the 3-year average that is used for tiered rate calculations. Figure 16 shows how supplies from wells and SCWA should be allocated to each customer class, although only residential customers receive tiered rates. Also, Figure 16 uses recorded water consumption which, due to system losses, is less than the total annual production shown in Figure 15.

**Figure 15. District Source of Supply (FY 2021/22)**

SOURCE OF WATER SUPPLY SUMMARY (Acre Feet)	Current Production: <sup>1</sup>		District Production Records:			
	FY 2020/21 (AF)	FY 2020/21 as a %	FY 2019/20 (AF)	FY 2019/20 as a %	FY 2018/19 (AF)	FY 2018/19 as a %
District Wells	589.46	21.0%	529.51	16%	1,242.17	27%
Sonoma County Water Agency (SCWA)	2,220.47	79.0%	2,765.86	84%	3,352.60	73%
<b>Total</b>	<b>2,809.93</b>	<b>100%</b>	<b>3,295.37</b>	<b>100%</b>	<b>4,594.77</b>	<b>100%</b>
<b>Estimated % of Supply (3-Year Avg.)</b>						
District Wells	21.4%					
Sonoma County Water Agency (SCWA)	78.6%					
<b>Total Source of Water Supply less System Losses</b>	<b>100%</b>					

1. Data source: Annual Public Water System Statistics.

**FIGURE 16. ALLOCATIONS OF SUPPLIES TO CUSTOMER CLASSES AND TIERS (RESIDENTIAL)**

Estimated Water Consumption by Customer Class (1,000 Gallons)	Allocations of FY'20/21 Supplies to District Wells and SCWA <sup>1</sup>								
	FY 2020/21 Acre Feet <sup>2</sup>			FY 2020/21 (1,000 gals.) <sup>2</sup>			% of FY 2020/21		
	Wells (AF)	SCWA (AF)	Total (AF)	Wells (AF)	SCWA (AF)	Total (AF)	Wells 1 (%)	SCWA 2 (%)	Total (%)
Residential	403	1,482	1,884.7	131,201	483,031	614,232	16.0%	58.8%	74.8%
Commercial (Incl. MFR ≥ 4 Units)	107	394	501.0	34,874	128,394	163,268	4.2%	15.6%	19.9%
Institutional	16	59	74.7	5,203	19,156	24,359	0.6%	2.3%	3.0%
Irrigation (Comm. & MFR)	11	40	51.2	3,566	13,127	16,693	0.4%	1.6%	2.0%
Fire Service	0.1	0.3	0.3	24	87	111	0.0%	0.0%	0.0%
Fire Hydrants	2	7	9.0	626	2,304	2,930	0.1%	0.3%	0.4%
<b>Total Estimated Water Consumption</b>	<b>538</b>	<b>1,983</b>	<b>2,521.0</b>	<b>175,493</b>	<b>646,100</b>	<b>821,593</b>	<b>21.4%</b>	<b>78.6%</b>	<b>100.0%</b>

1. Allocations based on the 3-Year average of supplies from District wells (Tier 1 = 21.4%) vs. SCWA (Tier 2 = 78.6%).

2. Consumption from the District's FY 2020/21 customer billing system. Totals are net of system losses and are consistent with the 3-year average District system loss of 11% from the system production totals.

3. Residential subtotal % for Tier 1 divided by total Residential %.

Figure 17 is the result of an analysis of residential customer consumption that shows that consumption from wells equates to about 24 percent of total usage. For residential customers, this is about four units (1,000 gals. per unit) per month, which is the tier breakpoint between tier 1 and 2. Figure 18 uses this breakpoint



and tier consumption along with costs for each tier to calculate the residential tiered rates. The costs shown in Figure 18 include the costs of well water vs. the costs of purchased SCWA water, plus the non-supply variable costs which are allocated to each tier on a volumetric basis.

**FIGURE 17. ALLOCATIONS OF SOURCE OF SUPPLY TO TIERS (RESIDENTIAL)**

Consumption by Tier					
Residential Tier	Source of Supply Associated with Each Tier	Bi-Monthly Tier 1 Breakpoint <sup>1</sup>	Expected Annual Consumption <sup>2</sup> (1,000 gals.)	Percentage of Total Residential Consumption	Percentage of SCWA Source
Tier 1	<i>District Wells</i>	4,000 Gallons	131,201	23.7%	--
Tier 2	SCWA	≥ 4,000 Gallons	421,608	76.3%	100.0%
<b>Total</b>			<b>552,809</b>	<b>100%</b>	<b>100%</b>

1. Break point between Tier 1 and 2 is set to exhaust annual well supply first.
2. Consumption from the Estimated Tiered Consumption by Source (Table 33).

**FIGURE 18. RESIDENTIAL TIERED RATE CALCULATIONS (FY 2022/23)**

Tier and Supply Source	Consumption (1,000 gal.) <sup>1</sup>	Cost/AF <sup>2</sup>	Supply Unit Costs (\$/1,000 gal.)	Total Supply Costs (\$/Yr.)	Non-Supply Volumetric Costs	Total Resid. Vol. Costs	Tiered Resid. Rates
	(a)	(b)	(c)	(a) x (c) = (d)	(e)	(d) + (e) = (f)	(f) ÷ (a) = (g)
Tier 1 (District Wells)	131,201	\$346.27	\$1.06	\$139,401	\$461,176	\$600,577	<b>\$4.58</b>
Tier 2 (SCWA)	421,608	\$1,374.21	\$4.22	\$1,777,779	\$1,481,974	\$3,259,753	<b>\$7.73</b>
<b>Totals/Average</b>	<b>552,809</b>	<b>\$1,130.24</b>	<b>\$3.47</b>	<b>\$1,917,180</b>	<b>\$1,943,150</b>	<b>\$3,860,330</b>	<b>\$6.98</b>

1. Consumption data is based on the District's FY 2020/21 customer billing data.

2. Source of Wells cost: *District Production Records*, 9/21/21. SCWA Source: *Sonoma County Water Agency Rates for Water Deliveries in FY'21-22*. Per District staff, additional GSA costs of \$40/AF has been added to the District's cost of \$346.27/AF.

Figure 19 and 20 compare the current and recommended rates for FY 2022/23 through 2026/27. Cost-of-service adjustments are reflected in the FY 2022/23 volumetric rates. After that rate increases are applied in an across-the-board manner (i.e., equally to all fixed charges and volumetric rates).

**FIGURE 19. CURRENT AND PROPOSED BI-MONTHLY FIXED CHARGES FY 2022/23 – 2026/27**

Water Rate Schedule	Current Rates	Proposed Rates				
		FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27
Fixed Service Charge						
Residential Bi-Monthly Fixed Service Charges:						
5/8 inch	\$36.06	\$34.57	\$36.99	\$39.57	\$42.34	\$45.31
3/4 inch	\$52.16	\$50.49	\$54.03	\$57.81	\$61.86	\$66.19
1 inch	\$84.36	\$82.35	\$88.11	\$94.28	\$100.88	\$107.94
1 1/2 inch	\$164.87	\$161.98	\$173.32	\$185.45	\$198.44	\$212.33
2 inch	\$264.49	\$257.55	\$275.57	\$294.86	\$315.50	\$337.59
Commercial & MFR (4+ Units) Fixed Bi-Monthly Service Charges:						
5/8 inch	\$59.65	\$66.01	\$70.63	\$75.57	\$80.86	\$86.52
3/4 inch	\$87.54	\$97.65	\$104.49	\$111.80	\$119.63	\$128.00
1 inch	\$143.33	\$160.95	\$172.21	\$184.27	\$197.17	\$210.97
1 1/2 inch	\$282.81	\$319.18	\$341.52	\$365.43	\$391.01	\$418.38
2 inch	\$450.18	\$509.06	\$544.70	\$582.82	\$623.62	\$667.28
3 inch	\$896.50	\$1,015.41	\$1,086.49	\$1,162.54	\$1,243.92	\$1,331.00
4 inch	\$1,398.61	\$1,585.05	\$1,696.01	\$1,814.73	\$1,941.76	\$2,077.68
6 inch	\$2,793.37	\$3,167.40	\$3,389.11	\$3,626.35	\$3,880.20	\$4,151.81
Volumetric Charges for All Water Consumed (All Rates are \$/1,000 gals.)						
Residential Only - Tiered Rates <sup>1</sup>						
Tier 1: 0-4	\$4.37	\$4.58	\$4.90	\$5.24	\$5.61	\$6.00
Tier 2: 4+	\$7.67	\$7.73	\$8.27	\$8.85	\$9.47	\$10.13
Commercial Uniform Rate	\$6.57	\$6.98	\$7.47	\$7.99	\$8.55	\$9.15

**FIGURE 20. CURRENT AND PROPOSED BI-MONTHLY FIXED CHARGES (CONTINUED)**

Water Rate Schedule	Current Rates	Proposed Rates				
		FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27
Fixed Service Charge						
Institutional Bi-Monthly Fixed Service Charges:						
5/8 inch	\$59.65	\$63.62	\$68.07	\$72.83	\$77.93	\$83.39
3/4 inch	\$87.54	\$94.07	\$100.65	\$107.70	\$115.24	\$123.31
1 inch	\$143.33	\$154.97	\$165.82	\$177.43	\$189.85	\$203.14
1 1/2 inch	\$282.81	\$307.24	\$328.74	\$351.75	\$376.38	\$402.72
2 inch	\$450.18	\$489.95	\$524.25	\$560.94	\$600.21	\$642.23
3 inch	\$896.50	\$977.19	\$1,045.59	\$1,118.79	\$1,197.10	\$1,280.90
4 inch	\$1,398.61	\$1,525.33	\$1,632.11	\$1,746.36	\$1,868.60	\$1,999.40
6 inch	\$2,793.37	\$3,047.96	\$3,261.31	\$3,489.61	\$3,733.88	\$3,995.25
Irrigation Bi-Monthly Fixed Service Charges:						
5/8 inch	\$59.65	\$90.98	\$97.35	\$104.16	\$111.45	\$119.25
3/4 inch	\$87.54	\$135.11	\$144.57	\$154.69	\$165.52	\$177.10
1 inch	\$143.33	\$223.38	\$239.01	\$255.74	\$273.65	\$292.80
1 1/2 inch	\$282.81	\$444.04	\$475.13	\$508.38	\$543.97	\$582.05
2 inch	\$450.18	\$708.84	\$758.46	\$811.55	\$868.36	\$929.15
3 inch	\$896.50	\$1,414.97	\$1,514.02	\$1,620.00	\$1,733.40	\$1,854.74
4 inch	\$1,398.61	\$2,209.36	\$2,364.02	\$2,529.50	\$2,706.57	\$2,896.03
Fire Fixed Bi-Monthly Service Charges:						
Up to 2 inch	\$20.09	\$26.06	\$27.88	\$29.83	\$31.92	\$34.16
3 inch	\$39.37	\$53.78	\$57.54	\$61.57	\$65.88	\$70.50
4 inch	\$74.88	\$104.85	\$112.19	\$120.04	\$128.44	\$137.44
6 inch	\$166.20	\$236.17	\$252.70	\$270.39	\$289.32	\$309.57
8 inch	\$287.96	\$411.26	\$440.05	\$470.85	\$503.81	\$539.08
10 inch	\$430.01	\$615.54	\$658.62	\$704.73	\$754.06	\$806.84
12 inch	\$541.62	\$776.04	\$830.36	\$888.49	\$950.68	\$1,017.23
Volumetric Charges for All Water Consumed (All Rates are \$/1,000 gals.)						
Institutional Uniform Rate	\$6.57	\$6.98	\$7.47	\$7.99	\$8.55	\$9.15
Irrigation Uniform Rate	\$7.76	\$6.98	\$7.47	\$7.99	\$8.55	\$9.15
Fire Lines Uniform Rate	\$6.57	\$6.98	\$7.47	\$7.99	\$8.55	\$9.15

1. Bi-mo. tiers shown. Residential includes: Single- and Multi-Family with 2 or 3 Units, Outside District & SCWA Residential customers.

## Comparison of Current and Proposed Bi-Monthly Bills

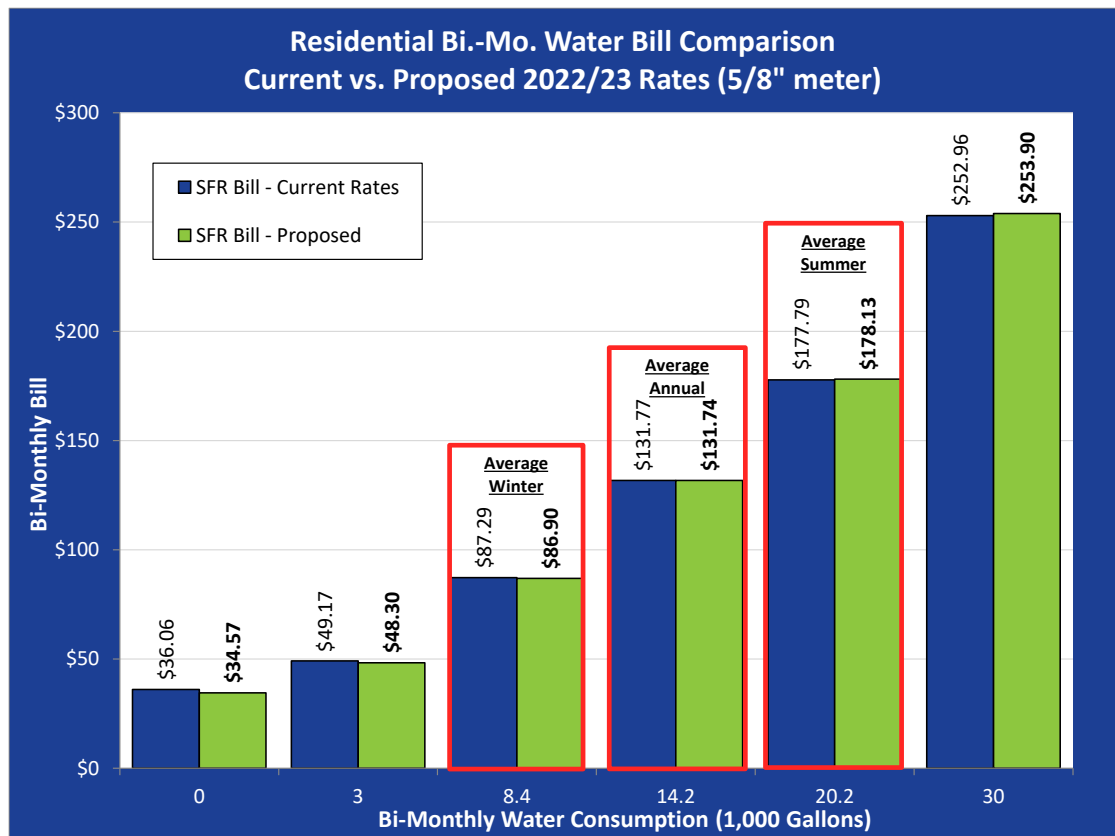
### SINGLE-FAMILY CUSTOMERS

FIGURE 21 COMPARES BI-MONTHLY WATER BILLS UNDER THE CURRENT AND PROPOSED RATES FOR SINGLE-FAMILY CUSTOMERS FOR A 5/8" INCH METER – THE MOST COMMON METER SIZE, IN FY 2022/23.

