Carlsbad Municipal Water District
Water Cost-of-Service Study

2021 POTABLE AND RECYCLED WATER RATE STUDY

FINAL | October 2021

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Abbreviations

ADD	Average Day Demand
AF	Acre Feet
AWWA	American Water Works Association
Carollo	Carollo Engineers, Inc.
ccf	Hundred cubic feet
CIP	Capital Improvement Plan
CMWD or District	Carlsbad Municipal Water District
Desal	Carlsbad Desalination Plant
DSCR	Debt Service Coverage Ratio
DU	Dwelling Unit
FYE	Fiscal year ending
LWD	Leucadia Wastewater District
M1 Manual	*Principles of Water Rates, Fees, and Charges: Manual of Water Supply Practices M1*
MDD	Maximum Day Demand
MEU	Meter Equivalent Unit
MFR	Multi-Family Residential
MGD	million gallons per day
MHD	Max Hour Demand
MWD	Metropolitan Water District of Southern California
O&M	Operations and maintenance
PERS	Public Employees' Retirement System
SCADA	Supervisory Control And Data Acquisition
SDCWA	San Diego County Water Authority
SFR	Single-Family Residential
Study	Cost-of-Service Study
UAL	Unfunded Accrued Liability
UMAPC	Uniform Member Agency Purchase Contract
VWD	Vallecitos Water District

Section 1 – Introduction

The Carlsbad Municipal Water District (CMWD or the District) supplies potable and recycled water to approximately 28,900 connections within a 32.3 square mile service area in Southern California. In fiscal year ending (FYE) 2022, the District is projected to deliver approximately 13,000 acre-feet (AF) of potable water and 4,300 AF of recycled water to customers. The District currently purchases its potable water supplies from the San Diego County Water Authority (SDCWA) and in 2016 the CMWD Board entered into a purchase agreement with SDCWA for 2,500 acre-feet per year of desalinated water as local supply. Desalinated water supplies are produced at the Carlsbad Desalination Plant (Desal). Recycled water is produced at the Carlsbad Water Recycling Facility, as well as purchased from the Vallecitos Water District.

1.1 Study Purpose

Carlsbad retained Carollo Engineers, Inc. (Carollo) to perform a comprehensive Cost-of-Service Study (Study) of the District's potable water, recycled water, and wastewater systems and to develop a rate plan for the upcoming five-year period, Fiscal Year Ending (FYE) 2022 through FYE 2026. Although this Study presents a five-year rate projection, the District is adopting rates for the next two or three years at this time. Carollo's analysis was guided by the policies and practices of the District, industry best practices for cost-of-service analyses as outlined by the American Water Works Association (AWWA), and requirements for establishing water rates within the State of California. The findings and recommendations of this cost-of-service analysis for potable and recycled water are detailed within this report. The findings of the cost-of-service analysis for wastewater are provided by Carollo in a separate report.

1.2 Overview of the Rate Setting Process

Rate analyses are performed periodically so that revenues continue to adequately fund utility operations, maintenance, and necessary capital investments, and so that the rates paid by customers accurately reflect the costs of the services that they receive. In California, water rates must adhere to the cost-of-service requirements imposed by Proposition 218 and the State Constitution. Proposition 218 requires that property related fees and charges, including water rates, do not exceed the reasonable and proportional cost of providing the service. The District's last rate study was completed by Carollo in 2019 and provided rates for FYE 2020 through FYE 2021.

The District also has obligations to safeguard and preserve the State's limited water resources. Article X (2) of the State Constitution establishes the need to preserve the State's water supplies and discourage the wasteful or unreasonable use of water by encouraging conservation. To achieve these multi-faceted requirements—rates that must simultaneously be equitable and reasonable, while providing a conservation message— Carollo's cost-of-service approach tests the adequacy of existing revenues, recommends additional revenues where needed, and develops rates built on comprehensive cost allocation and customer data analyses.

Carollo reviewed the District's current cost-of-service rate setting process. The processes presented below are advocated by the AWWA. While the process is described in a linear step-by-step approach, it is an iterative process, where the ultimate objective is to balance revenues with costs in an equitable manner for customers.

1.2.1 Revenue Requirement Analysis

The methodology that Carlsbad applies to establish annual rate revenue needs is consistent with industry standards established by the *Principles of Water Rates, Fees, and Charges: Manual of Water Supply Practices M1* (M1 Manual), which is published by AWWA, a national industry trade group that makes recommendations on generally accepted practices in the water and sewer industry. The revenue requirements analysis compares the forecasted revenues of the utility to its forecasted operating and capital reserve costs to determine the adequacy of the existing rates to recover the utility's costs. If any shortfalls exist, rates may need to increase.

1.2.2 Water Demand Analysis

Forecasting water sales and purchases is a critical component in the rate setting process. As part of the budget process, the District forecasts the expected water usage based on historical demand, proposed changes to rates, regulatory impacts, weather, and other variables. These forecasted water demands are then compared against forecasted revenue requirements, and rates are developed in order to recover costs. Future demands are based on historic sales and escalated for projected growth.

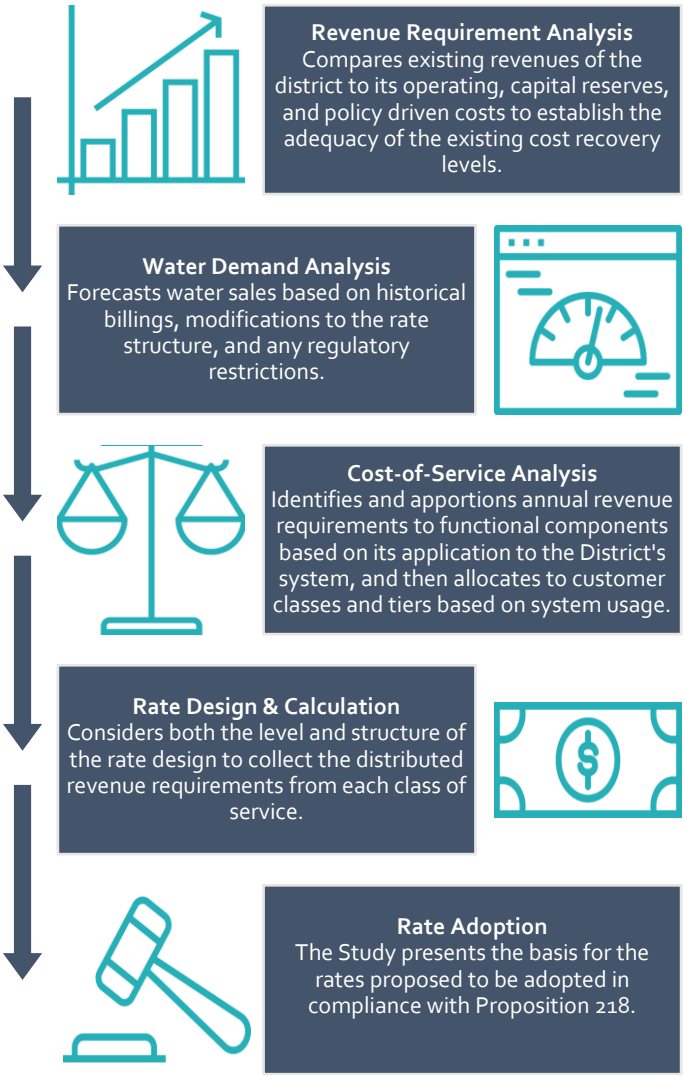

Figure 1 Conceptual Overview of the Rate-Setting Process

1.2.3 Cost-of-Service Analysis

After determining the revenue requirement, this step outlines the cost to deliver each unit of water and to serve each customer. This process takes each item in the water system's budget and allocates the each item's cost based on what function is served. For example, some cost items support the ability to deliver additional, more expensive water, while other costs are incurred to provide customer service or to fund capital replacement. Organizing the budget in terms of end function allows the creation of a nexus between the budget item and the rate. This organization bridges the costs incurred by the District and the unique and varied benefits delivered to each customer.

1.2.4 Rate Design Analysis & Calculation

The rate design involves developing a rate structure that proportionately recovers costs from customers. The rate structure must be tailored to the customer demand and account profile; built upon a nexus between costs and the rates that customers are charged; resilient enough to handle changing cost and demand scenarios; and flexible enough to meet multiple other unique criteria.

The rate design allows the District to develop unit costs that can then be layered based on requirements to meet customer needs. This is a critical process for establishing tiered rates, as increasing usage incurs additional supply, infrastructure, operating, and maintenance costs making excess water more expensive to provide.

The final part of the rate design analysis is the rate calculation. This provides the nexus between the revenue requirements, the functional cost allocation, and the final rates that customers are charged. This process connects planned expenditures to the designed rates by establishing rates to match the estimated revenue generation with expenditures.

1.2.5 Rate Adoption

To comply with the requirements of Proposition 218, the results of the Study are documented in this Report to support the District's public outreach regarding the proposed changes and provide the rationale and justifications behind the changes and the anticipated financial impacts. While the document should be easily understood, it must provide sufficient detail to fully support and document the rate setting process.

In order to adjust rates, the District must provide a written notice 45 days prior to adoption of the rates. During this 45-day notice period, any property owner or tenant directly responsible for the payment of water or sewer service fees may submit a written protest to the proposed rate increases. If written protests against the proposed rate increases are not presented by a majority of affected District property owners or customers, the Board of Directors will be authorized to adopt the rate increases.

As the following sections of this Report will demonstrate, this process creates a fair and equitable foundation for each charge and rate that the District levies.

1.3 Project Objectives

The Study aims to achieve several objectives related to the District's rate setting, cost recovery, and financial planning methodologies. Specific objectives for the project include the following.

1. Review of the current financial plans for the District's potable and recycled water systems to identify opportunities to improve long-term financial standing.
2. Evaluation and development of policy recommendations for the existing potable water and recycled water rate structures to achieve the objectives of the District. Namely, the rate structure should:
   - Be easy to understand.
   - Promote water use efficiency/conservation.
   - Maintain continued compliance with cost-of-service requirements.
3. Thorough documentation of the cost-of-service analysis, including the functional allocation and classification of costs, and the allocation of costs among customer classes.
4. Preparation of a rate design framework that proportionately recovers costs from the District's customers and meets the goals outlined above.

The Study identifies what actions the District should implement to maintain the financial viability of the system in light of changing consumer demands, increasing purchased water costs, regulatory requirements, and future infrastructure investments.

1.3.1 Rate Study Best Practices and Legal Considerations

Rates are typically designed to achieve multiple objectives. While industry standards provide a basis for testing reasonableness, this basis does not on its own meet legal requirements—particularly the unique legal requirements for agencies in California.

Within the cost-of-service approach and legal requirements, an agency's practices form the basis of the detailed rate structure design elements, making it distinct to the agency and the community it serves. Within the District's rate structure, these policies and practices encompass the entire structure including the selection of rate design, methodology for allotting the amount of water use within customer tier allocations, and how costs are allocated to be recovered in the upper tiers. With its rate structure, the District is able to satisfy its policy and practices objectives and proportionally recover costs from its customers.

1.4 Current Rate Structure

The CMWD maintains separate rate structures for potable and recycled water customers. The following section identifies how the District is currently charging their potable and recycled water customers.

Currently, potable and recycled water customers have two components to their bill:

1. Water Delivery Fee.
2. Water Usage Fee.

The Water Delivery Fee is a fixed monthly charge. It is assessed based on meter size. It is intended to capture the costs associated with providing customer service for each account, as well as a portion of the costs of providing and maintaining the system capacity to serve each account. The customer service component of the charge is equal to all customers while the capacity component is varied based on meter equivalent ratios as identified in the *AWWA M6 Manual Water Meters – Selection, Installation, Testing, and Maintenance.*

The Water Usage Fee is a volumetric charge based on the amount of water consumed each month, as measured by each customer's water meter. It is intended to capture the costs of the water utility that vary with the amount of water provided.

1.5 Project Findings and Recommendations

Based on the analysis projections, the District will need to increase water rate revenues to keep pace with increases in wholesale water supply costs, inflationary increases in operating expenses, and necessary capital improvements to the District's systems. The use of reserves to fund a share of capital projects will help to minimize the necessary level of rate increases. It is recommended that the District reviews its revenues and expenditures on an annual basis to verify that the implemented rates are adequately recovering costs. The City has historically set rates on a calendar year basis and will continue to do so through the study period. Tables and figures throughout the report are show results in fiscal years to match the District's accounting practices.

The key findings and recommendations are as follows:

- ***Proposed Potable Water Rate Revenue Increases***. Annual user rate revenue increases of 2.0 percent for FYE 2022 through FYE 2026 will be required to fund potable water activities. The proposed user rates largely retain the District's current rate structure and will include a cost-of-service adjustment in FYE 2022 based on the updated cost-of-service allocations followed by an across-the-board increase in FYE 2023 and beyond. The first increase based on this study will be delayed by two months and implemented on March 1, 2022. Subsequent increases will be implemented on January 1 of each year.
- ***Recycled Water Rate Revenue Increases.*** Annual user rate revenue increases of 4.0 percent for FYE 2022 through FYE 2026 will be required to fund recycled water activities. The proposed user rates largely retain the District's current rate structure and will include a cost-of-service adjustment in FYE 2022 based on the updated cost-of-service allocations followed by an across-the-board increase in FYE 2023 and beyond.
- ***Minimum Operating Reserve.*** It is recommended that the District continues to complete financial planning based on the current operating reserve practice that sets a minimum operating reserve of 40 percent of annual operating expenses. In the future, the District could consider this practice to increase the minimum reserve target with Council approval or implementing a best practice target above the 40 percent minimum for financial planning.

Table 1 and Table 2 outline the current and proposed water usage and water delivery fees.

Table 1 Proposed Water Usage Fees

Customer Class	Current Rates			Proposed Rates			
	Tier	Usage Limit	Rate	Tier	Usage Limit	FYE 2022	FYE 2023
Potable Water Usage Fees						**2.0% w/ COS[1]**	**2.0%[2]**
Single Family Residential	1	10	$4.13	1	10	$3.84	$3.92
	2	18	$4.51	2	18	$4.77	$4.87
	3	> 18 ccf	$7.18	3	> 18 ccf	$7.39	$7.54
Multi-Family Residential *per dwelling unit (DU) basis*	1	5	$3.95	1	5	$3.79	$3.87
	2	> 5 ccf	$5.04	2	>5 ccf	$5.89	$6.01
Commercial	N/A	All ccf	$4.36	N/A	All ccf	$4.34	$4.43
Agricultural	N/A	All ccf	$4.71	N/A	All ccf	$4.70	$4.80
Irrigation	N/A	All ccf	$5.41	N/A	All ccf	$5.47	$5.58
Recycled Water Usage Fees						**4.0% w/ COS[1]**	**4.0%[2]**
Recycled	N/A	All ccf	$3.79	N/A	All ccf	$3.94	$4.09

Notes:
(1) Proposed rates for FYE 2022 include a cost-of-service adjustment and increases for specific rates vary from the 2.0-percent (potable) and 4.0-percent (recycled) overall rate revenue increases.
(2) Proposed rates for FYE 2023 and subsequent years are calculated by applying the proposed overall rate revenue increase to the FYE 2022 rate proportionally.

Table 2 Proposed Water Delivery Fees

Meter Size	Current Rates	Proposed Rates	
		FYE 2022	FYE 2023
Potable Monthly Charge		**2.0% w/ COS[1]**	**2.0%[2]**
5/8"	$25.52	$27.81	$28.37
3/4"	$34.44	$37.33	$38.08
1"	$52.28	$56.37	$57.50
1.5"	$96.88	$103.97	$106.05
2"	$150.40	$161.09	$164.31
2 1/2"	$212.84	$227.73	$232.29
3"	$275.28	$294.37	$300.26
4"	$453.68	$484.77	$494.46
6"	$899.69	$960.76	$979.97
8"	$1,434.89	$1,531.95	$1,562.59
10"	$2,059.30	$2,198.33	$2,242.30
Recycled Monthly Charge		**4.0% w/ COS[1]**	**4.0%[2]**
5/8"	$23.34	$23.45	$24.39
3/4"	$32.22	$32.86	$34.18
1"	$49.97	$51.69	$53.76
1.5"	$94.35	$98.76	$102.71
2"	$147.59	$155.23	$161.44
2 1/2"	$209.77	$221.13	$229.97
3"	$271.92	$287.02	$298.50
4"	$449.35	$475.28	$494.30
6"	$893.11	$945.95	$983.78
8"	$1,425.61	$1,510.74	$1,571.17
10"	$2,046.87	$2,169.67	$2,256.45
Fire Monthly Charge[3]		**2.0% w/ COS[1]**	**2.0%[2]**
5/8"	$7.93	$8.33	$8.50
3/4"	$8.05	$8.45	$8.62
1"	$8.30	$8.67	$8.85
1.5"	$8.92	$9.24	$9.43
2"	$9.66	$9.93	$10.12
2 1/2"	$10.53	$10.72	$10.94
3"	$11.40	$11.52	$11.75
4"	$13.89	$13.79	$14.07
6"	$20.10	$19.48	$19.87
8"	$27.55	$26.30	$26.83
10"	$36.25	$34.26	$34.95
12"	$57.37	$53.60	$54.67

Notes:

(1) Proposed rates for FYE 2022 include a cost-of-service adjustment and increases for specific rates vary from the 2.0-percent (potable) and 4.0-percent (recycled) overall rate revenue increases.

(2) Proposed rates for FYE 2023 and subsequent years are calculated by applying the proposed overall rate revenue increase to the FYE 2022 rate proportionally.

(3) Customers with private fire protection connections are charges a fixed monthly fee based on the size of their connection.

Section 2 – Inputs and Assumptions

Financial, operational, and billing information provided by the District serves as the backbone of the revenue requirement and cost-of-service analysis. The projections developed for this analysis are based on several sources of information including the budgeted revenues and expenditures for FYE 2022, actual revenues and expenditures from several prior fiscal years, outstanding debt obligations, water purchase records, and other pertinent information. The analyses were completed by adding supplemental information and calculations to the District's existing financial models.

2.1 Forecast Assumptions

The escalation factors used in this analysis are based on a review of both long-term and recent cost escalation factors from the Engineering News-Record Index, an industry benchmarking resource, and informed by input from Carlsbad staff to reflect realized cost escalations. Other costs were escalated based on recent and specific cost trends. The escalators used for the Metropolitan Water District (MWD) and SDCWA pass-through costs are presented in Appendix B of this Study. Other escalation factors include account growth and changes in per account demands from each customer class. These factors for both potable and recycled water are presented in Table 3.

Table 3 Escalation Factors

Escalation Factor	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
General Inflation	2.5%	2.5%	2.5%	2.5%	2.5%
Labor Inflation	3.0%	3.0%	3.0%	3.0%	3.0%
Labor – PERS (Normal Cost)	13.2%	13.2%	13.2%	13.2%	13.2%
Labor – PERS (UAL)	15.7%	16.5%	16.7%	17.0%	16.8%
Labor – Health Insurance	7.1%	6.9%	6.6%	6.4%	6.1%
Chemicals Inflation	5.0%	5.0%	5.0%	5.0%	5.0%
Utilities Inflation	5.0%	5.0%	5.0%	5.0%	5.0%
Construction Inflation	3.5%	3.5%	3.5%	3.5%	3.5%
Property Tax Increase	3.1%	3.7%	2.9%	3.0%	3.2%
Depreciation Funding	1.2%	1.2%	1.2%	1.2%	1.2%
Interest Income	2.3%	2.4%	2.5%	2.5%	2.5%
Customer Growth	0.3%	0.7%	0.5%	0.5%	0.2%

2.2 Potable and Recycled Water Customer Base

Detailed customer billing records for January 2018 through March of 2021 were analyzed to develop customer demand and account projections for the study. Cost of service allocations and rate design allocations were performed using projected accounts and demands for FYE 2022. Table 4 summarizes the projected FYE 2022 number of accounts and demand by customer class, including the percentage of the totals. Currently, the District serves approximately 28,000 potable water accounts and 920 recycled water accounts. Water demands for FYE 2022 are expected at 5.89 million hundred cubic feet (ccfs) of potable water and 1.85 million ccfs of recycled water demands.

Table 4 Water System Customer Profile

Customer Class	Number of Accounts	Account Percentage of Total	FYE 2022 Demand (ccf)	Demand Percentage of Total
Single Family Residential	24,179	83.6%	3,226,108	41.7%
Multi-Family Residential	1,241	4.3%	734,848	9.5%
Commercial	1,736	6.0%	1,185,208	15.3%
Agricultural	16	0.1%	74,408	1.0%
Irrigation	813	2.8%	669,145	8.6%
Subtotal: Potable Water	**27,984**		**5,889,716**	
Recycled Water	922	3.2%	1,853,214	23.9%
Total Water Service Customers	**28,906**	**100.0%**	**7,742,930**	**100.0%**
Private Fire Protection Connections	1,116			

* *Line or column totals may not tie due to rounding.*

2.2.1 Water Demand Forecast

Water demand drives several key components of the revenue requirement analysis, as a large portion of the District's water revenues and O&M costs are tied to the amount of water usage. Changes in demands for existing customers are not expected and thus the forecasted water demand was calculated using the customer growth escalation factor presented in Table 3. Table 5 shows the projected water demands by customer class for FYE 2022 through FYE 2026. Detailed projections of customer accounts and demands are included for reference in Appendix A.

Table 5 Forecasted Water Demand by Customer Class (CCF)

Customer Class	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Potable Water Demands					
Single Family Residential	3,226,108	3,257,927	3,267,993	3,293,597	3,311,634
Multi-Family Residential	734,848	742,095	744,388	750,220	754,329
Commercial	1,185,208	1,187,929	1,191,572	1,192,417	1,195,049
Agricultural	74,408	75,142	75,374	75,965	76,381
Irrigation	669,145	675,745	677,833	683,143	686,885
Total Potable Water Demands	**5,889,716**	**5,938,839**	**5,957,160**	**5,995,343**	**6,024,278**
Recycled Water Demands	**1,853,214**	**1,871,492**	**1,877,274**	**1,891,982**	**1,902,344**
Total All Customers	**7,742,930**	**7,810,330**	**7,834,434**	**7,887,325**	**7,926,622**

* *Line or column totals may not tie due to rounding.*

Section 3– Revenue Requirement Analysis

The revenue requirement analysis is a comprehensive test of a utility's fiscal health, scrutinizing the adequacy of current revenues, and setting the basis for rate planning. It reviews the utility's revenues, expenses, debts, and reserve policies, and other requirements assessing the viability of each metric going forward. Where cash flows and balances are insufficient, the revenue requirement analysis determines the needed additional cash flows to meet all funding goals.

The District's FYE 2022 budget expenses serve as the base year for O&M costs. Furthermore, Carollo collected information related to current cash and restricted fund balances and policies, the budgeted capital improvement plan expenditures, and all other operating and non-operating future revenues and expenditures.

Once the revenue requirement is established by compiling all of the District's cost drivers, three tests are utilized to define the annual revenues necessary.

1. The cash flow sufficiency test looks for a net positive cash flow at the end of each fiscal year. This test looks at whether revenues exceed expenses; when they do not, this test recommends additional revenue.
2. The second test is the debt service coverage test. Utility bond or loan issuances regularly include a stipulation that the agency maintain sufficient cash flows to cover the planned debt service, plus an additional percent of that debt service, typically between 25 and 40 percent. Debt coverage is often presented as a ratio, for example a 25 percent coverage target is shown as 1.25x.
3. The third test is the reserve sufficiency test which determines whether projected cash balances are sufficient to guard the utility in the event of unforeseen costs or revenue shortfalls. As an essential service provider, the District needs to maintain resources to continue water service in the event of natural disasters or other emergencies. Reserves provide a source of funds for immediate repairs or other needs so that disruptions to service can be minimized or avoided.

3.1 Operating Revenues

Operating revenues were projected for the next five years by applying the escalation factors outlined in Table 3 to the District's FYE 2022 budgeted revenues. Table 6 shows the District's projected potable and recycled water rate revenues for FYE 2022 through FYE 2026, before applying any proposed rate increases. Increases in commodity and delivery charge revenues are projected based on customer growth. Recycled water revenues escalate in the same manner.

Table 6 Current Rate Revenue ($ millions)

Revenue Item	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Potable Water					
Commodity Charges	$26.6	$26.8	$26.9	$27.1	$27.1
Delivery Charges	$12.3	$12.3	$12.4	$12.5	$12.5
Total Potable Water	**$38.9**	**$39.1**	**$39.3**	**$39.5**	**$39.6**
Recycled Water					
Commodity Charges	$6.3	$6.3	$6.4	$6.4	$6.4
Delivery Charges	$1.2	$1.2	$1.2	$1.2	$1.2
Total Recycled Water	**$7.5**	**$7.6**	**$7.6**	**$7.6**	**$7.6**

* *Line or column totals may not tie due to rounding.*

In addition to above rate revenues, the District also receives other offsetting revenues. Table 7 summarizes the projected offsetting revenues for the potable water funds, and Table 8 summarizes the projected offsetting revenues for the recycled water funds.

