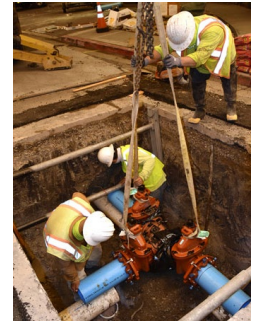


Final Report



**Dublin San Ramon
Services District**

Water, wastewater, recycled water



Dublin San Ramon Service District

Water Cost of Service Study

April 17, 2024



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Ms. Corinne Ferreyra
Senior Management Analyst
Dublin San Ramon Services District
7051 Dublin Blvd.
Dublin, California 94568

Subject: Comprehensive Water and Recycled Water Rate Study

Dear Ms. Ferreyra:

HDR Engineering, Inc. (HDR) is pleased to present to Dublin San Ramon Services District (District/DSRSD) the final report for the water rate study. The District's water rate study was developed using water industry standard methodologies and approaches. The analyses conducted for the District includes a revenue requirement, cost of service, and rate design analysis. The findings and conclusions from these analyses were used to develop proposed water rates that are equitable and proportional to the District's customers and sufficient to fund the operating and capital needs of the water utility. This report outlines the overall approach used to achieve these objectives, along with our findings, conclusions, and recommendations.

The District owns and operates a potable water distribution system and a recycled water treatment plant and distribution system. The District provides potable and recycled water service to customers in the City of Dublin and the Dougherty Valley area of the City of San Ramon. The District purchases wholesale potable water from the Zone 7 Water Agency (Zone 7) and partners with East Bay Municipal Utility District (EBMUD) to produce and distribute recycled water through the DSRSD-EBMUD Recycled Water Authority (DERWA). The cost of the operations and maintenance for the potable water and recycled water systems plus the wholesale potable water has been developed based on District provided information and included within the development of the proposed water rates. HDR's study provides the basis for developing and implementing water rates which are cost-based, proportional, defensible, and understandable for the District's customers.

We appreciate the assistance provided by the District's management team in the development of this study. More importantly, HDR appreciates the opportunity to provide these technical and professional services to the District.

Sincerely yours,
HDR Engineering, Inc.

A handwritten signature in black ink, appearing to read "Shawn Koorn". The signature is fluid and cursive, with the first name being the most prominent.

Shawn Koorn
Associate Vice President



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Technical Appendix



Executive Summary

Introduction

HDR Engineering, Inc. (HDR) was retained by the Dublin San Ramon Services District (District) to perform a comprehensive water and recycled water rate study. The purpose of this study is to determine the adequacy of the existing potable water and recycled water rates and propose recommended changes to address identified revenue shortfalls and calculate cost-based and proportional rates.

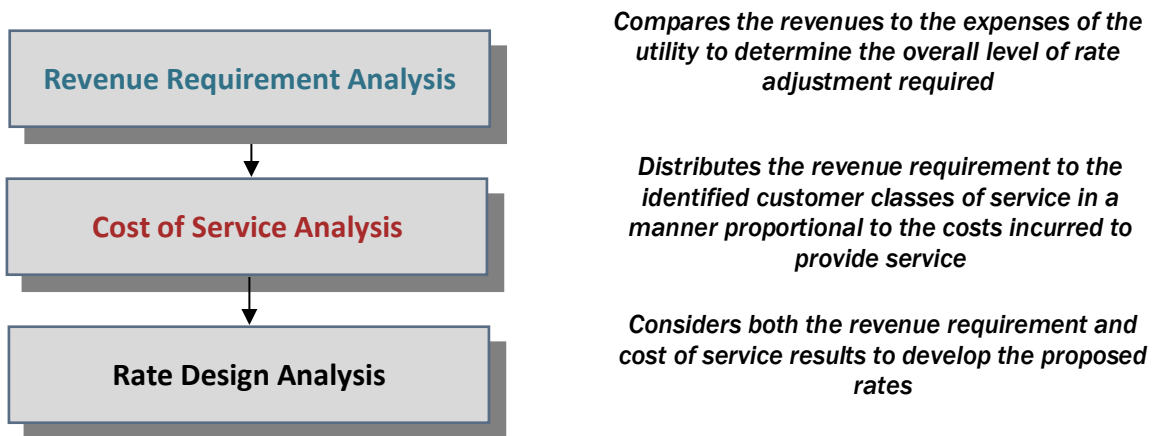
As noted, the District's water enterprise consists of two water systems, a potable water system and a recycled water system. The potable system is comprised of a distribution system where wholesale potable water is purchased from Zone 7 Water Agency (Zone 7). The District provides potable water services for residential, commercial (which includes industrial, multi-family and institutional uses), and irrigation customers. The recycled water system is comprised of a recycled water treatment plant and a recycled water distribution system. The District partners with East Bay Municipal Utility District (EBMUD) to produce and distribute recycled water through the DSRSD-EBMUD Recycled Water Authority (DERWA).

Within the water enterprise, there are two operating funds (enterprise fund and rate stabilization fund) and two capital funds (replacement fund and expansion fund). The water enterprise fund is a self-supporting fund that covers the costs of water system operations and maintenance. The water rate stabilization fund is the reserve to the water enterprise fund and can be used to achieve and maintain financial stability and avoid wide fluctuations in rates to fund operations.

Study Overview

A water rate study uses three interrelated analyses to address the adequacy and proportionality of a utility's 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.

Figure ES-1 Overview of the Comprehensive Water Rate Study



This study uses the framework described above to review and evaluate the District’s potable and recycled water rates.

Key Water Rate Study Results

The water rate study technical analysis was developed based on the operating costs and the rate funded portion of capital costs necessary to provide potable and recycled water service to the District’s customers. The water rate study resulted in the following key findings, conclusions, and recommendations:

- The District’s Fiscal Year (FY) 2024 and FY 2025 budgets were used as the starting point for the annual operating expense.
- A revenue requirement analysis was developed for the FY 2024 and FY 2025 budget years and projected period of FY 2026 through FY 2033.
- Operations and Maintenance expenses are projected to increase at inflationary levels.
- An overall 5.5% revenue adjustment for both FY 2024 and FY 2025 was determined to be necessary to support annual operating and capital costs. Beyond FY 2025 a 3% revenue increase was estimated to reflect annual inflationary increases.
- A cost of service analysis was conducted to establish proportional rates for potable water and recycled water customers.
- Distribution factors used in the cost of service analysis were based on District specific system and customer information.
- Water shortage condition rates were established for use during times of water shortages. The rates are intended to recover sufficient revenue for District operations.

- Based on the results of the revenue requirement and cost of service study, proposed rates were developed for FY 2024 and FY 2025. Beginning with FY 2026, annual inflationary adjustments are projected through FY 2028.

Summary of the Water Revenue Requirement Analysis

The District provides water service to customers in the City of Dublin and the Dougherty Valley area of San Ramon. The District collects revenue from customers to fund the expenses associated with providing potable water and recycled water services. The first step of the revenue requirement analysis is to establish the funding (i.e., revenue) needed to provide potable and recycled water services. This is done by accumulating the District's expenses, or "revenue requirement." The next step in the revenue requirement analysis is to compare the revenue requirement to the existing revenue sources.

A "cash basis" methodology was used to establish the District's revenue requirement. This method of determining the amount of revenue required to operate the utility conforms to industry standards, is the most common approach used by publicly owned utilities, and is also the method historically used by the District in past rate studies. The accumulation of costs for the cash basis includes annual operations and maintenance expenses, interfund transfers, debt service (principal and interest), and funding for the rate funded share of capital expenditures. The primary inputs for the District's cash basis revenue requirement was the District's Adopted Operating Budget for FY 2024 and FY 2025, debt service schedules, and adopted Capital Improvement Program Ten Year Plan for FY 2024 through 2033 and Two-Year Budget for FY 2024 – 2025.

The revenue requirement analysis conducted for this study is a ten-year period, from FY 2024 through FY 2033. While the focus of the report and Proposition 218 rate setting period is five years, the revenue requirement analysis was extended an additional five years (through FY 2033) to provide District management long term trends that may be important for planning purposes. The technical appendix includes the full ten-year revenue requirement analysis.

Provided below, in Table ES-1, is a summary of the five-year revenue requirement analysis (Financial Plan) developed for the District's study. More details of the revenue requirement analysis can be found in Section 3 of this report, as well as in the technical appendices.

Table ES-1
Summary of the Revenue Requirement Analysis (000's)

	Budget		Projected		
	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Revenue					
Rate Revenue	\$39,948	\$40,855	\$41,886	\$43,300	\$44,401
Misc. Revenue	<u>1,348</u>	<u>1,379</u>	<u>1,404</u>	<u>1,429</u>	<u>1,455</u>
Total Revenue	\$41,296	\$42,234	\$43,289	\$44,730	\$45,856
Expenses					
Water Enterprise - 600	\$38,819	\$41,065	\$42,323	\$43,621	\$44,961
Capital Replacement Funding	<u>6,390</u>	<u>6,500</u>	<u>6,610</u>	<u>6,720</u>	<u>6,830</u>
Total Expenses	\$45,209	\$47,565	\$48,933	\$50,341	\$51,791
Net Transfers-In from Other Funds	(\$4,296)	(\$2,851)	\$471	\$517	\$666
Bal./(Def.) Funds	\$384	(\$2,480)	(\$6,114)	(\$6,128)	(\$6,600)
Bal. as % of Rate Rev.	-1.0%	6.1%	14.6%	14.2%	14.9%
Proposed Rate Adj.	5.5%	5.5%	3.0%	3.0%	3.0%

It is important to note the annual deficiencies in ES-1 are cumulative. That is, any adjustments in the initial years will reduce the deficiency in the later years. Over the projected five-year time period, rate revenue needs to be adjusted approximately 14.9% in order to adequately and properly fund the District's water fund maintenance and capital replacement needs. Rate adjustments for FY 2024 and FY 2025 are proposed to be an overall 5.5% annually and the remaining three years are projected to be limited to annual inflation, which was assumed to be 3% for planning purposes. The actual revenue adjustment for FY 2026 through FY 2028 will be based on the August to August change in Consumer Price Index (CPI) – All Urban Consumers for San Francisco/Oakland/Hayward, as permitted by Government Code section 53756.

The proposed FY 2024 rate adjustment is projected to be effective in May 2024. All subsequent years are proposed to take effect January 1, which also aligns with the rate adjustment schedule for Zone 7.

HDR has concluded that the proposed rate adjustments will provide sufficient revenue to fund the District's revenue requirement over the 5-year period. HDR has reached this conclusion for the following reasons:

- The proposed revenue (rate) adjustments will generate revenue to fund the District's potable and recycled water systems operating and rate funded portion of capital costs as identified in this study.
- The proposed rates maintain the water system's financial health and integrity by providing consistent long term cash flow.
- The proposed rate adjustments follow the District's financial policies.

- The proposed rates are consistent with DSRSD Board of Directors policy direction.

HDR recommends that the District adopt the proposed rate adjustments for FY 2024 through FY 2025, and adjust rates for FY 2026 through 2028 based on the August to August change in CPI – All Urban Consumers for San Francisco/Oakland/Hayward.

Summary of the Water Cost of Service Analysis

A cost of service analysis determines the proportional distribution of the water revenue requirement to the identified customer classes, or rate components. The objective of the cost of service analysis is different from the revenue requirement. Whereas a revenue requirement analysis determines the overall financial needs, the cost of service analysis determines the proportional manner to collect the revenue from each customer class of service or rate component. The cost of service analysis developed as part of this study utilizes generally accepted cost of service principles and methodologies as defined by the American Water Works Association Principles of Water Rates, Fees, and Charges manual (AWWA M1).

The cost service analysis begins by functionalizing the revenue requirement, and then allocating the functionalized revenue requirement to the appropriate cost component(s) (e.g., commodity-related, capacity-related, customer-related). The individual allocation totals are then distributed to the appropriate customer classes of service and rate component based on the proportional burden placed on the system. A summary of the water cost of service results by customer type for FY 2024 is shown in Table ES - 2.

Table ES-2 FY 2024 Water Cost of Service Results (\$000)				
Class Of Service	Present Rate Revenue (FY 2024)	Distributed Costs	\$ Change	% Change
Residential / Commercial	\$29,445	\$30,096	(\$652)	2.2%
Irrigation	3,272	3,312	(40)	1.2%
Recycled Water	6,218	7,252	(1,034)	16.6%
Power Costs	1,013	1,484	(472)	46.6%
Total System	\$39,948	\$42,146	(\$2,197)	5.5%

The cost of service analysis results indicate that cost differences exist between the customer classes of service. The District charges all customers the same fixed meter charge but different consumption rates based on the cost and type of service. For example, potable water customers, but not recycled water customers, are charged for wholesale water from Zone 7. Similarly, both potable and recycled water customers are charged a power charge for deliveries to customers in higher elevation areas of the District’s service area. The power charges represent the cost of power required to pump water to those higher elevation areas.

Table ES-3
Summary of the Cost of Service Unit Costs (\$ / CCF)

Rate Component	Present Revenue (FY 2024)	Distributed Costs	\$ Difference	% Difference
Bi-Monthly Equivalent Meter	\$39.37	\$40.68	\$1.31	3.3%
DSRSD Consumption Rates				
Residential/Commercial	\$1.45	\$1.59	\$0.14	9.4%
Irrigation	1.86	2.02	0.16	8.5%
Recycled Water	4.45	5.23	0.78	17.5%
Power Charge	0.29	0.43	0.14	46.6%
Wholesale Pass Through Consumption Rates				
Zone 7	\$4.45	\$4.42	(\$0.03)	(0.7%)

Summary of the Water Rate Design

The final step of the District’s water rate study is to design rates to collect the desired levels of revenue, based on the results of the revenue requirement and cost of service analyses. In reviewing the District’s rates, consideration was given to both the rate amount and structure. The proposed rates within this report reflect the findings, conclusions and recommendations of the District’s revenue requirement and cost of service analysis prepared as part of this study.

The District’s proposed water rates have been developed with the intent of meeting the legal requirements of California Constitution Article XIII D, Section 6 (Article XIII D), adopted as a part of Proposition 218. While Article XIII D requires the development of cost-based rates, it does not prescribe a specific approach or methodology to ensure meeting this legal requirement. There are multiple acceptable methodologies. HDR and DSRSD staff collaborated to select a methodology that best reflects DSRSD’s financial and operational needs. Consequently, HDR has developed this report, along with the District’s proposed water rates, based on the principles and methodologies contained in the AWWA M1 Manual, while tailoring the methodology to be reflective of the District’s unique system and customer characteristics. HDR is of the opinion that this approach meets the requirements of Article XIII D and recent legal decisions to provide an administrative record of the steps taken to establish the District’s proposed potable and recycled water rates. HDR reaches this conclusion based upon the following:

“While Article XIII D requires the development of cost-based rates, it does not prescribe a specific approach or methodology to assure meeting this legal requirement.”

- **The revenue derived from water rates does not exceed the funds required to provide the property related service (i.e., water service).** The proposed rates are designed to collect the revenue requirement of the District’s water utility as developed in this study.

- **The revenues derived from water rates shall not be used for any purpose other than that for which the fee or charge is imposed.** The revenues derived from the District's water rates are used exclusively to operate and maintain the District's potable and recycled water systems.
- **The amount of a fee or charge imposed upon a parcel or person as an incident of property ownership shall not exceed the proportional costs of the service attributable to the parcel.** Section 4 of this study, the cost of service analysis, focuses almost exclusively on the issue of proportional assignment of costs to customer classes of service. The cost of service analysis appropriately groups customers into customer classes of service (residential/commercial, irrigation, recycled water) that reflect the varying consumption patterns and system requirements of each. Grouping of customers into these classes of service addresses the proportionality requirement of Article XIII D by setting rates which consider the manner in which the costs of service are incurred and the differential demands and burdens on the District's water system which are fairly attributable to each customer class of service, without subsidizing between these customer classes of service.

Given the requirements to develop rates based on cost of service principles, the average unit costs developed in the cost of service analysis were used to design the proposed water rates for the District's customer classes of service.

The District's water rates has a bi-monthly meter charge and variable consumption charges. The consumption charges have different components based on the type of customer and service. If the customer is located in an elevated zone which requires pumping, then a power charge is also applied to recover the direct costs of pumping water to the higher elevation.

The FY 2024 rates are based on the result of the detailed cost of service analysis, the FY 2025 rates are a result of applying the necessary FY 2025 rate adjustment (determined in the revenue requirement analysis) to the FY 2024 rates. Rates adjustments from FY 2026 through FY 2028, will be calculated annually based on the August to August change in CPI – All Urban Consumers for San Francisco/Oakland/Hayward. Table ES-4 provides the proposed bi-monthly water rates.

**Table ES-4
Current and Proposed Rates**

	Current	FY 2024	FY 2025
Bi-monthly Charge by Meter Size			
5/8"	\$39.37	\$40.68	\$42.92
3/4"	54.88	59.62	62.90
1"	85.93	97.50	102.87
1-1/2"	163.53	192.21	202.78
2"	256.67	305.85	322.68
3"	683.51	826.73	872.20
4"	1,172.45	1,423.36	1,501.65
6"	2,491.79	3,033.33	3,200.17
8"	4,354.40	5,306.23	5,598.07
10"	6,527.43	7957.95	8,395.63
Consumption Rates (\$/CCF)			
Residential/Commercial	\$1.45	\$1.59	\$1.67
Irrigation	1.86	2.02	2.13
Recycled Water	4.45	5.23	5.51
Power Charge	0.29	0.43	0.45

The District purchases all of its potable water supplies from Zone 7, the Tri-Valley’s wholesale water supplier. Zone 7 charges the District a wholesale rate for purchasing treated water. This rate covers Zone 7’s cost of purchasing water from the California Department of Water Resources through the State Water Project, and all associated costs. Similar to the District’s rates, Zone 7’s wholesale rates are comprised of fixed and variable charges. The District currently blends the fixed and variable wholesale charges, in proportion to estimated water use, and passes through a “Zone 7 Cost of Water” charge to District customers.

It is proposed the District establish a separate Zone 7 fixed and variable consumption rate to more closely reflect the manner in which Zone 7 charges the District for wholesale water. Table ES -5 provides the proposed rate to recover the Zone 7 costs based on a revised rate structure which includes a new bi-monthly meter charge and a variable consumption charge for potable water customers. The FY 2024 rates are based on the result of the cost of service analysis and are designed to collect 30 percent of the Zone 7 fixed charge imposed by Zone 7 through the new bimonthly meter charge. The remainder of the fixed charge and all consumption charges would be collected through the consumption charge. DSRSD will pass through any future adjustments to Zone 7’s wholesale water costs to potable water customers as described earlier.

Table ES-5
Current and Proposed Zone 7 Rates For Potable Customers

	Current	FY 2024
Bi-monthly Charge by Meter Size		
5/8"	NA	\$12.93
3/4"	NA	19.39
1"	NA	32.32
1-1/2"	NA	64.64
2"	NA	103.42
3"	NA	281.17
4"	NA	484.78
6"	NA	1,034.19
8"	NA	1,809.84
10"	NA	2,714.76
Variable Consumption Charge		
Zone 7 (\$/CCF)	\$4.45	\$3.83

The proposed Zone 7 consumption rate declines for 2024 because of the establishment of the separate bi-monthly fixed meter charge to recover a portion of the fixed costs of Zone 7 water purchases. For FY 2025 and after, the District will pass through any future adjustments to the wholesale rate that the Zone 7 Board of Directors authorizes, as authorized pursuant to California Government Code section 53756.

