

Aerial view of City of Victorville
via Google Earth



Victorville Water District

Final Report for:

Water Rate Study

May 14, 2021

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SECTION 1. BACKGROUND & PURPOSE

Victorville Water District (“District” or “Utility”) retained NBS to update the comprehensive water rate study performed in 2016 for several reasons, including meeting long-term revenue requirements, providing revenue stability and adequate funding for capital improvements, and complying with legal requirements, including Proposition 218 (Prop 218). The rates developed in this Study meet basic Prop 218 requirements and were developed in a manner that is consistent with industry standards, including recent court rulings affecting how the cost basis for water rates should be established.¹ The purpose of this report is to summarize the results of the water rate study that NBS has prepared for the District.

NBS worked cooperatively with District staff in developing the proposed water rates and rate study results. Our main objective was to focus on strategies and alternatives for meeting the District’s revenue requirements in order to fund the forecasted operational and planned capital improvement expenditures in a manner that is fiscally sustainable and complies with industry standard cost-of-service principles.

A. Overview of the Study

Key Issues Addressed – In addition to ensuring that water rates collect revenue sufficient to meet the annual operating and capital improvement plans, the key issues that were specifically addressed in this Study include:

- **Revenue Requirements and Financial Planning** – The long-range financial plan for the Utility was closely examined and adjusted to best meet annual operating expenses, capital improvement costs, annual OPEB funding requirements, and established reserve requirements.
- **Rate Structure** – The District’s rate structure was evaluated to ensure it is consistent with industry standards and addresses other key objectives. The fixed monthly charge will continue to be based on meter size which provides greater revenue stability. The District also compared a number of volumetric rate alternatives, including tiered and uniform volumetric alternatives. Given the Utility’s source of supply and costs, NBS believes the proposed 2-Tier volumetric rates for single-family residential customers with a uniform volumetric rate for all other customers is best suited for the Utility.
- **Fixed vs. Variable Charges** – The amount of revenue collected from fixed charges vs. volumetric rates was carefully examined. The proposed rate design will collect the projected water supply costs from volumetric charges and the remaining revenue requirement from fixed charges. In the first year of the rate adjustment, new rates will continue to collect 27% of revenue from fixed charges and 73% from volumetric charges but will transition to a 40% fixed/60% volumetric split by Year 5 of the proposed rates to move closer to the 53% fixed/47% volumetric split that resulted from the cost-of-service analysis. By adjusting the fixed vs. volumetric split, we are increasing revenue stability from the District’s perspective while still promoting conservation.
- **Statewide Conservation** – The State of California imposed drought-related conservation levels² (25% Statewide) back in 2015 and Victorville Water District was mandated to reduce water consumption by

¹ For example, San Juan Capistrano Court Case: Capistrano Taxpayers Association, Inc. v. City of San Juan Capistrano, Opinion G048969, Superior Ct. No 30-2012-00594579, Filed April 20, 2015.

² State Water Resources Control Board, Resolution 2015-0032.

28% beginning in April 2015. As the State may be heading into another drought, the current and projected future consumption levels were closely evaluated and incorporated into this Study.

- **Long-Term Conservation** – The assumptions and recommendations contained in this Study assume that water supplies will continue to be limited in the future and that, in the long run, customers will reduce consumption accordingly. Therefore, the drought rates developed in this Study will allow the Utility to meet its annual revenue requirements at various stages of conservation even if drought conditions worsen over the next five years. In addition to the proposed drought rates, adopting “revenue stabilization rates” is another option that would allow the Utility to offset future revenue shortfalls whether they are the result of low water sales, water conservation, unusual weather patterns, or other reasons.

Using appropriate industry standards and cost-of-service principles, NBS developed multiple water rate alternatives over the course of this Study. The recommended rate alternative presented in this report reflects input provided by District staff and the Board of Directors (“Board”).

B. Rate Study Methodology

Comprehensive rate studies, such as this one, typically include the three components outlined in **Figure 1**:

Figure 1. Primary Components of a Rate Study



These steps are intended to follow industry standards and reflect the fundamental principles of cost-of-service rate making embodied in American Water Works Association’s *Principles of Water Rates, Fees, and Charges*,³ also referred to as the M1 Manual. The rate study also addresses requirements under Proposition 218 that rates must not exceed the cost of providing the service and that rates be proportionate to the cost of providing service for all customers. In terms of the chronology of the Study, these three steps represent the order in which they were performed.

The District provided NBS with the data necessary to conduct the Study, including historical, current, and projected revenues and expenditures, number of customer accounts, and water consumption data along with other operational and capital cost information. Detailed tables and figures documenting the development of the proposed rates are provided in the *Technical Appendix*.

³ *Principles of Water Rates, Fees, and Charges, Manual of Water Supply Practices, M1 Manual, American Water Works Association (AWWA), Seventh Edition, 2017.*

Financial Plan

As a part of this rate study, NBS projected revenues and expenditures on a cash flow basis for the next ten years. The amount of rate revenue required to meet annual operating costs and maintain adequate reserves is known as the *net revenue requirement*. As current rate revenue falls short of the net revenue requirement, rate adjustments - or more accurately, adjustments in the total rate revenue collected - are recommended. This report presents an overview of the methodologies, assumptions, and data used, along with the financial plan and proposed rates developed in this Study.⁴

Water Rate Design Analysis

Rate design is typically the stage in the Study where NBS, staff, and the Board must work closely together to develop rate alternatives that will meet the District's objectives. It is important for the water utility to send proper price signals to its customers about the actual cost of their water usage through both the magnitude of the rate adjustments and the rate structure design. In other words, both the amount of revenue collected and the way in which the revenue is collected from customers are important.

Several criteria are typically considered in setting rates and developing sound rate structures. The fundamentals of this process have been documented in a number of rate-setting manuals, such as the American Water Works Association (AWWA) *Manual M1*. The foundation for evaluating rate structures is generally credited to James C. Bonbright in the *Principles of Public Utility Rates*,⁵ which outlines pricing policies, theories, and economic concepts along with various rate designs. The following is a simplified list of the attributes of a sound rate structure:

- Rates should be easy to understand from the customer's perspective.
- Rates should be easy to administer from the utility's perspective.
- Rates should promote the efficient allocation of the resource.
- Rates should be equitable and non-discriminating (that is, cost based).
- There should be continuity in the ratemaking philosophy over time.
- Rates should address other utility policies (e.g., encouraging conservation & economic development).
- Rates should provide month-to-month and year-to-year revenue stability.

The following are the basic rate design criteria that were considered in this Study:

Rate Structure Basics – The starting point in considering rate structures is the relationship between fixed costs and variable costs. Fixed costs typically do not vary with the amount of water consumed. Debt service and District personnel are examples of fixed costs. In contrast, variable costs, such as the cost of purchased water, chemicals, and electricity, tend to change with the quantity of water sold. Most rate structures contain a fixed, or minimum charge, in combination with a volumetric charge.

Although other objectives may be considered, the District must still meet the fundamental requirements of Prop 218. The following discussion provides the broader context for the general industry rate-study practices within which the recommended rates were developed.

⁴ More detailed tables and documentation of the rates are presented in the *Technical Appendix*.

⁵ James C. Bonbright; Albert L. Danielsen and David R. Kamerschen, *Principles of Public Utility Rates*, (Arlington, VA: Public Utilities Report, Inc., Second Edition, 1988), pp. 383-384.

Fixed Charges – Fixed charges can be called base charges, minimum monthly charges, customer charges, fixed meter charges, etc. Fixed charges for water utilities typically increase by meter size. From a financial stability perspective, if utilities recover all of their fixed costs from fixed charges and all of their variable costs from volumetric charges, fluctuations in water sales revenues are directly offset by reductions or increases in variable expenses. When rates are set in this manner, they provide the greatest revenue stability for the utility. However, other factors are often considered when designing water rates, such as community values, water conservation goals, ease of understanding, and ease of administration.

Because a large portion of water utilities' costs are typically related to system capacity, reflecting individual demands for capacity are an important factor in establishing fixed charges for customers. The District's rate structure was evaluated to improve its consistency with industry standards.

Volumetric (Consumption-Based) Charges – In contrast to fixed charges, variable costs, such as purchased water costs, the cost of electricity used in pumping water, and the cost of chemicals for treatment, tend to change with the quantity of water produced and are based on metered consumption and charged on a dollar-per-unit basis (e.g., per hundred cubic feet (HCF), which is equal to approximately 748 gallons). There are different philosophies about how variable charges should be set:

Uniform (Single-Tier) Water Rates – Under a uniform (single-tier) rate structure, the cost per unit does not change with consumption and provides a simple and straightforward approach from the perspective of customer understanding and rate administration.

Multi-Tiered Water Rates – Multi-tiered rates use an inclining block rate structure to send a price signal to customers that their consumption costs increase as more water is consumed; this is considered to be a more conservation-oriented rate structure. Tiered water rates are encouraged by state law and regulatory mandates but are also intended to proportionately allocate the higher costs of serving those customers whose higher water usage places proportionately greater demands and burdens on an agency's water system and water supplies and, therefore, generate higher costs to the utility. The types of higher costs reflected in the higher tiered rates may include:

- Sources of Supply – Higher-cost supplies needed to serve higher demand and cost more to purchase, produce, treat, deliver, and/or supply.
- Conservation Program Costs – Programs intended to encourage customers to eliminate inefficient and wasteful water use, and otherwise reduce consumption during peak periods.
- Energy Costs – During summer months, the District may pay more in electric charges and have a higher percentage of its energy bill in higher electricity "tiers."
- Higher Maintenance Costs – Peak periods tend to have higher numbers of service calls and system maintenance issues when the water system is running at peak demand.

Several volumetric rate alternatives were developed and evaluated, including tiered and uniform volumetric alternatives. Given its cost profile, NBS believes the proposed tiered-rate structure for single family residential customers with a uniform volumetric rate for all other customers is the best suited volumetric rate structure for the District.

Regulatory Issues

Drought and Water Conservation – On January 17, 2014, Governor Jerry Brown declared a State of Emergency throughout California due to severe drought conditions. On April 1, 2015, the Governor issued Executive Order B-29-15 mandating statewide water conservation of 25%; the specific conservation mandate for each community in California varies from 4% - 36%. Victorville Water District was mandated to reduce water consumption by 28% beginning in April 2015. Current and projected future consumption levels were closely evaluated and incorporated into this Study.

Key Financial Assumptions

- **Funding of Water Utility Capital Projects** – The District will fund all planned capital costs using existing reserves and rate revenues. The capital projects listed in the financial plan are from the District’s 2021 Approved Water Master Plan.
- **Reserve Targets** – Reserves for operations and capital needs are set at target levels that are consistent with industry standards for utility fund management. Reserve targets used in the analysis are as follows:
 - Operating & Maintenance Reserve – Equal to 90 days of the Utility’s budgeted annual operating expenses less costs for water purchases and the High Desert Power Project.
 - Capital Rehabilitation and Replacement Reserve – Equal to a minimum of 3% of net depreciable capital assets.
 - OPEB Reserve – Equal to \$8.9 million.
- **Water Conservation** – The District is currently meeting the State’s 28% conservation requirement, and the assumptions and recommendations contained in this Study are not a short-term response to the drought. They assume that water supplies will continue to be limited in the future and that, in the long run, customers will continue to conserve, and that consumption will remain at this 28% reduction level for the five-year period.
- **Inflation and Growth Projections** - Here are the key assumptions used in the rate analysis:

COST INFLATION FACTORS	2022	2023	2024	2025	2026
Customer Growth	2.00%	2.00%	2.00%	2.00%	2.00%
Connection Fees	2.00%	2.00%	2.00%	2.00%	2.00%
Plan Check Fee	1.80%	1.80%	1.80%	1.80%	1.80%
Reimbursements - Operating Cost Recovery	5.60%	5.60%	5.60%	5.60%	5.60%
General Cost Inflation	4.00%	4.00%	4.00%	4.00%	4.00%
General Cost Inflation - Travel & Meetings	5.00%	5.00%	5.00%	5.00%	5.00%
Labor Cost Inflation	4.00%	4.00%	4.00%	4.00%	4.00%
Fuel Cost Inflation	5.00%	5.00%	5.00%	5.00%	5.00%
Utilities - Electricity/Natural Gas/Sanitation	5.00%	5.00%	5.00%	5.00%	5.00%
Utilities - Production Power	9.00%	9.00%	9.00%	9.00%	9.00%
R-Cubed Water	7.00%	7.00%	7.00%	7.00%	7.00%
Admin & Bio Assessment	7.00%	7.00%	7.00%	7.00%	7.00%
Groundwater Replenishment & Makeup Obligation	10.30%	10.30%	10.30%	10.30%	10.30%
Meter Service Installation & Change Outs	4.00%	4.00%	4.00%	4.00%	4.00%

The following sections present the water rate study.

SECTION 2. WATER RATE STUDY

A. Key Water Study Issues

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

- Generating additional revenue needed to meet projected funding requirements.
- Improving revenue stability.
- Reflecting water conservation levels in response to the statewide conservation mandate.
- Developing drought rates to ensure the District will continue to meet its revenue requirements in the future if drought conditions worsen.

NBS developed various water rate alternatives as requested by District staff over the course of this Study. All rate structure alternatives relied on industry standards, cost-of-service principles, and the requirements of Prop 218. The new rates that will be implemented is ultimately the decision of the Board of Directors.

B. Water Utility Revenue Requirements

It is important for municipal utilities to maintain reasonable reserves in order to handle emergencies, fund working capital, maintain a good credit rating, and generally follow sound financial management practices. Rate increases are governed by the need to meet operating and capital costs, fund OPEB requirements, and maintain sufficient reserve funds. The current condition of the District's water utility, with regard to these objectives, is as follows:

- **Meeting Net Revenue Requirements:** For Fiscal Years 2021/22 through 2025/26, the projected net revenue requirement (i.e., total annual expenses plus rate-funded capital costs, less non-rate revenues) ranges from approximately \$23.8 million to \$37.5 million. New water rates have been developed for the next five years that will allow the Utility to adequately fund operating and planned capital expenditures, as well as meet OPEB requirements.
- **Building and Maintaining Reserve Funds:** The District should maintain sufficient reserves for the water utility. NBS recommends that the District adopt and maintain reserve levels in order to meet the following *minimum* reserve fund target levels. It is important to note that, at times, the amount in reserves can fall below or exceed the minimum reserve target due to the timing of capital expenditures that will inevitably vary from year to year.
- ✓ **Operating Reserve** – Equal to 90 days of the Utility's budgeted annual operating expenses less costs for water purchases and the High Desert Power Project which is equal to a three-month (or 25%) cash reserve for normal operations, or \$5.9 million in FY 2021/22. An operating reserve is intended to maintain financial viability in the event of any short-term fluctuation in revenues and/or expenditures, such as those caused by weather patterns, the natural inflow and outflow of cash during billing cycles, natural variability in demand-based revenue streams (e.g., volumetric charges), and – particularly in periods of economic distress – changes or trends in the age of receivables.

- ✓ **Capital Rehabilitation & Replacement Reserve** - Equal to a minimum of 3% of net depreciable capital assets which equates to a 33-year replacement cycle for capital assets, or \$4.8 million in FY 2021/22. This target serves simply as a starting point for addressing long-term capital system replacement needs, but also provides emergency funds in the case of unexpected capital costs.
- ✓ **OPEB Reserve** – The District is required to contribute funds to an OPEB reserve to fund retiree healthcare costs. Per the City of Victorville’s Finance Department, the target balance in the OPEB reserve is \$8.9 million and the financial plan is projected to meet this target. This reserve could also provide emergency funds in the case of unexpected capital needs in the future.

Figure 2 summarizes the sources and uses of funds, net revenue requirements, and the recommended annual percent increases in total rate revenue for the next five years. As this figure shows, if the District implements the recommended adjustments, the water utility will run a minimal deficit in FY 2025/26 and surpluses in the earlier years of the rate adoption period. These surpluses are then used to maintain reserves with the intent of meeting target reserve fund balances throughout the 5-year rate period.

Figure 2. Summary of Revenue Requirements

Summary of Sources and Uses of Funds and Net Revenue Requirements	Budget	Projected Rates for Adoption Period				
	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26
Sources of Water Funds						
Rate Revenue Under Prevailing Rates	\$ 29,210,200	\$ 29,794,404	\$ 30,390,292	\$ 30,998,098	\$ 31,618,060	\$ 32,250,421
Other Operating Revenues	1,591,000	1,570,940	1,600,457	1,630,563	1,661,268	1,692,586
Non-Rate Revenues	3,883,433	3,849,513	3,883,583	3,921,052	3,962,330	4,007,528
Interest Earnings	1,276,900	394,218	267,825	167,732	162,453	159,616
Total Sources of Funds	\$ 35,961,533	\$ 35,609,075	\$ 36,142,157	\$ 36,717,445	\$ 37,404,111	\$ 38,110,151
Uses of Water Funds						
Operating Expenses	\$ 31,381,157	\$ 29,564,837	\$ 31,170,950	\$ 32,883,345	\$ 34,710,362	\$ 36,661,074
Debt Service	-	-	-	-	-	-
Rate-Funded Capital Expenses	-	-	351,903	5,943,737	6,445,956	6,667,529
Total Use of Funds	\$ 31,381,157	\$ 29,564,837	\$ 31,522,853	\$ 38,827,082	\$ 41,156,318	\$ 43,328,603
Surplus (Deficiency) before Rate Increase	\$ 4,580,376	\$ 6,044,238	\$ 4,619,304	\$ (2,109,638)	\$ (3,752,207)	\$ (5,218,452)
Additional Revenue from Rate Increases ¹	-	893,832	1,850,769	2,874,361	3,968,345	5,136,656
Surplus (Deficiency) after Rate Increase	\$ 4,580,376	\$ 6,938,070	\$ 6,470,072	\$ 764,723	\$ 216,138	\$ (81,796)
Projected Annual Rate Increase	0.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Net Revenue Requirement²	\$ 24,629,824	\$ 23,750,166	\$ 25,770,988	\$ 33,107,736	\$ 35,370,267	\$ 37,468,873

1. Assumes new rates are implemented August 1, 2021 and subsequent increases are effective each following July 1st.

2. Total Use of Funds less non-rate revenues and interest earnings. This is the annual amount needed from water rates.

Figure 3 summarizes the sources of funding that will be used to fund the District’s Capital Improvement Program. The Utility is planning to fully cash fund the planned capital expenditures shown in this figure with a combination of capital reserves, rate revenue, and a small amount of connection fee reserves.

Figure 3. Capital Funding Summary

Capital Funding Summary	Budget	Projected CIP Funding Sources and Uses				
	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26
Sources of Capital Funding						
Connection Fee Reserves	\$ -	\$ 373,500	\$ -	\$ -	\$ -	\$ -
Capital Rehab. & Replacement Reserve	-	9,921,345	7,505,097	1,276,563	547,044	74,171
Rate Revenue	-	-	351,903	5,943,737	6,445,956	6,667,529
Total: Sources of Capital Funding	\$ -	\$ 10,294,845	\$ 7,857,000	\$ 7,220,300	\$ 6,993,000	\$ 6,741,700
Uses of Capital Funding Sources						
Planned Capital Expenditures	\$ -	\$ 10,294,845	\$ 7,857,000	\$ 7,220,300	\$ 6,993,000	\$ 6,741,700
Total: Uses of Capital Funding	\$ -	\$ 10,294,845	\$ 7,857,000	\$ 7,220,300	\$ 6,993,000	\$ 6,741,700
Surplus / (Deficiency)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

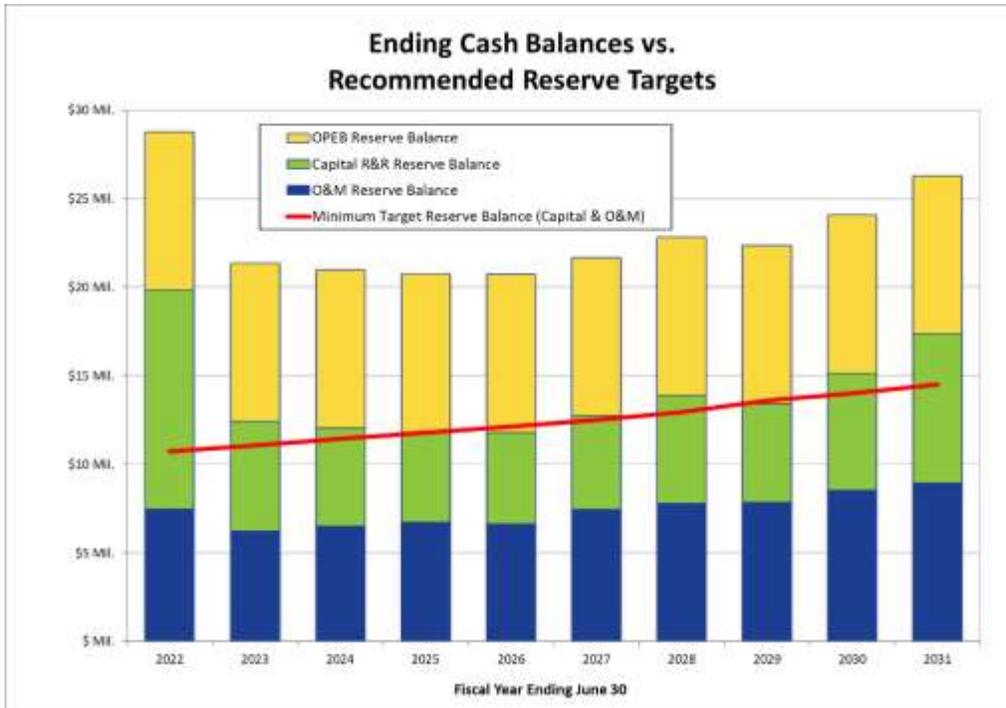
Figure 4 summarizes the projected reserve fund balances and reserve targets for the next five years, which indicates that the Utility will continue to meet most of its overall target reserve fund levels during the 5-year rate adoption period.

Figure 4. Summary of Water Reserve Funds

Beginning Reserve Fund Balances and Recommended Reserve Targets	Budget	Rate Adoption Period				
	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26
Unrestricted Reserves						
Operating Reserve						
Ending Balance	\$ 9,135,476	\$ 7,465,956	\$ 6,216,137	\$ 6,499,087	\$ 6,715,225	\$ 6,633,429
<i>Recommended Minimum Target</i>	<i>6,521,726</i>	<i>5,946,970</i>	<i>6,216,137</i>	<i>6,499,087</i>	<i>6,796,814</i>	<i>7,110,190</i>
Capital Rehabilitation & Replacement Reserve						
Ending Balance	\$ 20,065,881	\$ 12,372,897	\$ 6,208,463	\$ 5,534,444	\$ 5,108,171	\$ 5,154,771
<i>Recommended Minimum Target</i>	<i>4,621,700</i>	<i>4,782,600</i>	<i>4,867,800</i>	<i>4,931,900</i>	<i>4,987,400</i>	<i>5,034,000</i>
OPEB Reserve						
Ending Balance	\$ 8,946,000	\$ 8,946,000	\$ 8,946,000	\$ 8,946,000	\$ 8,946,000	\$ 8,946,000
<i>Recommended Minimum Target</i>	<i>8,946,000</i>	<i>8,946,000</i>	<i>8,946,000</i>	<i>8,946,000</i>	<i>8,946,000</i>	<i>8,946,000</i>
Total Ending Balance (Unrestricted Reserves)	\$ 38,147,358	\$ 28,784,854	\$ 21,370,600	\$ 20,979,531	\$ 20,769,396	\$ 20,734,200
Total Recommended Minimum Target	\$ 20,089,426	\$ 19,675,570	\$ 20,029,937	\$ 20,376,987	\$ 20,730,214	\$ 21,090,190

Figure 5 shows a 10-year projection of reserve fund balances compared to recommended minimum reserve targets for the Utility’s unrestricted reserve funds. Even though the reserves will continue to fund the capital improvement projects over the next ten years, this figure demonstrates that the Utility can also fund all operating and maintenance expenses while maintaining total reserve balances at or near the minimum target reserve fund levels through FY 2030/31.

Figure 5. 10-Year Reserve Fund Projection



A significant assumption in the capital improvement expenditures is the Utility’s plan to buy additional permanent water rights; the capital replacement reserves would fund the purchase of up to \$13 million in water rights over the next ten years depending on availability. If this happens it would help offset the higher costs of supplies incurred by the Utility when it pays replacement charges and the additional water rights would increase the Utility’s reliable sources at lower costs.

C. Capital Improvement Program

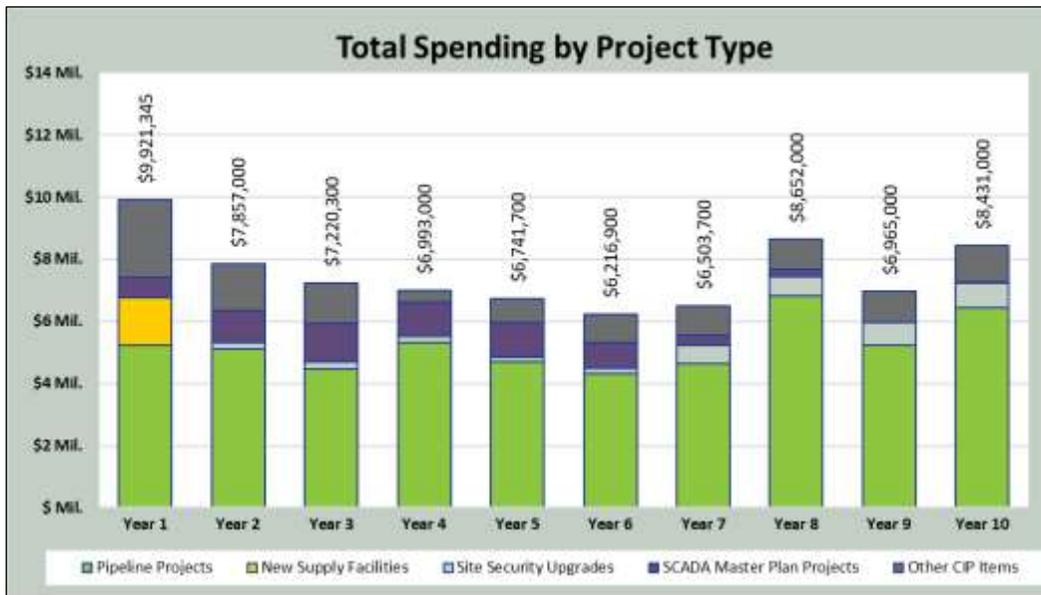
After the District’s extensive review of the capital improvement projects (CIP) and funding requirements, the 5-year Capital Improvement Program from the 2021 Water Master Plan has approximately \$50.8 million in total planned project costs of which \$38.7 million are capital costs to be completed by the end of FY 2025/26. The District is planning to cash fund these projects with a combination of rate revenue, funds held in reserves, and a small amount of connection fee reserves. These capital improvement projects are designed to keep existing infrastructure in good condition and maintain current service levels. **Figure 6** and **Figure 7** show the planned CIP projects; approximately 64% of the District’s total capital project costs are for Pipelines.

Figure 6. List of Capital Improvement Projects

Project Value in Future Year Dollars												
Project Type	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Beyond Year 10	Total
Pipeline Projects	\$ 5.2	\$ 5.1	\$ 4.5	\$ 5.3	\$ 4.7	\$ 4.3	\$ 4.7	\$ 6.8	\$ 5.2	\$ 6.4	\$ 27.7	\$ 80.0
New Supply Facilities	1.5	-	-	-	-	-	-	-	-	-	-	1.5
Site Security Upgrades	-	0.2	0.2	0.2	0.2	0.2	0.6	0.6	0.7	0.8	9.4	13.1
SCADA Master Plan Projects	0.7	1.0	1.2	1.1	1.1	0.8	0.3	0.2	0.0	0.0	1.2	7.8
Other CIP Items	2.5	1.5	1.3	0.4	0.8	0.9	0.9	1.0	1.0	1.2	-	11.4
Total	\$ 9.9	\$ 7.9	\$ 7.2	\$ 7.0	\$ 6.7	\$ 6.2	\$ 6.5	\$ 8.7	\$ 7.0	\$ 8.4	\$ 38.3	\$ 113.8

Project Value in Future Year Dollars												
Project Type	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Beyond Year 10	Total
Pipeline Projects	53%	65%	62%	76%	70%	69%	71%	79%	75%	76%	72%	70%
New Supply Facilities	15%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%
Site Security Upgrades	0%	2%	3%	3%	2%	3%	9%	7%	10%	9%	25%	11%
SCADA Master Plan Projects	7%	13%	17%	16%	17%	13%	5%	3%	0%	0%	3%	7%
Other CIP Items	25%	19%	18%	5%	11%	14%	14%	11%	14%	14%	0%	10%
Total	100%	100%										

Figure 7. Total Capital Spending by Project Type



D. Characteristics of Water Customers by Class

Both consumption and the number of meters by customer class are used in allocating costs as a part of the cost-of-service analysis. The District’s most recent consumption data is summarized in **Figure 8**, peaking factors by customer class are summarized in **Figure 9**, and **Figure 10** compares the total number of meters by customer class.

Figure 8. Water Consumption by Customer Class⁶

Customer Class	FY 2019/20 Volume (hcf) ¹	% Adjustment for Conservation ²	Estimated Volume Adjusted for Conservation	Percent of Total Volume
<i>Treated Water:</i>				
Single Family Residential	5,137,740	0%	5,137,740	59.7%
Multi-Family Residential	704,920	0%	704,920	8.2%
Commercial	1,164,409	0%	1,164,409	13.5%
Irrigation	90,252	0%	90,252	1.0%
Institutional	871,050	0%	871,050	10.1%
Institutional Irrigation	362,449	0%	362,449	4.2%
Fire	3,919	0%	3,919	0.0%
Other	275,271	0%	275,271	3.2%
Total: Recurring Consumption	8,610,010	--	8,610,010	100.0%
<i>Other Non-Recurring Consumption</i>				
Commercial Flow Meter	58,247	0%	58,247	0.6%
Institutional Flow Meter	3,220	0%	3,220	0.0%
Institutional Well	5,770	0%	5,770	0.1%
Intertie	316,631	0%	316,631	3.5%
Total Non-Recurring Consumption	383,868	--	383,868	4.3%
Grand Total Consumption	8,993,878	--	8,993,878	--

1. Consumption data is based on the VWD customer data. Source file: 2019-20 Customer Data.xlsx.

2. Assumes 0% conservation from FY 2019/20 consumption levels.

3. Assumes the District will meet the 28% conservation mandate from the State of CA, as noted in the draft usage analysis released 4/28/2015 by the State Water Resources Control Board.

Figure 9. Peaking Factors by Customer Class

Development of the CAPACITY (MAX MONTH) Allocation Factors				
Customer Class	Average Monthly Use (hcf)	Peak Monthly Use ¹ (hcf)	Peak Month Factor	Max Month Capacity Factor
<i>Treated Water:</i>				
Single Family Residential	428,145	597,411	1.40	58.4%
Multi-Family Residential	58,743	79,302	1.35	7.8%
Commercial	97,034	120,991	1.25	11.8%
Irrigation	7,521	12,321	1.64	1.2%
Institutional	72,588	108,208	1.49	10.6%
Institutional Irrigation	30,204	63,194	2.09	6.2%
Fire	327	603	1.85	0.1%
Other	22,939	40,379	1.76	3.9%
Total: Recurring Consumption	717,501	1,022,409	1.42	100%
<i>Other Non-Recurring Consumption</i>				
Commercial Flow Meter	4,854	8,509	1.75	0.8%
Institutional Flow Meter	268	464	1.73	0.0%
Institutional Well	481	1,254	2.61	0.1%
Intertie	26,386	67,334	2.55	6.1%
Total Non-Recurring Consumption	31,989	77,561	2.42	7.1%

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

⁶ Due to drought conditions, this analysis assumes that water consumption will remain at the 28% reduction level as required by the State's mandate, and that this is essentially the "new normal" for water consumption levels in the District.

Figure 10. Number of Meters by Customer Class

Development of the Customer Allocation Factor		
Customer Class	Number of Meters	Percent of Total
<i>Treated Water:</i>		
Single Family Residential	33,212	91.12%
Multi-Family Residential	758	2.08%
Commercial	1,267	3.48%
Irrigation	138	0.38%
Institutional	227	0.62%
Institutional Irrigation	227	0.62%
Fire	613	1.68%
Other ¹	7	0.02%
Total: Recurring Consumption	36,449	100.00%
<i>Other Non-Recurring Consumption²</i>		
Commercial Flow Meter	59	0.16%
Institutional Flow Meter	17	0.05%
Institutional Well	1	0.00%
Intertie	4	0.01%
Total: Non-Recurring Meters	81	0.22%

1. Other customers consist primarily of governmental customers (the City, special districts, other agencies) and churches.

2. Commercial and Municipal Flow meters and Intertie connections are excluded from allocations of meter counts.

E. Cost-of-Service Analysis

Once the revenue requirements are determined, the cost-of-service analysis distributes those revenue requirements to each component of the water rate by allocating costs through the functionalization and classification process. This process is described as follows:

Functionalization, Classification and Allocations

Most costs are not typically allocated 100% to fixed or variable categories, but rather allocated to multiple functions of water service. The classification (i.e., functionalization) of costs provides the basis for allocating the classified costs to the following cost causation components:

- **Base Commodity Related Costs** - Costs associated with the total consumption of water over a specified period of time (e.g., annual).
- **Capacity Related Costs** - Costs associated with the maximum demand required at one point in time or the maximum size of facilities required to meet this demand.
- **Customer Related Costs** - Costs associated with having a customer on the water system, such as meter reading, postage, and billing.
- **Fire Protection Costs** - Costs associated with providing sufficient capacity in the system for fire meters and other operating and maintenance costs of providing water to properties for private fire service protection.

Once costs have been organized into the District’s budget categories, they are allocated to these cost causation components that are used as the basis for establishing new water rates and, ultimately, translate into the proposed fixed and variable charges. Additional details on how the District’s expenses were classified and allocated to these cost causation components are available in the *Technical Appendix*.

Figure 11 and **Figure 12** show how costs are distributed to each cost component of the water rate. Commodity related costs are distributed to customers based on the amount of water consumed (refer to Figure 8). Capacity and customer related costs are distributed to customers based on the number of meters by size. A direct allocation is made in the functionalization and classification process to commercial fire which reflects their share of system-wide costs.

Figure 11. Percentage of Classification Components for Proposed Rate Period

Classification Components	Cost-of-Service Split	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26
Commodity-Related Costs	47%	73%	70%	67%	63%	60%
Capacity-Related Costs	43%	21%	24%	27%	29%	32%
Customer-Related Costs	9%	4%	5%	6%	6%	7%
Fire Protection-Related Costs	1%	1%	1%	1%	1%	1%
Net Revenue Requirement	100%	100%	100%	100%	100%	100%

Figure 12. Allocation of Target Rate Revenue - FY 2021/22 through 2025/26

Classification Components	Cost-of-Service Split	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26
Commodity-Related Costs	\$ 14,572,720	\$ 22,472,859	\$ 22,562,152	\$ 22,602,941	\$ 22,590,092	\$ 22,518,071
Capacity-Related Costs	13,065,473	6,534,499	7,731,380	9,032,655	10,445,823	11,978,878
Customer-Related Costs	2,739,070	1,369,904	1,620,821	1,893,622	2,189,882	2,511,274
Fire Protection-Related Costs	310,973	310,973	326,708	343,240	360,608	378,855
Target Rate Revenue	\$ 30,688,236	\$ 30,688,236	\$ 32,241,061	\$ 33,872,459	\$ 35,586,405	\$ 37,387,077

F. Current vs. Proposed Water Rate Structure

Although multiple rate alternatives were developed and evaluated in this Study, only the recommended alternative is presented here. The proposed new water rates will be implemented on August 1, 2021, and subsequent rate adjustments will be made on July 1st for each of the following four years. The recommended rate alternative is described in the following sections.

Fixed Charges

Currently, the District charges all customer classes a fixed monthly charge based on meter size because larger meters have the potential to use more of the system’s capacity, or said differently, they have higher system demands compared to smaller meters. The potential capacity demanded is proportional to the maximum hydraulic flow through each meter size as established by the AWWA hydraulic capacity ratios.⁷

For example, a 2-inch meter has a greater capacity, or potential demand, than a 3/4-inch meter; therefore, the fixed charge for a 2-inch meter is higher than a 3/4-inch meter based on their proportionate capacity requirements.⁸ A “hydraulic capacity factor” is calculated by dividing the maximum capacity, or flow of large

⁷ AWWA, *Principles of Water Rates, Fees and Charges: Manual of Water Supply Practices M1*, p. 386, (7th ed. 2017) and AWWA, *Water Meters – Selection, Installation, Testing and Maintenance M6*, p. 65 (5th ed. 2012).

⁸ This is reflected in the fixed charge calculations by using the AWWA hydraulic capacity factors to represent the maximum volume each meter size is capable of delivering.

meters, by the capacity of the base meter size which is typically the most common residential meter size (in this case a 3/4-inch meter).

The actual number of meters by size is multiplied by the corresponding hydraulic capacity factor to calculate the total number of equivalent meters. The number of equivalent meters is used as a proxy for the potential demand that each customer can place on the water system which dictates the sizing of the system's maximum capacity. A significant portion of a water system's peak capacity and, in turn, the utility's fixed operating and capital costs, are related to meeting system capacity requirements.

Fire service customers will still be subject to a different set of fixed charges than the other customer classes because fire service is more of a standby nature where a readiness-to-serve charge is more appropriate. Except in the event of a fire, these users are not intended to use water on a regular basis. However, the District still needs to provide sufficient capacity for fire meters and recover other operating and maintenance costs for providing water to such properties for private fire service protection. Based on the cost-of-service analysis and the standby nature of fire meters, the overall cost to serve these users is less than that of a standard service; therefore, the fixed charges are less.⁹

Volumetric Rates

Currently, the District charges all customers a uniform commodity rate (i.e., single-tier) for all water consumed (in \$/HCF). NBS recommends that the District adopt a new two-tiered volumetric rate structure for single family residential customers and continue using a uniform volumetric rate for all other customers. The two-tiered rate structure makes sense for single family customers because these customers represent a very homogenous group with similar water consumption patterns¹⁰; in contrast there are significant differences in consumption patterns among commercial customers. The proposed single-family tiered rates also support conservation and offer single family customers more control over their monthly bills. Both the tiered and uniform rates conform to the requirements of Prop 218, particularly the more stringent cost-basis required by the recent San Juan Capistrano decision.

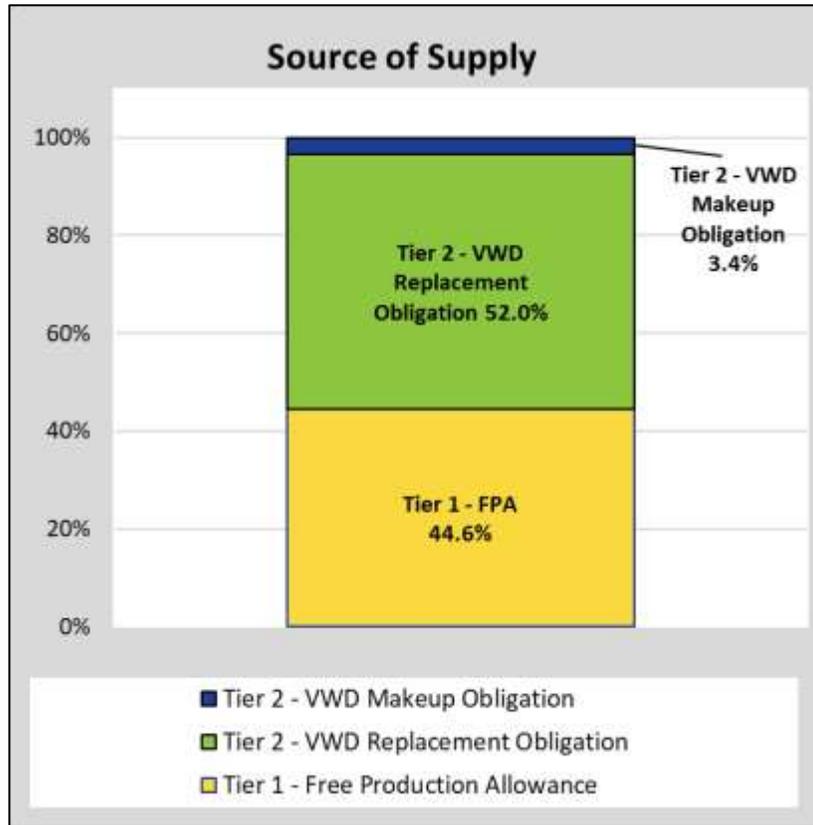
Source of Supply

In order to develop the tiered volumetric rates, the District's production costs, particularly those paid to Mojave Water Agency for groundwater replenishment and purchased water, were carefully evaluated. The new two-tiered volumetric rates are set based on the marginal costs of water supplies. For example, the District has a "Free Production Allowance" (FPA), which is the amount of groundwater that can be pumped without incurring additional replacement charges. However, when the District exceeds the FPA, a groundwater replenishment charge is incurred based on Mojave Water Agency's (MWA) costs per acre foot of water. Based on the clear cost differences between the FPA and MWA's more expensive costs for replacement and makeup water, Tier 1 consists of FPA water and Tier 2 includes the VWD Replacement and Makeup Obligation water as shown in **Figure 13**.

⁹ See Table 96 in the *Technical Appendix* for the fixed service charges for fire meters.

¹⁰ Additionally, the actual costs associated with the amount of water used in each tier is readily available and allows for a clear cost-basis for two tiers.