Table 7 Offsetting Revenues – Potable Water ($ millions)

Revenue Item	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Non-Rate Charges for Services	$0.32	$0.33	$0.34	$0.35	$0.36
Tax Revenues	$3.68	$3.82	$3.93	$4.04	$4.17
Intergovernmental	$0.01	$0.01	$0.01	$0.01	$0.01
Fines & Forfeitures	$0.10	$0.11	$0.11	$0.11	$0.12
Income from Prop & Investments	$0.64	$0.65	$0.67	$0.69	$0.70
Interdepartmental	$0.05	$0.05	$0.05	$0.05	$0.05
Other Revenues	$0.09	$0.09	$0.09	$0.09	$0.09
Total Offsetting Revenues	**$4.88**	**$5.05**	**$5.19**	**$5.34**	**$5.51**

* *Line or column totals may not tie due to rounding.*

Table 8 Offsetting Revenues – Recycled Water ($ millions)

Revenue Item	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Other Charges for Services	$0.001	$0.001	$0.001	$0.001	$0.002
Fines & Forfeitures	$0.004	$0.004	$0.004	$0.005	$0.005
Income from Prop & Investments	($0.023)	$0.000	$0.000	$0.000	$0.000
Interdepartmental	$0.020	$0.021	$0.021	$0.022	$0.022
Total Offsetting Revenues	**$0.002**	**$0.026**	**$0.027**	**$0.028**	**$0.028**

* *Line or column totals may not tie due to rounding.*

3.2 Operating Expenses

Most operating expenses were projected for the next five years by applying the escalation factors outlined in Table 3 to the District's FYE 2022 budgeted expenditures. Costs for water purchases from outside agencies were calculated based on projected water demands and wholesale rates. Table 9 and Table 10 illustrate operating expenditures over the five-year projection period for potable and recycled water, respectively. Potable operating expenses are projected to increase approximately $4.1 million by FYE 2026. The increases are largely due to the rise in purchased water costs. The Transfers to Capital Reserve line ("Replacement Funding"), and the annual depreciation amount are transferred to the capital reserve. Recycled expenses are going up approximately $1.0 million over the projection period. Detailed projections of O&M costs are included for reference in Appendix D.

Table 9 Expenditures – Potable Water ($ millions)

	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Personnel	$4.18	$4.84	$5.04	$5.26	$5.48
Maintenance & Equipment	$4.38	$4.40	$4.50	$4.60	$4.71
Water Purchases (SDCWA and Desal)	$31.36	$33.01	$34.42	$35.99	$37.61
Replacement Funding	$4.50	$4.55	$4.61	$4.66	$4.71
Transfer to Capital Fund	$4.00	$0.00	$0.00	$0.00	$0.00
Total Operating Expenditures	**$48.41**	**$46.80**	**$48.57**	**$50.52**	**$52.51**

* *Line or column totals may not tie due to rounding.*

Table 10 Expenditures – Recycled Water ($ millions)

	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Personnel	$1.84	$2.14	$2.23	$2.33	$2.42
Maintenance & Equipment	$3.10	$3.11	$3.20	$3.29	$3.39
Water Purchases (Vallecitos)	$2.27	$2.34	$2.41	$2.48	$2.55
Debt Service	$1.88	$2.90	$2.90	$2.90	$2.25
Rate-Funded Capital	$2.59	$0.00	$0.00	$0.00	$0.00
Replacement Funding	$1.40	$1.42	$1.43	$1.45	$1.47
Total Operating Expenditures	**$13.07**	**$11.90**	**$12.17**	**$12.45**	**$12.08**

* *Line or column totals may not tie due to rounding.*

3.3 Water Supply

The District obtains its potable water from SDCWA, which in turn has two main sources: imported water (largely from the Colorado River) and locally produced water from the Carlsbad Desalination Plant. Desalinated water deliveries began in 2016 per the Uniform Member Agency Purchase Contract (UMAPC). The District is required to purchase a minimum 2,500 acre-feet of desalinated water per year, and purchases are expected to remain at that level through FYE 2026.

The District produces recycled water at the Carlsbad Water Recycling Facility (CWRF) and purchases recycled water from Vallecitos Water District (VWD). Recycled water purchased from Vallecitos is strategically used in portions of the CMWD service area closest to interagency interties. Purchases from VWD are projected to stay at the current level of 2,386 acre-feet per year through FYE 2026.

Table 11 presents a summary of the District's forecasted potable and recycled water purchases in FYE 2022 through FYE 2026. Detailed projections of water purchases and costs are included for reference in Appendix B.

Table 11 Water Supply Purchases (AF, $ millions)

Source of Supply	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Potable Water					
Potable Water Demands	13,521	13,634	13,676	13,763	13,830
Unaccounted for Water (system loss)	1,156	1,165	1,169	1,176	1,182
Total Potable Water to Purchase	**14,677**	**14,799**	**14,845**	**14,940**	**15,012**
SDCWA					
Water Purchases (AF)	12,177	12,299	12,345	12,440	12,512
Fixed Charges	$6.7	$6.9	$7.1	$7.3	$7.6
Variable Charges	$17.5	$18.8	$19.8	$21.0	$22.2
Total SDCWA Purchase Costs	**$24.3**	**$25.7**	**$27.0**	**$28.4**	**$29.8**
Desalination					
Water Purchases (AF)	2,500	2,500	2,500	2,500	2,500
Fixed Charges	$4.5	$4.6	$4.7	$4.8	$4.9
Variable Charges	$2.0	$2.0	$2.1	$2.1	$2.2
Other Charges	$0.7	$0.7	$0.7	$0.7	$0.7
Total DESAL Purchase Costs	**$7.1**	**$7.3**	**$7.4**	**$7.6**	**$7.8**
Recycled Water					
Recycled Water Demands	4,254	4,296	4,310	4,343	4,367
Unaccounted for Water	213	215	215	217	218
Total Recycled Water to Purchase	**4,467**	**4,511**	**4,525**	**4,561**	**4,586**
Water from CWRF	2,081	2,125	2,139	2,174	2,199
VWD Water Purchases (AF)	2,386	2,386	2,386	2,386	2,386
VWD Charges	**$2.3**	**$2.3**	**$2.4**	**$2.5**	**$2.6**
Total Recycled Purchase Costs	**$2.3**	**$2.3**	**$2.4**	**$2.5**	**$2.6**

* *Line or column totals may not tie due to rounding.*

3.4 Capital Improvement Plan Funding

The District finalized a master plan for the potable and recycled water systems in 2019 as well as an asset management plan and a SCADA master plan. Based on the results of those studies, the District plans to increase capital investment over the coming years to repair and replace critical infrastructure and maintain water system reliability.

Prior to the completion of the plans, the District's CIP spending had been limited. However, the District continued to set aside funds for capital projects throughout that time in anticipation of increased investments. This prudent financial planning, which led to the reserve balance the District has accumulated, will allow for capital improvements to be completed for the potable water system while minimizing rate impacts.

Table 12 and Table 13 summarize the projected capital improvement plan (CIP) expenditures for the potable and recycled water systems. Over the study period, potable system improvements will total $93.2 million and recycled water improvements will total $12.5 million, both in FYE 2022 dollars. The capital funding projections account for cost inflation by applying a 3.5-percent annual escalation factor to the planned CIP costs. A detailed summary showing the District's projects can be found in Appendix C.

Table 12 Capital Improvement Plan Expenditures – Potable Water ($ millions)

CIP	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Connection Fee Fund Projects	$3.5	$4.3	$0.0	$8.2	$0.0
Replacement Fund Projects	$22.7	$12.1	$21.9	$13.2	$7.2
Total Potable Water Projects	**$26.2**	**$16.5**	**$21.9**	**$21.5**	**$7.2**
Total Escalated Cost	**$26.2**	**$17.0**	**$23.5**	**$23.8**	**$8.2**

* *Line or column totals may not tie due to rounding.*

Table 13 Capital Improvement Plan Expenditures – Recycled Water ($ millions)

CIP	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Connection Fee Fund Projects	$3.3	$0.0	$0.0	$0.0	$0.0
Replacement Fee Fund Projects	$5.3	$0.6	$1.2	$1.2	$0.9
Total Recycled Water Projects	**$8.6**	**$0.6**	**$1.2**	**$1.2**	**$0.9**
Total Escalated Cost	**$8.6**	**$0.6**	**$1.3**	**$1.4**	**$1.0**

* *Line or column totals may not tie due to rounding.*

The District's potable and recycled CIP expenses and funding is shown in Table 14 and Table 15. The transfers and replacement funding line item represents the transfer of operating revenues to the capital reserve for depreciation funding as well as any planned additional transfers for cash funding of capital. As shown in the tables, the District plans to draw on the reserves to fund CIP projects over the next several years.

An important aspect of the capital funding plan is that the District intends to draw on both existing replacement reserves and existing connection fee reserves to fund capital projects. Since the implementation of the District's existing connection fees, reduced water consumption due to conservation and changes in planned developments have reshaped the CIP projects that are necessary to serve new users.

While some of the projects initially conceived and included in the connection fees have changed, other projects have been modified or expanded to take their place. Further, replacements and upgrades to the District's existing infrastructure are required to maintain the assets that serve new users and to maintain the excess system capacity that will be needed to serve users that have not yet connected to the system. To these ends, the District plans to allocate existing connection fee reserves, as well as a share of future connection fees, to pay for replacement projects that have an excess capacity component. The District plans to update their connection fees in a future study within the next twelve months.

The District continually seeks sources of outside funding from grants and low interest loans to offset the rate impacts of capital funding. For FYE 2022, the District has secured $0.8 million in federal grants for the D-4 Tank project to improve the recycled water distribution and storage system. The District also expects approximately $16.9 million in State Revolving Fund (SRF) loan disbursements. The disbursements include $14.2 million for previously completed Phase 3 Recycled Water projects that were initially funded with cash or reserves. The remaining $2.7 million of expected disbursements is for the costs of the D-4 tank. For projection purposes, annual debt service associated with the SRF loan was estimated assuming a 2 percent interest rate and a 30-year term, resulting in an annual payment of $203,000. The District's recent correspondence with the State indicated that the rate will be lower, at 1 percent. This change will lead to a modest level of cost savings which may offset a portion of recycled water rate increases in future years. The projected debt service is included in the "Debt Service" line of Table 10.

Table 14 Capital Improvement Plan Expenditures and Funding – Potable Water ($ millions)

	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Total Recycled Water Projects (Escalated)	**$26.2**	**$17.0**	**$23.5**	**$23.8**	**$8.2**
Amount to be Rate Funded	$0.0	$0.0	$0.0	$0.0	$0.0
Amount to be Funded with Reserves	$26.2	$17.0	$23.5	$23.8	$8.2
Beginning Capital Funds Balance (Connection Fee and Replacement)	$94.3	$86.8	$77.2	$60.6	$43.6
Transfers and Replacement Funding	$16.5	$4.6	$4.6	$4.7	$4.7
Interest	$1.5	$1.4	$1.2	$1.0	$0.7
Connection Fees	$0.7	$1.4	$1.0	$1.2	$0.3
Use of Funds for Projects	**($26.2)**	**($17.0)**	**($23.5)**	**($23.8)**	**($8.2)**
Year-End Balance	**$86.8**	**$77.2**	**$60.6**	**$43.6**	**$41.1**
Change in Reserves	**($7.5)**	**($9.7)**	**($16.6)**	**($17.0)**	**($2.4)**

* *Line or column totals may not tie due to rounding.*

Table 15 Capital Improvement Plan Expenditures and Funding – Recycled Water ($ millions)

	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Total Recycled Water Projects (Escalated)	**$8.6**	**$0.6**	**$1.3**	**$1.4**	**$1.0**
Amount to be Rate Funded	$2.6	$0.0	$0.0	$0.0	$0.0
Other Funding Required	$6.0	$0.6	$1.3	$1.4	$1.0
Beginning Capital Funds Balance (Connection Fee and Replacement)	$3.1	$0.0	$8.4	$8.6	$8.8
Transfers and Replacement Funding	$1.4	$1.4	$1.4	$1.4	$1.5
Grants	$1.4	$0.0	$0.0	$0.0	$0.0
SRF Loan Disbursements[(1)]	$0.0	$16.9	$0.0	$0.0	$0.0
Refund to Operating for Prior Cash Funding	$0.0	($9.4)	$0.0	$0.0	$0.0
Interest	$0.0	$0.0	$0.1	$0.1	$0.1
Use of Funds for Projects	**($6.0)**	**($0.6)**	**($1.3)**	**($1.4)**	**($1.0)**
Year-End Balance	**$0.0**	**$8.4**	**$8.6**	**$8.8**	**$9.4**
Change in Reserves	**($3.1)**	**$8.4**	**$0.3**	**$0.2**	**$0.6**

* *Line or column totals may not tie due to rounding.*

3.5 Recommended Revenue Requirements

Rate revenue increases will be necessary in order to meet the District's projected operating needs and to continue to fund capital investments. The increases for potable water are primarily driven by increasing purchased water cost from SDCWA and the delivery of desalinated water pursuant to the UMAPC. The increases for recycled water are driven primarily by the need to fund capital improvements while maintaining a positive reserve balance.

The recommended increases will enable the District to continue to fully fund its capital program and meet its debt service requirements. Furthermore, by initiating annual increases, the District can mitigate larger increases in the future and avoid the need for substantial debt issuances.

3.5.1 Cash Flow Sufficiency Test

The cash flow sufficiency test evaluates revenues received by the District to see that they are adequately covering both operating and non-operating expenses. Table 16 and Table 17 provide the cash flow sufficiency tests for potable and recycled water, respectively. Though the financial analysis included projections for a five-year period, the District may adopt rate updates a period of up to five years.

3.5.1.1 Potable Water

Based on the analysis, 2-percent rate revenue increases are needed in each year to adequately cover the revenue requirements of the potable water system. The proposed potable water rate revenue increases for FYE 2022 will be implemented by a full cost-of-service adjustment on March 1, 2021, and rate adjustments will vary by customer class and rate component. For FYE 2023 and onward, the percentage rate revenue increase is recommended to be applied to the FYE 2022 cost-of-service-based rates on January 1 of each year.

Total operating expenses included in the cash flow sufficiency test include depreciation. When sufficient budget and fund balance are available, The District transfers an amount equal to annual depreciation as well as an additional capital funding transfer from the operating reserves to the capital reserves each year. Over time, the District has been proactive in annually contributing to the replacement of its system. Based on the current fund balances, the District can mitigate the necessary rate adjustments by spending down reserves to fund capital projects over the next five years.

Table 16 Cash Flow Sufficiency Test – Potable Water ($ millions)

	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Pre-Rate Increase					
Rate Revenues without Increases	$38.9	$39.1	$39.3	$39.5	$39.6
Revenue from Previous Years' Increases	$2.0	$2.8	$3.7	$4.6	$5.4
Offsetting Revenues	$4.9	$5.1	$5.2	$5.3	$5.5
Operating Revenues	**$45.7**	**$47.0**	**$48.2**	**$49.4**	**$50.5**
Less Operating Expenditures	($48.4)	($46.8)	($48.6)	($50.5)	($52.5)
Cash Flow Surplus/(Deficit)	**($2.7)**	**$0.2**	**($0.4)**	**($1.1)**	**($2.0)**
Rate Revenue Increase	**2.0%**	**2.0%**	**2.0%**	**2.0%**	**2.0%**
Post-Rate Increase					
Revenue from Increase	$0.8	$0.8	$0.9	$0.9	$0.9
(Less): Rate Increase Delay[(1)]	($0.5)	($0.4)	($0.4)	($0.4)	($0.5)
Cash Flow Surplus/(Deficit)	**($2.4)**	**$0.6**	**$0.0**	**($0.7)**	**($1.5)**
Operating Fund Reserve					
Beginning Operating Fund Balance	$26.4	$16.0	$16.6	$16.6	$15.9
Cash Flow	($2.4)	$0.6	$0.0	($0.7)	($1.5)
Other Transfers	($8.0)	$0.0	$0.0	$0.0	$0.0
Ending Operating Fund Balance	**$16.0**	**$16.6**	**$16.6**	**$15.9**	**$14.4**
Ending Capital Funds Balance	**$86.8**	**$77.2**	**$60.6**	**$43.6**	**$41.1**
Combined Ending Cash Balance	**$102.8**	**$93.7**	**$77.2**	**$59.5**	**$55.5**
Days of O&M Costs	**940 Days**	**810 Days**	**641 Days**	**474 Days**	**424 Days**
Operating Fund Percent of Operations[(2)]	40%	39%	38%	35%	30%

Notes:
(1) Adjustment to account for rate implementation in the middle of the fiscal year, March 1, 2022 and January 1 of each subsequent year.
(2) The operating fund balance is drawn below the 40 percent target due to the planned replacement funding transfers to the capital reserve. The District could reduce these transfers in future years to retain 40 percent of operating costs in the operating fund which would lead to a commensurate decrease in the capital fund balance.
* *Line or column totals may not tie due to rounding.*

3.5.1.2 Recycled Water

Based on the analysis, 4-percent rate revenue increases are needed in each year to adequately cover the revenue requirements of the recycled water system. The proposed recycled water rate revenue increases for FYE 2022 will be implemented by a full cost-of-service adjustment, and rate adjustments will vary by rate component. For FYE 2023, the percentage rate revenue increase is recommended to be applied to the FYE 2022 cost-of-service-based rates.

Total operating expenses included in the cash flow sufficiency test include depreciation. The District currently transfers an amount equal to annual depreciation as well as an additional capital funding transfer from the operating reserves to the capital reserves each year. Over time, the District has been proactive in annually contributing to the replacement of its system. Based on the current fund balances, the District can mitigate the necessary rate adjustments by spending down reserves to fund capital projects over the next five years.

Additional detail of the revenue requirement analysis is included for reference in Appendix E.

Table 17 Cash Flow Sufficiency Test – Recycled Water ($ millions)

	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Pre-Rate Increase					
Rate Revenues without Increases	$7.5	$7.6	$7.6	$7.6	$7.6
Revenue from Previous Years' Increases	$0.7	$1.0	$1.4	$1.8	$2.1
Offsetting Revenues	$0.0	$0.0	$0.0	$0.0	$0.0
Operating Revenues	**$8.2**	**$8.6**	**$9.0**	**$9.4**	**$9.8**
Less Operating Expenditures	($13.1)	($11.9)	($12.2)	($12.4)	($12.1)
Cash Flow Surplus/(Deficit)	**($4.9)**	**($3.3)**	**($3.2)**	**($3.0)**	**($2.3)**
Rate Revenue Increase	4.0%	4.0%	4.0%	4.0%	4.0%
Post-Rate Increase					
Revenue from Increase	$0.3	$0.3	$0.4	$0.4	$0.4
(Less): Rate Increase Delay(1)	($0.2)	($0.2)	($0.2)	($0.2)	($0.2)
Cash Flow Surplus/(Deficit)	**($4.7)**	**($3.1)**	**($3.0)**	**($2.8)**	**($2.1)**
Operating Fund Reserve					
Beginning Operating Fund Balance	$9.7	$5.0	$11.2	$8.2	$5.4
Cash Flow	($4.7)	($3.1)	($3.0)	($2.8)	($2.1)
Other Transfers	$0.0	$9.4	$0.0	$0.0	$0.0
Ending Operating Fund Balance	**$5.0**	**$11.2**	**$8.2**	**$5.4**	**$3.3**
Ending Capital Funds Balance	**$0.0**	**$8.4**	**$8.6**	**$8.8**	**$9.4**
Combined Ending Cash Balance	**$5.0**	**$19.6**	**$16.9**	**$14.2**	**$12.7**
Day of O&M Costs	**252 Days**	**942 Days**	**785 Days**	**642 Days**	**556 Days**
Operating Fund Percent of Operations	69%	148%	105%	67%	40%

Note:
(1) Adjustment to account for rate implementation in the middle of the fiscal year, March 1, 2022 and January 1 of each subsequent year.
* *Line or column totals may not tie due to rounding.*

3.5.2 Debt Coverage Test

The District's current and projected debt obligations are State Revolving Fund loans which historically required the agency's annual operating revenues are sufficient to cover annual operating expenses plus 110 percent of the annual debt service payments. This is stated as a debt coverage ratio (DSCR) of 1.10x. However, the District has a policy target of maintaining a bond coverage ratio of 125 percent of the annual debt service obligation. The outstanding debt agreements allow both potable and recycled water revenues to be used in the calculation of debt coverage. Based on the proposed rate revenue increases, the District will meet its debt coverage obligation. Table 18 presents the calculation of the DSCR.

Table 18 Debt Service Coverage Test – Recycled Water ($ millions)

Budget Item	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Post Increase Revenues					
Potable Water Operating Revenues	$46.0	$47.4	$48.6	$49.9	$51.0
Recycled Water Operating Revenues	$8.3	$8.6	$9.0	$9.4	$9.8
Total Revenues for Coverage	**$54.3**	**$56.0**	**$57.6**	**$59.3**	**$60.8**
Potable Water Operating Expenses	($39.9)	($42.2)	($44.0)	($45.9)	($47.8)
Recycled Water Operating Expenses	($7.2)	($7.6)	($7.8)	($8.1)	($8.4)
Net Revenue Available for Debt Service	**$7.2**	**$6.2**	**$5.8**	**$5.3**	**$4.6**
Recycled Water Debt Service	**$1.9**	**$2.9**	**$2.9**	**$2.9**	**$2.3**
DSCR	**3.83x**	**2.14x**	**2.00x**	**1.84x**	**2.06x**

* *Line or column totals may not tie due to rounding.*

Section 4 – Cost-of-Service Analysis

The Cost-of-Service analysis follows a step-by-step approach to tying the District's expenses to the rates charged to customers. Those steps are outlined in the figure below.

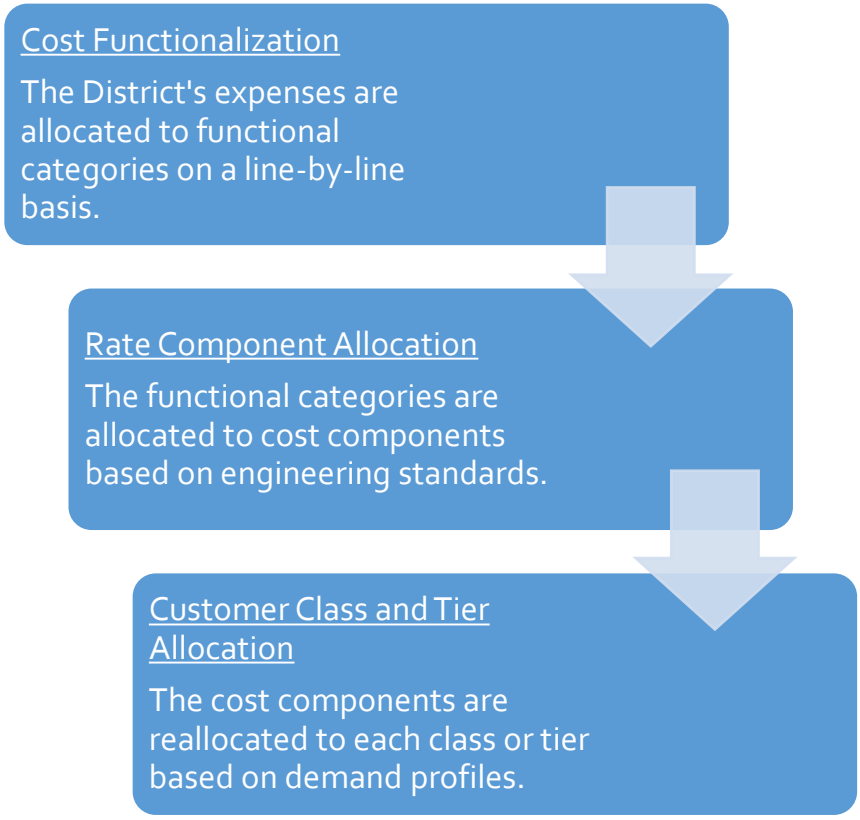

Figure 2 Cost-of-Service Analysis Steps

Based on the revenue requirement analysis outlined in the preceding chapter, the functional allocation designates each budget item to a functional category, which is then translated into a specific cost/rate component. Those functional categories and their associated costs are allocated to the distinct customer classes based on each class's unique account, meter, and demand characteristics. A customer class consists of users that commonly create or share responsibility for certain costs incurred by the utility, which is determined by customer consumption data (including peak demand) in order to combine similar groups of customers.

4.1 Legal and Policy Guidance

4.1.1 Legal Guidance

This Report should not be considered legal guidance and it does not offer any assurances of compliance with any other state, federal, or other laws. However, it is guided by the best available legal guidance and strives to match that guidance.