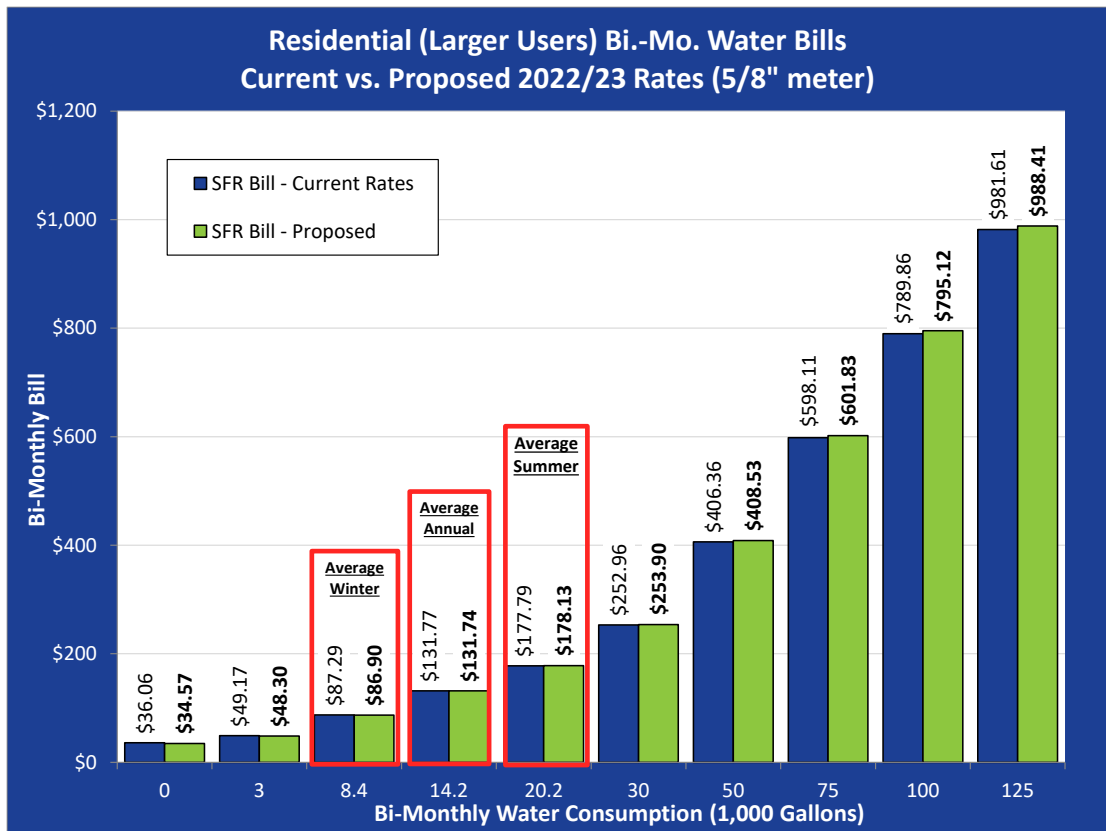
#### FIGURE 22. BI-MONTHLY BILL COMPARISON FOR HIGH USE RESIDENTIAL CUSTOMERS FY 2022/23

compares FY 2022/23 bi-monthly water bills for high use single family residential customers. Figure 23 shows the project bi-monthly residential bills for the projected 5-year rate adoption period.

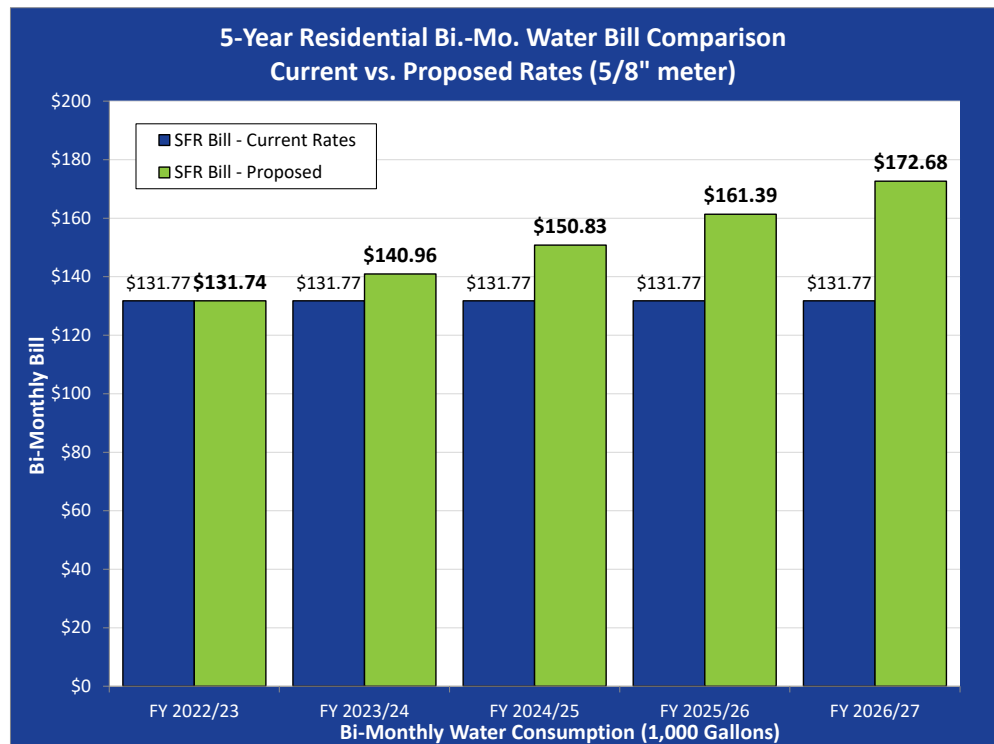
#### FIGURE 21. BI-MONTHLY WATER BILL COMPARISON FOR RESIDENTIAL CUSTOMERS FY 2022/23



**FIGURE 22. BI-MONTHLY BILL COMPARISON FOR HIGH USE RESIDENTIAL CUSTOMERS FY 2022/23**



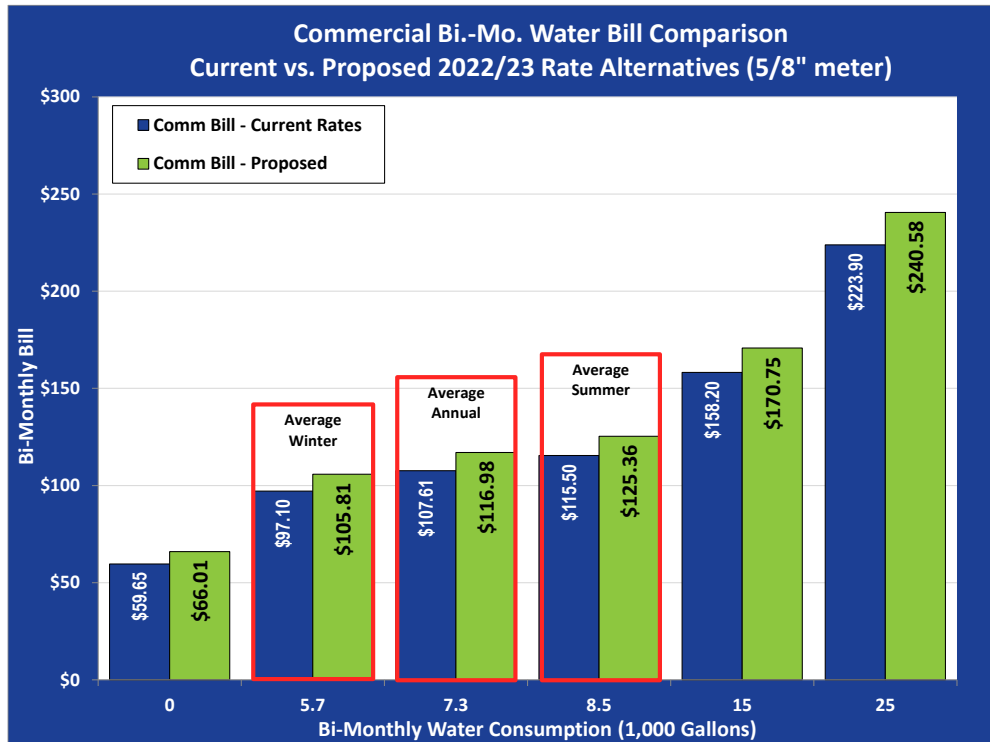
**FIGURE 23. MONTHLY BILL COMPARISON FOR RESIDENTIAL CUSTOMERS (FY 2022/23 – FY 2026/27)**



## COMMERCIAL CUSTOMERS

The District is largely residential (95 percent), with only four percent of customers in the commercial class. Figure 24 compares bi-monthly water bills in FY 2022/23 under the current and proposed rates for commercial customers with a 5/8" inch meter – also the most common meter size.

**FIGURE 24. BI-MONTHLY WATER BILL COMPARISON FOR COMMERCIAL CUSTOMERS FY 2022/23**



## INSTITUTIONAL AND IRRIGATION CUSTOMERS

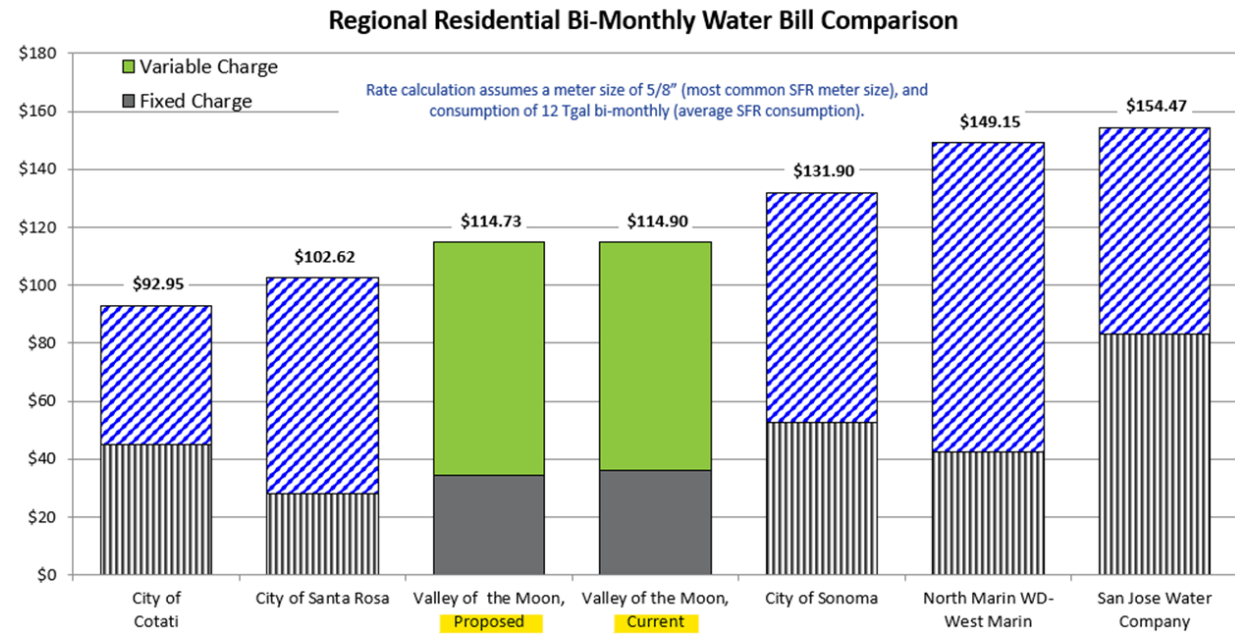
The District has a small number of institutional customers – just over 30 accounts representing less than one percent of all customers. Institutional customers use about three percent of the District’s water annually.

Irrigation customers also represent a small portion of the Districts customers – 40 accounts (also less than one percent of all customers). Irrigation customers use about 2 percent of the District’s water annually.

## REGIONAL RATE COMPARISONS

For comparison purposes, Figure 25 shows the District’s current and proposed rates compared to regional agencies. The rate calculation assumes 12 thousand gallons of water are consumed bi-monthly by a residential customer with a 5/8-inch water meter.



**FIGURE 25. REGIONAL WATER BILL COMPARISONS FOR RESIDENTIAL CUSTOMERS FY 2022/23**

## DROUGHT/REVENUE STABILIZATION RATES

Figure 26 summarizes the proposed drought rates for uniform rates and Figure 27 summarizes the proposed drought rates for tiered rates (residential customers only). These rates are calculated by determining the expenses that would be expected to decrease when the District sells less water, thereby decreasing net revenue requirements. Those reduced net revenue requirements are then divided by the reduced consumption levels associated with each level of the drought stages. This approach is intended to be revenue-neutral and ensure that the District is not under-funding its operations during drought stages as it sells less water. Revenue Stabilization rates are essentially the same as drought rates except that they are triggered by shortfalls in volumetric revenue. Appendix E provide more details of how both drought rates and revenue stabilization rates are calculated and implemented.

**FIGURE 26. PROPOSED UNIFORM DROUGHT RATES**

Drought Level	Level of Conservation	Uniform Rates (Updated Commodity Cost ÷ Drought Level Consumption)				
		FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27
No Level	Baseline <sup>1</sup>	\$6.98	\$7.54	\$8.14	\$8.79	\$9.49
Level 1	10%	\$7.34	\$7.94	\$8.58	\$9.28	\$10.03
Level 2	20%	\$7.79	\$8.44	\$9.14	\$9.89	\$10.71
Level 3	30%	\$8.37	\$9.08	\$9.85	\$10.68	\$11.58
Level 4	40%	\$9.15	\$9.94	\$10.79	\$11.72	\$12.73
Level 5	50%	\$10.23	\$11.13	\$12.12	\$13.19	\$14.35

1. Baseline level of consumption assumes adjustments for conservation to the baseline (2020) consumption.

**FIGURE 27. PROPOSED TIERED DROUGHT RATES**

Drought Level	Level of Conservation	Tiered Drought Rates (Residential Only)									
		FY 2022/23		FY 2023/24		FY 2024/25		FY 2025/26		FY 2026/27	
		Tier 1	Tier 2	Tier 1	Tier 2	Tier 1	Tier 2	Tier 1	Tier 2	Tier 1	Tier 2
No Level	Baseline	\$4.58	\$7.73	\$4.90	\$8.27	\$5.24	\$8.85	\$5.61	\$9.47	\$6.00	\$10.13
Level 1	10%	\$4.81	\$8.13	\$5.16	\$8.71	\$5.53	\$9.33	\$5.92	\$10.00	\$6.34	\$10.71
Level 2	20%	\$5.11	\$8.63	\$5.48	\$9.26	\$5.88	\$9.93	\$6.31	\$10.66	\$6.77	\$11.43
Level 3	30%	\$5.49	\$9.27	\$5.90	\$9.96	\$6.34	\$10.71	\$6.81	\$11.50	\$7.32	\$12.36
Level 4	40%	\$5.99	\$10.13	\$6.45	\$10.90	\$6.95	\$11.73	\$7.48	\$12.63	\$8.05	\$13.59
Level 5	50%	\$6.70	\$11.32	\$7.23	\$12.22	\$7.80	\$13.18	\$8.41	\$14.21	\$9.07	\$15.32

1. Baseline level of consumption assumes 2020 consumption.

## METER RIGHT-SIZING CHARGES

As previously mentioned, the District is proposing meter right-sizing charges for meters that are not in compliance with District Regulation. These charges are a temporary additional charge (i.e., they only last until the correct size meter is installed or usage is reduced to levels appropriate for the customer's current meter size), and the charges represent the difference between the monthly fixed meter charge and the correct meter fixed charge.

