Final Report



West Slope Water District Water Rate Study December 2024

FC

December 10, 2024

Mr. Michael Grimm General Manger West Slope Water District 3105 SW 89th Ave Portland OR 97225

Subject: 2024 Water Rate Study Final Report

Dear Mr. Grimm:

HDR Engineering, Inc. is pleased to present the final report for the water rate study conducted for West Slope Water District. The water rate study objectives were to provide an independent review of West Slope Water District's water utility and develop a rate transition plan that will result in sufficient revenue to fund the operating and capital needs of the water utility. Of particular importance for West Slope Water District's water rate study was the incorporation of the Water Master Plan capital improvement projects. Additionally, the water rate study reviewed the proportionality of the water rates for the different types of customers (e.g., rate schedules). This report outlines the approach, methodology, findings, and conclusions resulting from the comprehensive rate study process.

This report utilized West Slope Water District's accounting, budgeting, operating, and historical customer billing records. HDR has relied on this information to develop the water rate study that informs our findings, conclusions, and recommendations. At the same time, the water rate study was developed utilizing generally accepted water rate setting principles as outlined in the American Water Works Association (AWWA) M1 Manual <u>Principles of Water Rates, Fees, and Charges</u>. The conclusions and recommendations contained within this report are intended to provide the District with cost-based water rates that are set at a sufficient level to cover operating and capital expenses.

We appreciate the assistance provided by the West Slope Water District staff, management, and Board of Directors in the development of the water rate study.

Sincerely yours, HDR Engineering, Inc.

Josiah Close Utility Rates Project Manager **Table of Contents**

Executive Summary

1	Rate	Setting Principles	7
	1.1	Organization of the Study	. 7
	1.2	Study Goals and Objectives	. 7
	1.3	Overview of the Rate Study Process	. 8
	1.4	Determining the Revenue Requirement	. 8
	1.5	Analyzing Cost of Service	. 9
	1.6	Designing Water Rates	10
	1.7	Economic Theory and Rate Setting	10
	1.8	Summary	11
2	Reve	nue Requirement Analysis	12
	2.1	Determining the Water Utility Revenue Requirement	12
	2.2	Establishing a Time Frame and Approach	12
	2.3	Projection of Revenues	13
	2.4	Projection of Operations and Maintenance Expenses	13
	2.5	Capital Improvement Projects	14
		2.5.1 Rate Funded Capital	15
		2.5.2 Reserve Funding	15
		2.5.3 Long Term Debt	15
	2.6	Projection of Debt Service	17
	2.7	Summary of the Revenue Requirement	17
	2.8	Review of Reserve Levels	18
	2.9	Debt Service Coverage Ratio (DSC)	19
	2.10	Water Revenue Requirement Recommendations	20
3	Cost	of Service Analysis	21
	3.1	Objectives of a Cost of Service Study	21
	3.2	Determining the Customer Classes of Service	22
	3.3	General Cost of Service Procedures	22
		3.3.1 Functionalization of Costs	22
		3.3.2 Allocation of Costs	22
		3.3.3 Development of Distribution Factors	23
	3.4	Functionalization and Allocation of Operating Expenses	24
	3.5	Major Assumptions of the Cost of Service Study	24

1

	3.6	Summary of the Cost of Service Results	. 25
	3.7	Consultant's Conclusions and Recommendations	. 25
4	Rate	Design Analysis	26
	4.1	Rate Design Goals and Objectives	. 26
		4.1.1 Present and Proposed Water Rates	. 26
	4.2	Summary of the Water Rate Study	. 30

Technical Appendix

Executive Summary

HDR Engineering, Inc. (HDR) was retained by the West Slope Water District (District) to perform a water rate study (Study). The development of the Study examines the overall adequacy and proportionality of the existing water rates, provides the cost basis for needed rate revenue adjustments, and seeks to sufficiently fund the operating and capital needs of the District's water utility. An import component in the assessment of the District's capital improvement needs was met through the Water Master Plan (Master Plan) that was completed in parallel with the Study. This report describes the methodology, findings, and conclusions of the water rate study.

ES-1 Overview of the Rate Study Process

A comprehensive water rate study uses three interrelated analyses to address the adequacy and proportionality of the District's water rates. These three analyses are a revenue requirement analysis, a cost of service analysis, and a rate design analysis. These three analyses are illustrated below in Figure ES - 1.



For the District's Study, HDR conducted each of analyses shown in Figure ES -1 for the water utility. The results from each analysis were used as the basis for establishing cost-based and proportional water rates for the District's customers.

ES-2 Key Rate Study Results

The water utility was evaluated on a stand-alone basis. By reviewing the water utility on a standalone basis, the District is able to determine the actual costs incurred to provide water service to its customers. Based on the technical analysis undertaken as part of the Study, the following findings, conclusions, and recommendations were noted.

- A Revenue requirement analysis was developed on a stand-alone basis for FY 2024 to FY 2034
- The starting point for the revenue requirement analysis was the FY 2024 and FY 2025 adopted budgets as well as the District's capital improvement plan
 - ✓ Major capital projects from the District's Master Plan were included
- A rate transition plan was developed to adequately fund the operating and capital needs of the water utility as well as strengthen key financial metrics
- A cost of service analysis was developed for the water utility to determine the appropriate level of revenue to collect from each customer class of service (Residential, Multi-Family, Commercial)
 - ✓ Cost of service differences will be addressed through the proposed water rates
- Proposed water rates were developed for a 5-year period (FY 2026 FY 2030) to provide the District Board with a projection of water rates necessary to meet future operating and capital needs as well as meeting key financial metrics
- The proposed rate adjustments are necessary to adequately fund the District's water utility and maintain prudent financial measures
- By FY 2028, the District should update the Study to review the need for future rate adjustments to reflect system and customer characteristics and assumptions at that time

ES-3 Revenue Requirement Analysis

In general terms, a water rate study evaluates the overall adequacy and proportionality of the existing water rates. As mentioned above, the District's water utility was evaluated on a standalone basis. That is, no funding sources other than those generated by the water utility - such as water sales and other water-related fees and revenues - were used to fund water utility expenses.

The starting point of the revenue requirement analysis was the adopted FY 2024 and FY 2025 budgets. HDR developed a projection of revenues and expenses for future years based on estimated escalation (inflationary) factors. The Study was developed for the period of FY 2025 through FY 2034 to review future rate needs based on planned operating and capital needs. For establishing the City's proposed water rates, the focus was on the next five-year period (FY 2026 through FY 2030).

The revenue requirement analysis sums the utility's annual operating and capital expenses and compares that to the total water revenues to determine if a balance or deficiency of revenues exists, and then subsequently what the overall rate adjustment required may be. The rate transition plan developed for the water utility was also based on meeting financial targets which should be maintained as part of a financially healthy utility. Provided below in Table ES - 1 is a summary of the water revenue requirement analysis for the District.