Summary of the Water Shortage Condition Rates

DSRSD’s Adopted Water Shortage Contingency Plan is a strategic plan to prepare and respond to water shortage conditions resulting from drought and emergencies, including defined actions to reduce demand over six shortage condition levels from 10 percent to more than 50 percent demand reductions. Water shortage condition rates address the revenue impacts of decreased consumption during declared water shortages or emergencies. The District’s current water shortage condition rates are provided in Table ES-6.

Revised water shortage condition rates were calculated so that DSRSD generates sufficient revenue to cover the cost of providing water service during times of water shortage and reduced customer deliveries. These rates are only implemented during drought conditions and other water shortage emergencies and require a declaration from the District’s Board of Directors to impose.

Article X, section 2 of the State Constitution institutes the need to preserve the State’s water supplies and to discourage the wasteful or unreasonable use of water by encouraging conservation. As such, public agencies are mandated to maximize the beneficial use of water,

prevent waste, and encourage conservation. In connection with meeting the objectives of Article X, section 2, Water Code Sections 370 and 375 et. Seq. authorize a water purveyor to utilize its water rate design to incentivize the efficient use of water.

As part of this study, the District will realign water shortage condition rates with the water shortage stages identified in the current Water Shortage Contingency Plan submitted to the California Department of Water Resources, which expands the stages of shortage from four to six. In addition, the water shortage rates have been designed to include an allowance for baseline water use, in recognition that a certain amount of water is required for essential uses and cannot be conserved. This baseline allowance, established as 5 CCF/bimonthly, provides the residential and commercial customers 5 CCF of water per billing period at the normal condition rate before charging the corresponding water shortage rate for all consumption in excess of 5 CCF. Table ES-7 provides the proposed water shortage rates.

Table ES-6					
Current Water Shortage Condition Rates (\$/CCF)					
	Normal Conditions	Water Shortage Condition			
		Stage 1	Stage 2	Stage 3	Stage 4
Water Reduction Goal	0%	10%	20%	35%	50%
Residential/Commercial Customers					
All Units	\$1.45	\$1.62	\$1.83	2.24	2.92
Irrigation					
All Units	\$1.86	\$2.07	\$2.33	2.86	3.72
Power Charges					
All Units	\$0.29	\$0.32	\$0.37	0.45	0.59

Table ES-7
Proposed Water Shortage Condition Rates (\$/CCF)

Year	FY 2024	FY 2025
Residential/Commercial Customers	All Units over 5 CCF per Billing Period	
Normal Conditions	\$1.59	\$1.67
Stage 1 - 10% Reduction	1.81	1.91
Stage 2 - 20% Reduction	2.11	2.23
Stage 3 - 30% Reduction	2.54	2.68
Stage 4 - 40% Reduction	3.17	3.34
Stage 5 - 50% Reduction	4.22	4.46
Stage 6 - Reduction over 50%	6.33	6.68
Irrigation	All Units	
Normal Conditions	\$2.02	\$2.13
Stage 1 - 10% Reduction	2.24	2.36
Stage 2 - 20% Reduction	2.52	2.66
Stage 3 - 30% Reduction	2.88	3.04
Stage 4 - 40% Reduction	3.36	3.55
Stage 5 - 50% Reduction	4.03	4.26
Stage 6 - Reduction over 50%	5.04	5.32
Power Charges		
All Units	NA	NA

It was determined that the Power Charge water shortage rate was not necessary to maintain revenue stability when water shortage stages are declared since the cost of power is proportionate to the volume of water pumped and any reduction in consumption should be commensurate to reduced power costs.

Summary

The above summary is the culmination of an extensive effort by the District and HDR Engineering to develop a comprehensive review of the District’s water rates, methodologies, and structure. The recommendations and proposed rates contained herein are intended to provide a prudent level of funding for the water fund while providing proportional and cost-based rates.

1 Introduction and Overview

1.1 Introduction

HDR Engineering, Inc. (HDR) was retained by the Dublin San Ramon Services District (District) to conduct a potable and recycled water rate study. The objective of a water rate study is to develop proportional and cost-based water rates which are compliant with the legal requirements of Proposition 218. This is accomplished by first reviewing and analyzing the District's water operating expenses and capital costs and developing a projection of the overall revenue requirement of the water utility. Next, the District's revenue requirement is proportionally distributed to the appropriate District customer classes of service (e.g., residential/commercial, irrigation, etc.) or rate components. The findings and conclusions from the cost of service process are then used to develop the District's proposed water rates which are reflective of how the District incurs costs to provide water service. The result of the water rate study process is proportional water rates reflective of the water utility specific costs, differing customers classes of service levels and characteristics, and burdens on the water system. The District has historically developed water rate studies to establish their water rates and this study is a continuation of their past practices and commitment to establishing cost-based water rates.

The District owns and operates two water systems, a potable water distribution system, and a recycled water system that consists of a recycled water treatment plant and recycled water distribution system. The District's source for potable water is from the Zone 7 Water Agency. The District's service area is comprised of the City of Dublin and the Dougherty Valley area of the City of San Ramon. The District also partners with East Bay Municipal Utility District (EBMUD) to produce and distribute recycled water through the DSRSD-EBMUD Recycled Water Authority (DERWA), a joint powers authority formed in 1995. In an average year, 75% of DSRSD's water supply to its customers is potable water from Zone 7, and about 25% of its water supply is recycled water for outdoor irrigation.

1.2 Goals and Objectives

The District had a number of key objectives in developing the water rate study. These key objectives were as follows:

- Develop the study in a manner that is consistent with the principles and methodologies established by the American Water Works Association Principles of Water Rates, Fees, and Charges manual (AWWA M1).
- Review and utilize best industry practices, while recognizing and acknowledging the specific and unique characteristics of the District's potable and recycled water systems.
- Utilize the findings from the District's rate study to establish cost-based and proportional water rates for FY 2024 through 2028.

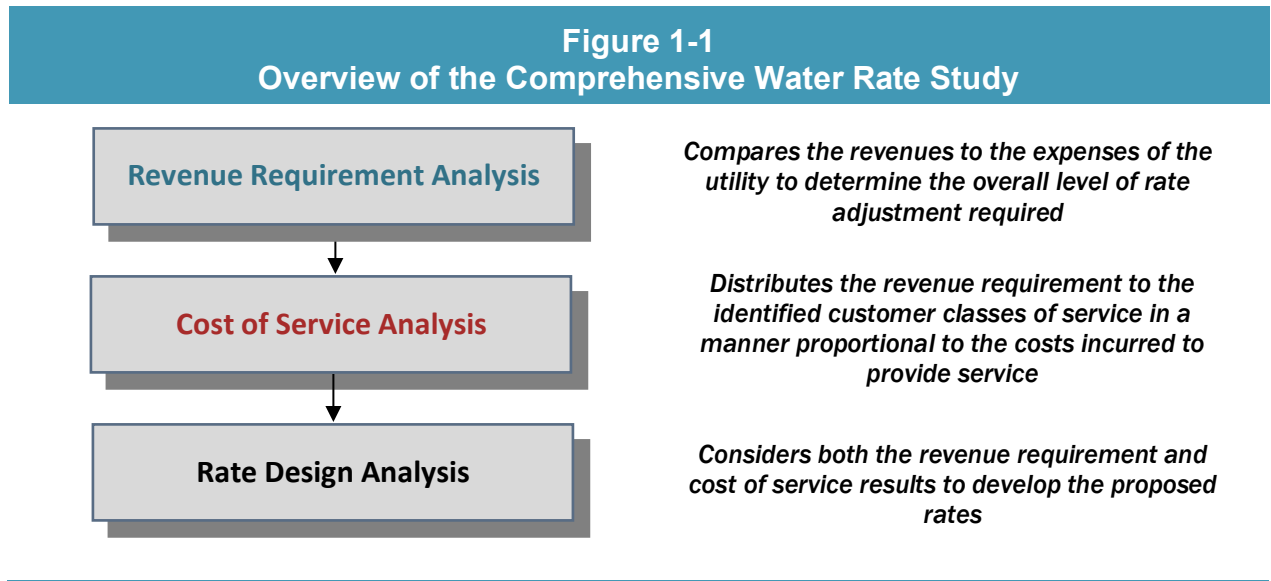
- Propose rates which do not exceed the reasonable cost of providing the service to meet the legal requirements of Proposition 218 (California Constitution Article XIII D) and which are understandable to the customer.
- Develop rates consistent with the District Board of Director’s guidance and policies.

These key goals and objectives for the study provided a framework for the technical analysis that follows.

1.3 Overview of the Rate Study Process

User rates must be set at a level where a utility’s operating expenses and rate funded capital expenditures are met. Failure to achieve this objective may lead to insufficient funds to maintain system integrity. In addition, the District must meet the requirements of Proposition 218. To accomplish this, a comprehensive water rate study is performed. Provided below in Figure 1-1 is an overview of the key analyses undertaken.

A comprehensive rate study consists of three interrelated analyses which includes a revenue requirement, cost of service, and rate design analysis. Figure 1-1 provides an overview of these analyses.



The revenue requirement analysis is concerned with the overall funding sources and expenses of the utility. From this analysis, a determination can be made as to the overall level of adjustment to rates. Next, a cost of service analysis is performed to proportionally distribute the revenue requirement to the customer classes served (e.g., residential/commercial, irrigation, etc.) and type of service (e.g., potable vs. recycled). Finally, given an overall level of rate adjustment and the proportional distribution of the costs between the customer classes of service, the last step of the rate study process is the design of rates to collect the appropriate level of revenues, based on the cost of service results, while considering other rate design goals and objectives of the utility (e.g., revenue stability, conservation, understandability).

In developing this review of the potable and recycled water systems, HDR utilized generally accepted cost of service and rate setting principles and methodologies.

1.4 Report Organization

This report is organized as follows:

- **Section 2** – Overview of Water Rate Setting Principles
- **Section 3** – Development of the Revenue Requirement Analysis
- **Section 4** – Development of the Cost of Service Analysis
- **Section 5** – Development of the Proposed Rate Designs

A technical appendix is attached at the end of the report which provides the analysis used in the preparation of this report.

1.5 Summary

This report will review the comprehensive water rate study prepared for the Dublin San Ramon Services District. This report was developed with assistance from District management and staff and has been developed utilizing generally accepted water rate setting principles and methodologies.

2 Overview of Water Rate Setting Principles

2.1 Introduction

This section of the report provides background information about the water rate setting process, including descriptions of generally accepted principles, methods of determining a revenue requirement and rate designs. This information is useful for gaining a better understanding of the details presented in Sections 3, 4, and 5.

2.2 Generally Accepted Rate Setting Principles

As a practical matter, all utilities should consider setting their rates around generally accepted or global principles and guidelines. That is, utility rates should be:

- Cost-based, proportional, and set at a level that meets the utility's full revenue requirement.
- Easy to understand and administer.
- Designed to conform to "generally accepted" rate setting methodologies.
- Stable in their ability to provide adequate revenues for meeting the utility's financial, operating, and regulatory requirements throughout the study period.
- Established at a level that is stable from year-to-year from a customer's perspective.

The above global principles have been used by the District to establish their rates in the past and were considered in the current study.

2.3 Determining The Revenue Requirement

Most public utilities, such as the District, use the cash basis¹ approach 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 of time to determine required revenues. The revenue requirement for a public utility is usually comprised of the following costs or expenses:

- **Operation and maintenance (O&M)** expenses which typically includes the materials, electricity, labor, supplies, etc. needed to keep the utility functioning.
- **Taxes and/or Transfers**, either state or local utility taxes, or transfers to another fund.

¹ Cash basis as used in the context of rate setting is not the same as the terminology used for accounting purposes and recognition of revenues and expenses. As used for rate setting, cash basis simply refers to the specific cost components to be included with the revenue requirement analysis

- **Annual debt service payments** (principal and interest) which have been used to fund capital improvements. For the District, the annual debt service payments are funded through the capital replacement and expansion funds.
- **Capital improvements** financed with rate revenues, which also can reflect 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 expenditures equals the utility’s revenue requirement during any selected period of time (historical or projected).

Note that the two portions of the capital expense component (debt service and capital improvements financed from rates) are necessary under the cash basis approach because utilities generally cannot finance all their capital facilities with long-term debt. An exception occurs if a public utility provides service to a wholesale or contract customer. In this situation, a public utility could use the “utility basis” approach (see below) to earn a fair return on its investment.

Table 2-1 provides an overview of the cash basis and utility basis revenue requirement methodology.

Table 2-1 Cash Basis Approach	
+	O&M Expense
+	Taxes or Transfer Payments
+	Capital Improvements Financed with Rate Revenues (≥ Depreciation Expense)
+	Debt service (Principal + Interest)
<hr/>	
=	Total Revenue Requirement

2.4 Cost of Service Analysis

After the total revenue requirement is determined, it is proportionally distributed to the users (e.g., customer classes) of the service. The distribution, analyzed through a cost of service study, reflects the cost relationships for producing and delivering water services.

A cost of service study requires three steps:

1. Costs are **functionalized** or grouped into the various cost categories related to providing service (e.g., distribution, pumping, etc.). This step is largely accomplished by the utility's accounting system.
2. 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 – such as for the District - are typically allocated as commodity (average day), capacity (peak day), or customer-related costs.
3. Once the costs are allocated into components, they are **distributed** to the customer classes of service (residential/commercial, irrigation, etc.,). The distribution is based on each customer class's relative contribution to the specific cost component. For example, customer-related costs are distributed to each class of service based on the total number of customers in that class of service. Once costs are distributed, the necessary revenues for achieving cost-based rates can be determined.

The District's cost of service was developed based on water utility industry generally accepted approaches (i.e., AWWA M1), while at the same time, taking into consideration the District's unique customer and system characteristics. The cost of service analysis developed for the District is discussed in more detail in Section 4 of this report.

2.5 Designing Water Rates

Rates that meet the utility's objectives are designed based on both the revenue requirement and the cost of service analysis. This approach results in rates that are strictly cost-based and does not consider other non-cost based goals and objectives (economic development, ability to pay, revenue stability, etc.). In designing final proposed rates, factors such as continuity of past rate philosophy, economic development, ease of administration, and customer understanding may be taken into consideration. However, the proposed rates must meet the requirements of California Constitution article XIII D, section 6 (Proposition 218), including avoiding subsidization between customer classes of service.

2.6 Summary

This section of the report has provided a brief introduction to the general principles, methods, and economic theory used to set the water rates. These principles and methods will become the basis for the District's water rate analysis. The next section of this report will review the development of the revenue requirement for the District's water system.

3 Development of the Revenue Requirement

3.1 Introduction

The development of a revenue requirement analysis is the first analytical step in the three-step rate study process. This section describes the development of the revenue requirement analysis for the District’s water utility. The District provided to HDR detailed revenue and expenses data for the water system that allowed for the development of the revenue requirement analysis.

The revenue requirement analysis, as developed for the District’s water utility, determines the adequacy of water rates at current rate levels. From this analysis, a determination can be made as to the overall level of rate revenue adjustment needed to provide adequate and prudent funding for both operating and capital expenses. HDR has developed an independent analysis based on the data and information provided by the District.

“The revenue requirement analysis, as developed for the District’s water utility, determines the adequacy of water rates at current rate levels.”

3.2 Determining the Revenue Requirement

In the development of the revenue requirement the water utility must financially “stand on its own” and be properly funded. Within the water enterprise, there are two operating funds (enterprise fund and rate stabilization fund) and two capital funds (replacement fund and expansion fund). The water enterprise fund is a self-supporting fund that covers the costs of water system operations and maintenance. The water rate stabilization fund is the reserve to the water enterprise fund and can be used to achieve and maintain financial stability and avoid wide fluctuations in rates to fund operations.

3.2.1 Establishing a Time Frame

The first step in calculating the revenue requirement for the District’s water utility was to establish a time frame for the revenue requirement analysis. For this study, the revenue requirement was developed for the ten-year period of FY 2024 through FY 2033. Reviewing a multi-year time period is recommended in an attempt to identify any major expenses that may be on the horizon. By anticipating future financial requirements, the District can begin planning for these changes sooner, thereby, minimizing short-term rate impacts and rates over the long-term. For the purposes of establishing proposed rates, and the Proposition 218 process, the first five-year period (FY 2024 – FY 2028) is the focus for this report.

3.2.1 Method of Accumulating Costs

The second step in determining the revenue requirement was to decide on the basis for accumulating costs. Similar to previous studies completed for the District, the revenue requirement analysis utilized a cash basis approach. Table 3-1 provides a summary of the

District’s cash basis approach and cost components used to develop the District’s water revenue requirements.

The revenue requirement developed for the District was “customized” to follow the District’s system of accounts (e.g., the adopted annual operating budget) and contained the cash basis cost components. Given a time period around which to develop the revenue requirement and a method to accumulate the costs, the focus shifts to the development and projection of the revenues and expenses of the District’s water systems.

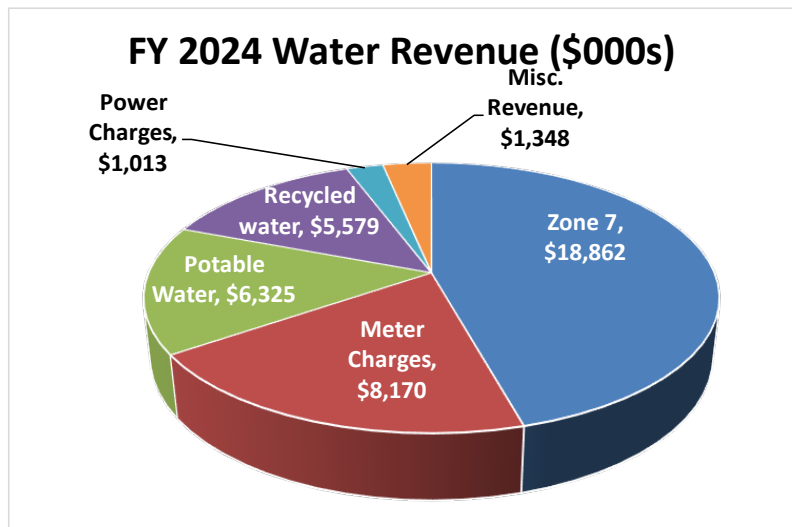
**Table 3-1
Overview of the District’s Cash Basis Revenue Requirement**

+	Operation and Maintenance Expenses
+	Debt Service (P + I) – Existing and Future
+	<u>Capital Improvement Funding Analysis</u>
=	Total Revenue Requirement
-	<u>Miscellaneous Revenues</u>
=	Net Revenue Requirement (Balance Required from Rates)

3.3 Water Revenue Requirement

3.3.1 Projection Water Revenue

The next step in developing the revenue requirement for the District was to develop a projection of rate revenues. District staff provided billing units for FY 2023 to which the FY 2023 rates were applied to estimate the revenue. Revenue beyond FY 2023, through FY 2033, was projected using customer growth assumptions developed in discussion with the District. These growth assumptions varied from year to year but on average were approximately 2.7% for the District. In total, District revenues range from \$41.3 million in FY 2024 increasing to \$45.8 million in FY 2028 based on estimated customer growth.