Figure 13. Summary of Supply Sources Allocated to Tiers



Single Family Residential Tiered Rates

In developing single family residential (SFR) tiered rates, the expected consumption in each tier and the breakpoint between Tier 1 and Tier 2 was determined. This breakpoint was set to include all FPA consumption in Tier 1 while all remaining consumption (i.e., VWD Replacement Obligation and VWD Makeup Obligation water) was included in Tier 2. **Figure 14** shows the volume of each source of supply included in the SFR tiers.

Figure 14. Allocated SFR Consumption from Each Source of Supply

Source of Supply	SFR Share of Total Production		SFR Share of Metered Consumption	
	%	CCF	(CCF)	% of Total
Free Production Allowance	59.7%	3,035,566	2,293,278	44.6%
Replacement Obligation	59.7%	3,533,384	2,669,364	52.0%
Makeup Obligation	59.7%	231,773	175,097	3.4%
Totals	--	6,800,723	5,137,740	100.0%

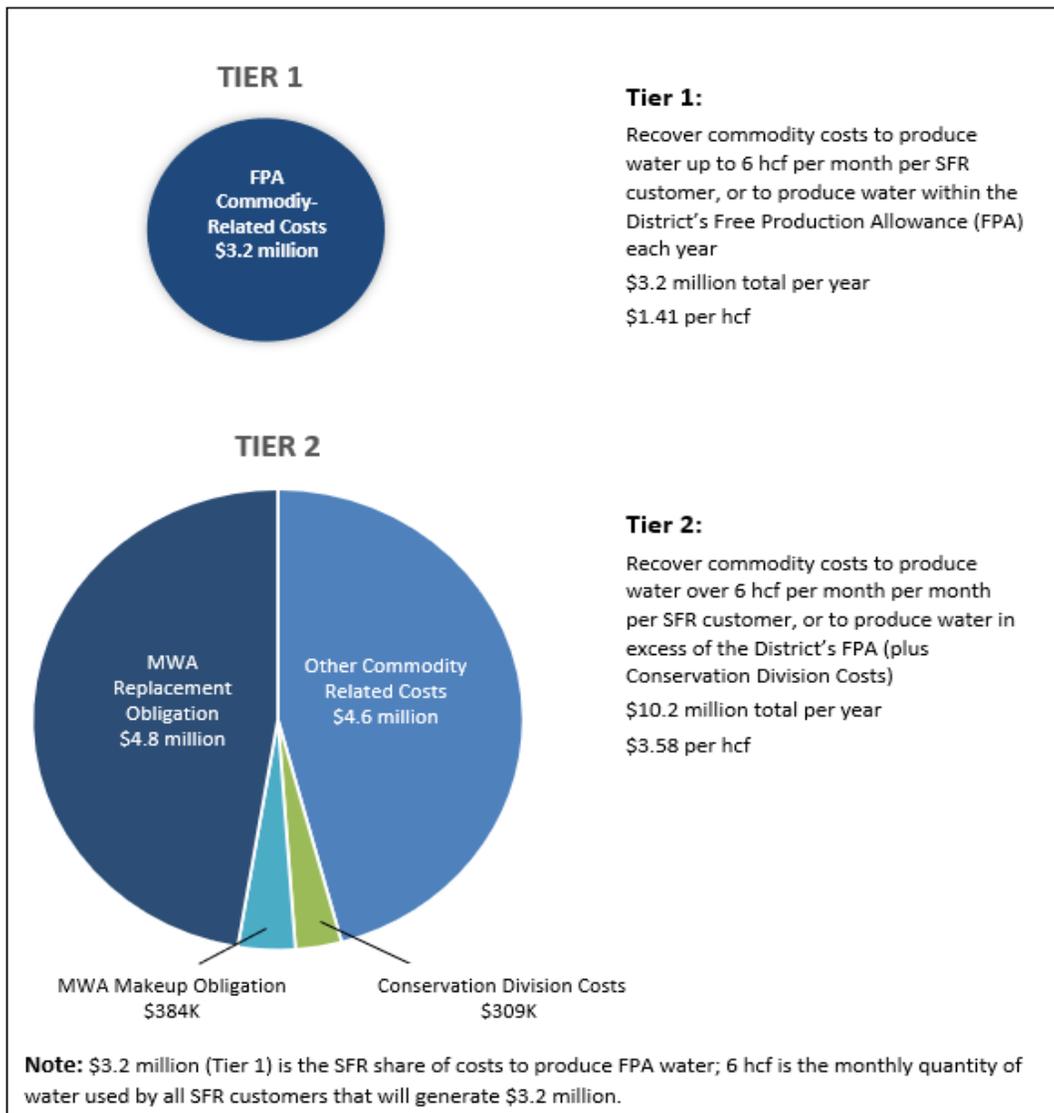
The SFR tier breakpoint accounts for the Tier 1 consumption shown in **Figure 15**. Then, the individual customer billing records were analyzed to determine the consumption level that would capture the FPA share of metered consumption, which is the 6 CCF shown in Figure 15 and explained further in **Figure 16**. The estimated consumption in Tier 1 matches closely with the allocated FPA consumption.

Figure 15. Tier Breakpoint for Single Family Residential Customers

Meter Sizes	FY 2020/21 Consumption ¹	% of Consumption	Avg. Monthly Consumption FY'20/21 (ccf) ²	Tier Breakpoint (ccf) ³
Tier 1 - Free Production Allowance	2,293,278	44.6%		6.0
Tier 2 - Replacement & Makeup Obligations	2,844,462	55.4%		
Total	5,137,740	100.0%	13.0	

- Free Production Allowance is included in Tier 1 and Replacement and Makeup Obligations are in Tier 2. The FY 2019/20 consumption data are actuals. See *Allocation Factors* Tab, Table 31.
- Annual consumption divided by total meters divided by 12 months.
- Tier 2 breakpoint is the percentage of Tier 1 consumption times the Avg. Monthly Consumption, rounded to the nearest integer in CCF.

Figure 16. Tiered Rate Structure



Once the expected consumption by tier was known, the expenses identified as commodity-related costs were spread over the expected consumption resulting in the rates show in **Figure 17**.

Figure 17. Tiered Rates for FY 2021/22 – FY 2025/26

Supply Costs for Single-Family Tiered Rates	Allocated SFR Costs	SFR Consumption ¹	Tier SFR Rates (\$/CCF)	Uniform Rate for Non-SFR ² (\$/CCF)
	(a)	(b)	(c) = (a) ÷ (b)	
(FY'21/22)				
Allocated Costs - Tier 1	\$3,228,052	2,293,278	\$1.41	\$2.61
Allocated Costs - Tier 2	\$10,181,887	2,844,462	\$3.58	
Total Commodity-Related Costs	\$13,409,939	5,137,740	--	--
(FY'22/23)				
Allocated Costs - Tier 1	\$2,757,557	2,698,281	\$1.02	\$2.57
Allocated Costs - Tier 2	\$10,705,664	4,272,546	\$2.51	
Total Commodity-Related Costs	\$13,463,221	6,970,827	--	--
(FY'23/24)				
Allocated Costs - Tier 1	\$2,485,766	2,698,281	\$0.92	\$2.52
Allocated Costs - Tier 2	\$11,001,795	4,446,483	\$2.47	
Total Commodity-Related Costs	\$13,487,561	7,144,764	--	--
(FY'24/25)				
Allocated Costs - Tier 1	\$2,180,111	2,698,281	\$0.81	\$2.47
Allocated Costs - Tier 2	\$11,299,783	4,623,997	\$2.44	
Total Commodity-Related Costs	\$13,479,894	7,322,278	--	--
(FY'25/26)				
Allocated Costs - Tier 1	\$2,154,705	2,698,281	\$0.80	\$2.42
Allocated Costs - Tier 2	\$11,282,212	4,623,997	\$2.44	
Total Commodity-Related Costs	\$13,436,917	7,322,278	--	--

1. Tier 1 is based on the percentage of Free Production Allowance; Tier 2 includes all other consumption. Volumetric rates are based on metered consumption, not total production.
2. Tiered rates only apply to single-family residential customers. All other customers pay a uniform volumetric rate, which is all volumetric costs divided by the total metered treated water consumption.

Uniform Rates

The uniform tier accounts for the expected consumption of the remaining amount of supply from all three water supplies. **Figure 18** identifies the uniform tier rate per unit of water for all non-SFR customers. The uniform tier is equal to all remaining water supply costs not allocated to SFR customers divided by all metered consumption. This is also the system-wide average cost.

Figure 18. Uniform Tier Rates for FY 2021/22

Customer Classes	Number of Meters ¹	Water Consumption (hcf/yr.)	Target Rev. Req't. from Vol. Charges	% of Total Rate Revenue	Uniform Commodity Rates (\$/hcf)	Proposed Rate Structure
<i>Treated Water:</i>						
Single Family Residential	33,212	5,137,740	\$ 13,409,939	44%	\$2.61	<i>Tiered</i>
Multi-Family Residential	758	704,920	1,839,901	6%	\$2.61	<i>Uniform</i>
Commercial	1,267	1,164,409	3,039,207	10%	\$2.61	<i>Uniform</i>
Irrigation	138	90,252	235,565	1%	\$2.61	<i>Uniform</i>
Institutional	227	871,050	2,273,515	7%	\$2.61	<i>Uniform</i>
Institutional Irrigation	227	362,449	946,023	3%	\$2.61	<i>Uniform</i>
Fire	613	3,919	10,229	0%	\$2.61	<i>Uniform</i>
Other	7	275,271	718,481	2%	\$2.61	<i>Uniform</i>
Total	36,449	8,610,010	\$ 22,472,859	73%		

1. Number of meters is based on the number of customers billed a fixed and/or variable charge in June 2020 except for institutional well, flow, and intertie customers. Source file: 2019-20 Customer Data.xlsx.

Current and Proposed Water Rates

Figure 19 provides a comparison of the current and proposed rates for Fiscal Years 2021/22 through 2025/26 and incorporates the rate design that transitions from the current 27% Fixed/73% Variable to the 40% Fixed/60% Variable in FY 2026/26.

Figure 19. Current and Proposed Rates

Water Rate Schedule	Current Rates	Proposed Rates				
		FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26
Projected Increase in Rate Revenue per Financial Plan:		27% Fixed / 73% Variable	30% Fixed / 70% Variable	33% Fixed / 67% Variable	37% Fixed / 63% Variable	40% Fixed / 60% Variable
Fixed Service Charge						
Fixed Service Charges:						
3/4 inch	\$13.36	\$15.24	\$17.68	\$20.25	\$22.96	\$25.81
1 inch	\$21.09	\$23.31	\$27.04	\$30.97	\$35.12	\$39.48
1.5 inch	\$40.41	\$43.49	\$50.45	\$57.78	\$65.51	\$73.66
2 inch	\$63.60	\$67.71	\$78.54	\$89.96	\$101.99	\$114.67
3 inch	\$125.44	\$132.28	\$153.44	\$175.75	\$199.26	\$224.03
4 inch	\$195.01	\$204.93	\$237.71	\$272.27	\$308.69	\$347.06
6 inch	\$388.25	\$406.72	\$471.78	\$540.38	\$612.67	\$688.81
8 inch	\$1,083.92	\$1,133.18	\$1,314.45	\$1,505.58	\$1,706.99	\$1,919.12
10 inch	\$1,624.99	\$1,698.21	\$1,969.86	\$2,256.28	\$2,558.12	\$2,876.03
Fire Fixed Service Charges:						
3/4 inch	\$2.63	\$3.13	\$3.63	\$4.16	\$4.72	\$5.30
1 inch	\$3.20	\$4.14	\$4.67	\$5.23	\$5.83	\$6.45
1.5 inch	\$4.64	\$5.15	\$5.71	\$6.31	\$6.93	\$7.59
2 inch	\$6.37	\$6.36	\$6.96	\$7.60	\$8.26	\$8.96
3 inch	\$11.83	\$10.19	\$10.92	\$11.68	\$12.47	\$13.30
4 inch	\$21.90	\$17.26	\$18.20	\$19.19	\$20.22	\$21.30
6 inch	\$47.78	\$35.42	\$36.94	\$38.52	\$40.16	\$41.86
8 inch	\$82.30	\$59.63	\$61.91	\$64.28	\$66.74	\$69.28
10 inch	\$128.31	\$91.91	\$95.22	\$98.64	\$102.18	\$105.84
Commodity Charges for All Water Consumed (per hcf)						
Rate Per hcf of Water Consumed:						
<u>Single Family Residential*</u>						
Tier 1	\$2.35	\$1.41	\$1.02	\$0.92	\$0.81	\$0.80
Tier 2	--	\$3.58	\$2.51	\$2.47	\$2.44	\$2.44
<u>All Other Customers</u>						
Flow Meter / Intertie / Well	\$3.51	\$3.56	\$3.67	\$3.78	\$3.89	\$4.01

Drought Rates

If the drought worsens, the District may experience reduced water sales due to conservation, which could be offset by using drought rates. Given the nature of the District's source of supply costs, we can assume that the first water to be reduced will be the most expensive Mojave Basin Area (MWA) water that incurs replenishment and makeup charges. Because of this, cost savings from reduced production would largely offset revenue losses until conservation exceeds 20% conservation. Therefore, drought rates would only be implemented if conservation reached or exceeded 20%.

At the point where conservation exceeds 20%, drought rates would ensure the District collects sufficient revenue to cover costs. However, after Year 2 the revenue losses from drought reductions will be offset by cost reductions for several reasons:

1. Fixed charge revenue increases from 27% to 40% by rate design, thereby increasing the amount of revenue not subject to reductions,
2. Volumetric rate revenue only minimally increases as the percent of volumetric rates drop from 73% to 60%, thereby decreasing the amount of revenue subject to reductions, and
3. The inflation rate for water production costs goes up by more than inflation for volumetric rate revenues, thereby increasing the amount of avoided costs due to lower production levels.

The District can implement drought rates at various conservation levels that range from 20% through 50%, in 10% increments as shown in **Figure 20**. However, due to the higher marginal cost savings, drought rates would not be needed after Year 2.

Figure 20. Drought Rates

Drought Rate Schedule	Current Rates	Proposed Rates				
		FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26
Increases in Rate Rev. per Financial Plan:		27% Fixed / 73% Variable	30% Fixed / 70% Variable	33% Fixed / 67% Variable	37% Fixed / 63% Variable	40% Fixed / 60% Variable
Rates for Single Family Residential Tier 1 Water Consumed (per hcf)¹						
Conservation Level Compared to FY 2019/20						<i>After year 2, revenue losses from drought reductions are offset by marginal cost reductions</i>
20%	N.A.	\$1.45	\$1.03			
30%	N.A.	\$1.48	\$1.04			
40%	N.A.	\$1.53	\$1.05			
50%	N.A.	\$1.59	\$1.07			
Rates for Single Family Residential Tier 2 Water Consumed (per hcf)¹						
Conservation Level Compared to FY 2019/20						<i>After year 2, revenue losses from drought reductions are offset by marginal cost reductions</i>
20%	N.A.	\$3.63	\$2.52			
30%	N.A.	\$3.66	\$2.53			
40%	N.A.	\$3.70	\$2.54			
50%	N.A.	\$3.76	\$2.56			
Rates for Standard Domestic & Public Benefit Use Water Consumed (per hcf)¹						
Conservation Level Compared to FY 2019/20						<i>After year 2, revenue losses from drought reductions are offset by marginal cost reductions</i>
20%	N.A.	\$2.66	\$2.73			
30%	N.A.	\$2.69	\$2.74			
40%	\$2.53	\$2.73	\$2.75			
45%	\$2.75	N.A.	N.A.			
50%	\$3.02	\$2.79	\$2.77			
55%	\$3.35	N.A.	N.A.			
60%	\$3.76	N.A.	N.A.			
Rates for Construction Flow Meter/Filler Spout Water/Inertie (per hcf)¹						
Conservation Level Compared to FY 2019/20						<i>After year 2, revenue losses from drought reductions are offset by marginal cost reductions</i>
20%	N.A.	\$3.61	\$3.68			
30%	N.A.	\$3.64	\$3.69			
40%	\$3.92	\$3.69	\$3.70			
45%	\$4.27	N.A.	N.A.			
50%	\$4.69	\$3.75	\$3.72			
55%	\$5.20	N.A.	N.A.			
60%	\$5.85	N.A.	N.A.			

1. Drought surcharges will apply to all consumption, if conservation is at or above 20% from FY 2019/20 baseline consumption levels.

Revenue Stabilization Rates

In lieu of the proposed drought rates, the District may want to consider adopting “revenue stabilization rates.” These rates stabilize volumetric rate revenue caused by low water sales, whether due to conservation or unseasonally cool weather. Here is how the revenue stabilization mechanism works:

- **Implementation** – Once adopted, they are automatically “turned on” whenever monthly volumetric revenues drop by 10% or more (i.e., *the Board would not need to act*).
- **Reversible** – When water sales revenue returns to expected levels, the revenue stabilization rates are automatically “turned off.”
- **Public Notification** – The District provides adequate notice prior to rates being turned on or off.
- **Volumetric Rates** – The revenue stabilization rates are current rates increased by percentages tied to revenue losses of 10% or more.

Comparison of Historical Water Rates

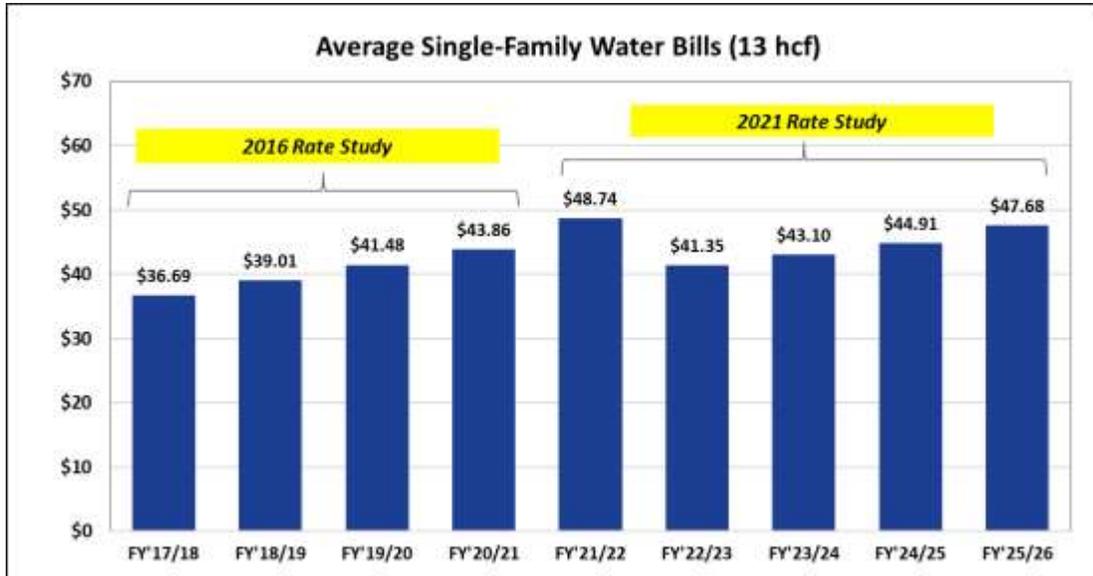
The previous rate study recommended annual rate increases of 6.25% for FY 2017/18 through FY 2020/21 compared to the 3% annual rate increases recommended herein for FY 2021/22 through FY 2025/26. However, the recommended use of tiered rates for single family residential customers is a significant change in the rate structure in terms of its impact on customer bills as shown in **Figure 21** and **Figure 22**. These figures summarize the single-family rates over this period and the average monthly water bills based on the current average annual consumption of 13 HCF/month.¹¹

Figure 21. Comparison of Single-Family Water Rates FY 2017/18 – FY 2025/26

SFR Rates	2016 Rate Study				2021 Rate Study				
	FY'17/18	FY'18/19	FY'19/20	FY'20/21	FY'21/22	FY'22/23	FY'23/24	FY'24/25	FY'25/26
	27% Fixed / 73% Variable	30% Fixed / 70% Variable	33% Fixed / 67% Variable	37% Fixed / 63% Variable	40% Fixed / 60% Variable				
	6.25%	6.25%	6.25%	6.25%	3.00%	3.00%	3.00%	3.00%	3.00%
Fixed	\$12.23	\$12.68	\$13.15	\$13.36	\$15.24	\$17.68	\$20.25	\$22.96	\$25.81
Vol. Rate	\$1.88	\$2.03	\$2.18	\$2.35	\$1.41	\$1.02	\$0.92	\$0.81	\$0.80
Vol. Rate (Tier 2)	n.a.	n.a.	n.a.	n.a.	\$3.58	\$2.51	\$2.47	\$2.44	\$2.44
Avg. Bill (13 hcf)	\$36.69	\$39.01	\$41.48	\$43.86	\$48.74	\$41.35	\$43.10	\$44.91	\$47.68

¹¹ These comparisons are based on a typical 3/4-inch meter.

Figure 22. Commercial Customer Bill Comparison



G. Comparison of Current and Proposed Customer Bills

Figure 23, Figure 24, and Figure 25 compare monthly bills for single-family, multi-family, and commercial customers under current and proposed rates at varying levels of water consumption and different meter sizes. Additional bill comparison examples for customers with different meter sizes are available in the *Technical Appendix*.

Figure 23. Monthly Water Bill Comparison for Single Family Customers

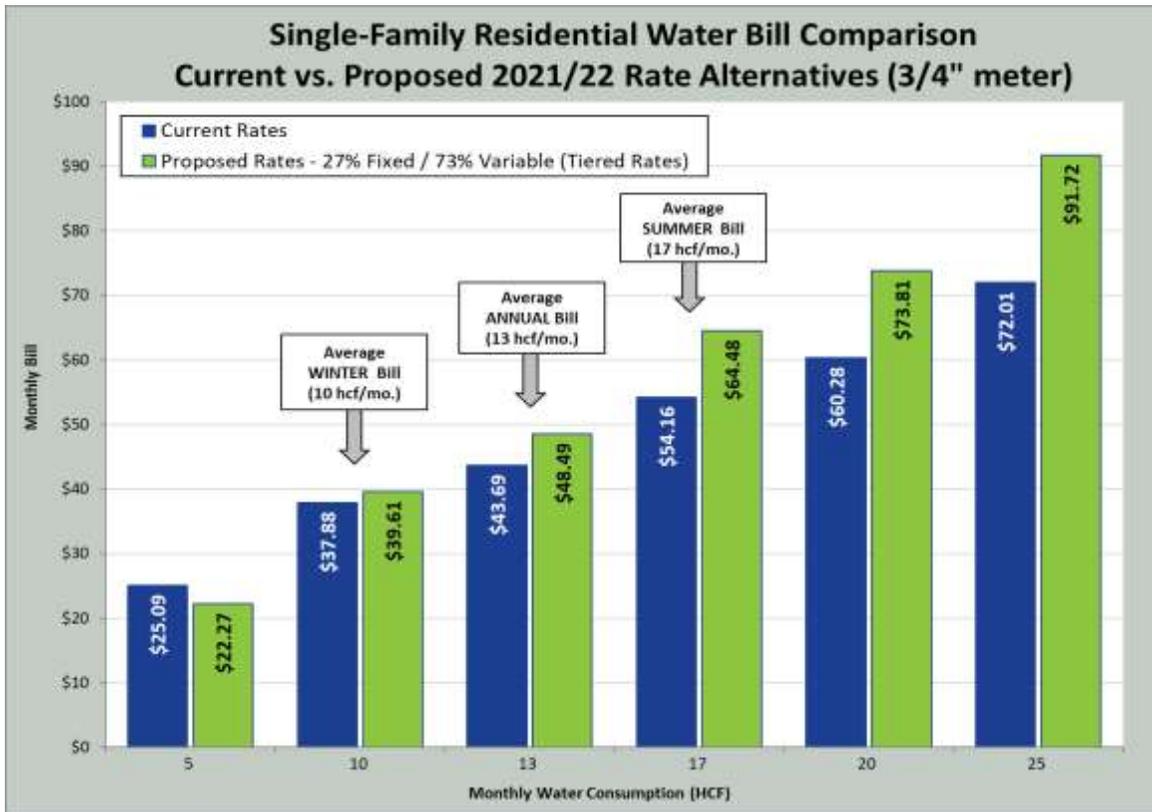


Figure 24. Monthly Water Bill Comparison for Multi-Family Customers

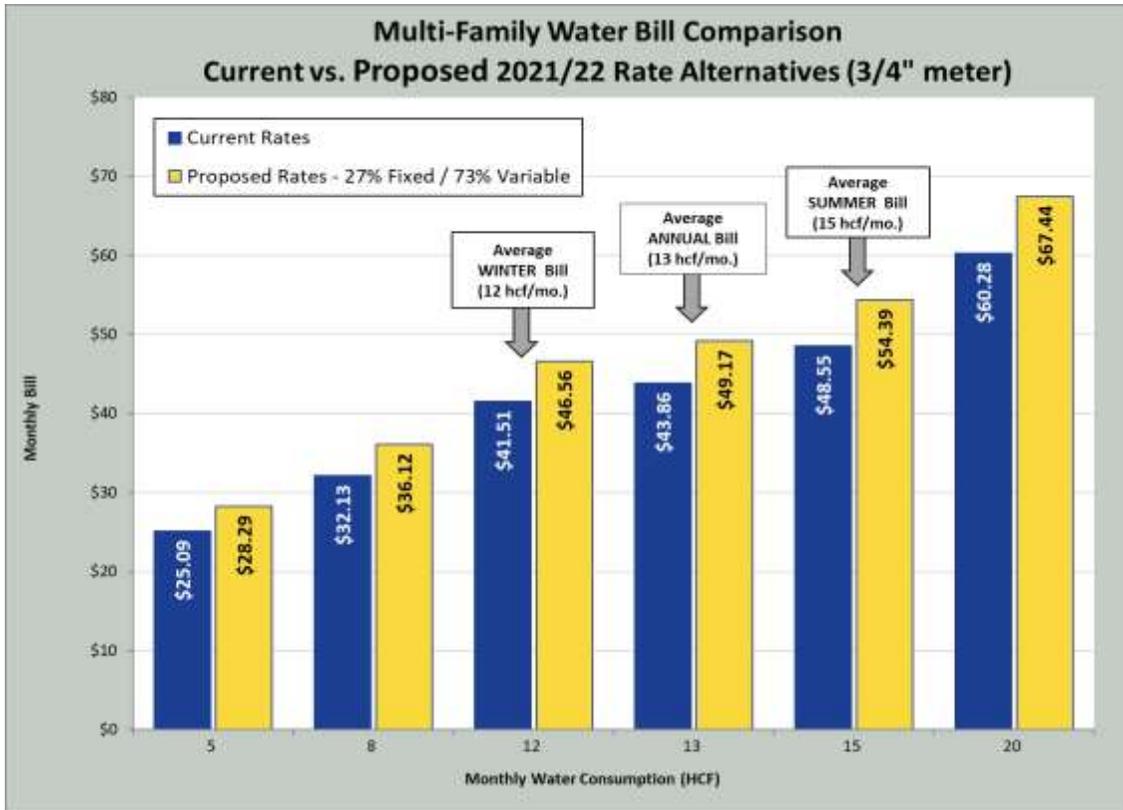
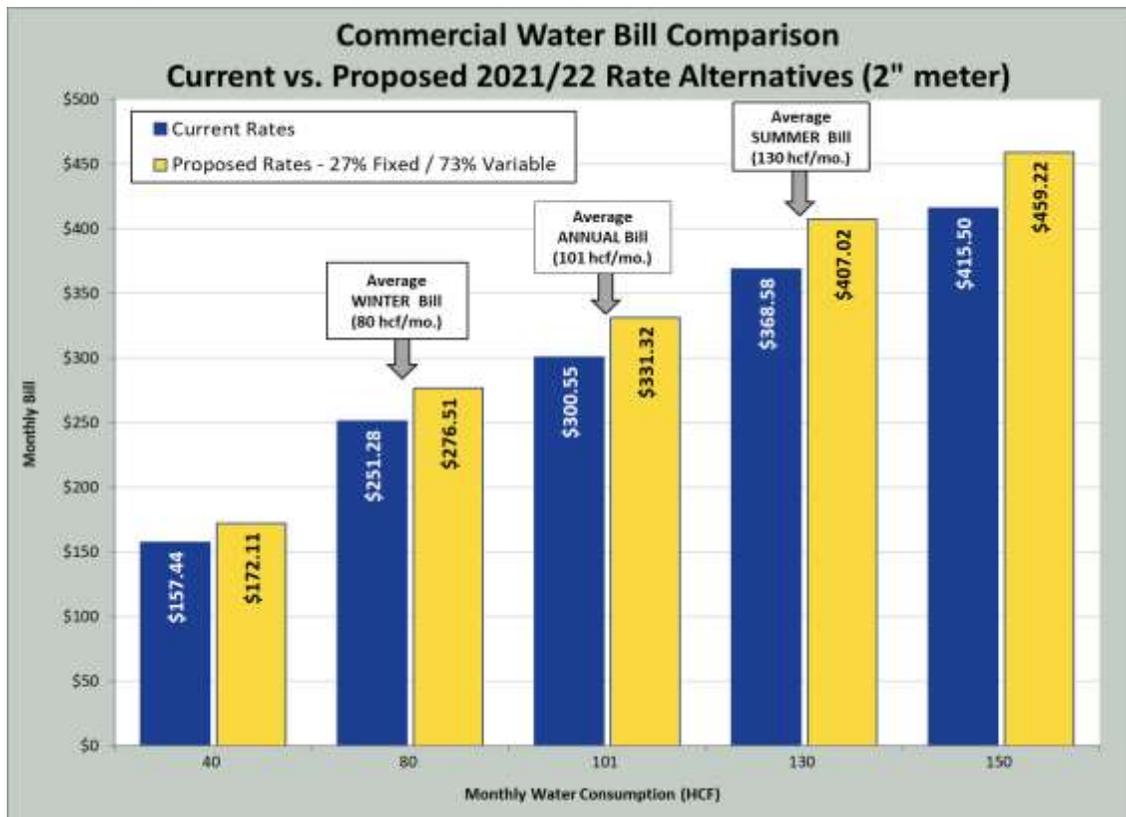


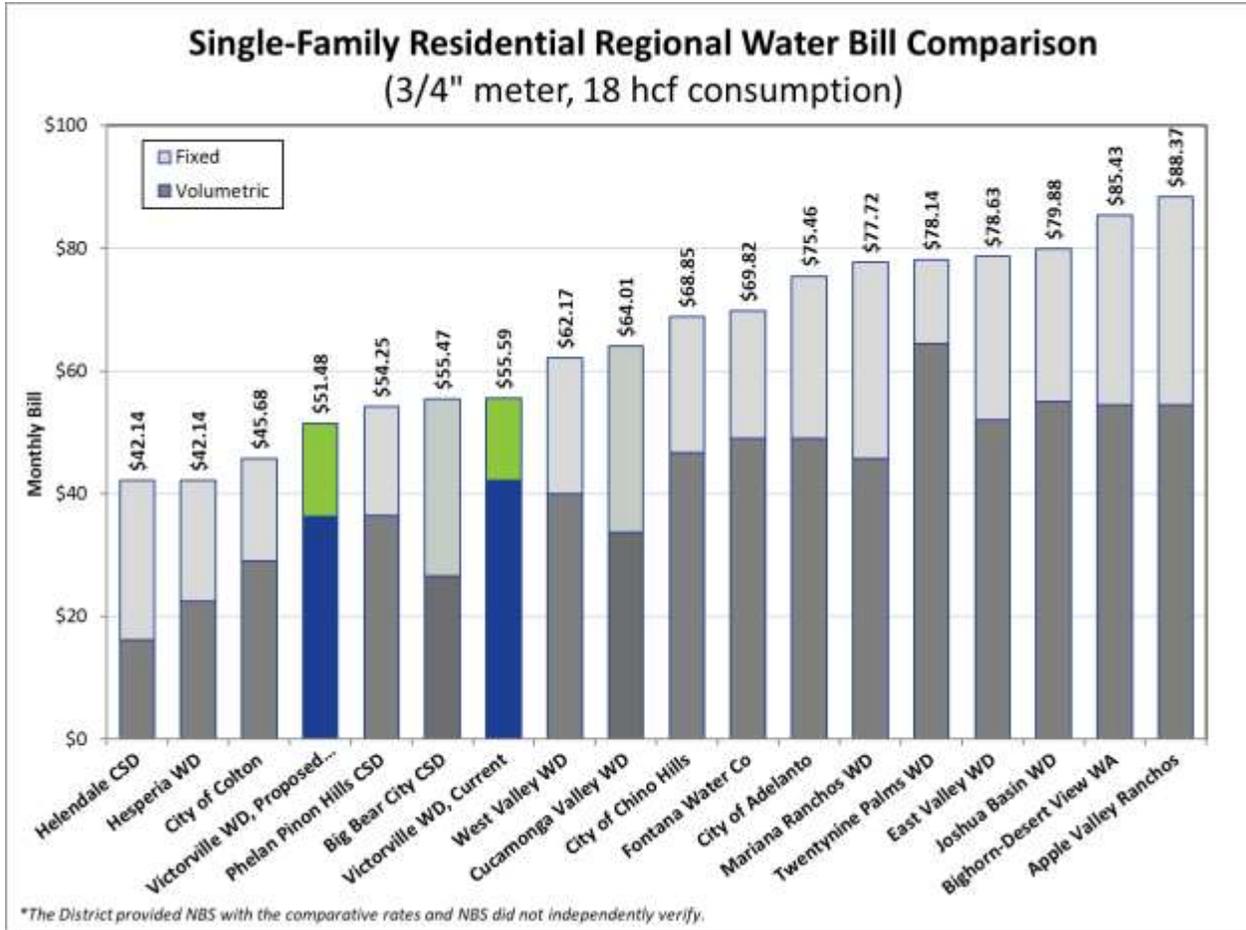
Figure 25. Monthly Water Bill Comparison for Commercial Customers



Regional Bill Comparisons

Figure 26 compares the current and proposed annual water bills for the typical single family residential customer to those of other surrounding communities.

Figure 26. Annual Regional Bill Comparisons - FY 2022/23



SECTION 3. RECOMMENDATIONS AND NEXT STEPS

A. Consultant Recommendations

NBS recommends the District take the following actions:

Approve and Accept this Study: NBS recommends the Board formally approve and adopt this study report, including the *Technical Appendix*, and its recommendations as a first step to implementing the proposed rates. This Study provides documentation of the rate study and the basis for analyzing potential changes to future rates.

Implement Recommended Levels of Rate Adjustments and Proposed Rates: Based on successfully meeting the Proposition 218 procedural requirements, the Board of Directors should proceed with implementing the 5-year schedule of proposed rates previously shown in **Figure 19** and **Figure 20**. This will help ensure the continued financial health of District's water utility.

B. Next Steps

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

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

C. NBS' Principal Assumptions and Considerations

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

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

ABBREVIATIONS & ACRONYMS

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
CA	Customer
CAP	Capacity
CCF	Hundred Cubic Feet (same as HCF); equal to 748 gallons
CCI	Construction Cost Index
CIP	Capital Improvement Program/Plan
COM	Commodity
Comm.	Commercial
COS	Cost-of-Service
COSA	Cost-of-Service Analysis
CPI	Consumer Price Index
DU	Dwelling Unit
Excl.	Exclude
ENR	Engineering News Record
EDU	Equivalent Dwelling Unit
Exp.	Expense
FY	Fiscal Year
FY 2019/20	July 1, 2019 through June 30, 2020
GPD	Gallons Per Day
GPM	Gallons Per Minute
HCF	Hundred Cubic Feet; equal to 748 gallons or 1 CCF
Ind.	Industrial
Irr.	Irrigation
LAIF	Local Agency Investment Fund
Lbs.	Pounds
MFR	Multi-Family Residential
MGD	Million Gallons Per Day
MG/L	Milligrams Per Liter
Mo.	Month

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.

ABBREVIATIONS & ACRONYMS

Muni.	Municipal
NPV	Net Present Value
N/A	Not Available or Not Applicable
O&M	Operating & Maintenance Expenses
Prop 13	Proposition 13 (1978) – Article XIII A of the California Constitution which limits taxes on real property to 1% of the full cash value of such property.
Prop 218	Proposition 218 (1996) – State Constitutional amendment expanded restrictions of local government revenue collections.
Req't.	Requirement
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
V. / Vs. /vs.	Versus

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.

TECHNICAL APPENDIX: DETAILED WATER STUDY TABLES AND FIGURES

TABLE 1: FINANCIAL PLAN AND SUMMARY OF REVENUE REQUIREMENTS

RATE REVENUE REQUIREMENTS SUMMARY ¹	Budget	Budget	Projected Rates for Adoption Period					Projected				
	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31
Sources of Water Funds												
Water Rate Revenue Under Prevailing Rates ²												
Water Sales Revenue	\$ 19,333,482	\$ 21,390,500	\$ 21,818,310	\$ 22,254,676	\$ 22,699,770	\$ 23,153,765	\$ 23,616,840	\$ 24,089,177	\$ 24,570,961	\$ 25,062,380	\$ 25,563,628	\$ 26,074,900
Readiness to Serve Revenue	7,217,219	7,819,700	7,976,094	8,135,616	8,298,328	8,464,295	8,633,581	8,806,252	8,982,377	9,162,025	9,345,265	9,532,171
Other Operating Revenues	1,315,554	1,591,000	1,570,940	1,600,457	1,630,563	1,661,268	1,692,586	1,724,529	1,757,108	1,790,337	1,824,228	1,858,795
Non-Operating Revenues	3,585,003	3,883,433	3,849,513	3,883,583	3,921,052	3,962,330	4,007,528	4,055,222	4,106,728	4,162,178	4,221,784	4,285,814
Interest Earnings (in Operating & Capital Reserves) ³	791,053	1,276,900	394,218	267,825	167,732	162,453	159,616	159,141	171,943	187,548	181,156	204,522
Total Sources of Funds	\$ 32,242,312	\$ 35,961,533	\$ 35,609,075	\$ 36,142,157	\$ 36,717,445	\$ 37,404,111	\$ 38,110,151	\$ 38,834,320	\$ 39,589,117	\$ 40,364,467	\$ 41,136,061	\$ 41,956,202
Uses of Water Funds												
<i>Operating Expenses:</i>												
Water Purchases	\$ 4,026,205	\$ 4,565,935	\$ 5,009,084	\$ 5,495,977	\$ 6,030,987	\$ 6,618,928	\$ 7,265,099	\$ 7,975,336	\$ 8,756,062	\$ 9,614,351	\$ 10,557,994	\$ 11,595,567
Production Power	2,133,628	2,481,100	2,704,399	2,947,795	3,213,096	3,502,275	3,817,480	4,161,053	4,535,548	4,943,747	5,388,684	5,873,666
Supply, Production & Pumping Services	2,425,528	4,398,386	3,728,731	3,878,538	4,034,370	4,196,469	4,365,089	4,540,491	4,722,950	4,912,748	5,110,183	5,315,562
Administrative Services	4,309,120	4,519,133	4,700,135	4,888,394	5,084,200	5,287,856	5,499,677	5,719,991	5,949,138	6,187,473	6,435,364	6,693,195
SCADA & Telemetry Services	408,987	960,238	521,402	542,359	564,159	586,836	610,426	634,966	660,493	687,048	714,672	743,408
HDPP Operating Expenses	587,051	728,160	768,036	810,475	855,666	903,815	955,142	1,009,888	1,068,312	1,130,696	1,197,344	1,268,585
Quality & Treatment Services	352,888	524,535	545,569	567,448	590,204	613,874	638,493	664,100	690,735	718,439	747,255	777,228
Conservation Services	474,937	517,783	538,545	560,140	582,603	605,966	630,268	655,545	681,836	709,183	737,628	767,214
Meter Services	2,021,069	2,676,796	1,549,291	1,598,707	1,650,122	1,703,616	1,759,275	1,817,186	1,877,440	1,940,133	2,005,363	2,073,234
Transmission & Distribution Services	3,016,563	3,113,416	3,238,916	3,369,485	3,505,328	3,646,657	3,793,695	3,946,673	4,105,832	4,271,421	4,443,702	4,622,946
Supply Service Warehouse	22,703	31,925	33,188	34,505	35,879	37,312	38,807	40,366	41,992	43,688	45,457	47,303
Field Service Warehouse	184,178	213,522	222,159	231,152	240,516	250,266	260,418	270,990	281,997	293,460	305,395	317,824
Customer Service	1,973,512	2,449,902	2,548,019	2,650,069	2,756,210	2,866,606	2,981,428	3,100,853	3,225,065	3,354,258	3,488,630	3,628,389
Geographic Information Services	256,827	421,172	296,560	308,470	320,858	333,745	347,149	361,093	375,597	390,684	406,378	422,703
Code Enforcement	277,693	417,006	433,686	451,033	469,075	487,838	507,351	527,645	548,751	570,701	593,529	617,270
Engineering Services	2,482,200	3,183,234	2,540,969	2,642,810	2,748,736	2,858,913	2,973,511	3,092,707	3,216,687	3,345,641	3,479,770	3,619,282
Asphalt Services	153,146	178,915	186,147	193,593	201,336	209,390	217,765	226,476	235,535	244,957	254,755	264,945
Capital Purchases	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Operating Expenses	\$ 25,106,233	\$ 31,381,157	\$ 29,564,837	\$ 31,170,950	\$ 32,883,345	\$ 34,710,362	\$ 36,661,074	\$ 38,745,358	\$ 40,973,970	\$ 43,358,629	\$ 45,912,104	\$ 48,648,320
<i>Other Expenditures:</i>												
Existing Debt Service	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
New Debt Service	-	-	-	-	-	-	-	-	-	-	-	-
Rate-Funded Capital Expenses	-	-	-	351,903	5,943,737	6,445,956	6,667,529	6,126,029	6,356,755	7,992,679	6,883,629	7,231,897
Subtotal: Other Expenditures	\$ -	\$ -	\$ -	\$ 351,903	\$ 5,943,737	\$ 6,445,956	\$ 6,667,529	\$ 6,126,029	\$ 6,356,755	\$ 7,992,679	\$ 6,883,629	\$ 7,231,897
Total Uses of Water Funds	\$ 25,106,233	\$ 31,381,157	\$ 29,564,837	\$ 31,522,853	\$ 38,827,082	\$ 41,156,318	\$ 43,328,603	\$ 44,871,387	\$ 47,330,725	\$ 51,351,308	\$ 52,795,733	\$ 55,880,217
plus: Revenue from Rate Increases ⁴	-	-	893,832	1,850,769	2,874,361	3,968,345	5,136,656	6,955,456	8,923,721	11,051,892	13,351,112	17,063,899
Annual Surplus/(Deficit)	\$ 7,136,078	\$ 4,580,376	\$ 6,938,070	\$ 6,470,072	\$ 764,723	\$ 216,138	\$ (81,796)	\$ 918,389	\$ 1,182,112	\$ 65,051	\$ 1,691,440	\$ 3,139,883
Net Revenue Req't... (Total Uses less Non-Rate Revenue)	\$ 19,414,623	\$ 24,629,824	\$ 23,750,166	\$ 25,770,988	\$ 33,107,736	\$ 35,370,267	\$ 37,468,873	\$ 38,932,496	\$ 41,294,946	\$ 45,211,246	\$ 46,568,565	\$ 49,531,086
Total Rate Revenue After Rate Increases	\$ 26,550,701	\$ 29,210,200	\$ 30,688,236	\$ 32,241,061	\$ 33,872,459	\$ 35,586,405	\$ 37,387,077	\$ 39,850,885	\$ 42,477,059	\$ 45,276,297	\$ 48,260,005	\$ 52,670,969
Projected Annual Rate Revenue Increase	0.00%	0.00%	3.00%	3.00%	3.00%	3.00%	3.00%	4.50%	4.50%	4.50%	4.50%	7.00%
<i>Cumulative Increase from Annual Revenue Increases</i>	0.00%	0.00%	3.00%	6.09%	9.27%	12.55%	15.93%	21.14%	26.60%	32.29%	38.25%	47.92%
<i>Debt Coverage After Rate Increase⁶</i>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

- Revenue and expenses for FY 2019/20 and FY 2020/21 were provided by District staff. Source file: WATER - REV & EXP -BUDGET - CUBES 2021 -NBS.xlsx .
- Revenue for FY 2020/21 includes the 6.25% annual rate increase adopted based on the 2015/16 rate study.
- Interest earnings for FY 2019/20 and FY 2020/21 were provided by VWD and then calculated for all future years based on projected cash balances and historical LAIF returns. This also includes the interest for the interfund loan based on the District's repayment schedule.
- Assumes new rates are implemented August 1, 2021 and subsequent increases are effective each following July 1st.
- Debt coverage after rate increase is shown as "N/A" because outstanding debt is not funded by water rate revenue.

