

## PLEASANT VALLEY COUNTY WATER DISTRICT

# **Water Rate Study**

DRAFT REPORT / JUNE 5, 2023







June 8, 2023

Mr. Jared Bouchard General Manager Pleasant Valley County Water District 154 S. Las Posas Rd Camarillo, CA 93010-8570

Subject: Water Rate Study - Draft

Dear Mr. Bouchard:

Raftelis Financial Consultants, Inc. (Raftelis) is pleased to provide this Water Rate Study report for the Pleasant Valley County Water District (the District). This report explains the methodologies and rationale used to develop the financial plan and water rates, which align with the requirements of Proposition 218.

The major study objectives include the following:

- Develop a financial plan which ensures financial sufficiency, meets operational and maintenance (O&M) costs, maintains sufficient funding for capital refurbishment and replacement (R&R) needs, meets debt service requirements and bond covenant ratio.
- Conduct a cost-of-service analysis for water services.
- Develop fair and equitable water rates over a two-year period.
- Conduct a customer impact analysis for the proposed water rates.

It has been a pleasure working with you, and we thank you and District staff for the support provided during this study.

Sincerely,

Haw Tagan
Steve Gagnon, PE (AZ)

Vice President

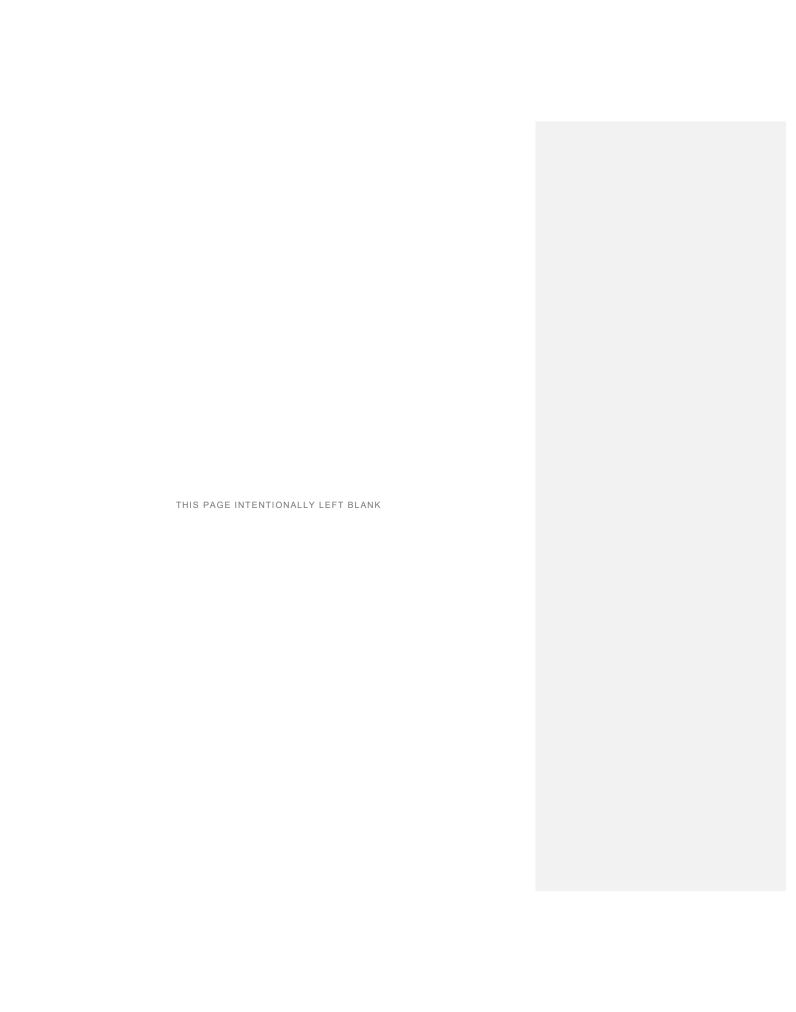
**Toby Fedder, PE** Senior Manager

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## 1. Executive Summary

### 1.1. Background

In 2022, the District engaged Raftelis to conduct a water rate study to update water rates and charges for the fiscal years ending (FYE) 2024 – FYE 2025. This water rate study includes a financial plan which compares projected revenue to expenses.