In addition to rate revenues, the District receives additional revenues from other sources such as interest income and miscellaneous fees. The total amount of miscellaneous revenues is

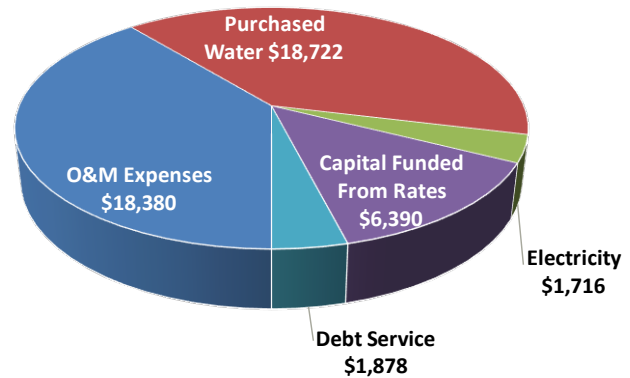
projected to be approximately \$1.3 million for FY 2024 and escalating to \$1.5 million in 2028. As a point of reference, nearly half of the miscellaneous revenue is from inspections, fireline service and backflow prevention.

3.3.2 Projection of O&M Expenses

Operation and maintenance (O&M) expenses are incurred by the District to provide potable and recycled water service. O&M expenses are expensed during the current year and are not capitalized or amortized over an extended period of years.

The FY 2024 and FY 2025 adopted budgets were the starting point for the analysis. The projected O&M expenses beyond FY 2025 were escalated using an appropriate escalation factor (such as CPI) for the type of cost being reviewed. Escalation factors ranged from 3% to 6% per year depending on the type of expense. The total projected water O&M expense ranged from \$38.8 million in FY 2024 increasing to \$44.9 million in FY 2028. Purchased water is a large portion of the District's O&M costs comprising 48% of Total O&M or 40% of the total revenue requirement excluding interfund transfers.

FY 2024 Revenue Requirement (\$000s)



3.3.3 Projection of Capital Replacement Funding

Given the projection of O&M expenses, the next area of costs to be included within the District's revenue requirement is capital costs. The District's capital funding analysis is shown as transfers to the replacement reserves that in turn fund capital projects. Transfers to the replacement fund averaged \$6.6 million from FY 2024 through FY 2028. Along with the replacement funds' existing fund balance, the budgeted transfers are sufficient pay for the projected capital expenditures over the analysis period.

3.4 Summary of the Water Revenue Requirement

The combined O&M, Capital Replacement funding, debt service, and transfers makes up the total revenue requirement. Presented below in Table 3-2 is the District's projected five-year revenue requirement for FY 2024 through FY 2028.

**Table 3-2
Water Revenue Requirement (\$000)**

	Budget			Projected	
	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Revenue					
Rate Revenue	\$39,948	\$40,855	\$41,886	\$43,300	\$44,401
Misc. Revenue	<u>1,348</u>	<u>1,379</u>	<u>1,404</u>	<u>1,429</u>	<u>1,455</u>
Total Revenue	\$41,296	\$42,234	\$43,289	\$44,730	\$45,856
Expenses					
Water Enterprise - 600	\$38,819	\$41,065	\$42,323	\$43,621	\$44,961
Capital Replacement Funding	<u>6,390</u>	<u>6,500</u>	<u>6,610</u>	<u>6,720</u>	<u>6,830</u>
Total Expenses	\$45,209	\$47,565	\$48,933	\$50,341	\$51,791
Net Transfers-In from Other Funds	(\$4,296)	(\$2,851)	\$471	\$517	\$666
Bal./(Def.) Funds	\$384	(\$2,480)	(\$6,114)	(\$6,128)	(\$6,600)
Bal. as % of Rate Rev.	-1.0%	6.1%	14.6%	14.2%	14.9%
Proposed Rate Adj.	5.5%	5.5%	3.0%	3.0%	3.0%

The revenue requirement identifies the District’s water O&M expenses, debt service, transfers, and capital funding needs. The total revenue requirement is then compared to the total sources of funds, which includes the rate revenues, at present rate levels, and other miscellaneous revenues. From this comparison a balance or deficiency of funds can be determined. This balance or deficiency of funds is then compared to the rate revenues to determine the level of rate adjustment needed to meet the revenue requirement.

In viewing Table 3-2, it should be noted that the deficiencies shown are cumulative and compared to the current level of revenues received by the District. In other words, the cumulative deficiency of approximately \$6.6 million in FY 2028 is a function of the existing rates and no assumed adjustments to rates over time. Any adjustment to rates in the initial years will reduce the deficiency in the following years.

In reviewing the overall revenue and needs of the District, HDR and District staff reviewed the need for a rate transition plan to sufficiently fund the needs of the District. To meet these financial needs and reflect Board direction, it is proposed that the District utilize rate stabilization funds to minimize the overall rate adjustments to reflect the proposed annual adjustments to rates of 5.5%, in both FY 2024 and FY 2025. Beyond FY 2025 rates are proposed to be adjusted based on the annual August to August change in the Consumer Price Index - All Urban Consumers for San Francisco/Oakland/Hayward. For purposes of the study, the inflationary assumption is 3.0% annually in FY 2026 through FY 2028.

3.5 Consultant's Conclusions

Based on the revenue requirement analysis as developed in this study, current revenue is not sufficient to meet the systems operating and capital needs. Not adjusting rates in a timely manner will result in annual deficiencies which will be detrimental to the financial health of the District's potable and recycled water systems. It is recommended that the rates be adjusted annually as shown in tables 3-1 to prevent degradation of the systems financial health.

3.6 Summary

This section of the report has provided a discussion of the District's water revenue requirement analyses. The revenue requirement analysis developed a financial plan to support the District's operating and capital needs. The next section of the report will discuss the distribution of the revenue requirement to the customer classes of service and rate components for each system.

4 Development of the Cost of Service

4.1 Introduction

In the previous section, the revenue requirement analysis for the water systems focused on the total sources and application of funds required to adequately fund the District's potable and recycled water systems. This section will discuss and review the development and recommendations of the cost of service analysis for the water system.

A cost of service analysis is concerned with the proportional distribution of the total revenue requirement between the customer classes of service (e.g., residential/commercial, Irrigation). The previously developed revenue requirement for the water systems were utilized in the development of the cost of service analysis.

As with all public utilities, there has been increased importance on cost of service studies by various government agencies, customers, utility regulatory commissions, and other parties. This interest has been generated in part by increasing need to replace aging infrastructure, escalating operating costs, and concern about rate equity among customers. Following the generally accepted guidelines and principles of a cost of service analysis will inherently lead to water rates which are proportional, cost-based, and which do not subsidize any customer class.

“Following the generally accepted guidelines and principles of a cost of service analysis will inherently lead to rates which are equitable, costs-based, and not viewed as arbitrary or capricious in nature”

4.2 Objectives of a Cost of Service Study

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

1. Distribute the revenue requirement proportionally to the customer classes of service
2. Derive average unit costs for subsequent rate designs

The water cost of service analysis proportionally distributes the revenue requirements to the customer classes of service. To accomplish this, the revenue requirement must first be allocated among cost classification for which costs can then be distributed. The allocation cost classifications used for this analysis were commodity, capacity, actual customer, meters and services, recycled water, pumping power costs and purchased water. Since there are two systems, a potable water and recycled water system some cost allocation classifications were exclusive to either the potable or recycled water systems, while other cost classifications apply to both systems. The potable water system allocated costs to the components of commodity, capacity, and purchased water. The recycled water system costs allocation was the recycled water component only. The allocation components that applied to both the potable and recycled

water systems were the actual customer, meters, and services. These costs apply to both customers sets as they represent the costs of providing service to customers regardless of the amount of consumption or if the customer uses potable water or recycled water. The pumping power costs allocation classification is unique since it can apply to either potable water customers or recycled water customers depending on if the customer is located in an elevated part of the District’s service area and requires pump stations for service.

4.3 Water Customer Classes of Service

Currently, the water system serves residential, commercial, irrigation, and recycled water customers. Distributing the allocated costs among the appropriate classes of service is the result of the cost of service process. This analysis groups customers into classes of service. The result of a cost of service analysis is the calculation of the unit costs, which are a product of the allocated costs divided by billing units, both meters and consumption. A key consideration of the District’s study is the allocation of joint costs to provide both potable and recycled water service.

Each customer pays a bi-monthly fixed meter charge. Potable residential, commercial, and irrigation customers also pay a consumption charge, either for residential/commercial or irrigation, as well as a Zone 7 charge that reflects the cost of the wholesale water purchased. Recycled water customers do not pay a Zone 7 charge but do pay a separate recycled water consumption charge based on the cost of providing recycled water service. All customers who are served at higher elevations of the service area, regardless of potable or recycled water, pay a power cost rate that is intended to recover the cost of pumping what to those higher elevations. Table 4-1 provides the Districts classes of service and the rate components used in the costs of service analysis.

Table 4-1 Water Customer Classes and Rates			
Rate Component	Potable Residential/Commercial	Potable Irrigation	Recycled Water
Meter Rate \$/Bi-monthly	X	X	X
Potable Residential/Commercial \$/CCF	X		
Potable Irrigation \$/CCF		X	
Zone 7 Water \$/CCF	X	X	
Recycled Water \$/CCF			X
Power Costs \$/CCF	X	X	X

4.4 General Cost of Service Procedures

In order to determine the cost to serve each customer class of service, a cost of service analysis is conducted. A cost of service study utilizes a three-step approach to review costs. These were previously discussed in our general overview in Section 2 and take the form of functionalization, allocation and distribution.

4.4.1 Functionalization of Costs

The first analytical step in the cost of service process is called functionalization. Functionalization is the arrangement of expenses and asset data by major operating functions within the utility (e.g., distribution, pumping, recycled water treatment).

4.4.2 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 water revenue requirements were reviewed and allocated using the following costs:

- **Commodity-Related Costs:** are those costs which tend to vary with the total quantity of water consumed by a customer. Commodity costs are costs that are incurred during average day demand conditions. Typically, chemicals or electricity are costs that tend to vary based on customer's average day demand. This cost allocation component is specifically for the potable water system allocation purposes. This method is used to distribute costs only as between residential/ commercial customers and irrigation customers.
- **Capacity Costs:** Capacity costs are those which vary with peak day demand, or the maximum rates of flow to customers. System capacity is required when there are large demands for water placed upon the system (e.g., summer lawn watering). 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

Terminology of a Water Cost of Service Analysis

Functionalization – The arrangement of the cost data by functional category (e.g. distribution, pumping, etc.).

Allocation – The assignment of functionalized costs to cost components (e.g. average day, peak day, and customer-related).

Distribution – Distribution the allocated costs to each class of service based upon each class's proportional contribution to that specific cost component.

Commodity Costs – Costs that are allocated as commodity-related vary with the total volume of water consumed (e.g., chemical, electricity for pumping).

Capacity Costs – Costs allocated as capacity-related are related to meeting peak day or peak hour usage. Facilities are often designed and sized around meeting peak demands.

Customer Costs – Costs allocated as customer related vary with the number of customers on the system, e.g. billing costs.

Purchased Water – This is specifically the cost of purchased water applicable only to potable water customers.

Customer Classes of Service – The grouping of customers into similar groups based upon usage characteristics and/or facility requirements.

example, portions of distribution storage reservoirs and mains (pipelines) must be adequately sized to meet these maximum water demand requirements. This allocation classification is also used specifically for distributing costs between the residential/commercial customers and the irrigation customers.

- **Customer Related Costs:** Customer costs are those costs which vary with the number of customers on the water system. They do not vary with water consumption. These costs are also sometimes referred to as readiness to serve or availability costs. Customer costs may also sometimes be further allocated as either actual or weighted. Actual customer costs vary proportionally, from customer to customer, with the addition or deletion of a customer regardless of the meter size of the customer. In contrast, a weighted customer cost reflects a disproportionate cost, from customer to customer, with the addition or deletion of a customer. An example of an actual customer cost is postage for mailing bills. This cost does not vary from customer to customer, regardless of the size or consumption characteristics of the customer. An example of a weighted customer cost can be the size of a customer meter, or potential demand. The District must be ready to serve each customer's potential demand, the customers portion of the system capacity, which is different than the systems actual demand which is captured by the capacity costs allocation described above.
- **Recycled Water Costs:** The District partners with EBMUD to produce and distribute recycled water through DERWA, a joint powers authority and the infrastructure and resulting costs are exclusive to recycled water customers.
- **Purchased Water:** The District is charged by the Zone 7 Water Agency for the potable water delivered to DSRSD for its potable water customers. Given the substantial amount of the cost and the direct nature of the cost, purchased water cost is specifically assigned to potable water customers using this allocation factor. This allocation factor is also the basis of the Zone 7 rate charged by the District to its potable water customers.

4.4.3 Development of Distribution Factors

Once the allocation process is complete, and the customer classes have been defined, the various allocated costs are proportionally distributed to each of the identified customer classes of service. The District's allocated costs for the water utility were distributed to the previously identified customer classes of service using the following distribution factors.

- **Commodity Distribution Factor:** As noted previously, commodity-related costs vary with the total water consumption. Therefore, the commodity distribution factor was based on the projected total metered water consumption plus water losses for each class of service for the projected test period. The commodity distribution factor was used to distribute potable commodity costs between residential/commercial, and irrigation customers.
- **Capacity Distribution Factor:** Capacity is related to peak usage. The capacity distribution factor was developed based on the estimated contribution to the water system peak day use of potable residential/commercial and irrigation customer classes of service. Peak day use by customer class of service was estimated using peaking factors for each customer group. In this case, the peaking factor was defined as the relationship between peak day

contribution and average day use and determined for each customer group based on a review of the average month to peak month usage. Given an estimated peaking factor, the peak day contribution for potable residential/commercial and irrigation customers was developed.

- **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 costs was based on the projection of the number of customers (accounts) developed within the revenue requirement.

The next customer related distribution factor is the weighted customer costs for meters and services. This factor reflects the additional cost a customer can place on the system such as the potential demand on the system given the size of their meter. For planning purposes, the potential for demand must be considered when designing and developing a water system.

The distribution factors used in this analysis were limited to the commodity, capacity and customers. The limited use of distribution factors was because other allocation classifications were not needed to distribute costs among different customer types since they were directly related to a specific rate. For example, recycled water costs apply only to the development of the recycled water rate. Similarly, the pumping power cost allocation is directly related to the power costs rate and do not need to be distributed between different customer types.

4.5 Functionalization and Allocation of the System Assets in Service

As noted above, the first steps of the cost of service analysis are the *functionalization* and *allocation* of system assets in service. In performing the functionalization of system assets in service, HDR utilized the District's replacement cost basis of its water system assets. Once the assets were functionalized, the analysis shifted to the allocation of the asset. The allocation process included reviewing each group of assets and determining the appropriate costs allocation component(s). For example, the District's assets were allocated as: commodity-related, capacity-related, customer-related, or recycled water. Provided below is a summary overview of the allocation process used for the District's system assets. The following approach is based on the methodology as described in the AWWA M1 Manual. The purpose of allocating system assets is to develop a means of allocating the water utilities expenses. The concept behind this process is that the value of system assets is proportional to the costs to operate and maintain the asset. For example, the largest asset in terms of replacement value is the small potable water mains which represents approximately 70% of the total water systems replacement costs. It is then presumed that 70% of an indirect water cost, such as labor are spent operating and maintaining the small potable water mains.

- **Pumping and Storage:** This includes mainly pump stations and reservoirs for both the potable water system and the recycled water system. The potable pump station was allocated as 100% commodity. The recycled water pump station was allocated 100% to the recycled water allocation factor. Potable reservoirs were allocated 29% to capacity and 71%

to customer meters and services. Recycled water reservoirs like recycled water pump stations were also allocated directly to the recycled water allocation factor since those assets only benefit the recycled water customers.

- **Transmission and Distribution:** Pipelines (mains) were broken down into small (less than or equal to 12”) and large (greater than 12”) for both the potable water system and the recycled water system. The small water lines were allocated 29% to capacity and 71% to meters and services. Large water lines were allocated 79% to commodity and 21% to capacity. Both small and large recycled water lines were allocated directly to the recycled water allocation factor because they are only used by recycled water customers.
- **General Equipment:** The general equipment allocation is used for assets such as administrative offices or field operations offices that are needed to serve utility needs overall. These assets serve all customers of the water utility both, potable and recycled water. These assets are allocated as actual customers because it is not related specifically to commodity, capacity, or recycled water.

The result of the functionalization and allocation of the system assets are provided in table 4-2 below.

Table 4-2 Allocation of System Assets					
	Commodity	Capacity	Actual Customer	Meters and Service	Recycled Water
Pumping and Storage	31%	18%	0%	45%	6%
Transmission & Distribution	7%	24%	0%	55%	14%
General Equipment	0%	0%	100%	0%	0%

Table 4 - 2 provides a summary of the basic functionalization and allocation of the major water plant items. A more detailed exhibit of the District’s functionalization and allocation of system assets can be found in the Technical Appendix.

4.6 Assumptions of the Cost of Service Analysis

A number of key assumptions were used within cost of service study. Provided below is a brief discussion of the major assumptions used.

- The test period used for the cost of service analysis was FY 2024. The revenue and expense data for FY 2024 was previously developed within the revenue requirement analysis.
- A cash basis approach was utilized which conforms to generally accepted cost of service approaches and methodologies. This is the same methodology that the District has historically utilized for past cost of service analyses.

- District staff provided detailed information on the allocation of costs, based on their knowledge of each facility and its operation.

4.7 Summary of the Water Cost of Service Analysis

In summary form, the water cost of service analysis began by functionalizing the District’s FY 2024 revenue requirement.

The functionalized revenue requirement was then allocated to the appropriate cost component(s). The individual allocation totals were then proportionally distributed to the identified customer groups based upon the appropriate distribution factor. Table 4-3 provides the distributed revenue requirement by allocation component.

Table 4 - 3 Summary of the Revenue Requirement Allocation (\$000)								
Commodity	Capacity	Actual Customer	Meters and Services	Recycled Water	Pumped Water Costs	Purchase Water	Total	
Residential/ Commercial	\$2,720	\$3,310	\$425	\$6,850	\$0	\$0	\$16,792	\$30,096
Irrigation	313	569	7	493	0	0	1,930	3,312
Recycled Water	0	0	8	691	6,553	0	0	7,252
Power	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1,484</u>	<u>0</u>	<u>1,484</u>
Total	\$3,032	\$3,879	\$441	\$8,034	\$6,553	\$1,484	\$18,722	\$42,146

The distributed expenses for each customer group were then aggregated to determine each customer group’s overall revenue responsibility. A summary of the detailed cost responsibility developed for each class of service versus the customer class present rate revenue is shown in Table 4-4.