Selection of Financial Plan Alternative		3										
Financial Plan Alternatives	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31
1	Alternative 1 - CIP with 2% Annual Rate Increases	0.00%	0.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
3	Alternative 3 - Full Funding of CIP	0.00%	0.00%	3.00%	3.00%	3.00%	3.00%	4.50%	4.50%	4.50%	4.50%	4.50%
4	No Rate Increases	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

TABLE 2 : RESERVE FUND SUMMARY - UN-RESTRICTED RESERVES

SUMMARY OF CASH ACTIVITY GENERAL WATER FUND RESERVES	Budget	Budget	Projected Rates for Adoption Period					Projected				
	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31
Total Beginning Cash¹	\$ 28,944,570	\$ 33,430,727										
Un-Restricted Reserves:												
Operating Reserve												
Beginning Reserve Balance	\$ 4,562,393	\$ 4,044,993	\$ 9,135,476	\$ 7,465,956	\$ 6,216,137	\$ 6,499,087	\$ 6,715,225	\$ 6,633,429	\$ 7,439,944	\$ 7,787,407	\$ 7,852,458	\$ 8,539,166
Plus: Net Cash Flow (After Rate Increases)	-	4,580,376	6,938,070	6,470,072	764,723	216,138	(81,796)	918,389	1,182,112	65,051	1,691,440	3,139,883
Plus: Unreserved Cash ²	11,408,586	15,321,356	-	-	-	-	-	-	-	-	-	-
Plus: Transfer of Debt Reserve Surplus	-	-	-	-	-	-	-	-	-	-	-	-
Less: Transfer out to Capital Replacement Reserve	(10,847,793)	(14,811,249)	(8,607,590)	(7,719,892)	(481,773)	-	-	(111,874)	(834,650)	-	(1,004,732)	(2,733,087)
Ending Operating Reserve Balance	\$ 5,123,186	\$ 9,135,476	\$ 7,465,956	\$ 6,216,137	\$ 6,499,087	\$ 6,715,225	\$ 6,633,429	\$ 7,439,944	\$ 7,787,407	\$ 7,852,458	\$ 8,539,166	\$ 8,945,962
Target Ending Balance (90-days of O&M Less Water Purchases & HDPP)	\$ 5,123,186	\$ 6,521,726	\$ 5,946,970	\$ 6,216,137	\$ 6,499,087	\$ 6,796,814	\$ 7,110,190	\$ 7,439,944	\$ 7,787,407	\$ 8,153,488	\$ 8,539,166	\$ 8,945,962
OPEB Reserve Fund												
Beginning Reserve Balance ³	\$ 8,946,363	\$ 10,092,990	\$ 8,946,000	\$ 8,946,000	\$ 8,946,000	\$ 8,946,000	\$ 8,946,000	\$ 8,946,000	\$ 8,946,000	\$ 8,946,000	\$ 8,946,000	\$ 8,946,000
Plus: Annual Contributions	-	-	-	-	-	-	-	-	-	-	-	-
Plus: Interest Earnings	120,776	136,255	120,771	120,771	120,771	120,771	120,771	120,771	120,771	120,771	120,771	120,771
Less: Transfer out to Capital Reserves	-	(1,283,246)	(120,771)	(120,771)	(120,771)	(120,771)	(120,771)	(120,771)	(120,771)	(120,771)	(120,771)	(120,771)
Ending OPEB Reserve Balance	\$ 9,067,139	\$ 8,946,000	\$ 8,946,000	\$ 8,946,000	\$ 8,946,000	\$ 8,946,000	\$ 8,946,000	\$ 8,946,000	\$ 8,946,000	\$ 8,946,000	\$ 8,946,000	\$ 8,946,000
Target Ending Balance⁴	\$ 8,946,000	\$ 8,946,000	\$ 8,946,000	\$ 8,946,000	\$ 8,946,000	\$ 8,946,000	\$ 8,946,000	\$ 8,946,000	\$ 8,946,000	\$ 8,946,000	\$ 8,946,000	\$ 8,946,000
Capital Rehabilitation & Replacement Reserve												
Beginning Reserve Balance ⁵	\$ 4,027,228	\$ 3,971,387	\$ 20,065,881	\$ 12,372,897	\$ 6,208,463	\$ 5,534,444	\$ 5,108,171	\$ 5,154,771	\$ 5,296,545	\$ 6,105,021	\$ 5,566,471	\$ 6,610,603
Plus: Grant Proceeds	-	-	-	-	-	-	-	-	-	-	-	-
Plus: Transfer of Operating Reserve Surplus	10,847,793	14,811,249	8,607,590	7,719,892	481,773	-	-	111,874	834,650	-	1,004,732	2,733,087
Plus: Transfer of OPEB Surplus	-	1,283,246	120,771	120,771	120,771	120,771	120,771	120,771	120,771	120,771	120,771	120,771
Less: Permanent Water Rights	-	-	(6,500,000)	(6,500,000)	-	-	-	-	-	-	-	-
Less: Use of Reserves for Capital Projects	-	-	(9,921,345)	(7,505,097)	(1,276,563)	(547,044)	(74,171)	(90,871)	(146,945)	(659,321)	(81,371)	(1,049,103)
Ending Capital Rehab & Replacement Reserve Balance	\$ 14,875,021	\$ 20,065,881	\$ 12,372,897	\$ 6,208,463	\$ 5,534,444	\$ 5,108,171	\$ 5,154,771	\$ 5,296,545	\$ 6,105,021	\$ 5,566,471	\$ 6,610,603	\$ 8,415,358
Target Ending Balance (3% of Assets)³	\$ 4,621,700	\$ 4,621,700	\$ 4,782,600	\$ 4,867,800	\$ 4,931,900	\$ 4,987,400	\$ 5,034,000	\$ 5,063,900	\$ 5,149,600	\$ 5,445,700	\$ 5,485,100	\$ 5,561,500
Ending Balance - Excludes Restricted Reserves	\$ 29,065,346	\$ 38,147,358	\$ 28,784,854	\$ 21,370,600	\$ 20,979,531	\$ 20,769,396	\$ 20,734,200	\$ 21,682,489	\$ 22,838,427	\$ 22,364,929	\$ 24,095,769	\$ 26,307,320
Minimum Target Ending Balance - Excludes Restricted Reserves	18,690,886	20,089,426	19,675,570	20,029,937	20,376,987	20,730,214	21,090,190	21,449,844	21,883,007	22,545,188	22,970,266	23,453,462
Ending Surplus/(Deficit) Compared to Reserve Targets	\$ 10,374,460	\$ 18,057,931	\$ 9,109,284	\$ 1,340,663	\$ 602,544	\$ 39,181	\$ (355,990)	\$ 232,645	\$ 955,421	\$ (180,259)	\$ 1,125,503	\$ 2,853,858
Annual Interest Earnings Rate⁶	1.35%	1.35%	1.35%	1.35%	1.35%	1.35%	1.35%	1.35%	1.35%	1.35%	1.35%	1.35%

1. Total beginning cash balances for FY 2019/20 and FY 2020/21 were provided by District Staff on 09-17-2020. Source file: WATER - REV & EXP -BUDGET - CUBES 2021 -NBS.xlsx .
 2. Net cash flow for FY 2019/20 and FY 2020/21 is the remaining balance of cash after all restricted and reserve requirements are met. The target for this is a positive amount close to zero. Source: Staff email dated 03-26-2020 & WATER - REV & EXP -BUDGET - CUBES 2021 -NBS.xlsx .
 3. Total beginning OPEB reserve cash balance is per source file: WATER - REV & EXP -BUDGET - CUBES 2021 -NBS.xlsx .
 4. The target ending balance for the OPEB reserve is set to the funding target of \$8.95 million.
 5. The Capital Rehabilitation & Replacement Reserve target is set to 3% of net assets. This is based on a net capital asset value of \$163.7 million per the VWD 2019 CAFR.
 6. Historical interest earning rates are per the average annual yields for funds invested in LAIF (2015-2019). The source is the California State Treasurer's website: <https://www.treasurer.ca.gov/pmia-laif/historical/annual.asp> .

TABLE 3 : RESERVE FUND SUMMARY - RESTRICTED RESERVES

SUMMARY OF CASH ACTIVITY, continued	Budget	Budget	Projected Rates for Adoption Period					Projected				
	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31
RESTRICTED WATER FUND RESERVES												
Restricted Reserves:												
Connection Fee & Alternate Water Source Reserve												
Beginning Reserve Balance ¹	\$ 4,832,624	\$ 6,509,126	\$ 7,996,999	\$ 9,159,458	\$ 10,739,671	\$ 12,370,348	\$ 14,052,752	\$ 15,788,178	\$ 17,577,945	\$ 17,759,408	\$ 12,806,483	\$ 14,652,500
Plus: Interest Earnings	65,240	87,873	107,959	123,653	144,986	167,000	189,712	213,140	237,302	239,752	172,888	197,809
Plus: Capacity Fee Revenue	1,611,261	1,400,000	1,428,000	1,456,560	1,485,691	1,515,405	1,545,713	1,576,627	1,608,160	1,640,323	1,673,130	1,706,592
Less: Use of Reserves for Capital Projects	-	-	(373,500)	-	-	-	-	-	(1,664,000)	(6,833,000)	-	-
Ending Connection Fee Fund Balance	\$ 6,509,126	\$ 7,996,999	\$ 9,159,458	\$ 10,739,671	\$ 12,370,348	\$ 14,052,752	\$ 15,788,178	\$ 17,577,945	\$ 17,759,408	\$ 12,806,483	\$ 14,652,500	\$ 16,556,901
Target Ending Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Debt Reserve												
Beginning Reserve Balance ²	\$ 836,597	\$ 847,891	\$ 859,338	\$ 870,939	\$ 882,696	\$ 894,613	\$ 906,690	\$ 918,930	\$ 931,336	\$ 943,909	\$ 956,652	\$ 969,566
Plus: Reserve Funding from New Debt Obligations	-	-	-	-	-	-	-	-	-	-	-	-
Plus: Interest Earnings	11,294	11,447	11,601	11,758	11,916	12,077	12,240	12,406	12,573	12,743	12,915	13,089
Less: Transfer of Surplus to Operating Reserve	-	-	-	-	-	-	-	-	-	-	-	-
Ending Debt Reserve Balance	\$ 847,891	\$ 859,338	\$ 870,939	\$ 882,696	\$ 894,613	\$ 906,690	\$ 918,930	\$ 931,336	\$ 943,909	\$ 956,652	\$ 969,566	\$ 982,656
Target Ending Balance	\$ 996,570	\$ 996,570	\$ 995,778	\$ 993,763	\$ 991,886	\$ 988,011	\$ 803,511	\$ 803,238	\$ 803,238	\$ 803,238	\$ 803,238	\$ 801,250
Reserve for Debt Service (Early Debt Payoff)												
Beginning Reserve Balance ³	\$ 4,506,745	\$ 4,567,586	\$ 4,629,249	\$ 4,691,744	\$ 4,755,082	\$ 4,819,276	\$ 4,884,336	\$ 4,950,275	\$ 5,017,103	\$ 5,084,834	\$ 5,153,480	\$ 5,223,052
Plus: Reserve Funding from New Debt Obligations	-	-	-	-	-	-	-	-	-	-	-	-
Plus: Interest Earnings	60,841	61,662	62,495	63,339	64,194	65,060	65,939	66,829	67,731	68,645	69,572	70,511
Less: Transfer of Surplus to Operating Reserve	-	-	-	-	-	-	-	-	-	-	-	-
Ending Reserve for Debt Service Balance	\$ 4,567,586	\$ 4,629,249	\$ 4,691,744	\$ 4,755,082	\$ 4,819,276	\$ 4,884,336	\$ 4,950,275	\$ 5,017,103	\$ 5,084,834	\$ 5,153,480	\$ 5,223,052	\$ 5,293,563
Target Ending Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Ending Balance - Restricted Reserves	\$ 11,924,603	\$ 13,485,585	\$ 14,722,141	\$ 16,377,450	\$ 18,084,236	\$ 19,843,779	\$ 21,657,383	\$ 23,526,385	\$ 23,788,151	\$ 18,916,614	\$ 20,845,118	\$ 22,833,119
Minimum Target Ending Balance - Restricted Reserves	996,570	996,570	995,778	993,763	991,886	988,011	803,511	803,238	803,238	803,238	803,238	801,250
Ending Surplus/(Deficit) Compared to Reserve Targets	\$ 10,928,033	\$ 12,489,015	\$ 13,726,363	\$ 15,383,687	\$ 17,092,350	\$ 18,855,767	\$ 20,853,871	\$ 22,723,147	\$ 22,984,913	\$ 18,113,377	\$ 20,041,880	\$ 22,031,869
Annual Interest Earnings Rate⁴	1.35%	1.35%	1.35%	1.35%	1.35%	1.35%	1.35%	1.35%	1.35%	1.35%	1.35%	1.35%

1. The beginning cash balances for FY 2019/20 and FY 2020/21 are actuals . Source file: WATER - REV & EXP -BUDGET - CUBES 2021 -NBS.xlsx .
2. Beginning balance for the Debt Reserve is the "Cash with Fiscal Agent" line item from the 2019 CAFR.
3. The beginning balance of the Reserve for Debt Service Fund is calculated based on debt service revenues less the 1998 and 2006 Certificates of Participation. These funds will tentatively be used to pay off the 1998 COP's early. Source file: Water Cash Balance as of 03-26-20.xlsx .
4. Historical interest earning rates are per the average annual yields for funds invested in LAIF (2015-2019). The source is the California State Treasurer's website: <https://www.treasurer.ca.gov/pmia-laif/historical/annual.asp> .

Chart 1

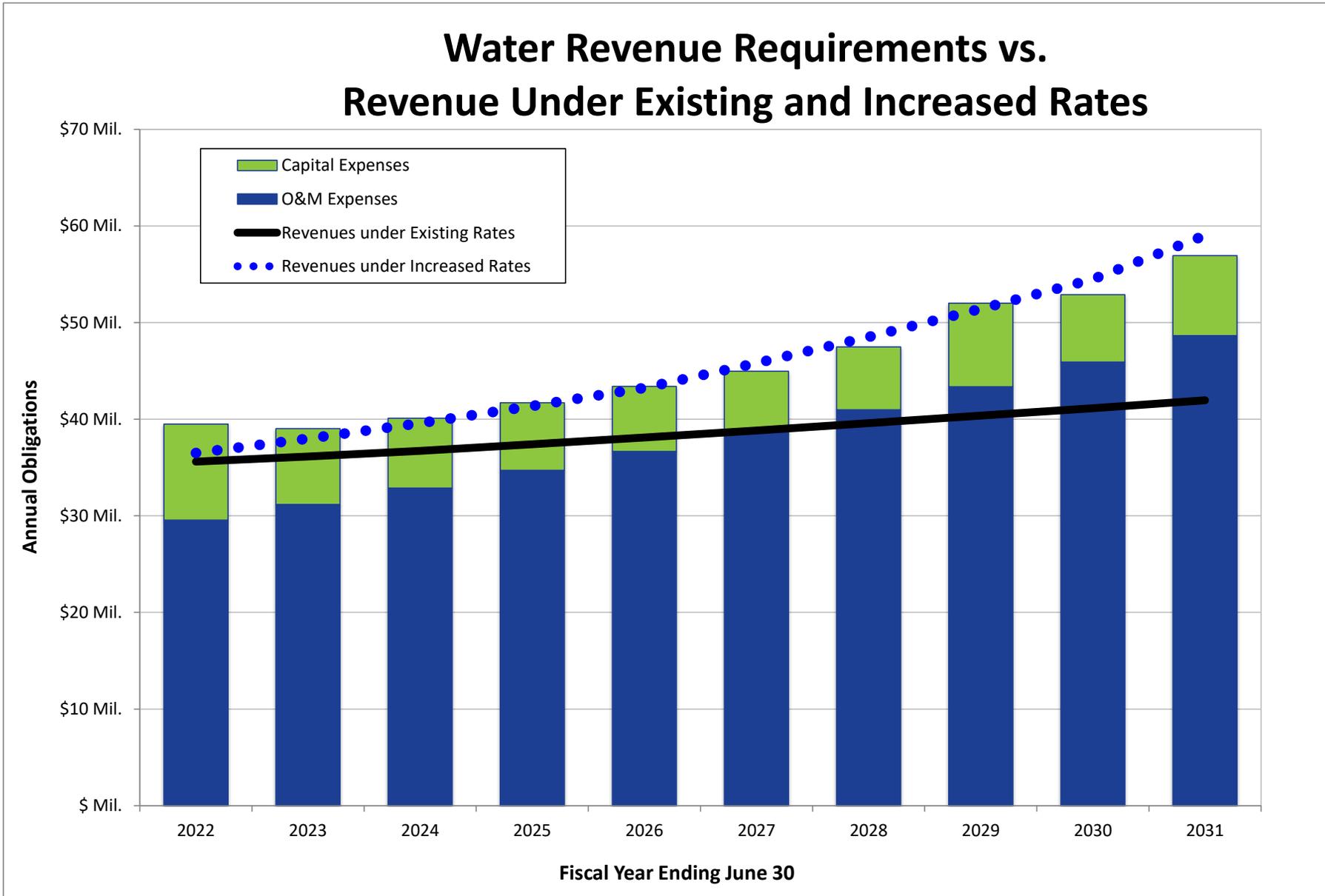
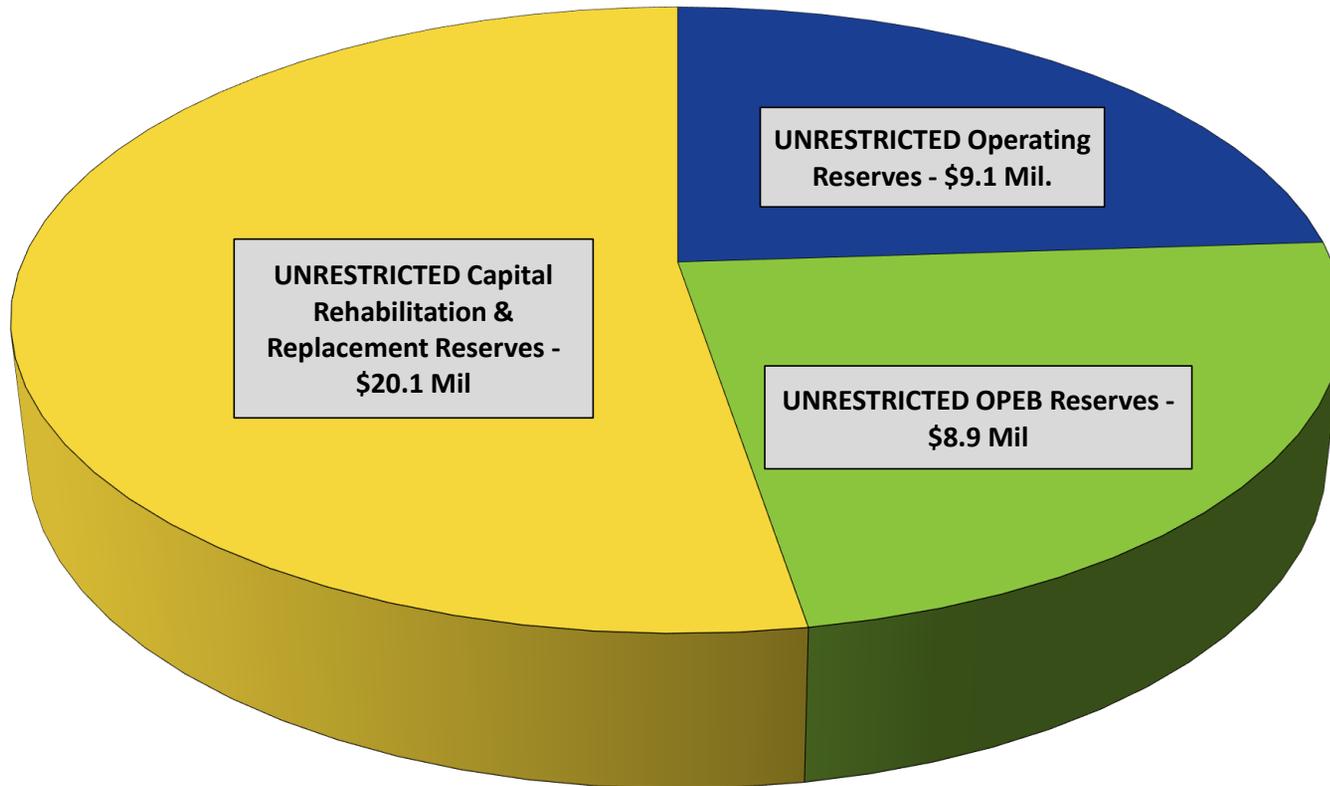


Chart 2

Water Fund - Beginning Cash Balances

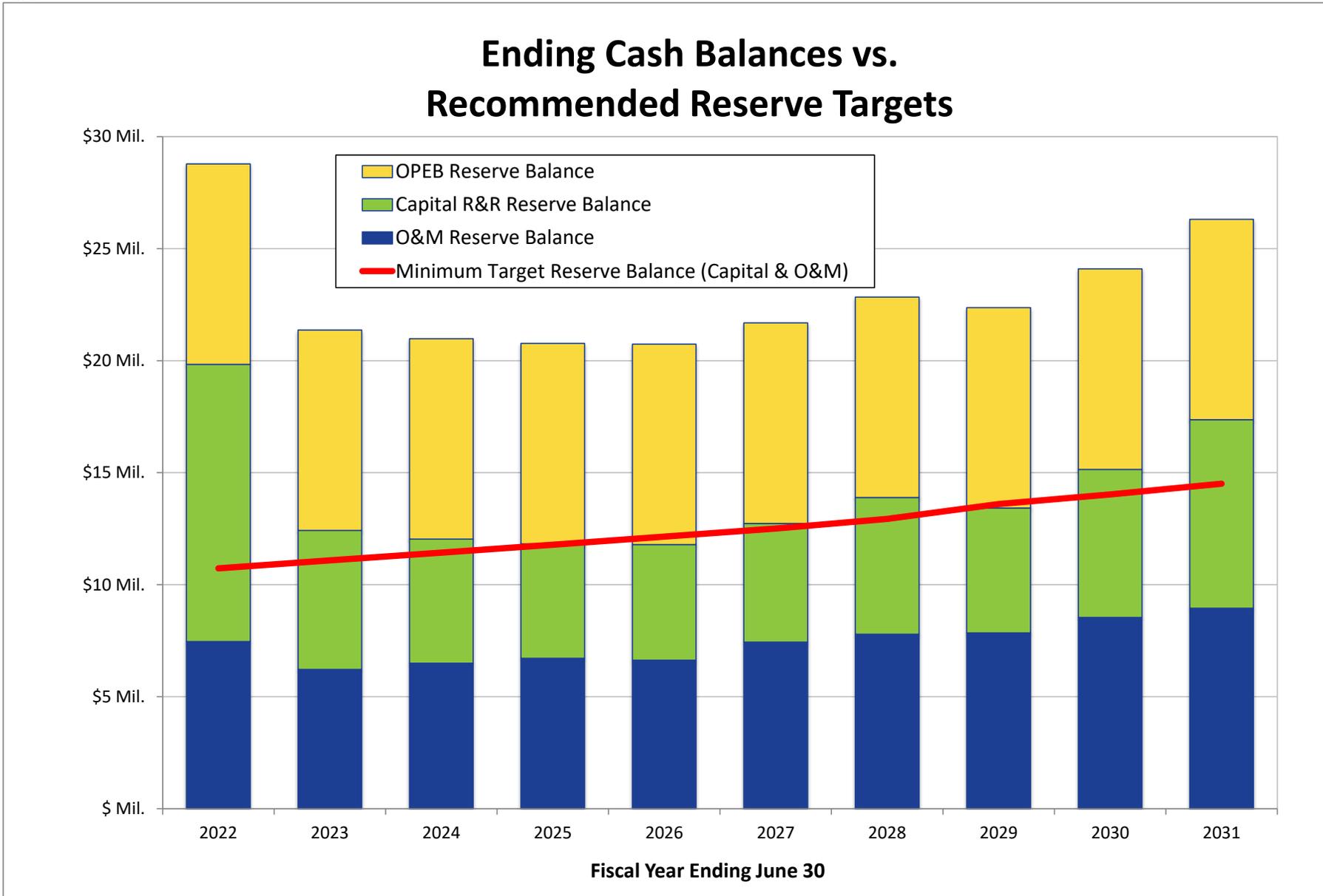
Fiscal Year 2021/22



Total Reserves = \$38.1 Mil.

■ UNRESTRICTED Operating Reserves ■ UNRESTRICTED OPEB Reserves ■ UNRESTRICTED Capital Rehabilitation & Replacement Reserves

Chart 3



VICTORVILLE WATER DISTRICT

WATER RATE STUDY

Operating Revenue and Expenses

Preliminary Draft Subject to Material Revision/Do Not Cite or Distribute

TABLE 4 : REVENUE FORECAST¹

ORG.	OBJECT	DESCRIPTION	Basis	Actual	Budget	Projected					Projected				
				FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31
Water Sales Revenue:															
4100010	44830	Water Sales-Residential	1	\$ 12,677,920	\$ 14,793,900	\$ 15,089,778	\$ 15,391,574	\$ 15,699,405	\$ 16,013,393	\$ 16,333,661	\$ 16,660,334	\$ 16,993,541	\$ 17,333,412	\$ 17,680,080	\$ 18,033,682
4100010	44840	Water Sales-Irrigation	1	974,861	1,261,900	1,287,138	1,312,881	1,339,138	1,365,921	1,393,240	1,421,104	1,449,526	1,478,517	1,508,087	1,538,249
4100010	44850	Water Sales-Commercial	1	5,680,701	5,334,700	5,441,394	5,550,222	5,661,226	5,774,451	5,889,940	6,007,739	6,127,893	6,250,451	6,375,460	6,502,970
Readiness to Serve Revenue:															
4100010	44860	Water-Service Availability	1	6,773,018	7,334,500	7,481,190	7,630,814	7,783,430	7,939,099	8,097,881	8,259,838	8,425,035	8,593,536	8,765,406	8,940,715
4100010	44880	Water-Fire Service Availability	1	444,201	485,200	494,904	504,802	514,898	525,196	535,700	546,414	557,342	568,489	579,859	591,456
Other Operating Revenue:															
4100010	41280	Water Permits	1	137,347	33,700	34,374	35,061	35,763	36,478	37,208	37,952	38,711	39,485	40,275	41,080
4100010	42150	Penalty/Late Fees	1	231,994	341,700	348,534	355,505	362,615	369,867	377,264	384,810	392,506	400,356	408,363	416,530
4100010	44300	Plan Check Fees	3	43,452	50,000	50,900	51,816	52,749	53,698	54,665	55,649	56,651	57,670	58,708	59,765
4100010	44890	Water Service Fees	1	360,097	412,000	420,240	428,645	437,218	445,962	454,881	463,979	473,258	482,724	492,378	502,226
4100010	44900	Service Installation Fees	1	216,092	214,200	218,484	222,854	227,311	231,857	236,494	241,224	246,048	250,969	255,989	261,109
4100010	44910	Service Call Fees	1	223,968	400,400	408,408	416,576	424,908	433,406	442,074	450,915	459,934	469,132	478,515	488,085
4100010	44940	Standby Fees	16	91,553	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000
4100010	47320	Scrap/Recyclable Materials	16	11,051	50,000	-	-	-	-	-	-	-	-	-	-
4100010	47420	Over & Under	16	-	(1,000)	-	-	-	-	-	-	-	-	-	-
Subtotal: Operating Revenue				27,866,255	30,801,200	31,365,344	31,990,749	32,628,660	33,279,328	33,943,007	34,619,958	35,310,446	36,014,742	36,733,121	37,465,866
Non-Operating Revenues & Expenses:															
4100020	44920	Connection Fees	2	1,611,261	1,400,000	1,428,000	1,456,560	1,485,691	1,515,405	1,545,713	1,576,627	1,608,160	1,640,323	1,673,130	1,706,592
4100020	45110	Interest Income ²	See FP	791,053	1,154,400	-	-	-	-	-	-	-	-	-	-
4100020	45110	Interest Income-Interfund Loan ²	Per Budget	839,600	795,000	749,700	703,800	657,300	610,200	562,400	513,900	464,800	415,000	364,477	313,241
		Principal Payment-Interfund Loan	Per Budget	1,786,632	1,810,632	1,835,112	1,860,082	1,885,551	1,911,529	1,938,027	1,965,055	1,992,623	2,020,743	2,049,425	2,078,681
4100021	45110	Interest Income-Restricted ³	See FP	-	122,500	-	-	-	-	-	-	-	-	-	-
4100020	45200	Lease Occupancy	16	1	1	1	1	1	1	1	1	1	1	1	1
4100020	47100	Pass Through Property Tax	16	295,970	272,000	272,000	272,000	272,000	272,000	272,000	272,000	272,000	272,000	272,000	272,000
4100020	47400	Miscellaneous Revenue	16	5,417	-	-	-	-	-	-	-	-	-	-	-
4100020	47510	Capital Contribution	16	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Non-Operating Revenue				5,329,935	5,554,533	4,284,813	4,292,443	4,300,543	4,309,135	4,318,141	4,327,583	4,337,584	4,348,067	4,359,032	4,370,515
HDPP Revenue															
4100510	44840	Water Sales-Wholesale	16	-	-	-	-	-	-	-	-	-	-	-	-
4100510	47230	Reimbursements-Operating Cost Recovery	4	657,383	1,005,800	992,700	1,047,700	1,106,200	1,168,600	1,235,100	1,304,266	1,377,304	1,454,434	1,535,882	1,621,891
Subtotal: HDPP Revenue				657,383	1,005,800	992,700	1,047,700	1,106,200	1,168,600	1,235,100	1,304,266	1,377,304	1,454,434	1,535,882	1,621,891
TOTAL: REVENUE				\$ 33,853,572	\$ 37,361,533	\$ 36,642,857	\$ 37,330,892	\$ 38,035,404	\$ 38,757,063	\$ 39,496,248	\$ 40,251,807	\$ 41,025,334	\$ 41,817,242	\$ 42,628,035	\$ 43,458,272

TABLE 5 : REVENUE SUMMARY

SOURCES OF REVENUE	Basis	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31
RATE REVENUE													
Water Sales Rate Revenue (Variable Charges)		\$ 19,333,482	\$ 21,390,500	\$ 21,818,310	\$ 22,254,676	\$ 22,699,770	\$ 23,153,765	\$ 23,616,840	\$ 24,089,177	\$ 24,570,961	\$ 25,062,380	\$ 25,563,628	\$ 26,074,900
Readiness to Serve (Fixed Charges)		7,217,219	7,819,700	7,976,094	8,135,616	8,298,328	8,464,295	8,633,581	8,806,252	8,982,377	9,162,025	9,345,265	9,532,171
OTHER REVENUE													
Interest Income		791,053	1,276,900	-	-	-	-	-	-	-	-	-	-
Other Operating Revenue		1,315,554	1,591,000	1,570,940	1,600,457	1,630,563	1,661,268	1,692,586	1,724,529	1,757,108	1,790,337	1,824,228	1,858,795
Other Non-Operating Revenue		2,927,621	2,877,633	2,856,813	2,835,883	2,814,852	2,793,730	2,772,428	2,750,956	2,729,424	2,707,744	2,685,903	2,663,923
HDPP Revenue		657,383	1,005,800	992,700	1,047,700	1,106,200	1,168,600	1,235,100	1,304,266	1,377,304	1,454,434	1,535,882	1,621,891
Subtotal:		\$ 32,242,312	\$ 35,961,533	\$ 35,214,857	\$ 35,874,332	\$ 36,549,712	\$ 37,241,658	\$ 37,950,535	\$ 38,675,180	\$ 39,417,174	\$ 40,176,919	\$ 40,954,905	\$ 41,751,680
CONNECTION F& ALTERNATIVE WATER SOURCE FEES													
Connection Fees		1,611,261	1,400,000	1,428,000	1,456,560	1,485,691	1,515,405	1,545,713	1,576,627	1,608,160	1,640,323	1,673,130	1,706,592
TOTAL REVENUE		\$ 33,853,572	\$ 37,361,533	\$ 36,642,857	\$ 37,330,892	\$ 38,035,404	\$ 38,757,063	\$ 39,496,248	\$ 40,251,807	\$ 41,025,334	\$ 41,817,242	\$ 42,628,035	\$ 43,458,272

VICTORVILLE WATER DISTRICT

WATER RATE STUDY

Operating Revenue and Expenses

Preliminary Draft Subject to Material Revision/Do Not Cite or Distribute

TABLE 6 : OPERATING EXPENSE FORECAST¹

ORG.	OBJECT	DESCRIPTION	Basis	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31
WATER PURCHASES															
4100500	53030	Purchased Water ³	12	642,450	711,200	760,984	814,253	871,251	932,238	997,495	1,067,319	1,142,032	1,221,974	1,307,512	1,399,038
4100500	53040	Groundwater Assessment ⁴	13	107,373	111,300	119,091	127,427	136,347	145,892	156,104	167,031	178,723	191,234	204,621	218,944
4100500	53050	Groundwater Replenishment ⁵	14	3,276,382	3,743,435	4,129,009	4,554,297	5,023,389	5,540,798	6,111,501	6,740,985	7,435,307	8,201,143	9,045,861	9,977,585
SUBTOTAL WATER PURCHASES				\$ 4,026,205	\$ 4,565,935	\$ 5,009,084	\$ 5,495,977	\$ 6,030,987	\$ 6,618,928	\$ 7,265,099	\$ 7,975,336	\$ 8,756,062	\$ 9,614,351	\$ 10,557,994	\$ 11,595,567
PRODUCTION POWER															
4100500	52050	Utilities-Production Power	10	2,133,628	2,481,100	2,704,399	2,947,795	3,213,096	3,502,275	3,817,480	4,161,053	4,535,548	4,943,747	5,388,684	5,873,666
SUBTOTAL PRODUCTION POWER				\$ 2,133,628	\$ 2,481,100	\$ 2,704,399	\$ 2,947,795	\$ 3,213,096	\$ 3,502,275	\$ 3,817,480	\$ 4,161,053	\$ 4,535,548	\$ 4,943,747	\$ 5,388,684	\$ 5,873,666
SUPPLY, PRODUCTION & PUMPING SERVICES															
4100500	51100	Full Time Wages	7	\$ 1,050,502	\$ 1,035,906	\$ 1,077,343	\$ 1,120,436	\$ 1,165,254	\$ 1,211,864	\$ 1,260,339	\$ 1,310,752	\$ 1,363,182	\$ 1,417,709	\$ 1,474,418	\$ 1,533,395
4100500	51110	Overtime Wages	7	22,387	25,300	26,312	27,364	28,459	29,597	30,781	32,013	33,293	34,625	36,010	37,450
4100500	51150	Standby Wages	7	16,093	27,500	28,600	29,744	30,934	32,171	33,458	34,796	36,188	37,636	39,141	40,707
4100500	51200	Fringe Benefits	7	433,134	452,964	471,082	489,926	509,523	529,904	551,100	573,144	596,069	619,912	644,709	670,497
4100500	51300	Payroll Taxes	7	15,214	26,416	27,472	28,571	29,714	30,903	32,139	33,424	34,761	36,152	37,598	39,102
4100500	52060	Telephone	5	13,550	10,900	11,336	11,789	12,261	12,751	13,262	13,792	14,344	14,917	15,514	16,135
4100500	52110	Supplies	5	24,556	23,400	24,336	25,309	26,322	27,375	28,470	29,608	30,793	32,025	33,305	34,638
4100500	52140	Training & Education	5	3,946	9,900	10,296	10,708	11,136	11,582	12,045	12,527	13,028	13,549	14,091	14,654
4100500	52201	Fuel	8	61,700	62,600	65,730	69,017	72,467	76,091	79,895	83,890	88,084	92,489	97,113	101,969
4100500	52230	Vehicle Expense	5	30,011	30,500	31,720	32,989	34,308	35,681	37,108	38,592	40,136	41,741	43,411	45,147
4100500	52240	Small Tools & Furniture	5	7,777	9,600	9,984	10,383	10,799	11,231	11,680	12,147	12,633	13,138	13,664	14,210
4100500	52300	Contract Services	5	608,364	2,476,200	1,729,032	1,798,193	1,870,121	1,944,926	2,022,723	2,103,632	2,187,777	2,275,288	2,366,300	2,460,952
4100500	52420	Grounds Maintenance	5	239	57,200	59,488	61,868	64,342	66,916	69,593	72,376	75,271	78,282	81,413	84,670
4100500	52440	Infrastructure Repairs & Maintenance	5	138,054	150,000	156,000	162,240	168,730	175,479	182,498	189,798	197,390	205,285	213,497	222,037
4100500	55001	Expense Capitalization	16	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL: SUPPLY, PRODUCTION & PUMPING SERVICES				\$ 2,425,528	\$ 4,398,386	\$ 3,728,731	\$ 3,878,538	\$ 4,034,370	\$ 4,196,469	\$ 4,365,089	\$ 4,540,491	\$ 4,722,950	\$ 4,912,748	\$ 5,110,183	\$ 5,315,562