The major study objectives were to:

- Develop a financial plan for the water enterprise to ensure revenues are sufficient to cover costs and
  create a financially healthy utility. This means revenue must meet operational and maintenance
  (O&M) costs, maintain sufficient funding for capital refurbishment and replacement (R&R) needs,
  and anticipated legal costs regarding groundwater litigation.
- Conduct a cost-of-service analysis for water services; and
- Develop fair and equitable water rates for FYE 2024 through FYE 2025.

## 1.2. Process and Approach

The study is informed by the District's financial policy objectives, the current water rates, and the legal requirements in California (namely, Proposition 218). The cost-of-service analysis and rate design follows four key steps, outlined below, to derive proposed rates that fulfill the District's policy objectives, meet industry standards, and align with Proposition 218.

#### 1.2.1. Step 1: Financial Plan and Revenue Requirement Calculation

We begin by developing a multi-year financial plan, which is used to determine the revenue adjustments and the revenue requirement for the base year, also known as the test year or rate-setting year. The base year for this study is FYE 2024 (July 1, 2023 to June 30, 2024). The revenue requirement should sufficiently fund the utility's O&M costs, capital project expenses, and reserve funding.

#### 1.2.2. Step 2: Cost of Service Analysis

The annual cost of providing the utility service, or the revenue requirement, is normally distributed to customer classes using a cost-of-service analysis. The District's cost-of-service analysis is simplified because it has only one class of customers – agricultural. Since all customers are the same it is reasonable to charge them the same rate or charge.

#### 1.2.3. Step 3: Rate Design and Calculation

The rate design step calculates rates that recover the total cost to serve water. The District currently has a volumetric rate which recovers all costs. This study proposes to add a fixed charge which recovers customer billing costs, meter maintenance costs, United Water Conservation District fixed wholesale water charges and a portion of fixed costs (sometimes known as ready to serve costs) that do not vary with water sales.

#### 1.2.4. Step 4: Report Preparation and Rate Adoption

The final step in a rate study is to develop the report in preparation for the rate adoption process. The report documents the rate study results and presents the methodologies, rationale and calculations utilized to derive

the proposed rates. A thorough and methodical report serves three important functions: fully deriving the rates, showing the nexus to costs, and communicating the rate adoption process to customers and other important stakeholders.

# **1.3. Recommended Revenue Adjustments and Financial Plan**

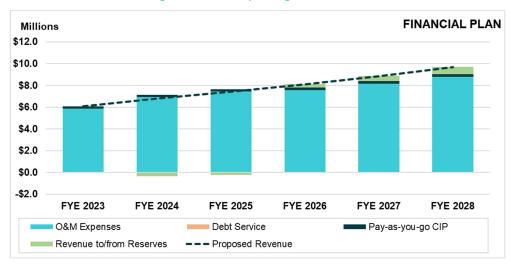
Raftelis prepared a financial model which projected revenue and expenses to assess whether revenue increases were needed to cover projected costs. Projected costs included operating costs such as salaries, supplies, equipment, and wholesale water purchase costs as well as capital expenses. Wholesale water purchase costs makeup over 80% of the District's expenses. This financial model was used to suggest revenue increases to cover costs. The proposed revenue increases are shown in **Error! Reference source not found.**. The FYE 2024 revenue adjustments would be implemented on July 1, 2024, contingent upon the Board approval of the rates after a public hearing.