Summary of the Water Revenue Requirements (\$000s)						
	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Revenues						
Rate Revenue	\$5,258	\$5,285	\$5,311	\$5,338	\$5,364	\$5,391
Miscellaneous Revenue	153	153	151	138	129	130
Total Revenues	\$5,412	\$5 <i>,</i> 438	\$5,463	\$5 <i>,</i> 476	\$5 <i>,</i> 494	\$5,521
Expenses						
Total O&M Expenses						
Purchased Water	\$1,345	\$1,367	\$1,671	\$2,033	\$2,338	\$2,502
All Other O&M	2,346	2,430	2,507	2,586	2,666	2,748
Net Debt Service	336	347	345	427	471	471
Rate Funded Capital	1,385	1,550	1,535	1,535	1,500	1,400
Reserve Funding	(1)	9	(50)	(264)	(325)	(111)
Total Expenses	\$5,412	\$5,702	\$6,007	\$6,317	\$6,650	\$7,011
Bal. / (Def.) of Funds	\$0	(\$264)	(\$544)	(\$841)	(\$1,156)	(\$1,490)
Balance as % of Rev from Rates	0.0%	5.0%	10.3%	15.8%	21.6%	27.6%
Proposed Rate Adjustment	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Add'l Revenue with Rate Adj. Bal. / (Def.) After Rate Adj.	\$0 (\$0)	\$264 \$0	\$544 \$0	\$841 (\$0)	\$1,156 (\$0)	\$1,490 \$0

Table ES – 1 ary of the Water Revenue Requirements (\$0

Based on the water revenue requirement analysis shown in Table ES - 1, HDR recommends the District increase the overall revenue levels of the water utility annually by 5.0% in FY 2026 through FY 2030. The deficit in FY 2026 - prior to any proposed rate adjustments - is \$264,000 which increases to \$1.5 million by FY 2030. The rate adjustments are necessary primarily to fund capital improvement projects, cover the increased purchased water costs, and maintain the District's policies for prudent financial metrics.

ES-4 Cost of Service Analysis

The second analytical step of the water rate study is the cost of service analysis. A cost of service analysis determines the proportional distribution of the revenue requirement to the customer classes of service, or rate schedules. In the District's case, the customer classes of service reviewed are Residential, Multi-Family, Commercial, and Fire. These customer classes of service were based on the District's current customer data and information.

The objective of the cost of service analysis is to determine the proportional manner in which to collect the previously developed revenue requirement. A summary of the cost of service results is provided in Table ES - 2.

Table ES – 2 Summary of the FY 2026 Cost of Service Analysis (\$000s)						
Class of Service	Present Rate Revenues	Distributed Costs	\$ Difference	% Difference		
Residential	\$3,642	\$3,790	(\$148)	4.1%		
Multi-Family	590	571	20	-3.3%		
Commercial	977	1,094	(117)	12.0%		
Fire	76	95	(19)	24.8%		
Total	\$5 <i>,</i> 285	\$5,549	(\$264)	5.0%		

The results of the cost of service, as provided in Table ES - 2, shows cost differences between serving the customer classes of service. A general guideline is that if a customer group is within +/- 5% of the overall system revenue adjustment, then the customer class is paying its proportional share of costs. This guideline is used as over time customer usage characteristics change, as well as District costs, which can result in a change in the cost distribution.

Given the above framework for reviewing the results, it appears that the while some customer classes of service are reasonably paying their share of costs required to provide service there are some that are paying more or less than their distributed costs. Based on the results of the cost of service analysis it is recommended that the District establish a specific rate schedule for each customer class which reflect the customer characteristics and costs associated with providing service.

ES-5 Rate Design Analysis

The final component of a water rate study is the development of water rates which reflect the overall revenue needs, as developed in the revenue requirement analysis, and the results of the cost of service analysis.

The District currently has a single rate schedule for all customer classes of service (types) with the exception of Fire which is not uncommon. The current rate structure has a fixed charge that varies by meter size and a uniform variable consumption charge. Shown in Table ES - 3 is a summary of the District's current water rates.

Table ES – 3 Summary of the Present Water Rates					
	Present Rates				
Service Charge	\$ / Month				
5/8 x 3/4"	\$21.14				
1"	35.94				
1 1/2"	59.01				
2"	90.38				
3"	196.57				
4"	297.19				
6″	545.79				
Water Use	\$ / CCF				
All Customers	\$7.61				
Fire	\$ / Month				
2"	\$31.45				
4"	85.29				
6"	164.47				
8"	259.49				

In discussion with District staff and in presentations to the Board, it was determined that the current rate structure would be revised to focus more on efficient water use. The proposed fixed charge is being maintained as it varies by meter size and reflects contemporary rate setting approaches. The proposed fixed charges are applied to all customers, regardless of customer class of service, and starts at a $5/8 \times 3/4$ " meter and will be transitioned to be based on the AWWA safe operating capacity for each corresponding meter size.

For the variable consumption charge, a unique structure was developed for the Residential, Multi-Family, and Commercial customer classes. The transition was developed to be over the 5year rate setting period in order to lessen the impacts to the District's customers. For Residential, a three-tiered increasing block rate structure is proposed with tier sizes that reflect the Residential customer consumption patterns. Multi-Family customers will be charged on a uniform rate structure which better reflects the variability in customer demographics driving water usage which may or may not be inefficient. For Commercial, there will be a uniform rate that varies by season (winter is November through April and summer is May through October). The seasonality of water use for the District drives the purchased water costs from the Portland Water Bureau and it is, therefore, prudent to charge customers based on this. After the first year proposed rates, all variable customer rates are adjusted equally by the proposed rate adjustment in each year. It is also important to note that the relationship for each meter size will be updated to realign with the AWWA equivalencies which are based on the potential water demand for each size of meter. Note that Fire service is a monthly fixed charge based one the service meter size and there is no change in the proposed structure. Table ES - 4 summarizes the proposed water rates for the District's customer classes of service.