All water rates in California must meet the requirements outlined in the California State Constitution, Article XIII D, Section 6. The rates recommended in this Report are developed based on the guidance from the 2015 decision by the Court of Appeal in *Capistrano Taxpayers Association v. City of San Juan Capistrano*, (2015) 235 Cal. App. 4th 1494 as well as other legal authority and provisions of the Constitution.

In San Juan Capistrano, the court stated that any rates, including tiered rates, must "correspond to the actual cost of providing service at a given level of usage." *Id. at 1498.* Furthermore, the court stated:

> *"And, we emphasize, there is nothing at all in [California Constitution Article XIII D, section 6,] subdivision (b)(3) or elsewhere in Proposition 218 that prevents water agencies from passing on the incrementally higher costs of expensive water to incrementally higher users. That would seem like a good idea. But subdivision (b)(3) does require they figure out the true cost of water, not simply draw lines based on water budgets…Our courts have made it clear they interpret the Constitution to allow tiered pricing; but the voters have made it clear they want it done in a particular way." San Juan Capistrano* at 1510-11.

This statement from the court outlines several fundamental principles for this rate analysis:

- Rates must be based on the cost of providing water service.
- Tiered pricing is an acceptable methodology under Proposition 218.
- Increasing block rates that pass incrementally higher costs of expensive water onto incrementally higher demand users is an acceptable methodology of proportionately allocating the costs of service under Proposition 218.

4.2 Industry Guidance

While Proposition 218 is the ultimate test for rates, industry guidance and commonly accepted rate-setting practices can serve as a template for achieving cost-based rates. The AWAA M1 Manual outlines the two most widely used methods for allocation of functionalized costs to cost components:

- **Base-Extra Capacity Method**, where costs are allocated among: (1) a base category to provide baseline water service or average day demand; (2) an extra capacity category to provide peak demand service, often split into maximum day and maximum hour components; (3) a customer category to provide services that do not vary with water usage, such as customer service and billing; and (4) direct fire protection.
- **Commodity-Demand Method**, where costs are allocated among: (1) a commodity category for costs that are directly driven by demand; (2) a demand category for building and maintaining peak system capacity; (3) a customer category to provide services that do not vary with water usage, such as customer service and billing; and (4) direct fire protection.

Both methodologies recognize that cost-of-service "depends not only on the total volume of water used, but also on the rate of use, or peak demand requirements."[1] Costs incurred by the District are not incurred uniformly, or simply based on the total quantity or volume of water used. The cost-of-service changes based on both when, how, and how much water is used. Both methodologies account for this by including an extra capacity or demand category, in recognition of costs associated with capacity that is not used consistently which impacts operating costs and capital asset related costs to accommodate peak flows.

For this analysis, the Base-Extra Capacity methodology was selected. The following sections discuss how costs are allocated to the system's functions, cost components, and customer classes using this methodology.

4.3 Functional Cost Allocation – Potable

4.3.1 Functional Cost Categories – Potable

The functional cost allocation assigns the revenue requirement for the test year by major function. The Study developed a list of functions specific to the District's water system. Each functional component is allocated to specific cost components, which can then be assigned to rates. The functional components used for the District are:

Customer Account Service: Costs for materials and outside services directly related to customer communication such as outreach, printing, and postage.

Meters and Services: Costs associated with water meters and service connections.

Administration: Costs related to the overall management and oversight of the water system including legal costs, permitting and regulatory fees, studies, and as well as other related items. This category also includes the costs that the water utility pays to other City of Carlsbad departments for services that they provide such as customer billing and information technology services.

Distribution: Costs associated with delivering water to customers including the operation and maintenance of the water distribution system facilities.

Supply: The District's internal costs associated with water purchased from SDCWA and desalinated water. These costs include a portion of operations and maintenance staff costs, water sampling services, chemicals, lab costs, and other related items.

SDCWA Variable: The variable portion of the costs that the District pays to SDCWA for treated water supplies.

SDCWA Fixed: The fixed portion of the costs that the District pays to SDCWA for treated water supplies not including the Infrastructure Access Charge (IAC).

SDCWA IAC: This category includes the costs of the SDCWA IAC, a fixed charge that SDCWA levies on the District based on the District's count of MEUs.

Desalination: The costs that the District pays to purchase desalinated water.

Conservation: Costs associated with conservation programs, such as rebates, and communications aimed at increasing overall water supply and reliability through encouraging or mandating customers that use large amounts of water to reduce water usage in order to increase water supply and reliability.

[1] AWWA, *M1 Manual*, p. 61.

Fire Protection: Costs that the District incurs specifically related to providing fire protection. The ability to provide fire protection service is intrinsic to the water system based on typical water system planning and engineering, those intrinsic characteristics are accounted for in costs allocated to the other categories, most notably within the Meters and Services and Distribution categories.

Cross Connection Control: Costs related to the District's cross-connection control program.

Engineering: Costs related to the District's engineering activities.

General: Costs associated with other expenses that provide an overall benefit to the water system such as staff costs for management personnel who oversee all aspects of the water operation. This category also includes costs that do not fit any of the other categories such as asphalt repairs, landscaping services, miscellaneous supplies, and other overhead expenses.

4.3.1.1 O&M Expense Functionalization – Potable

The District's O&M expenses were functionalized into each of the above categories using the FYE 2022 budgeted operating expenses. Table 19 presents a summary of the O&M cost functionalization. A detailed table of the functionalization is included in Appendix F.

Table 19 Functionalized O&M Expenses – Potable ($ millions)

Functional Component	Personnel	Maintenance & Equipment	Budget Adjustments	Total Allocated	Resulting Allocation
Customer Account Service	$0.00	$0.04	($0.00)	$0.03	0.09%
Meters and Services	$0.65	$1.05	($0.07)	$1.63	4.09%
Admin	$0.30	$2.39	($0.11)	$2.58	6.46%
Distribution	$1.45	$1.59	($0.12)	$2.91	7.29%
Supply	$0.20	$0.39	($0.02)	$0.56	1.41%
SDCWA Variable	$0.00	$17.52	($0.72)	$16.80	42.09%
SDCWA Fixed	$0.00	$4.89	($0.20)	$4.69	11.75%
SDCWA IAC	$0.00	$1.86	($0.08)	$1.78	4.46%
Desal	$0.00	$7.09	($0.29)	$6.80	17.04%
Conservation	$0.09	$0.03	($0.00)	$0.11	0.27%
Fire Protection	$0.00	$0.07	($0.00)	$0.07	0.16%
Cross Connection Control	$0.14	$0.03	($0.01)	$0.17	0.42%
Engineering	$0.40	$0.07	($0.02)	$0.45	1.14%
General	$0.95	$0.44	($0.06)	$1.33	3.33%
Total O&M Expenses	**$4.18**	**$37.44**	**($1.71)**	**$39.91**	**100.00%**

* *Line or column totals may not tie due to rounding.*

4.4 Rate Component Allocation – Potable

After O&M costs are functionalized, they can be allocated to rate components along with capital costs and other revenue requirement elements. These rate components are the foundation of the individual rates, with each component corresponding to individual or multiple rate components.

The District's rate components are used to allocate costs to the fixed monthly service charges and the volumetric rates. The volumetric components include base, extra capacity (maximum day and maximum hour), SDCWA, desalination, and conservation. The customer-related rate components (customer, service, and private fire protection) are the basis of the fixed monthly service charges.

Fire protection costs are separated into private and public. While private fire protection costs are only allocated to private fire customers through the private fire service charge, the public fire protection costs are attributable to all other customer classes and recovered via the service component.

4.4.1 Rate Component Descriptions – Potable

The following describes each of the cost components for the District.

Volumetric Components

Base: This category includes a portion of operating and capital costs related to internal source of supply and distribution costs, up to a level that meets the District's baseline (average day) demands throughout the year. Base also includes a portion of general and administrative costs associated with the operations and management of those functions.

Extra Capacity – Max Day: This category includes a portion of O&M and capital costs for water distribution related to meeting maximum day demands. Max day also includes a portion of general and administrative costs associated with the operations and management of those functions. Lastly, the costs of the District conservation activities are included in this category.

These costs are incremental to those required for Base service. For example, they include capital costs related to oversizing the system to meet excess max day demand.

System peaking factors are used to determine the appropriate allocations to the Extra Capacity cost components. For the purpose of this study, the maximum day peaking factor is 2.06 based on the District's water use records. This means that the maximum day demand is assumed to be 2.06 times the average day demand, and the maximum hour demand is assumed to be three times the average day demand.

The calculation of the allocation basis from these peaking factors is detailed in the next section.

Extra Capacity – Max Hour: The Max Hour category is similar to the Max Day category but covers the additional costs related to peak above Max Day. These costs are incremental to those required for Base and Max Day service. The Max Hour peaking factor is 2.90 times the average hour demand. The Max Hour peaking factor was developed in the District's master plan.

SDCWA: This category includes the variable costs of purchasing treated water from SDCWA.

Desalination: This category includes the costs of purchasing desalinated water through the UMAPC.

Fixed Components

Service: Costs associated with customer meters and service lines and the associated capacity. The fixed costs charged to the District by SDCWA are also included in this component. These costs are included in the fixed charge based on the meter's hydraulic capacity.

Customer: Costs related to operational support activities including accounting, administration, billing, and customer service. These expenditures are common to all customers and are reasonably uniform across the different customer classes.

Private Fire Protection: Costs associated with providing private fire protection services via dedicated connections. A portion of the distribution system and service costs are included as the system must have sufficient hydraulic capacity to support the pressures and flow demands for fire protection service.

4.5 Extra Capacity Allocation Factors – Potable

For costs related to either Max Day or Max Hour, the peaking factors for each component need to be normalized into a 100 percent scale to allow allocation of costs. The peaking factors are generated as a ratio of the peak demand for a given time period (max month, max day, etc.) to the average demand for the same time period.

For Base-Extra Capacity, this relies on Max Day Demand (MDD) and Max Hour Demand (MHD) flow criteria. District staff provided average day demand (ADD) and MDD conditions for the past three fiscal years based on SCADA monitoring data. The Max Hour Demand (MHD) peaking factor is based on the District's 2019 Master Plan.

4.5.1 Max Day Demand – Potable

For MDD, the highest demand day is approximately 24.50 mgd based on the peak demand from FYE 2020 which occurred on August 23, 2019. Table 20 outlines the calculation of the allocation basis from these peaking factors. Base corresponds with ADD of 11.89 mgd, which is set at 100 percent. The incremental Max Day capacity required above ADD to meet MDD is 12.61 mgd, or 106 percent of base.

The percentages associated with total MDD capacity need to be normalized into a 100 percent basis. After normalizing, 49 percent of capacity is associated with Base demand and 51 percent is associated with the incremental capacity needed to meet MDD.

Table 20 Max Day Allocation

Peaking Factor	MGD	Percent of Base	Normalized Allocation
Base (Average Day)	11.89	100%	48.5%
Incremental Max Day	12.61	106%	51.5%
Total Max Day	**24.50**	**206%**	**100%**

4.5.2 Max Hour Demand – Potable

Table 21 outlines the calculation of the allocation basis from the MHD peaking factors. The District's 2019 master plan determined a MHD peaking factor of 2.90. Applied to the ADD of 11.89 mgd, the 2.90 MHD factor results in estimated max hour demands of 34.98 mgd. Base corresponds with ADD of 11.89 mgd, which is set at 100 percent. The incremental Max Day capacity required above ADD to meet MDD is 12.61 mgd, or 106 percent of base. The incremental Max Hour capacity required above MHD is 9.98 mgd, or 84 percent of base.

The percentages associated with total MHD capacity need to be normalized into a 100 percent basis. After normalizing, 34 percent of capacity is associated with Base demand, 37 percent is associated with the incremental capacity needed to meet MDD, and 29 percent is associated with the incremental capacity needed to meet MHD.

Table 21 Max Hour Allocation

Peaking Factor	MGD	Percent of Base	Normalized Allocation
Base (Average Day)	11.89	100%	34.5%
Incremental Max Day	12.61	106%	36.6%
Incremental Max Hour	9.98	84%	29.0%
Total	**34.98**	**290%**	**100%**

* *Line or column totals may not tie due to rounding.*

Certain costs related to distribution system O&M or sizing are split between the extra capacity components, max day and max hour. The allocation for those costs outlined in Table 22. The allocation is developed based on the incremental max day and max hour demands' proportional share of total extra capacity. With the incremental max day demands of 12.61 mgd and incremental max hour demands of 9.98 mgd, the extra capacity allocation is 56 percent to max day and 44 percent to max hour.

Table 22 Extra Capacity Allocation

Peaking Factor	MGD	Extra Capacity MGD	Extra Capacity Allocation
Base (Average Hour)	11.89	n/a	n/a
Incremental Max Day	12.61	12.61	55.8%
Incremental Max Hour	9.98	9.98	44.2%
Total	**34.98**	**22.59**	**100%**

* *Line or column totals may not tie due to rounding.*

4.6 Allocation of Revenue Requirements to Cost Components – Potable

The next step in the Cost-of-Service analysis is to allocate revenue requirements to each cost component outlined in Section 4.4.1. Each functional category allocation from Section 4.3.1 is then reallocated to a rate component.

The percentages connecting each functional category with a rate component are outlined in Table 23. These percentages are then used to distribute the O&M functional category totals from Table 19 into the rate components, with results summarized in Table 25. Other revenue requirement elements including capital costs, replacement funding, and offsetting revenues are also allocated rate components in this step. Finally, revenue requirement elements allocated to each rate component are summed to determine the total revenue requirements, by rate component, for the FYE 2022 test year. The resulting allocation is shown in Table 26.

Functionalized O&M expenses and the other revenue requirement elements are allocated to the rate categories based on the how and why the costs are incurred, and the services provided to each rate payer by those activities. The O&M expenses and other revenue requirement elements are allocated to rate components as follows:

Customer and Administration: These costs are considered to be equal for all customers regardless of their water demands or the size of their water meters. Thus, to account for each billed connection's share of these costs, they are allocated to the customer and private fire protection rate components.

Meters and Services: This category includes service costs that are common to all customers as well as costs that vary based on the size of each connection. Meters and services costs are split between the customer, service, and private fire components. Fifty percent of costs are allocated between private fire and customer proportional to the number of potable connections and fire protection connections. The remaining fifty percent of costs are allocated between the service and private fire protection proportional to the number of potable MEUs and private fire protection MEUs.

Distribution: Distribution costs are split between the max day and max hour components. This allocation accounts for the oversizing of the distribution system, including pipelines, pump stations, storage facilities and other infrastructure to meet peak demands. This system oversizing drive increased operating and capital costs which are in turn recovered from the extra capacity components.

Supply: These costs are common to all units of water sold and do not vary based on system peaking. They are allocated to the base rate component.

SDCWA Fixed and SDCWA IAC: These costs are assessed to the District, by SDCWA, on a fixed basis tied to a combination of rolling average water purchases, MEUs, and maximum capacity demands. Thus, they can reasonably be recovered through the District's fixed delivery charge. Therefore, these costs are allocated to the service rate component to reflect the capacity needed to serve each customer.

SDCWA Variable: These costs are allocated to the SDCWA component which is later allocated to each customer class based on their allocated share of SDCWA water purchases.

Desalination: These costs are allocated to the desalination component which is later allocated to each customer class based on their allocated share of water purchases.

Conservation: These costs are allocated to the max day rate component as the conservation program is aimed at helping users reduce their incremental demands.

Fire Protection: These costs are allocated to the service and the private fire rate components proportionally based on the number of MEUs for normal service meters and private fire protection connections.

Cross Connection Control: These costs are fixed in nature and are allocated to the service rate component.

Engineering: The District's engineering efforts include planning and managing capital projects as well as supporting operations. These costs are allocated across the rate components based on the allocation of the water system's fixed assets.

General: These costs are for items and activities that provide a general benefit to the water system. They are therefore allocated to the rate components based on the weighted average of O&M expenses.

Capital Costs: Capital related revenue requirements including replacement funding and transfers to the capital replacement reserve are allocated based on the water system's fixed assets. This reflects that the District, as well as most utilities, spend CIP typically in accordance with the current functionalization of the system. For instance, if 25 percent of the value of the system is related to storage tanks and reservoirs, as is the case with the District, then it is reasonable to assign approximately 25 percent of the CIP to storage tanks and reservoirs because it is assumed the District will invest a proportional amount of maintenance, repair, and replacement on storage. While some agencies rely on project specific capital allocations, that process can lead to shifting and rate spiking as projects of different types are completed. Allocating capital costs using the overall fixed asset replacement cost ties the long-term costs of capital investments to the District's physical system while avoiding rate spikes and shifting allocations. A summary of the allocation of fixed assets in shown in Table 24.

Offsetting Revenues and Operating Cash Flows: Offsetting revenues and cash flows are allocated based on the weighted average allocation of all other revenue requirements.

The allocation factors used in the potable water functional allocation are outlined in Table 23.

Table 23 Functional Allocation Factors – Potable

Allocation Factor	Customer	Service	Base	Max Day	Max Hour	Private Fire	SDCWA	Desal
Customer Only[1]	96.2%					3.8%		
Service Only[2]		98.5%				1.5%		
Service Only – No Fire		100.0%						
Customer and Meter Service[3]	48.1%	49.3%				2.7%		
SDCWA Only							100.0%	
Desal Only								100.0%
Base			100.0%					
Max Day				100%				
Max Day/Max Hour[4]				55.8%	44.2%			
Plant-In-Service[5]	0.1%	51.2%	4.2%	23.9%	19.0%	1.5%		

Notes:
(1) Allocation proportional to the number of connections for retail potable customers and private fire protection connections.
(2) Allocation proportional to the number of MEUs for retail potable customers and private fire protection MEUs with private fire protection component adjusted to reflect only the portion of the system related to providing system wide fire protection.
(3) Allocation split to customer and service components with 50 percent to customer and 50 percent to service, allocations adjusted to account for customer and capacity related costs that are attributable to private fire protection.
(4) Allocation based on extra capacity demands as described in Table 22.
(5) Allocation of fixed assets as shown in Table 24.
* *Line or column totals may not tie due to rounding*

Table 24 Fixed Asset Allocation (Plant-in-Service) – Potable ($ millions)

Asset Class	Replacement Value	Customer	Service	Base	Max Day	Max Hour	Systemwide Fire Protection
Land	$10.4		100%				
Buildings	$10.8		100%				
Water Service & Meters	$1.1	50%	50%				
Machinery & Equipment	$0.2		100%				
Fire Hydrants	$0.0						100%
Reservoirs	$96.7		34%	17%	18%	14%	16%
Pipes & Pumping	$273.6		35%		28%	22%	15%
Construction in Progress	$0.0						
Total Allocation	**$392.9**	**$0.6**	**$150.5**	**$16.7**	**$94.0**	**$74.5**	**$56.7**
Percentage Allocation		**0.1%**	**38.3%**	**4.2%**	**23.9%**	**19.0%**	**14.4%**
Reallocation of Systemwide Fire Protection to Service and Private Fire Protection							
		Customer	**Service**	**Base**	**Max Day**	**Max Hour**	**Private Fire Protection**
Fixed Asset Allocation for Cost-of-Service		**0.1%**	**51.2%**	**4.2%**	**23.9%**	**19.0%**	**1.5%**

* *Line or column totals may not tie due to rounding.*

Table 25 O&M Allocation to Rate Components – Potable ($ millions)

Operating Expenditures	Customer	Service	Base	Max Day	Max Hour	Private Fire	SDCWA	Desalination	As All Others	Total
Customer Account Service	$0.03	-	-	-	-	$0.00	-	-	-	$0.03
Meters and Services	$0.78	$0.80	-	-	-	$0.04	-	-	-	$1.63
Admin	$2.48	-	-	-	-	$0.10	-	-	-	$2.58
Distribution	-	-	-	$1.62	$1.29	-	-	-	-	$2.91
Supply	-	-	$0.56	-	-	-	-	-	-	$0.56
SDCWA Variable	-	-	-	-	-	-	$16.80	-	-	$16.80
SDCWA Fixed	-	$4.69	-	-	-	-	-	-	-	$4.69
SDCWA IAC	-	$1.78	-	-	-	-	-	-	-	$1.78
Desal	-	-	-	-	-	-	-	$6.80	-	$6.80
Conservation	-	-	-	$0.11	-	-	-	-	-	$0.11
Fire Protection	-	$0.06	-	-	-	$0.00	-	-	-	$0.07
Cross Connection Control	-	$0.16	-	-	-	$0.00	-	-	-	$0.17
Engineering	$0.00	$0.23	$0.02	$0.11	$0.09	$0.01	-	-	-	$0.45
General	-	-	-	-	-	-	-	-	$1.33	$1.33
Operating Expenditures Subtotal	**$3.30**	**$7.74**	**$0.58**	**$1.84**	**$1.37**	**$0.15**	**$16.80**	**$6.80**	**$1.33**	**$39.91**
Reallocation of "As All Others"	**$0.11**	**$0.27**	**$0.02**	**$0.06**	**$0.05**	**$0.01**	**$0.58**	**$0.23**	**($1.33)**	**-**
Total Allocation	**$3.41**	**$8.00**	**$0.60**	**$1.90**	**$1.42**	**$0.16**	**$17.38**	**$7.03**	**-**	**$39.91**

* *Line or column totals may not tie due to rounding.*

Table 26 Revenue Requirements Allocation to Rate Components – Potable ($ millions)

Rate Revenue Requirement	Customer	Service	Base	Max Day	Max Hour	Private Fire	SDCWA	Desalination	As All Others	Total
Operating Expenses	$3.41	$8.00	$0.60	$1.90	$1.42	$0.16	$17.38	$7.03	-	$39.91
Debt	-	-	-	-	-	-	-	-	-	-
Rate Funded Capital	-	-	-	-	-	-	-	-	-	-
Replacement Funding (Depreciation Funding)	$0.01	$2.31	$0.19	$1.08	$0.85	$0.07	-	-	-	$4.50
Transfer to Capital Fund	$0.01	$2.05	$0.17	$0.96	$0.76	$0.06	-	-	-	$4.00
Cash Flows	-	-	-	-	-	-	-	-	($2.42)	($2.42)
Adjustment for Mid-Year Increase	-	-	-	-	-	-	-	-	$0.54	$0.54
Less Offsetting Revenues	-	-	-	-	-	-	-	-	($4.88)	($4.88)
Total Rate Revenues to be Collected	**$3.42**	**$12.36**	**$0.96**	**$3.94**	**$3.03**	**$0.29**	**$17.38**	**$7.03**	**($6.76)**	**$41.65**
Reallocation of "As All Others"	**($0.48)**	**($1.73)**	**($0.13)**	**($0.55)**	**($0.42)**	**($0.04)**	**($2.43)**	**($0.98)**	**$6.76**	**-**
Total Allocation	**$2.95**	**$10.63**	**$0.83**	**$3.39**	**$2.61**	**$0.25**	**$14.95**	**$6.05**	**-**	**$41.65**

* *Line or column totals may not tie due to rounding.*

4.7 Functional Allocation Results – Potable

Once each revenue requirement element is allocated, a combined allocation of the District's expenses is used as the basis for allocating rate revenue requirements to each functional category and subsequently to each customer class. The functional allocation also defines the split between costs recovered through fixed rate components and those recovered through variable rate components.

4.7.1 Potable Water Functional Allocation Results

The results of the potable water functional allocation analysis are shown in Table 27. The largest single component of the system's costs are related to variable supply costs for imported water from SDCWA. Combined with Desalination costs, these source costs make up approximately 52 percent of the District's potable rate revenue requirements.

The Service, Customer, and Fire cost components are collected through fixed rate components and total approximately 33 percent of the District's potable costs. These costs are recovered through Carlsbad's monthly delivery fee. The District's water usage fees recover the remaining 67 percent of costs, which are allocated to the Base, Max Day, Max Hour, SDCWA, and Desalination components.

Table 27 Functional Allocation Results Summary – Potable Water ($ millions)

Allocation Basis	Revenue Requirement ($ millions)	Percent of Total Functional Allocation
Customer	$2.95	7.1%
Service	$10.63	25.5%
Base	$0.83	2.0%
Max Day	$3.39	8.1%
Max Hour	$2.61	6.3%
Fire	$.25	0.6%
SDCWA	$14.95	35.9%
Desalination	$6.05	14.5%
Total	**$41.65**	**100.0%**

* *Line or column totals may not tie due to rounding.*

4.8 Customer Class Allocation

The final step in the cost-of-service analysis is the allocation of costs to each customer class. This step utilizes the results of the functional allocation and service units to proportionally allocate costs based on the level of service provided to each customer (rate) class. Service units are metrics for each customer class such as the number of accounts, number of meters by size, and usage characteristics that define the level of service provided to each class. Each functional cost component is divided amongst the customer classes in proportion to each classes' share of the service units used to allocate the respective functional component.

Table 28 presents the total service units, otherwise known as the customer class characteristics, of each customer class. These totals are used to proportionally allocate the functional cost components between each customer class. The values presented in Table 28 are the projected values for FYE 2022.