## Section 4. RECOMMENDATIONS AND NEXT STEPS

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### Consultant Recommendations

This water rate study reflects input from District staff and the District Board and is intended to comply with general industry standards and State law, and specifically the requirements of Proposition 218. To adopt and implement rates, the District must follow Proposition 218's notice, protest, and public hearing requirements.

### Next Steps

**Annually Review Rates and Revenue:** Any time an agency adopts new utility rates, particularly when facing uncertainties such as future coronavirus impacts, drought-related changes in water demand, inflation, and the costs of regulatory changes, those new rates should be closely monitored to ensure the revenue generated is sufficient. Specific assumptions about future consumption were made and should be reviewed annually, as they directly impact volumetric rate revenues.

### Principal Assumptions and Considerations

In preparing this report and the recommendations included herein, NBS has relied on several principal assumptions and considerations regarding financial matters, including the District's operating budgets, capital improvement plans, customer account data, water consumption records, and other conditions and events projected to occur in the future. This information and these assumptions were provided by sources we believe to be reliable, although NBS has not independently verified this data.

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

## APPENDIX A – ABBREVIATIONS & ACRONYMS<sup>10</sup>

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AAF	Average Annual Flow
AF	Acre Foot, equal to 435.6 HCF/CCF or 325,851 gallons
Alt.	Alternative
Avg.	Average
AWWA	American Water Works Association
BMP	Best Management Practice
BOD	Biochemical Oxygen Demand
CA	Customer
CAP	Capacity
CCF	Hundred Cubic Feet (same as HCF); equal to 748 gallons
CCI	Construction Cost Index
COD	Chemical Oxygen Demand
COM	Commodity
Comm.	Commercial
COS	Cost of Service
COSA	Cost of Service Analysis
CPI	Consumer Price Index
CIP	Capital Improvement Program
DU	Dwelling Unit
Excl.	Exclude
ENR	Engineering News Record
EDU	Equivalent Dwelling Unit
Exp.	Expense
FP	Fire Protection
FY	Fiscal Year (e.g., July 1st to June 30th)
FY 2020/21	July 1, 2020 through June 30, 2021
GPD	Gallons per Day
GPM	Gallons per Minute
HCF	Hundred Cubic Feet; equal to 748 gallons or 1 CCF
Ind.	Industrial
Irr.	Irrigation
Lbs.	Pounds
MFR	Multi-Family Residential
MGD	Million Gallons per Day
Mo.	Month
Muni.	Municipal
NPV	Net Present Value
N/A	Not Available or Not Applicable
O&M	Operational & Maintenance Expenses
Prop 218	Proposition 218 (1996) – State Constitutional amendment expanded restrictions of local government revenue collections.
Req't	Requirement

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*10 This appendix identifies abbreviations and acronyms that may be used in this report. This appendix has not been viewed, arranged, or edited by an attorney, nor should it be relied on as legal advice. The intent of this appendix is to support the recognition and analysis of this report. Any questions regarding clarification of this document should be directed to staff or an attorney specializing in this particular subject matter.*

*Appendix A, continued*

Res.	Residential
Rev.	Revenue
RTS	Readiness-to-Serve
R&R	Rehabilitation & Replacement
SFR	Single Family Residential
SRF Loan	State Revolving Fund Loan
SWRCB	State Water Resources Control Board
TSS / SS	Total Suspended Solids
V. / Vs. /vs.	Versus
WWTP	Wastewater Treatment Plant

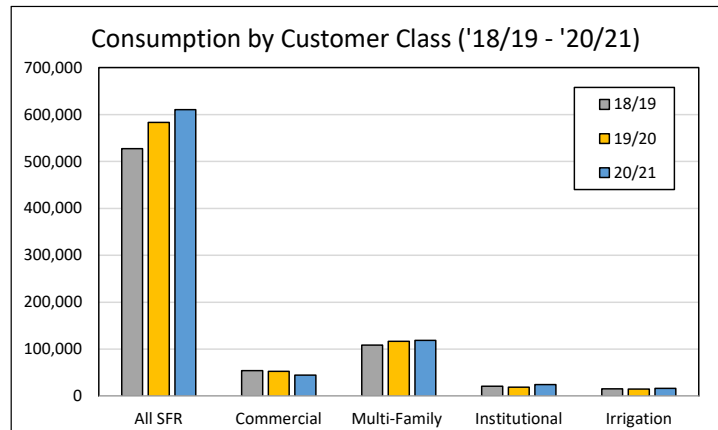


## APPENDIX B – SUMMARY OF WATER USE DATA

The District provided a large amount of data on individual customer consumption records that was used to form the basis for the cost allocations and rate calculations in the rate study. The following is a summary of this data in the form of tables and charts.

### Summary of All Customer Classes

Customer Classes	Consumption (1,000 Gals.)		
	18/19	19/20	20/21
SFR & 2-, 3-Units (Combined)	527,380	583,360	610,604
Commercial	54,207	52,746	44,849
Multi-Family (≥ 4 Units)	108,405	116,736	118,781
Institutional	20,836	19,015	24,377
Irrigation	15,501	14,668	16,670
Fire Service	138	172	111
Hydrants	1,121	2,197	2,930
MFR Irrigation (Unkown size)	146	74	89
Outside District	754	823	1,131
<b>Total</b>	<b>728,488</b>	<b>789,791</b>	<b>819,542</b>



No. of Meters by Size and by Class ('20/21 Data)											
Customer Class	5/8-Inch	3/4-Inch	1-Inch	1.5-Inch	2-Inch	3-Inch	4-Inch	6-Inch	8-Inch	10-Inch	Total
SFR & 2-, 3-Units (Combined)	6,667	176	307	19	2	0	0	0	0	0	7,171
Commercial	281	30	110	25	47	21					514
Multi-Family (≥ 4 Units)	35	5	25	19	21	7	2	5			119
Institutional	4	1	7	5	9	2	1	2			31
Irrigation	6	8	14	4	4	1					37
Fire Service							3	10	5	2	20
Hydrants						19					19
MFR Irrigation (Unkown size)			3								3
Outside District	4	1									5
<b>Total</b>	<b>6,997</b>	<b>221</b>	<b>466</b>	<b>72</b>	<b>83</b>	<b>50</b>	<b>6</b>	<b>17</b>	<b>5</b>	<b>2</b>	<b>7,919</b>

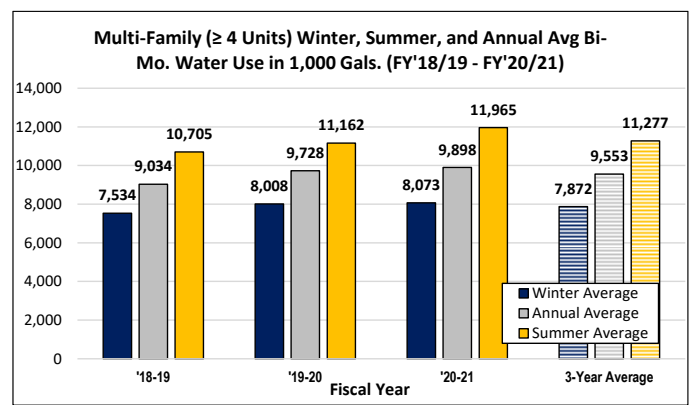
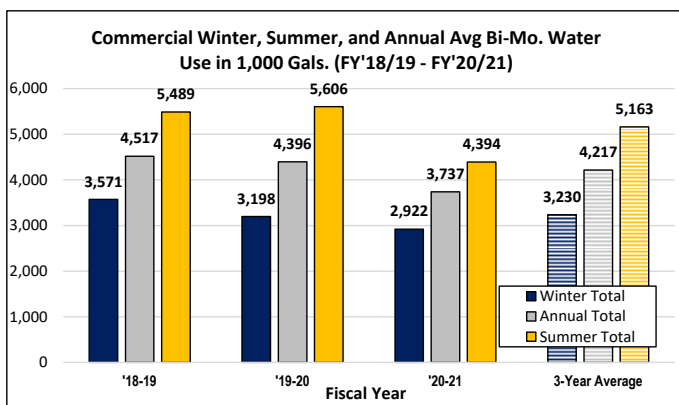
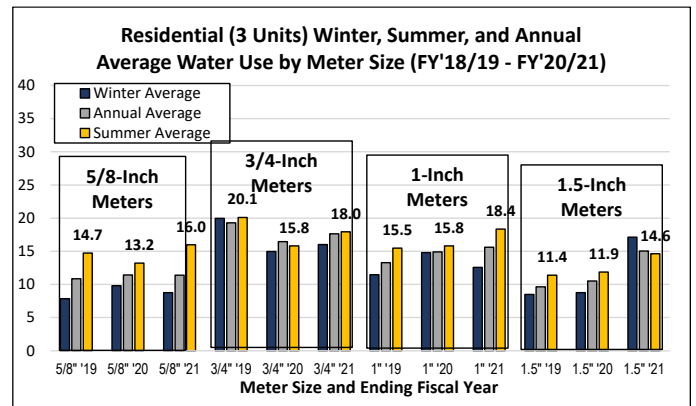
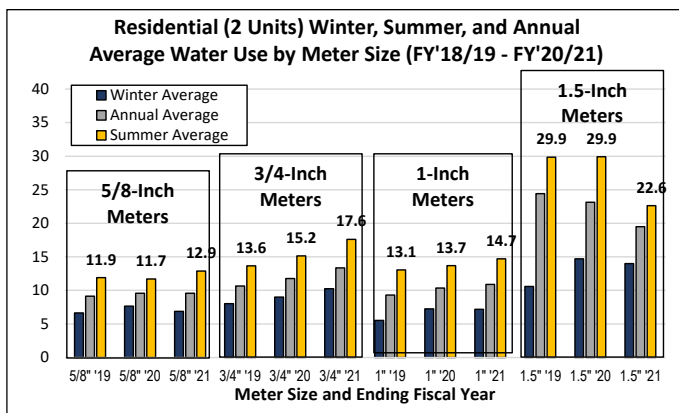
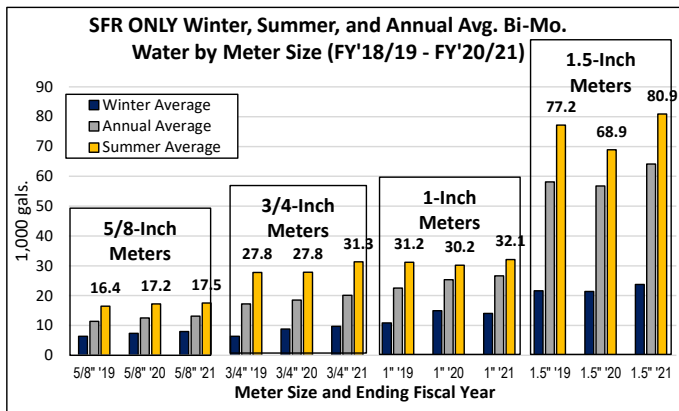
Consumption by Customer Class ('20/21 Data)														Winter Average	Annual Average	Summer Average
Customer Class	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	Total			
SFR & 2-, 3-Units (Combined)	57,448	70,873	59,505	70,957	48,122	44,485	33,249	24,968	25,825	32,755	39,499	53,796	561,482	27,849	46,790	67,112
Commercial	2,770	3,895	5,059	5,850	2,525	4,223	1,991	3,097	2,035	4,564	3,247	5,593	44,849	2,922	3,737	4,394
Multi-Family (≥ 4 Units)	9,512	4,214	20,049	14,085	8,488	10,138	7,548	8,200	6,754	9,791	7,404	12,598	118,781	8,073	9,898	11,965
Institutional	855	725	5,444	3,639	884	2,465	769	1,831	607	2,582	879	3,697	24,377	1,447	2,031	2,666
Irrigation	3,422	1,266	3,658	1,254	2,476	513	812	94	465	198	1,646	866	16,670	392	1,389	2,400
Fire Service	2	15	3	16	1	14	2	12	5	12	19	10	111	8	9	9
Hydrants	0	13	795	440	0	359	0	85	1	361	16	860	2,930	112	244	312
MFR Irrigation (Unkown size)	20	0	0	17	18	0	6	0	10	0	18	0	89	4	7	9
Outside District	0	300	0	312	0	165	0	82	0	91	0	181	1,131	43	94	153
Total	74,029	81,301	94,513	96,570	62,514	62,362	44,377	38,369	35,702	50,354	52,728	77,601	770,420	42,201	64,202	86,603

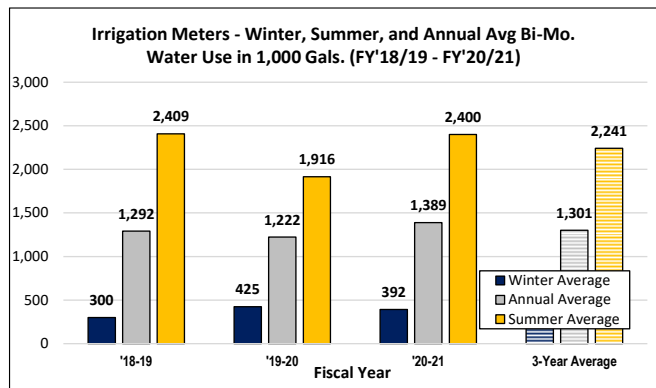
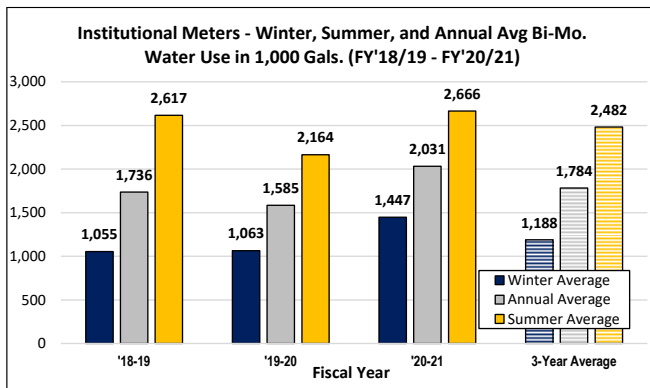
Peaking Factors by Customer Class ('20/21 Data)	Peaking Factor <sup>1</sup>
SFR & 2-, 3-Units (Combined)	1.49
SFR ONLY	1.52
SFR - 2 Units	1.51
SFR - 3 Units	1.53
Commercial	1.57
Multi-Family (≥ 4 Units)	2.03
Institutional	2.68
Irrigation	2.63
Fire Service	2.05
Hydrants	3.52
MFR Irrigation	2.70
Outside District	3.31