Table ES – 4							
Summary of the Proposed Water Rates							
	7.1.25	10.1.25	FY 2027	FY 2028	FY 2029	FY 2030	
Service Charge	\$ / month						
5/8 x 3/4"	\$23.50	\$23.50	\$24.00	\$24.00	\$24.00	\$24.00	
1"	43.71	43.71	48.48	52.32	56.16	60.00	
1 1/2"	75.98	75.98	88.20	98.80	109.40	120.00	
2"	117.98	117.98	138.36	156.24	174.12	192.00	
3"	245.31	245.31	277.90	305.27	332.63	360.00	
4"	381.79	381.79	442.44	494.96	547.48	600.00	
6"	720.38	720.38	851.78	967.85	1,083.93	1,200.00	
Water Use	\$ / CCF						
All Customers	\$7.99						
Residential							
0 - 8		\$5.90	\$6.18	\$6.48	\$6.80	\$7.13	
8 - 20		8.85	9.27	9.72	10.20	10.70	
20+		11.80	12.36	12.96	13.60	14.26	
Multi-Family		\$6.25	\$6.55	\$6.87	\$7.21	\$7.56	
Commercial							
0-325		\$7.61	\$7.97	\$8.36	\$8.77	\$9.20	
325+		11.42	11.96	12.54	13.16	13.80	
Fire	\$ / Mo						
2"	\$22.00	\$22.00	\$22.00	\$22.00	\$22.00	\$22.00	
4"	74.97	74.97	90.27	105.58	120.88	136.19	
6"	171.16	171.16	227.27	283.38	339.49	395.60	
8"	313.82	313.82	446.12	578.42	710.72	843.03	

ES-6 Summary of the Water Rate Study

It is recommended that the District's water rates be increased annually from FY 2026 through FY 2030 as outlined in this report. The proposed rate adjustments are necessary to maintain prudent financial metrics, allow the District to complete the planned capital improvement projects, and adequately fund O&M for the water utility which is increasing significantly due to increase purchased water costs. The proposed water rates are cost-based and reflect the customer's impact on the District's water system. The District's customers are moved to individual water use charges based on how their consumption characteristics.

1 Rate Setting Principles

HDR Engineering, Inc. was retained by West Slope Water District to conduct a water rate study. The objective of a rate study is to develop proportional and cost-based water rates. This is accomplished by first reviewing and analyzing the District's water operating and capital costs and developing a projection of the overall revenue requirement. Next, the revenue requirement is proportionally distributed to the District's water utility customer classes of service. The findings and conclusions from these two analyses are then used to develop the District's proposed water rates which are reflective of how the District's incurs costs to provide the water service to the District's customers. The results of the rate study produce proportional water rates that reflect the water utility's specific costs (i.e., cost-based rates).

The District owns and operates the water system that provides service to the District's customers. The determination of the total costs associated with providing services to the District's customers has been developed based on the District's accounting, operating, and customer billing records along with other District specific information.

1.1 Organization of the Study

This report is organized in a sequential manner that first provides an overview of utility rate setting principles, followed by sections that detail the specific technical and analytical steps used to develop the District's proposed water rates. The following sections comprise the Study report:

- Section 2 Revenue Requirement
- Section 3 Cost of Service
- Section 4 Rate Design

A Technical Appendix is attached at the end of the report, which details the technical analyses that were undertaken in the preparation of the District's Study.

1.2 Study Goals and Objectives

The District had several key objectives in developing the District's Study. These key goals and objectives provide a framework for the technical analysis and policy decisions that are a part of the Study. The District's key goals and objectives for the Study were as follows:

- Develop the water rate study in a manner consistent with the principles and methodologies established by the American Water Works Association (AWWA), M1 Manual, <u>Principles of Water Rates, Fees, and Charges</u>
- In financial planning and establishing the District's proposed water rates, review and utilize industry practices, while recognizing and acknowledging the specific and unique characteristics of the District's system and customers
- Utilizing generally accepted rate making methodologies review the District's costs to determine the adequacy and proportionality of the water rates

- Meet the District's financial planning criteria as it relates to legally required debt service coverage (DSC) ratios, adequate funding of capital infrastructure, and maintenance of adequate reserve levels
- Develop a final proposed water rate transition plan which adequately supports the funding requirements, while attempting to minimize overall impacts to rates

1.3 Overview of the Rate Study Process

The District's water rates must be set at a level where the operating and capital expenses are met with the revenues received from customers. This is an important point, as failure to achieve this objective may lead to insufficient funds to maintain system integrity. To evaluate the adequacy and proportionality of a utility's existing rates, a water rate study is often performed. A water rate study consists of three interrelated analyses. Figure 1 - 1 below provides an overview of these analyses.



The above framework was utilized for reviewing and evaluating the District's water rates.

1.4 Determining the Revenue Requirement

Most public utilities use the "cash basis" approach, or methodology, for establishing their revenue requirement and setting rates. This approach conforms to most public utility budgetary requirements and the calculation is easy to understand. A public utility totals its cash expenditures for a period to determine the required revenues. The revenue requirement for a public utility is usually comprised of the following cost components or expenses:

- This includes a utility's operation and maintenance (O&M) expenses, plus any applicable taxes or transfer payments. Operation and maintenance expenses include the materials, electricity, labor, supplies, etc., needed to keep the utility functioning.
- Capital expenses are calculated by adding annual debt service payments (principal and

interest) to capital improvements financed with rate revenues. In lieu of including capital improvements financed with rate revenues, a utility sometimes includes annual depreciation expense to stabilize the annual revenue requirement.

Under the cash basis approach, the sum of the total operating expenses plus the total capital expenses equals the utility's revenue requirement during any selected time period (historical or projected).

Note that the two portions of the capital expense component (debt service and capital improvements funded from rate revenues) are necessary under the cash basis approach because utilities generally cannot finance all their capital facilities with long-term debt. At the same time, it is often difficult to pay for all capital expenditures on a "pay-as-you-go" basis given that some major capital projects may have significant rate impacts upon the utility, even when financed with long-term debt. Many utilities have found that a combination of "pay-as-you-go" funding and long-term debt financing will often lead to minimization of rate increases over time.

As noted, public utilities typically use the cash basis methodology or approach to establish their revenue requirement. An exception may occur if a public utility provides service to a wholesale or large contract customer. In this situation, a public utility could use the "utility basis" approach (see Table 1 - 1) to earn a "fair" rate of return on the investment needed to serve the wholesale or large contract customer.

Table 1 – 1 Cash versus Utility Basis Comparison						
	Cash Basis		Utility Basis (Accrual)			
+	O&M Expenses	+	O&M Expenses			
+	Taxes/Transfer Payments	+	Taxes/Transfer Payments			
+	Rate Funded Capital Improv. (≥ Depreciation Expense)	+	Depreciation Expense			
+	Debt Service (Principal + Interest)	+	Return on Investment			
=	Total Revenue Requirement	=	Total Revenue Requirement			

1.5 Analyzing Cost of Service

After the total revenue requirement is determined, it is proportionally distributed to the users of the service. The allocation and distribution process, as analyzed through a cost of service analysis, reflects the cost relationships for producing and delivering water services. A cost of service analysis requires three analytical steps:

 Costs are *functionalized*, or grouped, into the cost categories related to providing service (e.g., distribution, storage, pumping). This step is largely accomplished by the utility's accounting system.

- The functionalized costs are then *allocated* to specific cost components. Allocation refers to the arrangement of the functionalized data into cost components. For example, a water utility's costs are typically allocated as commodity (average day), capacity (peak day), customer, or fire-protection-related costs.
- **3.** Once the total costs are allocated to the appropriate cost component(s), they are proportionally *distributed* to each of the customer classes of service or rate schedule component (i.e., fixed, variable). The proportional distribution is based on each customer class's relative contribution to the cost component (i.e., benefits received from, and burdens placed on the system and its resources). For example, customer-related costs are proportionally distributed to each class of service based on the total number of customers in that class of service, relative to all other customer classes of service. Once the total costs (i.e., revenue requirement) are proportionally distributed, the level or amount of revenues required from each customer class of service to achieve cost-based rates can be determined.