Table 28 Customer Class Service Units

Service Unit	Single Family	Multi-Family	Commercial	Agricultural	Irrigation	Fire	Total
Number of Accounts (Customer)	24,179	1,241	1,736	16	813	1,116	29,100
Number of MEUs (Service)	27,620	5,487	8,890	186	4,355	50,230	96,768
Annual Water Usage (ccf)	3,226,108	734,848	1,185,208	74,408	669,145	-	5,889,716
Max Month (ccf)	341,684	69,225	113,821	10,020	76,557	-	611,306
Max Day (ccf)	28,891	3,864	5,963	525	7,252	-	46,495
Max Hour (ccf)	1,694	227	350	31	425	-	2,727
SDCWA (ccf)	2,669,882	653,624	973,597	58,164	445,449	-	4,800,716
Desal (ccf)	556,226	81,223	211,611	16,245	223,696	-	1,089,000

* *Line or column totals may not tie due to rounding.*

4.8.1 Potable Volumetric Cost Customer Class Allocation

Costs allocated to the variable functional categories (Base, Max Day, Max Hour, SDCWA, and Desal) are allocated based on the amount of demand in each of those categories for each class. This directly ties the incremental cost of water to each class's consumption and to volumetric rate tiers (where applicable). Every unit of water has both an element of base, max day, max hour, SDCWA, and Desal costs. The elements are allocated across the total projected FYE 2022 demand and are summed to determine the total cost allocated to each class.

4.8.1.1 Base Allocation

Base costs are allocated to each class in proportion to their share of annual water usage.

4.8.1.2 Extra Capacity Allocations

Max Day and Max Hour costs are allocated to each class in proportion to their shares of Max Day and Max Hour demands, respectively.

4.8.1.3 Supply Allocations

The available water supplies are allocated based on unit costs and the amount of water from each source assigned to each customer class. Non-desalinated water from SDCWA, the lower cost source, is used first to fulfill all base demand requirements. Desalinated water, the more expensive source, is used to fulfill the remaining base demand requirement and subsequently peak demand requirements. The available supply from each priority is the basis to allocate costs to each customer class and then usage to each tier (where applicable).

This approach recovers costs associated with the higher cost source of supply through incremental peak usage and in turn the upper tiers, where applicable. In practice, this means that the costs of desalinated water are recovered from each class based on each class's incremental demands above their annual average demands.

Allocation proportions are based on the projected consumption from each customer class for FYE 2022. The allocation of available supply to each customer class was performed using the two step process described below.

> ***Step 1***: Allocate SDCWA water, and desalination water as needed, to all classes based on the annual consumption for each class within the average use for each class. This level of demand represents the basic minimum level of usage for each customer class. The remaining SDCWA water is available to be allocated to all customers in step two of the supply allocation. Table 29 shows the calculations for Step 1 of the supply allocation.
>
> ***Step 2***: Allocate remaining desalinated water supply to all classes based on their incremental demands above average demands. This represents each class's incremental use above their basic minimum needs. Table 30 shows the calculations for Step 2 of the supply allocation.

As an example, Figure 3 shows the amount of consumption for the single-family customer class for Step 1 and Step 2 of the supply allocation. The total FYE 2022 projected demand for the single-family class is 3,226,108 ccfs; the average monthly demand is 268,842 ccf. In Step 1, supplies are allocated to recover the sum of monthly usage occurring within average demands, a total of 2,899,357 ccfs. This amount is the total of the blue bars shown in the figure. In Step 2, supplies are allocated to cover the sum of all monthly demands occurring above the average demands, a total of 326,751 ccfs. This amount is the total of the orange bars. This methodology is applied to the other customer classes' projected demands to complete the supply allocation process.

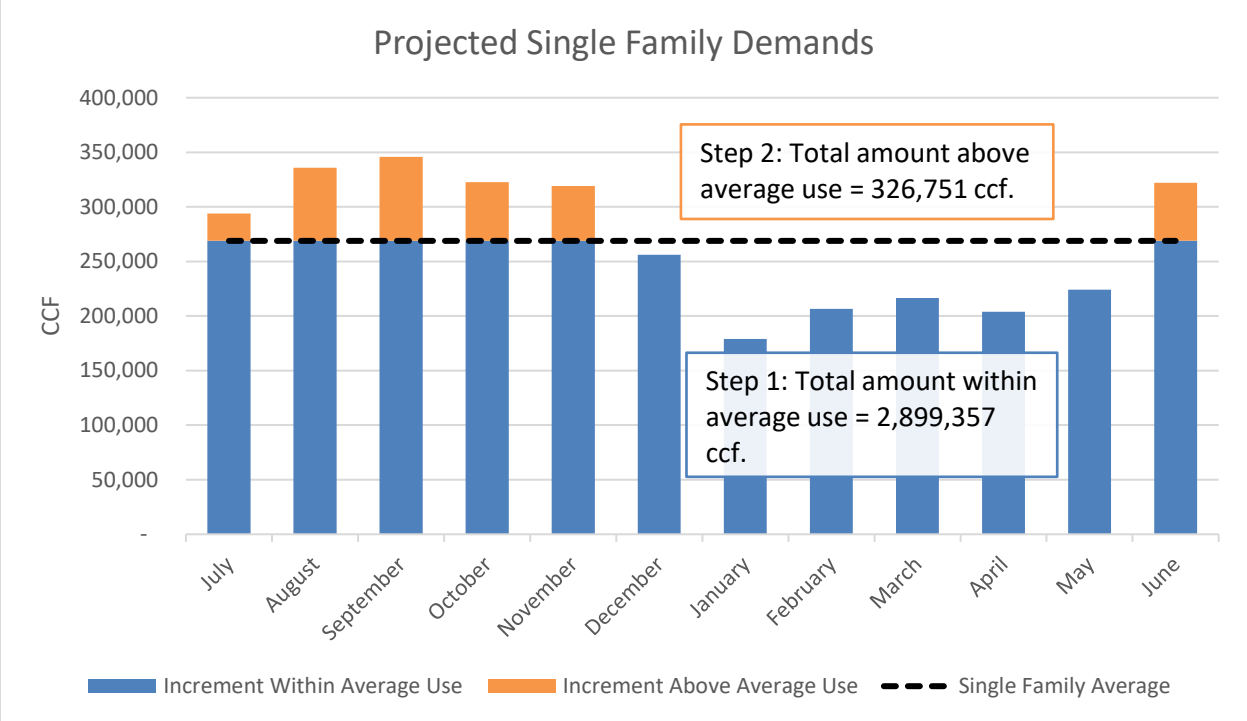

Figure 3 Single Family Monthly Demands for Supply Allocation

Table 29 Supply Allocation – Step 1

			SDCWA	Desal	Total
Total Supplies to be Allocated			4,800,716	1,089,000	5,889,716
Customer Class	**Sum of Monthly Demands within Annual Average (ccf)**	**% of Usage**	**SDCWA**	**Desal**	**Total**
Single Family	2,899,357	55.6%	2,669,882	229,475	2,899,357
Multi-Family	709,803	13.6%	653,624	56,179	709,803
Commercial	1,057,277	20.3%	973,597	83,680	1,057,277
Agricultural	63,163	1.2%	58,164	4,999	63,163
Irrigation	483,735	9.3%	445,449	38,286	483,735
Total	**5,213,335**	**100%**	**4,800,716**	**412,619**	**5,213,335**

* *Line or column totals may not tie due to rounding.*

Table 30 Supply Allocation – Step 2

					SDCWA	Desal	Total
Amount Remaining to be Allocated					0	676,381	676,381
Customer Class	**Annual Usage (ccf)**	**Less Previously Allocated**	**Remaining**	**% of Usage**	**SDCWA**	**Desal**	**Total**
Single Family	3,226,108	(2,899,357)	326,751	54.8%	0	326,751	326,751
Multi-Family	734,848	(709,803)	25,044	12.5%	0	25,044	25,044
Commercial	1,185,208	(1,057,277)	127,931	20.1%	0	127,931	127,931
Agricultural	74,408	(63,163)	11,246	1.3%	0	11,246	11,246
Irrigation	669,145	(483,735)	185,410	11.4%	0	185,410	185,410
Total	**5,889,716**	**(5,213,335)**	**676,381**	**100%**	**0**	**676,381**	**676,381**

* *Line or column totals may not tie due to rounding.*

The allocations to SDCWA and Desalination from steps 1 and 2 are summed to determine the total supplies allocated to each customer class. The costs allocated to the SDCWA and Desalination rate components are then split between each customer class proportionally based on their allocation of water from each supply. Table 31 shows the total demand (ccf) allocated to each supply as a result of the calculations in Table 29 and Table 30.

Table 31 Supply Allocation Summary

Customer Class	SDCWA	Desal	Total
Single Family	2,669,882	556,226	3,226,108
Multi-Family	653,624	81,223	734,848
Commercial	973,597	211,611	1,185,208
Agricultural	58,164	16,245	74,408
Irrigation	445,449	223,696	669,145
Total	**4,800,716**	**1,089,000**	**5,889,716**

* *Line or column totals may not tie due to rounding.*

4.8.2 Potable Fixed Cost Customer Class Allocation

Fixed costs are allocated based on each class's share of accounts and MEUs. Customer costs are allocated based on the number of accounts and Service costs are allocated based on the number of MEUs. All costs allocated to the Private Fire rate component are allocated directly to fire customers. Table 32 summarizes the service units and the percentage allocations used to allocate fixed costs to each customer class.

Table 32 Fixed Cost Customer Allocation Factors

Customer Class	# Accounts	Percent Allocation	# MEUs	Percent Allocation	Private Fire Accounts	Fire Percent Allocation
Single Family	24,179	83.1%	27,620	28.5%	-	-
Multi-Family	1,241	4.3%	5,487	5.7%	-	-
Commercial	1,736	6.0%	8,890	9.2%	-	-
Agricultural	16	0.1%	186	0.2%	-	-
Irrigation	813	2.8%	4,355	4.5%	-	-
Fire	1,116	3.8%	50,230	51.9%	1,116	100.0%
Total	**29,100**	**100.0%**	**96,768**	**100.0%**	**1,116**	**100.0%**

* *Line or column totals may not tie due to rounding.*

4.8.3 Potable Water Customer Allocation Results

Table 33 summarizes the total revenue requirements allocated to each potable water customer class for FYE 2022. These allocated costs are subsequently used to determine the fixed delivery charges and volumetric rates for each customer class. Additional detail of the customer allocation analysis is included for reference in Appendix H.

Table 33 Potable Water Customer Allocation Summary, FYE 2022 ($ millions)

Functional Component	Service Unit	Single-Family	Multi-Family	Commercial	Agricultural	Irrigation	Fire
Customer	Accounts	$2.54	$0.13	$0.18	$0.00	$0.09	-
Service	MEUs	$6.31	$1.25	$2.03	$0.04	$1.00	-
Base	Annual Usage (ccf)	$0.45	$0.10	$0.17	$0.01	$0.09	-
Max Day	Max Day Usage (ccf)	$2.10	$0.28	$0.43	$0.04	$0.53	-
Max Hour	Max Hour Usage (ccf)	$1.62	$0.22	$0.33	$0.03	$0.41	-
SDCWA	SDCWA Allocation	$8.31	$2.04	$3.03	$0.18	$1.39	-
Desal	Desal Allocation	$3.09	$0.45	$1.18	$0.09	$1.24	-
Fire	MEUs	-	-	-	-	-	$0.25
Total		**$24.44**	**$4.47**	**$7.36**	**$0.39**	**$4.74**	**$0.25**

* *Line or column totals may not tie due to rounding.*

4.8.4 Functional Cost Allocation – Recycled

4.8.4.1 Functional Cost Categories – Recycled

The functional cost allocation for recycled water follows an approach similar to that laid out for potable water in the previous sections. The allocation assigns the revenue requirement for the test year by major function. The Study developed a list of functions specific to the District's recycled water system. Each functional component is allocated to specific cost components, which can then be assigned to rates. The recycled water functional components used for the District are:

Customer Account Service: Costs for materials and outside services directly related to customer communication such as outreach, printing, and postage.

Meters and Services: Costs associated with recycled water meters and service connections.

Administration: Costs related to the overall management and oversight of the recycled water system including legal costs, permitting and regulatory fees, studies, and other related items. This category also includes the costs that the recycled water utility pays to other City of Carlsbad departments for services that they provide such as customer billing and information technology services.

Distribution: Costs associated with delivering recycled water to customers including the operation and maintenance of the water distribution system facilities.

Supply: The costs that the District pays to purchase recycled water from Vallecitos as well as the costs paid to the Encina Wastewater Authority for the operation of the CWRF.

Cross Connection Control: Costs related to the District's cross-connection control program.

Engineering: Costs related to the District's engineering activities.

General: Costs associated with other expenses that provide an overall benefit to the water system such as staff costs for management personnel who oversee all aspects of the water operation. This category also includes costs that do not fit any of the other categories such as asphalt repairs, landscaping services, miscellaneous supplies, and other overhead expenses.

4.8.4.2 O&M Expense Functionalization – Recycled

The District's O&M expenses were functionalized into each of the above categories using the FY 2022 budgeted operating expenses. Table 34 presents a summary of the O&M cost functionalization. A detailed table of the functionalization is included in Appendix G.

Table 34 Functionalized O&M Expenses – Recycled ($ millions)

Functional Category	Personnel	Maintenance & Equipment	Budget Adjustments	Total Allocated	Resulting Allocation
Customer Account Service	$0.00	$0.01	($0.00)	$0.00	0.07%
Meters and Services	$0.09	$0.20	($0.02)	$0.28	3.89%
Admin	$0.06	$0.65	($0.04)	$0.68	9.46%
Distribution	$0.34	$0.90	($0.06)	$1.18	16.34%
Supply	$0.04	$3.86	($0.20)	$3.71	51.46%
Cross Connection Control	$0.57	$0.04	($0.03)	$0.58	8.06%
Engineering	$0.48	$0.01	($0.03)	$0.46	6.45%
General	$0.25	$0.07	($0.02)	$0.31	4.27%
Total O&M Expenses	**$1.84**	**$5.76**	**($0.39)**	**$7.20**	**100.00%**

* *Line or column totals may not tie due to rounding.*

4.8.5 Rate Component Allocation – Recycled

After O&M costs are functionalized, they can be allocated to rate components along with capital costs and other revenue requirement elements. These rate components are the foundation of the individual rates, with each component corresponding to individual or multiple rate components.

The District's rate components are used to allocate costs to the fixed monthly service charges and the volumetric rates. For recycled water, the volumetric components include base, and supply. Due to the relative homogeneity of the recycled water customer base a uniform volumetric charge is applied to all customers, thus the extra capacity components are not necessary in the recycled water allocation. The customer-related rate components (customer, and service) are the basis of the fixed monthly service charges.

4.8.5.1 Rate Component Descriptions – Recycled

The following describes each of the cost components for the District.

Volumetric Components

Base: This category includes the District's volumetric costs for delivering recycled water to customers.

Supply: This category includes the variable costs of purchasing recycled water from Vallecitos and the costs the District pays to the Encina Wastewater Authority for the operation of the CWRF.

Fixed Components

Service: Costs associated with customer meters and service lines and the associated capacity. These costs are included in the fixed charge based on the meter's hydraulic capacity.

Customer: Costs related to operational support activities including accounting, administration, billing, and customer service. These expenditures are common to all customers and are reasonably uniform across the different customer classes.

4.8.6 Allocation of Revenue Requirements to Cost Components – Recycled

Functionalized O&M expenses and the other revenue requirement elements are allocated to the rate categories based on the how and why the costs are incurred, and the services provided to each rate payer by those activities. The O&M expenses and other revenue requirement elements are allocated to rate components as follows:

Customer: These costs are considered to be equal for all customers regardless of their water demands or the size of their water meters and are thus allocated to the customer rate component.

Administration: These costs are fixed in nature and are allocated to the service rate component.

Meters and Services: This category includes service costs that are common to all customers as well as costs that vary based on the size of each connection. Meters and services costs are split between the customer and service categories. Twenty-five percent of costs are allocated to customer and 75-percent of costs are allocated to service.

Distribution: Distribution costs are allocated to the base component.

Supply: These costs are common to all units of water sold and do not vary based on system peaking. They are allocated to the supply rate component.

Cross Connection Control: Due to the regulatory requirements of providing recycled water service, the recycled water system has a more extensive cross connection control program than the potable system. These costs are allocated to the base rate component.

Engineering: The District's engineering efforts include planning and managing capital projects as well as supporting operations. These costs are allocated across the rate components based on the allocation of the recycled water system's fixed assets.

General: These costs are for items and activities that provide a general benefit to the water system. They are therefore allocated to the rate components based on the weighted average of O&M expenses.

Capital Costs: Capital related revenue requirements including replacement funding and transfers to the capital replacement reserve are allocated based on the recycled water system's fixed assets. This reflects

that the District, as well as most utilities, spend CIP typically in accordance with the current functionalization of the system. A summary of the allocation of fixed assets in shown in Table 36.

Offsetting Revenues and Operating Cash Flows: Offsetting revenues and cash flows are allocated based on the weighted average allocation of all other revenue requirements.

The allocation factors used in the recycled water functional allocation are outlined in Table 35.

Table 35 Functional Allocation Factors – Recycled

Allocation Factor	Customer	Service	Base	Supply
Customer Only	100.0%			
Customer and Meter Service	25.0%	75.0%		
Service Only		100.0%		
Base Only			100.0%	
Supply Only				100.0%
Plant In Service		20.0%	60.9%	19.1%

* *Allocation of fixed assets as shown in Table 36.*
* *Line or column totals may not tie due to rounding.*

Table 36 Fixed Asset Allocation (Plant-in-Service) – Recycled ($ millions)

Asset Class	Replacement Value	Service	Base	Supply
Land	$65.8	20%	80%	0%
Buildings	$11.3	20%	80%	0%
Water Service & Meters	$24.2	20%	0%	80%
Total Allocation	**$101.30**	**$20.3**	**$61.7**	**$19.3**
Percentage Allocation		**20.0%**	**60.9%**	**19.1%**

* *Line or column totals may not tie due to rounding.*

Table 37 O&M Allocation to Rate Components – Recycled ($ millions)

Operating Expenditures	Customer	Service	Base	Supply	As All Others	Total
Customer Account Service	$0.00	-	-	-	-	$0.00
Meters and Services	$0.07	$0.21	-	-	-	$0.28
Admin	-	$0.68	-	-	-	$0.68
Distribution	-	-	$1.18	-	-	$1.18
Supply	-	-	-	$3.71	-	$3.71
Cross Connection Control	-	-	$0.58	-	-	$0.58
Engineering	-	$0.09	$0.28	$0.09	-	$0.46
General	-	-	-	-	$0.31	$0.31
Operating Expenditures Subtotal	**$0.07**	**$0.98**	**$2.04**	**$3.80**	**$0.31**	**$7.20**
Reallocation of "As All Others"	**$0.00**	**$0.04**	**$0.09**	**$0.17**	**($0.31)**	**-**
Total Allocation	**$0.08**	**$1.03**	**$2.13**	**$3.97**	**-**	**$7.20**

* *Line or column totals may not tie due to rounding.*

Table 38 Revenue Requirements Allocation to Rate Components – Recycled ($ millions)

Rate Revenue Requirement	Customer	Service	Base	Supply	As All Others	Total
Operating Expenses	$0.08	$1.03	$2.13	$3.97	-	$7.20
Debt	-	-	$1.88	-	-	$1.88
Rate Funded Capital	-	$0.52	$1.58	$0.49	-	$2.59
Replacement Funding (Depreciation Funding)	-	$0.28	$0.85	$0.27	-	$1.40
Transfer to Capital Fund	-	-	-	-	-	-
Cash Flows	-	-	-	-	($4.75)	($4.75)
Adjustment for Mid-Year Increase	-	-	-	-	$0.22	$0.22
Less Offsetting Revenues	-	-	-	-	($0.00)	($0.00)
Total Rate Revenues to be Collected	**$0.08**	**$1.83**	**$6.44**	**$4.73**	**($4.53)**	**$8.54**
Reallocation of "As All Others"	**($0.03)**	**($0.63)**	**($2.23)**	**($1.64)**	**$4.53**	**-**
Total Allocation	**$0.05**	**$1.19**	**$4.21**	**$3.09**	**-**	**$8.54**

* *Line or column totals may not tie due to rounding.*

4.8.7 Functional Allocation Results – Recycled

Once each revenue requirement element is allocated, a combined allocation of the District's expenses is used as the basis for allocating rate revenue requirements to each functional category and subsequently to each customer class. The functional allocation also defines the split between costs recovered through fixed rate components and those recovered through variable rate components.

4.8.7.1 Recycled Water Functional Allocation Results

The results of the recycled water functional allocation analysis are shown in Table 39. The Service and Customer components are collected through fixed rate components and total approximately 14.8 percent of the District's potable costs. These costs are recovered through the monthly delivery fee. The recycled water usage fees recover the remaining 85.2 percent of costs, which are allocated to the Base and Supply components.

Table 39 Functional Allocation Results Summary – Recycled ($ millions)

Allocation Basis	Revenue Requirement ($ millions)	Percent of Total Functional Allocation
Customer	$0.05	0.6%
Service	$1.19	14.0%
Base	$4.21	49.3%
Supply	$3.09	36.2%
Total Revenue Requirements	**$8.54**	**100.0%**

* *Line or column totals may not tie due to rounding.*

Section 5 – Rate Design Analysis

The rate design analysis links the cost allocated to each customer class with the projected demand for each class. The resulting rates from this analysis must fully recover costs. Additionally, the analysis should demonstrate that each customer class is paying their fair and proportionate share of system costs.

5.1 Rate Structure Objectives and Goals

With costs equitably allocated to each customer class, as outlined in Section 4, the District has some flexibility in designing a rate structure that meets its policy and fiscal objectives. In determining the appropriate rates and rate structures, the District considered various rate design alternatives and the resulting impacts to both the District and its customers. Carollo utilized multiple criteria in judging each rate structure.

1. Clear and understandable.
2. Easily administered.
3. Follows cost-of-service principles.
4. Provides revenue stability.
5. Provides affordability.
6. Complies with legal and regulatory requirements.

Given the numerous and competing elements of rate design, selection of an appropriate rate structure is complex. There is no single structure that meets all objectives equally. The rate recommendations presented within this report proportionally recover costs from system users, help to stabilize annual rate revenues, and are easy to both administer and understand by the District's customers as they provide consistency with the existing rate structure. The following sections summarize the calculations and methodologies used to develop the proposed rates. Additional detail of the rate design analysis is included for reference in Appendix I.

5.2 Potable Water Delivery Fees

Delivery charges are intended to recover the District's fixed operating costs. The proposed delivery charges are a combination of the Customer and Service functional components. Separate delivery charges were developed for recycled customers to reflect the specific costs of the recycled water system.

To determine the delivery charge, the meter unit cost is multiplied by the meter capacity ratios previously developed by the District to calculate the meter Service cost. These ratios are based on ratios identified in the *AWWA M6 Manual 'Water Meters – Selection, Installation, Testing, and Maintenance'* and represent the types of meters used by the District. The ratios are calculated using the average of maximum flow for meters of each size.

The service cost is then added to the customer cost to calculate the cost based fixed charges. Table 41 presents the results of this calculation for FYE 2022.

The proposed revenue adjustments, as a percentage, do not equal or necessarily correlate to an equivalent percentage increase to rates or monthly bills. The results of the cost-of-service analysis and rate design will affect users differently based on their meter size and water consumptions habits.

Table 40 Fixed Unit Costs – Potable

Monthly Fixed Charges	Customer	Service
Allocated Fixed Revenue Requirements	$2,945,000	$10,633,000
	Accounts	**MEU**
Customer Units	27,984	46,538
	Per Account	**Per MEU**
Monthly Unit Charges	$8.77	$19.04

Table 41 Proposed Monthly Water Delivery Fees – Potable

Meter Size	Meter Equivalent Ratio	Customer Component	Service Component	Total Fixed Charge
5/8"	1.00	$8.77	$19.04	$27.81
3/4"	1.50	$8.77	$28.56	$37.33
1"	2.50	$8.77	$47.60	$56.37
1.5"	5.00	$8.77	$95.20	$103.97
2"	8.00	$8.77	$152.32	$161.09
2 1/2"	11.50	$8.77	$218.96	$227.73
3"	15.00	$8.77	$285.59	$294.37
4"	25.00	$8.77	$475.99	$484.77
6"	50.00	$8.77	$951.98	$960.76
8"	80.00	$8.77	$1,523.17	$1,531.95
10"	115.00	$8.77	$2,189.56	$2,198.33

* *Line or column totals may not tie due to rounding.*

Table 43 summarizes the proposed fixed charges for customers with private fire line service. The service connection size is the basis of the charge for customers that have fire line service. The size of the connection determines the flow capacity, or quantity of water that can be drawn from the District's system in the event of a fire. Service connection size can be measured either by consumption meter size or by service line size. In cases where an installed meter restricts the capacity of the connection and measures total water consumption, the charges will be based on the meter size. For fire lines that have a meter that is in place only to inform the District when water is drawn through the pipe and does not restrict water flows, the charge will be based on the service line size. Setting charges based on service connection size ensures legal compliance and ratepayer equity.