Table 4 - 4 Summary of the Cost of Service Analysis (\$000)				
Class of Service	Present Revenue (FY 2024)	Allocated Costs	\$ Difference	% Difference
Residential / Commercial	\$29,445	\$30,096	(\$652)	2.2%
Irrigation	3,272	3,312	(40)	1.2%
Recycled Water	6,218	7,252	(1,034)	16.6%
Power Costs	<u>1,013</u>	<u>1,484</u>	<u>(472)</u>	<u>46.6%</u>
Total	\$39,948	\$42,146	(\$2,197)	5.5%

The distribution of costs provided a proportional distribution of the facilities and costs to each customer class reflective of their respective benefit and burden on the water system. The cost

of service results indicated that costs differences exist between the customer classes of service. The largest difference is for power cost which is the result of recent increases in power cost expenses for the District as a whole.

While the District’s cost of service analysis provides the distribution to each customer class of service, the average unit costs are the basis for the proposed rates. Table 4-5 below provides the unit costs calculated from the cost of service results.

Table 4 - 5 Summary of Cost of Service Unit Costs				
Allocation Component	Residential/ Commercial	Irrigation	Recycled Water	Power Costs
Commodity - \$/CCF	\$0.72	\$0.72	\$0.00	\$0.00
Capacity - \$/CCF	\$0.87	\$1.30	\$0.00	\$0.00
Actual Customer - \$/Bi-Monthly/Account	\$2.80	\$2.80	\$2.80	\$0.00
Meters & Services - \$/B-Monthly/Equivalent Meter	\$37.88	\$37.88	\$37.88	\$0.00
Recycled Water - \$/CCF	\$0.00	\$0.00	\$5.23	\$0.00
Pumped Water - \$/CCF	\$0.00	\$0.00	\$0.00	\$0.43
Purchased Water - \$/CCF	\$4.42	\$4.42	\$0.00	\$0.00

4.8 Consultant’s Conclusions and Recommendations

The cost of service analysis provides the basis for cost-based adjustments between the customer classes of service for both systems. Historically, the District has followed cost of service principles to set rates, which is also the recommendation for this study. Given the results of the cost of service, the proposed rates will be set to reflect the results shown in Table 4-5.

This section of the report has reviewed the cost of service analyses developed for the District. This study provides the basis for proportionally distributing the utility’s costs between the District’s water rates. Furthermore, this study provides the basis for determining the level of revenue to be collected from each customer class of service within the rate design process. The next section of the report will discuss the design of the proposed water rates.

5 Development of the Water Rate Design

5.1 Introduction

The final step of the comprehensive rate study process is the design of the proposed rates. This step involves using the results of the revenue requirement and cost of service analysis to establish the overall level of adjustment required. This section of the report will provide a more detailed discussion of the development of the proposed rate designs.

5.2 Development of Cost-Based Water Rates

Developing rates that are cost-based and proportional is of paramount importance and the purpose of completing a rate study. While always a key consideration in developing rates, meeting the legal requirements, and documenting the steps taken to meet the requirements, has been in the forefront due to statutory requirements and judicial decisions. Given this, the development of the District's proposed potable and recycled water rates have been developed to meet the legal requirements of California Constitution article XIII D, section 6 (Article XIII D). A substantive component of Article XIII D is the development of rates which reflect the cost of providing service and which are proportionally distributed between the appropriate customer classes, or rate components based on differential burdens placed on the water system. HDR would point out that there is no single methodology for proportionally assigning costs to the various customer groups. HDR collaborated with District staff to utilize a methodology which best suited the goals of the District and reflected the unique characteristics of the District's water systems. The AWWA Principles of Water Rates, Fees, and Charges discusses various methodologies which may be used to establish cost-based rates. Article XIII D, however, is not prescriptive and does not provide a specific acceptable methodology for establishing rates. Given that, HDR developed the District's proposed water rates based on generally accepted rate setting methodologies to meet the requirements of Article XIII D.

HDR is of the opinion that the proposed rates meet the legal requirements of Article XIII D. HDR reaches this conclusion based upon the following:

- The revenue derived from water rates does not exceed the funds required to provide the property related service (i.e., potable and recycled water service) for which they are imposed. The proposed rates are designed to collect the overall revenue requirement of the District's potable and recycled water systems, including funding appropriate reserves.
- The revenues derived from water rates will be used solely for the water system costs as described herein and shall not be used for any purpose other than that for which the fee or charge is imposed.
- The proposed water rates do not exceed the proportional costs of the service attributable to the customer class of service. The cost of service analysis focused exclusively on the issues of proportional assignment and allocation of costs to the appropriate rate component.

- The proposed rates are based on the appropriate allocated costs as determined by the costs of service which is based on industry standard costs allocation principles and methods as described in the AWWA M1. The allocation of costs to the appropriate rate component creates the proportionality expected under Proposition 218 since the specific rate component is a direct function of the allocated costs. Proportionality is gained when a customer is charged the rate based on their actual consumption or meter size for which the rate is based.

5.3 Water Rate Design

The final step and the purpose for the revenue requirement and the cost of service is to design proportional, cost based rates. The revenue requirement set the level of overall amount of funding needs and the cost of service distributed the costs identified in the revenue requirement. These allocated and distributed costs are then the basis for the development of the proposed rates. The District’s proposed rates are appropriately aligned with the allocated costs, in that the recycled water allocation is the cost basis for the recycled water rate and the purchased water allocation is the cost basis for the Zone 7 Rate. The next step is simply to divide the cost by the billing units (consumption in the case of variable rates (Table 5-1) and meters in the case of fixed charges (Table 5-2)), for the associated service. For example, the commodity and capacity costs are associated with the potable customers consumption rate, recycled water costs are associated with the recycled water consumption rate and the pumping power costs are associated with the power charge which is charged by consumptive volume.

Table 5-1 provides the development of the potable water rates for the residential/commercial and irrigation rates. The allocated costs were established by the cost of service analysis in Section 4 of this report.

Table 5 - 1			
Allocated Commodity and Capacity Related Costs (\$000s)			
	Total	Residential / Commercial	Irrigation
Allocated Commodity Costs	\$3,032	\$2,720	\$313
Allocated Capacity Costs	3,879	3,310	569
Total Commodity & Capacity Costs	\$6,911	\$6,030	\$882
Potable Water Units - CCF		3,801,584	437,037
Unit Cost of Potable Water - \$/CCF		\$1.59	\$2.02

In the above table, the distribution between the residential/commercial and irrigation customers was based on the customer class of service relative consumption. The distribution between the residential/commercial rate and the irrigation rate for capacity was based on each customer type’s contribution to peak day. Peak day responsibility was estimated using information from the District’s 2016 Water Master Plan and actual FY 2023 consumption data on a peak billing

period to average billing period basis.

The District's bi-monthly meter rate is comprised of two parts a customer cost allocation (actual customer) and a meters and service costs allocation. The actual customer component was calculated by dividing actual customer costs by the number of customer accounts, and then dividing by 6 to put the rate on a bi-monthly basis. The meters and service allocation component was divided by the equivalent meters then divided by 6 to convert it to a bi-monthly rates. Table 5-2 provides the development of the bi-monthly meter charges.

Table 5 - 2				
Allocated Customer Related Costs (\$000s)				
	Actual Customer		Meters and Services	
Allocated Actual Customer Costs	\$441		\$8,034	
Number of Units (Potable & Recycled Water)	26,222	Cust. Accts.	35,347	EqvInt. Mtrs.
Unit Cost - \$/Bi-Monthly	\$2.80	\$/Cust. Accts.	\$37.88	\$/EqvInt. Mtrs.

The two components of the allocated customer costs are added together to establish the actual bi-monthly meter rate charged to the District's customers. The actual customer components are charged the same rate for all meter sizes while the meters and services rate vary by meter size, with the rate increasing as the size and therefore the capacity (potential demand) of the meter increases. Table 5-3 provides the bi-monthly meter rates by meter size.

Table 5 - 3					
Customer Bi-Monthly Meter Rates					
Meter Size	Customer Rate		Meters and Service Rate		Total Meter Rate
5/8"	\$2.80	+	\$37.88	=	\$40.68
3/4"	2.80	+	56.82	=	59.62
1"	2.80	+	94.70	=	97.50
1-1/2"	2.80	+	189.41	=	192.21
2"	2.80	+	303.05	=	305.85
3"	2.80	+	823.93	=	826.73
4"	2.80	+	1,420.56	=	1,423.36
6"	2.80	+	3,030.53	=	3,033.33
8"	2.80	+	5,303.43	=	5,306.23
10"	2.80	+	7,955.15	=	7,957.95

Table 5-4 provides the recycled water and pumped water rate calculation.

Table 5 - 4 Allocated Recycled Water Costs and Pumped Water Costs				
	Recycled Water Costs		Pumped Water Costs	
Allocated Costs - Recycled/Pumped Water	\$6,553		\$1,484	
Units - Recycled/Pumped Water	1,253,657	CCF	3,492,402	CCF
Unit Costs	\$5.23	\$/CCF	\$0.43	\$/CCF

Recycled water and the power costs rates are both based on the customers consumption. The rates were calculated by dividing the allocated cost by the consumption units. Per direction from the District Board of Directors, which reaffirmed that development related costs should be funded through the expansion fund, Table 5-4 reflects a reimbursement of \$700,000 annually for each year of the rate study period from the expansion fund. This rate design reflects that recycled rates are intended to recover recycled operations and maintenance costs, and that capital and debt service costs are recovered through water capacity reserve fees.

Based on Board direction, the proposed rates establish a separate bi-monthly fixed charge for Zone 7 purchased water in addition to the existing consumption rate. The same level of revenue is collected as it would have been under the current single consumption rate method, just in a different manner with the addition of the fixed charge. This change in the Zone 7 rate was in recognition that the District is charged a fixed amount and a consumption rate by Zone 7 . Table 5-5 provides the proposed Zone 7 fixed and variable rates.

Table 5 - 5 Zone 7 Water Agency Purchased Water Costs (\$000s)					
	Total	Fixed Zone 7 Costs		Variable Zone 7 Costs	
Allocated Purchased Water Costs	\$18,722	\$2,506		\$16,216	
Units - Purchased Water		32,307	EqvInt. Mtrs.	4,238,622	CCF
Unit Cost		\$12.93	\$/Bi-Monthly	\$3.83	\$/CCF

The preceding tables in this chapter provides the unit cost calculation for FY 2024. These rates will also serve as the basis for future rates. The FY 2024 rates will be implemented on May 1, 2024, and the 2025 rates will be implemented January 1, 2025. DSRSD will directly pass through future adjustments to the Zone 7 wholesale rate as allowed by California Government Code 53756.

**Table 5-6
Current and Proposed Rates**

	Current	FY 2024 Effective 4/1/24	FY 2025 Effective 1/1/25
Bi-monthly Charge by Meter Size			
5/8"	\$39.37	\$40.68	\$42.92
3/4"	54.88	59.62	62.90
1"	85.93	97.50	102.87
1-1/2"	163.53	192.21	202.78
2"	256.67	305.85	322.68
3"	683.51	826.73	872.20
4"	1,172.45	1,423.36	1,501.65
6"	2,491.79	3,033.33	3,200.17
8"	4,354.40	5,306.23	5,598.07
10"	6,527.43	7,957.95	8,395.63
Consumption Rates (\$/ccf)			
Residential/Commercial	\$1.45	\$1.59	\$1.67
Irrigation	1.86	2.02	2.13
Recycled Water	4.45	5.23	5.51
Power Charge	0.29	0.43	0.45

Zone 7 wholesale water rates for FY 2024 are shown in Table 5-7. As provided for in state law, DSRSD passes through any future adjustments to wholesale water costs to water customers, based on the rate adopted by the Zone 7 Board of Directors.

**Table 5-7
Current and Proposed Zone 7 Rates**

	Current	FY 2024
Bi-monthly Charge by Meter Size		
5/8"	NA	\$12.93
3/4"	NA	19.39
1"	NA	32.32
1-1/2"	NA	64.64
2"	NA	103.42
3"	NA	281.17
4"	NA	484.78
6"	NA	1,034.19
8"	NA	1,809.84
10"	NA	2,714.76
Variable Consumption Charge		
Zone 7 (\$/ccf)	\$4.45	\$3.83

5.4 Summary of the Water Shortage Condition Rates

In addition to the District’s normal rate, water shortage condition rates were also developed. Article X, section 2 of the State Constitution institutes the need to preserve the State’s water supplies and to discourage the wasteful or unreasonable use of water by encouraging conservation. As such, public agencies are mandated to maximize the beneficial use of water, prevent waste, and encourage conservation. In connection with meeting the objectives of Article X, section 2, Water Code Sections 370 and 375 et. Seq. authorize a water purveyor to utilize its water rate design to incentivize the efficient use of water.

When properly designed, water shortage condition rates address the issues of the financial/revenue impacts of decreased consumption during declared water shortages or emergencies. Prescribed reductions in consumption are assumed when a utility declares a water shortage or emergency. Water shortage condition rates are intended to collect the level of funding needed by the District to adequately operate the system. The District’s current water shortage condition rates are provided in Table 5 - 8.

Table 5-8
Current Water Shortage Condition Rates (\$/CCF)

Water Reduction Goal	Normal	Water Shortage Condition			
	Conditions	Stage 1	Stage 2	Stage 3	Stage 4
	0%	10%	20%	35%	50%
Residential/Commercial Customers					
All Units	\$1.45	\$1.62	\$1.83	\$2.24	\$2.92
Irrigation					
All Units	\$1.86	\$2.07	\$2.33	\$2.86	\$3.72
Power Charges					
All Units	\$0.29	\$0.32	\$0.37	\$0.45	\$0.59

For this study the District wanted to better align their shortage rates with the State’s Department of Water Resources (DWR) water shortage definitions. In addition to this change, an allowance for health and safety was added to provide the residential and commercial customers five CCF of water per billing period at the normal rate before charging the corresponding water shortage rate.

Table 5 - 9 provides the proposed water shortage rates.

Table 5-9		
Proposed Water Shortage Condition Rates (\$/CCF)		
Year	FY 2024	FY 2025
Residential/Commercial Customers	All Units over 5 CCF per Billing Period	
Normal Conditions	\$1.59	\$1.67
Stage 1 - 10% Reduction	1.81	1.91
Stage 2 - 20% Reduction	2.11	2.23
Stage 3 - 30% Reduction	2.54	2.68
Stage 4 - 40% Reduction	3.17	3.34
Stage 5 - 50% Reduction	4.22	4.46
Stage 6 - Reduction over 50%	6.33	6.68
Irrigation	All Units	
Normal Conditions	\$2.02	\$2.13
Stage 1 - 10% Reduction	2.24	2.36
Stage 2 - 20% Reduction	2.52	2.66
Stage 3 - 30% Reduction	2.88	3.04
Stage 4 - 40% Reduction	3.36	3.55
Stage 5 - 50% Reduction	4.03	4.26
Stage 6 - Reduction over 50%	5.04	5.32
Power Charges		
All Units	NA	NA

The above water shortage condition rates, when a water shortage stage has been declared, replace the potable rates for residential and commercial and irrigation customers. It was determined that the power charge water shortage rate was not necessary to maintain revenue stability when water shortage stages are declared since the cost of power is proportionate to the volume of water pumped and any reduction in consumption should be commensurate to reduced power costs.

5.5 Summary of the Comprehensive Water Rate Study

This section of the report has discussed the development and results of the comprehensive rate study conducted for the District. The results of the comprehensive study indicated that current rates are deficient for the projected 5-year time period reviewed. The implementation of as needed rate adjustments, as shown in the rate tables in this chapter, should generate the additional revenue needed to meet the DSRSD’s water systems funding needs.

The proposed potable and recycled rates, and water shortage condition rates, as proposed herein

for FY 2024 through FY 2025, are designed to be cost-based and to recover the level of funding required by DSRSD. The proposed rates were developed using generally accepted rate making principles and methods. These rates will enable the District's water system to operate in a financially sound and prudent manner.



Appendix

	<i>Budget</i>		<i>Projected</i>								<i>Notes</i>
	<i>FY 2024</i>	<i>FY 2025</i>	<i>FY 2026</i>	<i>FY 2027</i>	<i>FY 2028</i>	<i>FY 2029</i>	<i>FY 2030</i>	<i>FY 2031</i>	<i>FY 2032</i>	<i>FY 2033</i>	
Revenues											
Customer Growth	1.1%	2.4%	3.4%	4.0%	3.2%	1.7%	0.9%	0.8%	0.9%	0.6%	
Residential + Commercial	2.7%	2.8%	3.0%	4.0%	3.0%	1.7%	0.9%	0.8%	0.9%	0.6%	
Irrigation	6.2%	2.7%	3.0%	4.0%	3.0%	1.7%	0.9%	0.8%	0.9%	0.6%	
Recycled	3.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Zone 7	3.0%	2.7%	3.0%	4.0%	3.0%	1.7%	0.9%	0.8%	0.9%	0.6%	
Power	6.2%	2.7%	3.0%	4.0%	3.0%	1.7%	0.9%	0.8%	0.9%	0.6%	
Limited Access	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Consumer Price Index	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	
System Development Charges	1.0%	1.0%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	
Misc. Revenue	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	
Consumption Growth	1.0%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	
Flat	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Expenses											
Salaries and Wages	Budget	Budget	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	
Personnel Benefits	Budget	Budget	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	
Interfund Charges	Budget	Budget	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	
Office and Operating Supplies	Budget	Budget	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	
Professional Services	Budget	Budget	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	
Machinery and Equipment	Budget	Budget	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	
Operational Rentals and Leases	Budget	Budget	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
Purchased Water	Budget	Budget	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	
DERWA	Budget	Budget	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	
Other Utilities	Budget	Budget	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	
Repairs and Maintenance	Budget	Budget	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	
Cost Share Reimbursements	Budget	Budget	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	
Miscellaneous	Budget	Budget	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	
Capital Costs	Budget	Budget	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	
Investment Interest	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	
New Long-Term Debt Assumptions											
Revenue Bond											
Rate	4.8%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
Term	20	20	20	20	20	20	20	20	20	20	
Low terest Loan											
Rate	2.8%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	
Term	20	20	20	20	20	20	20	20	20	20	

Dublin San Ramon Service District
 Water
 Revenue Requirement
 Exhibit 2 - Revenues & Expenses