TABLE 7 : OPERATING EXPENSE FORECAST, cont.¹

ORG.	OBJECT	DESCRIPTION	Basis	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31
ADMINISTRATIVE SERVICES															
4100030	51100	Full Time Wages	7	\$ 519,872	\$ 500,916	\$ 520,952	\$ 541,790	\$ 563,462	\$ 586,000	\$ 609,440	\$ 633,818	\$ 659,171	\$ 685,538	\$ 712,959	\$ 741,478
4100030	51110	Overtime Wages	7	2,802	415	432	449	467	485	505	525	546	568	591	614
4100030	51200	Fringe Benefits	7	173,552	172,264	179,154	186,321	193,773	201,524	209,585	217,969	226,688	235,755	245,185	254,993
4100030	51220	Retiree Health Care	7	180,465	186,705	194,173	201,940	210,018	218,418	227,155	236,241	245,691	255,519	265,739	276,369
4100030	51300	Payroll Taxes	7	7,589	12,773	13,284	13,816	14,368	14,943	15,541	16,162	16,809	17,481	18,180	18,908
4100030	52010	Utilities-Electricity	9	18,976	19,700	20,685	21,719	22,805	23,945	25,143	26,400	27,720	29,106	30,561	32,089
4100030	52020	Utilities-Water Usage	11	1,595	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200
4100030	52030	Utilities-Natural Gas	9	3,871	5,200	5,460	5,733	6,020	6,321	6,637	6,968	7,317	7,683	8,067	8,470
4100030	52040	Utilities-Sanitation	9	-	-	-	-	-	-	-	-	-	-	-	-
4100030	52060	Telephone	5	20,023	28,100	29,224	30,393	31,609	32,873	34,188	35,555	36,978	38,457	39,995	41,595
4100030	52110	Supplies	5	11,314	12,900	13,416	13,953	14,511	15,091	15,695	16,323	16,976	17,655	18,361	19,095
4100030	52130	Subs, Publications & Memberships	5	8,757	9,200	9,568	9,951	10,349	10,763	11,193	11,641	12,107	12,591	13,094	13,618
4100030	52140	Training & Education	5	10,674	5,200	5,408	5,624	5,849	6,083	6,327	6,580	6,843	7,117	7,401	7,697
4100030	52150	Travel & Meetings	6	485	500	525	551	579	608	638	670	704	739	776	814
4100030	52160	SCLA Meetings	5	26,244	-	-	-	-	-	-	-	-	-	-	-
4100030	52170	Legal Notices	5	1,275	6,200	6,448	6,706	6,974	7,253	7,543	7,845	8,159	8,485	8,825	9,178
4100030	52180	Recruiting	5	157	7,800	8,112	8,436	8,774	9,125	9,490	9,869	10,264	10,675	11,102	11,546
4100030	52201	Fuel	8	4,765	7,100	7,455	7,828	8,219	8,630	9,062	9,515	9,990	10,490	11,014	11,565
4100030	52230	Vehicle Expense	5	1,673	4,200	4,368	4,543	4,724	4,913	5,110	5,314	5,527	5,748	5,978	6,217
4100030	52240	Small Tools & Furniture	5	783	1,600	1,664	1,731	1,800	1,872	1,947	2,025	2,105	2,190	2,277	2,368
4100030	52260	Computer Equipment	5	12,290	26,000	27,040	28,122	29,246	30,416	31,633	32,898	34,214	35,583	37,006	38,486
4100030	52300	Contract Services	5	65,662	139,000	144,560	150,342	156,356	162,610	169,115	175,879	182,915	190,231	197,840	205,754
4100030	52340	Insurance	5	283,446	418,308	435,040	452,442	470,539	489,361	508,935	529,293	550,465	572,483	595,383	619,198
4100030	52350	Legal	5	93,526	67,600	70,304	73,116	76,041	79,082	82,246	85,536	88,957	92,515	96,216	100,065
4100030	52360	Federal, State & Local Fees	5	107,756	117,500	122,200	127,088	132,172	137,458	142,957	148,675	154,622	160,807	167,239	173,929
4100030	52410	Building Maintenance	5	591	10,400	10,816	11,249	11,699	12,167	12,653	13,159	13,686	14,233	14,802	15,395
4100030	52450	Vandalism & Accidents	5	45,626	52,000	54,080	56,243	58,493	60,833	63,266	65,797	68,428	71,166	74,012	76,973
4100030	54020	Cost Allocation	5	2,705,352	2,705,352	2,813,566	2,926,109	3,043,153	3,164,879	3,291,474	3,423,133	3,560,059	3,702,461	3,850,559	4,004,582
SUBTOTAL: ADMINISTRATIVE SERVICES				\$ 4,309,120	\$ 4,519,133	\$ 4,700,135	\$ 4,888,394	\$ 5,084,200	\$ 5,287,856	\$ 5,499,677	\$ 5,719,991	\$ 5,949,138	\$ 6,187,473	\$ 6,435,364	\$ 6,693,195

VICTORVILLE WATER DISTRICT

WATER RATE STUDY

Operating Revenue and Expenses

Preliminary Draft Subject to Material Revision/Do Not Cite or Distribute

TABLE 8 : OPERATING EXPENSE FORECAST, cont.¹

ORG.	OBJECT	DESCRIPTION	Basis	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31
SCADA & TELEMETRY SERVICES															
4100505	51100	Full Time Wages	7	\$ 225,298	\$ 240,198	\$ 249,806	\$ 259,798	\$ 270,190	\$ 280,997	\$ 292,237	\$ 303,927	\$ 316,084	\$ 328,727	\$ 341,876	\$ 355,551
4100505	51110	Overtime Wages	7	3,527	9,100	9,464	9,843	10,236	10,646	11,072	11,514	11,975	12,454	12,952	13,470
4100505	51200	Fringe Benefits	7	87,871	99,173	103,139	107,265	111,556	116,018	120,659	125,485	130,504	135,724	141,153	146,800
4100505	51300	Payroll Taxes	7	3,343	6,125	6,370	6,625	6,890	7,165	7,452	7,750	8,060	8,383	8,718	9,067
4100505	52060	Telephone	5	2,678	2,300	2,392	2,488	2,587	2,691	2,798	2,910	3,027	3,148	3,274	3,405
4100505	52110	Supplies	5	4,407	3,100	3,224	3,353	3,487	3,627	3,772	3,922	4,079	4,243	4,412	4,589
4100505	52130	Subs, Publications & Memberships	5	-	-	-	-	-	-	-	-	-	-	-	-
4100505	52140	Training & Education	5	5,867	11,200	11,648	12,114	12,598	13,102	13,627	14,172	14,738	15,328	15,941	16,579
4100505	52201	Fuel	8	8,761	9,600	10,080	10,584	11,113	11,669	12,252	12,865	13,508	14,184	14,893	15,637
4100505	52230	Vehicle Expense	5	1,559	4,700	4,888	5,084	5,287	5,498	5,718	5,947	6,185	6,432	6,690	6,957
4100505	52240	Small Tools & Furniture	5	4,706	32,000	33,280	34,611	35,996	37,435	38,933	40,490	42,110	43,794	45,546	47,368
4100505	52300	Contract Services	5	25,167	484,800	26,850	27,924	30,203	31,411	32,667	33,974	35,333	36,746	38,216	38,216
4100505	52440	Infrastructure Repairs & Maintenance	5	35,802	57,943	60,261	62,671	65,178	67,785	70,496	73,316	76,249	79,299	82,471	85,769
4100505	55001	Expense Capitalization	16	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL: SCADA & TELEMETRY SERVICES				\$ 408,987	\$ 960,238	\$ 521,402	\$ 542,359	\$ 564,159	\$ 586,836	\$ 610,426	\$ 634,966	\$ 660,493	\$ 687,048	\$ 714,672	\$ 743,408

TABLE 9 : OPERATING EXPENSE FORECAST¹

ORG.	OBJECT	DESCRIPTION	Basis	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31
HIGH DESERT POWER PROJECT															
4100510	51100	Full Time Wages	7	\$ 34,147	\$ 53,560	\$ 55,702	\$ 57,930	\$ 60,248	\$ 62,658	\$ 65,164	\$ 67,770	\$ 70,481	\$ 73,301	\$ 76,233	\$ 79,282
4100510	51110	Overtime Wages	7	13,698	27,000	28,080	29,203	30,371	31,586	32,850	34,164	35,530	36,951	38,429	39,967
4100510	51150	Standby Wages	7	15,479	33,200	34,528	35,909	37,345	38,839	40,393	42,009	43,689	45,436	47,254	49,144
4100510	51200	Fringe Benefits	7	6,377	13,500	14,040	14,602	15,186	15,793	16,425	17,082	17,765	18,476	19,215	19,983
4100510	51300	Payroll Taxes	7	757	1,000	1,040	1,082	1,125	1,170	1,217	1,265	1,316	1,369	1,423	1,480
4100510	52050	Utilities-Production Power	10	162,867	215,000	234,350	255,442	278,431	303,490	330,804	360,577	393,028	428,401	466,957	508,983
4100510	52110	Supplies	5	17,415	42,000	43,680	45,427	47,244	49,134	51,099	53,143	55,269	57,480	59,779	62,170
4100510	52300	Contract Services	5	315,317	315,000	327,600	340,704	354,332	368,505	383,246	398,575	414,519	431,099	448,343	466,277
4100510	52360	Federal, State & Local Fees	5	420	500	520	541	562	585	608	633	658	684	712	740
4100510	52420	Grounds Maintenance	5	6,000	7,400	7,696	8,004	8,324	8,657	9,003	9,363	9,738	10,127	10,533	10,954
4100510	52440	Infrastructure Repairs & Maintenance	5	14,573	20,000	20,800	21,632	22,497	23,397	24,333	25,306	26,319	27,371	28,466	29,605
4100510	53030	Purchased Water	12	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL: HDPP OPERATING EXPENSES				\$ 587,051	\$ 728,160	\$ 768,036	\$ 810,475	\$ 855,666	\$ 903,815	\$ 955,142	\$ 1,009,888	\$ 1,068,312	\$ 1,130,696	\$ 1,197,344	\$ 1,268,585

TABLE 10 OPERATING EXPENSE FORECAST¹

ORG.	OBJECT	DESCRIPTION	Basis	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31
QUALITY & TREATMENT SERVICES															
4100515	51100	Full Time Wages	7	\$ 71,042	\$ 73,250	\$ 76,180	\$ 79,227	\$ 82,396	\$ 85,692	\$ 89,119	\$ 92,684	\$ 96,391	\$ 100,247	\$ 104,257	\$ 108,427
4100515	51110	Overtime Wages	7	259	2,300	2,392	2,488	2,587	2,691	2,798	2,910	3,027	3,148	3,274	3,405
4100515	51200	Fringe Benefits	7	24,496	26,717	27,786	28,898	30,053	31,256	32,506	33,806	35,158	36,565	38,027	39,548
4100515	51300	Payroll Taxes	7	1,093	1,868	1,943	2,020	2,101	2,185	2,273	2,363	2,458	2,556	2,659	2,765
4100515	52060	Telephone	5	456	500	520	541	562	585	608	633	658	684	712	740
4100515	52110	Supplies	5	140,956	171,600	178,464	185,603	193,027	200,748	208,778	217,129	225,814	234,846	244,240	254,010
4100515	52140	Training & Education	5	1,407	2,700	2,808	2,920	3,037	3,159	3,285	3,416	3,553	3,695	3,843	3,997
4100515	52201	Fuel	8	6,419	5,300	5,565	5,843	6,135	6,442	6,764	7,103	7,458	7,831	8,222	8,633
4100515	52230	Vehicle Expense	5	3,664	3,200	3,328	3,461	3,600	3,744	3,893	4,049	4,211	4,379	4,555	4,737
4100515	52240	Small Tools & Furniture	5	835	1,000	1,040	1,082	1,125	1,170	1,217	1,265	1,316	1,369	1,423	1,480
4100515	52300	Contract Services	5	88,295	184,100	191,464	199,123	207,087	215,371	223,986	232,945	242,263	251,954	262,032	272,513
4100515	52360	Federal, State & Local Fees	5	10,954	26,000	27,040	28,122	29,246	30,416	31,633	32,898	34,214	35,583	37,006	38,486
4100515	52440	Infrastructure Repairs & Maintenance	5	3,013	26,000	27,040	28,122	29,246	30,416	31,633	32,898	34,214	35,583	37,006	38,486
SUBTOTAL: QUALITY & TREATMENT SERVICES				\$ 352,888	\$ 524,535	\$ 545,569	\$ 567,448	\$ 590,204	\$ 613,874	\$ 638,493	\$ 664,100	\$ 690,735	\$ 718,439	\$ 747,255	\$ 777,228

VICTORVILLE WATER DISTRICT

WATER RATE STUDY

Operating Revenue and Expenses

Preliminary Draft Subject to Material Revision/Do Not Cite or Distribute

TABLE 11 OPERATING EXPENSE FORECAST¹

ORG.	OBJECT	DESCRIPTION	Basis	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31
CONSERVATION SERVICES															
4100525	51100	Full Time Wages	7	\$ 287,990	\$ 289,840	\$ 301,434	\$ 313,491	\$ 326,031	\$ 339,072	\$ 352,635	\$ 366,741	\$ 381,410	\$ 396,667	\$ 412,533	\$ 429,035
4100525	51110	Overtime Wages	7	1,995	4,200	4,368	4,543	4,724	4,913	5,110	5,314	5,527	5,748	5,978	6,217
4100525	51200	Fringe Benefits	7	102,023	113,651	118,197	122,925	127,842	132,956	138,274	143,805	149,557	155,539	161,761	168,231
4100525	51300	Payroll Taxes	7	3,921	7,391	7,687	7,994	8,314	8,646	8,992	9,352	9,726	10,115	10,520	10,940
4100525	52010	Utilities-Electricity	9	2,179	2,400	2,520	2,646	2,778	2,917	3,063	3,216	3,377	3,546	3,723	3,909
4100525	52020	Utilities-Water Usage	11	124	100	100	100	100	100	100	100	100	100	100	100
4100525	52030	Utilities-Natural Gas	9	161	200	210	221	232	243	255	268	281	295	310	326
4100525	52060	Telephone	5	3,264	4,200	4,368	4,543	4,724	4,913	5,110	5,314	5,527	5,748	5,978	6,217
4100525	52110	Supplies	5	11,320	18,700	19,448	20,226	21,035	21,876	22,751	23,661	24,608	25,592	26,616	27,681
4100525	52140	Training & Education	5	250	1,500	1,560	1,622	1,687	1,755	1,825	1,898	1,974	2,053	2,135	2,220
4100525	52160	Conservation Programs	5	57,550	65,800	68,432	71,169	74,016	76,977	80,056	83,258	86,588	90,052	93,654	97,400
4100525	52201	Fuel	8	2,445	2,900	3,045	3,197	3,357	3,525	3,701	3,886	4,081	4,285	4,499	4,724
4100525	52230	Vehicle Expense	5	265	2,600	2,704	2,812	2,925	3,042	3,163	3,290	3,421	3,558	3,701	3,849
4100525	52240	Small Tools & Furniture	5	276	500	520	541	562	585	608	633	658	684	712	740
4100525	52300	Contract Services	5	1,171	3,800	3,952	4,110	4,274	4,445	4,623	4,808	5,001	5,201	5,409	5,625
SUBTOTAL: CONSERVATION SERVICES				\$ 474,937	\$ 517,783	\$ 538,545	\$ 560,140	\$ 582,603	\$ 605,966	\$ 630,268	\$ 655,545	\$ 681,836	\$ 709,183	\$ 737,628	\$ 767,214

TABLE 12 OPERATING EXPENSE FORECAST, cont.¹

ORG.	OBJECT	DESCRIPTION	Basis	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31
METER READING & MAINTENANCE SERVICES															
4100530	51100	Full Time Wages	7	\$ 542,535	\$ 539,734	\$ 561,323	\$ 583,776	\$ 607,127	\$ 631,412	\$ 656,668	\$ 682,935	\$ 710,253	\$ 738,663	\$ 768,209	\$ 798,938
4100530	51110	Overtime Wages	7	6,711	10,000	10,400	10,816	11,249	11,699	12,167	12,653	13,159	13,686	14,233	14,802
4100530	51150	Standby Wages	7	6,717	10,000	10,400	10,816	11,249	11,699	12,167	12,653	13,159	13,686	14,233	14,802
4100530	51200	Fringe Benefits	7	249,531	257,950	268,268	278,998	290,158	301,764	313,835	326,388	339,444	353,022	367,143	381,828
4100530	51300	Payroll Taxes	7	8,809	13,763	14,314	14,886	15,482	16,101	16,745	17,415	18,111	18,836	19,589	20,373
4100530	52060	Telephone	5	9,687	9,150	9,516	9,897	10,293	10,704	11,132	11,578	12,041	12,522	13,023	13,544
4100530	52110	Supplies	5	5,704	8,400	8,736	9,085	9,449	9,827	10,220	10,629	11,054	11,496	11,956	12,434
4100530	52140	Training & Education	5	3,751	2,000	2,080	2,163	2,250	2,340	2,433	2,531	2,632	2,737	2,847	2,960
4100530	52201	Fuel	8	26,280	42,300	44,415	46,636	48,968	51,416	53,987	56,686	59,520	62,496	65,621	68,902
4100530	52220	Equipment Expense	5	191	3,000	3,120	3,245	3,375	3,510	3,650	3,796	3,948	4,106	4,270	4,441
4100530	52230	Vehicle Expense	5	14,504	15,000	15,600	16,224	16,873	17,548	18,250	18,980	19,739	20,529	21,350	22,204
4100530	52240	Small Tools & Furniture	5	3,137	6,500	6,760	7,030	7,312	7,604	7,908	8,225	8,554	8,896	9,252	9,622
4100530	52300	Contract Services	5	4,342	26,000	27,040	28,122	29,246	30,416	31,633	32,898	34,214	35,583	37,006	38,486
4100530	52440	Infrastructure Repairs & Maintenance	5	26,379	83,000	86,320	89,773	93,364	97,098	100,982	105,021	109,222	113,591	118,135	122,860
4100530	52445	Meter Service Installations	15	123,630	150,000	156,000	162,240	168,730	175,479	182,498	189,798	197,390	205,285	213,497	222,037
4100530	52446	Meter Service Change Outs	15	989,161	1,500,000	325,000	325,000	325,000	325,000	325,000	325,000	325,000	325,000	325,000	325,000
4100530	55001	Expense Capitalization	16	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL: METER READING & MAINTENANCE SERVICES				\$ 2,021,069	\$ 2,676,796	\$ 1,549,291	\$ 1,598,707	\$ 1,650,122	\$ 1,703,616	\$ 1,759,275	\$ 1,817,186	\$ 1,877,440	\$ 1,940,133	\$ 2,005,363	\$ 2,073,234

VICTORVILLE WATER DISTRICT

WATER RATE STUDY

Operating Revenue and Expenses

Preliminary Draft Subject to Material Revision/Do Not Cite or Distribute

TABLE 13 OPERATING EXPENSE FORECAST¹

ORG.	OBJECT	DESCRIPTION	Basis	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31
TRANSMISSION & DISTRIBUTION SERVICES															
4100535	51100	Full Time Wages	7	\$ 1,467,911	\$ 1,458,198	\$ 1,516,526	\$ 1,577,187	\$ 1,640,274	\$ 1,705,885	\$ 1,774,120	\$ 1,845,085	\$ 1,918,889	\$ 1,995,644	\$ 2,075,470	\$ 2,158,489
4100535	51110	Overtime Wages	7	25,967	27,500	28,600	29,744	30,934	32,171	33,458	34,796	36,188	37,636	39,141	40,707
4100535	51150	Standby Wages	7	8,925	10,000	10,400	10,816	11,249	11,699	12,167	12,653	13,159	13,686	14,233	14,802
4100535	51200	Fringe Benefits	7	618,620	656,734	683,003	710,324	738,737	768,286	799,017	830,978	864,217	898,786	934,737	972,127
4100535	51300	Payroll Taxes	7	22,281	37,184	38,671	40,218	41,827	43,500	45,240	47,050	48,932	50,889	52,924	55,041
4100535	52060	Telephone	5	11,027	16,200	16,848	17,522	18,223	18,952	19,710	20,498	21,318	22,171	23,058	23,980
4100535	52110	Supplies	5	17,741	23,500	24,440	25,418	26,434	27,492	28,591	29,735	30,924	32,161	33,448	34,786
4100535	52140	Training & Education	5	3,323	7,900	8,216	8,545	8,886	9,242	9,612	9,996	10,396	10,812	11,244	11,694
4100535	52201	Fuel	8	87,123	96,400	101,220	106,281	111,595	117,175	123,034	129,185	135,644	142,427	149,548	157,025
4100535	52220	Equipment Expense	5	30,519	62,000	64,480	67,059	69,742	72,531	75,432	78,450	81,588	84,851	88,245	91,775
4100535	52230	Vehicle Expense	5	45,621	79,400	82,576	85,879	89,314	92,887	96,602	100,466	104,485	108,664	113,011	117,531
4100535	52240	Small Tools & Furniture	5	18,369	21,600	22,464	23,363	24,297	25,269	26,280	27,331	28,424	29,561	30,744	31,973
4100535	52300	Contract Services	5	16,874	80,500	83,720	87,069	90,552	94,174	97,941	101,858	105,933	110,170	114,577	119,160
4100535	52440	Infrastructure Repairs & Maintenance	5	892,124	536,300	557,752	580,062	603,265	627,395	652,491	678,591	705,734	733,964	763,322	793,855
4100535	55001	Expense Capitalization	16	(249,858)	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL: TRANSMISSION & DISTRIBUTION SERVICES				\$ 3,016,563	\$ 3,113,416	\$ 3,238,916	\$ 3,369,485	\$ 3,505,328	\$ 3,646,657	\$ 3,793,695	\$ 3,946,673	\$ 4,105,832	\$ 4,271,421	\$ 4,443,702	\$ 4,622,946

TABLE 14 OPERATING EXPENSE FORECAST, cont.¹

ORG.	OBJECT	DESCRIPTION	Basis	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31
SUPPLY SERVICE WAREHOUSE															
4100540	52010	Utilities-Electricity	9	\$ 6,288	\$ 7,200	\$ 7,488	\$ 7,788	\$ 8,099	\$ 8,423	\$ 8,760	\$ 9,110	\$ 9,475	\$ 9,854	\$ 10,248	\$ 10,658
4100540	52020	Utilities-Water Usage	11	2,118	2,225	2,225	2,225	2,225	2,225	2,225	2,225	2,225	2,225	2,225	2,225
4100540	52030	Utilities-Natural Gas	9	-	1,500	1,575	1,654	1,736	1,823	1,914	2,010	2,111	2,216	2,327	2,443
4100540	52040	Utilities-Sanitation	9	4,325	5,000	5,250	5,513	5,788	6,078	6,381	6,700	7,036	7,387	7,757	8,144
4100540	52060	Telephone	5	-	1,800	1,872	1,947	2,025	2,106	2,190	2,278	2,369	2,463	2,562	2,664
4100540	52110	Supplies	5	1,414	2,500	2,600	2,704	2,812	2,925	3,042	3,163	3,290	3,421	3,558	3,701
4100540	52201	Fuel	8	-	1,000	1,050	1,103	1,158	1,216	1,276	1,340	1,407	1,477	1,551	1,629
4100540	52230	Vehicle Expense	5	16	2,200	2,288	2,380	2,475	2,574	2,677	2,784	2,895	3,011	3,131	3,257
4100540	52240	Small Tools & Furniture	5	-	100	104	108	112	117	122	127	132	137	142	148
4100540	52410	Building Maintenance	5	8,542	8,400	8,736	9,085	9,449	9,827	10,220	10,629	11,054	11,496	11,956	12,434
SUBTOTAL: SUPPLY SERVICE WAREHOUSE				\$ 22,703	\$ 31,925	\$ 33,188	\$ 34,505	\$ 35,879	\$ 37,312	\$ 38,807	\$ 40,366	\$ 41,992	\$ 43,688	\$ 45,457	\$ 47,303

TABLE 15 OPERATING EXPENSE FORECAST, cont.¹

ORG.	OBJECT	DESCRIPTION	Basis	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31
FIELD SERVICE WAREHOUSE															
4100541	51100	Full Time Wages	7	\$ 108,837	\$ 115,173	\$ 119,780	\$ 124,571	\$ 129,554	\$ 134,736	\$ 140,125	\$ 145,730	\$ 151,560	\$ 157,622	\$ 163,927	\$ 170,484
4100541	51110	Overtime Wages	7	-	100	104	108	112	117	122	127	132	137	142	148
4100541	51200	Fringe Benefits	7	50,517	52,663	54,769	56,960	59,238	61,608	64,072	66,635	69,300	72,072	74,955	77,954
4100541	51300	Payroll Taxes	7	1,393	2,937	3,054	3,177	3,304	3,436	3,573	3,716	3,865	4,019	4,180	4,347
4100541	52010	Utilities-Electricity	9	13,222	17,300	18,165	19,073	20,027	21,028	22,080	23,184	24,343	25,560	26,838	28,180
4100541	52020	Utilities-Water Usage	11	1,823	2,900	2,900	2,900	2,900	2,900	2,900	2,900	2,900	2,900	2,900	2,900
4100541	52030	Utilities-Natural Gas	9	2,136	3,400	3,570	3,749	3,936	4,133	4,339	4,556	4,784	5,023	5,275	5,538
4100541	52060	Telephone	5	136	250	260	270	281	292	304	316	329	342	356	370
4100541	52110	Supplies	5	2,162	10,000	10,400	10,816	11,249	11,699	12,167	12,653	13,159	13,686	14,233	14,802
4100541	52140	Training & Education	5	70	400	416	433	450	468	487	506	526	547	569	592
4100541	52201	Fuel	8	112	500	525	551	579	608	638	670	704	739	776	814
4100541	52230	Vehicle Expense	5	2,265	3,300	3,432	3,569	3,712	3,861	4,015	4,176	4,343	4,516	4,697	4,885
4100541	52300	Contract Services	5	374	1,400	1,456	1,514	1,575	1,638	1,703	1,771	1,842	1,916	1,993	2,072
4100541	52410	Building Maintenance	5	1,132	3,200	3,328	3,461	3,600	3,744	3,893	4,049	4,211	4,379	4,555	4,737
4100541	52420	Grounds Maintenance	5	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL: FIELD SERVICE WAREHOUSE				\$ 184,178	\$ 213,522	\$ 222,159	\$ 231,152	\$ 240,516	\$ 250,266	\$ 260,418	\$ 270,990	\$ 281,997	\$ 293,460	\$ 305,395	\$ 317,824

VICTORVILLE WATER DISTRICT

WATER RATE STUDY

Operating Revenue and Expenses

Preliminary Draft Subject to Material Revision/Do Not Cite or Distribute

TABLE 16 OPERATING EXPENSE FORECAST, cont.¹

ORG.	OBJECT	DESCRIPTION	Basis	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31
CUSTOMER SERVICE, CASHIERING, BILLING & CREDIT															
4100545	51100	Full Time Wages	7	\$ 1,040,432	\$ 1,193,898	\$ 1,241,654	\$ 1,291,320	\$ 1,342,973	\$ 1,396,692	\$ 1,452,559	\$ 1,510,662	\$ 1,571,088	\$ 1,633,932	\$ 1,699,289	\$ 1,767,261
4100545	51110	Overtime Wages	7	(62)	5,000	5,200	5,408	5,624	5,849	6,083	6,327	6,580	6,843	7,117	7,401
4100545	51200	Fringe Benefits	7	420,304	490,660	510,286	530,697	551,925	574,002	596,962	620,841	645,674	671,501	698,362	726,296
4100545	51300	Payroll Taxes	7	15,006	30,444	31,662	32,929	34,246	35,616	37,040	38,522	40,063	41,665	43,332	45,065
4100545	52010	Utilities-Electricity	9	12,102	15,100	15,855	16,648	17,480	18,354	19,272	20,235	21,247	22,310	23,425	24,596
4100545	52020	Utilities-Water Usage	11	687	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200
4100545	52030	Utilities-Natural Gas	9	894	1,300	1,365	1,433	1,505	1,580	1,659	1,742	1,829	1,921	2,017	2,118
4100545	52060	Telephone	5	139	500	520	541	562	585	608	633	658	684	712	740
4100545	52110	Supplies	5	139,703	204,000	212,160	220,646	229,472	238,651	248,197	258,125	268,450	279,188	290,356	301,970
4100545	52140	Training & Education	5	113	2,500	2,600	2,704	2,812	2,925	3,042	3,163	3,290	3,421	3,558	3,701
4100545	52150	Travel & Meetings	6	116	500	525	551	579	608	638	670	704	739	776	814
4100545	52240	Small Tools & Furniture	5	252	2,700	2,808	2,920	3,037	3,159	3,285	3,416	3,553	3,695	3,843	3,997
4100545	52300	Contract Services	5	310,120	439,600	457,184	475,471	494,490	514,270	534,841	556,234	578,484	601,623	625,688	650,715
4100545	52360	Federal, State & Local Fees	5	10,249	8,100	8,424	8,761	9,111	9,476	9,855	10,249	10,659	11,085	11,529	11,990
4100545	52410	Building Maintenance	5	240	400	416	433	450	468	487	506	526	547	569	592
4100545	54050	Uncollectible Write-Offs	5	23,220	54,000	56,160	58,406	60,743	63,172	65,699	68,327	71,060	73,903	76,859	79,933
SUBTOTAL: CUSTOMER SERVICE, CASHIERING, BILLING & CREDIT				\$ 1,973,512	\$ 2,449,902	\$ 2,548,019	\$ 2,650,069	\$ 2,756,210	\$ 2,866,606	\$ 2,981,428	\$ 3,100,853	\$ 3,225,065	\$ 3,354,258	\$ 3,488,630	\$ 3,628,389

TABLE 17 OPERATING EXPENSE FORECAST, cont.¹

ORG.	OBJECT	DESCRIPTION	Basis	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31
GEOGRAPHIC INFORMATION SERVICES															
4101515	51100	Full Time Wages	7	\$ 76,686	\$ 75,558	\$ 78,581	\$ 81,724	\$ 84,993	\$ 88,393	\$ 91,928	\$ 95,605	\$ 99,430	\$ 103,407	\$ 107,543	\$ 111,845
4101515	51110	Overtime Wages	7	-	300	312	324	337	351	365	380	395	411	427	444
4101515	51200	Fringe Benefits	7	27,892	29,187	30,355	31,569	32,832	34,145	35,511	36,931	38,408	39,945	41,543	43,204
4101515	51300	Payroll Taxes	7	1,142	1,927	2,004	2,084	2,167	2,254	2,344	2,438	2,535	2,637	2,742	2,852
4101515	52060	Telephone	5	912	1,500	1,560	1,622	1,687	1,755	1,825	1,898	1,974	2,053	2,135	2,220
4101515	52110	Supplies	5	1	100	104	108	112	117	122	127	132	137	142	148
4101515	52140	Training & Education	5	2,100	3,500	3,640	3,786	3,937	4,095	4,258	4,429	4,606	4,790	4,982	5,181
4101515	52150	Travel & Meetings	6	200	500	525	551	579	608	638	670	704	739	776	814
4101515	52201	Fuel	8	129	4,000	4,200	4,410	4,631	4,862	5,105	5,360	5,628	5,910	6,205	6,516
4101515	52230	Vehicle Expense	5	152	2,000	2,080	2,163	2,250	2,340	2,433	2,531	2,632	2,737	2,847	2,960
4101515	52260	Computer Equipment	5	-	17,500	18,200	18,928	19,685	20,473	21,291	22,143	23,029	23,950	24,908	25,904
4101515	52300	Contract Services	5	147,613	285,100	155,000	161,200	167,648	174,354	181,328	188,581	196,124	203,969	212,128	220,613
4101515	55001	Expense Capitalization	16	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL: GEOGRAPHIC INFORMATION SERVICES				\$ 256,827	\$ 421,172	\$ 296,560	\$ 308,470	\$ 320,858	\$ 333,745	\$ 347,149	\$ 361,093	\$ 375,597	\$ 390,684	\$ 406,378	\$ 422,703

TABLE 18 OPERATING EXPENSE FORECAST, cont.¹

ORG.	OBJECT	DESCRIPTION	Basis	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31
CODE ENFORCEMENT															
4104000	51001	Contra Expense Wages	7	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4104000	51100	Full Time Wages	7	172,657	284,972	296,371	308,226	320,555	333,377	346,712	360,580	375,004	390,004	405,604	421,828
4104000	51110	Overtime Wages	7	946	300	312	324	337	351	365	380	395	411	427	444
4104000	51200	Fringe Benefits	7	101,563	124,467	129,446	134,624	140,008	145,609	151,433	157,490	163,790	170,342	177,155	184,242
4104000	51300	Payroll Taxes	7	2,527	7,267	7,557	7,860	8,174	8,501	8,841	9,195	9,563	9,945	10,343	10,757
SUBTOTAL: CODE ENFORCEMENT				\$ 277,693	\$ 417,006	\$ 433,686	\$ 451,033	\$ 469,075	\$ 487,838	\$ 507,351	\$ 527,645	\$ 548,751	\$ 570,701	\$ 593,529	\$ 617,270

VICTORVILLE WATER DISTRICT

WATER RATE STUDY

Operating Revenue and Expenses

Preliminary Draft Subject to Material Revision/Do Not Cite or Distribute

TABLE 19 OPERATING EXPENSE FORECAST, cont.¹

ORG.	OBJECT	DESCRIPTION	Basis	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31
ENGINEERING SERVICES															
4104500	51100	Full Time Wages	7	\$ 866,097	\$ 1,053,990	\$ 1,096,150	\$ 1,139,996	\$ 1,185,596	\$ 1,233,020	\$ 1,282,340	\$ 1,333,634	\$ 1,386,979	\$ 1,442,459	\$ 1,500,157	\$ 1,560,163
4104500	51110	Overtime Wages	7	2,251	5,500	5,720	5,949	6,187	6,434	6,692	6,959	7,238	7,527	7,828	8,141
4104500	51200	Fringe Benefits	7	308,913	375,000	390,000	405,600	421,824	438,697	456,245	474,495	493,474	513,213	533,742	555,092
4104500	51220	Retiree Health Care	7	5,004	11,220	11,669	12,136	12,621	13,126	13,651	14,197	14,765	15,355	15,970	16,608
4104500	51300	Payroll Taxes	7	11,224	15,000	15,600	16,224	16,873	17,548	18,250	18,980	19,739	20,529	21,350	22,204
4104500	52010	Utilities-Electricity	9	21,795	13,000	13,650	14,333	15,049	15,802	16,592	17,421	18,292	19,207	20,167	21,176
4104500	52020	Utilities-Water Usage	11	1,244	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200
4104500	52030	Utilities-Natural Gas	9	1,056	1,100	1,155	1,213	1,273	1,337	1,404	1,474	1,548	1,625	1,706	1,792
4104500	52060	Telephone	5	5,112	6,500	6,760	7,030	7,312	7,604	7,908	8,225	8,554	8,896	9,252	9,622
4104500	52110	Supplies	5	11,543	8,900	9,256	9,626	10,011	10,412	10,828	11,261	11,712	12,180	12,667	13,174
4104500	52140	Training & Education	5	3,756	4,900	5,096	5,300	5,512	5,732	5,962	6,200	6,448	6,706	6,974	7,253
4104500	52201	Fuel	8	9,187	9,700	10,185	10,694	11,229	11,790	12,380	12,999	13,649	14,331	15,048	15,800
4104500	52230	Vehicle Expense	5	8,014	2,700	2,808	2,920	3,037	3,159	3,285	3,416	3,553	3,695	3,843	3,997
4104500	52240	Small Tools & Furniture	5	394	500	520	541	562	585	608	633	658	684	712	740
4104500	52300	Contract Services	5	108,671	180,000	187,200	194,688	202,476	210,575	218,998	227,757	236,868	246,342	256,196	266,444
4104500	52440	Infrastructure Repairs & Maintenance	5	1,117,938	1,494,023	784,000	815,360	847,974	881,893	917,169	953,856	992,010	1,031,691	1,072,958	1,115,876
4104500	55001	Expense Capitalization	16	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL: ENGINEERING SERVICES				\$ 2,482,200	\$ 3,183,234	\$ 2,540,969	\$ 2,642,810	\$ 2,748,736	\$ 2,858,913	\$ 2,973,511	\$ 3,092,707	\$ 3,216,687	\$ 3,345,641	\$ 3,479,770	\$ 3,619,282

TABLE 20 OPERATING EXPENSE FORECAST, cont.¹

ORG.	OBJECT	DESCRIPTION	Basis	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31
ASPHALT SERVICES															
4105001	51100	Full Time Wages	7	\$ 101,058	\$ 102,952	\$ 107,070	\$ 111,353	\$ 115,807	\$ 120,439	\$ 125,257	\$ 130,267	\$ 135,478	\$ 140,897	\$ 146,533	\$ 152,394
4105001	51110	Overtime Wages	7	59	18,000	18,720	19,469	20,248	21,057	21,900	22,776	23,687	24,634	25,620	26,644
4105001	51200	Fringe Benefits	7	43,946	46,613	48,478	50,417	52,433	54,531	56,712	58,980	61,340	63,793	66,345	68,999
4105001	51300	Payroll Taxes	7	1,527	2,625	2,730	2,839	2,953	3,071	3,194	3,322	3,455	3,593	3,737	3,886
4105001	52110	Supplies	5	342	850	884	919	956	994	1,034	1,076	1,119	1,163	1,210	1,258
4105001	52240	Small Tools & Furniture	5	-	375	390	406	422	439	456	474	493	513	534	555
4105001	52440	Infrastructure Repairs & Maintenance	5	6,214	7,500	7,875	8,190	8,518	8,858	9,213	9,581	9,964	10,363	10,777	11,209
SUBTOTAL: ASPHALT SERVICES				\$ 153,146	\$ 178,915	\$ 186,147	\$ 193,593	\$ 201,336	\$ 209,390	\$ 217,765	\$ 226,476	\$ 235,535	\$ 244,957	\$ 254,755	\$ 264,945

VICTORVILLE WATER DISTRICT

WATER RATE STUDY

Operating Revenue and Expenses

Preliminary Draft Subject to Material Revision/Do Not Cite or Distribute

EXHIBIT 1

TABLE 21 OPERATING EXPENSE FORECAST, cont.¹

ORG.	OBJECT	DESCRIPTION	Basis	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31
CAPITAL PURCHASES															
4100010	52460	Capital Purchases ⁶	See Exh 2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SUBTOTAL: CAPITAL PURCHASES				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
GRAND TOTAL: WATER OPERATING EXPENSES				\$ 25,106,233	\$ 31,381,157	\$ 29,564,837	\$ 31,170,950	\$ 32,883,345	\$ 34,710,362	\$ 36,661,074	\$ 38,745,358	\$ 40,973,970	\$ 43,358,629	\$ 45,912,104	\$ 48,648,320

TABLE 22 : NON-CASH ITEMS, EXCLUDED FROM ABOVE

ORG.	OBJECT	DESCRIPTION	Basis	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31
DEPRECIATION															
4100010	52460	Depreciation Expense	16	\$ -	\$ -	\$ 6,615,563	\$ 7,090,551	\$ 7,333,929	\$ 7,099,575	\$ 7,203,484	\$ 7,203,484	\$ 7,203,484	\$ 7,203,484	\$ 7,203,484	\$ 7,203,484
SUBTOTAL: DEPRECIATION				\$ -	\$ -	\$ 6,615,563	\$ 7,090,551	\$ 7,333,929	\$ 7,099,575	\$ 7,203,484	\$ 7,203,484	\$ 7,203,484	\$ 7,203,484	\$ 7,203,484	\$ 7,203,484

TABLE 23 : FORECASTING ASSUMPTIONS

COST INFLATION FACTORS		2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
1	Customer Growth	--	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
2	Connection Fees	--	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
3	Plan Check Fee	--	1.80%	1.80%	1.80%	1.80%	1.80%	1.80%	1.80%	1.80%	1.80%	1.80%	1.80%
4	Reimbursements - Operating Cost Recovery	--	5.60%	5.60%	5.60%	5.60%	5.60%	5.60%	5.60%	5.60%	5.60%	5.60%	5.60%
5	General Cost Inflation	--	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
6	General Cost Inflation - Travel & Meetings	--	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
7	Labor Cost Inflation	--	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
8	Fuel Cost Inflation	--	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
9	Utilities - Electricity/Natural Gas/Sanitation	--	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
10	Utilities - Production Power	--	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%
11	Utilities - Water Usage	--	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
12	R-Cubed Water	--	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%
13	Admin & Bio Assessment	--	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%
14	Groundwater Replenishment & Makeup Obligation	--	10.30%	10.30%	10.30%	10.30%	10.30%	10.30%	10.30%	10.30%	10.30%	10.30%	10.30%
15	Meter Service Installation & Change Outs	--	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
16	No Cost Inflation	--	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

1. Revenues and expenses for FY 2019/20 and FY 2020/21 were provided by District staff. Source file: WATER - REV & EXP -BUDGET - CUBES 2021 -NBS.xlsx_AB , Rev-Exp by Org tab.
2. Interest income for the Interfund Loan is per the District's budget and debt schedule.
3. Purchased Water cost is the amount Victorville Water District pays to the Mojave Water Agency for R³ water in order to pump water to Victorville; it is a pumping cost similar to production power. The cost is \$125/AF and varies based on the cost of power and changes each year.
4. Groundwater Assessment is the Mojave Water Agency's cost for quarterly administration and the biological assessments to ensure quality standards.
5. Groundwater Replenishment is the additional cost of ground water over the Free Production Allowance (FPA). This cost is for replacement and makeup obligations from the Mojave Water Agency. Makeup obligations are related to the annual flow down the Mojave River which is very difficult to predict. Source file: MWA Obligations - Forecasts.xlsx .
6. Budgeted Capital Purchases are included in Exhibit 2 (CIP) of this model.
7. Cost inflation factors were provided by the District staff. Source file: VWD Data - Fiscal Impact Forecast 01-30-2020.xlsx .