The total allocated revenue requirements for private fire protection are split between an amount to be collected on a per account basis and an amount to be collected on a meter equivalent unit basis. The split between these components is based on the detailed cost allocation. Line items that include a private fire service allocation that are customer related are allocated to the account charge, those that are allocated to the service component are collected via the unit component of the charge.

Table 42 Proposed Fixed Unit Costs – Fire

Item	Amount
Allocated 2022 Revenue Requirement	$246,000
Percent Recovered Through Account Charges	44.2%
Number of Accounts	1,116
Monthly Fixed Charge Per Account	**$8.10**
Recovered through Unit Charges	55.8%
Effective Number of MEUs (FY 2021)	50,230
Monthly Fixed Charge Per MEU	**$0.23**

Table 43 Proposed Monthly Water Delivery Fees – Fire

Meter Size	Meter Equivalent Ratio	Customer Component	Service Component	Total Fixed Charge
5/8"	1.00	$8.10	$0.23	$8.33
3/4"	1.50	$8.10	$0.34	$8.45
1"	2.50	$8.10	$0.57	$8.67
1.5"	5.00	$8.10	$1.14	$9.24
2"	8.00	$8.10	$1.82	$9.93
2 1/2"	11.50	$8.10	$2.62	$10.72
3"	15.00	$8.10	$3.41	$11.52
4"	25.00	$8.10	$5.69	$13.79
6"	50.00	$8.10	$11.37	$19.48
8"	80.00	$8.10	$18.20	$26.30
10"	115.00	$8.10	$26.16	$34.26
12″	200.00	$8.10	$45.49	$53.60

* *Line or column totals may not tie due to rounding.*

5.3 Potable Water Usage Fees

The District's tiered customers include single-family and multi-family residential classes, referred to collectively as residential customers. All other customer classes are billed a uniform rate, regardless of usage. The volumetric rate for recycled customers is calculated based on the recycled water system's unique costs.

5.3.1 Residential Rates

The current rates for all residential customers utilize a three-tiered inclining block structure. The usage allotments for each tier are constant throughout the course of the year. Tier allotments are based on the water needs for each customer and on the actual usage patterns observed in the customer billing data.

5.3.1.1 Single-Family Rate Design

The single-family residential tiered rates provide a strong relationship between the District's cost of providing the water service and the customer's payment for that service. The tiered rates build from the functional allocation presented in Table 43 and are structured to recover Base, Max Day, and Max Hour costs, which are costs related to internal expenditures, as well as SDCWA and Desal water purchase costs. Based on an analysis of customer billing data, Carollo does not propose any changes to the current single-family rate tier break structure during the five-year rate analysis period.

Table 44 Proposed Single-Family Residential Tier Allotments

Customer Class	Tier	Allotment
Single-Family Residential	Tier 1	10 ccf
	Tier 2	18 ccf
	Tier 3	> 18 ccf

The Tier 1 allotment of 10 ccf corresponds roughly to the median monthly consumption for single-family customers and falls just below the average monthly use of 11 ccf. This level of consumption is considered to be efficient for indoor usage and places a lower burden on the system's infrastructure and on ongoing supply costs due to lower peak demands. The Tier 2 incremental allotment of 8 ccf, to a total allotment of 18 ccf, corresponds roughly to the upper 75th percentile of usage during the maximum month. This level of usage places an incrementally higher burden on the system than tier 1, and is therefore responsible for a greater share of peaking related costs. Usage above 18 ccf per month places the greatest burden on the system due to the highest peaking and thus pays the highest rate.

Single-family tiered rates are calculated by allocating the rate component costs that were allocated to the single-family customer class to each tier, then dividing the total costs allocated to each tier by the projected consumption in each tier. The costs allocations are developed based on the demands and extra capacity needs of each tier, as determined by an evaluation of the District billing data.

Base costs are allocated to each tier equally as they are the same for all units of water regardless of peaking. Max Day and Max Hour costs are allocated to each tier based on the Max Day and Max Hour extra capacity of each tier, respectively. Billing data for single family customers was evaluated on a per-tier basis to determine each tier's extra capacity. A detailed summary of that evaluation is included in Appendix F. Percentage allocations for Base, Max Day, and Max Hour costs are calculated for each component proportional to each tier's share of demands, Max Day, and Max Hour, as shown in Table 45.

Table 45 Single-Family Rate Design – Base, Max Day, Max Hour

Tier	FYE 2022 Demand		Max Day Extra Capacity		Max Hour Extra Capacity	
	ccf	Base Alloc.	ccf	Alloc.	ccf	Alloc.
Tier 1	1,898,561	58.8%	1,422,564	19.3%	3,219,436	43.0%
Tier 2	575,037	17.8%	1,861,942	25.3%	1,558,280	20.8%
Tier 3	752,509	23.3%	4,073,690	55.4%	2,706,341	36.2%
Total	**3,226,108**	**100.0%**	**7,358,196**	**100.0%**	**7,484,058**	**100.0%**

* *Line or column totals may not tie due to rounding.*

Using the result of the supply allocation (see Table 31), supplies are allocated to fulfill the forecasted FYE 2022 demand as summarized in Table 46. Costs for purchased water from SDCWA and Desalination are allocated between the three tiers by first using the lower cost source of supply, SDCWA, to satisfy demands in the lower tiers. Once all SDCWA supplies allocated to single family have been exhausted, single family's share of Desalination water is used to satisfy remaining demands. The resulting percent allocation split between the tiers is used to allocate the SDCWA and Desalination costs between Tiers 1, 2, and 3.

Table 46 Single-Family Rate Design – Supply Costs

Tier	FYE 2022 Demand (ccf)	SDCWA (ccf)	Desal (ccf)	SDCWA	Desal
Tier 1	1,898,561	1,898,561	-	71.1%	-
Tier 2	575,037	575,037	-	21.5%	-
Tier 3	752,509	196,284	556,226	7.4%	100.0%
Total	**3,226,108**	**2,669,882**	**556,226**	**100.0%**	**100.0%**

* *Line or column totals may not tie due to rounding.*

Using the percent allocations calculated in Table 45 and Table 46, the total revenue requirement for each functional component is divided between Tiers 1, 2, and 3. The resulting proposed FYE 2022 single-family water usage fees are presented in Table 47. Rates for each tier are calculated by dividing the total revenue requirements for each tier by the projected demands within each tier.

Table 47 Single-Family Rate Design Summary, FYE 2022

Functional Component	FYE 2022 Revenue Requirement ($ millions)	Tier 1 ($ millions)	Tier 2 ($ millions)	Tier 3 ($ millions)
Base	**$0.45**	$0.27	$0.08	$0.11
Max Day	**$2.10**	$0.41	$0.53	$1.17
Max Hour	**$1.62**	$0.70	$0.34	$0.59
SDCWA	**$8.31**	$5.91	$1.79	$0.61
Desalination	**$3.09**	-	-	$3.09
Total Requirements	**$15.58**	**$7.28**	**$2.74**	**$5.56**
	FYE 2022 Demand (ccf)	**1,898,561**	**575,037**	**752,509**
	Proposed FYE 2022 Rate	**$3.84/ccf**	**$4.77/ccf**	**$7.39/ccf**

* *Line or column totals may not tie due to rounding.*

5.3.1.2 MULTI-FAMILY RATE DESIGN

The multi-family residential tiered rates provide a strong relationship between the District's cost of providing the water service and the customer's payment for that service. The tiered rates build from the functional allocation presented in Table 33 and are structured to recover Base, Max Day, and Max Hour costs, which are costs related to internal expenditures, as well as SDCWA and Desal water purchase costs. Carollo does not propose any changes to the current multi-family rate tier break structure during the five-year rate analysis period.

Multi-family customers do not have yards and home owners associations maintain separate meters for irrigation. On average each multi family dwelling unit uses less water than an average single-family customer. Therefore, the tier per dwelling unit (DU) allotments for multi-family customers are lower than per account allotments of the single-family class. The proposed monthly multi-family Tier 1 allotment per dwelling unit remains at 5 ccf. 5 ccf ties closely to average minimum month use per dwelling unit. Any usage above 5 ccf will be charged the multi-family Tier 2 rate.

Table 48 Proposed Multi-Family Residential Tier Allotments

Customer Class	Tier	Allotment per Dwelling Unit
Multi-Family Residential (per DU)	Tier 1	5 ccf
	Tier 2	> 5 ccf

* *Line or column totals may not tie due to rounding.*

Similar to single family residential, multi-family residential tiered rates provide a strong relationship between the District's cost of providing the water service and the customer's payment for that service. The tiered rates build from the functional allocation presented in Section 4 and are structured to recover Base, Max Day, Max Hour, SDCWA, and Desal water purchase costs.

Multi-family tiered rates are calculated by allocating the rate component costs that were allocated to the multi-family customer class to each tier, then dividing the total costs allocated to each tier by the projected consumption in each tier. The costs allocations are developed based on the demands and extra capacity needs of each tier, as determined by an evaluation of the District billing data.

Base costs are allocated to each tier equally as they are the same for all units of water regardless of peaking. Max Day and Max Hour costs are allocated to each tier based on the Max Day and Max Hour extra capacity of each tier, respectively. Billing data for multi-family customers was evaluated on a per-tier basis to determine each tier's extra capacity. A detailed summary of that evaluation is included in Appendix F. Percentage allocations for Base, Max Day, and Max Hour costs are calculated for each component proportional to each tier's share of demands, Max Day, and Max Hour, as shown in Table 49.

Table 49 Multi-Family Rate Design – Base, Max Day, Max Hour

Tier	FYE 2022 Demand		Max Day Extra Capacity		Max Hour Extra Capacity	
	ccf	Base Alloc.	ccf	Alloc.	ccf	Alloc.
Tier 1	589,672	80.2%	370,512	54.1%	970,857	74.6%
Tier 2	145,176	19.8%	314,111	45.9%	329,853	25.4%
Total	**734,848**	**100.0%**	**684,623**	**100.0%**	**1,300,710**	**100.0%**

* *Line or column totals may not tie due to rounding.*

Using the result of the supply allocation (see Table 31), supplies are allocated to fulfill the forecasted FYE 2022 demand as summarized in Table 50. Costs for purchased water from SDCWA and Desalination are allocated between the two tiers by first using the lower cost source of supply, SDCWA, to satisfy demands in Tier 1, before remaining SDCWA supplies are allocated to Tier 2. Once all SDCWA supplies allocated to multi-family have been exhausted, multi-family's share of Desalination water is used to satisfy remaining demands. The resulting percent allocation split between the tiers is used to allocate the SDCWA and Desalination costs between Tiers 1 and 2.

Table 50 Multi-Family Rate Design – Supply Costs

Tier	FYE 2022 Demand (ccf)	SDCWA (ccf)	Desal (ccf)	SDCWA	Desal
Tier 1	589,672	589,672	-	90.2%	-
Tier 2	145,176	63,953	81,223	9.8%	100.0%
Total	**734,848**	**653,624**	**81,223**	**100.0%**	**100.0%**

* *Line or column totals may not tie due to rounding.*

Using the percent allocations calculated in Table 49 and Table 50, the total revenue requirement for each functional component is divided between Tiers 1 and 2. The resulting proposed FYE 2022 multi-family water usage fees are presented in Table 51. Rates for each tier are calculated by dividing the total revenue requirements for each tier by the projected demands within each tier.

Table 51 Multi-Family Rate Design Summary, FYE 2022

Functional Component	FYE 2022 Revenue Requirement ($ millions)	Tier 1 ($/ccf)	Tier 2 ($/ccf)
Base	$0.10	$0.08	$0.02
Max Day	$0.28	$0.15	$0.13
Max Hour	$0.22	$0.16	$0.05
SDCWA	$2.04	$1.84	$0.20
Desal	$0.45	-	$0.45
Total Requirements	**$3.09**	**$2.23**	**$0.86**
	FYE 2022 Demand (ccf)	589,672	145,176
	Proposed FYE 2022 Rate	**$3.79/ccf**	**$5.89/ccf**

* *Line or column totals may not tie due to rounding.*

5.3.2 Commercial, Agricultural, and Irrigation Rate Design

The water usage fee for the remaining customer classes are uniform rates charged for each ccf of consumption. Rates are calculated for each customer class by dividing each class's allocated share of variable revenue requirements by its projected consumption. A summary of the rate calculation for Commercial, Agricultural, and Irrigation customers is shown in Table 52.

Table 52 Commercial, Agricultural, and Irrigation Rate Design Summary, FYE 2022

Customer Class	Base ($ millions)	Max Day	Max Hour	SDCWA	Desal	Total Costs to Recover ($ millions)	Projected Demand (ccf)	Rate ($/ccf)
Commercial	$0.17	$0.43	$0.33	$3.03	$1.18	**$5.14**	1,185,208	**$4.34**
Agricultural	$0.01	$0.04	$0.03	$0.18	$0.09	**$0.35**	74,408	**$4.70**
Irrigation	$0.09	$0.53	$0.41	$1.39	$1.24	**$3.66**	669,145	**$5.47**

* *Line or column totals may not tie due to rounding.*

5.4 Recycled Water Rates

5.4.1 Recycled Water Delivery Charges

Recycled water delivery charges are calculated using the same methodology as the potable water delivery charges discusses previously, but with the revenue requirements and customer units of the recycled water system. Table 53 shows the recycled water unit costs per account and per MEU.

Table 53 Fixed Unit Costs – Recycled

Monthly Fixed Charges	Customer	Service
Allocated Fixed Revenue Requirements	$51,000	$1,193,000
	Accounts	**MEU**
Customer Units	922	5,282
	Per Account	**Per MEU**
Monthly Unit Charges	**$4.62**	**$18.83**

Table 54 shows the calculation of recycled water delivery charges for FYE 2022.

Table 54 Proposed Monthly Water Delivery Fees – Recycled

Meter Size	Meter Equivalent Ratio	Customer Component	Service Component	Total Fixed Charge
5/8"	1.00	$4.62	$18.83	$23.45
3/4"	1.50	$4.62	$28.24	$32.86
1"	2.50	$4.62	$47.07	$51.69
1.5"	5.00	$4.62	$94.13	$98.76
2"	8.00	$4.62	$150.61	$155.23
2 1/2"	11.50	$4.62	$216.50	$221.13
3"	15.00	$4.62	$282.40	$287.02

Meter Size	Meter Equivalent Ratio	Customer Component	Service Component	Total Fixed Charge
4"	25.00	$4.62	$470.66	$475.28
6"	50.00	$4.62	$941.32	$945.95
8"	80.00	$4.62	$1,506.12	$1,510.74
10"	115.00	$4.62	$2,165.05	$2,169.67

* *Line or column totals may not tie due to rounding.*

5.4.2 Recycled Water Usage Rates

Recycled water usage rates are calculated by dividing the total variable revenue requirements by the projected recycled water demands. Table 55 shows the calculation of the recycled water usage rate for FYE 2022.

Table 55 Recycled Water Usage Rate Design Summary, FYE 2022

Customer Class	Base ($ millions)	Supply	Total Costs to Recover ($ millions)	Projected Demand (ccf)	Rate ($/ccf)
Commercial	$4.21	$3.09	**$7.29**	1,853,214	**$3.94**

* *Line or column totals may not tie due to rounding.*

5.5 Proposed Potable Water Rates

Table 56 and Table 57 present the current and proposed potable water rates for the next two years, as well as projected rates for FYE 2024 through FYE 2026. The FYE 2022 overall annual rate adjustment of 2 percent will be implemented as a full cost-of-service adjustment and will therefore impact each rate uniquely. FYE 2023 to FYE 2026 will have a 2 percent rate revenue increase applied equally to all rates.

Table 56 Proposed Potable Water Delivery Fees

Meter Size	Current	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Increase		***2.0% w/ COS Adj.***	***2.0%***	***2.0%***	***2.0%***	***2.0%***
5/8"	$25.52	$27.81	$28.37	$28.94	$29.52	$30.11
3/4"	$34.44	$37.33	$38.08	$38.84	$39.62	$40.41
1"	$52.28	$56.37	$57.50	$58.65	$59.82	$61.02
1.5"	$96.88	$103.97	$106.05	$108.17	$110.34	$112.54
2"	$150.40	$161.09	$164.31	$167.60	$170.95	$174.37
2 1/2"	$212.84	$227.73	$232.29	$236.93	$241.67	$246.50
3"	$275.28	$294.37	$300.26	$306.26	$312.39	$318.63
4"	$453.68	$484.77	$494.46	$504.35	$514.44	$524.73
6"	$899.69	$960.76	$979.97	$999.57	$1,019.56	$1,039.95
8"	$1,434.89	$1,531.95	$1,562.59	$1,593.84	$1,625.71	$1,658.23
10"	$2,059.30	$2,198.33	$2,242.30	$2,287.15	$2,332.89	$2,379.55

Table 57 Proposed Potable Water Usage Fees

Customer Class	Tier	Current ($/ccf)	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Increase		*--*	***2.0% w/ COS Adj.***	***2.0%***	***2.0%***	***2.0%***	***2.0%***
Single Family Residential	Tier 1	$4.13	$3.84	$3.92	$4.00	$4.08	$4.16
	Tier 2	$4.51	$4.77	$4.87	$4.97	$5.06	$5.17
	Tier 3	$7.18	$7.39	$7.54	$7.69	$7.84	$8.00
Multi-Family Residential	Tier 1	$3.95	$3.79	$3.87	$3.95	$4.02	$4.10
	Tier 2	$5.04	$5.89	$6.01	$6.13	$6.26	$6.38
Commercial	N/A	$4.36	$4.34	$4.43	$4.52	$4.61	$4.70
Agricultural	N/A	$4.71	$4.70	$4.80	$4.89	$4.99	$5.09
Irrigation	N/A	$5.41	$5.47	$5.58	$5.69	$5.81	$5.92

5.6 Proposed Recycled Water Rates

Table 58 and Table 59 present the current and proposed recycled water rates for the next two years, as well as projected rates for FYE 2024 through FYE 2026. The FYE 2022 overall annual rate adjustment of 4 percent will be implemented as a full cost-of-service adjustment and will therefore impact each rate uniquely. FYE 2023 to FYE 2026 will have a 4 percent rate revenue increase applied equally to all rates.

Table 58 Proposed Recycled Water Delivery Fees

Meter Size	Current	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Increase	*--*	***4.0% w/ COS Adj.***	***4.0%***	***4.0%***	***4.0%***	***4.0%***
5/8"	$23.34	$23.45	$24.39	$25.36	$26.38	$27.43
3/4"	$32.22	$32.86	$34.18	$35.54	$36.97	$38.44
1"	$49.97	$51.69	$53.76	$55.91	$58.14	$60.47
1.5"	$94.35	$98.76	$102.71	$106.81	$111.09	$115.53
2"	$147.59	$155.23	$161.44	$167.90	$174.62	$181.60
2 1/2"	$209.77	$221.13	$229.97	$239.17	$248.74	$258.69
3"	$271.92	$287.02	$298.50	$310.44	$322.86	$335.77
4"	$449.35	$475.28	$494.30	$514.07	$534.63	$556.02
6"	$893.11	$945.95	$983.78	$1,023.14	$1,064.06	$1,106.62
8"	$1,425.61	$1,510.74	$1,571.17	$1,634.02	$1,699.38	$1,767.35
10"	$2,046.87	$2,169.67	$2,256.45	$2,346.71	$2,440.58	$2,538.20

Table 59 Proposed Recycled Water Usage Fees

Customer Class	Current ($/ccf)	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Increase	**--**	***4.0% w/ COS Adj.***	***4.0%***	***4.0%***	***4.0%***	***4.0%***
Recycled	$3.79	$3.94	$4.09	$4.26	$4.43	$4.61

5.7 Proposed Fire Service Rates

Table 60 presents the current and adopted fire service delivery fee rates over the next two years. The FYE 2022 overall annual rate adjustment of 2 percent will be implemented as a full cost-of-service adjustment and will therefore impact each rate uniquely. FYE 2023 to FYE 2026 will have a 2 percent rate revenue increase applied equally to all rates.

Table 60 Proposed Fire Service Delivery Fees

Meter Size	Current	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Increase	**--**	***2.0% w/ COS Adj.***	***2.0%***	***2.0%***	***2.0%***	***2.0%***
5/8"	$7.93	$8.33	$8.50	$8.67	$8.84	$9.02
3/4"	$8.05	$8.45	$8.62	$8.79	$8.96	$9.14
1"	$8.30	$8.67	$8.85	$9.02	$9.21	$9.39
1.5"	$8.92	$9.24	$9.43	$9.62	$9.81	$10.00
2"	$9.66	$9.93	$10.12	$10.33	$10.53	$10.74
2 1/2"	$10.53	$10.72	$10.94	$11.15	$11.38	$11.60
3"	$11.40	$11.52	$11.75	$11.98	$12.22	$12.47
4"	$13.89	$13.79	$14.07	$14.35	$14.64	$14.93
6"	$20.10	$19.48	$19.87	$20.26	$20.67	$21.08
8"	$27.55	$26.30	$26.83	$27.36	$27.91	$28.47
10"	$36.25	$34.26	$34.95	$35.65	$36.36	$37.09
12"	$57.37	$53.60	$54.67	$55.76	$56.88	$58.01

5.8 Regional Water Rate Comparison

A regional survey of single-family water rates was conducted to compare the District's existing and proposed rates to those of surrounding agencies. Although not all water systems are alike, such comparisons are common. Care should be taken in drawing conclusions from such comparisons as all systems face unique challenges and have developed their rates accordingly. Figure 4 compares the District's existing and proposed rates for single family residences, assuming an 11 unit water use and a 5/8" residential meter. The 5/8" meter size is the most common for the District's customers and 11 ccf is the average monthly consumption. The monthly bill includes usage fee, service charges (including the SDCWA infrastructure access charge when applicable), and miscellaneous charges such as pumping fees and Readiness-to-Serve charge. As shown in the figure, the District's average single-family residential monthly bill is currently $71.33. With the proposed increases, the average bill would decrease slightly by approximately $0.35 to $70.98 due to the cost-of-service adjustment in FYE 2022. With the proposed rates for FYE 2023, the average bill would be $72.44. Overall, the proposed rates for FYE 2022 will increase single family rate revenues by 1.9 percent, however bill increases for individual users will vary based on their consumption and meter size.

When compared to the surrounding agencies, the District's proposed rate continues to falls below the average regional monthly bill. Additionally, this survey does not reflect rate increases currently under review, but not yet implemented.

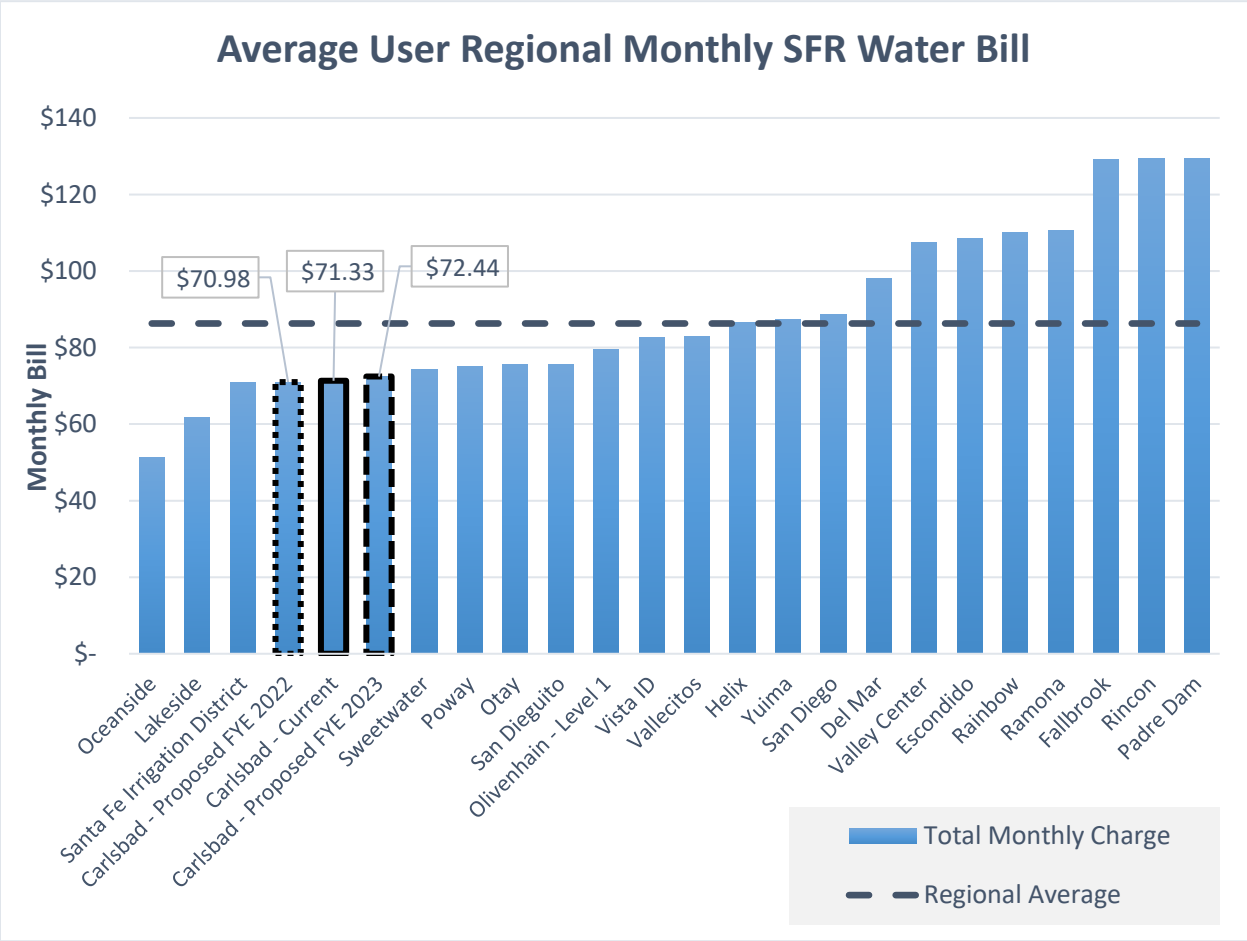

Figure 4 Regional Monthly Single-Family Water Bill Comparison – Average Customer

As another point of comparison, Figure 5 compares the bill for a higher usage single family customer to the surrounding agencies. This comparison is based on a ¾" meter and 20 ccf of consumption. This level of consumption is equal to the average consumption in the maximum month for single family customers with ¾" meters. As shown in the figure, the District's monthly bill for this assumed user is currently $120.84. With the proposed increases, the bill would increase to $123.43 in FYE 2022. With the proposed rates for FYE 2023, the average bill would be $125.98.