	Budget	Budget	Projected							Notes	
	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032		FY 2033
Revenues											
Rate Revenue by Rate Component											
Zone 7 Revenue (600.1.150.10)	\$18,861,867	\$19,381,365	\$19,962,802	\$20,761,315	\$21,384,155	\$21,747,680	\$21,943,408	\$22,118,956	\$22,318,027	\$22,451,932	Calc'd Cust Data Tab
DSRSD Fixed Charge (600.1.150.10)	8,169,779	8,355,880	8,578,729	8,884,298	9,119,903	9,258,341	9,329,829	9,394,194	9,466,627	9,516,697	Calc'd Cust Data Tab
DSRSD Potable Revenue (600.1.150.10)	6,325,187	6,499,248	6,694,224	6,961,993	7,170,853	7,292,756	7,358,390	7,417,258	7,484,013	7,528,916	Calc'd Cust Data Tab
DSRSD Recycled Revenue (600.1.150.30)	5,578,773	5,578,774	5,578,774	5,578,774	5,578,774	5,578,774	5,578,774	5,578,774	5,578,774	5,578,774	Calc'd Cust Data Tab
Power Charge Revenue (600.1.150.35)	1,012,796	1,039,850	1,071,046	1,113,887	1,147,304	1,166,808	1,177,310	1,186,728	1,197,409	1,204,593	Calc'd Cust Data Tab
Total Rate Revenue by Rate Component	\$39,948,402	\$40,855,117	\$41,885,575	\$43,300,267	\$44,400,989	\$45,044,358	\$45,387,711	\$45,695,910	\$46,044,850	\$46,280,912	
General Inspections	\$395,000	\$395,000	\$402,900	\$410,958	\$419,177	\$427,561	\$436,112	\$444,834	\$453,731	\$462,805	As Misc. Revenue
Overtime Inspections	3,500	3,500	3,570	3,641	3,714	3,789	3,864	3,942	4,020	4,101	As Misc. Revenue
Plan Check Fees	60,000	76,000	77,520	79,070	80,652	82,265	83,910	85,588	87,300	89,046	As Misc. Revenue
Backflow Prevention	270,000	275,000	280,500	286,110	291,832	297,669	303,622	309,695	315,889	322,206	As Misc. Revenue
Recycled Water Irrigation	2,000	2,000	2,040	2,081	2,122	2,165	2,208	2,252	2,297	2,343	As Misc. Revenue
Fireline service	250,000	260,000	265,200	270,504	275,914	281,432	287,061	292,802	298,658	304,631	As Misc. Revenue
Meter Assemblies	60,000	60,000	61,200	62,424	63,672	64,946	66,245	67,570	68,921	70,300	As Misc. Revenue
Engineering Penalties	175,000	175,000	178,500	182,070	185,711	189,426	193,214	197,078	201,020	205,040	As Misc. Revenue
Limited Access	132,447	132,447	132,447	132,447	132,447	132,447	132,447	132,447	132,447	132,447	Calc'd Cust Data Tab
Total Other Revenues	\$1,347,947	\$1,378,947	\$1,403,877	\$1,429,306	\$1,455,243	\$1,481,699	\$1,508,684	\$1,536,209	\$1,564,284	\$1,592,921	
Total Revenues	\$41,296,349	\$42,234,064	\$43,289,452	\$44,729,573	\$45,856,232	\$46,526,057	\$46,896,395	\$47,232,119	\$47,609,134	\$47,873,832	

	Budget	Budget	Projected								Notes
	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	
Expenses											
Water Enterprise - 600											
Salaries	\$5,532,219	\$5,883,255	\$6,059,753	\$6,241,545	\$6,428,792	\$6,621,655	\$6,820,305	\$7,024,914	\$7,235,662	\$7,452,731	As Salaries and Wages
Overtime	221,000	229,100	235,973	243,052	250,344	257,854	265,590	273,557	281,764	290,217	As Salaries and Wages
Standby Pay	117,620	138,120	\$142,264	\$146,532	\$150,927	\$155,455	\$160,119	\$164,923	\$169,870	\$174,966	As Salaries and Wages
Medical	977,460	1,017,100	1,047,613	1,079,041	1,111,413	1,144,755	1,179,098	1,214,471	1,250,905	1,288,432	As Personnel Benefits
Retirement	1,549,810	1,582,312	1,629,781	1,678,674	1,729,035	1,780,906	1,834,333	1,889,363	1,946,044	2,004,425	As Personnel Benefits
Other Benefits	267,977	280,322	288,732	297,394	306,315	315,505	324,970	334,719	344,761	355,104	As Personnel Benefits
Salary / Benefit Credit	(958,118)	(1,022,838)	(1,053,523)	(1,085,129)	(1,117,683)	(1,151,213)	(1,185,750)	(1,221,322)	(1,257,962)	(1,295,701)	As Personnel Benefits
Training Costs	92,825	95,535	97,446	99,395	101,383	103,410	105,478	107,588	109,740	111,934	As Miscellaneous
Group Training Services	8,250	8,250	8,415	8,583	8,755	8,930	9,109	9,291	9,477	9,666	As Miscellaneous
Temporary Help	102,400	67,620	68,972	70,352	71,759	73,194	74,658	76,151	77,674	79,228	As Miscellaneous
Interns	40,000	20,000	20,400	20,808	21,224	21,649	22,082	22,523	22,974	23,433	As Miscellaneous
Uniforms & Safety Equipment	21,350	22,392	23,120	23,871	24,647	25,448	26,275	27,129	28,011	28,921	As Machinery and Equipment
Permits, Cert., Licens, Member	219,686	228,527	233,098	237,760	242,515	247,365	252,312	257,359	262,506	267,756	As Miscellaneous
Chemicals	86,000	92,760	98,326	104,225	110,479	117,107	124,134	131,582	139,477	147,845	As Office and Operating Supplies
Equipment Under \$20,000	96,800	91,900	94,887	97,971	101,155	104,442	107,837	111,341	114,960	118,696	As Machinery and Equipment
Fuel	54,200	58,200	61,692	65,394	69,317	73,476	77,885	82,558	87,511	92,762	As Office and Operating Supplies
Gas & Electric	1,716,000	1,786,200	1,839,786	1,894,980	1,951,829	2,010,384	2,070,695	2,132,816	2,196,801	2,262,705	As Other Utilities
General Supplies	804,750	872,050	924,373	979,835	1,038,626	1,100,943	1,167,000	1,237,020	1,311,241	1,389,915	As Office and Operating Supplies
Tools	24,725	26,900	27,774	28,677	29,609	30,571	31,565	32,591	33,650	34,743	As Machinery and Equipment
Office Supplies/Services	10,600	11,240	11,914	12,629	13,387	14,190	15,042	15,944	16,901	17,915	As Office and Operating Supplies
Meter Equipment	353,500	353,500	364,989	376,851	389,099	401,744	414,801	428,282	442,201	456,573	As Machinery and Equipment
Water Purchase - Fixed	9,002,430	9,037,609	9,308,737	9,587,999	9,875,639	10,171,908	10,477,066	10,791,378	11,115,119	11,448,572	As Purchased Water
Water Purchase - Variable	9,719,920	11,219,391	11,555,973	11,902,652	12,259,732	12,627,524	13,006,349	13,396,540	13,798,436	14,212,389	As Purchased Water
Professional Services	433,800	331,600	338,232	344,997	351,897	358,935	366,113	373,435	380,904	388,522	As Miscellaneous
Advertising	13,085	13,085	13,347	13,614	13,886	14,164	14,447	14,736	15,031	15,331	As Miscellaneous
Equipment Lease/Rental	71,000	73,300	75,682	78,142	80,682	83,304	86,011	88,806	91,693	94,673	As Machinery and Equipment
Maintenance Contracts	237,050	239,550	244,341	249,228	254,212	259,297	264,483	269,772	275,168	280,671	As Miscellaneous
Software Maintenance	89,900	84,720	89,803	95,191	100,903	106,957	113,374	120,177	127,388	135,031	As Office and Operating Supplies
Monitoring & Testing Services	24,000	19,000	19,950	20,948	21,995	23,095	24,249	25,462	26,735	28,072	As Operational Rentals and Leases
Other Services	1,407,458	1,521,858	1,597,951	1,677,848	1,761,741	1,849,828	1,942,319	2,039,435	2,141,407	2,248,477	As Operational Rentals and Leases
Printing Services	105,600	105,600	107,712	109,866	112,064	114,305	116,591	118,923	121,301	123,727	As Miscellaneous
Meetings	7,640	7,740	7,895	8,053	8,214	8,378	8,546	8,716	8,891	9,069	As Miscellaneous
Subscriptions & Publications	950	950	969	988	1,008	1,028	1,049	1,070	1,091	1,113	As Miscellaneous
Credit Card Transaction Fees	90,000	90,000	91,800	93,636	95,509	97,419	99,367	101,355	103,382	105,449	As Miscellaneous
DERWA JPA	3,583,200	3,653,100	3,762,693	3,875,574	3,991,841	4,111,596	4,234,944	4,361,992	4,492,852	4,627,638	As DERWA
Overhead Charges	2,623,577	2,755,470	2,810,580	2,866,791	2,924,127	2,982,610	3,042,262	3,103,107	3,165,169	3,228,473	As Miscellaneous
Total Water Enterprise - 600	\$38,748,664	\$40,995,418	\$42,251,447	\$43,547,966	\$44,886,372	\$46,268,117	\$47,694,706	\$49,167,703	\$50,688,731	\$52,259,474	
Rate Stabilization - 605											
Low Income Credit (UB)	\$70,000	\$70,000	\$71,400	\$72,828	\$74,285	\$75,770	\$77,286	\$78,831	\$80,408	\$82,016	As Miscellaneous
Total Rate Stabilization - 605	\$70,000	\$70,000	\$71,400	\$72,828	\$74,285	\$75,770	\$77,286	\$78,831	\$80,408	\$82,016	
Water Replacement - 610											
Telecommunication Services	\$250	\$250	\$258	\$265	\$273	\$281	\$290	\$299	\$307	\$317	As Salaries and Wages
DERWA JPA	517,700	242,000	249,260	256,738	264,440	272,373	280,544	288,961	297,629	306,558	As DERWA
Total Water Replacement - 610	\$517,950	\$242,250	\$249,518	\$257,003	\$264,713	\$272,655	\$280,834	\$289,259	\$297,937	\$306,875	
Water Expansion - 620											
DERWA JPA	1,098,094	845,794	871,168	897,303	924,222	951,949	980,507	1,009,922	1,040,220	1,071,427	As DERWA
Total Water Expansion - 620	\$1,098,094	\$845,794	\$871,168	\$897,303	\$924,222	\$951,949	\$980,507	\$1,009,922	\$1,040,220	\$1,071,427	
Total Expenses	\$40,434,708	\$42,153,462	\$43,443,533	\$44,775,100	\$46,149,592	\$47,568,490	\$49,033,333	\$50,545,716	\$52,107,295	\$53,719,792	
Total Operations & Matenance Expense	\$40,434,708	\$42,153,462	\$43,443,533	\$44,775,100	\$46,149,592	\$47,568,490	\$49,033,333	\$50,545,716	\$52,107,295	\$53,719,792	

	Budget	Budget	Projected							Notes	
	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032		FY 2033
Rate Funded Capital											
Replacement Fund	\$6,390,000	\$6,500,000	\$6,610,000	\$6,720,000	\$6,830,000	\$6,940,000	\$7,050,000	\$7,160,000	\$7,270,000	\$7,380,000	
Expansion Fund	0	0	0	0	0	0	0	0	0	0	
Total Rate Funded Capital	\$6,390,000	\$6,500,000	\$6,610,000	\$6,720,000	\$6,830,000	\$6,940,000	\$7,050,000	\$7,160,000	\$7,270,000	\$7,380,000	FY 2023 Dep. Exp. = \$3,484,955
Debt Service											
2017 Water Rev. Ref. Bonds	\$1,877,813	\$1,877,188	\$1,875,313	\$2,306,063	\$2,586,563	\$2,577,063	\$2,579,188	\$2,577,563	\$2,572,188	\$2,567,938	Financial Plan
Total Debt Service	\$1,877,813	\$1,877,188	\$1,875,313	\$2,306,063	\$2,586,563	\$2,577,063	\$2,579,188	\$2,577,563	\$2,572,188	\$2,567,938	
Transfers											
In											
Transfer from Rate Stabilization Fund	(\$3,989,947)	(\$3,325,960)	(\$71,400)	(\$72,828)	(\$74,285)	(\$75,770)	(\$77,286)	(\$78,831)	(\$80,408)	(\$82,016)	
Transfer from Water Replacement Fund	(517,950)	(242,250)	(249,518)	(257,003)	(264,713)	(272,655)	(280,834)	(289,259)	(297,937)	(306,875)	
Transfer from Water Expansion Fund	(3,675,907)	(2,722,982)	(2,746,480)	(3,203,365)	(3,510,784)	(3,529,011)	(3,559,695)	(3,587,485)	(3,612,407)	(3,639,364)	
5th Supplement Agreement (Regional to Water)	(400,000)	(400,000)	(408,000)	(416,160)	(424,483)	(432,973)	(441,632)	(450,465)	(459,474)	(468,664)	As Miscellaneous
Out											
Transfers Out - Enterprise Fund	559,217	633,075	703,338	754,608	907,883	937,900	953,542	932,012	908,827	867,442	
Transfers Out - Other	234,714	241,756	246,591	251,523	256,553	261,684	266,918	272,256	277,701	283,255	As Miscellaneous
Total Transfers	(\$7,789,872)	(\$5,816,361)	(\$2,525,469)	(\$2,943,225)	(\$3,109,829)	(\$3,110,825)	(\$3,138,987)	(\$3,201,772)	(\$3,263,699)	(\$3,346,222)	
Total Revenue Requirements	\$40,912,649	\$44,714,289	\$49,403,376	\$50,857,937	\$52,456,325	\$53,974,728	\$55,523,533	\$57,081,507	\$58,685,784	\$60,321,507	
Balance / (Deficiency) of Funds	\$383,701	(\$2,480,224)	(\$6,113,924)	(\$6,128,364)	(\$6,600,093)	(\$7,448,671)	(\$8,627,138)	(\$9,849,388)	(\$11,076,650)	(\$12,447,675)	
Cumulative Rate Adjust. as a % of Rate Rev	-1.0%	6.1%	14.6%	14.2%	14.9%	16.5%	19.0%	21.6%	24.1%	26.9%	
Proposed Rate Adjustment	5.5%	5.5%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	
Month of Adjustment (FY begins July, July = 7)	2	1	1	1	1	1	1	1	1	1	
Add'l Rev from Proposed Adj.	\$707,456	\$3,142,427	\$5,262,373	\$6,902,321	\$8,622,146	\$10,360,824	\$12,114,625	\$13,933,672	\$15,842,619	\$17,789,983	
Net Bal/(Def) of Funds After Rate Adj.	\$1,091,157	\$662,202	(\$851,551)	\$773,957	\$2,022,053	\$2,912,152	\$3,487,487	\$4,084,284	\$4,765,968	\$5,342,308	
Additional Rate Increase Needed	-2.7%	-1.6%	2.0%	-1.8%	-4.6%	-6.5%	-7.7%	-8.9%	-10.4%	-11.5%	
Debt Service Coverage Ratio											
Before Rate Adjustment	0.46	0.04	-0.08	-0.02	-0.11	-0.40	-0.83	-1.29	-1.75	-2.28	
After Rate Adjustment	0.84	1.72	2.72	2.97	3.22	3.62	3.87	4.12	4.41	4.65	
Average Bi-monthly Residential Bill (3/4" meter + 20 CCF) \$157.37											
Average Bi-Monthly Bill After Rate Adjustment	\$166.03	\$175.16	\$180.41	\$185.82	\$191.40	\$197.14	\$203.05	\$209.15	\$215.42	\$221.88	
\$ Change Per Month	8.66	9.13	5.25	5.41	5.57	5.74	5.91	6.09	6.27	6.46	
Cumulative \$ Change per Month	8.66	17.79	23.04	28.45	34.03	39.77	45.68	51.78	58.05	64.51	

	Budget	Budget	Projected							Notes	
	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032		FY 2033
Reserve Funds											
Beginning Reserve Balance	\$24,812,931	\$24,083,358	\$23,064,600	\$23,662,724	\$25,950,937	\$29,578,482	\$34,207,400	\$39,537,078	\$45,603,847	\$52,509,471	
Water Enterprise - 600											
Beginning Balance	\$8,853,143	\$10,779,517	\$11,717,719	\$11,083,492	\$12,094,597	\$14,398,983	\$17,657,358	\$21,567,742	\$26,165,066	\$31,549,655	
Plus: Additions	1,650,374	1,295,278	703,338	1,528,565	2,929,936	3,850,052	4,441,028	5,016,296	5,674,795	6,209,749	
Plus: Interest	276,000	276,000	217,323	237,149	282,333	346,223	422,897	513,041	618,621	737,839	
Less: Transfer of Excess Fund Balance	0	0	0	0	0	0	0	0	0	0	
Less: Uses of Funds	0	(633,075)	(1,554,889)	(754,608)	(907,883)	(937,900)	(953,542)	(932,012)	(908,827)	(867,442)	
Ending Balance	\$10,779,517	\$11,717,719	\$11,083,492	\$12,094,597	\$14,398,983	\$17,657,358	\$21,567,742	\$26,165,066	\$31,549,655	\$37,629,802	
Min Fund Balance = 2 months of O&M	\$6,646,801	\$6,929,336	\$7,141,403	\$7,360,290	\$7,586,234	\$7,819,478	\$8,060,274	\$8,308,885	\$8,565,583	\$8,830,651	
Target Fund Balance	\$13,293,603	\$13,858,672	\$14,282,805	\$14,720,581	\$15,172,469	\$15,638,956	\$16,120,548	\$16,617,770	\$17,131,166	\$17,661,301	
Water Rate Stabilization - 605											
Beginning Balance	\$15,959,788	\$13,303,841	\$11,346,881	\$12,579,232	\$13,856,339	\$15,179,499	\$16,550,042	\$17,969,335	\$19,438,780	\$20,959,816	
Plus: Additions - Property Tax & Misc Revenue	1,000,000	1,035,000	1,055,700	1,076,814	1,098,350	1,120,317	1,142,724	1,165,578	1,188,890	1,212,667	As Miscellaneous
Plus: Interest	334,000	334,000	248,052	273,121	299,094	325,996	353,855	382,698	412,553	443,450	
Plus: Loan Proceeds	0	0	0	0	0	0	0	0	0	0	
Plus: Bond Proceeds	0	0	0	0	0	0	0	0	0	0	
Less: Uses of Funds	(3,989,947)	(3,325,960)	(71,400)	(72,828)	(74,285)	(75,770)	(77,286)	(78,831)	(80,408)	(82,016)	
Ending Balance	\$13,303,841	\$11,346,881	\$12,579,232	\$13,856,339	\$15,179,499	\$16,550,042	\$17,969,335	\$19,438,780	\$20,959,816	\$22,533,916	
Min Fund Balance = 2 months of O&M	\$6,646,801	\$6,929,336	\$7,141,403	\$7,360,290	\$7,586,234	\$7,819,478	\$8,060,274	\$8,308,885	\$8,565,583	\$8,830,651	
Target Fund Balance	\$13,293,603	\$13,858,672	\$14,282,805	\$14,720,581	\$15,172,469	\$15,638,956	\$16,120,548	\$16,617,770	\$17,131,166	\$17,661,301	
Target Combined Fund Balance (600 + 605)	\$26,587,206	\$13,858,672	\$14,282,805	\$14,720,581	\$15,172,469	\$15,638,956	\$16,120,548	\$16,617,770	\$17,131,166	\$17,661,301	
Water Replacement - 610											
Beginning Balance	\$32,016,267	\$30,758,374	\$30,566,824	\$28,242,561	\$38,571,767	\$40,012,826	\$39,449,083	\$41,784,962	\$44,301,765	\$43,563,413	
Plus: Additions - Transfer from Operations	6,390,000	6,500,000	6,610,000	6,720,000	6,830,000	6,940,000	7,050,000	7,160,000	7,270,000	7,380,000	
Plus: Interest	580,000	580,000	553,776	756,309	784,565	773,511	819,313	868,662	854,185	656,659	
Plus: Capital Reserve Fees	2,130,526	4,760,700	7,126,000	8,964,000	3,298,000	3,397,000	3,499,000	3,604,000	3,712,000	3,823,000	
Less: Replacement Capital Projects	(9,840,469)	(11,790,000)	(16,364,521)	(5,854,100)	(9,206,793)	(11,401,600)	(8,751,600)	(8,826,600)	(12,276,600)	(21,626,600)	
Less: Uses of Funds Transfer to Operations	(517,950)	(242,250)	(249,518)	(257,003)	(264,713)	(272,655)	(280,834)	(289,259)	(297,937)	(306,875)	
Ending Balance	\$30,758,374	\$30,566,824	\$28,242,561	\$38,571,767	\$40,012,826	\$39,449,083	\$41,784,962	\$44,301,765	\$43,563,413	\$33,489,596	
Target Balance:											
Water Expansion - 620											
Beginning Balance	\$52,006,188	\$49,943,421	\$35,511,024	\$30,764,897	\$26,805,306	\$27,339,592	\$25,726,012	\$26,393,844	\$26,791,687	\$27,172,065	
Plus: Additions	0	0	0	0	0	0	0	0	0	0	
Plus: Interest	1,000,000	1,000,000	603,233	525,594	536,070	504,432	517,526	525,327	532,786	489,854	
Plus: Capital Reserve Fees	2,605,841	2,605,841	8,655,000	10,850,000	3,979,000	4,085,000	4,085,000	4,085,000	4,085,000	4,085,000	
Less: Debt Service	(1,877,813)	(1,877,188)	(1,875,313)	(2,306,063)	(2,586,563)	(2,577,063)	(2,579,188)	(2,577,563)	(2,572,188)	(2,567,938)	
Less: Expansion Capital Projects	(2,692,702)	(15,315,256)	(11,257,880)	(12,131,820)	(470,000)	(2,674,000)	(375,000)	(625,000)	(625,000)	(3,125,000)	
Less: Uses of Funds Transfer to Operations	(1,098,094)	(845,794)	(871,168)	(897,303)	(924,222)	(951,949)	(980,507)	(1,009,922)	(1,040,220)	(1,071,427)	
Ending Balance	\$49,943,421	\$35,511,024	\$30,764,897	\$26,805,306	\$27,339,592	\$25,726,012	\$26,393,844	\$26,791,687	\$27,172,065	\$24,982,555	