1. Maximum month divided by average month water use.

## Summary of Individual Customer Classes

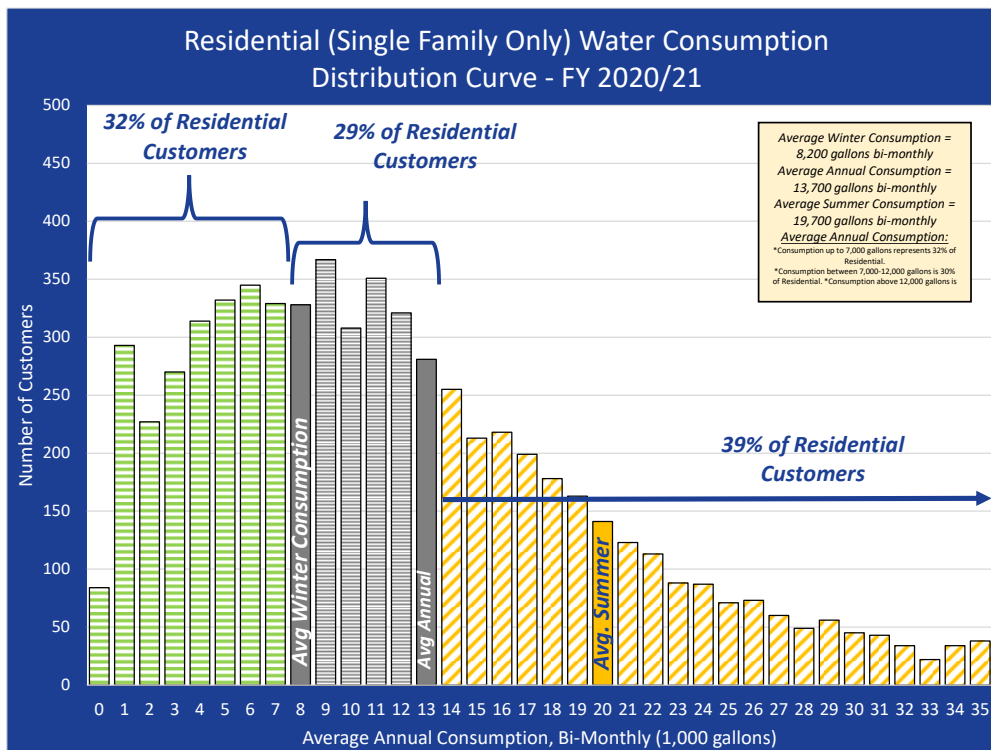
The following are summary graphs of seasonal consumption for the last three years by customer class.



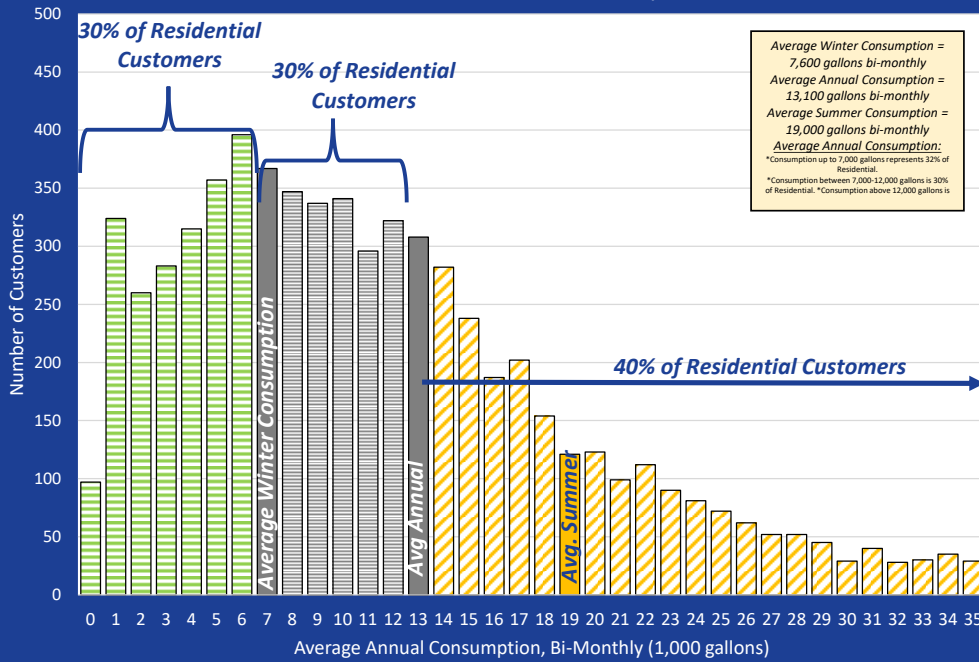


### Residential Water Consumption Distribution Curves

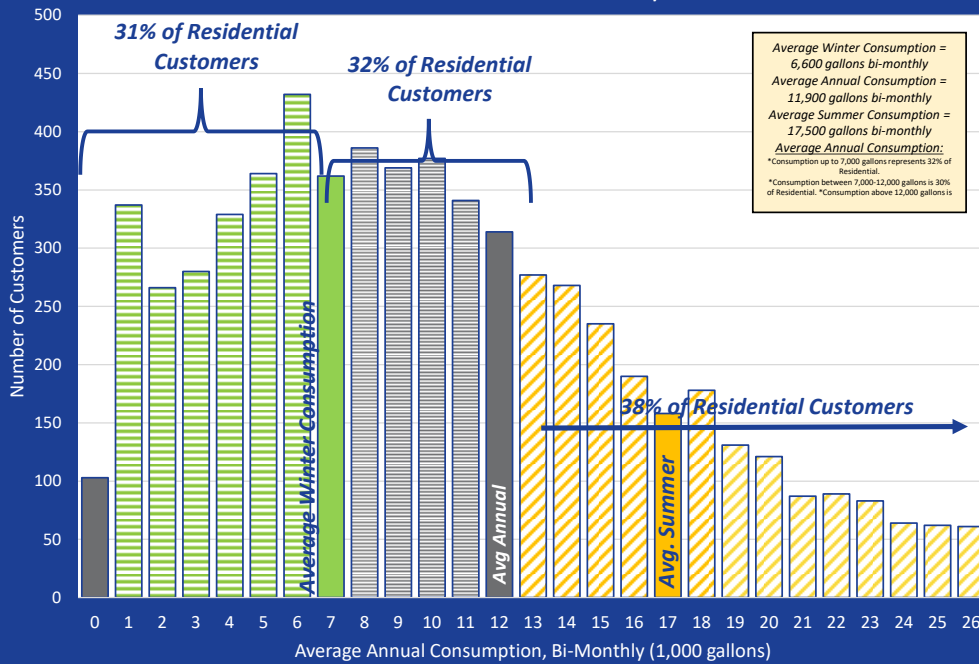
Because the COVID-19 pandemic restrictions have resulted in changes in closure of many businesses, many workers working from home, cancellation of events, etc., water consumption patterns have been impacted around the State in differing degrees. The District needs to better understand these patterns when projecting the future water demands. The residential class is the most significant: the following show the consumption patterns over the last three years.



## Residential (Single Family Only) Water Consumption Distribution Curve - FY 2019/20



## Residential (Single Family Only) Water Consumption Distribution Curve - FY 2018/19



## APPENDIX C – WATER RATE STUDY SUMMARY TABLES

TABLE 1 : FINANCIAL PLAN AND SUMMARY OF REVENUE REQUIREMENTS

RATE REVENUE REQUIREMENTS SUMMARY	Budget	5-Year Rate Adoption Period				
	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27
<b>Sources of Water Funds</b>						
<i>Rate Revenue:</i> <sup>1</sup>						
Operating Revenue	\$ 6,620,880	\$ 6,682,000	\$ 6,743,463	\$ 6,805,491	\$ 6,868,088	\$ 6,931,260
Revenue from rate revenue increases <sup>2</sup>	-	668,200	1,193,584	1,765,251	2,386,935	3,062,670
<i>Non-Rate Revenue:</i>						
Interest Income <sup>3</sup>	53,000	27,540	26,865	26,325	26,325	33,697
Gain on Sale of Assets	-	-	-	-	-	-
Customer Penalties & Fees	22,932	23,000	23,211	23,424	23,640	23,857
Revenue from Meter Right-Sizing Charges <sup>4</sup>	n.a.	n.a.	330,000	353,100	377,817	404,264
Misc. Income	12,875	12,000	12,000	12,000	12,000	12,000
<b>Total Sources of Funds</b>	<b>\$ 6,709,687</b>	<b>\$ 7,412,740</b>	<b>\$ 8,329,123</b>	<b>\$ 8,985,591</b>	<b>\$ 9,694,805</b>	<b>\$ 10,467,749</b>
<b>Uses of Water Funds</b>						
<i>Operating Expenses:</i> <sup>5</sup>						
Salaries	\$ 955,123	\$ 993,327	\$ 1,033,061	\$ 1,074,383	\$ 1,117,358	\$ 1,162,053
Additional Staff <sup>6</sup>	-	287,500	299,000	310,960	323,398	336,334
Benefits	431,898	464,290	499,112	536,545	576,786	620,045
Workers Comp	27,460	29,520	31,734	34,114	36,672	39,423
FICA/Medicare	113,255	121,750	130,881	140,697	151,249	162,593
District Portion/Retirement	357,596	384,415	413,246	444,240	477,558	513,375
Travel, Training, BOD Meetings	54,725	58,009	61,489	65,178	69,089	73,234
Purchased Water	2,206,281	2,329,832	2,460,303	2,598,080	2,743,572	2,897,212
Service & Supplies	974,140	1,033,343	1,096,152	1,162,788	1,233,484	1,308,488
Subtotal: Operating Expenses:	\$ 5,120,477	\$ 5,701,986	\$ 6,024,977	\$ 6,366,985	\$ 6,729,167	\$ 7,112,757
<i>Other Expenditures:</i>						
Existing Debt Service	\$ 57,895	\$ -	\$ -	\$ -	\$ -	\$ -
New Debt Service	-	-	-	-	-	-
Rate-Funded Capital Expenses	1,998,898	2,655,615	2,323,561	2,971,650	2,419,542	1,413,044
Subtotal: Other Expenditures	\$ 2,056,793	\$ 2,655,615	\$ 2,323,561	\$ 2,971,650	\$ 2,419,542	\$ 1,413,044
<b>Total Uses of Water Funds</b>	<b>\$ 7,177,270</b>	<b>\$ 8,357,601</b>	<b>\$ 8,348,538</b>	<b>\$ 9,338,635</b>	<b>\$ 9,148,709</b>	<b>\$ 8,525,801</b>
<b>Annual Contribution To or Use of Reserves</b>	<b>\$ (467,583)</b>	<b>\$ (944,861)</b>	<b>\$ (19,415)</b>	<b>\$ (353,044)</b>	<b>\$ 546,096</b>	<b>\$ 1,941,948</b>
<b>Net Revenue Req't. (Total Uses less Non-Rate Revenue)</b>	<b>\$ 7,088,463</b>	<b>\$ 8,295,061</b>	<b>\$ 7,956,462</b>	<b>\$ 8,923,785</b>	<b>\$ 8,708,927</b>	<b>\$ 8,051,983</b>
<b>Total Rate Revenue After Rate Revenue Increases</b>	<b>\$ 6,620,880</b>	<b>\$ 7,350,200</b>	<b>\$ 7,937,047</b>	<b>\$ 8,570,742</b>	<b>\$ 9,255,023</b>	<b>\$ 9,993,930</b>
<b>Projected Annual Rate Revenue Increase</b>	<b>0.00%</b>	<b>10.00%</b>	<b>7.00%</b>	<b>7.00%</b>	<b>7.00%</b>	<b>7.00%</b>
<b>Cumulative Increase from Annual Revenue Increases</b>	<b>0.00%</b>	<b>10.00%</b>	<b>17.70%</b>	<b>25.94%</b>	<b>34.75%</b>	<b>44.19%</b>
<b>Debt Coverage After Rate Revenue Increase</b>	<b>27.45</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>

1. Revenues for FY 2020/21 is based on the Adopted Budget provided by District staff. Source file: *Budget 2021-2022.xlsx*.

2. Revenue from rate revenue increases assumes an implementation date of July 1, 2022. For each year thereafter, the assumption is that new rates will be implemented annually on July 1st.

3. Interest earning are calculated based on historical LAIF returns.

4. Initial estimate assumes difference in monthly fixed charges of undersized meters based on District estimates, current rates, and assuming only half those meters do not reduce consumption to avoid the surcharge.

5. Expenses for FY 2020/21 is based on the Adopted Budget provided by District staff. Source file: *Budget 2021-2022.xlsx*.

6. The District plans to hire a level one operator and fill another similar position in FY 2022/23. The estimated annual salary per employee is \$230K plus 5% annual raises every year thereafter.