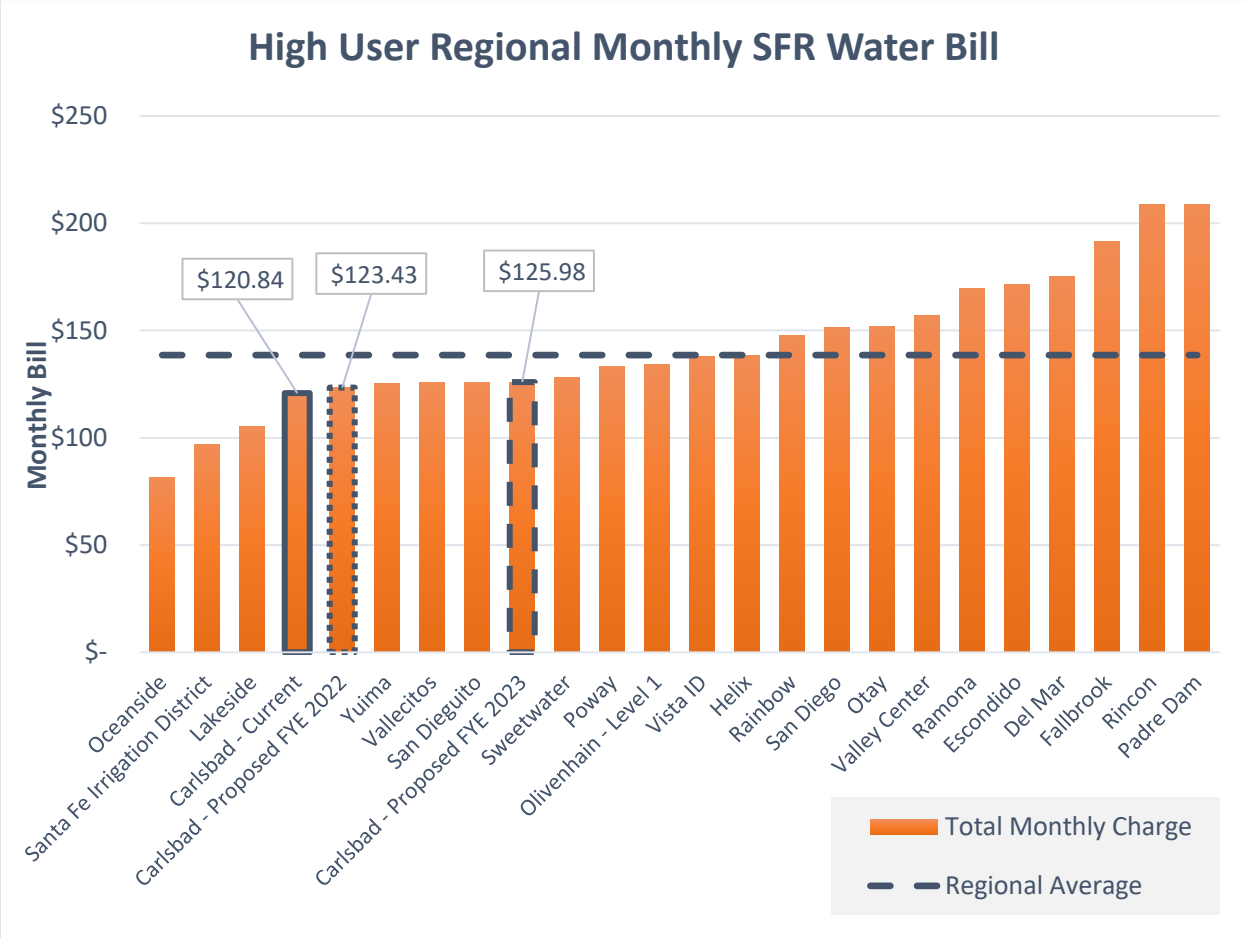

Figure 5 Regional Monthly Single-Family Water Bill Comparison – High Use Customer

Appendix A

CUSTOMER AND DEMAND FORECASTS

Growth Input	0.5%	0.7%	1.0%	0.3%	0.8%	0.5%	0.6%	0.2%	0.8%	0.8%	0.5%

Multi Family	FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027	FYE 2028	FYE 2029	FYE 2030	FYE 2031
5/8	49,278	49,623	50,112	50,267	50,661	50,938	51,245	51,338	51,733	52,127	52,373
3/4	20,569	20,713	20,918	20,982	21,147	21,262	21,390	21,429	21,594	21,759	21,861
1"	58,317	58,725	59,304	59,487	59,953	60,282	60,645	60,755	61,223	61,689	61,980
1.5"	178,047	179,293	181,062	181,621	183,044	184,046	185,154	185,492	186,919	188,342	189,231
2"	325,360	327,638	330,870	331,892	334,492	336,324	338,348	338,966	341,573	344,173	345,799
2.5"	-	-	-	-	-	-	-	-	-	-	-
3"	50,159	50,510	51,008	51,166	51,567	51,849	52,161	52,256	52,658	53,059	53,310
4"	41,110	41,398	41,806	41,935	42,264	42,495	42,751	42,829	43,158	43,487	43,692
6"	6,899	6,947	7,016	7,038	7,093	7,132	7,174	7,188	7,243	7,298	7,332
8"	-	-	-	-	-	-	-	-	-	-	-
10"	-	-	-	-	-	-	-	-	-	-	-
Total	**729,739**	**734,848**	**742,095**	**744,388**	**750,220**	**754,329**	**758,868**	**760,253**	**766,101**	**771,933**	**775,580**

Growth Input	0.5%	0.7%	1.0%	0.3%	0.8%	0.5%	0.6%	0.2%	0.8%	0.8%	0.5%

Single Family	FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027	FYE 2028	FYE 2029	FYE 2030	FYE 2031
5/8"	2,690,743	2,709,581	2,736,306	2,744,760	2,766,265	2,781,414	2,798,153	2,803,259	2,824,821	2,846,325	2,859,773
3/4"	251,230	252,989	255,484	256,273	258,281	259,696	261,258	261,735	263,748	265,756	267,012
1"	251,962	253,726	256,229	257,020	259,034	260,453	262,020	262,498	264,517	266,531	267,790
1.5"	5,849	5,890	5,948	5,966	6,013	6,046	6,082	6,094	6,140	6,187	6,216
2"	3,895	3,922	3,961	3,973	4,004	4,026	4,050	4,057	4,089	4,120	4,139
2.5"	-	-	-	-	-	-	-	-	-	-	-
3"	-	-	-	-	-	-	-	-	-	-	-
4"	-	-	-	-	-	-	-	-	-	-	-
6"	-	-	-	-	-	-	-	-	-	-	-
8"	-	-	-	-	-	-	-	-	-	-	-
10"	-	-	-	-	-	-	-	-	-	-	-
Total	**3,203,679**	**3,226,108**	**3,257,927**	**3,267,993**	**3,293,597**	**3,311,634**	**3,331,564**	**3,337,644**	**3,363,315**	**3,388,919**	**3,404,930**

Growth Input	0.9%	2.1%	0.2%	0.3%	0.1%	0.2%	0.3%	0.0%	1.2%	1.5%	1.6%

Commercial/ Institutional/Other	FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027	FYE 2028	FYE 2029	FYE 2030	FYE 2031
5/8	34,699	35,415	35,496	35,605	35,630	35,709	35,811	35,816	36,244	36,799	37,369
3/4	18,040	18,412	18,454	18,511	18,524	18,565	18,618	18,621	18,843	19,132	19,428
1"	81,194	82,868	83,058	83,313	83,372	83,556	83,795	83,806	84,808	86,106	87,441
1.5"	252,208	257,408	257,999	258,790	258,974	259,546	260,287	260,323	263,435	267,466	271,612
2"	651,380	664,811	666,338	668,381	668,855	670,331	672,247	672,339	680,377	690,787	701,496
2.5"	11,738	11,980	12,008	12,044	12,053	12,080	12,114	12,116	12,261	12,448	12,641
3"	73,171	74,680	74,852	75,081	75,134	75,300	75,515	75,526	76,429	77,598	78,801
4"	34,539	35,251	35,332	35,440	35,465	35,543	35,645	35,650	36,076	36,628	37,196
6"	544	555	557	558	559	560	562	562	568	577	586
8"	3,750	3,827	3,836	3,848	3,851	3,859	3,870	3,871	3,917	3,977	4,038
10"	-	-	-	-	-	-	-	-	-	-	-
Total	**1,161,263**	**1,185,208**	**1,187,929**	**1,191,572**	**1,192,417**	**1,195,049**	**1,198,464**	**1,198,629**	**1,212,958**	**1,231,516**	**1,250,609**

Growth Input	0.5%	0.7%	1.0%	0.3%	0.8%	0.5%	0.6%	0.2%	0.8%	0.8%	0.5%

Agricultural	FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027	FYE 2028	FYE 2029	FYE 2030	FYE 2031
5/8	-	-	-	-	-	-	-	-	-	-	-
3/4	624	628	634	636	641	645	649	650	655	660	663
1"	1,134	1,142	1,153	1,157	1,166	1,172	1,179	1,182	1,191	1,200	1,205
1.5"	580	584	590	592	596	600	603	604	609	614	617
2"	6,310	6,354	6,417	6,437	6,487	6,523	6,562	6,574	6,625	6,675	6,707
2.5"	-	-	-	-	-	-	-	-	-	-	-
3"	17,120	17,240	17,410	17,464	17,601	17,697	17,803	17,836	17,973	18,110	18,195
4"	48,123	48,460	48,938	49,089	49,473	49,744	50,044	50,135	50,521	50,905	51,146
6"	-	-	-	-	-	-	-	-	-	-	-
8"	-	-	-	-	-	-	-	-	-	-	-
10"	-	-	-	-	-	-	-	-	-	-	-
Total	**73,891**	**74,408**	**75,142**	**75,374**	**75,965**	**76,381**	**76,841**	**76,981**	**77,573**	**78,163**	**78,533**

Growth Input	0.5%	0.7%	1.0%	0.3%	0.8%	0.5%	0.6%	0.2%	0.8%	0.8%	0.5%
Irrigation	**FYE 2021**	**FYE 2022**	**FYE 2023**	**FYE 2024**	**FYE 2025**	**FYE 2026**	**FYE 2027**	**FYE 2028**	**FYE 2029**	**FYE 2030**	**FYE 2031**
5/8	9,113	9,177	9,267	9,296	9,369	9,420	9,477	9,494	9,567	9,640	9,685
3/4	7,721	7,775	7,851	7,876	7,937	7,981	8,029	8,044	8,105	8,167	8,206
1"	70,696	71,191	71,894	72,116	72,681	73,079	73,519	73,653	74,219	74,784	75,138
1.5"	200,508	201,912	203,904	204,534	206,136	207,265	208,512	208,893	210,500	212,102	213,104
2"	325,215	327,492	330,722	331,744	334,343	336,174	338,197	338,814	341,420	344,020	345,645
2.5"	-	-	-	-	-	-	-	-	-	-	-
3"	-	-	-	-	-	-	-	-	-	-	-
4"	39,143	39,417	39,806	39,929	40,241	40,462	40,705	40,780	41,093	41,406	41,602
6"	12,096	12,181	12,301	12,339	12,436	12,504	12,579	12,602	12,699	12,796	12,856
8"	-	-	-	-	-	-	-	-	-	-	-
10"	-	-	-	-	-	-	-	-	-	-	-
Total	**664,493**	**669,145**	**675,745**	**677,833**	**683,143**	**686,885**	**691,018**	**692,280**	**697,604**	**702,915**	**706,236**

Growth Input	0.5%	0.7%	1.0%	0.3%	0.8%	0.5%	0.6%	0.2%	0.8%	0.8%	0.5%
Recycled Water	**FYE 2021**	**FYE 2022**	**FYE 2023**	**FYE 2024**	**FYE 2025**	**FYE 2026**	**FYE 2027**	**FYE 2028**	**FYE 2029**	**FYE 2030**	**FYE 2031**
5/8	576	580	585	587	592	595	599	600	604	609	612
3/4	5,202	5,238	5,290	5,306	5,348	5,377	5,409	5,419	5,461	5,502	5,528
1"	162,197	163,332	164,943	165,453	166,749	167,662	168,671	168,979	170,279	171,575	172,386
1.5"	562,742	566,682	572,271	574,039	578,537	581,705	585,206	586,274	590,783	595,281	598,093
2"	691,872	696,716	703,588	705,762	711,291	715,187	719,491	720,804	726,348	731,877	735,335
2.5"	-	-	-	-	-	-	-	-	-	-	-
3"	33,757	33,993	34,328	34,434	34,704	34,894	35,104	35,168	35,439	35,709	35,877
4"	42,133	42,428	42,847	42,979	43,316	43,553	43,815	43,895	44,233	44,570	44,780
6"	212,108	213,593	215,699	216,366	218,061	219,255	220,575	220,977	222,677	224,372	225,432
8"	129,743	130,651	131,940	132,347	133,384	134,115	134,922	135,168	136,208	137,245	137,893
10"	-	-	-	-	-	-	-	-	-	-	-
Total	**1,840,329**	**1,853,214**	**1,871,492**	**1,877,274**	**1,891,982**	**1,902,344**	**1,913,792**	**1,917,285**	**1,932,032**	**1,946,740**	**1,955,937**

Appendix B

WATER SUPPLY PURCHASES AND COSTS

Water Purchases Escalators

	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Customer Service Charge Increase [(2)(3)]	5.00%	5.00%	5.00%	5.00%	5.00%
Emergency Storage Charge Increase [(2)(3)]	2.00%	2.00%	2.00%	2.00%	2.00%
Infrastructure Access Charge Increase [(2) (3)]	1.00%	1.00%	1.00%	1.00%	1.00%
Supply Reliability Charge Increase [(2)(3)]	5.00%	5.00%	5.00%	5.00%	5.00%
MWD Capacity Reservation Charge Increase [(2)(3)]	3.00%	3.00%	3.00%	3.00%	3.00%
MWD Readiness to Service Charge Increase	6.00%	6.00%	6.00%	6.00%	6.00%
Transportation Rate Increase [(3)]	5.00%	5.00%	5.00%	5.00%	5.00%
SDCWA M&I Melded Supply Rate Increase [(3)]	6.00%	6.00%	6.00%	6.00%	6.00%
SDCWA Melded Treatment Rate Increase [(3)]	2.00%	2.00%	2.00%	2.00%	2.00%
Desal - Fixed Capital Increase [(1)]	2.50%	2.50%	2.50%	2.50%	2.50%
Desal - Fixed Financing Increase [(1)]	9.70%	9.70%	9.70%	9.70%	9.70%
Desal - Fixed O&M Increase [(1)]	2.50%	2.50%	2.50%	2.50%	2.50%
Desal - Fixed Electricity Increase [(1)]	2.50%	2.50%	2.50%	2.50%	2.50%
Desal - Variable O&M Increase [(1)]	2.50%	2.50%	2.50%	2.50%	2.50%
Desal - Variable Electricity Increase [(1)]	3.00%	3.00%	3.00%	3.00%	3.00%
Desal - Conveyance Cost Increase [(1)]	2.50%	2.50%	2.50%	2.50%	2.50%
Desal - Indirect Costs Increase [(1)]	1.50%	1.50%	1.50%	1.50%	1.50%
Desal - T.O. Inefficiency Increase [(1)]	6.00%	6.00%	6.00%	6.00%	6.00%
Desal - Wheeling Increase [(1)]	5.00%	5.00%	5.00%	5.00%	5.00%

SDCWA/MWD Purchases

	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Water Consumption Override					
Water Purchases (AF)	12,177	12,299	12,345	12,440	12,512
Water Purchases (ccf)	5,304,160	5,357,481	5,377,369	5,418,816	5,450,224
Water Purchasee (MGD)	10.87	10.98	11.02	11.11	11.17
Customer Data (ccf)	5,889,716	5,938,839	5,957,160	5,995,343	6,024,278
System Loss (input)	8.5%	8.5%	8.5%	8.5%	8.5%
System Loss (calculated)	*4,800,716*	*4,849,839*	*4,868,160*	*4,906,343*	*4,935,278*

Fixed Charges (CY) (1,2,3)	CY 2022	CY 2023	CY 2024	CY 2025	CY 2026
Customer Service Charge	$ 821,100	$ 862,155	$ 905,263	$ 950,526	$ 998,052
Emergency Storage Charge	2,084,796	2,126,492	2,169,022	2,212,402	2,256,650
Infrastructure Access Charge	1,861,044	1,879,654	1,898,451	1,917,435	1,936,610
Supply Reliability Charge	1,352,460	1,420,083	1,491,087	1,565,642	1,643,924
MWD Capacity Reservation Charge	293,856	302,672	311,752	321,104	330,738
MWD Readiness to Service Charge (FY basis)	397,800	421,668	446,968	473,786	502,213

Fixed Charges (FY)					
Customer Service Charge	$ 807,150	$ 841,628	$ 883,709	$ 927,894	$ 974,289
Emergency Storage Charge	2,047,662	2,105,644	2,147,757	2,190,712	2,234,526
Infrastructure Access Charge	1,857,888	1,870,349	1,889,053	1,907,943	1,927,023
Supply Reliability Charge	1,350,210	1,386,272	1,455,585	1,528,364	1,604,783
MWD Capacity Reservation Charge	287,640	298,264	307,212	316,428	325,921
MWD Readiness to Service Charge	397,800	421,668	446,968	473,786	502,213
Total Fixed Charges (FY)	**$ 6,748,350**	**$ 6,923,824**	**$ 7,130,283**	**$ 7,345,128**	**$ 7,568,755**
Fixed per AF	*$554*	*$563*	*$578*	*$590*	*$605*
	-1%	*2%*	*3%*	*2%*	*2%*

Variable Charges (CY) (1,2,3)	CY 2022	CY 2023	CY 2024	CY 2025	CY 2026
Transportation Rate	$ 173	$ 182	$ 191	$ 200	$ 210
SDCWA M&I Melded Supply Rate	1,009	1,070	1,134	1,202	1,274
SDCWA Melded Treatment Rate	310	316	323	329	336
CWA Drought Fee					
Variable Price per AF	$ 1,492	$ 1,567	$ 1,647	$ 1,731	$ 1,820
Total Variable Costs (FY)	**$ 17,516,149**	**$ 18,813,849**	**$ 19,840,212**	**$ 21,010,647**	**$ 22,212,882**
Total SDCWA & MWD Charges (FY)	**$24,264,499**	**$25,737,673**	**$26,970,495**	**$28,355,775**	**$29,781,637**

DESAL PURCHASES

Contract Desal Water, Min. 2500 AF (1,5)	2,500	2,500	2,500	2,500	2,500
Additional desal water, AF (1)	-	-	-	-	-
Total Desal (AF)	**2,500**	**2,500**	**2,500**	**2,500**	**2,500**
In ccf	*1,089,000*	*1,089,000*	*1,089,000*	*1,089,000*	*1,089,000*
Fixed Charges ($/AF), Calendar Year (4,5)	CY 2022	CY 2023	CY 2024	CY 2025	CY 2026
Capital, Debt Service Charge	$1,812.49	$1,857.80	$1,904.24	$1,951.85	$2,000.65
Capital, Equity Return Charge	0.00	0.00	0.00	0.00	0.00
Fixed O&M	0.00	0.00	0.00	0.00	0.00
Fixed Electrictiy	0.00	0.00	0.00	0.00	0.00
Variable Charges ($/AF) (4,5)					
Variable O&M	$793.53	$813.37	$833.71	$854.55	$875.91
Variable Electricity	0.00	0.00	0.00	0.00	0.00
Other Costs ($/AF) (4,5)					
Conveyance (Pipeline Debt Payment)	$221.46	$227.00	$232.67	$238.49	$244.45
Indirect Costs (2)	33.04	33.53	34.04	34.55	35.07
Administration Charge	10.80	11.45	12.14	12.86	13.64
Wheeling (Transportation Charge Including credits) (2)	0.00	0.00	0.00	0.00	0.00
Fixed Costs ($)					
Capital	$ 4,531,218	$ 4,644,498	$ 4,760,610	$ 4,879,626	$ 5,001,616
Financing	-	-	-	-	-
Fixed O&M	-	-	-	-	-
Fixed Electrictiy	-	-	-	-	-
Variable Costs ($)					
Variable O&M	$ 1,983,836	$ 2,033,432	$ 2,084,268	$ 2,136,375	$ 2,189,784
Variable Electricity	-	-	-	-	-
Other Costs ($)					
Conveyance	$ 553,654	$ 567,495	$ 581,682	$ 596,225	$ 611,130
Indirect Costs	82,596	83,835	85,092	86,368	87,664
T.O. Inefficiency	27,004	28,624	30,341	32,162	34,091
Wheeling (Transportation Charge Including credits)	-	-	-	-	-
Total Desal Costs, CY (3)	**$ 7,178,307**	**$ 7,357,883**	**$ 7,541,994**	**$ 7,730,755**	**$ 7,924,286**
Desal Costs (FY Basis)	**$ 7,090,728**	**$ 7,268,095**	**$ 7,449,939**	**$ 7,636,374**	**$ 7,827,520**

Recycled Water Purchases

Assumptions

Leucadia Price (% of Potable Water) (1)	No Purchases	No Purchases	No Purchases	No Purchases	No Purchases
Potable Water Cost	$ 1,439	$ 1,530	$ 1,607	$ 1,689	$ 1,775
Vallecitos Annual Escalation	3%	3%	3%	3%	3%
Reclaimed Water Increases					
Expected AF to be Sold (Historical Sales &Customer Data)	4,254	4,296	4,310	4,343	4,367
System Losses	5%	5%	5%	5%	5%
Recycled Water to be Purchased	**4,467**	**4,511**	**4,525**	**4,561**	**4,586**

Source of Supply (in AF)

Leucadia Wastewater District (LWD)	-	-	-	-	-
Vallecitos Water District (VWD)	2,386	2,386	2,386	2,386	2,386
Carlsbad Water Recycling Facility (CWRF)	2,081	2,125	2,139	2,174	2,199
Total Recycled Water (AF)	**4,467**	**4,511**	**4,525**	**4,561**	**4,586**
5-year moving average	*#N/A*	*#N/A*	*#N/A*	*4,500*	*4,530*

Unit Costs

Leucadia Wastewater District (LWD)	$ -	$ -	$ -	$ -	$ -
Vallecitos Water District (VWD)	$ 951	$ 979	$ 1,009	$ 1,039	$ 1,070

Purchase Amount

Leucadia Wastewater District (LWD)	$ -	$ -	$ -	$ -	$ -
Vallecitos Water District (VWD)	$ 2,268,646	$ 2,336,705	$ 2,406,806	$ 2,479,010	$ 2,553,381
Outside RW Purchases	**$ 2,268,646**	**$ 2,336,705**	**$ 2,406,806**	**$ 2,479,010**	**$ 2,553,381**