The District's cost of service analysis was developed based on generally accepted water cost of service methodologies and approaches, while at the same time, tailoring the analysis to reflect the District's unique customer and system characteristics.

1.6 Designing Water Rates

Water rates that meet the utility's cost-based and proportional objectives are designed based on the findings and conclusions from the revenue requirement and cost of service analyses. Using the cost information from these two analyses results in rates that are strictly cost-based and proportional. The average unit costs (i.e., cost-based rates) from the cost of service analysis does not consider, or take into account, other non-cost based goals and objectives (e.g., conservation, economic development, ability to pay, revenue stability). In designing rates, many utilities consider or incorporate other rate design objectives such as ability to pay, continuity of past rate philosophy, economic development, ease of administration, and customer understanding into their final rate designs. However, utilities need to take into consideration each customer class's proportional share of costs distributed through the cost of service analysis to maintain proportional and cost-based water rates.

1.7 Economic Theory and Rate Setting

One of the major justifications for a rate study is founded in economic theory. Economic theory suggests that the price of a commodity must roughly equal its cost if equity among customers is to be maintained. This statement's implications on utility rate designs are significant. For example, a water utility usually incurs capacity-related costs to meet summer outdoor or non-domestic watering needs. It is presumed, then, that the customers who create excessive peak demands on the system - and create the need for upsizing of the water system infrastructure - should pay their proportional share of the costs related to the over-sizing of facilities to meet peak use requirements. When costing and pricing techniques are refined, consumers have a more accurate understanding of what the commodity costs to produce and deliver. This price-equals-

cost concept provides the basis for the subsequent analysis and comments. This basic pricing technique has been incorporated and used within the Study.

1.8 Summary

This report will review and discuss the Study prepared for the District. This report has been prepared utilizing generally accepted rate setting methodologies and techniques and the District's specific customer and system characteristics.

2 Revenue Requirement Analysis

This section describes the development of the revenue requirement analysis for the District's water utility. The revenue requirement analysis is the first analytical step in the comprehensive rate study process. This analysis determines the adequacy of the overall water rates at current rate levels. From this analysis, a determination can be made as to the overall level of rate adjustment needed to provide adequate and prudent funding for both operating and capital needs.

2.1 Determining the Water Utility Revenue Requirement

In developing the water rate study, the District's water utility must financially "stand-alone" and be properly funded. As a result, the revenue requirement as developed herein assumes the full and proper funding needed to operate and maintain the system on a financially sound and prudent basis. This includes maintaining adequate reserve levels, prudently funding annual renewal and replacement needs (rate funded capital), and meeting other industry standard financial metrics (e.g., debt service coverage). Provided in the following sections is a more detailed discussion of the development of the revenue requirement analysis for the District's water utility.

2.2 Establishing a Time Frame and Approach

The first step in calculating the revenue requirement for the water utility was to establish a time frame for the revenue requirement analysis. For the Study, the revenue requirement was developed based on the FY 2024 and FY 2025 adopted budgets and a projected time period of FY 2026 through FY 2034. For rate setting purposes, the focus was the five-year period of FY 2026 – FY 2030. Reviewing a multi-year time period is recommended to identify any major expenses – either operating or capital – that may be on the horizon and to be able to recognize trends that may be happening. By anticipating future financial requirements, the District can begin planning for these changes sooner, transition rate levels, and minimize short-term rate impacts as well as long-term rate levels.

The second step in determining the revenue requirement was to decide on the basis of accumulating costs. For the District's revenue requirement, a cash basis approach was utilized. As mentioned in Section 1, this approach is the most commonly used methodology by municipal utilities to set their revenue requirement. The revenue requirement developed for the District was customized to follow the District's system of accounts (budget documents), which contained the four basic cost components of the cash basis methodology.

The primary financial inputs in this process were the District's historical billing records, operating budget, and current capital improvement plan. Presented below is a detailed discussion of the steps and key assumptions contained in the development of the projections of the District's revenues and expenses.

2.3 Projection of Revenues

The District's water utility receives revenue from two primary sources: water rates and miscellaneous revenue. Rate revenues are based on the current rate structure and collected on a monthly basis. Other revenue includes items such as interest income and other miscellaneous revenues.

The first step in developing the revenue requirement was to develop a projection of rate revenues, at present rate levels. This process involved developing projected consumption/billing units for each customer group based on historical billing records. The billing units were then multiplied by the applicable current rates. This method of independently calculating revenues results in the projected revenues used within the analysis tie to the projected billing units used in the development of the cost of service analysis and rate design analysis. The consumption was



based on historical consumption records.

There are currently three primary customer classes: residential, multifamily, commercial, and fire service. The majority of the District's rate revenues, as shown in the chart, are derived from residential customers (68.9%). In total at present rates - the District is projected to receive approximately \$5.3 million in rate revenues in FY 2025. Over the rate setting period of the Study, customer growth is expected to average 0.5%, annually, resulting in total rate

revenues of approximately \$5.4 million by FY 2030 based on the current adopted water rates.

In addition to rate revenues, the District also receives a variety of miscellaneous revenues. There is projected to be approximately \$153,000 in miscellaneous revenues in FY 2025. Miscellaneous revenues are expected to decrease slightly over time, to \$130,000 in FY 2030, primarily the result of decreasing interest income as reserve levels decrease from the use of rate stabilization reserves.

On a combined basis - considering the rate revenues along with miscellaneous revenues - the District's total projected revenues are expected to be approximately \$5.4 million FY 2025 which increases to \$5.5 million in FY 2030, prior to any proposed rate adjustments.

2.4 Projection of Operations and Maintenance Expenses

Operation and maintenance (O&M) expenses are incurred by the District to operate and maintain the District's water utility. The costs incurred in this area are expensed during the current year and are not capitalized or depreciated. In general, operation and maintenance (O&M) expenses

are grouped into a number of different functional categories. To begin the process of projecting O&M expenses over the planning horizon, escalation factors were developed. Escalation factors were developed for the types of expenses incurred, for example salaries, benefits, materials and supplies, utilities, equipment, chemicals, and miscellaneous expenses. Escalation factors were projected based on recent inflationary trends and assumed to be approximately 3.5% - 5.0% per year. The outlier is the projected purchased water costs from Portland Water Bureau which are anticipated to increase due to changing contractual terms. As such, the costs are assumed to increase by 33.7% in FY 2027, 21.1% in FY 2028, and 14.4% in FY 2029.