TABLE 24 : CAPITAL FUNDING SUMMARY

CAPITAL FUNDING FORECAST	Budget		Projected Rates for Adoption Period					Projected				
	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31
Funding Sources:												
Grants	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Use of Connection Fee Reserves	-	-	373,500	-	-	-	-	-	1,664,000	6,833,000	-	-
SRF Loan Funding	-	-	-	-	-	-	-	-	-	-	-	-
Use of New Revenue Bond Proceeds	-	-	-	-	-	-	-	-	-	-	-	-
<i>Unfunded Capital</i>	-	-	-	-	-	-	-	-	-	-	-	-
Use of Capital Rehabilitation and Replacement Reserve	-	-	9,921,345	7,505,097	1,276,563	547,044	74,171	90,871	146,945	659,321	81,371	1,049,103
Rate Revenue	-	-	-	351,903	5,943,737	6,445,956	6,667,529	6,126,029	6,356,755	7,992,679	6,883,629	7,231,897
Total Sources of Capital Funds	\$ -	\$ -	\$10,294,845	\$ 7,857,000	\$ 7,220,300	\$ 6,993,000	\$ 6,741,700	\$ 6,216,900	\$ 8,167,700	\$15,485,000	\$ 6,965,000	\$ 8,281,000
Uses of Capital Funds:												
Total Project Costs	\$ -	\$ -	\$10,294,845	\$ 7,857,000	\$ 7,220,300	\$ 6,993,000	\$ 6,741,700	\$ 6,216,900	\$ 8,167,700	\$15,485,000	\$ 6,965,000	\$ 8,281,000
Capital Funding Surplus (Deficiency)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

CIP Funding Option Selected in Financial Plan 3

Total Planned CIP through FY 2025/26 \$ 38,733,345

Capital Improvement Program Funding Choice	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31
Alternative 1 - CIP with 2% Annual Rate Increases	\$ -	\$ -	\$ 8,929,211	\$ 7,071,300	\$ 6,498,270	\$ 6,293,700	\$ 6,067,530	\$ 5,595,210	\$ 5,853,330	\$ 7,786,800	\$ 6,268,500	\$ 7,452,900
Alternative 2 - Fund 80% of CIP	-	-	7,937,076	6,285,600	5,776,240	5,594,400	5,393,360	4,973,520	5,202,960	6,921,600	5,572,000	6,624,800
Alternative 3 - Full Funding of CIP	-	-	9,921,345	7,857,000	7,220,300	6,993,000	6,741,700	6,216,900	6,503,700	8,652,000	6,965,000	8,281,000
No Rate Increases	-	-	2,480,336	1,964,250	1,805,075	1,748,250	1,685,425	1,554,225	1,625,925	2,163,000	1,741,250	2,070,250
Connection Fee Projects	-	-	373,500	-	-	-	-	-	1,664,000	6,833,000	-	-

CAPITAL IMPROVEMENT PROGRAM

TABLE 25 : CAPITAL IMPROVEMENT PROGRAM COSTS (in Future-Year Dollars)¹

PROJECT ID	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31
RATE FUNDED												
Pipeline Projects												
Area 1	\$ -	\$ -	\$ -	\$ 1,144,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Area 2	-	-	-	1,666,000	-	-	-	-	-	-	-	-
Area 3	-	-	-	-	-	-	-	-	-	-	-	-
Area 4	-	-	-	-	-	2,530,000	-	-	-	-	-	-
Area 5	-	-	-	2,310,000	-	-	-	-	-	-	-	-
Area 6	-	-	-	-	2,530,000	-	-	-	-	-	-	-
Area 7	-	-	-	-	1,389,000	-	-	-	-	-	-	-
Area 8	-	-	-	-	-	2,794,000	-	-	-	-	-	-
Area 9	-	-	-	-	-	-	2,274,000	-	-	-	-	-
Area 10	-	-	-	-	-	-	2,413,000	-	-	-	-	-
Area 11	-	-	-	-	-	-	-	1,604,000	-	-	-	-
Area 12	-	-	-	-	-	-	-	2,698,000	-	-	-	-
Area 13	-	-	-	-	-	-	-	-	1,698,000	-	-	-
Area 14	-	-	-	-	-	-	-	-	1,284,000	-	-	-
Area 15	-	-	-	-	-	-	-	-	-	-	-	3,176,000
Area 16	-	-	-	-	-	-	-	-	-	-	-	3,264,000
Area 17	-	-	-	-	-	-	-	-	-	-	2,832,000	-
Area 18	-	-	-	-	-	-	-	-	-	-	2,395,000	-
Area 19	-	-	-	-	-	-	-	-	-	-	-	-
Area 20	-	-	-	-	-	-	-	-	-	-	-	-
Area 21	-	-	-	-	-	-	-	-	-	-	-	-
Area 22	-	-	-	-	-	-	-	-	-	-	-	-
Area 23	-	-	-	-	-	-	-	-	-	-	-	-

VICTORVILLE WATER DISTRICT
WATER RATE STUDY
Capital Improvement Plan Expenditures
Preliminary Draft Subject to Material Revision/Do Not Cite or Distribute

EXHIBIT 2

TABLE 25 : CAPITAL IMPROVEMENT PROGRAM COSTS, cont. (in Future-Year Dollars)¹

PROJECT ID	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31
Area 24	-	-	-	-	-	-	-	-	-	-	-	-
Area 25	-	-	-	-	-	-	-	-	-	-	-	-
Area 26	-	-	-	-	-	-	-	-	-	-	-	-
Area 27	-	-	3,720,000	-	-	-	-	-	-	-	-	-
Area 28	-	-	-	-	550,000	-	-	-	-	-	-	-
Area 29	-	-	-	-	-	-	-	-	1,664,000	6,833,000	-	-
Area 30	-	-	1,494,000	-	-	-	-	-	-	-	-	-
Area 31	-	-	-	-	-	-	-	-	-	-	-	-
Area 32	-	-	-	-	-	-	-	-	-	-	-	-
Sub-total	\$ -	\$ -	\$ 5,214,000	\$ 5,120,000	\$ 4,469,000	\$ 5,324,000	\$ 4,687,000	\$ 4,302,000	\$ 4,646,000	\$ 6,833,000	\$ 5,227,000	\$ 6,440,000
New Supply Facilities												
F-TO 5 Metering Station	\$ -	\$ -	\$ 1,537,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Sub-total	\$ -	\$ -	\$ 1,537,000	\$ -								
Site Security Upgrades												
Well 109	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 273,000	\$ -	\$ -
Well 118	-	-	-	-	-	-	-	-	-	118,000	-	-
Well 119	-	-	-	-	-	-	-	-	-	226,000	-	-
Well 120	-	-	-	-	-	-	-	-	-	-	213,000	-
Well 121	-	-	-	-	-	-	-	-	-	-	289,000	-
Well 122	-	-	-	-	-	-	-	-	-	-	222,000	-
Well 123	-	-	-	-	-	-	-	-	-	-	-	307,000
Well 126	-	-	-	-	-	-	-	-	-	-	-	177,000
Well 127	-	-	-	-	-	-	-	-	-	-	-	312,000
Well 128	-	-	-	-	-	-	-	-	-	-	-	-
Well 130	-	-	-	-	-	-	-	-	-	-	-	-
Well 131	-	-	-	-	-	-	-	-	-	-	-	-
Well 133	-	-	-	-	-	-	-	-	-	-	-	-
Well 134	-	-	-	-	-	-	-	-	-	-	-	-
Well 136	-	-	-	-	-	-	-	-	-	-	-	-
Well 138	-	-	-	-	-	-	-	-	-	-	-	-
Well 141	-	-	-	-	-	-	-	-	-	-	-	-
Well 144	-	-	-	-	-	-	-	-	-	-	-	-
Well 201	-	-	-	-	-	194,000	-	-	-	-	-	-
Well 203	-	-	-	-	-	-	154,000	-	-	-	-	-
Well 204	-	-	-	-	18,000	-	-	-	-	-	-	-
Well 205	-	-	-	-	-	-	-	57,000	-	-	-	-
Well 206	-	-	-	-	-	-	-	135,000	-	-	-	-
Well 207	-	-	-	-	-	-	-	-	584,000	-	-	-
Well 208	-	-	-	152,000	-	-	-	-	-	-	-	-
Well 209	-	-	-	18,000	-	-	-	-	-	-	-	-
Well 212	-	-	-	-	231,000	-	-	-	-	-	-	-
R 102 & Well 135	-	-	-	-	-	-	-	-	-	-	-	-
R 104	-	-	-	-	-	-	-	-	-	-	-	-
R 105, 113, 115, 118 & Well 137	-	-	-	-	-	-	-	-	-	-	-	-
R 107, 108, 112, 114 & Well 129	-	-	-	-	-	-	-	-	-	-	-	-
R 109 & 121	-	-	-	-	-	-	-	-	-	-	-	-

VICTORVILLE WATER DISTRICT
WATER RATE STUDY
Capital Improvement Plan Expenditures
Preliminary Draft Subject to Material Revision/Do Not Cite or Distribute

EXHIBIT 2

TABLE 25 : CAPITAL IMPROVEMENT PROGRAM COSTS, cont. (in Future-Year Dollars)¹

PROJECT ID	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31
R 110, 111, 116, 117 & Well 140	-	-	-	-	-	-	-	-	-	-	-	-
R 119 & Well 132	-	-	-	-	-	-	-	-	-	-	-	-
R 120 & Well 139 & 143	-	-	-	-	-	-	-	-	-	-	-	-
R 202 & 207	-	-	-	-	-	-	-	-	-	-	-	-
R 205 & 210	-	-	-	-	-	-	-	-	-	-	-	-
R 208 & 209	-	-	-	-	-	-	-	-	-	-	-	-
Sub-total	\$ -	\$ -	\$ -	\$ 188,000	\$ 231,000	\$ 194,000	\$ 154,000	\$ 192,000	\$ 584,000	\$ 617,000	\$ 724,000	\$ 796,000
SCADA Master Plan Projects												
AM11	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 55,000	\$ 56,000	\$ -	\$ -	\$ -	\$ -	\$ -
ES01	-	-	-	262,000	269,000	-	-	-	-	-	-	-
ES06	-	-	14,000	14,000	15,000	15,000	15,000	16,000	16,000	17,000	17,000	18,000
NI02	-	-	652,000	236,000	-	-	-	-	-	-	-	-
NI03	-	-	-	276,000	284,000	292,000	299,000	307,000	316,000	216,000	-	-
CC01	-	-	-	250,000	193,000	198,000	-	-	-	-	-	-
SU01	-	-	-	-	465,000	478,000	491,000	504,000	-	-	-	-
SU02	-	-	-	-	-	-	-	-	-	-	-	-
OI01	-	-	-	-	-	-	165,000	-	-	-	-	-
OI02	-	-	-	-	-	-	107,000	-	-	-	-	-
OI03	-	-	-	-	-	72,000	-	-	-	-	-	-
Sub-total	\$ -	\$ -	\$ 666,000	\$ 1,038,000	\$ 1,226,000	\$ 1,110,000	\$ 1,133,000	\$ 827,000	\$ 332,000	\$ 233,000	\$ 17,000	\$ 18,000
Other CIP Items												
Machinery, Equipment & Vehicles	\$ -	\$ -	\$ 770,000	\$ 616,000	\$ 392,000	\$ 112,700	\$ 502,800	\$ 618,000	\$ 649,400	\$ 667,000	\$ 686,000	\$ 706,000
ROW/ Utility Location	-	-	234,345	145,000	152,300	152,300	159,900	167,900	176,300	182,000	187,000	193,000
IT	-	-	-	-	-	100,000	105,000	110,000	116,000	120,000	124,000	128,000
Meter - AMI	-	-	1,500,000	750,000	750,000	-	-	-	-	-	-	-
Sub-total: Rate Funded Capital	\$ -	\$ -	\$ 2,504,345	\$ 1,511,000	\$ 1,294,300	\$ 365,000	\$ 767,700	\$ 895,900	\$ 941,700	\$ 969,000	\$ 997,000	\$ 1,027,000
Total: Rate Funded Capital	\$ -	\$ -	\$ 9,921,345	\$ 7,857,000	\$ 7,220,300	\$ 6,993,000	\$ 6,741,700	\$ 6,216,900	\$ 6,503,700	\$ 8,652,000	\$ 6,965,000	\$ 8,281,000
Placeholder for Future Year Capital Projects ³	-	-	-	-	-	-	-	-	-	-	-	-
Total: Rate Funded Capital Costs (in Future-Year Dollars)	\$ -	\$ -	\$ 9,921,345	\$ 7,857,000	\$ 7,220,300	\$ 6,993,000	\$ 6,741,700	\$ 6,216,900	\$ 6,503,700	\$ 8,652,000	\$ 6,965,000	\$ 8,281,000

TABLE 26 : CAPITAL IMPROVEMENT PROGRAM COSTS (in Future-Year Dollars)¹

Area	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31
CONNECTION FEE FUNDED												
Pipeline Projects												
Area 30	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,664,000	\$ 6,833,000	\$ -	\$ -
Area 31	-	-	373,500	-	-	-	-	-	-	-	-	-
Area 32	-	-	-	-	-	-	-	-	-	-	-	-
Sub-total: Connection Fee Funded Capital	\$ -	\$ -	\$ 373,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,664,000	\$ 6,833,000	\$ -	\$ -
Total: CIP Costs (in Future-year Dollars)	\$ -	\$ -	\$ 10,294,845	\$ 7,857,000	\$ 7,220,300	\$ 6,993,000	\$ 6,741,700	\$ 6,216,900	\$ 8,167,700	\$ 15,485,000	\$ 6,965,000	\$ 8,281,000

TABLE 27 : FORECASTING ASSUMPTIONS

Economic Variables	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31
Annual Construction Cost Inflation, Per Engineering News Record	0.00%	0.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Cumulative Construction Cost Multiplier from 2020	1.00	1.00	1.03	1.06	1.09	1.13	1.16	1.19	1.23	1.27	1.30	1.34

1. Capital project costs for were provided by District Staff in future-year dollars. Source file: 2021 WMP 10 Year CIP_210309_final.xlsx .
2. The annual Construction Cost Inflation percentage is the 10-year average change in the Construction Cost Index from August 2010-2020. Source: Engineering News Record website (<http://enr.construction.com>).
3. Future capital projects represent the average of all planned CIP expenditures.

VICTORVILLE WATER DISTRICT
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TABLE 28 : CLASSIFICATION OF EXPENSES FOR COST OF SERVICE ANALYSIS

Classification of Expenses										
Budget Categories	Total Revenue Requirements	Commodity	Commodity Tier 2	Capacity	Customer	Fire Protection	Basis of Classification			
	FY 2021/22	(COM)	(COM Tier 2)	(CAP)	(CA)	(FP)	(COM)	(CAP)	(CA)	(FP)
4100500 - WATER PURCHASES										
Purchased Water	760,984	760,984	-	-	-	-	100%	0%	0%	0%
Groundwater Assessment	119,091	119,091	-	-	-	-	100%	0%	0%	0%
Groundwater Replenishment	4,129,009	4,129,009	-	-	-	-	100%	0%	0%	0%
SUBTOTAL: WATER PURCHASES	\$ 5,009,084	\$ 5,009,084	\$ -	\$ -	\$ -	\$ -	100%	0%	0%	0%
4100500 - PRODUCTION POWER										
Utilities-Production Power	2,704,399	2,704,399	-	-	-	-	100%	0%	0%	0%
SUBTOTAL: PRODUCTION POWER	\$ 2,704,399	\$ 2,704,399	\$ -	\$ -	\$ -	\$ -	100%	0%	0%	0%
4100500 - SUPPLY, PRODUCTION & PUMPING SERVICES										
Full Time Wages	\$ 1,077,343	\$ -	\$ -	\$ 1,059,264	\$ -	\$ 18,079	0%	98%	0%	2%
Overtime Wages	26,312	-	-	25,870	-	442	0%	98%	0%	2%
Standby Wages	28,600	-	-	28,120	-	480	0%	98%	0%	2%
Extra Regular Wages	-	-	-	-	-	-	0%	98%	0%	2%
Fringe Benefits	471,082	-	-	463,177	-	7,905	0%	98%	0%	2%
Payroll Taxes	27,472	-	-	27,011	-	461	0%	98%	0%	2%
Telephone	11,336	5,591	-	5,555	-	190	49%	49%	0%	2%
Supplies	24,336	12,003	-	11,925	-	408	49%	49%	0%	2%
Training & Education	10,296	-	-	10,123	-	173	0%	98%	0%	2%
Fuel	65,730	-	-	32,208	-	1,103	49%	49%	0%	2%
Vehicle Expense	31,720	15,645	-	15,543	-	532	49%	49%	0%	2%
Small Tools & Furniture	9,984	4,924	-	4,892	-	168	49%	49%	0%	2%
Contract Services	1,729,032	852,792	-	847,226	-	29,014	49%	49%	0%	2%
Grounds Maintenance	59,488	29,341	-	29,149	-	998	49%	49%	0%	2%
Infrastructure Repairs & Maintenance	156,000	76,942	-	76,440	-	2,618	49%	49%	0%	2%
Expense Capitalization	-	-	-	-	-	-	49%	49%	0%	2%
SUBTOTAL: SUPPLY, PRODUCTION & PUMP	\$ 3,728,731	\$ 1,029,657	\$ -	\$ 2,636,503	\$ -	\$ 62,571	28%	71%	0%	2%
4100030 - ADMINISTRATIVE SERVICES										
Full Time Wages	\$ 520,952	\$ -	\$ -	\$ 491,372	\$ 20,838	\$ 8,742	0%	94%	4%	2%
Overtime Wages	432	-	-	407	17	7	0%	94%	4%	2%
Extra Regular Wages	-	-	-	-	-	-	0%	94%	4%	2%
Fringe Benefits	179,154	-	-	168,982	7,166	3,006	0%	94%	4%	2%
Retiree Health Care	194,173	-	-	183,148	7,767	3,258	0%	94%	4%	2%
Payroll Taxes	13,284	-	-	12,530	531	223	0%	94%	4%	2%
Utilities-Electricity	20,685	-	-	19,510	827	347	0%	94%	4%	2%
Utilities-Water Usage	2,200	-	-	2,075	88	37	0%	94%	4%	2%
Utilities-Natural Gas	5,460	-	-	5,150	218	92	0%	94%	4%	2%
Utilities-Sanitation	-	-	-	-	-	-	0%	94%	4%	2%
Telephone	29,224	-	-	27,565	1,169	490	0%	94%	4%	2%
Supplies	13,416	-	-	12,654	537	225	0%	94%	4%	2%
Subs, Publications & Memberships	9,568	-	-	9,025	383	161	0%	94%	4%	2%
Training & Education	5,408	-	-	5,101	216	91	0%	94%	4%	2%
Travel & Meetings	525	-	-	495	21	9	0%	94%	4%	2%
SCLA Meetings	-	-	-	-	-	-	0%	94%	4%	2%
Legal Notices	6,448	-	-	6,082	258	108	0%	94%	4%	2%
Recruiting	8,112	-	-	7,651	324	136	0%	94%	4%	2%
Fuel	7,455	-	-	7,032	298	125	0%	94%	4%	2%
Vehicle Expense	4,368	-	-	4,120	175	73	0%	94%	4%	2%
Small Tools & Furniture	1,664	-	-	1,570	67	28	0%	94%	4%	2%
Computer Equipment	27,040	-	-	25,505	1,082	454	0%	94%	4%	2%
Contract Services	144,560	-	-	136,352	5,782	2,426	0%	94%	4%	2%

VICTORVILLE WATER DISTRICT
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TABLE 28, cont.

Classification of Expenses										
Budget Categories	Total Revenue Requirements	Commodity	Commodity Tier 2	Capacity	Customer	Fire Protection	Basis of Classification			
	0.00	(COM)	(COM Tier 2)	(CAP)	(CA)	(FP)	(COM)	(CAP)	(CA)	(FP)
4100030 - ADMINISTRATIVE SERVICES										
Insurance	435,040	-	-	410,338	17,402	7,300	0%	94%	4%	2%
Legal	70,304	-	-	66,312	2,812	1,180	0%	94%	4%	2%
Federal, State & Local Fees	122,200	-	-	115,261	4,888	2,051	0%	94%	4%	2%
Building Maintenance	10,816	-	-	10,202	433	182	0%	94%	4%	2%
Vandalism & Accidents	54,080	-	-	51,009	2,163	908	0%	94%	4%	2%
Cost Allocation	2,813,566	-	-	2,653,810	112,543	47,214	0%	94%	4%	2%
SUBTOTAL: ADMINISTRATIVE SERVICES	\$ 4,700,135	\$ -	\$ -	\$ 4,433,258	\$ 188,005	\$ 78,872	0%	94%	4%	2%
4100505 - SCADA & TELEMETRY SERVICES										
Full Time Wages	\$ 249,806	\$ -	\$ -	\$ 245,604	\$ -	\$ 4,201	0%	98%	0%	2%
Overtime Wages	9,464	-	-	9,305	-	159	0%	98%	0%	2%
Extra Regular Wages	-	-	-	-	-	-	0%	98%	0%	2%
Fringe Benefits	103,139	-	-	101,405	-	1,735	0%	98%	0%	2%
Payroll Taxes	6,370	-	-	6,263	-	107	0%	98%	0%	2%
Telephone	2,392	-	-	2,352	-	40	0%	98%	0%	2%
Supplies	3,224	-	-	3,170	-	54	0%	98%	0%	2%
Subs, Publications & Memberships	-	-	-	-	-	-	0%	98%	0%	2%
Training & Education	11,648	-	-	11,452	-	196	0%	98%	0%	2%
Fuel	10,080	-	-	9,910	-	170	0%	98%	0%	2%
Vehicle Expense	4,888	-	-	4,806	-	82	0%	98%	0%	2%
Small Tools & Furniture	33,280	-	-	32,720	-	560	0%	98%	0%	2%
Contract Services	26,850	-	-	26,398	-	452	0%	98%	0%	2%
Infrastructure Repairs & Maintenance	60,261	-	-	59,247	-	1,013	0%	98%	0%	2%
Expense Capitalization	-	-	-	-	-	-	0%	98%	0%	2%
SUBTOTAL: SCADA & TELEMETRY SERVICES	\$ 521,402	\$ -	\$ -	\$ 512,633	\$ -	\$ 8,769	0%	98%	0%	2%
4100510 - HIGH DESERT POWER PROJECT										
Full Time Wages	\$ 55,702	\$ -	\$ -	\$ 54,766	\$ -	\$ 937	0%	98%	0%	2%
Overtime Wages	28,080	-	-	27,608	-	472	0%	98%	0%	2%
Standby Wages	34,528	-	-	33,947	-	581	0%	98%	0%	2%
Extra Regular Wages	-	-	-	-	-	-	0%	98%	0%	2%
Fringe Benefits	14,040	-	-	13,804	-	236	0%	98%	0%	2%
Payroll Taxes	1,040	-	-	1,023	-	17	0%	98%	0%	2%
Utilities-Production Power	234,350	234,350	-	-	-	-	100%	0%	0%	0%
Supplies	43,680	-	-	42,945	-	735	0%	98%	0%	2%
Contract Services	327,600	-	-	322,090	-	5,510	0%	98%	0%	2%
Federal, State & Local Fees	520	-	-	511	-	9	0%	98%	0%	2%
Grounds Maintenance	7,696	-	-	7,567	-	129	0%	98%	0%	2%
Infrastructure Repairs & Maintenance	20,800	-	-	20,450	-	350	0%	98%	0%	2%
Purchased Water	-	-	-	-	-	-	0%	100%	0%	0%
SUBTOTAL: HDPP OPERATING EXPENSES	\$ 768,036	\$ 234,350	\$ -	\$ 524,711	\$ -	\$ 8,976	31%	68%	0%	1%
4100515 - QUALITY & TREATMENT SERVICES										
Full Time Wages	\$ 76,180	\$ -	\$ -	\$ 74,901	\$ -	\$ 1,278	0%	98%	0%	2%
Overtime Wages	2,392	-	-	2,352	-	40	0%	98%	0%	2%
Extra Regular Wages	-	-	-	-	-	-	0%	98%	0%	2%
Fringe Benefits	27,786	-	-	27,320	-	466	0%	98%	0%	2%
Payroll Taxes	1,943	-	-	1,910	-	33	0%	98%	0%	2%
Telephone	520	256	-	255	-	9	49%	49%	0%	2%
Supplies	178,464	175,469	-	-	-	2,995	98%	0%	0%	2%
Training & Education	2,808	1,385	-	1,376	-	47	49%	49%	0%	2%
Fuel	5,565	2,745	-	2,727	-	93	49%	49%	0%	2%
Vehicle Expense	3,328	1,641	-	1,631	-	56	49%	49%	0%	2%
Small Tools & Furniture	1,040	513	-	510	-	17	49%	49%	0%	2%

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TABLE 28, cont.

Classification of Expenses										
Budget Categories	Total Revenue	Commodity	Commodity	Capacity	Customer	Fire Protection	Basis of Classification			
	FY 2021/22						(COM)	Tier 2 (COM Tier 2)	(CAP)	(CA)
Contract Services	191,464	188,251	-	-	-	3,213	98%	0%	0%	2%
Federal, State & Local Fees	27,040	13,337	-	13,250	-	454	49%	49%	0%	2%
Infrastructure Repairs & Maintenance	27,040	13,337	-	13,250	-	454	49%	49%	0%	2%
SUBTOTAL: QUALITY & TREATMENT SERVICES	\$ 545,569	\$ 396,934	\$ -	\$ 139,480	\$ -	\$ 9,155	73%	26%	0%	2%
4100525 - CONSERVATION SERVICES										
Full Time Wages	\$ 301,434	\$ 301,434	\$ -	\$ -	\$ -	\$ -	100%	0%	0%	0%
Overtime Wages	4,368	4,368	-	-	-	-	100%	0%	0%	0%
Extra Regular Wages	-	-	-	-	-	-	100%	0%	0%	0%
Fringe Benefits	118,197	118,197	-	-	-	-	100%	0%	0%	0%
Payroll Taxes	7,687	7,687	-	-	-	-	100%	0%	0%	0%
Utilities-Electricity	2,520	2,520	-	-	-	-	100%	0%	0%	0%
Utilities-Water Usage	100	100	-	-	-	-	100%	0%	0%	0%
Utilities-Natural Gas	210	210	-	-	-	-	100%	0%	0%	0%
Telephone	4,368	4,368	-	-	-	-	100%	0%	0%	0%
Supplies	19,448	19,448	-	-	-	-	100%	0%	0%	0%
Training & Education	1,560	1,560	-	-	-	-	100%	0%	0%	0%
Conservation Programs	68,432	68,432	-	-	-	-	100%	0%	0%	0%
Fuel	3,045	3,045	-	-	-	-	100%	0%	0%	0%
Vehicle Expense	2,704	2,704	-	-	-	-	100%	0%	0%	0%
Small Tools & Furniture	520	520	-	-	-	-	100%	0%	0%	0%
Contract Services	3,952	3,952	-	-	-	-	100%	0%	0%	0%
SUBTOTAL: CONSERVATION SERVICES	\$ 538,545	\$ 538,545	\$ -	\$ -	\$ -	\$ -	100%	0%	0%	0%
4100530 - METER READING & MAINTENANCE SERVICES										
Full Time Wages	\$ 561,323	\$ -	\$ -	\$ 275,941	\$ 275,941	\$ 9,440	0%	49%	49%	2%
Overtime Wages	10,400	-	-	5,113	5,113	175	0%	49%	49%	2%
Standby Wages	10,400	-	-	5,113	5,113	175	0%	49%	49%	2%
Extra Regular Wages	-	-	-	-	-	-	0%	49%	49%	2%
Fringe Benefits	268,268	-	-	131,878	131,878	4,512	0%	49%	49%	2%
Payroll Taxes	14,314	-	-	7,037	7,037	241	0%	49%	49%	2%
Telephone	9,516	-	-	4,678	4,678	160	0%	49%	49%	2%
Supplies	8,736	-	-	4,295	4,295	147	0%	49%	49%	2%
Training & Education	2,080	-	-	1,023	1,023	35	0%	49%	49%	2%
Fuel	44,415	-	-	21,834	21,834	747	0%	49%	49%	2%
Equipment Expense	3,120	-	-	1,534	1,534	52	0%	49%	49%	2%
Vehicle Expense	15,600	-	-	7,669	7,669	262	0%	49%	49%	2%
Small Tools & Furniture	6,760	-	-	3,323	3,323	114	0%	49%	49%	2%
Contract Services	27,040	-	-	13,293	13,293	455	0%	49%	49%	2%
Infrastructure Repairs & Maintenance	86,320	-	-	42,434	42,434	1,452	0%	49%	49%	2%
Meter Service Installations	156,000	-	-	76,688	76,688	2,624	0%	49%	49%	2%
Meter Service Change Outs	325,000	-	-	159,767	159,767	5,466	0%	49%	49%	2%
Expense Capitalization	-	-	-	-	-	-	0%	49%	49%	2%
SUBTOTAL: METER READING & MAINTENANCE SERVICES	\$ 1,549,291	\$ -	\$ -	\$ 761,618	\$ 761,618	\$ 26,056	0%	49%	49%	2%
4100535 - TRANSMISSION & DISTRIBUTION SERVICES										
Full Time Wages	\$ 1,516,526	\$ 1,516,526	\$ -	\$ -	\$ -	\$ -	100%	0%	0%	0%
Overtime Wages	28,600	28,600	-	-	-	-	100%	0%	0%	0%
Standby Wages	10,400	10,400	-	-	-	-	100%	0%	0%	0%
Extra Regular Wages	-	-	-	-	-	-	100%	0%	0%	0%
Fringe Benefits	683,003	683,003	-	-	-	-	100%	0%	0%	0%
Payroll Taxes	38,671	38,671	-	-	-	-	100%	0%	0%	0%
Telephone	16,848	16,848	-	-	-	-	100%	0%	0%	0%
Supplies	24,440	24,440	-	-	-	-	100%	0%	0%	0%
Training & Education	8,216	8,216	-	-	-	-	100%	0%	0%	0%

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TABLE 28, cont.

Classification of Expenses										
Budget Categories	Total Revenue Requirements	Commodity	Commodity Tier 2	Capacity	Customer	Fire Protection	Basis of Classification			
	FY 2021/22	(COM)	(COM Tier 2)	(CAP)	(CA)	(FP)	(COM)	(CAP)	(CA)	(FP)
Fuel	101,220	101,220	-	-	-	-	100%	0%	0%	0%
Equipment Expense	64,480	64,480	-	-	-	-	100%	0%	0%	0%
Vehicle Expense	82,576	82,576	-	-	-	-	100%	0%	0%	0%
Small Tools & Furniture	22,464	22,464	-	-	-	-	100%	0%	0%	0%
Contract Services	83,720	83,720	-	-	-	-	100%	0%	0%	0%
Infrastructure Repairs & Maintenance	557,752	557,752	-	-	-	-	100%	0%	0%	0%
Expense Capitalization	-	-	-	-	-	-	100%	0%	0%	0%
SUBTOTAL: TRANSMISSION & DISTRIBUTION	\$ 3,238,916	\$ 3,238,916	\$ -	\$ -	\$ -	\$ -	100%	0%	0%	0%
4100540 - SUPPLY SERVICE WAREHOUSE										
Utilities-Electricity	\$ 7,488	\$ 3,693	\$ -	\$ 3,669	\$ -	\$ 126	49%	49%	0%	2%
Utilities-Water Usage	2,225	1,097	-	1,090	-	37	49%	49%	0%	2%
Utilities-Natural Gas	1,575	777	-	772	-	26	49%	49%	0%	2%
Utilities-Sanitation	5,250	2,589	-	2,573	-	88	49%	49%	0%	2%
Telephone	1,872	923	-	917	-	31	49%	49%	0%	2%
Supplies	2,600	1,282	-	1,274	-	44	49%	49%	0%	2%
Fuel	1,050	518	-	515	-	18	49%	49%	0%	2%
Vehicle Expense	2,288	1,128	-	1,121	-	38	49%	49%	0%	2%
Small Tools & Furniture	104	51	-	51	-	2	49%	49%	0%	2%
Building Maintenance	8,736	4,308	-	4,281	-	147	49%	49%	0%	2%
SUBTOTAL: SUPPLY SERVICE WAREHOUSE	\$ 33,188	\$ 16,368	\$ -	\$ 16,262	\$ -	\$ 558	49%	49%	0%	2%
4100541 - FIELD SERVICE WAREHOUSE										
Full Time Wages	\$ 119,780	\$ -	\$ -	\$ 112,974	\$ 4,791	\$ 2,014	0%	94%	4%	2%
Overtime Wages	104	-	-	98	4	2	0%	94%	4%	2%
Extra Regular Wages	-	-	-	-	-	-	0%	94%	4%	2%
Fringe Benefits	54,769	-	-	51,657	2,191	921	0%	94%	4%	2%
Payroll Taxes	3,054	-	-	2,881	122	51	0%	94%	4%	2%
Utilities-Electricity	18,165	-	-	17,133	727	305	0%	94%	4%	2%
Utilities-Water Usage	2,900	-	-	2,735	116	49	0%	94%	4%	2%
Utilities-Natural Gas	3,570	-	-	3,367	143	60	0%	94%	4%	2%
Telephone	260	-	-	245	10	4	0%	94%	4%	2%
Supplies	10,400	-	-	9,809	416	175	0%	94%	4%	2%
Training & Education	416	-	-	392	17	7	0%	94%	4%	2%
Fuel	525	-	-	495	21	9	0%	94%	4%	2%
Vehicle Expense	3,432	-	-	3,237	137	58	0%	94%	4%	2%
Contract Services	1,456	-	-	1,373	58	24	0%	94%	4%	2%
Building Maintenance	3,328	-	-	3,139	133	56	0%	94%	4%	2%
Grounds Maintenance	-	-	-	-	-	-	0%	94%	4%	2%
SUBTOTAL: FIELD SERVICE WAREHOUSE	\$ 222,159	\$ -	\$ -	\$ 209,537	\$ 8,886	\$ 3,736	0%	94%	4%	2%
4100545 - CUSTOMER SERVICE, CASHIERING, BILLING & CREDIT										
Full Time Wages	\$ 1,241,654	\$ -	\$ -	\$ -	\$ 1,220,772	\$ 20,882	0%	0%	98%	2%
Overtime Wages	5,200	-	-	-	5,113	87	0%	0%	98%	2%
Extra Regular Wages	-	-	-	-	-	-	0%	0%	98%	2%
Fringe Benefits	510,286	-	-	-	501,704	8,582	0%	0%	98%	2%
Payroll Taxes	31,662	-	-	-	31,130	532	0%	0%	98%	2%
Utilities-Electricity	15,855	-	-	-	15,588	267	0%	0%	98%	2%
Utilities-Water Usage	1,200	-	-	-	1,180	20	0%	0%	98%	2%
Utilities-Natural Gas	1,365	-	-	-	1,342	23	0%	0%	98%	2%
Telephone	520	-	-	-	511	9	0%	0%	98%	2%
Supplies	212,160	-	-	-	208,592	3,568	0%	0%	98%	2%
Training & Education	2,600	-	-	-	2,556	44	0%	0%	98%	2%

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TABLE 28, cont.

Classification of Expenses										
Budget Categories	Total Revenue Requirements	Commodity	Commodity Tier 2	Capacity	Customer	Fire Protection	Basis of Classification			
	FY 2021/22	(COM)	(COM Tier 2)	(CAP)	(CA)	(FP)	(COM)	(CAP)	(CA)	(FP)
Travel & Meetings	525	-	-	-	516	9	0%	0%	98%	2%
Small Tools & Furniture	2,808	-	-	-	2,761	47	0%	0%	98%	2%
Contract Services	457,184	-	-	-	449,495	7,689	0%	0%	98%	2%
Federal, State & Local Fees	8,424	-	-	-	8,282	142	0%	0%	98%	2%
Building Maintenance	416	-	-	-	409	7	0%	0%	98%	2%
Uncollectible Write-Offs	56,160	-	-	-	55,216	944	0%	0%	98%	2%
SUBTOTAL: CUSTOMER SERVICE, CASHIERING	\$ 2,548,019	\$ -	\$ -	\$ -	\$ 2,505,166	\$ 42,853	0%	0%	98%	2%
4101515 - GEOGRAPHIC INFORMATION SERVICES										
Full Time Wages	\$ 78,581	\$ -	\$ -	\$ -	\$ 77,259	\$ 1,322	0%	0%	98%	2%
Overtime Wages	312	-	-	-	307	5	0%	0%	98%	2%
Extra Regular Wages	-	-	-	-	-	-	0%	0%	98%	2%
Fringe Benefits	30,355	-	-	-	29,844	511	0%	0%	98%	2%
Payroll Taxes	2,004	-	-	-	1,970	34	0%	0%	98%	2%
Telephone	1,560	-	-	-	1,534	26	0%	0%	98%	2%
Supplies	104	-	-	-	102	2	0%	0%	98%	2%
Training & Education	3,640	-	-	-	3,579	61	0%	0%	98%	2%
Travel & Meetings	525	-	-	-	516	9	0%	0%	98%	2%
Fuel	4,200	-	-	-	4,129	71	0%	0%	98%	2%
Vehicle Expense	2,080	-	-	-	2,045	35	0%	0%	98%	2%
Computer Equipment	18,200	-	-	-	17,894	306	0%	0%	98%	2%
Contract Services	155,000	-	-	-	152,393	2,607	0%	0%	98%	2%
Expense Capitalization	-	-	-	-	-	-	0%	0%	98%	2%
SUBTOTAL: GEOGRAPHIC INFORMATION SERVICES	\$ 296,560	\$ -	\$ -	\$ -	\$ 291,573	\$ 4,988	0%	0%	98%	2%
4104000 - CODE ENFORCEMENT										
Contra Expense Wages	-	-	-	-	-	-	0%	0%	98%	2%
Full Time Wages	296,371	-	-	-	291,386	4,984	0%	0%	98%	2%
Overtime Wages	312	-	-	-	307	5	0%	0%	98%	2%
Extra Regular Wages	-	-	-	-	-	-	0%	0%	98%	2%
Fringe Benefits	129,446	-	-	-	127,269	2,177	0%	0%	98%	2%
Payroll Taxes	7,557	-	-	-	7,430	127	0%	0%	98%	2%
SUBTOTAL: CODE ENFORCEMENT	\$ 433,686	\$ -	\$ -	\$ -	\$ 426,392	\$ 7,294	0%	0%	98%	2%
4104500 - ENGINEERING SERVICES										
Full Time Wages	\$ 1,096,150	\$ -	\$ -	\$ 1,033,910	\$ 43,846	\$ 18,394	0%	94%	4%	2%
Overtime Wages	5,720	-	-	5,395	229	96	0%	94%	4%	2%
Extra Regular Wages	-	-	-	-	-	-	0%	94%	4%	2%
Fringe Benefits	390,000	-	-	367,856	15,600	6,544	0%	94%	4%	2%
Retiree Health Care	11,669	-	-	11,006	467	196	0%	94%	4%	2%
Payroll Taxes	15,600	-	-	14,714	624	262	0%	94%	4%	2%
Utilities-Electricity	13,650	-	-	12,875	546	229	0%	94%	4%	2%
Utilities-Water Usage	1,200	-	-	1,132	48	20	0%	94%	4%	2%
Utilities-Natural Gas	1,155	-	-	1,089	46	19	0%	94%	4%	2%
Telephone	6,760	-	-	6,376	270	113	0%	94%	4%	2%
Supplies	9,256	-	-	8,730	370	155	0%	94%	4%	2%
Training & Education	5,096	-	-	4,807	204	86	0%	94%	4%	2%
Fuel	10,185	-	-	9,607	407	171	0%	94%	4%	2%
Vehicle Expense	2,808	-	-	2,649	112	47	0%	94%	4%	2%
Small Tools & Furniture	520	-	-	490	21	9	0%	94%	4%	2%
Contract Services	187,200	-	-	176,571	7,488	3,141	0%	94%	4%	2%
Infrastructure Repairs & Maintenance	784,000	-	-	739,484	31,360	13,156	0%	94%	4%	2%
Expense Capitalization	-	-	-	-	-	-	0%	94%	4%	2%
SUBTOTAL: ENGINEERING SERVICES	\$ 2,540,969	\$ -	\$ -	\$ 2,396,691	\$ 101,639	\$ 42,639	0%	94%	4%	2%

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TABLE 28, cont.