DESAL PURCHASES

	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Contract Desal Water, Min. 2500 AF (1,5)	2,500	2,500	2,500	2,500	2,500
Additional desal water, AF (1)	-	-	-	-	-
Total Desal (AF)	**2,500**	**2,500**	**2,500**	**2,500**	**2,500**
In ccf	*1,089,000*	*1,089,000*	*1,089,000*	*1,089,000*	*1,089,000*
Fixed Charges ($/AF), Calendar Year (4,5)	CY 2022	CY 2023	CY 2024	CY 2025	CY 2026
Capital, Debt Service Charge	$1,812.49	$1,857.80	$1,904.24	$1,951.85	$2,000.65
Capital, Equity Return Charge	0.00	0.00	0.00	0.00	0.00
Fixed O&M	0.00	0.00	0.00	0.00	0.00
Fixed Electrictiy	0.00	0.00	0.00	0.00	0.00
Variable Charges ($/AF) (4,5)					
Variable O&M	$793.53	$813.37	$833.71	$854.55	$875.91
Variable Electricity	0.00	0.00	0.00	0.00	0.00
Other Costs ($/AF) (4,5)					
Conveyance (Pipeline Debt Payment)	$221.46	$227.00	$232.67	$238.49	$244.45
Indirect Costs (2)	33.04	33.53	34.04	34.55	35.07
Administration Charge	10.80	11.45	12.14	12.86	13.64
Wheeling (Transportation Charge Including credits) (2)	0.00	0.00	0.00	0.00	0.00
Fixed Costs ($)					
Capital	$ 4,531,218	$ 4,644,498	$ 4,760,610	$ 4,879,626	$ 5,001,616
Financing	-	-	-	-	-
Fixed O&M	-	-	-	-	-
Fixed Electrictiy	-	-	-	-	-
Variable Costs ($)					
Variable O&M	$ 1,983,836	$ 2,033,432	$ 2,084,268	$ 2,136,375	$ 2,189,784
Variable Electricity	-	-	-	-	-
Other Costs ($)					
Conveyance	$ 553,654	$ 567,495	$ 581,682	$ 596,225	$ 611,130
Indirect Costs	82,596	83,835	85,092	86,368	87,664
T.O. Inefficiency	27,004	28,624	30,341	32,162	34,091
Wheeling (Transportation Charge Including credits)	-	-	-	-	-
Total Desal Costs, CY (3)	**$ 7,178,307**	**$ 7,357,883**	**$ 7,541,994**	**$ 7,730,755**	**$ 7,924,286**
Desal Costs (FY Basis)	**$ 7,090,728**	**$ 7,268,095**	**$ 7,449,939**	**$ 7,636,374**	**$ 7,827,520**

Recycled Water Purchases

	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Assumptions					
Leucadia Price (% of Potable Water) (1)	No Purchases	No Purchases	No Purchases	No Purchases	No Purchases
Potable Water Cost	$ 1,439	$ 1,530	$ 1,607	$ 1,689	$ 1,775
Vallecitos Annual Escalation	3%	3%	3%	3%	3%
Reclaimed Water Increases					
Expected AF to be Sold (Historical Sales &Customer Data)	4,254	4,296	4,310	4,343	4,367
System Losses	5%	5%	5%	5%	5%
Recycled Water to be Purchased	**4,467**	**4,511**	**4,525**	**4,561**	**4,586**
Source of Supply (in AF)					
Leucadia Wastewater District (LWD)	-	-	-	-	-
Vallecitos Water District (VWD)	2,386	2,386	2,386	2,386	2,386
Carlsbad Water Recycling Facility (CWRF)	2,081	2,125	2,139	2,174	2,199
Total Recycled Water (AF)	**4,467**	**4,511**	**4,525**	**4,561**	**4,586**
5-year moving average	*#N/A*	*#N/A*	*#N/A*	*4,500*	*4,530*
Unit Costs					
Leucadia Wastewater District (LWD)	$ -	$ -	$ -	$ -	$ -
Vallecitos Water District (VWD)	$ 951	$ 979	$ 1,009	$ 1,039	$ 1,070
Purchase Amount					
Leucadia Wastewater District (LWD)	$ -	$ -	$ -	$ -	$ -
Vallecitos Water District (VWD)	$ 2,268,646	$ 2,336,705	$ 2,406,806	$ 2,479,010	$ 2,553,381
Outside RW Purchases	**$ 2,268,646**	**$ 2,336,705**	**$ 2,406,806**	**$ 2,479,010**	**$ 2,553,381**

Appendix C

CAPITAL IMPROVEMENT PLAN

WATER CONNECTION PROJECTS					FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Include	**Project Number**	**Project Title**	**Expansion**	**Replacement**					
✓	50131	College Boulevard - Cannon Road To Badger Lane (375 Zone)	100%	0%	$ 250,000	$ 844,817			
✓	50121	College Boulevard - Cannon Road To Badger Lane (490 Zone)	100%	0%	300,000	1,160,000			
✓	50381	Desalinated Water Flow Control Facility No. 5	100%	0%	1,056,749			8,200,000	
✓	50591	Hydroelectric Generation at Water Facilities	100%	0%	400,000	1,875,000			
✓	50451	Poinsettia Lane - Cassia Road to Skimmer Court (Reimbursement Agreement)	100%	0%	595,066				
✓	19621	Rancho Carlsbad Groundwater Supply	100%	0%	400,000	125,000			
✓	50441	San Luis Rey Mission Basin Groundwater Supply	100%	0%	277,500	300,000			
✓	50581	Water Modeling	100%	0%	189,591	25,000	25,000	25,000	
		WATER CONNECTION PROJECTS TOTAL:			**$ 3,468,906**	**$ 4,329,817**	**$ 25,000**	**$ 8,225,000**	**$ -**

SUMMARY OF WATER CONNECTION PROJECTS	UNESCALATED	ESCALATED
5-YEAR CIP (2022-2026)		
R&R	$ -	$ -
Expansion	16,048,723	17,096,252
TOTAL:	**$ 16,048,723**	**$ 17,096,252**
10-YEAR CIP (2022-2031)		
R&R	$ -	$ -
Expansion	22,973,723	25,917,216
TOTAL:	**$ 22,973,723**	**$ 25,917,216**
TOTAL CIP (2022-2035)		
R&R	$ -	$ -
Expansion	24,973,723	28,890,013
TOTAL:	**$ 24,973,723**	**$ 28,890,013**

	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
UNESCALATED					
R&R	$ -	$ -	$ -	$ -	$ -
Expansion	3,468,906	4,329,817	25,000	8,225,000	-
Total	**$ 3,468,906**	**$ 4,329,817**	**$ 25,000**	**$ 8,225,000**	**$ -**
ESCALATED					
R&R	$ -	$ -	$ -	$ -	$ -
Expansion	3,468,906	4,481,361	26,781	9,119,205	-
Total	**$ 3,468,906**	**$ 4,481,361**	**$ 26,781**	**$ 9,119,205**	**$ -**

WATER REPLACEMENT PROJECTS

Include	Project Number	Project Title	Expansion	Replacement	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
✓	52051	Abandon Potable Services (New Recycled Services)	0%	100%	$ 51,153		$ 50,000	$ 500,000	$ 500,000
✓	50601	Aviara Parkway and Plum Tree Waterline	0%	100%	200,000	200,000	900,500		
✓	50481	Carlsbad Boulevard Waterline Replacement at Terramar	0%	100%	627,894	2,800,000			
✓	52031	Carlsbad Water Recycling Facility (Encina Capital Projects)	0%	100%	-				
✓	50071	Cathodic Protection Program	0%	100%	1,437,014	190,000	190,000	190,000	190,000
✓	50331	Crestview Drive Transmission Main	0%	100%	300,000	500,000			
✓	50431	Fire Flow Capacity System Improvements	0%	100%	-		1,710,000	100,000	100,000
✓	50351	Limited Access Pipeline Relocation Program	0%	100%	329,446	900,000	729,446	2,000,000	1,000,000
✓	50091	Maerkle Facility Improvements	0%	100%	940,113				
✓	50361	Maerkle Reservoir Floating Cover Replacement	0%	100%	586,996				
✓	50011	Maerkle Reservoir Transmission Main	0%	100%	600,348	1,000,000	4,557,000		
✓	50501	Normally Closed Valve (Install Motorized Valve)	0%	100%	481,089				
✓	35722	Orion Center	0%	100%	695,050				
✓	50551	Palomar Airport Waterline Realignment	0%	100%	1,456,894				
✓	50201	Pressure Reducing Station Program	0%	100%	2,831,352	600,000	600,000	600,000	600,000
✓	50612	Rancho Carlsbad Groundwater Supply	0%	100%	400,000	125,000			
✓	50271	Recycled Water Line - Carlsbad Water Recycling Facility to Agua Hedionda Lagoon	0%	100%	303,763				
✓	52081	Recycled Water Phase 3 - Pipelines	0%	100%	305,295				
✓	52101	Recycled Water Phase 3 - Reservoir	0%	100%	942,784				
✓	50241	Reservoir Repair and Maintenance Program	0%	100%	2,039,904		1,960,000		
✓	50442	San Luis Rey Mission Basin Groundwater Supply	0%	100%	77,500				
✓	50571	Santa Fe II Inlet Pipeline	0%	100%	-		495,000	2,370,000	
✓	50461	Santa Fe II Reservoir Site Electrical Improvements	0%	100%	25,000				
✓	55422	SCADA Improvements	0%	100%	250,000	300,000	5,000,000	3,000,000	295,000
✓	50081	Tri-Agency Water Transmission Pipeline Replacement	0%	100%	1,500,000	1,418,015	1,418,015		
✓	60192	Valley & Magnolia sidewalks	0%	100%	63,260				
✓	50511	Water Infrastructure Condition Assessment Program	0%	100%	1,632,153	410,000	410,000	420,000	420,000
✓	50521	Water Loss Monitoring Program	0%	100%	250,687	50,000	100,000	100,000	100,000
✓	39041	Water System Rehabilitation and Replacement	0%	100%	2,673,849	2,690,000	2,800,000	3,000,000	3,000,000
✓	50191	Water Valve Repair/Replacement Program	0%	100%	1,742,236	940,000	960,000	960,000	960,000
✓			0%	100%					
		WATER REPLACEMENT PROJECTS TOTAL:			**$ 22,743,780**	**$ 12,123,015**	**$ 21,879,961**	**$ 13,240,000**	**$ 7,165,000**

SUMMARY OF WATER REPLACEMENT PROJECTS	UNESCALATED	ESCALATED
5-YEAR CIP (2022-2026)		
R&R	$ 77,151,756	$ 81,630,889
Expansion	-	-
TOTAL:	**$ 77,151,756**	**$ 81,630,889**
10-YEAR CIP (2022-2031)		
R&R	$ 118,920,756	$ 134,835,633
Expansion	-	-
TOTAL:	**$ 118,920,756**	**$ 134,835,633**
TOTAL CIP (2022-2035)		
R&R	$ 150,200,756	$ 181,330,172
Expansion	-	-
TOTAL:	**$ 150,200,756**	**$ 181,330,172**

	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Unescalated					
R&R	$ 22,743,780	$ 12,123,015	$ 21,879,961	$ 13,240,000	$ 7,165,000
Expansion	$ -	$ -	$ -	$ -	$ -
Total	**$ 22,743,780**	**$ 12,123,015**	**$ 21,879,961**	**$ 13,240,000**	**$ 7,165,000**
Escalated					
R&R	$ 22,743,780	$ 12,547,321	$ 23,438,361	$ 14,679,425	$ 8,222,002
Expansion	-	-	-	-	-
Total	**$ 22,743,780**	**$ 12,547,321**	**$ 23,438,361**	**$ 14,679,425**	**$ 8,222,002**

SUMMARY OF WATER DISTRIBUTION SYSTEM

5-YEAR CIP (2022-2026)		
R&R	$ 77,151,756	$ 81,630,889
Expansion	16,048,723	17,096,252
TOTAL:	**$ 93,200,479**	**$ 98,727,141**
10-YEAR CIP (2022-2031)		
R&R	$ 118,920,756	$ 134,835,633
Expansion	22,973,723	25,917,216
TOTAL:	**$ 141,894,479**	**$ 160,752,850**
TOTAL CIP (2022-2035)		
R&R	$ 150,200,756	$ 186,357,722
Expansion	24,973,723	28,890,013
TOTAL:	**$ 175,174,479**	**$ 215,247,735**

	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Unescalated					
R&R	$ 22,743,780	$ 12,123,015	$ 21,879,961	$ 13,240,000	$ 7,165,000
Expansion	3,468,906	4,329,817	25,000	8,225,000	-
Total	**$ 26,212,686**	**$ 16,452,832**	**$ 21,904,961**	**$ 21,465,000**	**$ 7,165,000**
Escalated					
R&R	$ 22,743,780	$ 12,547,321	$ 23,438,361	$ 14,679,425	$ 8,222,002
Expansion	3,468,906	4,481,361	26,781	9,119,205	-
Total	**$ 26,212,686**	**$ 17,028,681**	**$ 23,465,142**	**$ 23,798,629**	**$ 8,222,002**

RECYCLED WATER REPLACEMENT PROJECTS

Include	Project Number	Project Title	Expansion	Replacement	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
✓	52032	Carlsbad Water Recycling Facility (Encina Capital Projects)	0%	100%	$ 3,322,054	$ 315,000	$ 320,000	$ 310,000	$ 200,000
✓	52131	Carlsbad Water Recycling Facility Irrigation and Landscape	0%	100%	$ 175,000				
✓		Carlsbad Water Recycling Facility Roof Replacement	0%	100%	$ 450,000				
✓	35725	Orion Center	0%	100%	$ 278,000				
✓	52111	Recycled Water Condition Assessment Program	0%	100%	$ 683,619	50,000	50,000	50,000	50,000
✓		Recycled Water Pipeline Replacement	0%	100%	$ -		350,000	350,000	350,000
✓	52121	Recycled Water Valve and Appurtenance Replacement Program	0%	100%	$ 260,000	120,000		120,000	
✓	55423	SCADA Improvements	0%	100%	$ 87,000	100,000	500,000	400,000	300,000
✓		Recycled Water Line - Carlsbad Water Recycling Facility to Agua Hedionda Lagoon	100%	0%	$ (44,342)				
✓	52082	Recycled Water Phase 3 - Pipelines	100%	0%	$ 650,000				
✓	52102	Recycled Water Phase 3 - Reservoir	100%	0%	$ 2,708,913				
		RECYCLED WATER REPLACEMENT PROJECTS TOTAL:			**$ 8,570,244**	**$ 585,000**	**$ 1,220,000**	**$ 1,230,000**	**$ 900,000**

SUMMARY OF RECYCLED WATER REPLACEMENT PROJECTS	UNESCALATED	ESCALATED
5-YEAR CIP (2022-2026)		
R&R	$ 9,190,673	$ 9,564,536
Expansion	3,314,571	3,314,571
TOTAL:	**$ 12,505,244**	**$ 12,879,107**
10-YEAR CIP (2022-2031)		
R&R	$ 13,450,673	$ 14,990,862
Expansion	3,314,571	3,314,571
TOTAL:	**$ 16,765,244**	**$ 18,305,433**

	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Unescalated					
R&R	$ 5,255,673	$ 585,000	$ 1,220,000	$ 1,230,000	$ 900,000
Expansion	3,314,571	-	-	-	-
Total	**$ 8,570,244**	**$ 585,000**	**$ 1,220,000**	**$ 1,230,000**	**$ 900,000**
Escalated					
R&R	$ 5,255,673	$ 605,475	$ 1,306,895	$ 1,363,723	$ 1,032,771
Expansion	3,314,571	-	-	-	-
Total	**$ 8,570,244**	**$ 605,475**	**$ 1,306,895**	**$ 1,363,723**	**$ 1,032,771**

TOTAL CIP PROJECT SUMMARY (C	UNESCALATED	ESCALATED	
TOTAL CIP (2022-2035)			
R&R	$ 167,827,429	$ 202,528,234	*85.58%*
Expansion	28,288,294	32,204,584	*14.42%*
Total CIP	**$ 196,115,723**	**$ 234,732,818**	
TOTAL 5-YEAR CIP (2022-2026)			
R&R	$ 86,342,429	$ 91,195,425	*81.68%*
Expansion	19,363,294	20,410,823	*18.32%*
Total 5-Year CIP	**$ 105,705,723**	**$ 111,606,248**	
TOTAL 10-YEAR CIP (2022-2031)			
R&R	$ 132,371,429	$ 149,826,496	*83.43%*
Expansion	26,288,294	29,231,787	*16.57%*
Total 10-Year CIP	**$ 158,659,723**	**$ 179,058,283**	

	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Unescalated					
R&R	$ 23,099,961	$ 14,470,000	$ 8,065,000	$ 9,205,800	$ 9,205,800
Expansion	25,000	8,225,000	-	1,385,000	1,385,000
Total	**$ 23,124,961**	**$ 22,695,000**	**$ 8,065,000**	**$ 10,590,800**	**$ 10,590,800**
Escalated					
R&R	$ 24,745,256	$ 16,043,148	$ 9,254,773	$ 10,933,603	$ 11,316,279
Expansion	26,781	9,119,205	-	1,644,946	1,702,519
Total	**$ 24,772,036**	**$ 25,162,352**	**$ 9,254,773**	**$ 12,578,548**	**$ 13,018,797**

Appendix D

PROJECTED O&M COSTS

CODE	LINE ITEM	ESCALATOR	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
REVENUES			Projection (Pre-Rate Increase)	Projection (Pre-Rate Increase)	Projection (Pre-Rate Increase)	Projection (Pre-Rate Increase)	Projection (Pre-Rate Increase)
Charges for Services							
4885	Plan Check	General Inflation	$ -	$ -	$ -	$ -	$ -
4976	Special Benefit District Servc	General Inflation	-	-	-	-	-
4995	Admin Fees	General Inflation	-	-	-	-	-
5100	Commodity Usage	Cust. Grwth + Usage Grwth	28,288,971	29,048,358	29,772,564	30,533,284	31,193,016
5101	Water Delivery Charges	Customer Growth	12,541,986	12,878,662	13,199,740	13,537,007	13,829,501
5110	New Account Charges	Gnrl Infltn + Cstmr Dmnd Grwth	132,416	136,615	140,691	144,974	148,826
5111	Backflow Device	Gnrl Infltn + Cstmr Dmnd Grwth	138,859	143,262	147,536	152,028	156,068
5113	Quick Turnon Fees	Gnrl Infltn + Cstmr Dmnd Grwth	5,456	5,629	5,797	5,973	6,132
5115	Scheduled Disconnect Fee	Gnrl Infltn + Cstmr Dmnd Grwth	4,350	4,488	4,622	4,763	4,889
5124	Service Installation Fees	Gnrl Infltn + Cstmr Dmnd Grwth	42,600	43,951	45,262	46,640	47,879
5125	Misc Conn Chg	Gnrl Infltn + Cstmr Dmnd Grwth	-	-	-	-	-
5127	Non Jurisdictional Fees	Gnrl Infltn + Cstmr Dmnd Grwth	-	-	-	-	-
	Other Charges for Services	Gnrl Infltn + Cstmr Dmnd Grwth	-	-	-	-	-
	Total Charges for Services		**$ 41,154,638**	**$ 42,260,965**	**$ 43,316,212**	**$ 44,424,669**	**$ 45,386,312**
			$ 323,681	*$ 333,945*	*$ 343,908*		
Developer Fees							
	Developer Connection Fees	[Calculated]					
	Other Developer Fees	General Inflation	-	-	-	-	-
	Total Developer Fees		**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Tax Revenues							
4010	Adjustments - Current Taxes	General Inflation	$ -	$ -	$ -	$ -	$ -
4011	Property Taxes - Current	Property Tax Increase	3,465,441	3,593,316	3,697,881	3,806,969	3,929,553
4012	Refunds - Current Taxes	General Inflation	-	-	-	-	-
4015	Supplemental Property Taxes	Property Tax Increase	41,438	42,967	44,217	45,522	46,988
4016	Refunds - Supplemental Taxes	General Inflation	-	-	-	-	-
4018	Unitary Tax (combine w/4011)	General Inflation	27,968	28,667	29,384	30,118	30,871
4020	Prior Years Property Taxes	Property Tax Increase	33,828	35,076	36,097	37,162	38,358
4021	Refunds - Prior Year Taxes	General Inflation	(18,520)	(18,983)	(19,458)	(19,944)	(20,443)
4027	Surplus Property Tax Increment	Property Tax Increase	130,344	135,154	139,087	143,190	147,800
4111	Sales and Use tax	General Inflation	-	-	-	-	-
	Other Tax Revenues	General Inflation	-	-	-	-	-
	Total Tax Revenues		**$ 3,680,499**	**$ 3,816,197**	**$ 3,927,209**	**$ 4,043,017**	**$ 4,173,128**
Licenses and Permits							
4452	Fire Protect Sys	General Inflation	$ -	$ -	$ -	$ -	$ -
	Other Licenses and Permits	General Inflation	-	-	-	-	-
	Total Licenses and Permits		**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Intergovernmental							
4525	Homeowners Exemption	General Inflation	$ 7,401	$ 7,586	$ 7,776	$ 7,970	$ 8,169
4632	Federal Grants - Capital	One Time Expense	-	-	-	-	-
4753	SDCWA/MWD Credits	One Time Expense	-	-	-	-	-
4754	SDCWA Rebates	One Time Expense	-	-	-	-	-
	Other Intergovernmental	General Inflation	-	-	-	-	-
	Total Intergovernmental		**$ 7,401**	**$ 7,586**	**$ 7,776**	**$ 7,970**	**$ 8,169**
Fines & Forfeitures							
5221	Reconnect Fees	General Inflation	$ 1,365	$ 1,399	$ 1,434	$ 1,470	$ 1,507
5212	Code Violations	General Inflation	-	-	-	-	-
5222	Return Check Fee	General Inflation	3,000	3,075	3,152	3,231	3,311
5225	Late Charges	General Inflation	96,903	99,326	101,809	104,354	106,963
5226	Door Hanger Fee	General Inflation	3,383	3,468	3,554	3,643	3,734
5229	Misc Fines	General Inflation	-	-	-	-	-
	Other Fines & Forfeitures	General Inflation	-	-	-	-	-
	Total Fines & Forfeitures		**$ 104,651**	**$ 107,267**	**$ 109,949**	**$ 112,698**	**$ 115,515**
Income from Prop & Investments							
5300	Interest Income - Pooled Cash	Interest Income	$ 368,799	$ 377,650	$ 387,091	$ 396,769	$ 406,688
5305	Interest - Unrealized Gains/Losses	General Inflation	-	-	-	-	-
5315	Interest Income - Property Tax	Interest Income	6,098	6,244	6,400	6,560	6,724
5320	Facilities Rentals	General Inflation	-	-	-	-	-
5341	Other Rentals and Leases	General Inflation	46,980	48,155	49,358	50,592	51,857
5342	Cell Site Leases	General Inflation	215,249	220,630	226,146	231,800	237,595
5360	Sale of Capital Assets	General Inflation	-	-	-	-	-
5361	Donated Assets	One Time Expense	-	-	-	-	-
5362	Scrap & Recycle	General Inflation	-	-	-	-	-
	Other Income from Prop & Investments	General Inflation	-	-	-	-	-
	Total Income from Prop & Investments		**$ 637,126**	**$ 652,679**	**$ 668,996**	**$ 685,721**	**$ 702,864**

CODE	LINE ITEM	ESCALATOR	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Interdepartmental							
5430	Eng Labor	General Inflation	$ 40,000	$ 41,000	$ 42,025	$ 43,076	$ 44,153
5442	Reimbursed Work for Other Dept.	General Inflation	5,000	5,125	5,253	5,384	5,519
	Other Interdepartmental	General Inflation	-	-	-	-	-
	Total Interdepartmental		**$ 45,000**	**$ 46,125**	**$ 47,278**	**$ 48,460**	**$ 49,672**
Other Revenues							
5542	Major Facilities	General Inflation	$ -	$ -	$ -	$ -	$ -
5550	Prior Year Fee Refunds	General Inflation	-	-	-	-	-
5632	Str Lights/Signs	General Inflation	-	-	-	-	-
5634	Misc Damages	General Inflation	-	-	-	-	-
5636	Loss Recovery	General Inflation	49,000	50,225	51,481	52,768	54,087
5638	Misc Reimbursement Losses	General Inflation	-	-	-	-	-
5639	Misc Reimbursement Expenses	General Inflation	-	-	-	-	-
5664	Misc AR Write Offs	General Inflation	-	-	-	-	-
5674	Misc Revenues	General Inflation	36,000	36,900	37,823	38,768	39,737
	Other Other Revenues	General Inflation	-	-	-	-	-
	Total Other Revenues		**$ 85,000**	**$ 87,125**	**$ 89,303**	**$ 91,536**	**$ 93,824**
Other Financing Sources							
5900	Transfers In	No Annual Increase	$ -	$ -	$ -	$ -	$ -
	Other Other Financing Sources	General Inflation	-	-	-	-	-
	Total Other Financing Sources		**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
	TOTAL REVENUES		**$ 45,714,315**	**$ 46,977,945**	**$ 48,166,723**	**$ 49,414,070**	**$ 50,529,485**
		CHECK (from data)	*45,466,455*				