TABLE 2 : RESERVE FUND SUMMARY

SUMMARY OF CASH ACTIVITY	Budget	5-Year Rate Adoption Period				
	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27
<b>Un-Restricted Reserve:</b>						
<b>Total Beginning Cash<sup>1</sup></b>	<b>\$ 3,954,869</b>	<b>\$ 3,488,906</b>	<b>\$ 2,545,687</b>	<b>\$ 2,527,936</b>	<b>\$ 2,176,578</b>	<b>\$ 2,724,384</b>
<b>Operating Reserve</b>						
Beginning Reserve Balance <sup>2</sup>	\$ -	\$ 1,280,000	\$ 1,160,000	\$ 1,050,000	\$ 1,050,000	\$ 1,596,096
Plus: Net Cash Flow (After rate revenue increases)	(467,583)	(944,861)	(19,415)	(353,044)	546,096	1,941,948
Plus: Transfer of Undesignated Reserve Surplus	1,747,583	777,286	-	-	-	-
Plus: Transfer of Debt Reserve Surplus	-	-	-	-	-	-
Plus: Transfer of Rate Stabilization Reserve Surplus	-	167,575	19,415	353,044	-	-
Plus: Transfer in from Capital R&R Reserve	-	-	-	-	-	-
Less: Transfer Out to Rate Stabilization Reserve	-	(50,000)	(40,000)	-	-	(730,034)
Less: Transfer Out to Capital Replacement Reserve	-	(70,000)	(70,000)	-	-	(1,030,010)
<b>Ending Operating Reserve Balance</b>	<b>\$ 1,280,000</b>	<b>\$ 1,160,000</b>	<b>\$ 1,050,000</b>	<b>\$ 1,050,000</b>	<b>\$ 1,596,096</b>	<b>\$ 1,778,000</b>
<b>Target Ending Balance (90-days of O&amp;M)</b>	<b>\$ 1,280,000</b>	<b>\$ 1,425,000</b>	<b>\$ 1,506,000</b>	<b>\$ 1,592,000</b>	<b>\$ 1,682,000</b>	<b>\$ 1,778,000</b>
<b>Capital Rehabilitation &amp; Replacement Reserve</b>						
Beginning Reserve Balance <sup>3</sup>	\$ 760,000	\$ 760,000	\$ 830,000	\$ 900,000	\$ 900,000	\$ 900,000
Plus: Grant Proceeds	-	-	-	-	-	776,206
Plus: Transfer of Operating Reserve Surplus	-	70,000	70,000	-	-	1,030,010
Less: Use of Reserves for Operating Reserve	-	-	-	-	-	-
Less: Use of Reserves for Capital Projects	-	-	-	-	-	(776,206)
<b>Ending Capital Rehab &amp; Replacement Reserve Balance</b>	<b>\$ 760,000</b>	<b>\$ 830,000</b>	<b>\$ 900,000</b>	<b>\$ 900,000</b>	<b>\$ 900,000</b>	<b>\$ 1,930,010</b>
<b>Capital R&amp;R Reserve (3.0% of Net Assets or \$1.1M)</b>	<b>\$ 760,000</b>	<b>\$ 820,000</b>	<b>\$ 870,000</b>	<b>\$ 930,000</b>	<b>\$ 980,000</b>	<b>\$ 1,010,000</b>
<b>Rate Stabilization Reserve</b>						
Beginning Reserve Balance <sup>4</sup>	\$ 550,000	\$ 550,000	\$ 432,425	\$ 453,010	\$ 99,966	\$ 99,966
Plus: Transfers from Operating Reserve	-	50,000	40,000	-	-	730,034
Less: Use of Reserve	-	(167,575)	(19,415)	(353,044)	-	-
<b>Ending Rate Stabilization Reserve</b>	<b>\$ 550,000</b>	<b>\$ 432,425</b>	<b>\$ 453,010</b>	<b>\$ 99,966</b>	<b>\$ 99,966</b>	<b>\$ 830,000</b>
<b>Target Ending Balance (one-month of rate revenue)</b>	<b>\$ 550,000</b>	<b>\$ 610,000</b>	<b>\$ 660,000</b>	<b>\$ 710,000</b>	<b>\$ 770,000</b>	<b>\$ 830,000</b>
<b>Undesignated Reserves</b>						
Beginning Reserve Balance	\$ 2,524,869	\$ 777,286	\$ -	\$ -	\$ -	\$ -
Plus: Contribution to Reserve	-	-	-	-	-	-
Less: Use of Reserve	(1,747,583)	(777,286)	-	-	-	-
<b>Ending Undesignated Reserve</b>	<b>\$ 777,286</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
<b>Ending Balance - Excl. Restricted Reserves</b>	<b>\$ 3,367,286</b>	<b>\$ 2,422,425</b>	<b>\$ 2,403,010</b>	<b>\$ 2,049,966</b>	<b>\$ 2,596,062</b>	<b>\$ 4,538,010</b>
<b>Min. Target Ending Balance -Excl. Restricted Reserves</b>	<b>\$ 2,590,000</b>	<b>\$ 2,855,000</b>	<b>\$ 3,036,000</b>	<b>\$ 3,232,000</b>	<b>\$ 3,432,000</b>	<b>\$ 3,618,000</b>
<b>Ending Surplus/(Deficit) Compared to Reserve Targets</b>	<b>\$ 777,286</b>	<b>\$ (432,575)</b>	<b>\$ (632,990)</b>	<b>\$ (1,182,034)</b>	<b>\$ (835,938)</b>	<b>\$ 920,010</b>

TABLE 3 : RESERVE FUND SUMMARY, cont.

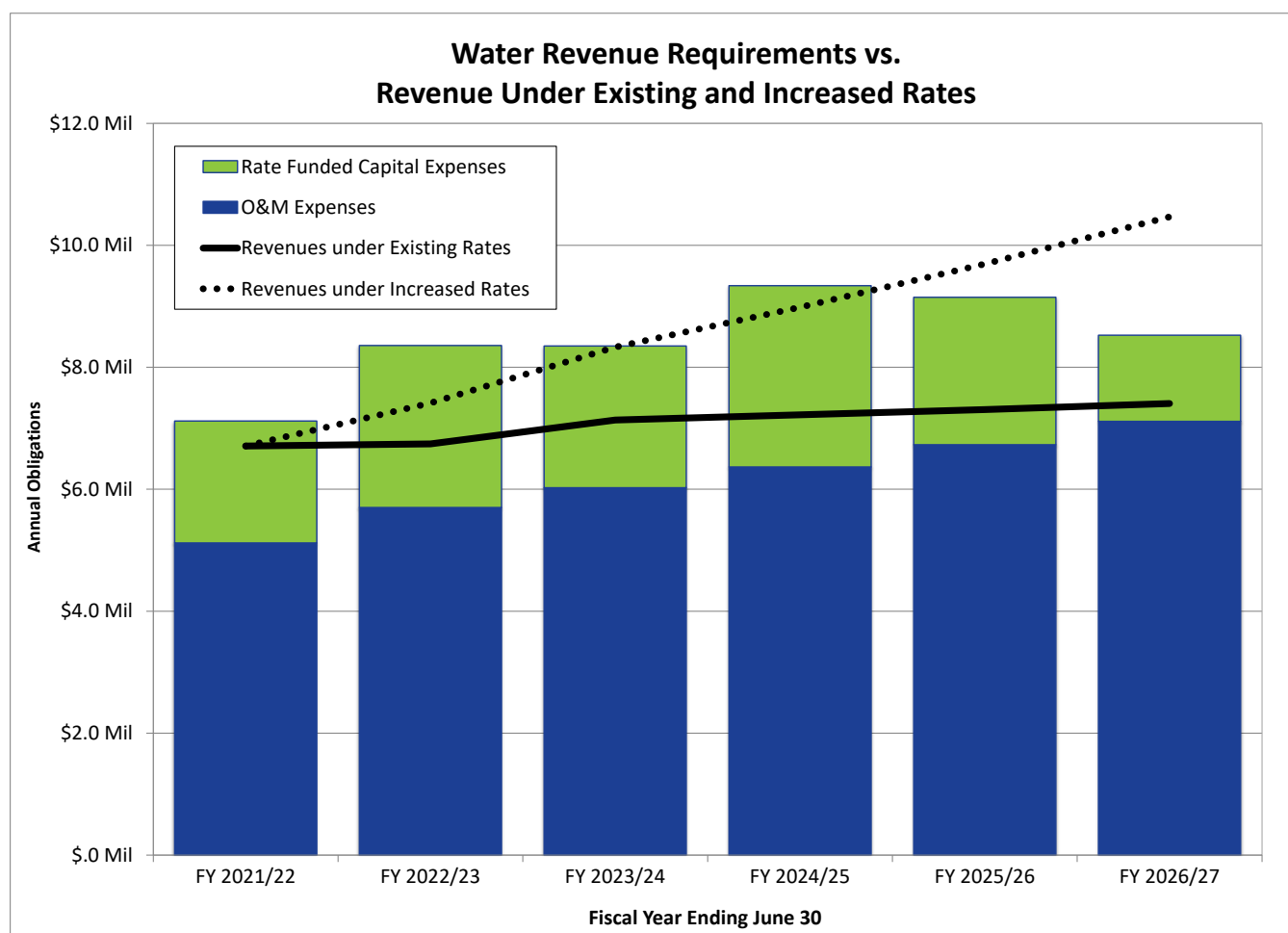
SUMMARY OF CASH ACTIVITY	Budget	5-Year Rate Adoption Period				
	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27
<b>Restricted Reserve:</b>						
<b>Capacity Fee Reserve</b>						
Beginning Reserve Balance	\$ 120,000	\$ 121,620	\$ 123,262	\$ 124,926	\$ 126,612	\$ 128,322
Plus: Interest Earnings	1,620	1,642	1,664	1,686	1,709	1,732
Plus: Capacity Fee Revenue	-	-	-	-	-	-
Less: Use of Reserves for Capital Projects	-	-	-	-	-	-
<b>Ending Connection Fee Fund Balance</b>	<b>\$ 121,620</b>	<b>\$ 123,262</b>	<b>\$ 124,926</b>	<b>\$ 126,612</b>	<b>\$ 128,322</b>	<b>\$ 130,054</b>
<b>Annual Interest Earnings Rate<sup>7</sup></b>	<b>1.35%</b>	<b>1.35%</b>	<b>1.35%</b>	<b>1.35%</b>	<b>1.35%</b>	<b>1.35%</b>

1. The beginning Cash balance is reported in the District's Adopted Budget for FY 2021/22. Source file: *Final Budget FY 21-22 with signed resolutions.pdf*, page 21 .
2. The beginning Cash balance is equal to the amount in Account 12001-0000 (General Checking West America), per the District's Trial Balance as of July 1, 2021.
3. The beginning Capital Rehabilitation and Replacement Reserve balance is equal to Accounts 11304-0000 (LAIF) and 11308-0000 (Sonoma County Pooled Investment Fund), per the District's Trial Balance report as of July 1, 2017.
4. The beginning Rate Stabilization Fund balance is assumed to be zero.
5. The beginning Bond Project Reserve balance is assumed to be zero.
6. The beginning Debt Reserve balance is assumed to be zero.
7. Historical interest earning rates are per the average annual yields for funds invested in LAIF (2016-2020). The source is the California State Treasurer's website: <https://www.treasurer.ca.gov/pmia-laif/historical/annual.asp>.

**WORKSPACE FOR CALCULATING REVENUES FROM rate revenue increases:**

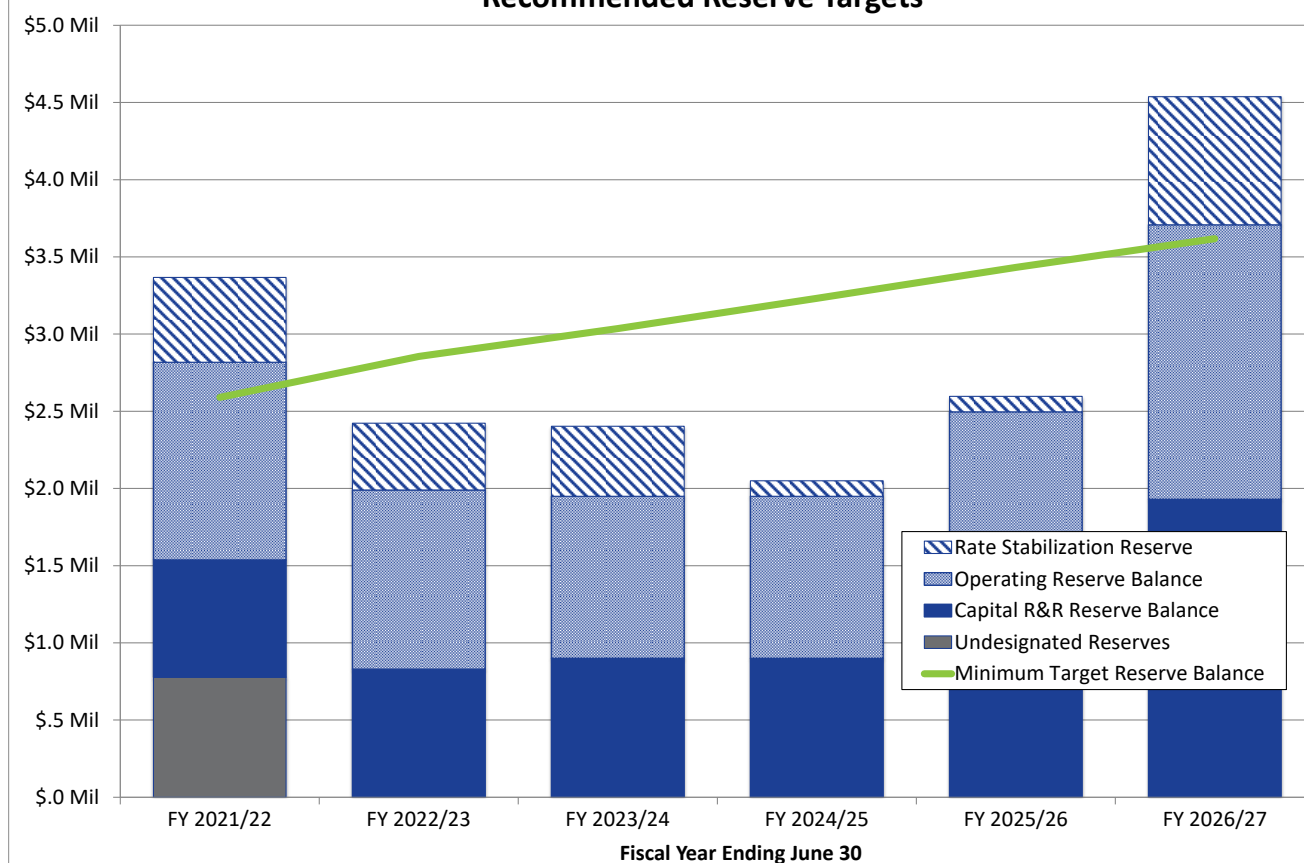
	Budget	5-Year Rate Adoption Period				
	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27
	1-Jul-21	1-Jul-22	1-Jul-23	1-Jul-24	1-Jul-25	1-Jul-26
Implementation Date	0%	10%	7%	7%	7%	7%
rate revenue increase	12	12	12	12	12	12
No. of Months actually collected in the FY	100%	100%	100%	100%	100%	100%
% of rate revenue increase to be collected						
Adjustment made to rates	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Calculation of Rate Revenues	2022	2023	2024	2025	2026	2027
Projected Revenues without rate revenue increases	\$ 6,620,880	\$ 6,682,000	\$ 6,743,463	\$ 6,805,491	\$ 6,868,088	\$ 6,931,260
Additional Revenues from rate revenue increases:						
2022 rate revenue increase	-	-	-	-	-	-
2023 rate revenue increase		668,200	674,338	680,532	686,784	693,093
2024 rate revenue increase			519,246	524,016	528,829	533,687
2025 rate revenue increase				560,703	565,853	571,051
2026 rate revenue increase					605,469	611,031
2027 rate revenue increase						653,809
Subtotal: Additional Revenues from rate revenue increases	\$ -	\$ 668,200	\$ 1,193,584	\$ 1,765,251	\$ 2,386,935	\$ 3,062,670
Total Rate Revenues After rate revenue increases	\$ 6,620,880	\$ 7,350,200	\$ 7,937,047	\$ 8,570,742	\$ 9,255,023	\$ 9,993,930





### Ending Cash Balances vs. Recommended Reserve Targets



**TABLE 9 : CAPITAL FUNDING SUMMARY**

CAPITAL FUNDING FORECAST		Budget	5-Year Rate Adoption Period				
Funding Sources:		FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27
Grants		\$ -					\$ 776,206
Use of Capacity Fee Reserves		-	-	-	-	-	-
SRF Loan Funding		-	-	-	-	-	-
Use of New Revenue Bond Proceeds		-	-	-	-	-	-
Use of Capital Rehabilitation and Replacement Reserve		-	-	-	-	-	-
Rate Revenue		1,998,898	2,655,615	2,323,561	2,971,650	2,419,542	1,413,044
<b>Total Sources of Capital Funds</b>		<b>\$ 1,998,898</b>	<b>\$ 2,655,615</b>	<b>\$ 2,323,561</b>	<b>\$ 2,971,650</b>	<b>\$ 2,419,542</b>	<b>\$ 2,189,250</b>
<b>Uses of Capital Funds:</b>							
Total Project Costs		\$ 1,998,898	\$ 2,655,615	\$ 2,323,561	\$ 2,971,650	\$ 2,419,542	\$ 2,189,250
<b>Capital Funding Surplus (Deficiency)</b>		<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>