Dublin San Ramon Service District
Water
Revenue Requirement
Exhibit 3 - Debt Service

Payment Date	Fiscal Year						Total
		Principal	Coupon	Interest	Debt Service	Annual Debt Service	P&I
8/1/2018	2018	410,000	0	737,506	1,147,506		0
2/1/2019	2019	-	-	733,406	733,406	1,880,913	1,880,913
8/1/2019	2019	420,000	0	733,406	1,153,406		0
2/1/2020	2020	-	-	727,106	727,106	1,880,513	1,880,513
8/1/2020	2020	435,000	0	727,106	1,162,106		0
2/1/2021	2021	-	-	718,406	718,406	1,880,513	1,880,513
8/1/2021	2021	455,000	0	718,406	1,173,406		0
2/1/2022	2022	-	-	707,031	707,031	1,880,438	1,880,438
8/1/2022	2022	475,000	0	707,031	1,182,031		0
2/1/2023	2023	-	-	695,156	695,156	1,877,188	1,877,188
8/1/2023	2023	500,000	0	695,156	1,195,156		0
2/1/2024	2024	-	-	682,656	682,656	1,877,813	1,877,813
8/1/2024	2024	525,000	0	682,656	1,207,656		0
2/1/2025	2025	-	-	669,531	669,531	1,877,188	1,877,188
8/1/2025	2025	550,000	0	669,531	1,219,531		0
2/1/2026	2026	-	-	655,781	655,781	1,875,313	1,875,313
8/1/2026	2026	1,020,000	0	655,781	1,675,781		0
2/1/2027	2027	-	-	630,281	630,281	2,306,063	2,306,063
8/1/2027	2027	1,360,000	0	630,281	1,990,281		0
2/1/2028	2028	-	-	596,281	596,281	2,586,563	2,586,563
8/1/2028	2028	1,420,000	0	596,281	2,016,281		0
2/1/2029	2029	-	-	560,781	560,781	2,577,063	2,577,063
8/1/2029	2029	1,495,000	0	560,781	2,055,781		0
2/1/2030	2030	-	-	523,406	523,406	2,579,188	2,579,188
8/1/2030	2030	1,570,000	0	523,406	2,093,406		0
2/1/2031	2031	-	-	484,156	484,156	2,577,563	2,577,563
8/1/2031	2031	1,645,000	0	484,156	2,129,156		0
2/1/2032	2032	-	-	443,031	443,031	2,572,188	2,572,188
8/1/2032	2032	1,725,000	0	443,031	2,168,031		0
2/1/2033	2033	-	-	399,906	399,906	2,567,938	2,567,938
8/1/2033	2033	1,815,000	0	399,906	2,214,906		0
2/1/2034	2034	-	-	354,531	354,531	2,569,438	2,569,438
8/1/2034	2034	1,905,000	0	354,531	2,259,531		0
2/1/2035	2035	-	-	306,906	306,906	2,566,438	2,566,438
8/1/2035	2035	1,995,000	0	306,906	2,301,906		0
2/1/2036	2036	-	-	257,031	257,031	2,558,938	2,558,938
8/1/2036	2036	2,100,000	0	257,031	2,357,031		0
2/1/2037	2037	-	-	204,531	204,531	2,561,563	2,561,563
8/1/2037	2037	2,200,000	0	204,531	2,404,531		0
2/1/2038	2038	-	-	149,531	149,531	2,554,063	2,554,063
8/1/2038	2038	2,290,000	0	149,531	2,439,531		0
2/1/2039	2039	-	-	113,750	113,750	2,553,281	2,553,281
8/1/2039	2039	2,355,000	0	113,750	2,468,750		0
Total		\$28,665,000	\$1	\$22,099,116	\$50,764,116	\$48,295,366	\$48,295,366

Notes

	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Total	
Residential														
Metered Residential	<i>As of 1/1/2023</i>		Bimonthly											
5/8"	\$39.37	11,502	11,502	11,502	11,502	11,502	11,502	11,502	11,502	11,502	11,502	11,502	23,003	
3/4"	54.88	1	1	1	1	1	1	1	1	1	1	1	2	
1"	85.93	9	9	9	9	9	9	9	9	9	9	9	18	
1 1/2"	163.53	10	10	10	10	10	10	10	10	10	10	10	21	
2"	256.67	9	9	9	9	9	9	9	9	9	9	9	18	
3"	683.51	5	5	5	5	5	5	5	5	5	5	5	10	
4"	1,172.45	0	0	0	0	0	0	0	0	0	0	0	0	
6"	2,491.79	1	1	1	1	1	1	1	1	1	1	1	2	
8"	4,354.40	0	0	0	0	0	0	0	0	0	0	0	0	
10"	6,527.43	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Total Number of Customers</i>		11,538	11,538	11,538	11,538	11,538	11,538	11,538	11,538	11,538	11,538	11,538	23,075	
Total Monthly Charge		\$463,792	\$463,792	\$463,792	\$463,792	\$463,792	\$463,792	\$463,792	\$463,792	\$463,792	\$463,792	\$463,792	\$5,565,501	
Metered Consumption		284,510	241,339	309,552	248,871	295,044	200,144	188,948	151,292	175,931	131,098	191,537	2,711,863	
Pumped Water		180,913	153,461	196,836	158,251	187,611	127,266	120,147	96,203	111,870	83,362	121,794	1,724,405	
Metered Consumption (\$/100 CF)														
Zone 7 Cost of Water	\$4.45	\$1,266,072	\$1,073,957	\$1,377,505	\$1,107,475	\$1,312,947	\$890,640	\$840,819	\$673,249	\$782,891	\$583,387	\$852,341	\$1,306,508	\$12,067,790
Power Charge	\$0.29	52,465	44,504	57,082	45,893	54,407	36,907	34,843	27,899	32,442	24,175	35,320	54,140	500,078
Potable Uniform Rate (Commercial & Resic	\$1.45	412,540	349,941	448,850	360,863	427,814	290,209	273,975	219,373	255,099	190,092	277,729	425,716	3,932,201
<i>Total Consumption Revenue</i>		\$1,731,077	\$1,468,402	\$1,883,438	\$1,514,230	\$1,795,168	\$1,217,756	\$1,149,636	\$920,520	\$1,070,432	\$797,654	\$1,165,390	\$1,786,364	\$16,500,068
Total Residential		\$2,194,868	\$1,932,194	\$2,347,229	\$1,978,022	\$2,258,960	\$1,681,548	\$1,613,428	\$1,384,312	\$1,534,224	\$1,261,446	\$1,629,182	\$2,250,156	\$22,065,569
	\$25	\$21	\$27	\$22	\$26	\$17	\$16	\$13	\$15	\$11	\$17	\$25		
Commercial														
Commercial Fixed Charges														
5/8"	\$39.37	631	631	631	631	631	631	631	631	631	631	631	1,262	
3/4"	54.88	50	50	50	50	50	50	50	50	50	50	50	101	
1"	85.93	111	111	111	111	111	111	111	111	111	111	111	222	
1 1/2"	163.53	127	127	127	127	127	127	127	127	127	127	127	255	
2"	256.67	154	154	154	154	154	154	154	154	154	154	154	308	
3"	683.51	21	21	21	21	21	21	21	21	21	21	21	41	
4"	1,172.45	4	4	4	4	4	4	4	4	4	4	4	8	
6"	2,491.79	0	0	0	0	0	0	0	0	0	0	0	0	
8"	4,354.40	1	1	1	1	1	1	1	1	1	1	1	2	
10"	6,527.43	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Total Number of Customers</i>		1,099	1,099	1,099	1,099	1,099	1,099	1,099	1,099	1,099	1,099	1,099	2,199	
Total Monthly Charge		\$120,825	\$120,825	\$120,825	\$120,825	\$120,825	\$120,825	\$120,825	\$120,825	\$120,825	\$120,825	\$120,825	\$1,449,899	
Metered Consumption		67,945	131,727	74,836	133,310	67,305	125,026	53,058	105,326	53,126	102,327	58,043	1,089,721	
Pumped Water		43,204	83,762	47,587	84,768	42,797	79,501	33,738	66,974	33,782	65,067	36,908	692,926	
Metered Consumption Revenue	\$/100 CF													
Zone 7 Cost of Water	\$4.45	\$302,353	\$586,183	\$333,022	\$593,228	\$299,506	\$556,366	\$236,109	\$468,703	\$236,411	\$455,354	\$258,293	\$523,732	4,849,261
Power Charge	0.29	12,529	24,291	13,800	24,583	12,411	23,055	9,784	19,423	9,797	18,869	10,703	21,703	200,949
Potable Uniform Rate (Commercial & Resic	1.45	98,520	191,003	108,513	193,299	97,592	181,288	76,935	152,723	77,033	148,374	84,163	170,654	1,580,096
<i>Total Consumption Revenue</i>		\$413,402	\$801,478	\$455,335	\$811,110	\$409,508	\$760,709	\$322,828	\$640,849	\$323,241	\$622,597	\$353,160	\$716,089	6,630,305
Total Commercial		\$534,227	\$922,302	\$576,160	\$931,935	\$530,333	\$881,534	\$443,653	\$761,674	\$444,066	\$743,422	\$473,985	\$836,914	\$8,080,205

	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Total	
Irrigation														
Irrigation Fixed Charges														
5/8"	\$39.37	21	21	21	21	21	21	21	21	21	21	21	42	
3/4"	54.88	15	15	15	15	15	15	15	15	15	15	15	30	
1"	85.93	67	67	67	67	67	67	67	67	67	67	67	134	
1 1/2"	163.53	65	65	65	65	65	65	65	65	65	65	65	130	
2"	256.67	48	48	48	48	48	48	48	48	48	48	48	96	
3"	683.51	2	2	2	2	2	2	2	2	2	2	2	4	
4"	1,172.45	1	1	1	1	1	1	1	1	1	1	1	2	
6"	2,491.79	2	2	2	2	2	2	2	2	2	2	2	4	
8"	4,354.40	1	1	1	1	1	1	1	1	1	1	1	2	
10"	6,527.43	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Total Number of Customers</i>		222	222	222	222	222	222	222	222	222	222	222	444	
Total Monthly Charge		\$42,895	\$42,895	\$42,895	\$42,895	\$42,895	\$42,895	\$42,895	\$42,895	\$42,895	\$42,895	\$42,895	\$514,736	
Metered Consumption		42,892	77,726	52,573	79,217	60,617	53,461	11,143	8,405	2,938	8,730	6,447	437,037	
Pumped Water		27,274	49,424	33,430	50,372	38,545	33,995	7,086	5,344	1,868	5,551	4,099	277,901	
Metered Consumption Revenue	\$/100 CF													
Zone 7 Cost of Water	\$4.45	\$190,868	\$345,882	\$233,952	\$352,514	\$269,746	\$237,903	\$49,587	\$37,401	\$13,074	\$38,848	\$28,689	\$146,353	\$1,944,817
Power Charge	0.29	7,909	14,333	9,695	14,608	11,178	9,858	2,055	1,550	542	1,610	1,189	6,065	80,591
Potable Irrigation	1.86	79,779	144,571	97,787	147,343	112,748	99,438	20,726	15,633	5,465	16,237	11,991	61,172	812,890
<i>Total Consumption</i>		\$278,556	\$504,786	\$341,433	\$514,465	\$393,672	\$347,200	\$72,368	\$54,583	\$19,081	\$56,695	\$41,869	\$213,591	\$2,838,298
Total Irrigation		\$321,451	\$547,681	\$384,328	\$557,359	\$436,567	\$390,094	\$115,262	\$97,478	\$61,975	\$99,590	\$84,764	\$256,485	\$3,353,034
Recycled Water														
Recycled Water Fixed Charges														
5/8"	\$39.37	4	4	4	4	4	4	4	4	4	4	4	8	
3/4"	54.88	6	6	6	6	6	6	6	6	6	6	6	12	
1"	85.93	57	57	57	57	57	57	57	57	57	57	57	114	
1-1/2"	163.53	97	97	97	97	97	97	97	97	97	97	97	195	
2"	256.67	73	73	73	73	73	73	73	73	73	73	73	145	
3"	683.51	10	10	10	10	10	10	10	10	10	10	10	21	
4"	1,172.45	3	3	3	3	3	3	3	3	3	3	3	6	
6"	2,491.79	1	1	1	1	1	1	1	1	1	1	1	2	
8"	4,354.40	0	0	0	0	0	0	0	0	0	0	0	0	
10"	6,527.43	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Total Number of Customers</i>		252	252	252	252	252	252	252	252	252	252	252	504	
Total Monthly Charge		\$53,304	\$53,304	\$53,304	\$53,304	\$53,304	\$53,304	\$53,304	\$53,304	\$53,304	\$53,304	\$53,304	\$639,642	
Metered Consumption		959	420,094	26,057	418,437	9	242,042	52	31,932	540	19,505	30	93,999	1,253,657
Pumped Water		610	267,127	16,569	266,074	6	153,908	33	20,305	343	12,403	19	59,772	797,169
Metered Consumption Revenue	\$/100 CF													
Power Charge	0.29	177	77,467	4,805	77,161	2	44,633	10	5,888	100	3,597	6	17,334	231,179
Recycled Water	4.45	4,270	1,869,417	115,955	1,862,045	41	1,077,085	233	142,099	2,402	86,796	134	418,296	5,578,773
<i>Total Consumption</i>		4,447	1,946,884	120,761	1,939,206	42	1,121,719	242	147,988	2,502	90,393	139	435,630	5,809,952
Total Recycled Water		\$57,750	\$2,000,187	\$174,064	\$1,992,510	\$53,346	\$1,175,022	\$53,546	\$201,291	\$55,805	\$143,696	\$53,443	\$488,933	\$6,449,594

Dublin San Ramon Service District
 Water
 Revenue Requirement
 Exhibit 5 - Customer Forecast

	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	Projected FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	Notes
Residential											
Metered Residential	<i>As of 1/1/2023</i>										
5/8"	\$39.37 23,003	23,639	24,348	25,322	26,082	26,525	26,764	26,978	27,221	27,384	As Residential + Commercial
3/4"	\$54.88 2	2	2	2	2	2	2	2	2	2	As Residential + Commercial
1"	\$85.93 18	19	20	21	22	22	22	22	22	22	As Residential + Commercial
1 1/2"	\$163.53 21	21	22	23	24	24	24	24	24	24	As Residential + Commercial
2"	\$256.67 18	19	20	21	22	22	22	22	22	22	As Residential + Commercial
3"	\$683.51 10	11	11	11	11	11	11	11	11	11	As Residential + Commercial
4"	\$1,172.45 0	0	0	0	0	0	0	0	0	0	As Residential + Commercial
6"	\$2,491.79 2	2	2	2	2	2	2	2	2	2	As Residential + Commercial
8"	\$4,354.40 0	0	0	0	0	0	0	0	0	0	As Residential + Commercial
10"	\$6,527.43 0	0	0	0	0	0	0	0	0	0	As Residential + Commercial
<i>Total Number of Customers</i>	23,075	23,713	24,425	25,402	26,165	26,608	26,847	27,061	27,304	27,467	
Total Monthly Charge	\$5,565,501	\$5,719,337	\$5,889,854	\$6,122,969	\$6,305,533	\$6,410,179	\$6,466,635	\$6,517,186	\$6,574,588	\$6,613,092	
Metered Consumption	2,711,863	2,786,812	2,870,416	2,985,233	3,074,790	3,127,061	3,155,205	3,180,447	3,209,071	3,228,325	As Residential + Commercial
Pumped Water	1,724,405	1,770,467	1,823,581	1,896,524	1,953,420	1,986,628	2,004,508	2,020,544	2,038,729	2,050,961	As Power
Metered Consumption (\$/100 CF)											
Zone 7 Cost of Water	\$4.45 \$12,067,790	\$12,401,313	\$12,773,351	\$13,284,287	\$13,682,816	\$13,915,421	\$14,040,662	\$14,152,989	\$14,280,366	\$14,366,046	
Power Charge	0.29 500,078	513,435	528,838	549,992	566,492	576,122	581,307	585,958	591,231	594,779	
Potable Uniform Rate (Commerci	1.45 3,932,201	4,040,877	4,162,103	4,328,588	4,458,446	4,534,238	4,575,047	4,611,648	4,653,153	4,681,071	
<i>Total Consumption Revenue</i>	\$16,500,068	\$16,955,626	\$17,464,293	\$18,162,867	\$18,707,753	\$19,025,782	\$19,197,017	\$19,350,595	\$19,524,750	\$19,641,896	
Total Residential	\$22,065,569	\$22,674,964	\$23,354,147	\$24,285,836	\$25,013,286	\$25,435,961	\$25,663,652	\$25,867,781	\$26,099,338	\$26,254,988	

Dublin San Ramon Service District
 Water
 Revenue Requirement
 Exhibit 5 - Customer Forecast