Starting with the District's budgeted O&M expenses from the budgets for FY 2024 and FY 2025, the O&M was escalated based on the previously mentioned escalation factors. Total O&M expenses for the District's water utility are approximately \$3.7 million in FY 2025. Purchased water costs are the largest single line item for the District and account for approximately 36.4% of the District's budget in FY 2025. Given the magnitude of the budgetary component and the proposed increases in costs discussed earlier, the District's proposed revenue requirement is significantly impacted by the increase of purchased water costs. No additional or new O&M expense have been assumed at this time. Based on the changes and assumed escalation factors, O&M expenses are projected to increase to approximately \$5.3 million by FY 2030.

2.5 Capital Improvement Projects

At the same time the water rate study was being completed, the District had the water master plan updated which included the development of a capital improvement plan (CIP) identifying the most critical improvements that the District needs to prioritize. This CIP was used to inform the assumed capital projects included within the Study. After the capital projects were included, the process of identifying the funding sources was completed. Provided below in Table 2 - 1 is a summary of the annual capital improvement needs during the rate study review period.

Table 2 – 1 Summary of the Water Capital Improvement Plan (\$000s)						
	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Capital Improvement Projects	\$1,825	\$1,178	\$3,437	\$8,147	\$1,306	\$1,352
Less: Outside Funding Sources						
Capital Improvement Reserve	1,700	1,071	2,326	3,033	1,188	1,229
Equipment Reserve	125	107	111	115	119	123
New Low Interest Loan	0	0	0	0	0	0
New Long-Term Debt Total Funding Sources	<u>0</u> \$1,825	0 \$1,178	<u>1,000</u> \$3,437	<u>5,000</u> \$8,147	<u>0</u> \$1,306	<u>0</u> \$1,352

The District's water capital improvement plan totals approximately \$17.2 million from FY 2025 through FY 2030. The funding sources for these projects are assumed to be from annual rate funding of capital, and existing District reserve funds. There are a number of different methods

which may be used to fund the capital needs. Among the methods that may be used to finance these capital improvement projects are long-term borrowing, grants, capital reserves, and rates. Historically, the District has used all available sources to fund the capital improvements and attempt to minimize the impact to customer's water rates. Provided below is a summary of the typical funding sources the District has used, and will use, to fund the planned improvements over the next five year period.

2.5.1 Rate Funded Capital

A general financial guideline states that, at a minimum, a utility should fund an amount equal to or greater than annual depreciation through rates. Annual depreciation expense reflects the current investment in plant being depreciated or "losing" its useful life. Therefore, this portion of plant investment needs to be replaced to maintain the existing level of infrastructure. In addition, consideration should be given to funding within rates an amount greater than annual depreciation expense for renewals and replacements as costs escalate over time. Whenever possible, the District should be funding water capital projects from rates in an amount greater than annual depreciation expense. For the water utility, the FY 2023 depreciation expense was \$435,370. Over the course of the review period, the District is funding the renewal and replacement projects at a level greater than the depreciation expense. Based on the proposed rate transition plan, rate funded capital averages \$1.5 million per year which accounts for approximately 52.0% of total capital being funded annually through water rates.

2.5.2 Reserve Funding

The District is assumed to supplement rate funding of capital with reserve funding for annual capital improvements. During the rate setting time period approximately \$2.3 million in capital and equipment reserves will be used to fund capital improvement projects in FY 2025 through FY 2030 which is equal to 13.3% of the total capital improvement plan projects.

2.5.3 Long Term Debt

The District can also issue long-term debt as a source to fund capital projects. There can be a number of advantages and disadvantages with the issuance of long-term debt and it is important to weigh them when deciding whether to issue or not. Long-term debt does have prudent applications whereby it acts as a financial device to spread the costs of a larger project, such as a new source of supply, over multiple years. Doing so then distributes the costs to the customers who are benefiting from the new project - in this case - and are said to be paying their "fair share" as opposed to cash financing when only current customers are paying for the project. Issuing debt should be done prudently and in a way that does not put excessive financial burden on the District's water utility. There should be a level of indebtedness that still allows the District flexibility should a financial crisis occur. As part of the District's water master plan, Reservoir 4 was identified as needed to be constructed during the rate setting period and with seismic resiliency as an integral part of the design. The total project costs is assumed to be approximately \$11.3 million (escalated) and be funded just under half from existing reserves and rate funded capital and the remaining to be funded by long-term debt. Based on this, a total of \$6.0 million is estimated to be issuance in FY 2027 and FY 2028 as part of the capital funding plan.

2.6 Projection of Debt Service

The final component of the District's water revenue requirement is debt service. At the present time, there is one outstanding debt obligation (the 2008 Revenue Bond) and total annual debt service payment is approximately \$356,000 in FY 2025 and remaining at about that level through FY 2028 when it is retired. As mentioned above, the District has identified the need to issue additional long-term debt during the rate setting period in order to fund the Reservoir 4 project. This new debt issuance has an estimated annual debt service payment of approximately \$480,000 per year based on assumed terms. In total, annual debt service ranges from \$356,000 in FY 2025 to \$482,000 in FY 2030.

It is important to note that HDR is not acting as a municipal advisor for the District. HDR did not recommend specific long-term debt issuances or terms but rather the funding shortage was identified and an estimate of annual debt service payments made based on general industry terms.

2.7 Summary of the Revenue Requirement

Given the above projections of revenues and expenses, a summary of the revenue requirement for the District's water utility can be developed. In developing the revenue requirement, consideration was given to the financial planning considerations. In particular, emphasis was placed on attempting to minimize rate impacts, yet still have adequate funds to support the operational activities, capital projects, and meet key financial metrics throughout the rate setting period. Presented in Table 2 - 2 is a summary of the revenue requirement.

Summary of the Revenue Requirement (3000s)						
	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Revenues						
Rate Revenue	\$5,258	\$5,285	\$5,311	\$5,338	\$5,364	\$5,391
Miscellaneous Revenue	153	153	151	138	129	130
Total Revenues	\$5,412	\$5 <i>,</i> 438	\$5 <i>,</i> 463	\$5 <i>,</i> 476	\$5 <i>,</i> 494	\$5,521
Expenses						
Total O&M Expenses						
Purchased Water	\$1,345	\$1,367	\$1,671	\$2,033	\$2,338	\$2,502
All Other O&M	2,346	2,430	2,507	2,586	2,666	2,748
Net Debt Service	336	347	345	427	471	471
Rate Funded Capital	1,385	1,550	1,535	1,535	1,500	1,400
Reserve Funding	(1)	9	(50)	(264)	(325)	(111)
Total Expenses	\$5,412	\$5,702	\$6,007	\$6,317	\$6,650	\$7,011
Bal. / (Def.) of Funds	\$0	(\$264)	(\$544)	(\$841)	(\$1,156)	(\$1,490)
Balance as % of Rev from Rates	0.0%	5.0%	10.3%	15.8%	21.6%	27.6%
Proposed Rate Adjustment	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Add'l Revenue with Rate Adj.	\$0	\$264	\$544	\$841	\$1,156	\$1,490
Bal. / (Def.) After Rate Adj.	(\$0)	\$0	\$0	(\$0)	(\$0)	\$0

Table 2 – 2Summary of the Revenue Requirement (\$000s)

The results of the revenue requirement analysis indicate a deficiency of funds over the rate setting period (FY 2026 – FY 2030). The deficiency ranges by year and is driven by the capital funding plan, meeting financial targets, and annual operating expenses. It is important to note the annual deficiencies are cumulative, that is, any adjustment in the initial years will reduce the needed deficiency in the following years. The cumulative deficiency is approximately \$264,000 in FY 2026 increasing to \$1.5 million in FY 2030, prior to any rate adjustments. The proposed adjustments provide adequate funding for annual operating, debt service, and capital needs. To provide adequate funding for the District's water utility and to meet financial targets, annual rate adjustments of 5.0% are proposed in FY 2026 through FY 2030.