TABLE 11 :		CAPITAL IMPROVEMENT PROGRAM COSTS (in Current-Year Dollars) <sup>1</sup>				
Project Description & ID		2022	2023	2024	2025	2026
Facilities and Maintenance Projects						
CIP-3002	Zenner Hydrant Meters	\$ 13,000	\$ -	\$ -	\$ -	\$ -
CIP- 3003	Replace failing lids	25,000	-	-	-	-
CIP- 3004	Better paving cutter	11,000	-	-	-	-
CIP-3005	Non-metallic pipe locator	22,000	-	-	-	-
CIP - 3006	Install EV Plugs and Solar on Office/Shop	-	200,000	-	-	-
CIP - 3007	Racks in Yard	20,000	-	-	-	-
CIP- 3008	Laundry facility, bigger shower and more lockers	-	30,000	-	-	-
CIP- 3009	Install meters at Chestnut and Donald Boosters	-	-	10,000	-	-
CIP- 3010	Manual transfer switches	-	10,000	-	-	-
CIP- 3011	Replace Signs at Office/Yard	15,000	-	-	-	-
CIP - 3012	Replace GM Vehicle with an EV	-	35,000	-	-	-
CIP-3013	Replace #32 & #33 with F250 or F350 utility body trucks	130,000	-	-	-	-
CIP-3014	Verano Well Generator	-	-	75,000	-	-
CIP-2957-13	CL2 Equipment	30,000	-	-	-	-
CIP-5107	County of Sonoma Paving Projects requiring adjustments and or relocation of District facilities	40,000	50,000	50,000	50,000	50,000
CIP-3015	Caltrans Project on Hwy 12	50,000	-	-	-	-
CIP-6001	New Services	-	-	-	-	-
CIP-6004	All Service Replacements	40,000	60,000	30,000	30,000	30,000
CIP-8100	Valve Replacement Program	25,000	27,563	28,941	30,388	31,907
CIP-9300	Meter Replacement Program	-	-	-	-	-
CIP-3016	Repave corporate yard parking lot	100,000	-	-	-	-
CIP-2991	GPS Facilities	20,000	30,000	-	-	-
CIP-3017	Installation of generator at Donald Booster	-	20,000	-	-	-
CIP- 3018	Installation of generator at Main Office	15,000	-	-	-	-
CIP-3019	Park Ave, Hanna Tank Road & Kearney site clean up	27,000	100,000	-	-	-
Subtotal - Facilities and Maintenance Projects		\$ 583,000	\$ 562,563	\$ 193,941	\$ 110,388	\$ 111,907
Pipeline Projects						
CIP-2993 P-1	Steel Pipe Replacement	\$ 250,000	\$ -	\$ -	\$ -	\$ -
CIP-2996 P-2	Glen Ellen Transmission and Fire Flow Improvement	-	610,000	-	-	-
CIP-3020	Warm Springs Road Fire Flow Improvement	-	-	-	-	200,000
CIP-3021	Pressure Zone 3D Fire Flow Improvement	-	40,000	500,000	-	-
CIP-3022	Altamira Middle School Fire Flow Improvement	-	-	176,000	1,584,000	-
CIP-3023	Upper Sobre Vista Fire Flow Improvement	-	-	-	100,000	800,000
Subtotal - Pipeline Projects		\$ 250,000	\$ 650,000	\$ 676,000	\$ 1,684,000	\$ 1,000,000
Wells, Pumping, & Supply						
CIP-2949	Well No. 5A (Verano Well Replacement)	\$ 105,000	\$ -	\$ -	\$ -	\$ -
CIP-2983	New Larbre/ Pedroncelli Well(s) Private	300,000	-	-	-	-
CIP-2987	Chestnut Exploratory Well	-	225,000	1,200,000	-	-
CIP-2989	New Well No. 11 Redrill Park Engineering	225,000	900,000	-	-	-
CIP - 3024	WSA/Transition Plan @ SDC	100,000	-	-	-	-
CIP - 3025	New source and booster meters	-	-	50,000	-	-
CIP - 3026	VFDs on all well pumps	-	-	30,000	-	-
CIP- 3027	SDC - Glen Ellen Booster	-	-	-	-	225,000
CIP- 3028	Trinity Well Clean-up	-	50,000	-	-	-
Subtotal - Wells, Pumping, & Supply		\$ 730,000	\$ 1,175,000	\$ 1,280,000	\$ -	\$ 225,000
Tanks						
CIP-2986	Richards (Kearney) Tank Site	\$ -	\$ -	\$ -	\$ 400,000	\$ 1,600,000
CIP-3001	Saddle Tank non-FEMA	30,000	-	-	-	-

TABLE 11 : continued						
Project Description & ID	2022	2023	2024	2025	2026	2027
<b>Tanks, cont.</b>						
CIP- 3029 Bolli Tanks Recoating & Railing/Solar Retrofit	-	900,000	-	-	-	-
CIP-3030 Upgrade fall protection at all tanks per new OSHA requirements	15,600	-	-	-	-	-
CIP- 3031 Temelec 1M Tanks Recoating & Railing/Solar Retrofit	-	-	800,000	-	-	-
CIP-3032 Tank Site Solar upgrade	100,000	-	-	-	-	-
<b>Subtotal - Tanks</b>	<b>\$ 145,600</b>	<b>\$ 900,000</b>	<b>\$ 800,000</b>	<b>\$ 400,000</b>	<b>\$ 1,600,000</b>	<b>\$ 2,000,000</b>
<b>Future Projects<sup>2</sup></b>	<b>\$ 290,298</b>	<b>\$ (700,000)</b>	<b>\$ (743,941)</b>	<b>\$ 554,612</b>	<b>\$ (756,007)</b>	<b>\$ (1,832,246)</b>
<b>Total: CIP Program Costs (in Current-Year Dollars)</b>	<b>\$ 1,998,898</b>	<b>\$ 2,587,563</b>	<b>\$ 2,206,000</b>	<b>\$ 2,749,000</b>	<b>\$ 2,180,900</b>	<b>\$ 1,922,754</b>

TABLE 12 : FORECASTING ASSUMPTIONS

Economic Variables	2022	2023	2024	2025	2026	2027
Annual Construction Cost Inflation, Per Engineering News Rec	0.00%	2.63%	2.63%	2.63%	2.63%	2.63%
Cumulative Construction Cost Multiplier from 2022	1.00	1.03	1.05	1.08	1.11	1.14

TABLE 20 : CLASSIFICATION OF EXPENSES FOR COST OF SERVICE ANALYSIS

Classification of Expenses										
Budget Categories	Total Rev. Reqts.	Commodity	Capacity	Customer	Fire Service	Basis of Classification				
	FY 2022/23	(COM)	(CAP)	(CA)	(FIRE)	(COM)	(CAP)	(CA)	(FIRE)	
<b>Salaries, Benefits &amp; Administrative Costs</b>										
Salaries										
O&M - Operating	\$ 975,405	\$ 243,851	\$ 682,784	\$ 41,942	\$ 6,828	25.0%	70.0%	4.3%	0.7%	
Stand-By	33,381	8,345	23,367	1,435	234	25.0%	70.0%	4.3%	0.7%	
Administration	579,267	144,817	405,487	24,908	4,055	25.0%	70.0%	4.3%	0.7%	
Additional Staff2	287,500	71,875	201,250	12,363	2,013	25.0%	70.0%	4.3%	0.7%	
Weighted Wages Transferred to Capital Projects	(594,726)	(148,682)	(416,308)	(25,573)	(4,163)	25.0%	70.0%	4.3%	0.7%	
Benefits										
O&M - Operating & Maintenance	233,297	58,324	163,308	10,032	1,633	25.0%	70.0%	4.3%	0.7%	
Administration	150,321	37,580	105,225	6,464	1,052	25.0%	70.0%	4.3%	0.7%	
Retirees	80,673	20,168	56,471	3,469	565	25.0%	70.0%	4.3%	0.7%	
Workers Comp										
Operating & Maintenance	26,163	6,541	18,314	1,125	183	25.0%	70.0%	4.3%	0.7%	
Accounting/Administration	3,356	839	2,349	144	23	25.0%	70.0%	4.3%	0.7%	
FICA/Medicare										
Operating & Maintenance	78,371	19,593	54,860	3,370	549	25.0%	70.0%	4.3%	0.7%	
Administration	43,378	10,845	30,365	1,865	304	25.0%	70.0%	4.3%	0.7%	
District Portion/Retirement										
Operating & Maintenance	91,709	22,927	64,197	3,944	642	25.0%	70.0%	4.3%	0.7%	
Administration	58,389	14,597	40,872	2,511	409	25.0%	70.0%	4.3%	0.7%	
CalPERS Accrued Liability	234,317	58,579	164,022	10,076	1,640	25.0%	70.0%	4.3%	0.7%	
Travel, Training, Dues										
Operating & Maintenance	8,189	2,047	5,732	352	57	25.0%	70.0%	4.3%	0.7%	
Administration	12,720	3,180	8,904	547	89	25.0%	70.0%	4.3%	0.7%	
Board of Directors										
Meeting Compensation	31,800	7,950	22,260	1,367	223	25.0%	70.0%	4.3%	0.7%	
Travel & Training	5,300	1,325	3,710	228	37	25.0%	70.0%	4.3%	0.7%	
<b>TOTAL: Salaries, Benefits &amp; Administrative Costs</b>	<b>\$ 2,338,811</b>	<b>\$ 584,703</b>	<b>\$ 1,637,167</b>	<b>\$ 100,569</b>	<b>\$ 16,372</b>	<b>25.0%</b>	<b>70.0%</b>	<b>4.3%</b>	<b>0.7%</b>	

TABLE 21 : CLASSIFICATION OF EXPENSES FOR COST OF SERVICE ANALYSIS, cont.

Classification of Expenses									
Budget Categories	Total Revenue Requirements	Commodity	Capacity	Customer	Fire Service	Basis of Classification			
	FY 2022/23	(COM)	(CAP)	(CA)	(FIRE)	(COM)	(CAP)	(CA)	(FIRE)
<b>Service &amp; Supplies</b>									
Purchased Water	\$ 2,329,832	\$ 2,313,523	\$ -	\$ -	\$ 16,309	99.3%	0.0%	0.0%	0.7%
Safety & Clothing Allowance	15,121	4,430	10,131	454	106	29.3%	67.0%	3.0%	0.7%
Vehicle Maintenance	7,420	2,174	4,971	223	52	29.3%	67.0%	3.0%	0.7%
Election Costs	-	-	-	-	-	29.3%	67.0%	3.0%	0.7%
Employee Relations	4,606	1,349	3,086	138	32	29.3%	67.0%	3.0%	0.7%
Attorney Retainer	68,900	20,188	46,163	2,067	482	29.3%	67.0%	3.0%	0.7%
Engineering General Support	3,816	1,118	2,557	114	27	29.3%	67.0%	3.0%	0.7%
Misc. Expenses/Contributions	26,500	7,765	17,755	795	186	29.3%	67.0%	3.0%	0.7%
Advertising	1,060	311	710	32	7	29.3%	67.0%	3.0%	0.7%
Outside Services	37,395	10,957	25,055	1,122	262	29.3%	67.0%	3.0%	0.7%
Annual Audit	10,638	3,117	7,128	319	74	29.3%	67.0%	3.0%	0.7%
Bad Debts/Collections	12,720	3,727	8,522	382	89	29.3%	67.0%	3.0%	0.7%
Building Maintenance	9,540	2,795	6,392	286	67	29.3%	67.0%	3.0%	0.7%
Dues and Subscriptions	26,871	7,873	18,004	806	188	29.3%	67.0%	3.0%	0.7%
Equipment Maintenance/Repairs	26,500	7,765	17,755	795	186	29.3%	67.0%	3.0%	0.7%
Fees (County/State)	55,961	16,396	37,494	1,679	392	29.3%	67.0%	3.0%	0.7%
Fuel	28,414	8,325	19,037	852	199	29.3%	67.0%	3.0%	0.7%
Bank Charges	32,270	9,455	21,621	968	226	29.3%	67.0%	3.0%	0.7%
Liability Ins. (Incl. Losses)	53,863	15,782	36,088	1,616	377	29.3%	67.0%	3.0%	0.7%
Postage	22,322	6,540	14,956	670	156	29.3%	67.0%	3.0%	0.7%
Public Information	8,333	2,441	5,583	250	58	29.3%	67.0%	3.0%	0.7%
Service Contracts	59,195	17,344	39,661	1,776	414	29.3%	67.0%	3.0%	0.7%
Office Supplies	8,640	2,532	5,789	259	60	29.3%	67.0%	3.0%	0.7%
Telephone-Internet	14,416	4,224	9,658	432	101	29.3%	67.0%	3.0%	0.7%
Small Tools & Equipment	8,957	2,624	6,001	269	63	29.3%	67.0%	3.0%	0.7%
Trash Disposal	5,785	1,695	3,876	174	40	29.3%	67.0%	3.0%	0.7%
Utilities - PG&E	182,154	162,664	9,108	9,108	1,275	89.3%	5.0%	5.0%	0.7%
Professional Services	139,409	40,847	93,404	4,182	976	29.3%	67.0%	3.0%	0.7%
Water Testing	41,698	41,406	-	-	292	99.3%	0.0%	0.0%	0.7%
Water Main Maintenance	11,660	11,578	-	-	82	99.3%	0.0%	0.0%	0.7%
Service Line Maintenance	5,300	5,263	-	-	37	99.3%	0.0%	0.0%	0.7%
Hydrant Repairs	4,240	1,242	2,841	127	30	29.3%	67.0%	3.0%	0.7%
Misc. System Maintenance	5,830	1,708	3,906	175	41	29.3%	67.0%	3.0%	0.7%
Wells Maintenance	6,360	6,315	-	-	45	99.3%	0.0%	0.0%	0.7%
Pump Maintenance	12,720	12,631	-	-	89	99.3%	0.0%	0.0%	0.7%
Storage Tank Maintenance	10,600	10,526	-	-	74	99.3%	0.0%	0.0%	0.7%
Water Conservation Program	36,570	36,314	-	-	256	99.3%	0.0%	0.0%	0.7%
Abandoned Projects	-	-	-	-	-	29.3%	67.0%	3.0%	0.7%
Interest Expense	21,200	6,212	14,204	636	148	29.3%	67.0%	3.0%	0.7%
Equipment Replacement	6,360	-	6,315	-	45	0.0%	99.3%	0.0%	0.7%
<b>TOTAL: Service &amp; Supplies</b>	<b>\$ 3,363,175</b>	<b>\$ 2,811,157</b>	<b>\$ 497,770</b>	<b>\$ 30,705</b>	<b>\$ 23,542</b>	<b>83.6%</b>	<b>14.8%</b>	<b>0.9%</b>	<b>0.7%</b>
<i>Comparison to 2018 Rate model:</i>						83.9%	14.6%	0.8%	0.7%
<b>GRAND TOTAL: WATER EXPENSES</b>	<b>\$ 5,701,986</b>	<b>\$ 3,395,860</b>	<b>\$ 2,134,937</b>	<b>\$ 131,274</b>	<b>\$ 39,914</b>	<b>59.6%</b>	<b>37.4%</b>	<b>2.3%</b>	<b>0.7%</b>

TABLE 22 : CLASSIFICATION OF EXPENSES FOR COST OF SERVICE ANALYSIS, cont.