	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	Projected		FY 2030	FY 2031	FY 2032	FY 2033	Notes
						FY 2029						
Commercial												
Multifamily Fixed Charges												
5/8"	39.37	1,262	1,297	1,336	1,389	1,431	1,455	1,468	1,480	1,493	1,502	As Residential + Commercial
3/4"	54.88	101	103	106	110	113	115	116	117	118	119	As Residential + Commercial
1"	85.93	222	228	235	244	251	255	257	259	261	263	As Residential + Commercial
1 1/2"	163.53	255	262	270	281	289	294	297	299	302	304	As Residential + Commercial
2"	256.67	308	317	327	340	350	356	359	362	365	367	As Residential + Commercial
3"	683.51	41	42	43	45	46	47	47	47	47	47	As Residential + Commercial
4"	1,172.45	8	8	8	8	8	8	8	8	8	8	As Residential + Commercial
6"	2,491.79	0	0	0	0	0	0	0	0	0	0	As Residential + Commercial
8"	4,354.40	2	2	2	2	2	2	2	2	2	2	As Residential + Commercial
10"	6,527.43	0	0	0	0	0	0	0	0	0	0	As Residential + Commercial
<i>Total Number of Customers</i>	2,199	2,259	2,327	2,419	2,490	2,532	2,554	2,574	2,596	2,612		
Total Monthly Charge	\$1,449,899	1,483,876	1,525,036	1,582,528	1,624,397	1,651,034	1,663,029	1,673,807	1,685,802	1,694,331		
Metered Consumption Pumped Water	1,089,721	1,119,839	1,153,434	1,199,571	1,235,558	1,256,562	1,267,871	1,278,014	1,289,516	1,297,253		As Residential + Commercial
	692,926	711,436	732,779	762,090	784,953	798,297	805,482	811,926	819,233	824,148		As Power
Metered Consumption Revenue	\$/100 CF											
Zone 7 Cost of Water	\$4.45	4,849,261	4,983,284	5,132,781	5,338,091	5,498,233	5,591,701	5,642,026	5,687,162	5,738,346	5,772,776	
Power Charge	0.29	200,949	206,316	212,506	221,006	227,636	231,506	233,590	235,459	237,578	239,003	
Potable Uniform Rate (Commerci	1.45	1,580,096	1,623,767	1,672,479	1,739,378	1,791,559	1,822,015	1,838,413	1,853,120	1,869,798	1,881,017	
<i>Total Consumption Revenue</i>		\$6,630,305	\$6,813,367	\$7,017,767	\$7,298,475	\$7,517,429	\$7,645,222	\$7,714,029	\$7,775,741	\$7,845,722	\$7,892,796	
Total Commercial	\$8,080,205	\$8,297,242	\$8,542,803	\$8,881,003	\$9,141,826	\$9,296,256	\$9,377,058	\$9,449,548	\$9,531,524	\$9,587,126		

Dublin San Ramon Service District
 Water
 Revenue Requirement
 Exhibit 5 - Customer Forecast

	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	Projected		FY 2030	FY 2031	FY 2032	FY 2033	Notes
						FY 2029						
Irrigation												
Irrigation Fixed Charges												
5/8"	\$39.37	42	44	45	47	48	49	49	49	49	49	As Irrigation
3/4"	54.88	30	31	32	33	34	35	35	35	35	35	As Irrigation
1"	85.93	134	137	141	147	151	154	155	156	157	158	As Irrigation
1 1/2"	163.53	130	133	137	142	146	148	149	150	151	152	As Irrigation
2"	256.67	96	98	101	105	108	110	111	112	113	114	As Irrigation
3"	683.51	4	4	4	4	4	4	4	4	4	4	As Irrigation
4"	1,172.45	2	2	2	2	2	2	2	2	2	2	As Irrigation
6"	2,491.79	4	4	4	4	4	4	4	4	4	4	As Irrigation
8"	4,354.40	2	2	2	2	2	2	2	2	2	2	As Irrigation
10"	6,527.43	0	0	0	0	0	0	0	0	0	0	As Irrigation
<i>Total Number of Customers</i>		444	455	468	486	499	508	511	514	517	520	
Total Monthly Charge	\$514,736	\$515,184	\$526,357	\$541,318	\$552,491	\$559,645	\$562,682	\$565,719	\$568,755	\$571,792		
Metered Consumption	437,037	448,712	462,173	480,660	495,080	503,496	508,027	512,091	516,700	519,800		As Irrigation
Pumped Water	277,901	285,324	293,884	305,639	314,808	320,160	323,041	325,625	328,556	330,527		As Power
Metered Consumption Revenue	\$/100 CF											
Zone 7 Cost of Water	\$4.45	1,944,817	1,996,768	2,056,670	2,138,937	2,203,106	2,240,557	2,260,720	2,278,805	2,299,315	2,313,110	
Power Charge	0.29	80,591	82,744	85,226	88,635	91,294	92,846	93,682	94,431	95,281	95,853	
Potable Irrigation	1.86	812,890	834,604	859,642	894,028	920,849	936,503	944,930	952,489	961,062	966,828	
<i>Total Consumption Revenue</i>		2,838,298	\$2,914,117	\$3,001,538	\$3,121,600	\$3,215,249	\$3,269,906	\$3,299,332	\$3,325,725	\$3,355,658	\$3,375,791	
Total Irrigation	\$3,353,034	\$3,429,301	\$3,527,895	\$3,662,918	\$3,767,740	\$3,829,551	\$3,862,014	\$3,891,444	\$3,924,414	\$3,947,583		

Dublin San Ramon Service District
Water
 Revenue Requirement
 Exhibit 5 - Customer Forecast

	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	Projected		FY 2030	FY 2031	FY 2032	FY 2033	Notes
						FY 2029						
Recycled Water												
Recycled Water Fixed Charges												
5/8"	39.37	8	8	8	8	8	8	8	8	8	8	As Recycled
3/4"	54.88	12	12	12	12	12	12	12	12	12	12	As Recycled
1"	85.93	114	114	114	114	114	114	114	114	114	114	As Recycled
1 1/2"	163.53	195	195	195	195	195	195	195	195	195	195	As Recycled
2"	256.67	145	145	145	145	145	145	145	145	145	145	As Recycled
3"	683.51	21	21	21	21	21	21	21	21	21	21	As Recycled
4"	1,172.45	6	6	6	6	6	6	6	6	6	6	As Recycled
6"	2,491.79	2	2	2	2	2	2	2	2	2	2	As Recycled
8"	4,354.40	0	0	0	0	0	0	0	0	0	0	As Recycled
10"	6,527.43	0	0	0	0	0	0	0	0	0	0	As Recycled
<i>Total Number of Customers</i>	504	503	503	503	503	503	503	503	503	503	503	
Total Monthly Charge	\$639,642	\$637,482	\$637,482	\$637,482	\$637,482	\$637,482	\$637,482	\$637,482	\$637,482	\$637,482	\$637,482	
Metered Consumption	1,253,657	1,253,657	1,253,657	1,253,657	1,253,657	1,253,657	1,253,657	1,253,657	1,253,657	1,253,657	1,253,657	As Recycled
Pumped Water	797,169	818,463	843,017	876,738	903,040	918,392	926,658	934,071	942,478	948,133	948,133	As Power
Metered Consumption Revenue	\$/100 CF											
Power Charge	0.29	231,179	237,354	244,475	254,254	261,882	266,334	268,731	270,881	273,319	274,959	
Recycled Water	4.45	5,578,773	5,578,774	5,578,774	5,578,774	5,578,774	5,578,774	5,578,774	5,578,774	5,578,774	5,578,774	
<i>Total Consumption Revenue</i>		5,809,952	5,816,128	5,823,249	5,833,028	5,840,655	5,845,107	5,847,504	5,849,654	5,852,092	5,853,732	
Total Recycled Water	\$6,449,594	\$6,453,610	\$6,460,731	\$6,470,510	\$6,478,137	\$6,482,590	\$6,484,987	\$6,487,136	\$6,489,574	\$6,491,214		

Dublin San Ramon Service District
 Water
 Development of Allocation Factors
 Exhibit 6 - Commodity & Capacity

	Commodity					Capacity		
	Water (CCF)	5.2% Losses ^[1]	Consumption & Losses (CCF)	Water Flow (MGD)	% of Total	Peaking Factor	Peak Day ^[2] Use (MGD)	% of Total
Residential / Commercial	3,801,584	197,682	3,999,267	8.20	89.7%	1.21	9.92	85.3%
Irrigation	437,037	22,726	459,763	0.94	10.3%	1.81	1.70	14.7%
Recycled Water	1,253,657	0	0	0.00	0.0%	2.13	0.00	0.0%
Power Costs	3,492,402	0	0	0.00	0.0%	0.00	0.00	0.0%
Total	8,984,680	220,408	4,459,030	9.14	100.0%	1.27	11.62	100.0%

Actual Production ^[3]

9.55 MGD

Actual Peak ^[4]

12.14 MGD

Allocation Factor

(COM)

(CAP-1)

Notes

- [1] West Yost 2016 Water Master Plan Table 3-5 pg. 3-7, Average of 2011 - 2015.
- [2] Based on Peak month to average month calculation
- [3] Provided by District Staff
- [4] Provided by District Staff

Dublin San Ramon Service District
 Water
 Development of Allocation Factors
 Exhibit 7 - Customer

	<i>Actual Customer</i>		<i>Meters & Services</i>	
	Number of Billing Units	% of Total	Equiv. Meters	% of Total
Residential / Commercial	25,274	96.4%	30,139	85.3%
Irrigation	444	1.7%	2,169	6.1%
Recycled Water	504	1.9%	3,040	8.6%
Power Costs	0	0.0%	0	0.0%
<i>Total</i>	26,222	100.0%	35,347	100.0%

Allocation Factor

(AC)

(WCMS)

Dublin San Ramon Service District
 Water
 Development of Allocation Factors
 Exhibit 8 - Distribution Main Analysis

<i>Distribution Storage</i>				<i>Distribution Main Analysis</i>			
<i>hrs</i>	<i>gpm</i>	<i>Total</i>		<i>Ma Size</i>	<i>Length (ft)^[3]</i>	<i>Installed Replcmt \$^[4]</i>	<i>Total</i>
Zone 1	4	4,500	1,080,000	1"	0	0	\$0
Zone 2	4	1,625	390,000	2"	10,696	340	3,636,640
Zone 3	2	2,500	300,000	3"	2,634	360	948,240
Zone 4	2	2,500	300,000	4"	16,267	380	6,181,460
Zone 20	4	4,000	960,000	6"	198,963	420	83,564,460
Zone 30	2	1,500	180,000	8"	961,922	460	442,484,120
Zone 200	4	4,000	960,000	10"	115,152	510	58,727,520
Zone 300	4	4,000	960,000	12"	280,498	570	159,883,860
Fire Flow Requirements ^[1]			5,130,000 (a)	14"	92,081	630	58,011,030
Storage Capacity ^[2]			24,980,000 (b)	16"	62,995	690	43,466,550
Public Fire Protection			20.5% (FP)	18"	7,813	760	5,937,880
(a) / (b) = FP%				20"	23,519	840	19,755,960
Capacity			79.5% (CAP)	24"	20	1,020	20,400
1 - FP% = CAP				36"	0	0	0
				42"	0	0	0
				2" - 12" Total	1,586,132		\$755,426,300 (e)
Source of Supply				Customer%			
Capacity / Commodity				(f) Total @ 2" Equivalent Cost			539,284,880
<i>Average Day</i>	9.14 (c)		79.0% (COM)	(f) / (e) = Cust.%			71.0% (AC)
(c) / (d) = COM%				Capacity			
<i>Peak Day</i>	11.62 (d)		21.0% (CAP)	(g) Cost for 2" - 6"			\$94,330,800
1 - ((c) / (d)) = CAP%				(h) 8" - 12" @ Equivalent 6" Cost			570,180,240
				(g + h - f) / (e) = CAP%			16.6% (CAP)
				Fire Protection			
				1 - CUST.% - CAP% = FP%			12.4% (FP)

Notes

[1] - 2016 Water System Master Plan Page 5-7, table 5-4
 [2] - 2016 Water System Master Plan Page 2-8, table 5-5 (sum of reservoirs)
 [3] - Provided by DSRSD Staff, file name W_1 Functional Asset Records__081620023.xlsx

Dublin San Ramon Service District
 Water
 Functionalization and Classification
 Exhibit 9 - System Assets in Service

Total System Assets Replacement Costs	Commodity (COM)	Capacity (CAP-1)	Customer Related		Recycled Water (RW)	Pumping Power Costs (PPC)	Purchased Water (PW)	Basis of Classification
			Actual Customer (AC)	Meters & Svcs (WCMS)				
System Assets in Service								
Source, Pumping and Storage								
Field Ops. Facility	\$30,800	\$0	\$0	\$0	\$0	\$0	\$0	100% (COM)
Pleasanton Recycled Water Turnout	0	0	0	0	0	0	0	100% (RW)
SCADA - Distribution System	7,700	0	0	0	0	0	0	100% (COM)
Turnouts	1,315,693	0	0	0	0	0	0	100% (COM)
Pump Stations	28,608,901	0	0	0	0	0	0	100% (COM)
Potable Water Reservoirs	59,817,557	17,347,091	0	42,470,465	0	0	0	29% (CAP-1)/ 71% (WCMS)
Recycled Pump Stations	5,603,203	0	0	0	5,603,203	0	0	100% (RW)
Recycled Water Reservoirs	27,700	0	0	0	27,700	0	0	100% (RW)
Total Source of Supply	\$95,411,554	\$29,963,094	\$17,347,091	\$0	\$42,470,465	\$5,630,903	\$0	\$0
Transmission & Distribution								
Small Potable Water Mains =<12"	\$793,066,000	\$0	\$229,989,140	\$0	\$563,076,860	\$0	\$0	29% (CAP-1)/ 71% (WCMS)
Large Potable Water Mains >12"	93,214,000	73,639,060	19,574,940	0	0	0	0	79% (COM)/ 21% (CAP-1)
Small Recycled Water Mains =<12"	119,139,000	0	0	0	0	119,139,000	0	100% (RW)
Large Recycled Water Mains >12"	25,717,500	0	0	0	0	25,717,500	0	100% (RW)
Total Storage	\$1,031,136,500	\$73,639,060	\$249,564,080	\$0	\$563,076,860	\$144,856,500	\$0	\$0
System Assets Before General	\$1,126,548,054	\$103,602,154	\$266,911,171	\$0	\$605,547,325	\$150,487,403	\$0	\$0
Percent System Assets Before General	100.0%	9.2%	23.7%	0.0%	53.8%	13.4%	0.0%	0.0%
G&A Equipment								
District Admin Offices	\$2,877,807	\$0	\$0	\$2,877,807	\$0	\$0	\$0	100% (AC)
Field Ops Dept. Admin. Offices	5,468,438	0	0	5,468,438	0	0	0	100% (AC)
	\$8,346,245	\$0	\$0	\$8,346,245	\$0	\$0	\$0	\$0
Total System Assets	\$1,134,894,299	\$103,602,154	\$266,911,171	\$8,346,245	\$605,547,325	\$150,487,403	\$0	\$0

Dublin San Ramon Service District
Water
Functionalization and Classification
Exhibit 10 - Revenue Requirement

	Total Expenses FY 2024	Commodity (COM)	Capacity (CAP-1)	Customer Related				Pumping Power Costs (PPC)	Purchased Water (PW)	Basis of Classification
				Actual Customer (AC)	Meters & SvcS (WCMS)	Recycled Water (RW)	Weighted for:			
Expenses										
Water Enterprise - 600										
Salaries	\$5,532,219	\$505,025	\$1,301,100	\$40,685	\$2,951,835	\$733,574	\$0	\$0	as System Assets in Service	
Overtime	221,000	20,175	51,976	1,625	117,919	29,305	0	0	as System Assets in Service	
Standby Pay	117,620	10,737	27,663	865	62,759	15,596	0	0	as System Assets in Service	
Medical	977,460	89,230	229,885	7,188	521,545	129,612	0	0	as System Assets in Service	
Retirement	1,549,810	141,479	364,493	11,398	826,935	205,505	0	0	as System Assets in Service	
Other Benefits	267,977	24,463	63,024	1,971	142,985	35,534	0	0	as System Assets in Service	
Salary / Benefit Credit	(958,118)	(87,465)	(225,336)	(7,046)	(511,225)	(127,047)	0	0	as System Assets in Service	
Training Costs	92,825	8,474	21,831	683	49,529	12,309	0	0	as System Assets in Service	
Group Training Services	8,250	753	1,940	61	4,402	1,094	0	0	as System Assets in Service	
Temporary Help	102,400	9,348	24,083	753	54,638	13,578	0	0	as System Assets in Service	
Interns	40,000	3,652	9,407	294	21,343	5,304	0	0	as System Assets in Service	
Uniforms & Safety Equipment	21,350	1,949	5,021	157	11,392	2,831	0	0	as System Assets in Service	
Permits, Cert., Licens, Member	219,686	20,055	51,667	1,616	117,218	29,130	0	0	as System Assets in Service	
Chemicals	86,000	86,000	0	0	0	0	0	0	100% (COM)	
Equipment Under \$20,000	96,800	8,837	22,766	712	51,650	12,836	0	0	as System Assets in Service	
Fuel	54,200	4,948	12,747	399	28,920	7,187	0	0	as System Assets in Service	
Gas & Electric	1,716,000	231,660	0	0	0	0	1,484,340	0	14% (COM)/ 87% (PPC)	
General Supplies	804,750	73,464	189,266	5,918	429,392	106,710	0	0	as System Assets in Service	
Tools	24,725	2,257	5,815	182	13,193	3,279	0	0	as System Assets in Service	
Office Supplies/Services	10,600	0	0	10,600	0	0	0	0	100% (AC)	
Meter Equipment	353,500	0	0	0	353,500	0	0	0	100% (WCMS)	
Water Purchase - Fixed	9,002,430	0	0	0	0	0	0	9,002,430	100% (PW)	
Water Purchase - Variable	9,719,920	0	0	0	0	0	0	9,719,920	100% (PW)	
Professional Services	433,800	39,601	102,024	3,190	231,463	57,522	0	0	as System Assets in Service	
Advertising	13,085	1,195	3,077	96	6,982	1,735	0	0	as System Assets in Service	
Equipment Lease/Rental	71,000	6,481	16,698	522	37,884	9,415	0	0	as System Assets in Service	
Maintenance Contracts	237,050	21,640	55,751	1,743	126,483	31,433	0	0	as System Assets in Service	
Software Maintenance	89,900	8,207	21,143	661	47,968	11,921	0	0	as System Assets in Service	
Monitoring & Testing Services	24,000	24,000	0	0	0	0	0	0	100% (COM)	
Other Services	1,407,458	1,111,892	295,566	0	0	0	0	0	79% (COM)/ 21% (CAP-1)	
Printing Services	105,600	0	0	105,600	0	0	0	0	100% (AC)	
Meetings	7,640	697	1,797	56	4,076	1,013	0	0	as System Assets in Service	
Subscriptions & Publications	950	87	223	7	507	126	0	0	as System Assets in Service	
Credit Card Transaction Fees	90,000	0	0	90,000	0	0	0	0	100% (AC)	
DERWA JPA	3,583,200	0	0	0	0	3,583,200	0	0	100% (RW)	
Overhead Charges	2,623,577	239,501	617,029	19,294	1,399,866	347,887	0	0	as System Assets in Service	
Total Water Enterprise - 600	\$38,748,664	\$2,608,340	\$3,270,658	\$299,230	\$7,103,157	\$5,260,589	\$1,484,340	\$18,722,350		