2.8 Review of Reserve Levels

Reserves are an important component of a utility's financial health. There can be many different purposes for reserves. For modeling purposes, the District's water utility has a water General Fund reserve, Capital Improvement Reserve Fund, Equipment Reserve Fund, SDC fund, and Rate Stabilization reserve. The District currently has an established minimum target for the General Fund reserve equal to three months of operating expenses (approximately 90 days). The target balance is approximately \$910,000 for FY 2025. The Capital Improvement Reserve and Equipment Reserve Funds currently do not have a target or minimum and are primarily pre-funded via budget accumulations from the General Fund. The SDC reserves do not have a minimum or target and are funded by SDC revenues from new customers or customers seeking additional capacity. SDC reserves are to be used to make debt service payments on outstanding bonds which were

used for capital improvement projects. The Districts rate stabilization reserve was established to hold funds to address the increase in purchased water costs from Portland Water Bureau which has been anticipated as the existing contract is set to expire and new terms are effective in FY 2027. Over the rate setting period, the rate stabilization reserve is used up completely to help lessen the impacts from the increase in purchased water costs as well as funding capital improvement projects. Below is a graph showing the total District reserves over the rate setting period.



Based on the rate transition plan the District will be funding reserves over the five-year rate setting period to meet target minimums and maintain prudent levels of reserves. The District's reserves appear to remain strong over the rate setting period (FY 2025 – FY 2030).

2.9 Debt Service Coverage Ratio (DSC)

Long-term debt often contains covenants requiring rates to be set at an adequate level to assure annual payments of principal and interest. This is typically known as a debt service coverage ratio (DSC). The DSC ratio is financial measure of the utility's ability to repay the debt. In general, the DSC ratio is set at a level such that revenues less operating expenses will be 1.25 times greater than the maximum annual debt service on the outstanding debt. That is, rates will be sufficient to pay projected O&M and have an additional 25% more than the annual debt service payment. Currently, the water utility DSC ratio is estimated at 4.58 in FY 2025 and with the assumed long-term debt issuances and the proposed rate adjustments, the DSC ration remains strong calculated at 3.66 in FY 2030.

2.10 Water Revenue Requirement Recommendations

Based on the revenue requirement analysis developed, HDR recommends that water rates are increased over the review period to fund operating and capital needs of the utility. The anticipated adjustments would allow for the District to fully fund its water operations and planned capital improvements as well as put it on a financially secure footing going forward.

3 Cost of Service Analysis

In the previous section, the revenue requirement analysis focused on the total revenues required to adequately fund the District's water utility. This section will discuss the development of the cost of service analysis. A cost of service analysis is concerned with the proportional distribution of the total revenue requirement between the identified customer classes of service (Residential, Multi-Family, Commercial, and Fire). The previously developed revenue requirement was utilized in the development of the cost of service analysis.

In recent years, increasing emphasis has been placed on cost of service studies by government agencies, customers, utility regulatory commissions, and other parties. This interest has been generated in part by continued inflationary trends, increased operating and capital expenditures, and concerns of proportionality in rates among customers. Following the generally accepted guidelines and principles of a cost of service analysis will inherently lead to rates which are proportion, cost-based, and not viewed as arbitrary or capricious in nature.

3.1 Objectives of a Cost of Service Study

There are two primary objectives in conducting a cost of service study:

- Proportionally distribute the revenue requirement between the customer classes of service
- Derive average unit costs for subsequent rate designs

The objectives of the water cost of service analysis are different from determining the revenue requirement. As noted in the previous section (Section 2), a revenue requirement analysis determines the utility's overall financial needs, whereas the cost of service analysis determines the proportional manner to collect the revenue requirement from each customer class of service. The second rationale for conducting a cost of service analysis is to develop proposed water rates that properly reflects the costs incurred by the District. For example, a water utility incurs costs related to average day, peak day, fire protection, and customer cost components. A water utility must build sufficient capacity to meet peak capacity needs. Therefore, those customers creating this peak requirement should pay their proportional share of the cost to meet this peak demand requirement. Each of these types of costs may be collected in a slightly different manner as to allow for the development of rates that collect costs in the same manner as they are incurred.

3.2 Determining the Customer Classes of Service

The first step in a cost of service study is to determine the customer classes of service. Currently, the District has a single rate schedule for all customers. However, in discussion with the District, it was determined that the cost of service would evaluate the different customer classes of service. Based on the customer characteristics, the classes of service used within the water cost of service analysis are:

- Residential
- Multi-family
- Commercial
- Fire

In determining classes of service for cost of service purposes, the objective is to group customers together into similar or homogeneous groups based upon facility requirements and/or flow characteristics.

3.3 General Cost of Service Procedures

In order to determine the cost to serve each customer class of service on the District's water system, a cost of service analysis is conducted. A cost of service study utilizes a three-step approach to review costs. These are functionalization, allocation, and distribution. Provided below is a detailed discussion of the water cost of service study conducted for the District, and the specific steps taken within the analysis.

3.3.1 Functionalization of Costs

The first analytical step in the cost of service process is called functionalization. Functionalization is the arrangement of expenses and asset (infrastructure) data by major operating functions. For example, the water utility incurs costs related to source of supply, pumping, distribution, etc. Within the District's water cost of service analysis, the functionalization of the cost data was accomplished through the District's system of accounts.

3.3.2 Allocation of Costs

The second analytical task performed in a water cost of service analysis is the allocation of the costs. Allocation determines why the expenses were incurred or what type of need is being met. The District's assets and revenue requirement (operating expenses) were reviewed and allocated using the following cost allocations:

- Commodity-Related Costs: Costs associated with commodity are those incurred under average demand conditions and are generally specified for a period of time such as a year. Chemicals or electricity used in the treatment of water are an example of a commodityrelated cost since these costs tend to vary based upon the total production of water.
- Capacity-Related Costs: Capacity costs are those which vary with peak demand, or the maximum rates of flow to customers. For water utilities, capacity-related costs are generally related to the sizing of facilities needed to meet a customer's maximum water

demand at any point in time. For example, portions of distribution storage reservoirs and mains (pipes) must be adequately sized for this particular type of requirement.