Classification of Expenses					
Budget Categories	Total Revenue Requirements	Commodity	Capacity	Customer	Fire Service
	FY 2022/23	(COM)	(CAP)	(CA)	(FIRE)
<b>Debt Service Payments</b>					
CIEDB Loan - Agrmt No. CIEDB-B08-085, \$810,0001	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total Debt Service Payments</b>	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Capital Expenditures</b>					
Rate Funded Capital Expenses	\$ 2,655,615	\$ 902,909	\$ 1,752,706	\$ -	\$ -
<b>TOTAL REVENUE REQUIREMENTS</b>	<b>\$ 8,357,601</b>	<b>\$ 4,298,769</b>	<b>\$ 3,887,644</b>	<b>\$ 131,274</b>	<b>\$ 39,914</b>
<b>Less: Non-Rate Revenues</b>					
Interest Income	\$ -	\$ -	\$ -	\$ -	\$ -
Customer Penalties & Fees	(23,000)	(11,830)	(10,699)	(361)	(110)
Misc. Income	(12,000)	(6,172)	(5,582)	(188)	(57)
Leak Adjustments	9,000	4,629	4,186	141	43
<b>TOTAL: Non-Rate Revenues</b>	<b>(26,000)</b>	<b>(13,373)</b>	<b>(12,094)</b>	<b>(408)</b>	<b>(124)</b>
<b>NET REVENUE REQUIREMENTS</b>	<b>\$ 8,331,601</b>	<b>\$ 4,285,396</b>	<b>\$ 3,875,549</b>	<b>\$ 130,866</b>	<b>\$ 39,790</b>
<b>Allocation of Revenue Requirements</b>	<b>100.0%</b>	<b>51.4%</b>	<b>46.5%</b>	<b>1.6%</b>	<b>0.48%</b>

TABLE 23 : ADJUSTMENT TO CLASSIFICATION OF EXPENSES FOR COST OF SERVICE ANALYSIS

Classification of Expenses, cont.					
Adjustments to Classification of Expenses					
Adjustment for Current Rate Level:	Total	(COM)	(CAP)	(CA)	(FIRE)
Test Year (FY 2022/23) Target Rate Rev. After Rate Increase	\$ 7,350,200				
Projected Rate Revenue at Current Rates	\$ 6,620,880				
Test Year (FY 2022/23) Projected Rate Adjustment	10%				
<b>Adjusted Net Revenue Req'ts</b>	<b>\$ 7,350,200</b>	<b>\$ 3,780,608</b>	<b>\$ 3,419,038</b>	<b>\$ 115,451</b>	<b>\$ 35,103</b>
<i>Percent of Revenue</i>	<i>100.0%</i>	<i>51.4%</i>	<i>46.5%</i>	<i>1.6%</i>	<i>0.5%</i>

## Development of the COMMODITY Allocation Factor

Customer Class	'20/21 Volume (1,000 gal) <sup>1</sup>	% Adjustment for Conservation	'20/21 Volume Adjusted for Conservation	Percent of Total Volume
Residential	614,232	10%	552,809	75.0%
Commercial (Incl. MFR ≥ 4 Units)	163,268	10%	146,941	19.9%
Institutional	24,359	10%	21,923	3.0%
Irrigation (Comm. & MFR)	16,693	10%	15,024	2.0%
Fire Lines <sup>2</sup>	111	10%	100	0.01%
<b>Total</b>	<b>818,663</b>	<b>10%</b>	<b>736,797</b>	<b>100.0%</b>
Fire Hydrants <sup>3</sup>	2,930	0%	2,930	N.A.
<b>Grand Total</b>	<b>821,593</b>	<b>10%</b>	<b>739,727</b>	<b>100.0%</b>

1. Data is based on the District's FY 2020/21 customer billing data.

2. Fire service line provide emergency services with have incidental water use.

3. Hydrants are temporary flow meters that connect to Hydrants for construction and misc. uses.

TABLE 27 : DEVELOPMENT OF THE CAPACITY ALLOCATION FACTORS

Development of the PEAK CAPACITY (MAX BI-MONTH) Allocation Factors				
Customer Class	Avg. Bi-Mo. Usage (1,000 gal)	Peak Bi-Mo. Use (1,000 gal) <sup>1</sup>	Peak Bi-Monthly Factor	Max Bi-Monthly Capacity Factor
Residential	51,098	76,208	1.49	69.0%
Commercial (Incl. MFR ≥ 4 Units)	13,643	25,108	1.84	22.7%
Institutional	2,030	5,441	2.68	4.9%
Irrigation (Comm. & MFR)	1,397	3,658	2.62	3.3%
Fire Lines	9	19	2.05	0.0%
<b>Total</b>	<b>68,176</b>	<b>110,434</b>	<b>1.62</b>	<b>100.0%</b>
Fire Hydrants <sup>2</sup>	244	860	3.52	0.00%
<b>Grand Total</b>	<b>68,420</b>	<b>111,294</b>	<b>1.63</b>	<b>100.0%</b>

1. Based on peak bi-monthly data (peak day data not available).

2. Hydrants are temporary meters and not considered a permanent part of the system. Since usage is unpredictable revenue is considered miscellaneous revenue.

TABLE 28 : DEVELOPMENT OF THE CUSTOMER ALLOCATION FACTORS				
Development of the CUSTOMER Allocation Factor				
Customer Class <sup>1</sup>	FY'20/21 Data		For Cost Alloc. (FY'22/23)	
	Number of Meters <sup>2</sup>	Percent of Total	Number of Meters <sup>3</sup>	Percent of Total
Residential	6,615	94.9%	6,737	94.9%
Commercial (Incl. MFR ≥ 4 Units)	263	3.8%	268	3.8%
Institutional	31	0.44%	31	0.44%
Irrigation (Comm. & MFR)	40	0.57%	40	0.56%
Fire Lines	20	0.29%	20	0.28%
<b>Grand Total</b>	<b>6,969</b>	<b>100%</b>	<b>7,096</b>	<b>100%</b>
Fire Hydrants <sup>4</sup>	20	n.a.	20	n.a.

1. Residential Customers include: Single Family, Multi-Family with 2 or 3 Units, Outside District - Residential, & SCWA Residential customers. Commercial Customers include Multi-Family Residential with 4+ units.
2. Meter Count data is based on the District's customer billing data for FY'20/21.
3. Residential and Commercial Customers include projected growth of 0.92%/year for 2 years.
4. Hydrants are temporary meters and not considered a permanent part of the system. Use is unpredictable.

TABLE 31 : METER EQUIVALENT FACTORS USED IN FIXED CHARGES CALCULATIONS				
Meter Size	Standard Meters		Fire Meters	
	Meter Capacity (gpm) <sup>1</sup>	Equivalency to 5/8 inch meter	Meter Capacity (gpm) <sup>2</sup>	Equivalency to 5/8 inch meter
	<u>Displacement Meters</u>		<u>Displacement Meters</u>	
5/8 inch	20	1.00	20	1.00
3/4 inch	30	1.50	30	1.50
1 inch	50	2.50	50	2.50
1.5 inch	100	5.00	100	5.00
2 inch	160	8.00	160	8.00
	<u>Compound Class I Meters</u>		<u>Fire Service Type I &amp; II Meters</u>	
3 inch	320	16.00	350	17.50
4 inch	500	25.00	700	35.00
6 inch	1,000	50.00	1,600	80.00
8 inch	1,600	80.00	2,800	140.00
	<u>Turbine Class II Meters</u>		<u>Turbine Class II Meters</u>	
10 inch	4,200	210.00	4,200	210.00
12 inch	5,300	265.00	5,300	265.00

1. Per AWWA M-1, Table B-2.
2. Per AWWA M-6, Table 5-3.

TABLE 34 : CALCULATION OF BI-MONTHLY FIXED METER SERVICE CHARGES FOR FY 2022/23											(30% Fixed / 70% Variable)	
Number of Meters by Class and Size <sup>1</sup>	Bi-Monthly Service Charges for FY 2022/23											Total
	5/8 inch	3/4 inch	1 inch	1.5 inch	2 inch	3 inch	4 inch	6 inch	8 inch	10 inch	12 inch	
Annual Fixed Costs Allocated to Bi-Monthly Meter Charges												
Customer Costs	\$ 115,125											
Capacity Costs												
Residential (Incl. MFR 2 & 3 Units)	\$ 1,417,768											
Commercial/MFR 4+	\$ 467,107											
Institutional	\$ 101,224											
Irrigation	68,053											
<b>Total Fixed Meter Costs</b>	<b>\$ 2,169,278</b>											
Bi-Monthly Fixed Service Charges												
Customer Costs (\$/Acct/2-months) <sup>2</sup>	\$2.71	\$2.71	\$2.71	\$2.71	\$2.71	\$2.71	\$2.71	\$2.71	\$2.71	\$2.71	\$2.71	
Capacity Costs (\$/Acct/2-months) <sup>3</sup>												
Residential (all) & MFR 2 & 3 Units	\$31.85	\$47.78	\$79.64	\$159.27	\$254.83	\$509.67	\$796.36	\$1,592.71	\$2,548.34	\$6,689.39	\$8,441.37	
Commercial/MFR 4+	\$63.29	\$94.94	\$158.23	\$316.47	\$506.35	\$1,012.70	\$1,582.34	\$3,164.68	\$5,063.50	\$13,291.68	\$16,772.83	
Institutional	\$60.90	\$91.36	\$152.26	\$304.52	\$487.24	\$974.48	\$1,522.62	\$3,045.25	\$4,872.39	\$12,790.03	\$16,139.80	
Irrigation	\$88.27	\$132.40	\$220.67	\$441.33	\$706.13	\$1,412.26	\$2,206.65	\$4,413.31	\$7,061.29	\$18,535.88	\$23,390.52	
Annual Revenue from Bi-Monthly Meter Charges												
Customer Charges	\$ 103,639	\$ 3,254	\$ 5,678	\$ 1,269	\$ 830	\$ 293	\$ 49	\$ 114	\$ -	\$ -	\$ -	\$ 115,125
Capacity Charges												
Residential (all) & MFR 2 & 3 Units	\$ 1,194,152	\$ 50,744	\$ 128,532	\$ 38,225	\$ 3,058	\$ 3,058	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,417,768
Commercial/MFR 4+	42,533	7,975	53,167	55,066	109,372	85,067	18,988	94,941	-	-	-	467,107
Institutional	1,462	548	6,395	9,136	26,311	11,694	9,136	36,543	-	-	-	101,224
Irrigation	3,178	6,355	22,508	10,592	16,947	8,474	-	-	-	-	-	68,053
<b>Total Revenue from Bi-Monthly Meter</b>	<b>\$ 1,344,963</b>	<b>\$ 68,876</b>	<b>\$ 216,280</b>	<b>\$ 114,287</b>	<b>\$ 156,517</b>	<b>\$ 108,585</b>	<b>\$ 28,173</b>	<b>\$ 131,597</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 2,169,278</b>

1. Meter by Class and Size are based on '20/21 customer billing data.
2. Customer costs are allocated to each customer by dividing the total customer costs by the total number of customers.
3. Capacity costs are allocated by meter size and the hydraulic capacity of the meter.

Number of Meters by Class and Size (1)	Number of Meters - FY 2022/23											Total
	5/8 inch	3/4 inch	1 inch	1.5 inch	2 inch	3 inch	4 inch	6 inch	8 inch	10 inch	12 inch	
Fire Lines	-	-	-	-	-	-	3	10	5	2	-	20
<b>Total Meters/Accounts</b>	-	-	-	-	-	-	3	10	5	2	-	20
<b>Hydraulic Capacity Factor<sup>2</sup></b>	<b>1.00</b>	<b>1.50</b>	<b>2.50</b>	<b>5.00</b>	<b>8.00</b>	<b>17.50</b>	<b>35.00</b>	<b>80.00</b>	<b>140.00</b>	<b>210.00</b>	<b>265.00</b>	
<b>Total Equivalent Meters</b>	-	-	-	-	-	-	105	800	700	420	-	2,025
<b>Bi-Monthly Service Charges for FY 2022/23</b>												
Customer Costs (\$/Acct/2-months) (	\$2.71	\$2.71	\$2.71	\$2.71	\$2.71	\$2.71	\$2.71	\$2.71	\$2.71	\$2.71	\$2.71	
Capacity Costs (\$/Acct/2-months) (4	\$2.92	\$4.38	\$7.30	\$14.59	\$23.35	\$51.07	\$102.14	\$233.46	\$408.55	\$612.82	\$773.33	
<b>Total Bi-Monthly Meter Charge</b>	<b>\$5.63</b>	<b>\$7.09</b>	<b>\$10.01</b>	<b>\$17.30</b>	<b>\$26.06</b>	<b>\$53.78</b>	<b>\$104.85</b>	<b>\$236.17</b>	<b>\$411.26</b>	<b>\$615.54</b>	<b>\$776.04</b>	
<b>Annual Fixed Costs Allocated to Bi-Monthly Meter Charges</b>												
Customer Costs	\$ 325					\$ 51.07	\$ 102.14	\$ 233.46	\$ 408.55	\$ 612.82		
Capacity & Fire Protection Costs	35,456											
<b>Total Fixed Meter Costs</b>	<b>\$ 35,782</b>											
<b>Annual Revenue from Bi-Monthly Meter Charges</b>												
Customer Charges	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 49	\$ 163	\$ 81	\$ 33	\$ -	\$ 325
Capacity Charges	-	-	-	-	-	-	1,838	14,007	12,256	7,354	-	35,456
<b>Total Revenue from Bi-Monthly Met</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 1,887</b>	<b>\$ 14,170</b>	<b>\$ 12,338</b>	<b>\$ 7,386</b>	<b>\$ -</b>	<b>\$ 35,782</b>

1. Meter by Class and Size are based on May & June 2017 customer billing data.
2. Fire Service hydraulic capacity factors are from AWWA M-6, Table 5-3.
3. Customer costs are allocated to each customer by dividing the total customer costs by the total number of customers.
4. Capacity costs are allocated by meter size and the hydraulic capacity of the meter.

TABLE 44 : WATER SUPPLY BY SOURCE - CY 2020

Water Source of Supply (Acre Feet) CY 2020	January	February	March	April	May	June	July	August	September	October	November	December	Total
District Wells	53.04	49.52	41.43	39.68	13.30	-	39.23	39.41	28.30	57.52	43.07	69.24	473.74
Sonoma County Water Agency	78.95	77.88	122.89	129.99	185.66	244.14	335.91	259.36	230.45	259.45	166.51	134.97	2,226.15
<b>Total</b>	<b>131.99</b>	<b>127.40</b>	<b>164.32</b>	<b>169.67</b>	<b>198.96</b>	<b>244.14</b>	<b>375.14</b>	<b>298.77</b>	<b>258.75</b>	<b>316.97</b>	<b>209.58</b>	<b>204.21</b>	<b>2,699.89</b>

Data source: Annual Public Water System Statistics.