Dublin San Ramon Service District
Water
Functionalization and Classification
Exhibit 10 - Revenue Requirement

	Total Expenses FY 2024	Customer Related							Basis of Classification
		Commodity (COM)	Capacity (CAP-1)	Actual Customer (AC)	Meters & Svc (WCMS)	Recycled Water (RW)	Pumping Power Costs (PPC)	Purchased Water (PW)	
Rate Stabilization - 605									
Low Income Credit (UB)	\$70,000	\$0	\$0	\$70,000	\$0	\$0	\$0	\$0	100% (AC)
Total Rate Stabilization - 605	\$70,000	\$0	\$0	\$70,000	\$0	\$0	\$0	\$0	
Water Replacement - 610									
Telecommunication Services	\$250	\$23	\$59	\$2	\$133	\$33	\$0	\$0	as System Assets in Service
DERWA JPA	517,700	0	0	0	0	517,700	0	0	100% (RW)
Total Water Replacement - 610	\$517,950	\$23	\$59	\$2	\$133	\$517,733	\$0	\$0	
Water Expansion - 620									
DERWA JPA	\$1,098,094	\$0	\$0	\$0	\$0	\$1,098,094	\$0	\$0	100% (RW)
Total Water Expansion - 620	\$1,098,094	\$0	\$0	\$0	\$0	\$1,098,094	\$0	\$0	
Total Expenses	\$40,434,708	\$2,608,363	\$3,270,717	\$369,232	\$7,103,290	\$6,876,416	\$1,484,340	\$18,722,350	
Additional Expenditures	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	as System Assets in Service
Total Operations & Matenance Expense	\$40,434,708	\$2,608,363	\$3,270,717	\$369,232	\$7,103,290	\$6,876,416	\$1,484,340	\$18,722,350	
Rate Funded Capital									
Replacement Fund	\$6,390,000	\$583,330	\$1,502,838	\$46,993	\$3,409,522	\$847,316	\$0	\$0	as System Assets in Service
Expansion Fund	0	0	0	0	0	0	0	0	as System Assets in Service
Total Rate Funded Capital	\$6,390,000	\$583,330	\$1,502,838	\$46,993	\$3,409,522	\$847,316	\$0	\$0	
Debt Service									
2017 Water Rev. Ref. Bonds	\$1,877,813	\$0	\$0	\$0	\$1,877,813	\$0	\$0	\$0	100% (WCMS)
Total Debt Service	\$1,877,813	\$0	\$0	\$0	\$1,877,813	\$0	\$0	\$0	

Dublin San Ramon Service District
Water
Functionalization and Classification
Exhibit 10 - Revenue Requirement

	Total Expenses FY 2024	Commodity (COM)	Capacity (CAP-1)	Customer Related				Purchased Water (PW)	Basis of Classification
				Actual Customer (AC)	Meters & Svc (WCMS)	Recycled Water (RW)	Pumping Power Costs (PPC)		
Transfers									
In									
Transfer from Rate Stabilization Fund	(\$3,989,947)	(\$419,915)	(\$1,081,831)	(\$33,829)	(\$2,454,373)	\$0	\$0	\$0	as System Assets in Service less R
Transfer from Water Replacement Fund	(517,950)	0	0	0	0	(517,950)	0	0	100% (RW)
Transfer from Water Expansion Fund	(3,675,907)	0	0	0	(1,877,813)	(1,798,094)	0	0	as System Assets in Service less R
5th Supplement Agreement (Regional to Water)	(400,000)	(42,097)	(108,456)	(3,391)	(246,056)	0	0	0	as System Assets in Service less R
Partial Year Rate Adjustment Correction	2,580,863	332,797	417,306	47,110	906,298	877,352	0	0	as O&M Expense less Pumping ar
Out									
Transfers Out - Enterprise Fund	\$559,217	\$72,110	\$90,421	\$10,208	\$196,375	\$190,103	\$0	\$0	as O&M Expense less Pumping ar
Transfers Out - Other	234,714	30,266	37,952	4,284	82,422	79,790	0	0	as O&M Expense less Pumping ar
Total Transfers	(\$5,209,009)	(\$26,839)	(\$644,608)	\$24,382	(\$3,393,145)	(\$1,168,799)	\$0	\$0	
Total Revenue Requirements	\$43,493,512	\$3,164,854	\$4,128,947	\$440,607	\$8,997,480	\$6,554,933	\$1,484,340	\$18,722,350	
Less: Other Income									
General Inspections	\$395,000	\$0	\$0	\$0	\$395,000	\$0	\$0	\$0	100% (WCMS)
Overtime Inspections	3,500	0	0	0	3,500	0	0	0	100% (WCMS)
Plan Check Fees	60,000	0	0	0	60,000	0	0	0	100% (WCMS)
Backflow Prevention	270,000	0	0	0	270,000	0	0	0	100% (WCMS)
Recycled Water Irrigation	2,000	0	0	0	0	2,000	0	0	100% (RW)
Fireline service	250,000	0	250,000	0	0	0	0	0	100% (CAP-1)
Meter Assemblies	60,000	0	0	0	60,000	0	0	0	100% (WCMS)
Engineering Penalties	175,000	0	0	0	175,000	0	0	0	100% (WCMS)
Limited Access	132,447	132,447	0	0	0	0	0	0	100% (COM)
Total Other come	\$1,347,947	\$132,447	\$250,000	\$0	\$963,500	\$2,000	\$0	\$0	
Net Revenue Requirements	\$42,145,564	\$3,032,407	\$3,878,947	\$440,607	\$8,033,980	\$6,552,933	\$1,484,340	\$18,722,350	

Dublin San Ramon Service District
 Water
 Cost of Service Summary
 Exhibit 11 - Allocation by Component

Classification Components	FY 2024 Total	Residential / Commercial	Irrigation	Recycled Water	Power Costs	Distribution Factor
Commodity	\$3,032,407	\$2,719,740	\$312,667	\$0	\$0	(COM)
Capacity	\$3,878,947	\$3,309,902	\$569,045	\$0	\$0	(CAP-1)
Customer Related						
Actual Customer	\$440,607	\$424,676	\$7,462	\$8,469	\$0	(AC)
Meters & Svcs	8,033,980	6,850,183	492,883	690,914	0	(WCMS)
Total Customer Related	\$8,474,587	\$7,274,859	\$500,346	\$699,383	\$0	
Recycled Water	\$6,552,933	\$0	\$0	\$6,552,933	\$0	(DA)
Pumped Power Costs	\$1,484,340	\$0	\$0	\$0	\$1,484,340	(PPC)
Variable Zone 7 Costs	\$10,369,421	\$9,300,247	\$1,069,174	\$0	\$0	
Fixed Zone 7 Costs	8,352,929	7,491,672	861,257	0	0	
Purchased Water	\$18,722,350	\$16,791,919	\$1,930,431	\$0	\$0	(DA)
Net Revenue Requirement	\$42,145,564	\$30,096,420	\$3,312,489	\$7,252,316	\$1,484,340	

Dublin San Ramon Service District
 Water
 Cost of Service Summary
 Exhibit 12 - Summary of Cost Allocation

	FY 2024 Total	Residential / Commercial	Irrigation	Recycled Water	Power Costs	Source
Revenues at Present Rates	\$39,948,402	\$29,444,748	\$3,272,443	\$6,218,415	\$1,012,796	
Allocated Revenue Requirement	\$42,145,564	\$30,096,420	\$3,312,489	\$7,252,316	\$1,484,340	
Subtotal Balance/(Deficiency) of Funds	(\$2,197,162)	(\$651,672)	(\$40,046)	(\$1,033,901)	(\$471,544)	
% Change Over Present Rates	5.5%	2.2%	1.2%	16.6%	46.6%	

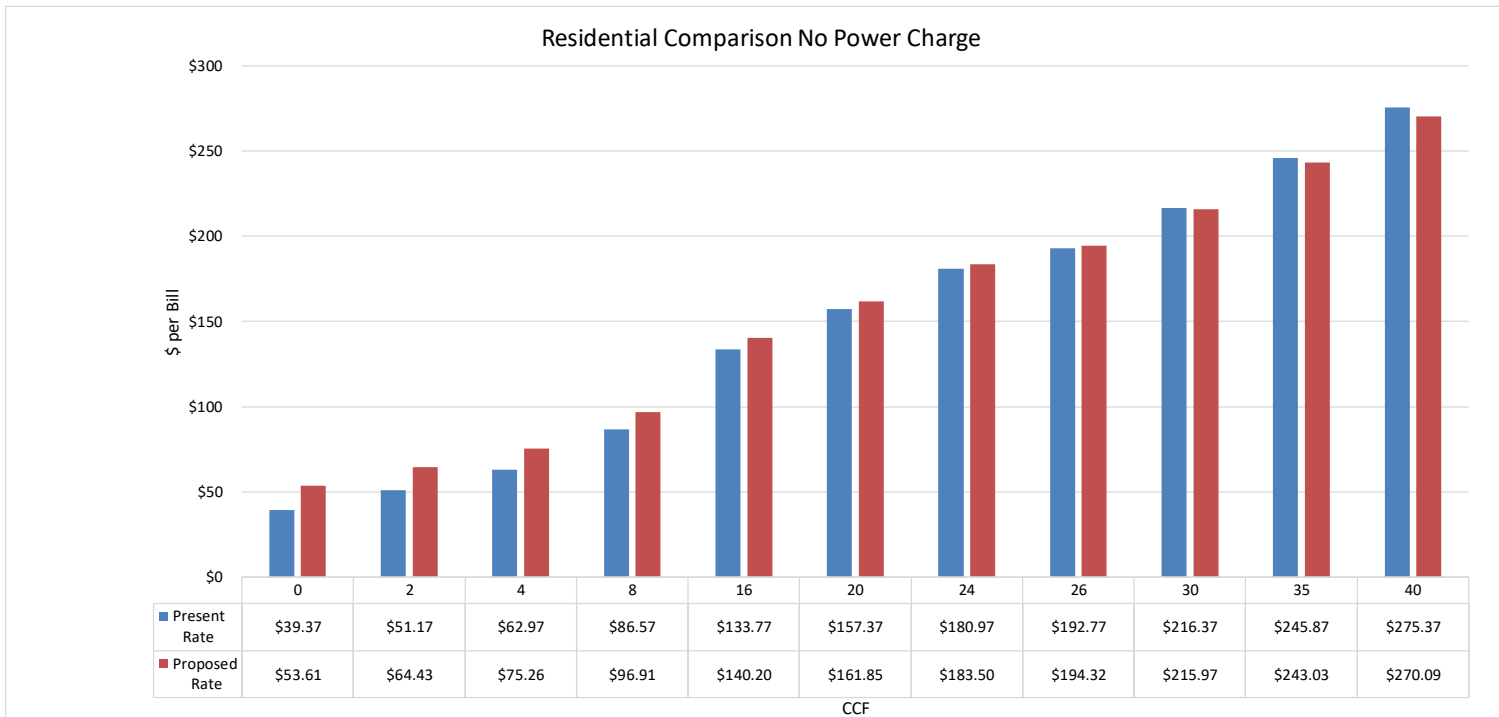
Dublin San Ramon Service District
Water
Cost of Service Summary
Exhibit 13 - Average Unit Cost

	FY 2024 Total	Residential / Commercial	Irrigation	Recycled Water	Power Costs
Commodity Costs - \$/CCF	\$0.72	\$0.72	\$0.72	\$0.00	\$0.00
Capacity Costs - \$/CCF	0.92	0.87	1.30	0.00	0.00
Total Water DSRSD Costs	\$1.63	\$1.59	\$2.02	\$0.00	\$0.00
Zone 7 - Purchased Water	\$4.42	\$4.42	\$4.42	\$0.00	\$0.00
Recycled Water Costs	\$5.23	\$0.00	\$0.00	\$5.23	\$0.00
Pumping Costs	\$0.43	\$0.00	\$0.00	\$0.00	\$0.43
Total Allocated Costs - \$/CCF	\$11.70	\$6.00	\$6.43	\$5.23	\$0.43
Meter Capacity - \$ / Equiv. Mtrs / month	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Meters and Service - \$ / Meter / month	37.88	37.88	37.88	37.88	\$0.00
Actual Customer	2.80	2.80	2.80	2.80	0.00
Total - \$ / Month	\$40.68	\$40.68	\$40.68	\$40.68	\$0.00
Fire Protection					
Rate Rev \$/CCF	\$9.42	\$7.75	\$7.49	\$0.00	\$0.29
Allocated Rev Req \$/CCF	\$9.94	\$7.92	\$7.58	\$0.00	\$0.00
Average Bi-monthly Distributed Cost	\$267.87	\$198.47	\$1,243.10	\$2,398.07	\$0.00
Basic Data					
Annualized Potable Water Flows - CCF	4,238,622	3,801,584	437,037	0	0
Annualized Potable Zone 7 Flow - CCF	4,238,622	3,801,584	437,037	0	0
Annualized Recycled Water Flows - CCF	1,253,657	0	0	1,253,657	0
Annualized Pumped Water Flows - CCF	3,492,402	0	0	0	3,492,402
No. of Customers	26,222	25,274	444	504	0
Equivalent Meters	35,347	30,139	2,169	3,040	0

Dublin San Ramon Service District
 Water
 Rate Design
 Exhibit 14 - Rate Design

			Cost of Service Results						Zone 7	
Meter Size	Meter Equivalency factor	Present Rates	Cust. Component	+	Meter Capacity Equiv. Meter	=	Total Meter Rate	\$ Change	% Change	Meter Capacity Equiv. Meter (Potable Only)
5/8"	1.00	\$39.37	\$2.80	+	\$37.88	=	\$40.68	\$1.31	3.3%	\$12.93
3/4"	1.50	54.88	\$2.80	+	56.82	=	59.62	4.74	8.6%	19.39
1"	2.50	85.93	\$2.80	+	94.70	=	97.50	11.57	13.5%	32.32
1-1/2"	5.00	163.53	\$2.80	+	189.41	=	192.21	28.68	17.5%	64.64
2"	8.00	256.67	\$2.80	+	303.05	=	305.85	49.18	19.2%	103.42
3"	21.75	683.51	\$2.80	+	823.93	=	826.73	143.22	21.0%	281.17
4"	37.50	1,172.45	\$2.80	+	1,420.56	=	1,423.36	250.91	21.4%	484.78
6"	80.00	2,491.79	\$2.80	+	3,030.53	=	3,033.33	541.54	21.7%	1,034.19
8"	140.00	4,354.40	\$2.80	+	5,303.43	=	5,306.23	951.83	21.9%	1,809.84
10"	210.00	6,527.43	\$2.80	+	7,955.15	=	7,957.95	1,430.52	21.9%	2,714.76
Consumption Charges		Current Rate	Proposed Rate	% change	Drought Surcharge					
Potable Uniform Rate (Commercial & Residential)		1.45	1.59	9.4%	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6
Potable Irrigation		1.86	2.02	8.5%	1.81	2.11	2.54	3.17	4.22	6.33
Zone 7 Cost of Water		4.45	3.83	-14.0%	2.24	2.52	2.88	3.36	4.03	5.04
Recycled Water		4.45	5.23	17.5%						
Power Charge		0.29	0.43	46.6%						

CCF	Residential 5/8" With Zone 7 & No Power Charge				With Drought Surcharges					
	Present Rate	Proposed Rate	\$ Change	% Change	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6
0	\$39.37	\$53.61	\$14.24	36.2%	\$53.61	\$53.61	\$53.61	\$53.61	\$53.61	\$53.61
2	\$51.17	\$64.43	13.26	25.9%	\$64.43	\$64.43	\$64.43	\$64.43	\$64.43	\$64.43
4	\$62.97	\$75.26	12.29	19.5%	\$75.26	\$75.26	\$75.26	\$75.26	\$75.26	\$75.26
8	\$86.57	\$96.91	10.34	11.9%	\$102.34	\$103.25	\$104.52	\$106.42	\$109.58	\$115.90
16	\$133.77	\$140.20	6.43	4.8%	\$160.14	\$163.46	\$168.10	\$175.07	\$186.67	\$209.85
20	\$157.37	\$161.85	4.48	2.8%	\$189.04	\$193.56	\$199.90	\$209.40	\$225.22	\$256.82
24	\$180.97	\$183.50	2.53	1.4%	\$217.93	\$223.67	\$231.69	\$243.73	\$263.77	\$303.79
26	\$192.77	\$194.32	1.55	0.8%	\$232.38	\$238.72	\$247.59	\$260.89	\$283.04	\$327.28
30	\$216.37	\$215.97	(0.40)	-0.2%	\$261.28	\$268.83	\$279.39	\$295.22	\$321.59	\$374.25
35	\$245.87	\$243.03	(2.84)	-1.2%	\$297.40	\$306.46	\$319.13	\$338.13	\$369.77	\$432.97
40	\$275.37	\$270.09	(5.28)	-1.9%	\$333.53	\$344.09	\$358.87	\$381.04	\$417.95	\$491.68



CCF	Residential 5/8" Meter With Zone 7 & Power Charge				With Drought Surcharges					
	Present Rate	Proposed Rate	\$ Change	% Change	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6
0	\$39.37	\$53.61	\$14.24	36.2%	\$53.61	\$53.61	\$53.61	\$53.61	\$53.61	\$53.61
2	\$51.75	\$65.28	13.53	26.2%	\$65.28	\$65.28	\$65.28	\$65.28	\$65.28	\$65.28
4	\$64.13	\$76.96	12.83	20.0%	\$76.96	\$76.96	\$76.96	\$76.96	\$76.96	\$76.96
8	\$88.89	\$100.31	11.42	12.8%	\$105.74	\$106.65	\$107.92	\$109.82	\$112.98	\$119.30
16	\$138.41	\$147.00	8.59	6.2%	\$166.94	\$170.26	\$174.90	\$181.87	\$193.47	\$216.65
20	\$163.17	\$170.35	7.18	4.4%	\$197.54	\$202.06	\$208.40	\$217.90	\$233.72	\$265.32
24	\$187.93	\$193.70	5.77	3.1%	\$228.13	\$233.87	\$241.89	\$253.93	\$273.97	\$313.99
26	\$200.31	\$205.37	5.06	2.5%	\$243.43	\$249.77	\$258.64	\$271.94	\$294.09	\$338.33
30	\$225.07	\$228.72	3.65	1.6%	\$274.03	\$281.58	\$292.14	\$307.97	\$334.34	\$387.00
35	\$256.02	\$257.90	1.88	0.7%	\$312.28	\$321.33	\$334.00	\$353.00	\$384.65	\$447.84
40	\$286.97	\$287.09	0.12	0.0%	\$350.53	\$361.09	\$375.87	\$398.04	\$434.95	\$508.68