**Table 1-1: Proposed Revenue Adjustments** 

	FYE 2024	FYE 2025
Revenue Increase	9.75%	9.75%

#### 1.3.1. Proposed Financial Plan

Error! Reference source not found. presents the District's proposed financial plan, that is, it shows a graph of expenses (shown as the bars) and revenue (shown as the lines). The stacked bars are the District's expenses. If the green portion of the bar (which is the yearly surplus or deficit) is below the x-axis (below zero), it signifies whether the District is projected to use reserves or replenish reserves. As shown the District is projected to use reserves in the near term and replenish reserves in the last three years. Note that the financial plan shows six years, however the District is implementing rates for the next two fiscal years at this time and will reevaluate the financial plan in the future.



**Figure 1-1: Water Operating Financial Plan** 

Error! Reference source not found. illustrates the ending reserve balances and target balances for FYE 2023 – FYE 2028. As shown, it is projected that reserves will decline (if expenses are as projected) initially and increase in the final three years shown. The lower reserve target (red line) is equal to 25% of annual operating revenues. The higher reserve target (green line) includes the operating reserve and adds a capital reserve target (5% of asset value) and a rate stabilization reserve (10% of O&M). All utilities have an operating reserve target, and many utilities have a capital reserve. Rate stabilization reserves are less common but with droughts becoming more common, many agencies are expressing interest in rate stabilization reserves to mitigate lost revenue during a drought.

**ENDING CASH BALANCE** Millions \$4.0 \$3.5 \$2.8 M \$3.0 \$2.5 \$2.1 M \$1.9 M \$2.0 \$1.3 M \$1.5 \$1.0 \$0.5 \$0.0 **FYE 2023 FYE 2024 FYE 2025** FYE 2026 **FYE 2027 FYE 2028** Operating Reserve Target Alert Balance Ending Cash Balance --- Total Reserve Target

Figure 1-2: Estimated Water Ending Fund Balances

Figure 1-3 illustrates the District's scheduled capital improvement project expenses. The District anticipates funding capital projects in the study period with rate-based revenues (i.e., pay-as-you-go).

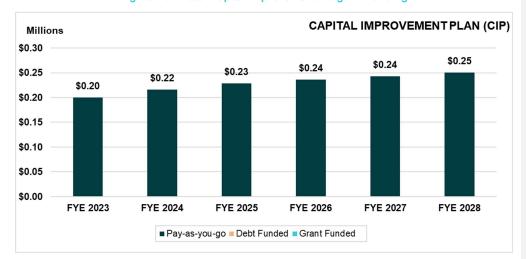


Figure 1-3: Water Capital Improvement Program Funding

### 1.3.2. Proposed Water Rates

Table 1-2: Current and Proposed Water Rates and Charges

shows the current and proposed volumetrics rates and fixed charges. Rates for FYE 2024 include the adoption of new fixed charges as shown. The fixed charge recovers fixed water purchase costs from United Water Conservation District as well as customer billing and meter reading costs. FYE 2024 rates are set based on a cost-of-service analysis and FYE 2025 rates are increased by the percentages shown in **Error! Reference source not found.**.

**Table 1-2: Current and Proposed Water Rates and Charges** 

Rate (\$ / AF) and Monthly Fixed Charge	Current Vol Rate	FYE 2024	FYE 2025
Volumetric Rate (\$ / AF) Monthly Fixed Charge	\$355.00	\$360.18	\$395.30
	NA	\$360.18	\$395.30

## 2. Financial Plan Assumptions

## 2.1. Financial Plan Information

Raftelis and District staff reviewed projected revenues, operating expenses, and capital expenditures over the study period. The financial plan is a comprehensive spreadsheet model of the District's revenues, O&M expenses, capital expenditures, and reserves for the study period (FYE 2024 to FYE 2028).

This study utilized the following financial documents:

- Operating Budget for Fiscal Year (FYE) 2023
- Reserve Policy
- Capital Improvement Plan (projected capital expenses)
- Updated water supply costs
- · Projections of legal costs

### 2.2. Inflationary Factors Used to Project Expenses

The study period is from Fiscal Year (FYE) 2023 to 2028. Table 2-1: Assumed Cost Escalation Factors

shows the inflationary factors used to project future expenses by inflating the FYE 2023 budget.