Classification of Expenses										
Budget Categories	Total Revenue Requirements	Commodity	Commodity Tier 2	Capacity	Customer	Fire Protection	Basis of Classification			
	FY 2021/22	(COM)	(COM Tier 2)	(CAP)	(CA)	(FP)	(COM)	(CAP)	(CA)	(FP)
4105001 - ASPHALT SERVICES										
Full Time Wages	\$ 107,070	\$ -	\$ -	\$ 100,990	\$ 4,283	\$ 1,797	0%	94%	4%	2%
Overtime Wages	18,720	-	-	17,657	749	314	0%	94%	4%	2%
Extra Regular Wages	-	-	-	-	-	-	0%	94%	4%	2%
Fringe Benefits	48,478	-	-	45,725	1,939	813	0%	94%	4%	2%
Payroll Taxes	2,730	-	-	2,575	109	46	0%	94%	4%	2%
Supplies	884	-	-	834	35	15	0%	94%	4%	2%
Small Tools & Furniture	390	-	-	368	16	7	0%	94%	4%	2%
Infrastructure Repairs & Maintenance	7,875	-	-	7,428	315	132	0%	94%	4%	2%
SUBTOTAL: ASPHALT SERVICES	\$ 186,147	\$ -	\$ -	\$ 175,577	\$ 7,446	\$ 3,124	0%	94%	4%	2%
4100010 - CAPITAL PURCHASES										
Capital Purchases	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	0%	100%	0%	0%
SUBTOTAL: CAPITAL PURCHASES	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	0%	100%	0%	0%
TOTAL OPERATING EXPENSES	\$ 29,564,837	\$ 13,168,253	\$ -	\$ 11,806,269	\$ 4,290,725	\$ 299,589	45%	40%	15%	1%

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TABLE 29 : CLASSIFICATION OF EXPENSES FOR COST OF SERVICE ANALYSIS

Classification of Expenses										
Budget Categories	Total Revenue Requirements	Commodity	Commodity Tier 2	Capacity	Customer	Fire Protection	Basis of Classification			
	FY 2021/22	(COM)	(COM Tier 2)	(CAP)	(CA)	(FP)	(COM)	(CAP)	(CA)	(FP)
Debt Service Payments										
Outstanding Debt	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	0%	100%	0%	0%
New Debt Issue - SRF Loan	-	-	-	-	-	-	0%	100%	0%	0%
New Debt Issue - Revenue Bond	-	-	-	-	-	-	0%	100%	0%	0%
Total Debt Service Payments	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	0%	0%	0%	0%
Capital Expenditures										
Rate Funded Capital Expenses	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	0%	98%	0%	2%
TOTAL REVENUE REQUIREMENTS	\$ 29,564,837	\$ 13,168,253	\$ -	\$ 11,806,269	\$ 4,290,725	\$ 299,589	45%	40%	15%	1%
Less: Non-Rate Revenues										
Water Permits	\$ (34,374)	\$ -	\$ -	\$ -	\$ (34,026)	\$ (348)	0%	0%	99%	1%
Penalty/Late Fees	(348,534)	-	-	-	(345,002)	(3,532)	0%	0%	99%	1%
Plan Check Fees	(50,900)	-	-	-	(50,384)	(516)	0%	0%	99%	1%
Water Service Fees	(420,240)	-	-	-	(415,982)	(4,258)	0%	0%	99%	1%
Service Installation Fees	(218,484)	-	-	-	(216,270)	(2,214)	0%	0%	99%	1%
Service Call Fees	(408,408)	-	-	-	(404,269)	(4,139)	0%	0%	99%	1%
Standby Fees	(90,000)	-	-	-	(89,088)	(912)	0%	0%	99%	1%
Scrap/Recyclable Materials	-	-	-	-	-	-	0%	0%	99%	1%
Over & Under	-	-	-	-	-	-	0%	0%	99%	1%
Connection Fees	-	-	-	-	-	-	0%	0%	0%	0%
Interest Income	(394,218)	(175,586)	-	(157,425)	(57,213)	(3,995)	45%	40%	15%	1%
Interest Income-Interfund Loan	(749,700)	(333,918)	-	(299,381)	(108,803)	(7,597)	45%	40%	15%	1%
Principal Payment-Interfund Loan	(1,835,112)	(817,364)	-	(732,824)	(266,329)	(18,596)	45%	40%	15%	1%
Interest Income-Restricted	-	-	-	-	-	-	45%	40%	15%	1%
Lease Occupancy	(1)	(0)	-	(0)	(0)	(0)	45%	40%	15%	1%
Pass Through Property Tax	(272,000)	(121,149)	-	(108,619)	(39,475)	(2,756)	45%	40%	15%	1%
Miscellaneous Revenue	-	-	-	-	-	-	45%	40%	15%	1%
Capital Contribution	-	-	-	-	-	-	45%	40%	15%	1%
Water Sales-Wholesale	-	-	-	-	-	-	45%	40%	15%	1%
Reimbursements-Operating Cost Recovery	(992,700)	(442,151)	-	(396,420)	(144,070)	(10,059)	45%	40%	15%	1%
NET REVENUE REQUIREMENTS	\$ 23,750,166	\$ 11,278,085	\$ -	\$ 10,111,599	\$ 2,119,814	\$ 240,668				
<i>Allocation of Revenue Requirements</i>	<i>100.0%</i>	<i>47.5%</i>	<i>0.0%</i>	<i>42.6%</i>	<i>8.9%</i>	<i>1.0%</i>				

TABLE 30 : ADJUSTMENTS TO CLASSIFICATION OF EXPENSES

Adjustments to Classification of Expenses						
Adjustment to Current Rate Level:	Total	(COM)	(COM Tier 2)	(CAP)	(CA)	(FP)
FY 2021/22 Target Rate Rev. After Rate Increase	\$ 30,688,236					
Projected Rate Revenue at Current Rates	29,794,404					
FY 2021/22 Projected Rate Increase	3%					
Adjusted Net Revenue Req'ts	\$ 30,688,236	\$ 14,572,720	\$ -	\$ 13,065,473	\$ 2,739,070	\$ 310,973
<i>Percent of Revenue</i>		<i>47.5%</i>	<i>0.0%</i>	<i>42.6%</i>	<i>8.9%</i>	<i>1.0%</i>

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TABLE 31 : DEVELOPMENT OF THE BASE COMMODITY ALLOCATION FACTOR

Development of the BASE COMMODITY Allocation Factor						
Customer Class	FY 2019/20 Volume (hcf) ¹	% Adjustment for Conservation ²	Estimated Volume Adjusted for Conservation	Percent of Total Volume	% Adjustment for Conservation ³	Estimated Volume Adjusted for Conservation
<i>Treated Water:</i>						
Single Family Residential	5,137,740	0%	5,137,740	59.7%	28%	1,438,567
Multi-Family Residential	704,920	0%	704,920	8.2%	28%	197,378
Commercial	1,164,409	0%	1,164,409	13.5%	28%	326,035
Irrigation	90,252	0%	90,252	1.0%	28%	25,271
Institutional	871,050	0%	871,050	10.1%	28%	243,894
Institutional Irrigation	362,449	0%	362,449	4.2%	28%	101,486
Fire	3,919	0%	3,919	0.0%	28%	1,097
Other	275,271	0%	275,271	3.2%	28%	77,076
Total: Recurring Consumption	8,610,010	--	8,610,010	100.0%	--	2,410,803
<i>Other Non-Recurring Consumption</i>						
Commercial Flow Meter	58,247	0%	58,247	0.6%	28%	16,309
Institutional Flow Meter	3,220	0%	3,220	0.0%	28%	902
Institutional Well	5,770	0%	5,770	0.1%	28%	1,616
Intertie	316,631	0%	316,631	3.5%	28%	88,657
Total Non-Recurring Consumption	383,868	--	383,868	4.3%	--	107,483
Grand Total Consumption	8,993,878	--	8,993,878	--	--	2,518,286

1. Consumption data is based on the VWD customer data. Source file: 2019-20 Customer Data.xlsx.
2. Assumes 0% conservation from FY 2019/20 consumption levels.
3. Assumes the District will meet the 28% conservation mandate from the State of CA, as noted in the draft usage analysis released 4/28/2015 by the State Water Resources Control Board.

TABLE 32 : DEVELOPMENT OF THE PEAK CAPACITY ALLOCATION FACTORS

Development of the CAPACITY (MAX MONTH) Allocation Factors				
Customer Class	Average Monthly Use (hcf)	Peak Monthly Use ¹ (hcf)	Peak Month Factor	Max Month Capacity Factor
<i>Treated Water:</i>				
Single Family Residential	428,145	597,411	1.40	58.4%
Multi-Family Residential	58,743	79,302	1.35	7.8%
Commercial	97,034	120,991	1.25	11.8%
Irrigation	7,521	12,321	1.64	1.2%
Institutional	72,588	108,208	1.49	10.6%
Institutional Irrigation	30,204	63,194	2.09	6.2%
Fire	327	603	1.85	0.1%
Other	22,939	40,379	1.76	3.9%
Total: Recurring Consumption	717,501	1,022,409	1.42	100%
<i>Other Non-Recurring Consumption</i>				
Commercial Flow Meter	4,854	8,509	1.75	0.8%
Institutional Flow Meter	268	464	1.73	0.0%
Institutional Well	481	1,254	2.61	0.1%
Intertie	26,386	67,334	2.55	6.1%
Total Non-Recurring Consumption	31,989	77,561	2.42	7.1%

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

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TABLE 33 : DEVELOPMENT OF THE CUSTOMER ALLOCATION FACTORS

Development of the Customer Allocation Factor		
Customer Class	Number of Meters ¹	Percent of Total
<i>Treated Water:</i>		
Single Family Residential	33,212	91.12%
Multi-Family Residential	758	2.08%
Commercial	1,267	3.48%
Irrigation	138	0.38%
Institutional	227	0.62%
Institutional Irrigation	227	0.62%
Fire ²	613	1.68%
Other ³	7	0.02%
Total: Recurring Consumption	36,449	100.00%
<i>Other Non-Recurring Consumption⁴</i>		
Commercial Flow Meter	59	0.16%
Institutional Flow Meter	17	0.05%
Institutional Well	1	0.00%
Intertie	4	0.01%
Total: Non-Recurring Meters	81	0.22%

- Meter by class and size are based on FY 2019/20 customer data. Victorville bills monthly. Source file: 2019-20 Customer Data.xlsx.
- Number of fire meters by size were provided by District Staff. Source file: 2019-20 Customer Data.xlsx .
- Other customers consist primarily of governmental customers (the City, special districts, other agencies) and churches.
- Commercial and Municipal Flow meters and Intertie connections are excluded from allocations of meter counts.

TABLE 34 : PROJECTED PRODUCTION FOR FIVE-YEAR RATE PERIOD

Fiscal Year	Free Production Allowance (AF) ¹	Replacement Obligation (AF)	Total Production ²	Free Production Allowance (%)	Replacement Obligation (%)	
2021/22	12,976	11,727	24,703	53%	47%	
2022/23	11,678	13,594	25,272	46%	54%	
2023/24	10,381	15,473	25,854	40%	60%	
2024/25	10,381	16,069	26,450	39%	61%	
2025/26	10,381	16,678	27,059	38%	62%	
Fiscal Year	Free Production Allowance (ccf)	Replacement Obligation (ccf)	Total Production	Free Production Allowance (%)	Replacement Obligation (%)	Free Production Allowance HCF/User/month
2021/22	5,652,346	5,108,281	10,760,627	53%	47%	12.9
2022/23	5,087,111	5,921,372	11,008,483	46%	54%	11.6
2023/24	4,521,876	6,740,126	11,262,002	40%	60%	10.3
2024/25	4,521,876	6,999,744	11,521,620	39%	61%	10.3
2025/26	4,521,876	7,265,024	11,786,900	38%	62%	10.3

- Free Production Allowance is established annually by the court. For FY 2021/22, see the City's Mojave Water Agency Obligations worksheet. Source file: WATER - REV & EXP -BUDGET - CUBES 2021 -NBS.xlsx .
- Total production amount was provided by District Staff. Source files: Production Data-08.25.2020.xlsx and WATER - REV & EXP -BUDGET - CUBES 2021 -NBS.xlsx.

ALLOCATION OF WATER REVENUE REQUIREMENTS

Select Option **OPTION 2**

OPTION 1

TABLE 35 : PERCENTAGE OF FIXED VS. VARIABLE SPLIT FOR PROPOSED RATE PERIOD

Fixed-Variable %'s for Five-Year Period	COSA Split FY 2021/22	Current Revenue Split	Proposed Allocations for Rate Period				
			FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26
Fixed	53%	27%	27%	32%	37%	42%	47%
Variable	47%	73%	73%	68%	63%	58%	53%
Total	100%	100%	100%	100%	100%	100%	100%

OPTION 2

PREFERRED OPTION

TABLE 36 : PERCENTAGE OF FIXED VS. VARIABLE SPLIT FOR PROPOSED RATE PERIOD

Fixed-Variable %'s for Five-Year Period	COSA Split FY 2021/22	Current Revenue Split	Proposed Allocations for Rate Period				
			FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26
Variable (Commodity-Related Costs)	47%	73%	73%	70%	67%	63%	60%
Fixed (Capacity-, Customer-, Fire-Related Costs)	53%	27%	27%	30%	33%	37%	40%
Total	100%	100%	100%	100%	100%	100%	100%

TABLE 37 : PERCENTAGE OF CLASSIFICATION COMPONENTS FOR PROPOSED RATE PERIOD

OPTION 2

Classification Components	Cost-of- Service Split	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26
Commodity-Related Costs	47%	73%	70%	67%	63%	60%
Capacity-Related Costs	43%	21%	24%	27%	29%	32%
Customer-Related Costs	9%	4%	5%	6%	6%	7%
Fire Protection-Related Costs	1%	1%	1%	1%	1%	1%
Net Revenue Requirement	100%	100%	100%	100%	100%	100%

TABLE 38 : ALLOCATION OF TARGET RATE REVENUE - FY 2021/22 THRU FY 2025/26

OPTION 2

Classification Components	Cost-of- Service Split	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26
Commodity-Related Costs	\$14,572,720	\$22,472,859	\$22,562,152	\$22,602,941	\$22,590,092	\$22,518,071
Capacity-Related Costs	13,065,473	6,534,499	7,731,380	9,032,655	10,445,823	11,978,878
Customer-Related Costs	2,739,070	1,369,904	1,620,821	1,893,622	2,189,882	2,511,274
Fire Protection-Related Costs	310,973	310,973	326,708	343,240	360,608	378,855
Target Rate Revenue	\$30,688,236	\$30,688,236	\$32,241,061	\$33,872,459	\$35,586,405	\$37,387,077

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TABLE 39 : METER EQUIVALENCY FACTORS USED IN FIXED CHARGE CALCULATION

Meter Size	Standard Meters		Fire Service Meters	
	Meter Capacity (gpm) ¹	Equivalency to 3/4-inch	Meter Capacity (gpm)	Equivalency to 3/4-inch
	<u>Displacement</u>		<u>Displacement¹</u>	
3/4 inch	30	1.00	30	1.00
1 inch	50	1.67	50	1.67
1.5 inch	100	3.33	100	3.33
2 inch	160	5.33	160	5.33
	<u>Compound Type Class I</u>		<u>Fire Service Type I & II²</u>	
3 inch	320	10.67	350	11.67
4 inch	500	16.67	700	23.33
6 inch	1,000	33.33	1,600	53.33
	<u>Turbine Class II</u>			
8 inch	2,800	93.33	2,800	93.33
10 inch	4,200	140.00	4,400	146.67

1. Per AWWA M-1 Table B-2.

2. Capacity factors are for Fire Service Type I and II meters from AWWA M-6 Table 5-3.

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TABLE 40 : ALLOCATION OF NET REVENUE REQUIREMENTS - FY 2021/22

Net Revenue Requirements (27% Fixed / 73% Variable)						
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 Protection-Related Costs		
Single Family Residential	\$13,409,939	\$ 3,818,219	\$ 1,248,245	\$ -	\$ 18,476,403	60.2%
Multi-Family Residential	1,839,901	506,841	28,489	-	2,375,231	7.7%
Commercial	3,039,207	773,287	47,619	-	3,860,113	12.6%
Irrigation	235,565	78,747	5,187	-	319,499	1.0%
Institutional	2,273,515	691,587	8,532	-	2,973,634	9.7%
Institutional Irrigation	946,023	403,890	8,532	-	1,358,445	4.4%
Fire	10,229	3,854	23,039	310,973	348,095	1.1%
Other	718,481	258,073	263	-	976,817	3.2%
Total Net Revenue Requirement	\$22,472,859	\$ 6,534,499	\$ 1,369,904	\$ 310,973	\$30,688,236	100%

OPTION 2

TABLE 41 : CALCULATION OF MONTHLY FIXED METER SERVICE CHARGES - FY 2021/22

Net Revenue Requirements (27% Fixed / 73% Variable)

Number of Meters by Class and Size ¹	FY 2021/22									
	3/4 inch	1 inch	1.5 inch	2 inch	3 inch	4 inch	6 inch	8 inch	10 inch	Total
Single Family Residential	31,992	1,220	0	0	0	0	0	0	0	33,212
Multi-Family Residential	478	138	52	45	13	8	15	9	0	758
Commercial	361	318	252	292	25	11	5	3	0	1,267
Irrigation	26	41	42	29	0	0	0	0	0	138
Institutional	50	34	35	60	19	19	3	6	1	227
Institutional Irrigation	16	37	86	69	9	3	5	2	0	227
Other	0	0	0	0	2	0	1	2	2	7
Total Meters/Accounts	32,923	1,788	467	495	68	41	29	22	3	35,836
<i>Hydraulic Capacity Factor²</i>	<i>1.00</i>	<i>1.67</i>	<i>3.33</i>	<i>5.33</i>	<i>10.67</i>	<i>16.67</i>	<i>33.33</i>	<i>93.33</i>	<i>140.00</i>	
Total Equivalent Meters	32,923	2,980	1,557	2,640	725	683	967	2,053	420	44,948
Monthly Fixed Service Charges										
Customer Costs (\$/Acct/month) ³	\$3.13	\$3.13	\$3.13	\$3.13	\$3.13	\$3.13	\$3.13	\$3.13	\$3.13	
Capacity Costs (\$/Acct/month) ⁴	\$12.11	\$20.18	\$40.36	\$64.57	\$129.15	\$201.79	\$403.59	\$1,130.05	\$1,695.08	
Total Monthly Meter Charge	\$15.24	\$23.31	\$43.49	\$67.71	\$132.28	\$204.93	\$406.72	\$1,133.18	\$1,698.21	
Annual Fixed Costs Allocated to Monthly Meter Charges										
Customer Costs	\$ 1,346,865									
Capacity Costs		6,530,645								
Total Fixed Meter Costs	\$ 7,877,511									
Annual Revenue from Monthly Meter Charges										
Customer Charges	\$ 1,237,383	\$ 67,200	\$ 17,552	\$ 18,604	\$ 2,556	\$ 1,541	\$ 1,090	\$ 827	\$ 113	\$ 1,346,865
Capacity Charges	4,783,457	432,971	226,172	383,572	105,385	99,283	140,449	298,333	61,023	6,530,645
Total Revenue from Monthly Meter Charges	\$ 6,020,840	\$ 500,171	\$ 243,723	\$ 402,176	\$ 107,941	\$ 100,824	\$ 141,539	\$ 299,160	\$ 61,136	\$ 7,877,511

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TABLE 42 : CALCULATION OF MONTHLY FIXED SERVICE CHARGES - FY 2021/22

Number of Meters by Class and Size ⁵	FY 2021/22									Total
	3/4 inch	1 inch	1.5 inch	2 inch	3 inch	4 inch	6 inch	8 inch	10 inch	
Fire	0	33	0	12	0	85	144	303	36	613
Total Meters/Accounts	0	33	0	12	0	85	144	303	36	613
<i>Hydraulic Capacity Factor²</i>	<i>1.00</i>	<i>1.67</i>	<i>3.33</i>	<i>5.33</i>	<i>11.67</i>	<i>23.33</i>	<i>53.33</i>	<i>93.33</i>	<i>146.67</i>	
Total Equivalent Meters	0	55	0	64	0	1,983	7,680	28,280	5,280	43,342
Monthly Fixed Service Charges										
Customer Costs (\$/Acct/month) ³	\$3.13	\$3.13	\$3.13	\$3.13	\$3.13	\$3.13	\$3.13	\$3.13	\$3.13	\$3.13
Capacity Costs (\$/Acct/month) ⁴	\$0.00	\$1.01	\$2.02	\$3.23	\$7.06	\$14.12	\$32.28	\$56.50	\$88.78	
Total Monthly Meter Charge	\$3.13	\$4.14	\$5.15	\$6.36	\$10.19	\$17.26	\$35.42	\$59.63	\$91.91	
Annual Fixed Costs Allocated to Monthly Meter Charges										
Customer Costs	\$ 23,039									
Capacity & Fire Protection Costs	314,827									
Total Fixed Meter Costs	\$ 337,866									
Annual Revenue from Monthly Meter Charges										
Customer Charges	\$ -	\$ 1,240	\$ -	\$ 451	\$ -	\$ 3,195	\$ 5,412	\$ 11,388	\$ 1,353	\$ 23,039
Capacity Charges	-	400	-	465	-	14,406	55,785	205,418	38,353	314,827
Total Revenue from Monthly Meter Charges	\$ -	\$ 1,640	\$ -	\$ 916	\$ -	\$ 17,601	\$ 61,198	\$ 216,806	\$ 39,706	\$ 337,866

- Number of meters by class and size are based on June 2020 customer data. Excludes institutional wells, flow meters and intertie connections. Source file: 2019-20 Customer Data.xlsx.
- Source: AWWA Manual M1, *Principles of Water Rates, Fees, and Charges*, Table VI.2-5. Assumes displacement meters for 3/4-2 inch meters, compound meters for 3 to 6-inch and turbine class II meters for 8 to 10-inch meters.
- Customer costs are allocated to each customer by dividing the total customer costs by the total number of customers.
- Capacity costs are allocated by meter size and the hydraulic capacity of the meter.
- Number of fire meters by size were provided by District Staff. Source file: 2019-20 Customer Data.xlsx.

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TABLE 43 : ALLOCAITON OF NET REVENUE REQUIREMENTS - FY 2022/23

Net Revenue Requirements (30% Fixed / 70% Variable)						
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 Protection-Related Costs		
Single Family Residential	\$13,463,221	\$ 4,517,577	\$ 1,476,877	\$ -	\$ 19,457,676	60.4%
Multi-Family Residential	1,847,212	599,676	33,707	-	2,480,594	7.7%
Commercial	3,051,282	914,925	56,341	-	4,022,548	12.5%
Irrigation	236,501	93,170	6,137	-	335,808	1.0%
Institutional	2,282,548	818,261	10,094	-	3,110,903	9.6%
Institutional Irrigation	949,782	477,868	10,094	-	1,437,744	4.5%
Fire	10,270	4,560	27,259	326,708	368,797	1.1%
Other	721,336	305,343	311	-	1,026,990	3.2%
Total Net Revenue Requirement	\$22,562,152	\$ 7,731,380	\$ 1,620,821	\$ 326,708	\$32,241,061	100%

TABLE 44 : CALCULATION OF MONTHLY FIXED METER SERVICE CHARGES FOR FY FY 2022/23

Number of Meters by Class and Size ¹	Net Revenue Requirements (30% Fixed / 70% Variable)									Total
	FY 2022/23									
	3/4 inch	1 inch	1.5 inch	2 inch	3 inch	4 inch	6 inch	8 inch	10 inch	
Single Family Residential	32,632	1,244	0	0	0	0	0	0	0	33,876
Multi-Family Residential	488	141	53	46	13	8	15	9	0	773
Commercial	368	324	257	298	26	11	5	3	0	1,292
Irrigation	27	42	43	30	0	0	0	0	0	141
Institutional	51	35	36	61	19	19	3	6	1	232
Institutional Irrigation	16	38	88	70	9	3	5	2	0	232
Other	0	0	0	0	2	0	1	2	2	7
Total Meters/Accounts	33,581	1,824	476	505	69	42	30	22	3	36,553
<i>Hydraulic Capacity Factor²</i>	<i>1.00</i>	<i>1.67</i>	<i>3.33</i>	<i>5.33</i>	<i>10.67</i>	<i>16.67</i>	<i>33.33</i>	<i>93.33</i>	<i>140.00</i>	
Total Equivalent Meters	33,581	3,040	1,588	2,693	740	697	986	2,094	428	45,847
Monthly Fixed Service Charges										
Customer Costs (\$/Acct/month) ³	\$3.63	\$3.63	\$3.63	\$3.63	\$3.63	\$3.63	\$3.63	\$3.63	\$3.63	
Capacity Costs (\$/Acct/month) ⁴	\$14.04	\$23.41	\$46.81	\$74.90	\$149.81	\$234.07	\$468.15	\$1,310.82	\$1,966.23	
Total Monthly Meter Charge	\$17.68	\$27.04	\$50.45	\$78.54	\$153.44	\$237.71	\$471.78	\$1,314.45	\$1,969.86	
Annual Fixed Costs Allocated to Monthly Meter Charges										
Customer Costs	\$ 1,593,562									
Capacity Costs	<u>7,726,820</u>									
Total Fixed Meter Costs	\$ 9,320,382									
Annual Revenue from Monthly Meter Charges										
Customer Charges	\$ 1,464,026	\$ 79,509	\$ 20,767	\$ 22,012	\$ 3,024	\$ 1,823	\$ 1,290	\$ 978	\$ 133	\$ 1,593,562
Capacity Charges	<u>5,659,612</u>	<u>512,275</u>	<u>267,598</u>	<u>453,828</u>	<u>124,688</u>	<u>117,468</u>	<u>166,174</u>	<u>352,977</u>	<u>72,200</u>	7,726,820
Total Revenue from Monthly Meter Charges	\$ 7,123,637	\$ 591,784	\$ 288,365	\$ 475,840	\$ 127,712	\$ 119,291	\$ 167,464	\$ 353,956	\$ 72,333	\$ 9,320,382

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TABLE 45 : CALCULATION OF MONTHLY FIXED SERVICE CHARGES - FY 2022/23

Number of Meters by Class and Size ⁵	FY 2022/23									Total
	3/4 inch	1 inch	1.5 inch	2 inch	3 inch	4 inch	6 inch	8 inch	10 inch	
Fire	0	34	0	12	0	87	147	309	37	625
Total Meters/Accounts	0	34	0	12	0	87	147	309	37	625
<i>Hydraulic Capacity Factor²</i>	1.00	1.67	3.33	5.33	11.67	23.33	53.33	93.33	146.67	
Total Equivalent Meters	0	56	0	65	0	2,023	7,834	28,846	5,386	44,209
Monthly Fixed Service Charges										
Customer Costs (\$/Acct/month) ³	\$3.63	\$3.63	\$3.63	\$3.63	\$3.63	\$3.63	\$3.63	\$3.63	\$3.63	
Capacity Costs (\$/Acct/month) ⁴	\$0.00	\$1.04	\$2.08	\$3.33	\$7.29	\$14.57	\$33.30	\$58.28	\$91.58	
Total Monthly Meter Charge	\$3.63	\$4.67	\$5.71	\$6.96	\$10.92	\$18.20	\$36.94	\$61.91	\$95.22	
Annual Fixed Costs Allocated to Monthly Meter Charges										
Customer Costs	\$ 27,259									
Capacity & Fire Protection Costs	331,268									
Total Fixed Meter Costs	\$ 358,527									
Annual Revenue from Monthly Meter Charges										
Customer Charges	\$ -	\$ 1,467	\$ -	\$ 534	\$ -	\$ 3,780	\$ 6,403	\$ 13,474	\$ 1,601	\$ 27,259
Capacity Charges	-	420	-	489	-	15,159	58,699	216,146	40,355	331,268
Total Revenue from Monthly Meter Charges	\$ -	\$ 1,888	\$ -	\$ 1,023	\$ -	\$ 18,939	\$ 65,102	\$ 229,620	\$ 41,956	\$ 358,527

- Number of meters by class and size are based on June 2020 customer data. Excludes institutional wells, flow meters and intertie connections. Source file: 2019-20 Customer Data.xlsx.
- Source: AWWA Manual M1, *Principles of Water Rates, Fees, and Charges*, Table VI.2-5. Assumes displacement meters for 3/4-2 inch meters, compound meters for 3 to 6-inch and turbine class II meters for 8 to 10-inch meters.
- Customer costs are allocated to each customer by dividing the total customer costs by the total number of customers.
- Capacity costs are allocated by meter size and the hydraulic capacity of the meter.
- Number of fire meters by size were provided by District Staff. Source file: 2019-20 Customer Data.xlsx.

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TABLE 46 : ALLOCATION OF NET REVENUE REQUIREMENTS - FY 2023/24

Net Revenue Requirements (33% Fixed / 67% Variable)						
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 Protection-Related Costs		
Single Family Residential	\$13,487,561	\$ 5,277,934	\$ 1,725,452	\$ -	\$ 20,490,947	60.5%
Multi-Family Residential	1,850,551	700,608	39,380	-	2,590,539	7.6%
Commercial	3,056,799	1,068,917	65,824	-	4,191,539	12.4%
Irrigation	236,929	108,852	7,169	-	352,950	1.0%
Institutional	2,286,675	955,983	11,793	-	3,254,451	9.6%
Institutional Irrigation	951,499	558,299	11,793	-	1,521,591	4.5%
Fire	10,288	5,327	31,847	343,240	390,702	1.2%
Other	722,640	356,735	364	-	1,079,739	3.2%
Total Net Revenue Requirement	\$22,602,941	\$ 9,032,655	\$ 1,893,622	\$ 343,240	\$33,872,459	100%

TABLE 47 : CALCULATION OF MONTHLY FIXED METER SERVICE CHARGES FOR FY FY 2023/24

Number of Meters by Class and Size ¹	Net Revenue Requirements (33% Fixed / 67% Variable)									
	FY 2023/24									
	3/4 inch	1 inch	1.5 inch	2 inch	3 inch	4 inch	6 inch	8 inch	10 inch	Total
Single Family Residential	33,284	1,269	0	0	0	0	0	0	0	34,554
Multi-Family Residential	497	144	54	47	14	8	16	9	0	789
Commercial	376	331	262	304	26	11	5	3	0	1,318
Irrigation	27	43	44	30	0	0	0	0	0	144
Institutional	52	35	36	62	20	20	3	6	1	236
Institutional Irrigation	17	38	89	72	9	3	5	2	0	236
Other	0	0	0	0	2	0	1	2	2	7
Total Meters/Accounts	34,253	1,860	486	515	71	43	30	23	3	37,284
<i>Hydraulic Capacity Factor</i> ²	1.00	1.67	3.33	5.33	10.67	16.67	33.33	93.33	140.00	
Total Equivalent Meters	34,253	3,100	1,620	2,747	755	711	1,006	2,136	437	46,764
Monthly Fixed Service Charges										
Customer Costs (\$/Acct/month) ³	\$4.16	\$4.16	\$4.16	\$4.16	\$4.16	\$4.16	\$4.16	\$4.16	\$4.16	
Capacity Costs (\$/Acct/month) ⁴	\$16.09	\$26.81	\$53.62	\$85.80	\$171.59	\$268.11	\$536.22	\$1,501.42	\$2,252.12	
Total Monthly Meter Charge	\$20.25	\$30.97	\$57.78	\$89.96	\$175.75	\$272.27	\$540.38	\$1,505.58	\$2,256.28	
Annual Fixed Costs Allocated to Monthly Meter Charges										
Customer Costs	\$ 1,861,775									
Capacity Costs		9,027,328								
Total Fixed Meter Costs		\$10,889,103								
Annual Revenue from Monthly Meter Charges										
Customer Charges	\$ 1,710,437	\$ 92,891	\$ 24,262	\$ 25,717	\$ 3,533	\$ 2,130	\$ 1,507	\$ 1,143	\$ 156	\$ 1,861,775
Capacity Charges	6,612,185	598,497	312,638	530,212	145,674	137,239	194,143	412,387	84,352	9,027,328
Total Revenue from Monthly Meter Charges	\$ 8,322,623	\$ 691,388	\$ 336,900	\$ 555,929	\$ 149,207	\$ 139,369	\$ 195,650	\$ 413,530	\$ 84,508	\$ 10,889,103

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TABLE 48 : CALCULATION OF MONTHLY FIXED SERVICE CHARGES FOR FY FY 2023/24

Number of Meters by Class and Size ⁵	FY 2023/24									Total
	3/4 inch	1 inch	1.5 inch	2 inch	3 inch	4 inch	6 inch	8 inch	10 inch	
Fire	0	34	0	12	0	88	150	315	37	638
Total Meters/Accounts	0	34	0	12	0	88	150	315	37	638
<i>Hydraulic Capacity Factor</i> ²	1.00	1.67	3.33	5.33	11.67	23.33	53.33	93.33	146.67	
Total Equivalent Meters	0	57	0	67	0	2,063	7,990	29,423	5,493	45,093
Monthly Fixed Service Charges										
Customer Costs (\$/Acct/month) ³	\$4.16	\$4.16	\$4.16	\$4.16	\$4.16	\$4.16	\$4.16	\$4.16	\$4.16	
Capacity Costs (\$/Acct/month) ⁴	\$0.00	\$1.07	\$2.15	\$3.44	\$7.52	\$15.03	\$34.36	\$60.12	\$94.48	
Total Monthly Meter Charge	\$4.16	\$5.23	\$6.31	\$7.60	\$11.68	\$19.19	\$38.52	\$64.28	\$98.64	
Annual Fixed Costs Allocated to Monthly Meter Charges										
Customer Costs	\$ 31,847									
Capacity & Fire Protection Costs	348,567									
Total Fixed Meter Costs	\$ 380,414									
Annual Revenue from Monthly Meter Charges										
Customer Charges	\$ -	\$ 1,714	\$ -	\$ 623	\$ -	\$ 4,416	\$ 7,481	\$ 15,742	\$ 1,870	\$ 31,847
Capacity Charges	-	442	-	515	-	15,950	61,764	227,433	42,463	348,567
Total Revenue from Monthly Meter Charges	\$ -	\$ 2,157	\$ -	\$ 1,138	\$ -	\$ 20,366	\$ 69,245	\$ 243,175	\$ 44,333	\$ 380,414

1. Number of meters by class and size are based on June 2020 customer data. Excludes institutional wells, flow meters and intertie connections. Source file: 2019-20 Customer Data.xlsx.
2. Source: AWWA Manual M1, *Principles of Water Rates, Fees, and Charges*, Table VI.2-5. Assumes displacement meters for 3/4-2 inch meters, compound meters for 3 to 6-inch and turbine class II meters for 8 to 10-inch meters.
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.
5. Number of fire meters by size were provided by District Staff. Source file: 2019-20 Customer Data.xlsx.

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TABLE 49 : ALLOCATION OF NET REVENUE REQUIREMENTS - FY 2024/25

<i>Net Revenue Requirements (37% Fixed / 63% Variable)</i>						
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 Protection-Related Costs		
Single Family Residential	\$13,479,894	\$ 6,103,673	\$ 1,995,400	\$ -	\$ 21,578,967	60.6%
Multi-Family Residential	1,849,499	810,219	45,541	-	2,705,259	7.6%
Commercial	3,055,061	1,236,150	76,122	-	4,367,333	12.3%
Irrigation	236,794	125,882	8,291	-	370,968	1.0%
Institutional	2,285,375	1,105,547	13,638	-	3,404,561	9.6%
Institutional Irrigation	950,958	645,645	13,638	-	1,610,241	4.5%
Fire	10,282	6,161	36,829	360,608	413,880	1.2%
Other	722,229	412,547	421	-	1,135,197	3.2%
Total Net Revenue Requirement	\$22,590,092	\$10,445,823	\$ 2,189,882	\$ 360,608	\$35,586,405	100%

TABLE 50 : CALCULATION OF MONTHLY FIXED METER SERVICE CHARGES FOR FY FY 2024/25

Number of Meters by Class and Size ¹	<i>Net Revenue Requirements (37% Fixed / 63% Variable)</i>									
	FY 2024/25									Total
	3/4 inch	1 inch	1.5 inch	2 inch	3 inch	4 inch	6 inch	8 inch	10 inch	
Single Family Residential	33,950	1,295	0	0	0	0	0	0	0	35,245
Multi-Family Residential	507	146	55	48	14	8	16	10	0	804
Commercial	383	337	267	310	27	12	5	3	0	1,345
Irrigation	28	44	45	31	0	0	0	0	0	146
Institutional	53	36	37	64	20	20	3	6	1	241
Institutional Irrigation	17	39	91	73	10	3	5	2	0	241
Other	0	0	0	0	2	0	1	2	2	7
Total Meters/Accounts	34,938	1,897	496	525	72	44	31	23	3	38,029
<i>Hydraulic Capacity Factor</i> ²	<i>1.00</i>	<i>1.67</i>	<i>3.33</i>	<i>5.33</i>	<i>10.67</i>	<i>16.67</i>	<i>33.33</i>	<i>93.33</i>	<i>140.00</i>	
Total Equivalent Meters	34,938	3,162	1,652	2,802	770	725	1,026	2,179	446	47,700
Monthly Fixed Service Charges										
Customer Costs (\$/Acct/month) ³	\$4.72	\$4.72	\$4.72	\$4.72	\$4.72	\$4.72	\$4.72	\$4.72	\$4.72	
Capacity Costs (\$/Acct/month) ⁴	\$18.24	\$30.40	\$60.80	\$97.27	\$194.54	\$303.98	\$607.95	\$1,702.27	\$2,553.40	
Total Monthly Meter Charge	\$22.96	\$35.12	\$65.51	\$101.99	\$199.26	\$308.69	\$612.67	\$1,706.99	\$2,558.12	
Annual Fixed Costs Allocated to Monthly Meter Charges										
Customer Costs	\$ 2,153,052									
Capacity Costs	10,439,663									
Total Fixed Meter Costs	\$12,592,715									
Annual Revenue from Monthly Meter Charges										
Customer Charges	\$ 1,978,037	\$ 107,424	\$ 28,058	\$ 29,740	\$ 4,085	\$ 2,463	\$ 1,742	\$ 1,322	\$ 180	\$ 2,153,052
Capacity Charges	7,646,669	692,132	361,550	613,164	168,465	158,710	224,517	476,906	97,549	10,439,663
Total Revenue from Monthly Meter Charges	\$ 9,624,706	\$ 799,557	\$ 389,608	\$ 642,904	\$ 172,551	\$ 161,174	\$ 226,260	\$ 478,227	\$ 97,729	\$12,592,715

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TABLE 51 : CALCULATION OF MONTHLY FIXED SERVICE CHARGES FOR FY FY 2024/25

Number of Meters by Class and Size ⁵	FY 2024/25									Net Revenue Requirements (37% Fixed / 63% Variable)										
	3/4 inch	1 inch	1.5 inch	2 inch	3 inch	4 inch	6 inch	8 inch	10 inch	Total										
Fire	0	35	0	13	0	90	153	322	38	651										
Total Meters/Accounts	0	35	0	13	0	90	153	322	38	651										
<i>Hydraulic Capacity Factor²</i>	1.00	1.67	3.33	5.33	11.67	23.33	53.33	93.33	146.67											
Total Equivalent Meters	0	58	0	68	0	2,105	8,150	30,011	5,603	45,995										
Monthly Fixed Service Charges																				
Customer Costs (\$/Acct/month) ³	\$4.72	\$4.72	\$4.72	\$4.72	\$4.72	\$4.72	\$4.72	\$4.72	\$4.72											
Capacity Costs (\$/Acct/month) ⁴	\$0.00	\$1.11	\$2.22	\$3.54	\$7.75	\$15.51	\$35.44	\$62.02	\$97.46											
Total Monthly Meter Charge	\$4.72	\$5.83	\$6.93	\$8.26	\$12.47	\$20.22	\$40.16	\$66.74	\$102.18											
Annual Fixed Costs Allocated to Monthly Meter Charges																				
Customer Costs	\$	36,829																		
Capacity & Fire Protection Costs		366,769																		
Total Fixed Meter Costs	\$	403,598																		
Annual Revenue from Monthly Meter Charges																				
Customer Charges	\$	-	\$	1,983	\$	-	\$	721	\$	-	\$	5,107	\$	8,652	\$	18,204	\$	2,163	\$	36,829
Capacity Charges		-		465		-		542		-		16,783		64,989		239,309		44,680		366,769
Total Revenue from Monthly Meter Charges	\$	-	\$	2,448	\$	-	\$	1,263	\$	-	\$	21,890	\$	73,641	\$	257,514	\$	46,843	\$	403,598

- Number of meters by class and size are based on June 2020 customer data. Excludes institutional wells, flow meters and intertie connections. Source file: 2019-20 Customer Data.xlsx.
- Source: AWWA Manual M1, *Principles of Water Rates, Fees, and Charges*, Table VI.2-5. Assumes displacement meters for 3/4-2 inch meters, compound meters for 3 to 6-inch and turbine class II meters for 8 to 10-inch meters.
- Customer costs are allocated to each customer by dividing the total customer costs by the total number of customers.
- Capacity costs are allocated by meter size and the hydraulic capacity of the meter.
- Number of fire meters by size were provided by District Staff. Source file: 2019-20 Customer Data.xlsx.

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TABLE 52 : ALLOCATION OF NET REVENUE REQUIREMENTS - FY 2025/26

<i>Net Revenue Requirements (40% Fixed / 60% Variable)</i>						
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 Protection-Related Costs		
Single Family Residential	\$13,436,917	\$ 6,999,462	\$ 2,288,250	\$ -	\$ 22,724,630	60.8%
Multi-Family Residential	1,843,603	929,128	52,225	-	2,824,956	7.6%
Commercial	3,045,321	1,417,570	87,294	-	4,550,185	12.2%
Irrigation	236,039	144,357	9,508	-	389,904	1.0%
Institutional	2,278,089	1,267,800	15,640	-	3,561,529	
Institutional Irrigation	947,926	740,402	15,640	-	1,703,967	4.6%
Fire	10,250	7,065	42,235	378,855	438,404	1.2%
Other	719,926	473,094	482	-	1,193,502	3.2%
Total Net Revenue Requirement	\$22,518,071	\$11,978,878	\$ 2,511,274	\$ 378,855	\$37,387,077	90%

TABLE 53 : CALCULATION OF MONTHLY FIXED METER SERVICE CHARGES FOR FY FY 2025/26

Number of Meters by Class and Size ¹	<i>Net Revenue Requirements (40% Fixed / 60% Variable)</i>									Total
	FY 2025/26									
	3/4 inch	1 inch	1.5 inch	2 inch	3 inch	4 inch	6 inch	8 inch	10 inch	
Single Family Residential	34,629	1,321	0	0	0	0	0	0	0	35,950
Multi-Family Residential	517	149	56	49	14	9	16	10	0	820
Commercial	391	344	273	316	27	12	5	3	0	1,371
Irrigation	28	44	45	31	0	0	0	0	0	149
Institutional	54	37	38	65	21	21	3	6	1	246
Institutional Irrigation	17	40	93	75	10	3	5	2	0	246
Other	0	0	0	0	2	0	1	2	2	8
Total Meters/Accounts	35,637	1,935	505	536	74	44	31	24	3	38,790
<i>Hydraulic Capacity Factor</i> ²	<i>1.00</i>	<i>1.67</i>	<i>3.33</i>	<i>5.33</i>	<i>10.67</i>	<i>16.67</i>	<i>33.33</i>	<i>93.33</i>	<i>140.00</i>	
Total Equivalent Meters	35,637	3,226	1,685	2,858	785	740	1,046	2,223	455	48,654
Monthly Fixed Service Charges										
Customer Costs (\$/Acct/month) ³	\$5.30	\$5.30	\$5.30	\$5.30	\$5.30	\$5.30	\$5.30	\$5.30	\$5.30	
Capacity Costs (\$/Acct/month) ⁴	\$20.51	\$34.18	\$68.35	\$109.36	\$218.72	\$341.75	\$683.51	\$1,913.82	\$2,870.73	
Total Monthly Meter Charge	\$25.81	\$39.48	\$73.66	\$114.67	\$224.03	\$347.06	\$688.81	\$1,919.12	\$2,876.03	
Annual Fixed Costs Allocated to Monthly Meter Charges										
Customer Costs	\$ 2,469,039									
Capacity Costs	11,971,813									
Total Fixed Meter Costs	\$14,440,852									
Annual Revenue from Monthly Meter Charges										
Customer Charges	\$ 2,268,338	\$ 123,190	\$ 32,176	\$ 34,105	\$ 4,685	\$ 2,825	\$ 1,998	\$ 1,516	\$ 207	\$ 2,469,039
Capacity Charges	8,768,912	793,711	414,612	703,154	193,190	182,003	257,468	546,897	111,865	11,971,813
Total Revenue from Monthly Meter Charges	\$11,037,251	\$ 916,901	\$ 446,788	\$ 737,258	\$ 197,875	\$ 184,828	\$ 259,466	\$ 548,413	\$ 112,072	\$14,440,852

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TABLE 54 : CALCULATION OF MONTHLY FIXED SERVICE CHARGES FOR FY FY 2025/26

Number of Meters by Class and Size ⁵	FY 2025/26									Total
	3/4 inch	1 inch	1.5 inch	2 inch	3 inch	4 inch	6 inch	8 inch	10 inch	
Fire	0	36	0	13	0	92	156	328	39	664
Total Meters/Accounts	0	36	0	13	0	92	156	328	39	664
<i>Hydraulic Capacity Factor</i> ²	1.00	1.67	3.33	5.33	11.67	23.33	53.33	93.33	146.67	
Total Equivalent Meters	0	60	0	69	0	2,147	8,313	30,611	5,715	46,915
Monthly Fixed Service Charges										
Customer Costs (\$/Acct/month) ³	\$5.30	\$5.30	\$5.30	\$5.30	\$5.30	\$5.30	\$5.30	\$5.30	\$5.30	
Capacity Costs (\$/Acct/month) ⁴	\$0.00	\$1.14	\$2.28	\$3.66	\$8.00	\$15.99	\$36.56	\$63.98	\$100.54	
Total Monthly Meter Charge	\$5.30	\$6.45	\$7.59	\$8.96	\$13.30	\$21.30	\$41.86	\$69.28	\$105.84	
Annual Fixed Costs Allocated to Monthly Meter Charges										
Customer Costs	\$ 42,235									
Capacity & Fire Protection Costs	385,919									
Total Fixed Meter Costs	\$ 428,154									
Annual Revenue from Monthly Meter Charges										
Customer Charges	\$ -	\$ 2,274	\$ -	\$ 827	\$ -	\$ 5,856	\$ 9,921	\$ 20,876	\$ 2,480	\$ 42,235
Capacity Charges	-	490	-	570	-	17,660	68,383	251,805	47,013	385,919
Total Revenue from Monthly Meter Charges	\$ -	\$ 2,763	\$ -	\$ 1,397	\$ -	\$ 23,516	\$ 78,304	\$ 272,681	\$ 49,493	\$ 428,154

- Number of meters by class and size are based on June 2020 customer data. Excludes institutional wells, flow meters and intertie connections. Source file: 2019-20 Customer Data.xlsx.
- Source: AWWA Manual M1, *Principles of Water Rates, Fees, and Charges*, Table VI.2-5. Assumes displacement meters for 3/4-2 inch meters, compound meters for 3 to 6-inch and turbine class II meters for 8 to 10-inch meters.
- Customer costs are allocated to each customer by dividing the total customer costs by the total number of customers.
- Capacity costs are allocated by meter size and the hydraulic capacity of the meter.
- Number of fire meters by size were provided by District Staff. Source file: 2019-20 Customer Data.xlsx.