- Customer-Related Costs: Customer costs are those cost which vary with the number of customers on the system and do not vary with consumption levels. An example is postage for mailing bills as the cost does not vary from customer to customer based of the size or consumption characteristics of that customer.
- Fire Protection-Related Costs: Fire protection costs are those costs related to the public and private fire protection functions. Fire protection related costs are related to hydrants, the over-sizing of mains and distribution storage reservoirs.
- Revenue-Related Costs: Certain costs associated with the utility may vary with the amount of revenue received. An example is a utility tax based upon the amount of rate revenues received by the water utility.
- Direct Assignments: Certain costs associated with operating the system may be directly traced to a specific customer or class of service and these costs are then directly assigned to that specific class of service. In this way, other classes of service will not be distributed any costs for those significant facilities from which they do not benefit.

3.3.3 Development of Distribution Factors

Once the allocation process is complete, and the customer groups have been defined, the allocated costs are distributed to each customer class of service. The District's allocated costs were distributed to the identified customer groups using the following distribution factors.

- Commodity Distribution Factor: As noted earlier, commodity-related costs vary with the total flow of water. The commodity distribution factors were based on the projected total metered consumption plus system losses for each class of service for the projected test period. Water usage was based on the average from FY 2023 and FY 2024.
- Capacity Distribution Factor: The capacity distribution factor was developed based on the estimated contribution to peak day use of each class. Peak day use by customer group was calculated using monthly metered consumption data for each customer class of service. The peaking factor was defined as the relationship between peak month contribution and average month use and determined for each customer class based on the review of the District's consumption data for each customer class.
- Customer Distribution Factor: Customer costs vary with the number of customers on the system. Two basic types of customer distribution factors were identified actual and weighted. The distribution factor for actual customer was based on the projection of the number of customers developed within the revenue requirement. The weighted customer distribution factor reflects the disproportionate costs associated with serving different types of customers. The weighted customer factor was further broken down based on living units and based on equivalent meters. The weighted customer for living units is based on the number of living units in order to reflect the increased in costs related to that fact which most often affects the multi-family customers that have more than one living unit per meter. The weighted customer for equivalent meters and services

is used to represent the potential capacity requirements or demand that different customer meter sizes may place on the system.

Public Fire Protection Distribution Factor: The development of the distribution factor for public fire protection expenses involved an analysis of each class of service and their fire flow requirements based on industry standard requirements.

3.4 Functionalization and Allocation of Operating Expenses

For the District's Study, the revenue requirement for FY 2026 was functionalized, allocated, and distributed. For the allocation of the operating expenses, the line item detail of the O&M was used to describe the functional category and suggests a manner in which to allocate. As noted earlier, the District utilized a cash basis revenue requirement, which was comprised of operation and maintenance expenses, debt service, reserve funding, and rate funded capital. A more detailed review of the allocation of revenue requirement can be found in the Technical Appendix in Exhibit 14. Shown below in Table 3 - 1 is a summary of the allocation of the FY 2026 revenue requirement to the different allocation components.

Table 3 – 1 Summary of FY 2026 Allocated Revenue Requirement (\$000s)							
Total	Commodity	Capacity	Actual Customer	Weighted Customer	Fire Protection	Revenue Related	
\$5,549	\$2,370	\$2,495	\$0	\$474	\$211	\$0	

3.5 Major Assumptions of the Cost of Service Study

A number of key assumptions were used within the District's water cost of service analysis. Below is a brief discussion of the major assumptions used.

- The test period used for the cost of service analysis was FY 2026. The revenue and expense data was previously developed within the revenue requirement analysis.
- A cash basis approach was utilized which conforms to generally accepted water cost of service approaches and methodologies
- Infrastructure costs were based on the District's historical asset records for the water utility
- The allocation of plant in service was developed based upon generally accepted cost allocation techniques
- Metered consumption data used within the Study were provided for each class of service from historical usage information provided by the District
- Capacity distribution factors were based on a review of the metered consumption data for each customer class of service, and the relationship of peak month consumption to average month consumption

3.6 Summary of the Cost of Service Results

In summary, the cost of service analysis began by functionalizing the District's revenue requirement (costs). The functionalized expenses were then allocated to the appropriate cost component(s). The individual allocation totals were then distributed to each of the customer classes based upon the appropriate distribution factors. The distributed expenses for each customer class were then aggregated to determine each customer class's overall revenue responsibility. A summary of the detailed cost responsibility developed for each class of service is shown in Table 3 - 2.

Table 3 – 2 Summary of Water Cost of Service Analysis (\$000s)							
Class of Service	Present Rate Revenues	Distributed Costs	\$ Difference	% Difference			
Residential	\$3,642	\$3,790	(\$148)	4.1%			
Multi-Family	590	571	20	-3.3%			
Commercial	977	1,094	(117)	12.0%			
Fire Total	76 \$5,285	95 \$5,549	<u>(19)</u> (\$264)	24.8% 5.0%			

When looking at the water system and distributing its costs, it is important to keep in mind the different customer classes' consumption characteristics and facility requirements. The results of the water cost of service, as provided in Table 3 - 2, show calculated cost differences between serving the customer classes of service. A general guideline is that if a customer group is within +/- 5% of the overall system revenue adjustment, then the customer class is paying its proportional share of costs to provide service. This guideline reflects that over time customer usage characteristics change, as does the revenue requirement, which can result in changes in the cost allocation and cost of service results.

Given the results of the cost of service analysis shown in Table 3 - 2, it is proposed that the District address the cost differences for the customer classes through the rate design analysis and target revenues.

3.7 Consultant's Conclusions and Recommendations

As was noted in Table 3 - 2, differences in the cost of service exist between the customer classes of service. At this time, it is recommended that the District make cost of service adjustments based on the overall distribution of costs. In Section 4, the design of the proposed rates will incorporate the results of the cost of service analysis in order to reasonably reflect the revenues received from each of the customer classes of service. It is important to note that cost of service results can change over time as customer's consumption patterns and facility requirements change as a result of rate adjustments, economic factors, or other influences on water consumption.

4 Rate Design Analysis

The final step of the water rate study process is the design of proposed water rates to collect the desired levels of revenues, based on the results of the revenue requirement and cost of service analyses. In reviewing the rate designs, consideration is given to the level of the rates and the structure of the rates.