**Table 2-1: Assumed Cost Escalation Factors** 

Inflationary Factor	FYE 2024	FYE 2025	FYE 2026	FYE 2027	FYE 2028
General	7.0%	5.0%	3.0%	3.0%	3.0%
Personnel	5.0%	3.0%	3.0%	3.0%	3.0%
Equipment	7.0%	5.0%	3.0%	3.0%	3.0%
Water Costs <sup>1</sup>	9.5%	9.5%	9.5%	9.5%	9.5%
Utilities	2.4%	2.4%	2.4%	2.4%	2.4%
Capital Projects	8.0%	6.0%	3.0%	3.0%	3.0%

<sup>&</sup>lt;sup>1</sup>Historical average increase of United Water Zone A and B from 2014 to 2023, and two years projected increases for 2024 and 2025

### 2.3. Non-Rate Revenue Projections

The District receives revenue from non-rate sources such as property tax and interest earned on cash balances which totals about \$450,000 in FYE 2024. Table 2-2: Escalatory Factors for Non-rate Revenue

shows the escalatory factors used to project non-rate revenue.

**Table 2-2: Escalatory Factors for Non-rate Revenue** 

Revenue Escalation	FYE 2024	FYE 2025	FYE 2026	FYE 2027	FYE 2028
Property Tax Revenue	2.0%	2.0%	2.0%	2.0%	2.0%
Late Charges	0.5%	0.5%	0.5%	0.5%	0.5%
Interest earned on cash balances	1.0%	1.0%	1.0%	1.0%	1.0%
Other Income	1.0%	1.0%	1.0%	1.0%	1.0%

## 2.4. Reserve Policy

The District provided a financial reserve policy and the Board provided guidance on reserve targets. Table 2-3 presents the reserves targets which informed the revenue adjustments proposed in Table 3-1. The reserve targets are shown in **Error! Reference source not found.**, Figure 3-1 and Figure 3-4.

**Table 2-3: Reserve Targets** 

		FYE 2024 Target
Reserve Policies	Target	(\$)
Operating Reserve	25% of annual O&M	\$1,732,075
Captial Reserve	5% of asset Value	\$692,830
Rate Stabilization Reserve	10% of annual O&M	\$458,100
		\$2,883,004

## 2.5. Billed Water Use

The district bills its customers for water use in acre-feet (AF). Based upon waster use provided by the District, the rates proposed in this study assume approximately 16,300 AF/yr.

## 3. Water Financial Plan

This section discusses the financial plan which includes projected revenues, O&M expenses, and revenue adjustments to ensure the fiscal sustainability and solvency of the District. The financial plan is shown in Table 3-2: Proposed Financial Plan

. Section 3.1 discusses the financial health of the district in absence of revenue increases.

### 3.1. Status Quo Financial Plan

Figure 3-1 reflects the projected ending cash balances keeping the District's current rates over the same time period as the study period. The figure incorporates the expenses as described in the subsequent sections. Under the "status-quo" scenario, revenues generated from current rates and other miscellaneous revenues are inadequate to sufficiently recover operating and capital expenses, as shown by decreasing fund balances.

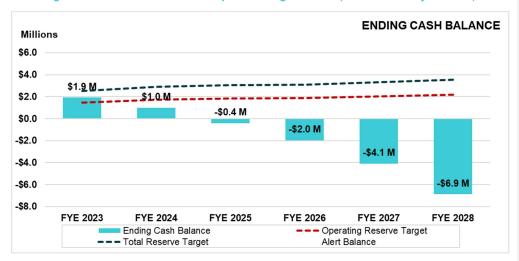


Figure 3-1: Status Quo Water Enterprise Ending Balances (No Revenue Adjustments)

### 3.2. Proposed Financial Plan

Table 3-2: Proposed Financial Plan

shows the proposed financial plan. We will describe each line in the proposed financial plan. The proposed financial plan incorporates the proposed revenue adjustments shown in Table 3-1.