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TABLE 55 : PROPOSED VOLUMETRIC CHARGES FOR FY 2021/22

Net Revenue Requirements (27% Fixed / 73% Variable)						
Customer Classes	Number of Meters ¹	Water Consumption (hcf/yr.)	Target Rev. Req't. from Vol. Charges	% of Total Rate Revenue	Uniform Commodity Rates (\$/hcf)	Proposed Rate Structure
<i>Treated Water:</i>						
Single Family Residential	33,212	5,137,740	\$ 13,409,939	44%	\$2.61	<i>Tiered</i>
Multi-Family Residential	758	704,920	1,839,901	6%	\$2.61	<i>Uniform</i>
Commercial	1,267	1,164,409	3,039,207	10%	\$2.61	<i>Uniform</i>
Irrigation	138	90,252	235,565	1%	\$2.61	<i>Uniform</i>
Institutional	227	871,050	2,273,515	7%	\$2.61	<i>Uniform</i>
Institutional Irrigation	227	362,449	946,023	3%	\$2.61	<i>Uniform</i>
Fire	613	3,919	10,229	0%	\$2.61	<i>Uniform</i>
Other	7	275,271	718,481	2%	\$2.61	<i>Uniform</i>
Total	36,449	8,610,010	\$ 22,472,859	73%		

1. Number of meters is based on the number of customers billed a fixed and/or variable charge in June 2020 except for institutional well, flow, and intertie customers. Source file: 2019-20 Customer Data.xlsx .

TABLE 56 : CALCULATED RATE FOR NON-RECURRING (COMMERCIAL & INSTITUTIONAL FLOW & INTERIE) USERS

Net Revenue Requirements (27% Fixed / 73% Variable), cont.			
Calculated Rate for Flow Meters and Intertie Connections	Water Consumption (hcf/yr.)	Total Target Rev. Req't..	Average Cost Per Unit (\$/hcf)
All Treated Water	8,610,010	\$ 30,688,236	\$3.564

TABLE 57 : ESTIMATED REVENUE FROM FLOW METERS AND INTERIE CONNECTIONS BASED ON FY 2019/20 CONSUMPTION

Customer Classes	Number of Meters ¹	Water Consumption (hcf/yr.)	Estimated Rate Revenue FY 2021/22
Commercial Flow Meter	59	58,247	\$ 207,607
Institutional Flow Meter	17	3,220	11,477
Institutional Well	1	5,770	20,566
Intertie	4	316,631	1,128,552
Total	81	383,868	\$ 1,368,202

1. Number of meters is based on the number of customers billed a fixed and/or variable charge in June 2020 except for institutional well, flow, and intertie customers. Source file: 2019-20 Customer Data.xlsx .

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TABLE 58 : PROPOSED VOLUMETRIC CHARGES FOR FY 2022/23

<i>Net Revenue Requirements (30% Fixed / 70% Variable)</i>						
Customer Classes	Number of Meters ¹	Water Consumption (hcf/yr.)	Target Rev. Req't. from Vol. Charges	% of Total Rate Revenue	Uniform Commodity Rates (\$/hcf)	Proposed Rate Structure
<i>Treated Water:</i>						
Single Family Residential	33,876	5,240,495	\$ 13,463,221	42%	\$2.57	<i>Tiered</i>
Multi-Family Residential	773	719,018	1,847,212	6%	\$2.57	<i>Uniform</i>
Commercial	1,292	1,187,697	3,051,282	9%	\$2.57	<i>Uniform</i>
Irrigation	141	92,057	236,501	1%	\$2.57	<i>Uniform</i>
Institutional	232	888,471	2,282,548	7%	\$2.57	<i>Uniform</i>
Institutional Irrigation	232	369,698	949,782	3%	\$2.57	<i>Uniform</i>
Fire	625	3,997	10,270	0%	\$2.57	<i>Uniform</i>
Other	7	280,776	721,336	2%	\$2.57	<i>Uniform</i>
Total	37,178	8,782,210	\$ 22,562,152	70%		

1. Number of meters is based on the number of customers billed a fixed and/or variable charge in June 2020 except for institutional well, flow, and intertie customers. Source file: 2019-20 Customer Data.xlsx .

TABLE 59 : CALCULATED RATE FOR NON-RECURRING (COMMERCIAL & INSTITUTIONAL FLOW & INTERIE) USERS

<i>Net Revenue Requirements (30% Fixed / 70% Variable), cont.</i>			
Calculated Rate for Flow Meters and Intertie Connections	Water Consumption (hcf/yr.)	Total Target Rev. Req't..	Average Cost Per Unit (\$/hcf)
All Treated Water	8,782,210	\$ 32,241,061	\$3.671

TABLE 60 : ESTIMATED REVENUE FROM FLOW METERS AND INTERIE CONNECTIONS BASED ON FY 2019/20 CONSUMPTION

Customer Classes	Number of Meters ¹	Water Consumption (hcf/yr.)	Estimated Rate Revenue FY 2022/23
Commercial Flow Meter	59	58,247	\$ 213,835
Institutional Flow Meter	17	3,220	11,821
Institutional Well	1	5,770	21,183
Intertie	4	316,631	1,162,409
Total	81	383,868	\$ 1,409,248

1. Number of meters is based on the number of customers billed a fixed and/or variable charge in June 2020 except for institutional well, flow, and intertie customers. Source file: 2019-20 Customer Data.xlsx .

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TABLE 61 : PROPOSED VOLUMETRIC CHARGES FOR FY 2023/24

Net Revenue Requirements (33% Fixed / 67% Variable)						
Customer Classes	Number of Meters ¹	Water Consumption (hcf/yr.)	Target Rev. Req't. from Vol. Charges	% of Total Rate Revenue	Uniform Commodity Rates (\$/hcf)	Proposed Rate Structure
<i>Treated Water:</i>						
Single Family Residential	34,554	5,345,305	\$ 13,487,561	40%	\$2.52	Tiered
Multi-Family Residential	789	733,399	1,850,551	5%	\$2.52	Uniform
Commercial	1,318	1,211,451	3,056,799	9%	\$2.52	Uniform
Irrigation	144	93,898	236,929	1%	\$2.52	Uniform
Institutional	236	906,240	2,286,675	7%	\$2.52	Uniform
Institutional Irrigation	236	377,092	951,499	3%	\$2.52	Uniform
Fire	638	4,077	10,288	0%	\$2.52	Uniform
Other	7	286,392	722,640	2%	\$2.52	Uniform
Total	37,922	8,957,854	\$ 22,602,941	67%		

1. Number of meters is based on the number of customers billed a fixed and/or variable charge in June 2020 except for institutional well, flow, and intertie customers. Source file: 2019-20 Customer Data.xlsx .

TABLE 62 : CALCULATED RATE FOR NON-RECURRING (COMMERCIAL & INSTITUTIONAL FLOW & INTERIE) USERS

Net Revenue Requirements (33% Fixed / 67% Variable), cont.			
Calculated Rate for Flow Meters and Intertie Connections	Water Consumption (hcf/yr.)	Total Target Rev. Req't..	Average Cost Per Unit (\$/hcf)
All Treated Water	8,957,854	\$ 33,872,459	\$3.781

TABLE 63 : ESTIMATED REVENUE FROM FLOW METERS AND INTERIE CONNECTIONS BASED ON FY 2019/20 CONSUMPTION

Customer Classes	Number of Meters ¹	Water Consumption (hcf/yr.)	Estimated Rate Revenue FY 2023/24
Commercial Flow Meter	59	58,247	\$ 220,250
Institutional Flow Meter	17	3,220	12,176
Institutional Well	1	5,770	21,818
Intertie	4	316,631	1,197,281
Total	81	383,868	\$ 1,451,525

1. Number of meters is based on the number of customers billed a fixed and/or variable charge in June 2020 except for institutional well, flow, and intertie customers. Source file: 2019-20 Customer Data.xlsx .

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TABLE 64 : PROPOSED VOLUMETRIC CHARGES FOR FY 2024/25

Net Revenue Requirements (37% Fixed / 63% Variable)						
Customer Classes	Number of Meters ¹	Water Consumption (hcf/yr.)	Target Rev. Req't. from Vol. Charges	% of Total Rate Revenue	Uniform Commodity Rates (\$/hcf)	Proposed Rate Structure
<i>Treated Water:</i>						
Single Family Residential	35,245	5,452,211	\$ 13,479,894	38%	\$2.47	<i>Tiered</i>
Multi-Family Residential	804	748,067	1,849,499	5%	\$2.47	<i>Uniform</i>
Commercial	1,345	1,235,680	3,055,061	9%	\$2.47	<i>Uniform</i>
Irrigation	146	95,776	236,794	1%	\$2.47	<i>Uniform</i>
Institutional	241	924,365	2,285,375	6%	\$2.47	<i>Uniform</i>
Institutional Irrigation	241	384,634	950,958	3%	\$2.47	<i>Uniform</i>
Fire	651	4,159	10,282	0%	\$2.47	<i>Uniform</i>
Other	7	292,120	722,229	2%	\$2.47	<i>Uniform</i>
Total	38,680	9,137,011	\$ 22,590,092	63%		

1. Number of meters is based on the number of customers billed a fixed and/or variable charge in June 2020 except for institutional well, flow, and intertie customers. Source file: 2019-20 Customer Data.xlsx .

TABLE 65 : CALCULATED RATE FOR NON-RECURRING (COMMERCIAL & INSTITUTIONAL FLOW & INTERIE) USERS

Net Revenue Requirements (37% Fixed / 63% Variable), cont.			
Calculated Rate for Flow Meters and Intertie Connections	Water Consumption (hcf/yr.)	Total Target Rev. Req't..	Average Cost Per Unit (\$/hcf)
All Treated Water	9,137,011	\$ 35,586,405	\$3.895

TABLE 66 : ESTIMATED REVENUE FROM FLOW METERS AND INTERIE CONNECTIONS BASED ON FY 2019/20 CONSUMPTION

Customer Classes	Number of Meters ¹	Water Consumption (hcf/yr.)	Estimated Rate Revenue FY 2024/25
Commercial Flow Meter	59	58,247	\$ 226,858
Institutional Flow Meter	17	3,220	12,541
Institutional Well	1	5,770	22,473
Intertie	4	316,631	1,233,200
Total	81	383,868	\$ 1,495,071

1. Number of meters is based on the number of customers billed a fixed and/or variable charge in June 2020 except for institutional well, flow, and intertie customers. Source file: 2019-20 Customer Data.xlsx .

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TABLE 67 : PROPOSED VOLUMETRIC CHARGES FOR FY 2025/26

Net Revenue Requirements (40% Fixed / 60% Variable)						
Customer Classes	Number of Meters ¹	Water Consumption (hcf/yr.)	Target Rev. Req't. from Vol. Charges	% of Total Rate Revenue	Uniform Commodity Rates (\$/hcf)	Proposed Rate Structure
<i>Treated Water:</i>						
Single Family Residential	35,950	5,561,255	\$ 13,436,917	36%	\$2.42	<i>Tiered</i>
Multi-Family Residential	820	763,028	1,843,603	5%	\$2.42	<i>Uniform</i>
Commercial	1,371	1,260,394	3,045,321	8%	\$2.42	<i>Uniform</i>
Irrigation	149	97,692	236,039	1%	\$2.42	<i>Uniform</i>
Institutional	246	942,853	2,278,089	6%	\$2.42	<i>Uniform</i>
Institutional Irrigation	246	392,326	947,926	3%	\$2.42	<i>Uniform</i>
Fire	664	4,242	10,250	0%	\$2.42	<i>Uniform</i>
Other	8	297,962	719,926	2%	\$2.42	<i>Uniform</i>
Total	39,454	9,319,752	\$ 22,518,071	60%		

1. Number of meters is based on the number of customers billed a fixed and/or variable charge in June 2020 except for institutional well, flow, and intertie customers. Source file: 2019-20 Customer Data.xlsx .

TABLE 68 : CALCULATED RATE FOR NON-RECURRING (COMMERCIAL & INSTITUTIONAL FLOW & INTERIE) USERS

Net Revenue Requirements (40% Fixed / 60% Variable), cont.			
Calculated Rate for Flow Meters and Intertie Connections	Water Consumption (hcf/yr.)	Total Target Rev. Req't..	Average Cost Per Unit (\$/hcf)
All Treated Water	9,319,752	\$ 37,387,077	\$4.012

TABLE 69 : ESTIMATED REVENUE FROM FLOW METERS AND INTERIE CONNECTIONS BASED ON FY 2019/20 CONSUMPTION

Customer Classes	Number of Meters ¹	Water Consumption (hcf/yr.)	Estimated Rate Revenue FY 2025/26
Commercial Flow Meter	59	58,247	\$ 233,663
Institutional Flow Meter	17	3,220	12,917
Institutional Well	1	5,770	23,147
Intertie	4	316,631	1,270,196
Total	81	383,868	\$ 1,539,923

1. Number of meters is based on the number of customers billed a fixed and/or variable charge in June 2020 except for institutional well, flow, and intertie customers. Source file: 2019-20 Customer Data.xlsx .

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TABLE 70 : PROPOSED TIER BREAKPOINT - SINGLE FAMILY RESIDENTIAL

Meter Sizes	FY 2020/21 Consumption ¹	% of Consumption ²	Avg. Monthly Consumption FY'20/21 (ccf) ³	Tier Breakpoint (ccf) ⁴
Tier 1 - Free Production Allowance	2,293,278	44.6%		6.0
Tier 2 - Replacement & Makeup Obligations	2,844,462	55.4%		
Total	5,137,740	100.0%	13.0	

1. Free Production Allowance is included in Tier 1 and Replacement and Makeup Obligations are in Tier 2. The FY 2019/20 consumption data are actuals. See Allocation Factors Tab, Table 31.

2. See Table 71 for details on how the percentage of consumption was calculated.

3. Annual consumption divided by total meters divided by 12 months.

4. Tier 2 breakpoint is the percentage of Tier 1 consumption times the Avg. Monthly Consumption, rounded to the nearest integer in CCF.

TABLE 71 : FY 2020/21 WATER SUPPLY BY SOURCE AND SINGLE-FAMILY RESIDENTIAL (SFR) SHARE OF PRODUCTION

Source of Supply	Total Production (FY'20/21)			SFR Share of Total Production ¹		SFR Share of Metered Consumption ²		Total Production (FY'21/22)	Total Production (FY'22/23)	Total Production (FY'23/24)	Total Production (FY'24/25)
	In AF	In CCF	% of Total	%	CCF	(CCF)	% of Total	CCF	CCF	CCF	CCF
Free Production Allowance (Tier 1)	11,678	5,087,111	44.6%	59.7%	3,035,566	2,293,278	44.6%	2,698,281	2,698,281	2,698,281	2,698,281
VWD Replacement Obligation (Tier 2)	13,594	5,921,372	52.0%	59.7%	3,533,384	2,669,364	52.0%	4,021,948	4,176,866	4,335,164	4,335,164
VWD Makeup Obligation (Tier 2)	892	388,413	3.4%	59.7%	231,773	175,097	3.4%	250,598	269,616	288,833	288,833
Totals	26,164	11,396,897	100.0%	--	6,800,723	5,137,740	100.0%	6,970,827	7,144,764	7,322,278	7,322,278

1. Single-Family share of treated water based on the VWD customer data. Source file: 2019-20 Customer Data.xlsx .

2. This is the annual metered consumption, from the Allocation Factors Tab, times the "% of Total Production". Rates are based on metered consumption, not total production.

TABLE 72 : SUMMARY OF FY 2021/22 SINGLE-FAMILY RESIDENTIAL SHARE OF WATER SUPPLY/VOLUMETRIC-RELATED COSTS

Supply Costs for Single-Family Tiered Rates	Total Cost (FY 2021/22)	SFR % of Costs	SFR Share of Costs	Tier 1 Allocation ¹	Tier 2 Allocation ¹
	(a)	(b)	(c) = (a) x (b)		
VWD Replacement Obligation	\$ 9,230,054	59.7%	\$ 5,507,731	0.0%	100.0%
VWD Makeup Obligation	605,447	59.7%	361,281	0.0%	100.0%
Conservation Dept. Costs	538,545	59.7%	321,359	0.0%	100.0%
Other Commodity-Related Costs	12,098,813	59.7%	7,219,568	44.6%	55.4%
Total Commodity-Related Costs	\$ 22,472,859	--	\$ 13,409,939	--	--

1. Tier rate design assumes lowest-cost supplies are in Tier 1; Tier 2 includes replenishment/makeup and conservation costs.

TABLE 73 : SUMMARY OF FY 2022/23 - FY 2025/26 SINGLE-FAMILY RESIDENTIAL SHARE OF WATER SUPPLY/VOLUMETRIC-RELATED COSTS

Supply Costs for Single-Family Tiered Rates	Total Cost (FY 2022/23)		Total Cost (FY 2023/24)		Total Cost (FY 2024/25)		Total Cost (FY 2025/26)	
	\$	SFR Share						
VWD Replacement Obligation	\$ 10,985,972	\$ 6,555,517	\$ 11,939,416	\$ 7,124,453	\$ 12,958,961	\$ 7,732,834	\$ 12,958,961	\$ 7,732,834
VWD Makeup Obligation	684,509	408,458	770,688	459,883	863,400	515,205	863,400	515,205
Conservation Dept. Costs	538,545	321,359	560,140	334,245	582,603	347,649	605,966	361,590
Other Commodity-Related Costs	10,353,126	6,177,887	9,332,697	5,568,980	8,185,129	4,884,206	8,089,743	4,827,288
Total Commodity-Related Costs	\$ 22,562,152	\$ 13,463,221	\$ 22,602,941	\$ 13,487,561	\$ 22,590,092	\$ 13,479,894	\$ 22,518,071	\$ 13,436,917

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TABLE 74 : ALLOCATION OF FY 2020/21 SINGLE-FAMILY RESIDENTIAL VOLUMETRIC COSTS BY TIER

Supply Costs for Single-Family Tiered Rates	SFR Share of Costs ('20/21) ¹	Tier Allocations (%)		Tier Allocations (\$) ²	
		Tier 1	Tier 2	Tier 1	Tier 2
VWD Replacement Obligation	\$ 5,507,731	0.0%	100.0%	\$ -	\$ 5,507,731
VWD Makeup Obligation	361,281	0.0%	100.0%	-	361,281
Conservation Dept. Costs	321,359	0.0%	100.0%	-	321,359
Other Commodity-Related Costs	7,219,568	44.6%	55.4%	3,222,522	3,997,047
Total Commodity-Related Costs	\$ 13,409,939	--	--	\$ 3,222,522	\$ 10,187,417

1. From Table 72.

2. "SFR Share of Costs ('20/21)" times "Tier Allocations (%)".

TABLE 75 : FY 2020/21 CALCULATION OF SINGLE-FAMILY RESIDENTIAL TIERED RATES

Supply Costs for Single-Family Tiered Rates	Allocated SFR Costs ¹	SFR Consumption ²	Tier SFR Rates (\$/CCF)	Uniform Rate for Non-SFR ³ (\$/CCF)
	(a)	(b)	(c) = (a) ÷ (b)	
(FY'21/22)				
Allocated Costs - Tier 1	\$ 3,222,522	2,293,278	\$1.41	\$2.61
Allocated Costs - Tier 2	10,187,417	2,844,462	\$3.58	
Total Commodity-Related Costs	\$ 13,409,939	5,137,740	--	--
(FY'22/23)				
Allocated Costs - Tier 1	\$ 2,757,557	2,698,281	\$1.02	\$2.57
Allocated Costs - Tier 2	10,705,664	4,272,546	\$2.51	
Total Commodity-Related Costs	\$ 13,463,221	6,970,827	--	--
(FY'23/24)				
Allocated Costs - Tier 1	\$ 2,485,766	2,698,281	\$0.92	\$2.52
Allocated Costs - Tier 2	11,001,795	4,446,483	\$2.47	
Total Commodity-Related Costs	\$ 13,487,561	7,144,764	--	--
(FY'24/25)				
Allocated Costs - Tier 1	\$ 2,180,111	2,698,281	\$0.81	\$2.47
Allocated Costs - Tier 2	11,299,783	4,623,997	\$2.44	
Total Commodity-Related Costs	\$ 13,479,894	7,322,278	--	--
(FY'25/26)				
Allocated Costs - Tier 1	\$ 2,154,705	2,698,281	\$0.80	\$2.42
Allocated Costs - Tier 2	11,282,212	4,623,997	\$2.44	
Total Commodity-Related Costs	\$ 13,436,917	7,322,278	--	--

1. From Table 73.

2. SFR Share of Metered Consumption from Table 71. Tier 1 is based on the percentage of Free Production Allowance; Tier 2 includes all other consumption. Volumetric rates are based on metered consumption, not total production.

3. Tiered rates only apply to single-family residential customers. All other customers pay a uniform volumetric rate, which is all volumetric costs divided by the total metered treated water consumption from the Allocation Factors Tab, Table 31.

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TABLE 76 : FREE PRODUCTION ALLOWANCE ANALYSIS

Free Production Allowance Analysis	
Description	HCF
FY 2019/20 Production ¹	9,587,300
Free Production Allowance ²	<u>6,217,580</u>
Excess Production	3,369,720
Conservation Equivalent ³	35%

1. Provided by District. Source file: *Production Data.xlsx*.

2. Free Production Allowance is calculated based on 15,574 AF for FY 2019-20.
See *MWA Obligations* tab.

3. If conservation exceeds 35%, this analysis will no longer accurately assess the marginal cost of production as no groundwater replenishment will be required.

TABLE 77 : DEVELOPMENT OF THE MARGINAL COST OF GROUNDWATER REPLENISHMENT

Development of the Marginal Cost of Groundwater Replenishment ¹				
Fiscal Year	Description	Acre Foot Cost	HCF Cost	% Change in MWA Cost
2019-20	Mojave Basin Area Watermaster Replacement Obligation Rates	\$591	\$1.357	
2020-21		\$604	\$1.387	2%
2021-22		\$665	\$1.527	10%
2022-23		\$679	\$1.559	2%
2023-24		\$710	\$1.630	5%
2024-25		\$743	\$1.706	5%
2025-26		\$777	\$1.784	5%

1. Acre Foot Costs provided by District staff. Source file: *MWA Obligations - Forecasts.xlsx*.

TABLE 78 : DEVELOPMENT OF THE MARGINAL COST OF PURCHASED WATER

Development of the Marginal Cost of Purchased Water ¹			
Fiscal Year	Description	Acre Foot Cost	HCF Cost
2020-21	Mojave Basin Area Watermaster	\$151	\$0.346

1. Per Acre Foot Cost is \$150.92 and represents delivery costs per District Staff. Source: Email received 09-29-20.

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TABLE 79 : DEVELOPMENT OF THE MARGINAL COST OF UTILITIES-PRODUCTION POWER

Development of the Marginal Cost Of Utilities-Production Power ¹		
Fiscal Year	Description	Net Change
2020-21	Budget Adjustment Utilities-Production Power ²	\$694,708
2020-21	Consumption Change	2,684,444
2020-21	Per HCF Cost	\$0.259

1. Net change in budget figure for anticipated conservation.

2. Calculated based on District achieving 28% conservation.

TABLE 80 : MARGINAL COST PER HCF

OBJECT	DESCRIPTION	CPI Factor	Base Year Costs (FY'20/21)	Marginal Cost of Water				
				2022	2023	2024	2025	2026
4100500	Groundwater Replenishment	10.30%	<u>\$1.387</u>	\$1.527	\$1.559	\$1.630	\$1.706	\$1.784
4100500	Purchased Water	7.00%	<u>\$0.346</u>	\$0.371	\$0.397	\$0.424	\$0.454	\$0.486
4100500	Utilities-Production Power	9.00%	<u>\$0.259</u>	\$0.282	\$0.307	\$0.335	\$0.365	\$0.398
	Marginal Cost Per HCF - Production		\$1.992	\$2.179	\$2.263	\$2.390	\$2.525	\$2.668
	Adjustment for Non-revenued Water (System Loss)	6.6%	<u>\$0.131</u>	\$0.144	\$0.149	\$0.158	\$0.167	\$0.176
	Marginal Cost Per HCF - Consumption		\$2.123	\$2.323	\$2.412	\$2.547	\$2.692	\$2.844

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Summary Analysis - (1) the marginal impact of drought reductions are not significant enough to implement a drought rate until at least 20% reduction are reached. (2) After year 2, the revenue losses from drought reductions are more than offset by marginal cost reductions because (a) the fixed charge revenues are increasing from 27% to 40% by rate design, (b) revenues from volumetric rates are minimally increasing due to the decrease in volumetric rate % from 73% to 60%, and (c) inflation rates in the water production costs are greater than the increases in the volumetric rate revenues.

TABLE 81 : PROJECTED REVENUE CHECK FROM RATES USING MARGINAL WATER COST FOR FY 2021/22

Conservation to FY 2019/20 Level	Fiscal Year 2021/22 Estimates									
	Production ¹	Net Revenue Requirement	Marginal Water Cost Adjustment	Adjusted Revenue Req't.	Consumption After Conservation ¹	Fixed Revenue	Adjusted Variable Revenue	Total Revenue	Drought-Related Shortfall	
									(\$)	% of Total
0%	9,587,300	\$ 30,688,236	\$ -	\$ 30,688,236	8,610,010	\$ 8,215,377	\$ 22,472,859	\$ 30,688,236	\$ -	0.0%
10%	8,628,570	30,688,236	(2,089,483)	28,598,753	7,749,009	8,215,377	20,225,573	28,440,950	(157,802)	-0.6%
20%	7,669,840	30,688,236	(4,178,967)	26,509,269	6,888,008	8,215,377	17,978,287	26,193,664	(315,605)	-1.2%
30%	6,711,110	30,688,236	(6,268,450)	24,419,786	6,027,007	8,215,377	15,731,002	23,946,378	(473,407)	-2.0%
40%	5,752,380	30,688,236	(8,357,934)	22,330,302	5,166,006	8,215,377	13,483,716	21,699,092	(631,210)	-2.9%
50%	4,793,650	\$ 30,688,236	\$(10,447,417)	\$ 20,240,819	4,305,005	\$ 8,215,377	\$ 11,236,430	\$ 19,451,806	\$ (789,012)	-4.1%

1. Production and consumption in FY 2019/20 and beyond assumes 2.0% increase in water consumption per year to account for customer growth.

TABLE 82 : CALCULATION OF DROUGHT SURCHARGES FOR FY 2021/22

Conservation to FY 2019/20 Level	Consumption	Costs to Recover	Drought Surcharge (\$/hcf)	FY '21/22 Unadjusted Volumetric Rates			FY '21/22 Vol. Rates w/ Drought Surcharge		
				Uniform Volumetric Rate	Tier 1 Volumetric Rate	Tier 2 Volumetric Rate	Uniform Volumetric Rate	Tier 1 Volumetric Rate	Tier 2 Volumetric Rate
				0%	8,610,010	\$ -	\$0.00	\$2.61	\$1.41
10%	7,749,009	157,802	\$0.02	\$2.61	\$1.41	\$3.58	\$2.63	\$1.43	\$3.60
20%	6,888,008	315,605	\$0.05	\$2.61	\$1.41	\$3.58	\$2.66	\$1.45	\$3.63
30%	6,027,007	473,407	\$0.08	\$2.61	\$1.41	\$3.58	\$2.69	\$1.48	\$3.66
40%	5,166,006	631,210	\$0.12	\$2.61	\$1.41	\$3.58	\$2.73	\$1.53	\$3.70
50%	4,305,005	\$ 789,012	\$0.18	\$2.61	\$1.41	\$3.58	\$2.79	\$1.59	\$3.76

TABLE 83 : FY 2021/22 DROUGHT SURCHARGES FOR CONSTRUCTION FLOW METER/FILLER SPOUT WATER/INTERIE

Conservation to FY 2019/20 Level	Standard Rate	Water Rate in Drought	Drought Surcharge
20%	\$3.56	\$0.046	\$3.610
30%	\$3.56	\$0.079	\$3.643
40%	\$3.56	\$0.122	\$3.686
50%	\$3.56	\$0.183	\$3.748

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Summary Analysis - (1) the marginal impact of drought reductions are not significant enough to implement a drought rate until at least 20% reduction are reached. (2) After year 2, the revenue losses from drought reductions are more than offset by marginal cost reductions because (a) the fixed charge revenues are increasing from 27% to 40% by rate design, (b) revenues from volumetric rates are minimally increasing due to the decrease in volumetric rate % from 73% to 60%, and (c) inflation rates in the water production costs are greater than the increases in the volumetric rate revenues.

TABLE 84 : PROJECTED REVENUE CHECK FROM RATES USING MARGINAL COST FOR FY 2022/23

Conservation to FY 2019/20 Level	Fiscal Year 2021/22 Estimates									
	Production ¹	Net Revenue Requirement	Marginal Water Cost Adjustment	Adjusted Revenue Req't.	Consumption After Conservation ¹	Fixed Revenue	Adjusted Variable Revenue	Total Revenue	Drought-Related Shortfall	
									(\$)	% of Total
0%	9,779,046	\$ 32,241,061	\$ -	\$ 32,241,061	8,782,210	\$ 9,678,909	\$ 22,562,152	\$ 32,241,061	\$ -	0.0%
10%	8,801,141	32,241,061	(2,212,906)	30,028,155	7,903,989	9,678,909	20,305,936	29,984,846	(43,309)	-0.1%
20%	7,823,237	32,241,061	(4,425,812)	27,815,249	7,025,768	9,678,909	18,049,721	27,728,631	(86,619)	-0.3%
30%	6,845,332	32,241,061	(6,638,717)	25,602,343	6,147,547	9,678,909	15,793,506	25,472,415	(129,928)	-0.5%
40%	5,867,428	32,241,061	(8,851,623)	23,389,438	5,269,326	9,678,909	13,537,291	23,216,200	(173,237)	-0.7%
50%	4,889,523	\$ 32,241,061	\$(11,064,529)	\$ 21,176,532	4,391,105	\$ 9,678,909	\$ 11,281,076	\$ 20,959,985	\$ (216,547)	-1.0%

1. Production and consumption in FY 2019/20 and beyond assumes 2.0% increase in water consumption per year to account for customer growth.

TABLE 85 : CALCULATION OF DROUGHT SURCHARGES FOR FY 2022/23

Conservation to FY 2019/20 Level	Consumption	Costs to Recover	Drought Surcharge (\$/hcf)	FY '22/23 Unadjusted Volumetric Rates			FY '22/23 Vol. Rates w/ Drought Surcharge		
				Uniform Volumetric Rate	Tier 1 Volumetric Rate	Tier 2 Volumetric Rate	Uniform Volumetric Rate	Tier 1 Volumetric Rate	Tier 2 Volumetric Rate
				0%	8,782,210	\$ -	\$0.00	\$2.57	\$1.02
10%	7,903,989	43,309	\$0.01	\$2.72	\$1.02	\$2.51	\$2.73	\$1.03	\$2.51
20%	7,025,768	86,619	\$0.01	\$2.72	\$1.02	\$2.51	\$2.73	\$1.03	\$2.52
30%	6,147,547	129,928	\$0.02	\$2.72	\$1.02	\$2.51	\$2.74	\$1.04	\$2.53
40%	5,269,326	173,237	\$0.03	\$2.72	\$1.02	\$2.51	\$2.75	\$1.05	\$2.54
50%	4,391,105	\$ 216,547	\$0.05	\$2.72	\$1.02	\$2.51	\$2.77	\$1.07	\$2.56

TABLE 86 : FY 2022/23 DROUGHT SURCHARGES FOR CONSTRUCTION FLOW METER/FILLER SPOUT WATER/INTERIE

Conservation to FY 2019/20 Level	Standard Rate	Water Rate in Drought	Drought Surcharge
20%	\$3.67	\$0.012	\$3.684
30%	\$3.67	\$0.021	\$3.692
40%	\$3.67	\$0.033	\$3.704
50%	\$3.67	\$0.049	\$3.720

**VICTORVILLE WATER DISTRICT
WATER RATE STUDY
Cost of Service Analysis & Rate Design**

Summary Analysis - (1) the marginal impact of drought reductions are not significant enough to implement a drought rate until at least 20% reduction are reached. (2) After year 2, the revenue losses from drought reductions are more than offset by marginal cost reductions because (a) the fixed charge revenues are increasing from 27% to 40% by rate design, (b) revenues from volumetric rates are minimally increasing due to the decrease in volumetric rate % from 73% to 60%, and (c) inflation rates in the water production costs are greater than the increases in the volumetric rate revenues.

TABLE 87 : PROJECTED REVENUE CHECK FROM RATES USING MARGINAL WATER COST FOR FY 2023/24

Conservation to FY 2019/20 Level	Fiscal Year 2021/22 Estimates									
	Production ¹	Net Revenue Requirement	Marginal Water Cost Adjustment	Adjusted Revenue Req't.	Consumption After Conservation ¹	Fixed Revenue	Adjusted Variable Revenue	Total Revenue	Drought-Related Shortfall	
									(\$)	% of Total
0%	9,974,627	\$ 33,872,459	\$ -	\$ 33,872,459	8,957,854	\$11,269,517	\$ 22,602,941	\$ 33,872,459	\$ -	0.0%
10%	8,977,164	33,872,459	(2,383,448)	31,489,011	8,062,069	11,269,517	20,342,647	31,612,164	123,154	0.4%
20%	7,979,702	33,872,459	(4,766,896)	29,105,563	7,166,284	11,269,517	18,082,353	29,351,870	246,307	0.8%
30%	6,982,239	33,872,459	(7,150,343)	26,722,115	6,270,498	11,269,517	15,822,059	27,091,576	369,461	1.4%
40%	5,984,776	33,872,459	(9,533,791)	24,338,667	5,374,713	11,269,517	13,561,765	24,831,282	492,615	2.0%
50%	4,987,313	\$ 33,872,459	\$(11,917,239)	\$ 21,955,220	4,478,927	\$11,269,517	\$ 11,301,471	\$ 22,570,988	\$ 615,768	2.7%

1. Production and consumption in FY 2019/20 and beyond assumes 2.0% increase in water consumption per year to account for customer growth.

TABLE 88 : CALCULATION OF DROUGHT SURCHARGES FOR FY 2023/24

Conservation to FY 2019/20 Level	Consumption	Costs to Recover	Drought Surcharge (\$/hcf)	FY '23/24 Unadjusted Volumetric Rates			FY '23/24 Vol. Rates w/ Drought Surcharge		
				Uniform Volumetric Rate	Tier 1 Volumetric Rate	Tier 2 Volumetric Rate	Uniform Volumetric Rate	Tier 1 Volumetric Rate	Tier 2 Volumetric Rate
				0%	8,957,854	\$ -	\$0.00	\$2.52	\$0.92
10%	8,062,069	(123,154)	(\$0.02)	\$2.52	\$0.92	\$2.47	\$2.51	\$0.91	\$2.46
20%	7,166,284	(246,307)	(\$0.03)	\$2.52	\$0.92	\$2.47	\$2.49	\$0.89	\$2.44
30%	6,270,498	(369,461)	(\$0.06)	\$2.52	\$0.92	\$2.47	\$2.46	\$0.86	\$2.42
40%	5,374,713	(492,615)	(\$0.09)	\$2.52	\$0.92	\$2.47	\$2.43	\$0.83	\$2.38
50%	4,478,927	\$ (615,768)	(\$0.14)	\$2.52	\$0.92	\$2.47	\$2.39	\$0.78	\$2.34

TABLE 89 : FY 2023/24 DROUGHT SURCHARGES FOR CONSTRUCTION FLOW METER/FILLER SPOUT WATER/INTERIE

Conservation to FY 2019/20 Level	Standard Rate	Water Rate in Drought	Drought Surcharge
20%	\$3.78	(\$0.034)	\$3.747
30%	\$3.78	(\$0.059)	\$3.722
40%	\$3.78	(\$0.092)	\$3.690
50%	\$3.78	(\$0.137)	\$3.644

**VICTORVILLE WATER DISTRICT
WATER RATE STUDY
Cost of Service Analysis & Rate Design**

Summary Analysis - (1) the marginal impact of drought reductions are not significant enough to implement a drought rate until at least 20% reduction are reached. (2) After year 2, the revenue losses from drought reductions are more than offset by marginal cost reductions because (a) the fixed charge revenues are increasing from 27% to 40% by rate design, (b) revenues from volumetric rates are minimally increasing due to the decrease in volumetric rate % from 73% to 60%, and (c) inflation rates in the water production costs are greater than the increases in the volumetric rate revenues.

TABLE 90 : PROJECTED REVENUE CHECK FROM RATES USING MARGINAL WATER COST FOR FY 2024/25

Conservation to FY 2019/20 Level	Fiscal Year 2021/22 Estimates									
	Production ¹	Net Revenue Requirement	Marginal Water Cost Adjustment	Adjusted Revenue Req't.	Consumption After Conservation ¹	Fixed Revenue	Adjusted Variable Revenue	Total Revenue	Drought-Related Shortfall	
									(\$)	% of Total
0%	10,174,119	\$ 35,586,405	\$ -	\$ 35,586,405	9,137,011	\$12,996,313	\$ 22,590,092	\$ 35,586,405	\$ -	0.0%
10%	9,156,708	35,586,405	(2,569,109)	33,017,296	8,223,310	12,996,313	20,331,083	33,327,396	310,100	0.9%
20%	8,139,296	35,586,405	(5,138,218)	30,448,187	7,309,609	12,996,313	18,072,074	31,068,387	620,200	2.0%
30%	7,121,884	35,586,405	(7,707,327)	27,879,078	6,395,908	12,996,313	15,813,065	28,809,377	930,299	3.2%
40%	6,104,472	35,586,405	(10,276,436)	25,309,969	5,482,207	12,996,313	13,554,055	26,550,368	1,240,399	4.7%
50%	5,087,060	\$ 35,586,405	\$(12,845,545)	\$ 22,740,860	4,568,506	\$12,996,313	\$ 11,295,046	\$ 24,291,359	\$ 1,550,499	6.4%

1. Production and consumption in FY 2019/20 and beyond assumes 2.0% increase in water consumption per year to account for customer growth.