4.1 Rate Design Goals and Objectives

Prudent rate administration dictates that several criteria must be considered when setting utility rates. Some of these rate design goals are listed below:

- Rates which are easy to understand from the customer's perspective
- Rates which are easy for the utility to administer
- Consideration of the customer's ability to pay
- Continuity, over time, of the rate making philosophy
- Policy considerations (e.g., economic development)
- Provide revenue stability from month to month and year to year
- Promote efficient allocation of the resource
- Proportional and non-discriminatory (cost-based)

Many contemporary rate experts and regulatory agencies feel the last consideration, cost-based rates, should be of paramount importance and provide the primary guidance to utilities on rate structure and policy. It is important that the District provides its water customers with a proper price signal as to what their consumption is costing. This goal may be approached through rate level and structure. When developing the proposed rate designs, the above listed criteria are taken into consideration. However, it should be noted that it is difficult, if not impossible, to design a rate that meets each of the goals and objectives listed above. For example, it may be difficult to design a rate that takes into consideration the customer's ability to pay, and one which is cost-based. In designing rates, there are always trade-offs between the goals and objectives.

4.2 Present Water Rates

In developing the proposed water rates, and as noted previously, the District's existing rate structure for each customer class of service was reviewed. The District's current water rates include a fixed charge that varies by meter size and a uniform consumption charge that is the same for all customers. Shown below in Table 4 - 1 is a summary of the District's present water rates.

Table Summary of the Pre	4 – 1 esent Water Rates
	Present Rates
Service Charge	\$ / Month
5/8 x 3/4"	\$21.14
1"	35.94
1 1/2"	59.01
2"	90.38
3"	196.57
4"	297.19
6″	545.79
Water Use	\$ / CCF
All Customers	\$7.61
Fire	\$ / Month
2"	\$31.45
4"	85.29
6"	164.47
8"	259.49

4.3 **Proposed Water Rates**

Given the cost of service analysis results, and in discussion with District staff, it is proposed that rates be developed for each of the customer classes of service.

4.3.1 Fixed Charge

The fixed charge is currently the same for all customers and would be maintained in the proposed rates. This structure for the fixed charge is very common and industry standard. The fixed charge starts at a $5/8 \times 3/4$ " meter and increases with the size of the meter and the cost is based on the AWWA water meter weighting. This approach on the meter size cost relationship aims to reflect the capacity and potential demands each customer may place on the water system for a corresponding meter size.

4.3.2 Consumption Charge

For the consumption charge, changes are recommended to reflect the results of the cost of service analysis and the District's rate design goals and objectives. First, for Residential customers, a three-tiered increasing block rate structure is proposed with the size of the tiers designed to reflect the consumption patterns of the Residential customer class. For Multi-Family customers, a uniform consumption charge is proposed as it is difficult to develop a tiered rate structure given the high level of variability between customers within a class. Additionally, there is often not the level of outdoor water usage for Multi-Family customers given the inherent design of the properties. For Commercial customers, a two-tiered rate is proposed where the first tier targets 90% of the total water usage. The second tier is targeted at the top 10% of water

usage and is typically during the summer which drives the long-term water rates that the District is charged from Portland Water Bureau.

4.3.2.1 Determination of Tiers

To determine the effectiveness and reasonableness of the consumption charge structure for a given customer class, the consumption characteristics were reviewed. After reviewing the customer consumption patterns and discussion with the District, it was determined that a 3-tier structure for Residential, a uniform rate for Multi-Family, and a 2-tier structure for Commercial reflects their respective consumption patterns. Below is a chart showing the consumption patterns for each of the customer classes.



As can be seen in the chart, the Residential tier sizes are designed to reflect the customer characteristics with the consumption in the first tier primarily capturing the average use year round. Tier 2 then is designed to capture some indoor use year round from customers with perhaps larger numbers of people in them and then some of the outdoor use in the summer. Finally, Tier 3 is designed to capture significant water use by customers and in particular the use in the peak summer outdoor watering period.



The Commercial customer class is comprised of a variety of different customers and, as a result, it is difficult to develop tiers which reflect the typical customer consumption habits. However, given the impact of high users, particularly in the summer months, on the District's peak water use which is then incorporated by Portland Water Bureau in the proportional distribution of costs and the rate charged to the District. It was decided to target approximately 90% of the water use in the Commercial class in Tier 1 and the rest in Tier 2; the tier break was determined to be 325 CCF per month.

4.3.3 Fire Service

Finally, for Fire service it is a monthly fixed charge based on the service meter size and there is no change in the proposed structure. The current structure for Fire service would be maintained as this is a contemporary approach and one that is most often used in rate making for this type of customer class.

After the first year proposed rates, all variable customer rates are adjusted equally by the proposed rate adjustment in each year. It is also important to note that the relationship for each meter size has been updated to realign with the AWWA equivalencies which are based on the potential water demand for each size of meter.

As noted in the prior discussion in Section 3, the cost of service results showed differences in costs between the customer classes. This reflects the results of the cost of service as well as the desire to develop proposed water rates by class of service. A specific rate structure was developed for each class of service based on the results of the cost of service analysis and the

structure outline above. As noted, the monthly service charge is the same for all customers for each meter size. Provided below in Table 4 - 2 is a summary of the proposed water rates.

Table 4 – 2 Summary of the Proposed Water Rates						
	7.1.25	10.1.25	FY 2027	FY 2028	FY 2029	FY 2030
Service Charge	\$ / month					
5/8 x 3/4"	\$23.50	\$23.50	\$24.00	\$24.00	\$24.00	\$24.00
1"	43.71	43.71	48.48	52.32	56.16	60.00
1 1/2"	75.98	75.98	88.20	98.80	109.40	120.00
2"	117.98	117.98	138.36	156.24	174.12	192.00
3"	245.31	245.31	277.90	305.27	332.63	360.00
4"	381.79	381.79	442.44	494.96	547.48	600.00
6"	720.38	720.38	851.78	967.85	1,083.93	1,200.00
Water Use	\$ / CCF					
All Customers	\$7.99					
Residential						
0 - 8		\$5.90	\$6.18	\$6.48	\$6.80	\$7.13
8 - 20		8.85	9.27	9.72	10.20	10.70
20+		11.80	12.36	12.96	13.60	14.26
Multi-Family		\$6.25	\$6.55	\$6.87	\$7.21	\$7.56
Commercial						
0-325		\$7.61	\$7.97	\$8.36	\$8.77	\$9.20
325+		11.42	11.96	12.54	13.16	13.80
Fire	\$ / Mo					
2"	\$22.00	\$22.00	\$22.00	\$22.00	\$22.00	\$22.00
4"	74.97	74.97	90.27	105.58	120.88	136.19
6"	171.16	171.16	227.27	283.38	339.49	395.60
8"	313.82	313.82	446.12	578.42	710.72	843.03

4.4 Summary of the Water Rate Study

This completes the analysis for the District's water utility. Based on the operating and capital needs as well as meeting key financial metrics, it is recommended that the District's water rates be increased annually by 5.0% in FY 2026 through FY 2030 and the proposed rate structures implemented. Full and complete technical appendices of the development of the District's water rate study and the proposed rate adjustments can be found in the Technical Appendix of this report.