#### 3.2.1. Rate Revenue

#### Line 2 of Table 3-2: Proposed Financial Plan

shows current revenue assuming no revenue increases (no rate increase). It is derived by multiplying the current rates of \$355/ AF by the estimated water use. Lines 6 through 11 show the additional revenue from the proposed rate increases with the total from each revenue adjustment shown in line 12. Table 3-1 shows revenue adjustments up to FYE 2028, *however the District is setting rates for FYE 2024 and FYE 2025*. It will reevaluate the revenue adjustments for FYE 2026 through 2028 in the future as there are many unknowns that can affect expenses. The revenue adjustments are also shown in Table 3-2 in lines 6 through 11.

**Table 3-1: Proposed Revenue Adjustments** 

	FYE 2024	FYE 2025	FYE 2026	FYE 2027	FYE 2028
Revenue Increase	9.75%	9.75%	9.75%	9.75%	9.75%

#### 3.2.2. Non-Rate Revenues

Lines 14 through 17 show the District's other revenue streams. This revenue was estimated by escalating FYE 2023 budgetary values by the factors described in Table 2-2: Escalatory Factors for Non-rate Revenue

. Interest income was estimated based on the average cash balances for each fiscal year, earning the interest rate shown in Table 2-2: Escalatory Factors for Non-rate Revenue

#### 3.2.3. Operating Expenses

#### 3.2.3.1. Water Operating Expenses

Lines 22 and 23 show general operating costs which were escalated, from the FYE 2023 budget, using inflation factors from Table 2-1: Assumed Cost Escalation Factors

. Raftelis worked closely with District staff to identify any non-recurring costs and other anticipated expenses for the study period.

#### 3.2.3.2. Water Supply Costs

The District has six sources of water. It obtains most of its water from United Water Conservation District (UWCD) and Conejo Creek water from Camrosa Water District. Line 24 shows the estimated water purchase costs. UWCD recently raised their wholesale groundwater rates by 35% for Zone A and 111% for Zone B. The estimated water purchased costs, shown in line 24, reflect these recent increases. Line 25 shows fixed charges from UWCD. The water purchase costs are escalated using the inflation factors shown in Table 2-1: Assumed Cost Escalation Factors

, which are based on historical increases.

### 3.2.3.3. Projected Capital Improvement Projects

Line 38 of Table 3-2 shows the estimated yearly capital expenses. Capital expenses are also shown graphically in Figure 3-2. The capital budget for FYE 2023 is inflated by the capital inflation factor shown in Table 2-1: Assumed Cost Escalation Factors

. The District plans to fund projects on a pay-as-you-go basis from current revenues.