TABLE 91 : CALCULATION OF DROUGHT SURCHARGES FOR FY 2024/25

Conservation to FY 2019/20 Level	Consumption	Costs to Recover	Drought Surcharge (\$/hcf)	FY '24/25 Unadjusted Volumetric Rates			FY '24/25 Vol. Rates w/ Drought Surcharge		
				Uniform Volumetric Rate	Tier 1 Volumetric Rate	Tier 2 Volumetric Rate	Uniform Volumetric Rate	Tier 1 Volumetric Rate	Tier 2 Volumetric Rate
				0%	9,137,011	\$ -	\$0.00	\$2.47	\$0.81
10%	8,223,310	(310,100)	(\$0.04)	\$2.47	\$0.81	\$2.44	\$2.43	\$0.77	\$2.41
20%	7,309,609	(620,200)	(\$0.08)	\$2.47	\$0.81	\$2.44	\$2.39	\$0.72	\$2.36
30%	6,395,908	(930,299)	(\$0.15)	\$2.47	\$0.81	\$2.44	\$2.33	\$0.66	\$2.30
40%	5,482,207	(1,240,399)	(\$0.23)	\$2.47	\$0.81	\$2.44	\$2.25	\$0.58	\$2.22
50%	4,568,506	\$ (1,550,499)	(\$0.34)	\$2.47	\$0.81	\$2.44	\$2.13	\$0.47	\$2.10

TABLE 92 : FY 2024/25 DROUGHT SURCHARGES FOR CONSTRUCTION FLOW/FILLER SPOUT WATER/INTERIE

Conservation to FY 2019/20 Level	Standard Rate	Water Rate in Drought	Drought Surcharge
20%	\$3.89	(\$0.085)	\$3.810
30%	\$3.89	(\$0.145)	\$3.749
40%	\$3.89	(\$0.226)	\$3.668
50%	\$3.89	(\$0.339)	\$3.555

**VICTORVILLE WATER DISTRICT
WATER RATE STUDY
Cost of Service Analysis & Rate Design**

Summary Analysis - (1) the marginal impact of drought reductions are not significant enough to implement a drought rate until at least 20% reduction are reached. (2) After year 2, the revenue losses from drought reductions are more than offset by marginal cost reductions because (a) the fixed charge revenues are increasing from 27% to 40% by rate design, (b) revenues from volumetric rates are minimally increasing due to the decrease in volumetric rate % from 73% to 60%, and (c) inflation rates in the water production costs are greater than the increases in the volumetric rate revenues.

TABLE 93 : PROJECTED REVENUE CHECK FROM RATES USING MARGINAL WATER COST FOR FY 2025/26

Conservation to FY 2019/20 Level	Fiscal Year 2021/22 Estimates									
	Production ¹	Net Revenue Requirement	Marginal Water Cost Adjustment	Adjusted Revenue Req't.	Consumption After Conservation ¹	Fixed Revenue	Adjusted Variable Revenue	Total Revenue	Drought-Related Shortfall	
									(\$)	% of Total
0%	10,377,602	\$ 37,387,077	\$ -	\$ 37,387,077	9,319,752	\$14,869,006	\$ 22,518,071	\$ 37,387,077	\$ -	0.0%
10%	9,339,842	37,387,077	(2,768,601)	34,618,476	8,387,777	14,869,006	20,266,264	35,135,270	516,794	1.5%
20%	8,302,081	37,387,077	(5,537,202)	31,849,875	7,455,801	14,869,006	18,014,457	32,883,463	1,033,588	3.1%
30%	7,264,321	37,387,077	(8,305,803)	29,081,274	6,523,826	14,869,006	15,762,650	30,631,656	1,550,382	5.1%
40%	6,226,561	37,387,077	(11,074,404)	26,312,673	5,591,851	14,869,006	13,510,842	28,379,849	2,067,176	7.3%
50%	5,188,801	\$ 37,387,077	\$(13,843,005)	\$ 23,544,072	4,659,876	\$14,869,006	\$ 11,259,035	\$ 26,128,042	\$ 2,583,970	9.9%

1. Production and consumption in FY 2019/20 and beyond assumes 2.0% increase in water consumption per year to account for customer growth.

TABLE 94 : CALCULATION OF DROUGHT SURCHARGES FOR FY 2025/26

Conservation to FY 2019/20 Level	Consumption	Costs to Recover	Drought Surcharge (\$/hcf)	FY '25/26 Unadjusted Volumetric Rates			FY '25/26 Vol. Rates w/ Drought Surcharge		
				Uniform Volumetric Rate	Tier 1 Volumetric Rate	Tier 2 Volumetric Rate	Uniform Volumetric Rate	Tier 1 Volumetric Rate	Tier 2 Volumetric Rate
				0%	9,319,752	\$ -	\$0.00	\$2.42	\$0.80
10%	8,387,777	(516,794)	(\$0.06)	\$2.42	\$0.80	\$2.44	\$2.35	\$0.74	\$2.38
20%	7,455,801	(1,033,588)	(\$0.14)	\$2.42	\$0.80	\$2.44	\$2.28	\$0.66	\$2.30
30%	6,523,826	(1,550,382)	(\$0.24)	\$2.42	\$0.80	\$2.44	\$2.18	\$0.56	\$2.20
40%	5,591,851	(2,067,176)	(\$0.37)	\$2.42	\$0.80	\$2.44	\$2.05	\$0.43	\$2.07
50%	4,659,876	\$(2,583,970)	(\$0.55)	\$2.42	\$0.80	\$2.44	\$1.86	\$0.24	\$1.89

TABLE 95 : FY 2025/26 DROUGHT SURCHARGES FOR CONSTRUCTION FLOW METER/FILLER SPOUT WATER/INTERIE

Conservation to FY 2019/20 Level	Standard Rate	Water Rate in Drought	Drought Surcharge
20%	\$4.01	(\$0.139)	\$3.873
30%	\$4.01	(\$0.238)	\$3.774
40%	\$4.01	(\$0.370)	\$3.642
50%	\$4.01	(\$0.555)	\$3.457

VICTORVILLE WATER DISTRICT
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Select Option **OPTION 2**

TABLE 96 : CURRENT VS. PROPOSED WATER RATES - TIERED RATES FOR SINGLE-FAMILY

Water Rate Schedule	Current Rates	Proposed Rates				
		FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26
Projected Increase in Rate Revenue per Financial Plan:		27% Fixed / 73% Variable	30% Fixed / 70% Variable	33% Fixed / 67% Variable	37% Fixed / 63% Variable	40% Fixed / 60% Variable
Fixed Service Charge						
Fixed Service Charges:						
3/4 inch	\$13.36	\$15.24	\$17.68	\$20.25	\$22.96	\$25.81
1 inch	\$21.09	\$23.31	\$27.04	\$30.97	\$35.12	\$39.48
1.5 inch	\$40.41	\$43.49	\$50.45	\$57.78	\$65.51	\$73.66
2 inch	\$63.60	\$67.71	\$78.54	\$89.96	\$101.99	\$114.67
3 inch	\$125.44	\$132.28	\$153.44	\$175.75	\$199.26	\$224.03
4 inch	\$195.01	\$204.93	\$237.71	\$272.27	\$308.69	\$347.06
6 inch	\$388.25	\$406.72	\$471.78	\$540.38	\$612.67	\$688.81
8 inch	\$1,083.92	\$1,133.18	\$1,314.45	\$1,505.58	\$1,706.99	\$1,919.12
10 inch	\$1,624.99	\$1,698.21	\$1,969.86	\$2,256.28	\$2,558.12	\$2,876.03
Fire Fixed Service Charges:						
3/4 inch	\$2.63	\$3.13	\$3.63	\$4.16	\$4.72	\$5.30
1 inch	\$3.20	\$4.14	\$4.67	\$5.23	\$5.83	\$6.45
1.5 inch	\$4.64	\$5.15	\$5.71	\$6.31	\$6.93	\$7.59
2 inch	\$6.37	\$6.36	\$6.96	\$7.60	\$8.26	\$8.96
3 inch	\$11.83	\$10.19	\$10.92	\$11.68	\$12.47	\$13.30
4 inch	\$21.90	\$17.26	\$18.20	\$19.19	\$20.22	\$21.30
6 inch	\$47.78	\$35.42	\$36.94	\$38.52	\$40.16	\$41.86
8 inch	\$82.30	\$59.63	\$61.91	\$64.28	\$66.74	\$69.28
10 inch	\$128.31	\$91.91	\$95.22	\$98.64	\$102.18	\$105.84
Commodity Charges for All Water Consumed (per hcf)						
Rate Per hcf of Water Consumed:						
<u>Single Family Residential*</u>						
Tier 1	\$2.35	\$1.41	\$1.02	\$0.92	\$0.81	\$0.80
Tier 2	--	\$3.58	\$2.51	\$2.47	\$2.44	\$2.44
<u>All Other Customers</u>	\$2.35	\$2.61	\$2.57	\$2.52	\$2.47	\$2.42
Flow Meter / Intertie / Well	\$3.51	\$3.56	\$3.67	\$3.78	\$3.89	\$4.01

* Tier Breakpoints shown in Table 73

VICTORVILLE WATER DISTRICT
WATER RATE STUDY
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Select Option **OPTION 2**

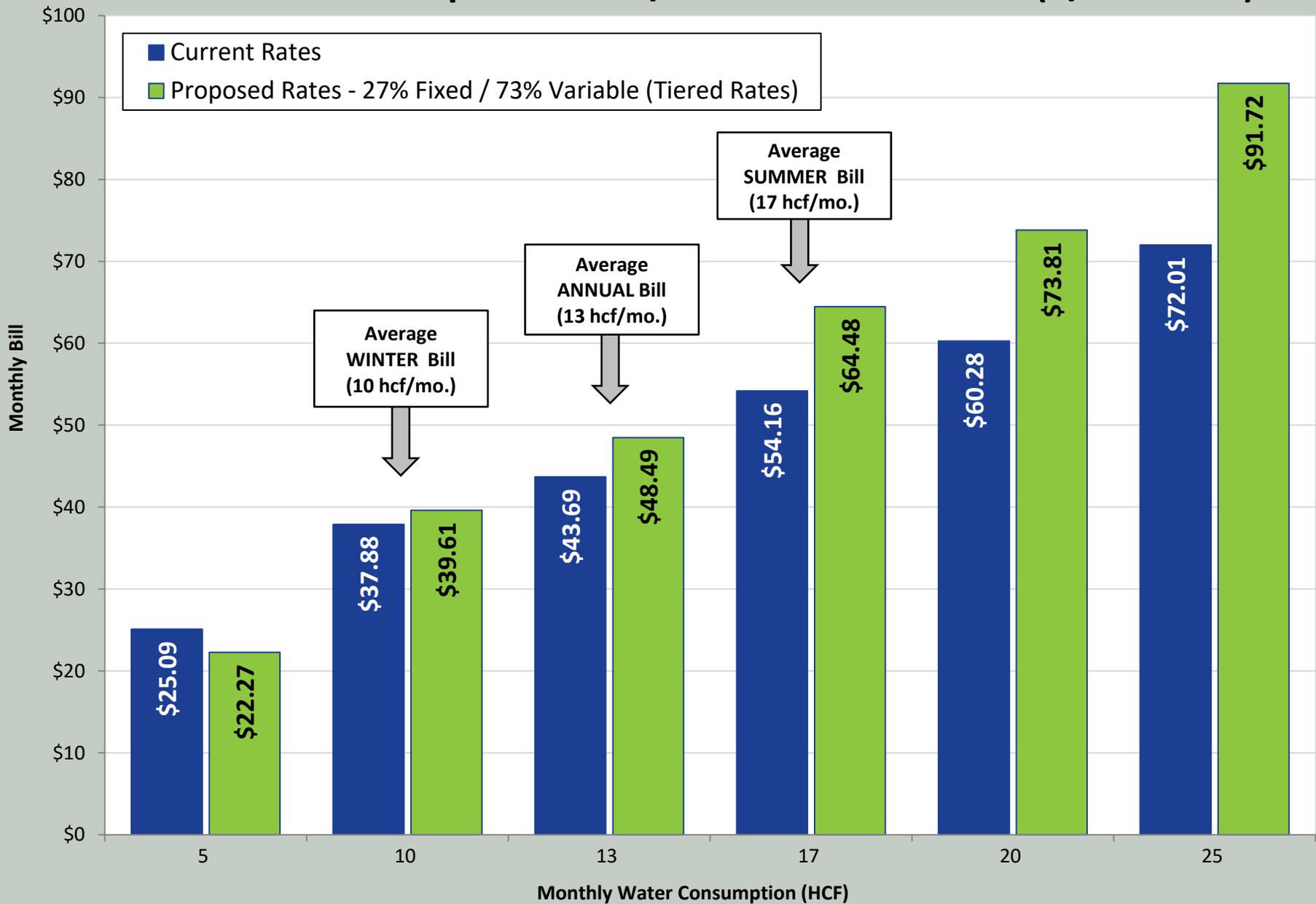
TABLE 97 : PROPOSED DROUGHT RATES

Drought Rate Schedule	Current Rates	Proposed Rates				
		FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26
<i>Increases in Rate Rev. per Financial Plan:</i>		27% Fixed / 73% Variable	30% Fixed / 70% Variable	33% Fixed / 67% Variable	37% Fixed / 63% Variable	40% Fixed / 60% Variable
Rates for Single Family Residential Tier 1 Water Consumed (per hcf)¹						
Conservation Level Compared to FY 2019/20						
20%	N.A.	\$1.45	\$1.03	<i>After year 2, revenue losses from drought reductions are offset by marginal cost reductions</i>		
30%	N.A.	\$1.48	\$1.04			
40%	N.A.	\$1.53	\$1.05			
50%	N.A.	\$1.59	\$1.07			
Rates for Single Family Residential Tier 2 Water Consumed (per hcf)¹						
Conservation Level Compared to FY 2019/20						
20%	N.A.	\$3.63	\$2.52	<i>After year 2, revenue losses from drought reductions are offset by marginal cost reductions</i>		
30%	N.A.	\$3.66	\$2.53			
40%	N.A.	\$3.70	\$2.54			
50%	N.A.	\$3.76	\$2.56			
Rates for Standard Domestic & Public Benefit Use Water Consumed (per hcf)¹						
Conservation Level Compared to FY 2019/20						
20%	N.A.	\$2.66	\$2.73	<i>After year 2, revenue losses from drought reductions are offset by marginal cost reductions</i>		
30%	N.A.	\$2.69	\$2.74			
40%	\$2.53	\$2.73	\$2.75			
45%	\$2.75	N.A.	N.A.			
50%	\$3.02	\$2.79	\$2.77			
55%	\$3.35	N.A.	N.A.			
60%	\$3.76	N.A.	N.A.			
Rates for Construction Flow Meter/Filler Spout Water/Inertie (per hcf)¹						
Conservation Level Compared to FY 2019/20						
20%	N.A.	\$3.61	\$3.68	<i>After year 2, revenue losses from drought reductions are offset by marginal cost reductions</i>		
30%	N.A.	\$3.64	\$3.69			
40%	\$3.92	\$3.69	\$3.70			
45%	\$4.27	N.A.	N.A.			
50%	\$4.69	\$3.75	\$3.72			
55%	\$5.20	N.A.	N.A.			
60%	\$5.85	N.A.	N.A.			

1. Drought surcharges will apply to all consumption, if conservation is at or above 20% from FY 2019/20 baseline consumption levels.

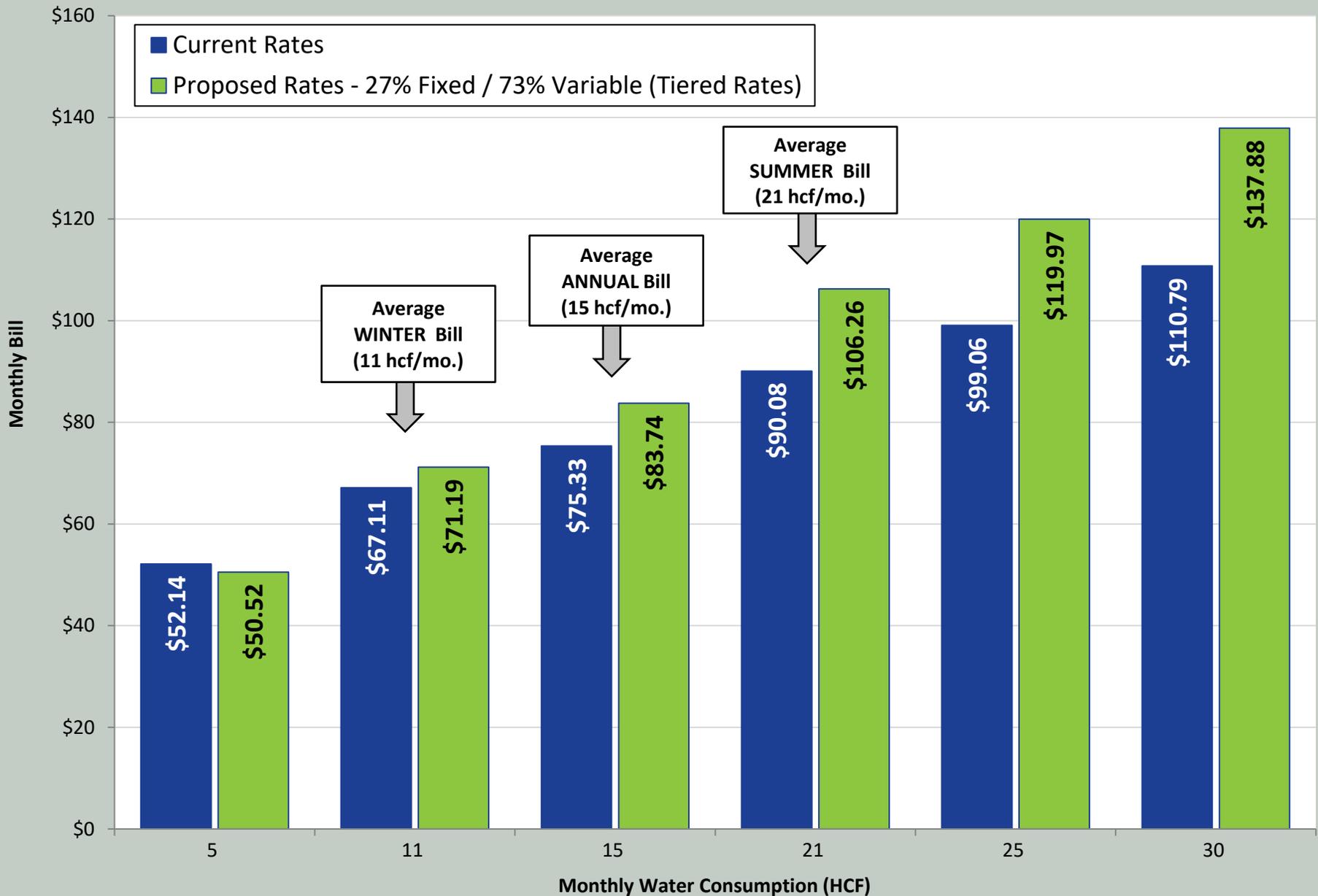
Single-Family Residential Water Bill Comparison

Current vs. Proposed 2021/22 Rate Alternatives (3/4" meter)

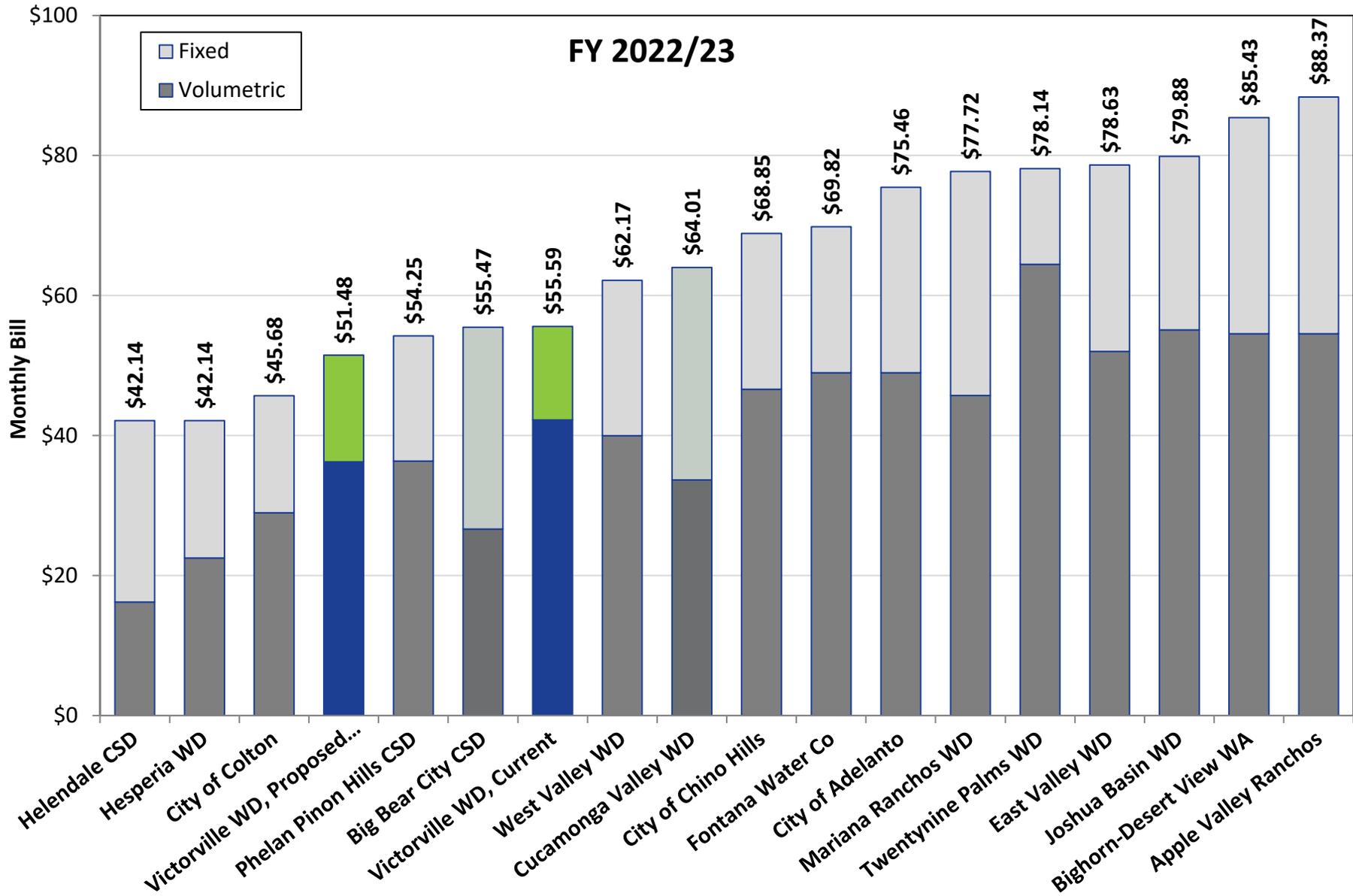


Single-Family Residential Water Bill Comparison

Current vs. Proposed 2021/22 Rate Alternatives (1" meter)



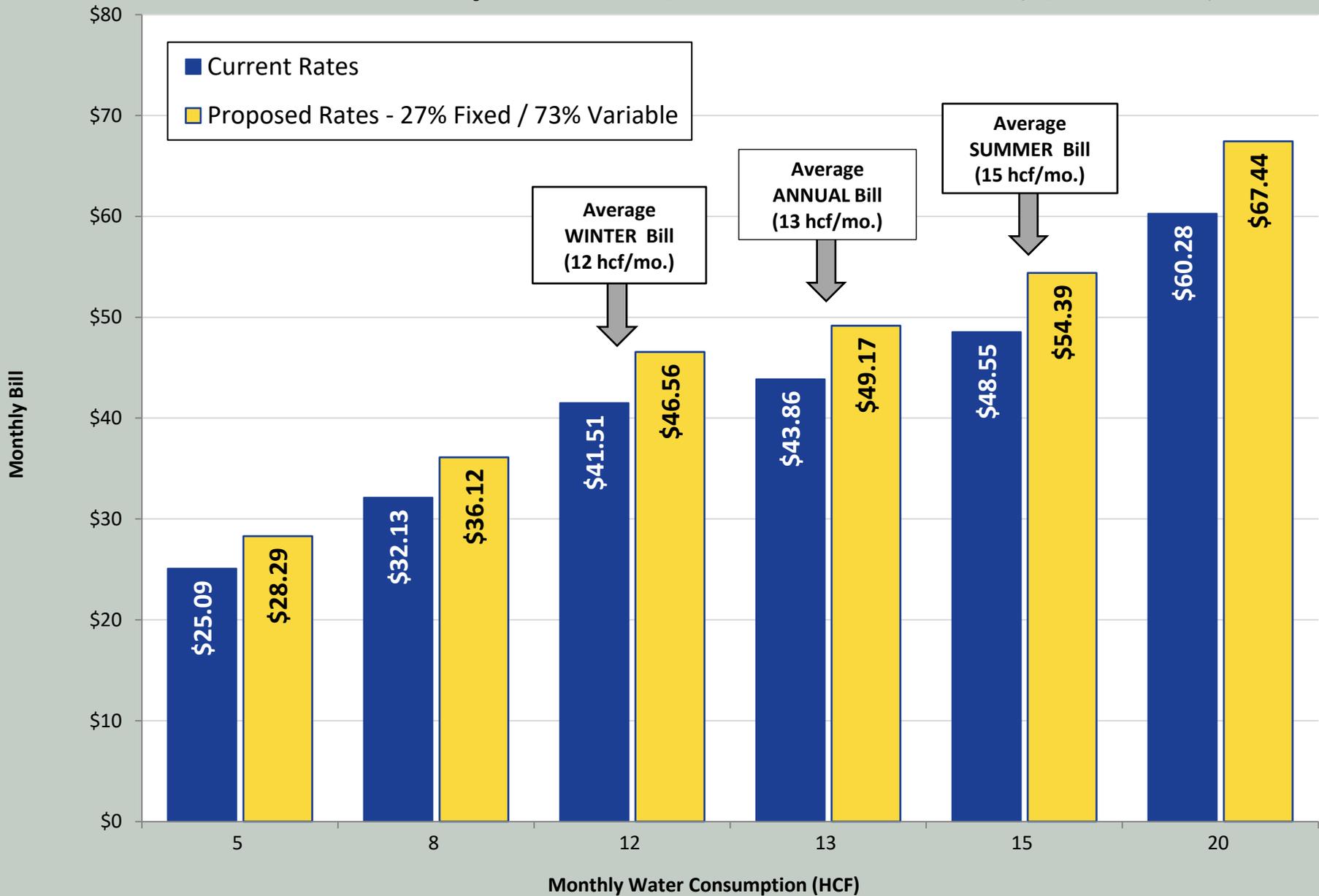
Single-Family Residential Regional Water Bill Comparison (3/4" meter, 18 hcf consumption)



*The District provided NBS with the comparative rates and NBS did not independently verify.

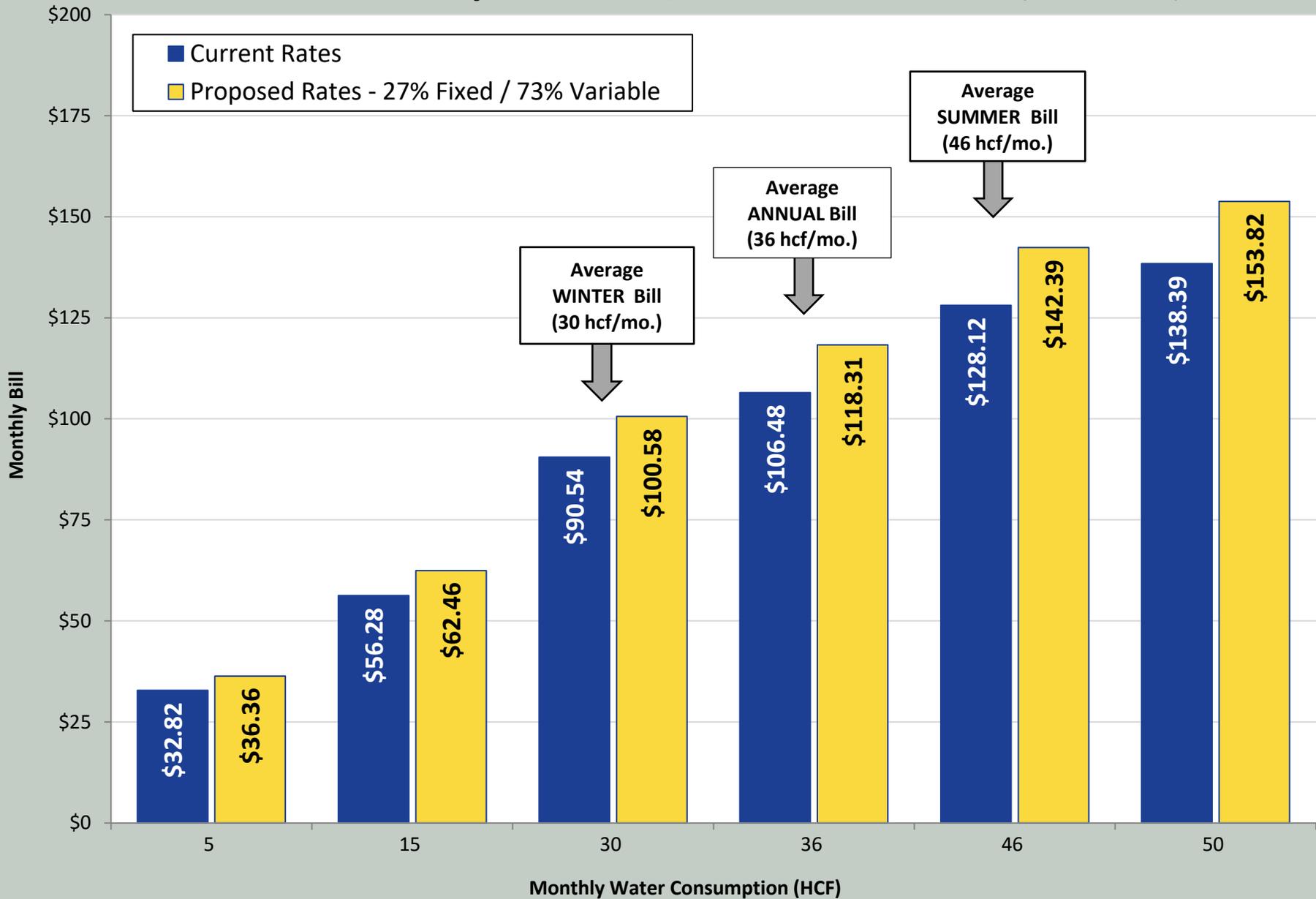
Multi-Family Water Bill Comparison

Current vs. Proposed 2021/22 Rate Alternatives (3/4" meter)



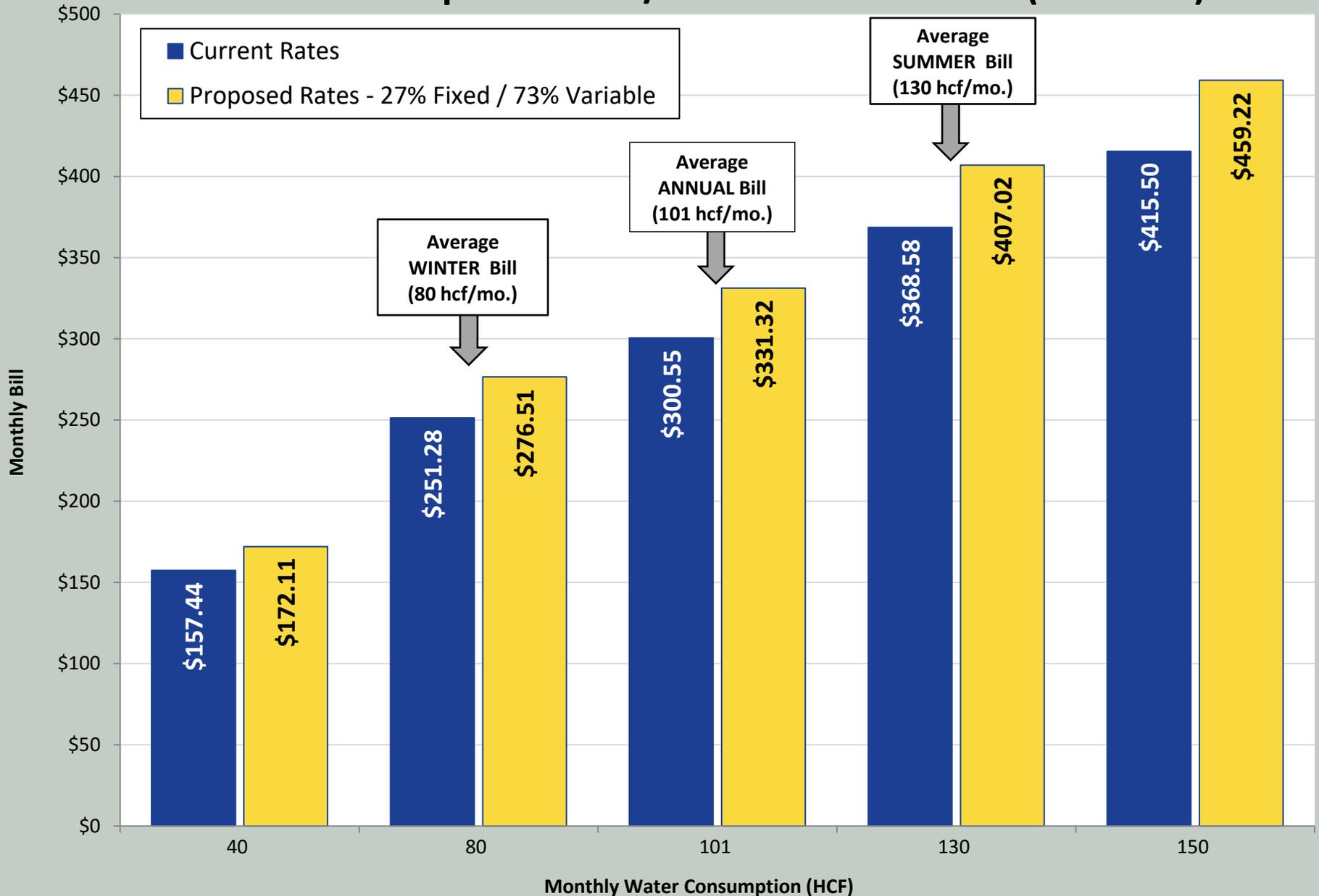
Multi-Family Water Bill Comparison

Current vs. Proposed 2021/22 Rate Alternatives (1" meter)



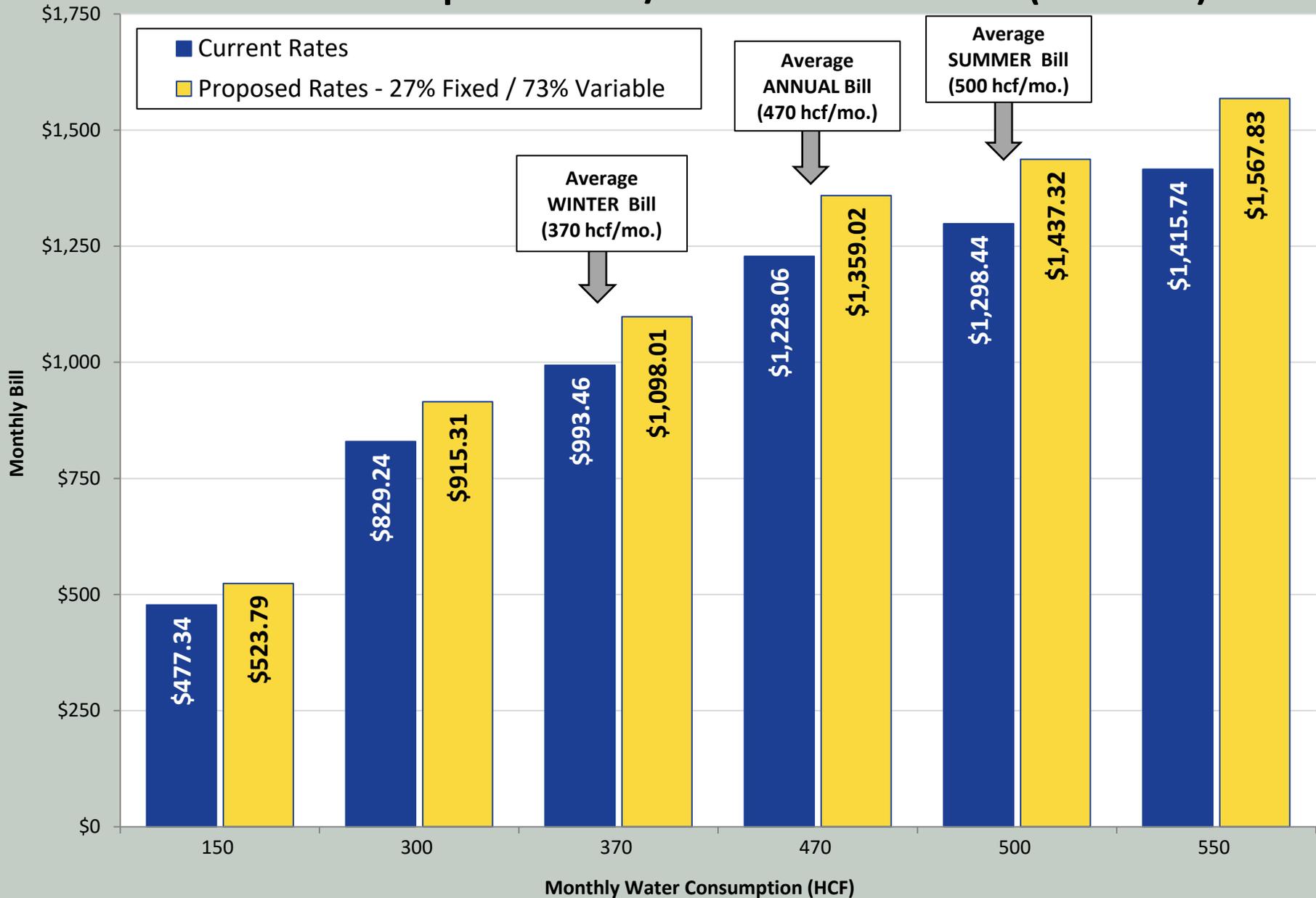
Commercial Water Bill Comparison

Current vs. Proposed 2021/22 Rate Alternatives (2" meter)



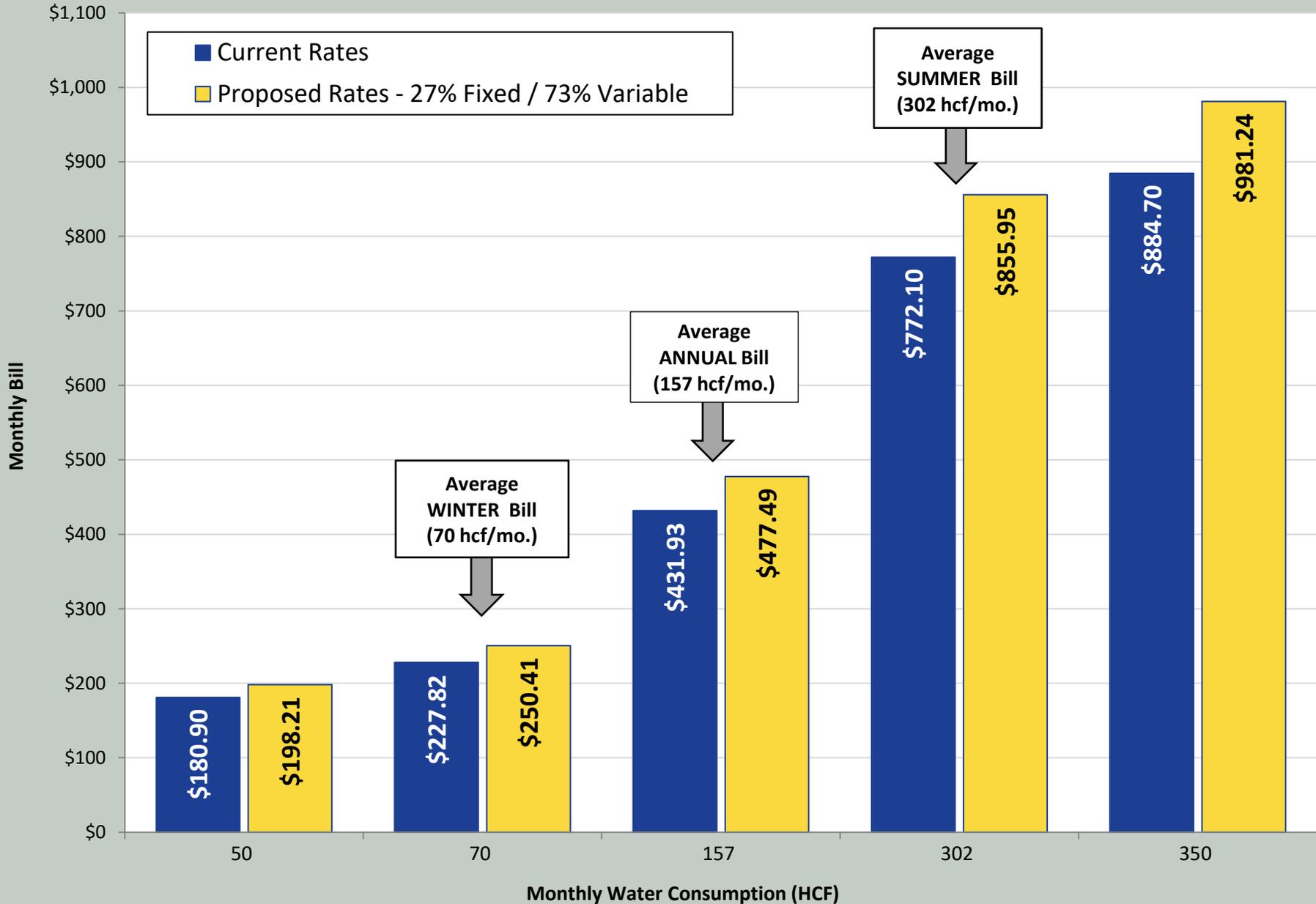
Commercial Water Bill Comparison

Current vs. Proposed 2021/22 Rate Alternatives (3" meter)



Institutional Irrigation Water Bill Comparison

Current vs. Proposed 2021/22 Rate Alternatives (2" meter)



Annual Average Single-Family Consumption Distribution Curve (FY 2019/20)