TABLE 45 : WATER SUPPLY BY SOURCE - CY 2019

Water Source of Supply (Acre Feet) CY 2019	January	February	March	April	May	June	July	August	September	October	November	December	Total
District Wells	43.14	110.65	196.75	207.74	272.45	202.14	159.21	63.50	47.18	29.79	18.16	14.70	1,365.41
Sonoma County Water Agency	367.81	291.35	258.44	279.56	374.83	496.92	858.17	223.63	217.87	261.29	203.23	162.17	3,995.27
<b>Total</b>	<b>410.95</b>	<b>402.00</b>	<b>455.19</b>	<b>487.30</b>	<b>647.28</b>	<b>699.06</b>	<b>1,017.38</b>	<b>287.13</b>	<b>265.05</b>	<b>291.08</b>	<b>221.39</b>	<b>176.86</b>	<b>5,360.68</b>

Data source: Annual Public Water System Statistics.

Water Source of Supply (Acre Feet) CY 2018	January	February	March	April	May	June	July	August	September	October	November	December	Total
District Wells	37.36	48.55	36.98	49.66	54.40	63.68	55.26	68.86	59.37	21.38	4.43	-	499.92
Sonoma County Water Agency	121.48	96.05	73.77	121.57	156.40	184.17	265.56	218.95	202.20	242.11	186.48	168.39	2,037.14
<b>Total</b>	<b>158.84</b>	<b>144.61</b>	<b>110.75</b>	<b>171.23</b>	<b>210.80</b>	<b>247.85</b>	<b>320.82</b>	<b>287.81</b>	<b>261.57</b>	<b>263.49</b>	<b>190.91</b>	<b>168.39</b>	<b>2,537.07</b>

## Summary of Residential (SFR & MFR 2-3 Units) Tier Breakpoint Analysis

(To Determine Tier 1 Breakpoint where 16% of Consumption Occurs)

Factor Used in Analysis	FY'20/21 Consumption by Range (1,000 gals.)						
	≤1	> 1 ≤ 2	> 2 ≤ 3	> 3 ≤ 4	> 4 ≤ 5	> 5 ≤ 6	> 6 ≤ 7
<i>Beginning row</i>	<i>na</i>	640	914	1,237	1,577	1,929	2,272
<i>Ending row</i>	<i>na</i>	7,199	7,199	7,199	7,199	7,199	7,199
Bi-Mo. Consum. By Range <sup>1</sup>	152	365	702	1,159	1,574	1,968	2,258
Prior Usage to Include <sup>2</sup>	0	6,559	6,285	5,962	5,622	5,270	4,927
Total Bi-Mo. Consump. (1,000 gals.)	152	6,924	6,987	7,121	7,196	7,238	7,185
Cumulative Bi-Mo. Consump. (1,000 gals.)	152	7,077	14,063	21,184	28,380	35,618	42,803
% of SFR Total <sup>3</sup>	0.15%	6.80%	6.86%	6.99%	7.06%	7.10%	7.05%
Cumulative % of SFR Total <sup>4</sup>	0.15%	6.95%	13.80%	20.80%	27.86%	34.96%	42.02%
<b>Total of All SFR Bi-Mo. Avg.</b>	<b>101,870</b>						

1. Total consumption within the noted range of cells (beginning to ending rows of worksheet).
2. All cells after the range will include an additional unit of consumption. There are 7,182 total rows.
3. Percent of Total Consumption in each range.
4. Cumulative total through current range.

Source of Supply Analysis indicates the Tier 1 Breakpoint includes 21.4% of SFR Consumption. **Use a Tier 1**



TABLE 52 : PROPOSED UNIFORM VOLUMETRIC CHARGES FOR FY 2022/23

<i>(30% Fixed / 70% Variable)</i>					
Customer Classes	Number of Meters	Water Consumption (1,000 gal./yr.) <sup>1</sup>	Total Target Rev. Req't from Volumetric Charges	Uniform Commodity Rates (\$/1,000 gal.)	Proposed Rate Structure
Residential	6,737	552,809	\$ 3,860,330	\$6.98	Uniform
Comm. (Incl. MFR ≥ 4 Units)	268	146,941	1,026,108	\$6.98	Uniform
Institutional	31	21,923	153,092	\$6.98	Uniform
Irrigation	40	15,024	104,912	\$6.98	Uniform
Fire Lines	20	100	698	\$6.98	Uniform
<b>Total</b>	<b>7,096</b>	<b>736,797</b>	<b>5,145,140</b>	<b>\$6.98</b>	
<i>Volumetric Revenue as % of Total Revenue Requirements</i>			<i>70%</i>		

1. Consumption data is based on the District's FY 2020/21 customer billing data.

<i>(30% Fixed / 70% Variable)</i>							
Tier and Supply Source	Consumption (1,000 gal.) <sup>1</sup>	Cost/AF <sup>2</sup>	Supply Unit Costs (\$/1,000 gal.)	Total Supply Costs (\$/Yr.)	Non-Supply Volumetric Costs	Total Resid. Vol. Costs	Tiered Resid. Rates
	<i>(a)</i>	<i>(b)</i>	<i>(c)</i>	<i>(a) x (c) = (d)</i>	<i>(e)</i>	<i>(d) + (e) = (f)</i>	<i>(f) ÷ (a) = (g)</i>
Tier 1 (District Wells)	131,201	\$346.27	\$1.06	\$139,401	\$461,176	\$600,577	<b>\$4.58</b>
Tier 2 (SCWA)	421,608	\$1,374.21	\$4.22	\$1,777,779	\$1,481,974	\$3,259,753	<b>\$7.73</b>
<b>Totals/Average</b>	<b>552,809</b>	<b>\$1,130.24</b>	<b>\$3.47</b>	<b>\$1,917,180</b>	<b>\$1,943,150</b>	<b>\$3,860,330</b>	<b>\$6.98</b>

1. Consumption data is based on the District's FY 2020/21 customer billing data.

2. Source of Wells cost: *District Production Records, 9/21/21*. SCWA Source: *Sonoma County Water Agency Rates for Water Deliveries in FY'21-22*.  
Per District staff, additional GSA costs of \$40/AF has been added to the District's cost of \$346.27/AF.

## APPENDIX D – COMPARISON OF COST ALLOCATION FACTORS

Cost allocation factors are the basis for determining the amount of revenue requirements to each customer class. These factors change over time for a number of reasons, such as COVID-19 impacts, droughts, installation of drought resistant landscaping and appliances. The following tables compare the allocation factors from last rate study update in 2017/18 to the current 2021 rate study to highlight the differences, which affect the final rates calculated during the rate design tasks in the rate study.

Comparison of FY'20/21 Allocation Factors to Last Rate Study (2017/18)							
Customer Class	Volume (1,000 gal)			Peaking Factors (Max Mo/Avg.)		Customer Accounts	
	2017/18	2020/21	% Change	2017/18	2020/21	2017/18	2020/21
Residential	497,188	552,809	11%	1.51	1.49	6,647	6,737
Commercial (Incl. MFR ≥ 4 Units)	156,404	146,941	-6%	1.23	1.84	276	268
Institutional	23,926	21,923	-8%	1.73	2.68	32	31
Irrigation (Comm. & MFR)	10,677	15,024	41%	2.36	2.62	33	40
Total	688,195	736,697	7%	1.47	1.62	6,988	7,076
Fire Lines <sup>2</sup>	96	100	4%	2.00	2.05	24	20
<b>Grand Total</b>	<b>688,291</b>	<b>736,797</b>	<b>7%</b>	<b>1.47</b>	<b>1.63</b>	<b>7,012</b>	<b>7,096</b>

A few observations about the comparisons in this table are:

- **Residential Customers** – There are now more accounts and more consumption but a slightly lower peaking factor than in 2018.
- **Commercial Customers** – There are now fewer accounts but more consumption and a higher peaking factor than in 2018.
- **Institutional Customers** – There are now fewer accounts but more consumption and a significantly higher peaking factor than in 2018.
- **Irrigation Customers** – There are now more accounts, more consumption, and a higher peaking factor than in 2018.

The following table is a duplicate of the previous table except the results are show as percentages of the total.

Comparison of Allocation Factor Percentages to Last Rate Study (2017/18)						
Customer Class	Volume (% of Total)		Peaking Factors (% of Total)		Customer Accounts (% of Total)	
	2017/18	2020/21	2017/18	2020/21	2017/18	2020/21
Residential	72.2%	75.0%	74.3%	69.0%	94.8%	94.9%
Commercial (Incl. MFR ≥ 4 Units)	22.7%	19.9%	19.1%	22.7%	3.9%	3.8%
Institutional	3.5%	3.0%	4.1%	4.9%	0.5%	0.4%
Irrigation (Comm. & MFR)	1.6%	2.0%	2.5%	3.3%	0.5%	0.6%
Total	100.0%	100.0%	100.0%	100.0%	99.7%	99.7%
Fire Lines <sup>2</sup>	0.0%	0.0%	0.0%	0.0%	0.3%	0.3%
<b>Grand Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

## APPENDIX E – CALCULATION OF DROUGHT RATES

The following tables summarize the steps used to calculate drought rates, beginning with the expenses likely to decrease as the District sells less water. These cost reductions are reflected in the lower commodity rate revenue and divided by the lower total consumption to determine the uniform drought rate.

**TABLE 57 : EXPENSES IMPACTED BY MANDATED WATER CONSERVATION, IF DIRECTED BY DISTRICT BOARD**

Expense Description	Commodity Costs <sup>1</sup>				
	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27
Purchased Water	\$ 2,329,832	\$2,460,303	\$2,598,080	\$2,743,572	\$2,897,212
Utilities - PG&E	\$ 182,154	\$ 194,176	\$ 206,992	\$ 220,653	\$ 235,217
O&M - Operating Salaries	\$ 243,851	\$ 253,605	\$ 263,750	\$ 274,300	\$ 285,272
<b>Adjusted Commodity Assig</b>	<b>\$ 2,755,838</b>	<b>\$2,908,085</b>	<b>\$3,068,821</b>	<b>\$3,238,525</b>	<b>\$3,417,700</b>

1. Costs change due to expected inflation.

**TABLE 58 : YEAR 1 NET REVENUE REQTS FOR FUTURE MANDATED CONSERVATION STAGES, IF DIRECTED BY DISTRICT BOARD**

Percentage of Conservation	Total Consumption (1,000 gal.)	Base Commodity Cost	Impacted Commodity Cost	Savings	Updated Comm. Cost '22/23	Updated Comm. Cost '23/24	Updated Comm. Cost '24/25	Updated Comm. Cost '25/26	Updated Comm. Cost '26/27
<i>a</i>	<i>b</i>	<i>c</i>	<i>d = (-a) * c</i>	<i>e = b + d</i>	<i>e = b + d</i>	<i>e = b + d</i>	<i>e = b + d</i>	<i>e = b + d</i>	<i>e = b + d</i>
0%	736,797	\$ 5,145,140	\$2,755,838	\$ -	\$5,145,140	\$5,555,933	\$5,999,519	\$6,478,516	\$6,995,751
10%	663,117	\$ 5,145,140	\$2,755,838	\$ 275,584	\$4,869,556	\$5,265,124	\$5,692,637	\$6,154,664	\$6,653,981
20%	589,437	\$ 5,145,140	\$2,755,838	\$ 551,168	\$4,593,972	\$4,974,316	\$5,385,755	\$5,830,811	\$6,312,211
30%	515,758	\$ 5,145,140	\$2,755,838	\$ 826,751	\$4,318,389	\$4,683,508	\$5,078,873	\$5,506,959	\$5,970,441
40%	442,078	\$ 5,145,140	\$2,755,838	\$1,102,335	\$4,042,805	\$4,392,699	\$4,771,991	\$5,183,106	\$5,628,671
50%	368,398	\$ 5,145,140	\$2,755,838	\$1,377,919	\$3,767,221	\$4,101,891	\$4,465,108	\$4,859,254	\$5,286,901

**TABLE 59 : PROPOSED POTABLE DROUGHT RATE SUMMARY (ADJUSTED FIXED/VARIABLE COSTS)**

Drought Level	Level of Conservation	Uniform Rates (Updated Commodity Cost ÷ Drought Level Consumption)				
		FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27
No Level	Baseline <sup>1</sup>	\$6.98	\$7.54	\$8.14	\$8.79	\$9.49
Level 1	10%	\$7.34	\$7.94	\$8.58	\$9.28	\$10.03
Level 2	20%	\$7.79	\$8.44	\$9.14	\$9.89	\$10.71
Level 3	30%	\$8.37	\$9.08	\$9.85	\$10.68	\$11.58
Level 4	40%	\$9.15	\$9.94	\$10.79	\$11.72	\$12.73
Level 5	50%	\$10.23	\$11.13	\$12.12	\$13.19	\$14.35

1. Baseline level of consumption assumes adjustments for conservation to the baseline (2020) consumption.

**TABLE 60 : PROPOSED POTABLE DROUGHT RATE SUMMARY (ADJUSTED FIXED/VARIABLE COSTS)**

Drought Level	Level of Conservation	Total Consumption (1,000 gal.)	Uniform Drought Rate				
			FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27
No Level	Baseline	736,797	\$6.98	\$7.54	\$8.14	\$8.79	\$9.49
Level 1	10%	663,117	\$7.34	\$7.94	\$8.58	\$9.28	\$10.03
Level 2	20%	589,437	\$7.79	\$8.44	\$9.14	\$9.89	\$10.71
Level 3	30%	515,758	\$8.37	\$9.08	\$9.85	\$10.68	\$11.58
Level 4	40%	442,078	\$9.15	\$9.94	\$10.79	\$11.72	\$12.73
Level 5	50%	368,398	\$10.23	\$11.13	\$12.12	\$13.19	\$14.35

**TABLE 61 : PROPOSED POTABLE DROUGHT RATE SUMMARY (ADJUSTED FIXED/VARIABLE COSTS)**

Drought Level	Level of Conservation	Tiered Drought Rates (Residential Only)									
		FY 2022/23		FY 2023/24		FY 2024/25		FY 2025/26		FY 2026/27	
		Tier 1	Tier 2	Tier 1	Tier 2	Tier 1	Tier 2	Tier 1	Tier 2	Tier 1	Tier 2
No Level	Baseline	\$4.58	\$7.73	\$4.90	\$8.27	\$5.24	\$8.85	\$5.61	\$9.47	\$6.00	\$10.13
Level 1	10%	\$4.81	\$8.13	\$5.16	\$8.71	\$5.53	\$9.33	\$5.92	\$10.00	\$6.34	\$10.71
Level 2	20%	\$5.11	\$8.63	\$5.48	\$9.26	\$5.88	\$9.93	\$6.31	\$10.66	\$6.77	\$11.43
Level 3	30%	\$5.49	\$9.27	\$5.90	\$9.96	\$6.34	\$10.71	\$6.81	\$11.50	\$7.32	\$12.36
Level 4	40%	\$5.99	\$10.13	\$6.45	\$10.90	\$6.95	\$11.73	\$7.48	\$12.63	\$8.05	\$13.59
Level 5	50%	\$6.70	\$11.32	\$7.23	\$12.22	\$7.80	\$13.18	\$8.41	\$14.21	\$9.07	\$15.32

1. Baseline level of consumption assumes 2020 consumption.