**Table 3-2: Proposed Financial Plan** 

Line	Description	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027	FYE 2028
1	REVENUE						
2	Rate Revenue	\$5,638,049	\$5,786,855	\$5,786,855	\$5,786,855	\$5,786,855	\$5,786,855
3	Proposed Revenue Adjustments						
4	Revenue Months Months						
5	Fiscal Year Adjustment Effective Effective						
6	FYE 2024 9.75% July 12		\$564,218	\$564,218	\$564,218	\$564,218	\$564,218
7	FYE 2025 9.75% July 12			\$619,230	\$619,230	\$619,230	\$619,230
8	FYE 2026 9.75% July 12				\$679,605	\$679,605	\$679,605
9	FYE 2027 9.75% July 12					\$745,866	\$745,866
10	FYE 2028 9.75% July 12						\$818,588
11	FYE 2029 9.75% July 12						
12	Total Revenue Adjustments	\$0	\$564,218	\$1,183,448	\$1,863,053	\$2,608,919	\$3,427,506
13	Other Revenue						
14	Property tax revenue	\$400,000	\$408,000	\$416,160	\$424,483	\$432,973	\$441,632
15	Late charges	\$20,000	\$20,100	\$20,201	\$20,302	\$20,403	\$20,505
16	Interest income	\$5,000	\$5,050	\$5,101	\$5,152	\$5,203	\$5,255
17	Other income	\$10,000	\$10,100	\$10,201	\$10,303	\$10,406	\$10,510
18	Subtotal Non-Rate Revenue	\$435,000	\$443,250	\$451,662	\$460,239	\$468,985	\$477,902
19							
20	TOTAL REVENUE	\$6,073,049	\$6,794,323	\$7,421,965	\$8,110,147	\$8,864,758	\$9,692,264
21	O&M EXPENSES						
22	General Operations	\$570,370	\$598,889	\$616,855	\$635,361	\$654,422	\$674,054
23	Finance and Admin	\$336,400	\$618,874	\$624,629	\$228,322	\$235,125	\$242,130
24	Water Costs	\$4,562,549	\$5,398,536	\$5,843,161	\$6,326,068	\$6,853,130	\$7,428,503
25	United Water CD Fixed Charges	\$387,060	\$312,000	\$341,674	\$374,171	\$409,758	\$448,730
26	TOTAL O&M EXPENSES	\$5,856,379	\$6,928,298	\$7,426,320	\$7,563,922	\$8,152,434	\$8,793,418
27							
28	NET REVENUE BEFORE DEBT and CAPITAL	\$216,671	(\$133,975)	(\$4,355)	\$546,225	\$712,324	\$898,846
29	CIP EXPENDITURES						
38	Pay-as-you-go	\$200,000	\$216,000	\$228,960	\$235,829	\$242,904	\$250,191
39	TOTAL CIP EXPENDITURES	\$200,000	\$216,000	\$228,960	\$235,829	\$242,904	\$250,191
40							
41	NET CASH FLOW	\$16,671	(\$349,975)	(\$233,315)	\$310,396	\$469,421	\$648,656



Figure 3-2: Projected Capital Expenditures

Figure 3-3 and

Figure 3-4 shows the project ending reserve balances. As shown, it is expected that reserves will be drawn down in the near term and recover to surpass the operating reserve target by FYE 2028. Figure 3-4 show the District's financial plan and reserve balances in graphical format. The figures were derived using the revenues and expenses in Table 3-2. Figure 3-3 the District is expected to use reserves in the near term (as shown by the green areas below the x-axis) and build reserves after FYE 2025.

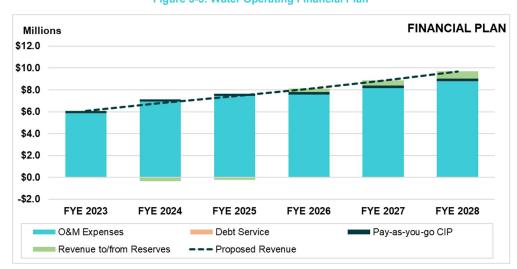
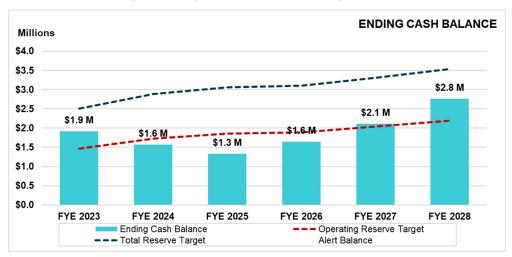


Figure 3-3: Water Operating Financial Plan

Figure 3-4 shows the project ending reserve balances. As shown, it is expected that reserves will be drawn down in the near term and recover to surpass the operating reserve target by FYE 2028.

Figure 3-4: Projected Water Reserve Ending Balances



## 4. Rate Design

### 4.1. Revenue Required from Rates

Table 4-1: Revenue Required from Rates show the total revenue required from rates in line 17, column D. It is broken into a fixed component and a volumetric component as shown in columns B and C. Note that the total revenue requirement in line 17 of column D is the same as the sum of lines 2 and 12 in Table 3-2: Proposed Financial Plan

for FYE 2024.

Line 7, column B, is the sum of operating expenses and capital projects. Line 2, column C shows that a portion of fixed O&M costs are allocated to (or recovered from) the fixed charge. The fixed charge also includes billing and meter reading costs (line 3) and UWCD fixed charges (line 4). The total fixed revenue requirement is shown in line 7, column C.

Line 10 shows revenue offsets, which lowers the volumetric rate. The total revenue offset is the sum of non-rate revenue shown in line 18 of Table 3-2: Proposed Financial Plan

for FYE 2024. Line 14 shows an adjustment for the cash balance which is subtracted. The total revenue required from rates is line 7, plus line 11, less line 15. Line 17 shows the total costs (revenue requirement) for the volumetric rate and the fixed charge. Dividing by either water use or the number of customers (in line 20), yields the volumetric rate and fixed charge shown in lines 22 and 23, respectively.

**Table 4-1: Revenue Required from Rates** 

Line No.	Revenue Requirement	Volumetric Revenue Requirement	Fixed Revenue Requirement	Total Revenue Requirement
	(A)	(B)	(C)	(D)
1	Revenue Requirements			
2	O&M Expenses	\$6,448,533	\$100,265	
3	Billing and Meter Reading		\$67,500	
4	United Water Fixed Charges		\$312,000	
5	Debt Service	\$0		
6	PAYGO Capital Projects	\$216,000		
7	Subtotal - Revenue Requirements	\$6,664,533	\$479,765	\$7,144,298
8				
9	Revenue Offsets			
10	Other Operating Revenue	(\$443,250)	\$0	
11	Subtotal - Revenue Offsets	(\$443,250)	\$0	
12				
13	Adjustments			
14	Adjustment for Cash Balance	\$349,975		_
15	Subtotal - Adjustments	\$349,975	\$0	
16				
17	Total - Revenue Required from Rates	\$5,871,308	\$479,765	\$6,351,073
18		-	-	
19		Use (AF)	# of Customers	
20	Water Use	16,301	111	
21				
22	Water Rate (\$ / AF)	\$360.18		_
23	Fixed Charge per Month	-	\$360.18	=

### 4.2. Two Year Recommended Rates

The District is proposing rates for the next two fiscal years though the report shows the financial plan out to FYE 2028. This is due to the uncertainty in wholesale water prices amongst other operating expenses. The District will reevaluate the financial plan and rates in the future. Table 4-2: Recommended 2-year Volumetric Rates and Charges

presents the recommended rates. The rate and charge for FYE 2024 were derived in Section 4.1 and the rate for FYE 2025 is escalated by the revenue adjustment (9.75%) shown in Table 3-1:

Proposed Revenue Adjustments

Table 4-2: Recommended 2-year Volumetric Rates and Charges

Volumetrict Rate (\$ / AF) and	Current Vol		
Monthly Fixed Charge	Rate	FYE 2024	FYE 2025
Volumetric Rate (\$ / AF)	\$355.00	\$360.18	\$395.30
Monthly Fixed Charge	NA	\$360.18	\$395.30

# **5. Customer Impact Analysis**

Table 5-1 shows the bill impacts for customers using various amounts of water each month. The data provided by the District shows that the average monthly use is approximately 12-acre feet.

Table 5-1: Customer Bill Impact for Various Water Use

Monthly Bill Impacts						
		Proposed				
Water use (AF)	Current Charge	Charge	\$ Difference	% Difference		
6	\$2,130	\$2,521	\$391	18.4%		
12	\$4,260	\$4,682	\$422	9.9%		
18	\$6,390	\$6,843	\$453	7.1%		
24	\$8,520	\$9,005	\$485	5.7%		