CODE	LINE ITEM	ESCALATOR	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
	EXPENDITURES		Projection (Pre-Rate Increase)	Projection (Pre-Rate Increase)	Projection (Pre-Rate Increase)	Projection (Pre-Rate Increase)	Projection (Pre-Rate Increase)
	Personnel						
6100	Reg Salaries	Labor Inflation	$ 2,662,637	$ 2,742,517	$ 2,824,792	$ 2,909,536	$ 2,996,822
6101	Incentive Pay	Labor Inflation	-	-	-	-	-
6140	Other Personnel	Labor Inflation	-	-	-	-	-
6150	IOD Worker's Comp	Labor Inflation	-	-	-	-	-
6200	Overtime Salaries	Labor Inflation	110,000	113,300	116,699	120,200	123,806
6210	Standby Pay	Labor Inflation	24,000	24,720	25,462	26,225	27,012
6300	Parttime Salaries	Labor Inflation	18,776	19,339	19,919	20,517	21,133
6305	Intern Salaries	Labor Inflation	7,429	7,652	7,881	8,118	8,361
6310	Elected Officials' Salaries	Labor Inflation	7,000	7,210	7,426	7,649	7,879
6400	Temporary Help	Labor Inflation	40,000	41,200	42,436	43,709	45,020
6501	Health Insurance	Labor - Health Insurance	505,472	540,249	576,067	612,820	650,386
6510	Life Insurance	Labor Inflation	1,860	1,916	1,973	2,033	2,094
6511	AD&D City Paid	Labor Inflation	931	959	987	1,017	1,047
6520	Vision Insurance	Labor Inflation	-	-	-	-	-
6530	Medicare	Labor Inflation	40,825	42,050	43,311	44,610	45,949
6620	MTG Physicals	Labor Inflation	-	-	-	-	-
6629	Cell Phone Allowance	Labor Inflation	-	-	-	-	-
6630	Auto Allowance	Labor Inflation	1,625	1,674	1,724	1,776	1,829
6640	Earned Leave Accrual	Labor Inflation	-	-	-	-	-
6651	Healthy Emp Awards	Labor Inflation	-	-	-	-	-
6653	Final Vacation Pay	Labor Inflation	35,000	36,050	37,132	38,245	39,393
6654	Final Sick Leave Pay	Labor Inflation	-	-	-	-	-
6655	Disability	Labor Inflation	24,092	24,814	25,559	26,326	27,115
6656	Unemployment	Labor Inflation	13,361	13,761	14,174	14,599	15,037
6657	Worker's Compensation	Labor Inflation	50,210	51,716	53,268	54,866	56,512
6720	PERS	Labor - PERS (Normal Cost)	323,511	362,012	372,873	384,059	395,580
6720	PERS UAL Exp	Labor - PERS (UAL)		453,612	470,610	493,166	503,166
6721	PERS (GASB 68 Contra Account)	Labor - PERS (Normal Cost)	-	-	-	-	-
	PERS - Repayment	Labor - PERS (UAL)	-	-	-	-	-
6722	OPEB Expense	One Time Expense	-	-	-	-	-
6723	PERS Unfunded Liability Expense	Labor - PERS (Normal Cost)	310,869	351,903	398,354	450,937	510,461
6730	Social Security	Labor Inflation	-	-	-	-	-
6740	Deferred Comp	Labor Inflation	705	726	748	770	793
6741	Def Comp Match	Labor Inflation	-	-	-	-	-
	Other Personnel	Labor Inflation	-	-	-	-	-
	Total Personnel Costs		**$ 4,178,302**	**$ 4,837,380**	**$ 5,041,396**	**$ 5,261,179**	**$ 5,479,397**
	Maintenance & Equipment						
7110	Office Equip Rental	General Inflation	$ 500	$ 513	$ 525	$ 538	$ 552
7111	Other Mach & Equip	General Inflation	2,000	2,050	2,101	2,154	2,208
7115	Vehicle Rentals	General Inflation	17,150	17,579	18,018	18,469	18,930
7119	Misc Rentals	General Inflation	14,000	14,350	14,709	15,076	15,453
7120	Misc Leases	General Inflation	-	-	-	-	-
7210	Office Equip Maintenance	General Inflation	-	-	-	-	-
7211	Communication Equip Maintenance	General Inflation	3,000	3,075	3,152	3,231	3,311
7215	Software Maintenance	General Inflation	50,000	51,250	52,531	53,845	55,191
7216	Computer Maintenance	General Inflation	-	-	-	-	-
7220	Vehicle Maint	General Inflation	30,000	30,750	31,519	32,307	33,114
7221	Wash and Wax	General Inflation	23,450	24,036	24,637	25,253	25,884
7222	Other Equip Maintenance	General Inflation	100	103	105	108	110
7225	Car Wash Repairs	General Inflation	-	-	-	-	-
7226	Pipeline Maintenance	General Inflation	234,500	240,363	246,372	252,531	258,844
7227	Fire Hydrant Maintenance - City	General Inflation	21,000	21,525	22,063	22,615	23,180
7228	FIRE HYDRANT MAINTENANCE - OTHER	General Inflation	25,000	25,625	26,266	26,922	27,595
7230	Routine Building Maintenance	General Inflation	5,000	5,125	5,253	5,384	5,519
7241	Asphalt Repairs	General Inflation	50,000	51,250	52,531	53,845	55,191
7244	Street Sweeping	General Inflation	-	-	-	-	-
7249	Maintenance, Repair and Rehab	General Inflation	10,000	10,250	10,506	10,769	11,038
7400	Audit	General Inflation	-	-	-	-	-
7410	Legal	General Inflation	70,000	71,750	73,544	75,382	77,267
7435	Administrative	General Inflation	45,000	46,125	47,278	48,460	49,672
7480	Claims Admin	General Inflation	-	-	-	-	-
7490	Misc Professional Services	General Inflation	521,500	534,538	547,901	561,598	575,638
7500	Encina Services	General Inflation	-	-	-	-	-
7510	City Generated	General Inflation	-	-	-	-	-
7511	Citizen Generated	General Inflation	-	-	-	-	-
7550	Miscellaneous Outside Services	General Inflation	500,100	512,603	525,418	538,553	552,017
7551	Bank Services	General Inflation	38,600	39,565	40,554	41,568	42,607
7552	Book Binding	General Inflation	-	-	-	-	-
7553	Comm Arts Support	General Inflation	-	-	-	-	-
7554	Regulatory/Permitting Fees	General Inflation	143,400	146,985	150,660	154,426	158,287
7556	Misc Services	General Inflation	-	-	-	-	-
7557	Customer Service Charge	[Calculated]	807,150	841,628	883,709	927,894	974,289
7557	Emergency Storage Charge	[Calculated]	2,047,662	2,105,644	2,147,757	2,190,712	2,234,526
7557	Infrastructure Access Charge	[Calculated]	1,857,888	1,870,349	1,889,053	1,907,943	1,927,023
7557	Supply Reliability Charge	[Calculated]	1,350,210	1,386,272	1,455,585	1,528,364	1,604,783

CODE	LINE ITEM	ESCALATOR	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
7557	MWD Capacity Reservation Charge	[Calculated]	287,640	298,264	307,212	316,428	325,921
7557	MWD Readiness to Service Charge	[Calculated]	397,800	421,668	446,968	473,786	502,213
7558	Laundry and Uniform Maintenance	General Inflation	8,000	8,200	8,405	8,615	8,831
7559	Electrical/Scada Services	General Inflation	85,000	87,125	89,303	91,536	93,824
7560	Water Sampling Services	General Inflation	147,500	151,188	154,967	158,841	162,812
7561	Water Conservation Services	General Inflation	22,500	23,063	23,639	24,230	24,836
7564	Landscaping Services	General Inflation	93,000	95,325	97,708	100,151	102,655
7710	Ads and Publishing	General Inflation	500	513	525	538	552
7711	Dues and Subscriptions	General Inflation	42,500	43,563	44,652	45,768	46,912
7712	Books and Publications	General Inflation	1,200	1,230	1,261	1,292	1,325
7713	Audio-Visual Materials	General Inflation	-	-	-	-	-
7715	Printing	General Inflation	15,000	15,375	15,759	16,153	16,557
7720	Postage	General Inflation	7,000	7,175	7,354	7,538	7,727
7725	Office Supplies	General Inflation	11,000	11,275	11,557	11,846	12,142
7726	Office Furniture & Equipment	General Inflation	15,000	15,375	15,759	16,153	16,557
7730	Computer Software	General Inflation	10,000	10,250	10,506	10,769	11,038
7731	Misc. Computer Hardware	General Inflation	5,000	5,125	5,253	5,384	5,519
7735	Promo Materials	General Inflation	6,000	6,150	6,304	6,461	6,623
7741	Preschool	General Inflation	-	-	-	-	-
7745	Food Expense	General Inflation	-	-	-	-	-
7750	Heat and Light	Utilities Inflation	126,270	132,584	139,213	146,173	153,482
7751	Telephone & Communications	Utilities Inflation	13,600	14,280	14,994	15,744	16,531
7752	Waste Disposal Services	Utilities Inflation	12,000	12,600	13,230	13,892	14,586
7753	Water	Utilities Inflation	17,000	17,850	18,743	19,680	20,664
7801	Building Maintenance	General Inflation	-	-	-	-	-
7810	Electrical Supplies	General Inflation	-	-	-	-	-
7811	Janitorial Supplies	General Inflation	-	-	-	-	-
7812	Sign Materials	General Inflation	-	-	-	-	-
7820	Parts-Vehicles	General Inflation	-	-	-	-	-
7821	Parts-Equip	General Inflation	223,000	228,575	234,289	240,147	246,150
7830	Rock and Mineral Products	General Inflation	15,000	15,375	15,759	16,153	16,557
7831	Asphalt	General Inflation	5,000	5,125	5,253	5,384	5,519
7850	Small Tools	General Inflation	5,000	5,125	5,253	5,384	5,519
7851	Safety Equipment	General Inflation	25,000	25,625	26,266	26,922	27,595
7852	Uniforms and Accessories	General Inflation	4,000	4,100	4,203	4,308	4,415
7853	Meters/Fittings - New Development	General Inflation	106,000	108,650	111,366	114,150	117,004
7863	Meters/Fittings - Replacement	General Inflation	136,000	139,400	142,885	146,457	150,119
7855	Fire Hose and Appliances	General Inflation	-	-	-	-	-
7856	Rescue Equipment	General Inflation	-	-	-	-	-
7857	Personal Protective Equipment	General Inflation	-	-	-	-	-
7858	Breathing Apparatus Equipment	General Inflation	-	-	-	-	-
7865	Automated Meter Program	General Inflation	-	-	-	-	-
7880	Gasoline and Oil	Utilities Inflation	2,000	2,100	2,205	2,315	2,431
7881	Propane	General Inflation	500	513	525	538	552
7882	Other Petrol Products	General Inflation	-	-	-	-	-
7883	Chemicals	Chemicals Inflation	33,000	34,650	36,383	38,202	40,112
7890	CMWD Purc Water-Outside Agency	[Calculated]	17,516,149	18,813,849	19,840,212	21,010,647	22,212,882
7892	Desal Costs	[Calculated]	7,090,728	7,268,095	7,449,939	7,636,374	7,827,520
7899	Misc Supplies	General Inflation	45,000	46,125	47,278	48,460	49,672
8110	Employee Training	General Inflation	6,000	6,150	6,304	6,461	6,623
8120	Tuition Reimbursement	General Inflation	-	-	-	-	-
8130	Training/Training Related Travel	General Inflation	4,500	4,613	4,728	4,846	4,967
8500	Depreciation	Depreciation Funding	4,500,000	4,553,550	4,606,827	4,660,266	4,713,859
8510	Prop Taxes PD	General Inflation	5,000	5,125	5,253	5,384	5,519
8520	Conference Travel	General Inflation	1,500	1,538	1,576	1,615	1,656
8522	Misc. Meals/Miles	General Inflation	7,000	7,175	7,354	7,538	7,727
8530	Bad Debt Exp - Other Inv/Bills	General Inflation	47,850	49,046	50,272	51,529	52,817
8532	Disposal of Assets	One Time Expense	-	-	-	-	-
8534	Reg Over/Short	General Inflation	-	-	-	-	-
8610	Settlements	General Inflation	-	-	-	-	-
8615	Interest on Deposit	General Inflation	-	-	-	-	-
8621	Interfund Services	General Inflation	-	-	-	-	-
8699	Misc Expenditures	General Inflation	-	-	-	-	-
8700	Contingencies	General Inflation	-	-	-	-	-
8809	Vehicle Direct Charges	General Inflation	34,003	34,853	35,724	36,618	37,533
8810	Vehicle Maintenance	General Inflation	160,512	164,525	168,638	172,854	177,175
8811	Vehicle Replacement	General Inflation	178,609	183,074	187,651	192,342	197,151
8820	Street Lighting	General Inflation	-	-	-	-	-
8822	Median Maintenance	General Inflation	-	-	-	-	-
8830	General Lab	General Inflation	158,530	162,493	166,556	170,719	174,987
8840	Copy Services	General Inflation	-	-	-	-	-
8855	Records Management Interdept	General Inflation	-	-	-	-	-
8860	Information Technologies	General Inflation	632,427	648,238	664,444	681,055	698,081
8890	Misc Interdepartmental Charges	General Inflation	1,805,116	1,850,244	1,896,500	1,943,912	1,992,510
8891	Mis Chg Back	General Inflation	-	-	-	-	-
8892	Utility Billing Chargeback	General Inflation	-	-	-	-	-
8910	Fiscal Agent Fees	General Inflation	-	-	-	-	-
8911	Arbitrage Costs	General Inflation	-	-	-	-	-
8912	Misc Debt Expense	General Inflation	-	-	-	-	-
8920	Principal	[Calculated]	-	-	-	-	-

CODE	LINE ITEM	ESCALATOR	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
8921	Interest Expense	[Calculated]	-	-	-	-	-
8922	Int Exp-Capitalized Interest	General Inflation	-	-	-	-	-
8930	Amortization Expense	General Inflation	-	-	-	-	-
8931	Issuance Costs	General Inflation	-	-	-	-	-
	Other	No Annual Increase	-	-	-	-	-
	Additional Maintenance & Equipment	[Calculated Below]	(1,705,116)	(1,840,752)	(1,901,466)	(1,965,515)	(2,030,038)
	Total Maintenance & Equipment Costs		**$ 40,233,029**	**$ 41,958,652**	**$ 43,527,235**	**$ 45,253,996**	**$ 47,030,151**
	Capital Outlay						
9003	Non-Budgeted Cap Equip <$10K	General Inflation	$ -	$ -	$ -	$ -	$ -
9005	Capital Outlay <$10K New	General Inflation	-	-	-	-	-
9006	Capital Outlay < $10K - Repl	General Inflation	-	-	-	-	-
9010	Cap Outlay - Vehicles	General Inflation	-	-	-	-	-
9020	Computer Equip > $10K - Repl	General Inflation	-	-	-	-	-
9021	Office Equipment	General Inflation	-	-	-	-	-
9022	Other Equipment	General Inflation	-	-	-	-	-
9030	Office Furniture	General Inflation	-	-	-	-	-
9040	Reclass Capital Outlay	General Inflation	-	-	-	-	-
9050	Capitalized Assets	One Time Expense	-	-	-	-	-
	Other Capital Outlay	General Inflation	-	-	-	-	-
	Total Capital Outlay Costs		**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
	Other Financing Uses						
9999	Transfers Out	One Time Expense	$ 4,000,000	$ -	$ -	$ -	$ -
	Other Other Financing Uses	General Inflation	-	-	-	-	-
	Total Other Financing Uses Costs		**$ 4,000,000**	**$ -**	**$ -**	**$ -**	**$ -**
	Total Expenditures		**$ 48,411,331**	**$ 46,796,032**	**$ 48,568,631**	**$ 50,515,175**	**$ 52,509,547**
		CHECK (from data)	*52,321,219*				

Rate Revenues Without Increases						FOR REFERENCE - DO
Commodity Usage	Cust. Grwth + Usage Grwth	$ 26,603,537	$ 26,782,039	$ 26,911,513	$ 27,057,971	$ 27,100,600
Water Delivery Charges	Customer Growth	12,250,496	12,332,694	12,392,314	12,459,756	12,479,385
Total Rate Revenues Without Increases		**$38,854,033**	**$39,114,733**	**$39,303,827**	**$39,517,726**	**$39,579,985**

CODE	LINE ITEM	ESCALATOR	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
REVENUES			Projection (Pre-Rate Increase)	Projection (Pre-Rate Increase)	Projection (Pre-Rate Increase)	Projection (Pre-Rate Increase)	Projection (Pre-Rate Increase)
Charges for Services							
5100	Commodity Usage	Customer Growth	$ 7,023,679	$ 7,353,639	$ 7,684,756	$ 8,035,641	$ 8,370,233
5101	Water Delivery Charges	Customer Growth	1,186,865	1,242,622	1,298,575	1,357,867	1,414,407
5110	New Acct Charges	Gnrl Infltn + Cstmr Dmnd Grwth	1,120	1,156	1,190	1,226	1,259
5111	Backflow Device	Gnrl Infltn + Cstmr Dmnd Grwth	186	192	198	204	209
5113	Quick Turnon Fees	Gnrl Infltn + Cstmr Dmnd Grwth	-	-	-	-	-
5115	SCHEDULED DISCONNET FEE	Gnrl Infltn + Cstmr Dmnd Grwth	40	41	42	44	45
5124	Service Installation Fees	Gnrl Infltn + Cstmr Dmnd Grwth	-	-	-	-	-
5115,17	Other	General Inflation	-	-	-	-	-
	Total Charges for Services		**$ 8,211,891**	**$ 8,597,649**	**$ 8,984,761**	**$ 9,394,982**	**$ 9,786,153**
Developer Fees							
	Developer Connection Fees	[Calculated]	$ -	$ -	$ -	$ -	$ -
5542	Major Facilities	General Inflation	-	-	-	-	-
	Total Developer Fees		**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Intergovernmental (CWA)							
4592	State Grants - Capital	General Inflation	$ -	$ -	$ -	$ -	$ -
4632	Federal Grants - Capital	One Time Expense	-	-	-	-	-
4753	SDCWA/MWD Credits	[Calculated]	-	-	-	-	-
	Other Intergovernmental (CWA)	General Inflation	-	-	-	-	-
	Total Intergovernmental (CWA)		**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Fines and Forfeitures							
5221	Reconnect Fees	General Inflation	$ -	$ -	$ -	$ -	$ -
5222	Return Check Fee	General Inflation	50	51	53	54	55
5225	Late Charges	General Inflation	4,181	4,286	4,393	4,502	4,615
5226	Door Hanger Fee	General Inflation	-	-	-	-	-
5342	Cell Site Leases	General Inflation	-				
	Other Fines and Forfeitures	General Inflation	-	-	-	-	-
	Total Fines and Forfeitures		**$ 4,231**	**$ 4,337**	**$ 4,445**	**$ 4,556**	**$ 4,670**
Income from Property & Investments							
5300	Interest Income - Pooled Cash	Interest income	$ (23,389)	$ -	$ -	$ -	$ -
5305	Interest-Unrealzd Gains/Losses	General Inflation	-	-	-	-	-
5310	Interest Income Frm Othr Inv	General Inflation	-	-	-	-	-
5360	Sale of Capital Assets	General Inflation	-	-	-	-	-
5361	Donated Assets	One Time Expense	-	-	-	-	-
	Other Income from Property & Investments	General Inflation	-	-	-	-	-
	Total Income from Property & Investments		**$ (23,389)**	**$ -**	**$ -**	**$ -**	**$ -**
Interdepartmental							
5430	Eng Labor	General Inflation	$ 20,000	$ 20,500	$ 21,013	$ 21,538	$ 22,076
5442	Reimbursed Work for Other Dept.	General Inflation	-	-	-	-	-
	Other Interdepartmental	General Inflation	-	-	-	-	-
	Total Interdepartmental		**$ 20,000**	**$ 20,500**	**$ 21,013**	**$ 21,538**	**$ 22,076**
Other Revenues							
5550	Prior Year Fee Refunds	General Inflation	$ -	$ -	$ -	$ -	$ -
5639	Misc Reimbursement Exp.	General Inflation	-	-	-	-	-
5674	Misc Revenues	General Inflation	-	-	-	-	-
5664	Misc AR Write Offs	General Inflation	-				
	Other Other Revenues	General Inflation	-	-	-	-	-
	Total Other Revenues		**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Other Financing Sources							
5900	Transfers In	No Annual Increase	$ -	$ -	$ -	$ -	$ -
	Other Other Financing Sources	General Inflation	-	-	-	-	-
	Total Other Financing Sources		**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
	TOTAL REVENUES		**$ 8,212,733**	**$ 8,622,486**	**$ 9,010,219**	**$ 9,421,076**	**$ 9,812,899**

CODE	LINE ITEM	ESCALATOR	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
			Projection (Pre-Rate Increase)	Projection (Pre-Rate Increase)	Projection (Pre-Rate Increase)	Projection (Pre-Rate Increase)	Projection (Pre-Rate Increase)
EXPENDITURES							
Personnel							
6100	Reg Salaries	Labor Inflation	$ 1,217,881	$ 1,254,418	$ 1,292,050	$ 1,330,812	$ 1,370,736
6101	Incentive Pay	Labor Inflation	-	-	-	-	-
6140	Other Personnel	Labor Inflation	-	-	-	-	-
6150	IOD Worker's Comp	Labor Inflation	-	-	-	-	-
6200	Overtime Salaries	Labor Inflation	30,000	30,900	31,827	32,782	33,765
6210	Standby Pay	Labor Inflation	4,000	4,120	4,244	4,371	4,502
6300	Parttimes Salaries	Labor Inflation	9,388	9,670	9,960	10,259	10,566
6305	Intern Salaries	Labor Inflation	3,716	3,827	3,942	4,061	4,182
6310	Elected Officials' Salaries	Labor Inflation	-	-	-	-	-
6620	Mgt Physicals	Labor Inflation	-				
6400	Temproary Help	Labor Inflation	-	-	-	-	-
6501	Health Insurance	Labor - Health Insurance	211,460	226,008	240,993	256,368	272,083
6510	Life Insurance	Labor Inflation	882	908	935	963	992
6511	AD&D - City Paid	Labor Inflation	441				
6520	Vision Insurance	Labor Inflation	-	-	-	-	-
6530	Medicare	Labor Inflation	18,290	18,838	19,404	19,986	20,585
6629	Cell Phone Allowance	Labor Inflation	-	-	-	-	-
6630	Auto Allowance	Labor Inflation	488	503	518	533	549
6640	Earned Leave Accrual	Labor Inflation	-	-	-	-	-
6651	Healthy Emp Awards	Labor Inflation	-	-	-	-	-
6653	Final Vacation Pay	Labor Inflation	14,000	14,420	14,853	15,298	15,757
6654	Final Sick Leave Pay	Labor Inflation	-	-	-	-	-
6655	Disability	Labor Inflation	11,021	11,352	11,692	12,043	12,404
6656	Unemployment	Labor Inflation	6,114	6,297	6,486	6,681	6,881
6657	Worker's Compensation	Labor Inflation	21,890	22,547	23,223	23,920	24,637
6720	PERS	Labor - PERS (Normal Cost)	147,973	165,583	170,551	175,667	180,937
	PERS - Repayment	Labor - PERS (Normal Cost)	-	207,481	215,256	225,573	230,147
6722	OPEB Expense	Labor Inflation	-	-			
6723	PERS Unfunded Liability Exp	Labor - PERS (Normal Cost)	142,158	160,922	182,164	206,210	233,430
6730	Social Security	Labor Inflation	-	-	-	-	-
6740	Deffered Comp	Labor Inflation	353	364	374	386	397
6741	Def Comp Match	Labor Inflation	-	-	-	-	-
	Other Personnel	Labor Inflation	-	-	-	-	-
	Total Personnel Costs		**$ 1,840,054**	**$ 2,138,158**	**$ 2,228,471**	**$ 2,325,911**	**$ 2,422,553**
Maintenance & Equipment							
7110	Office Equp Rental	General Inflation	$ -	$ -	$ -	$ -	$ -
7111	Other Mach & Equip	General Inflation	-	-	-	-	-
7119	Misc Rentals	General Inflation	500	513	525	538	552
7120	Misc Leases	General Inflation	-	-	-	-	-
7210	Office Equip Maintenance	General Inflation	-	-	-	-	-
7211	Communication Equip Maintenance	General Inflation	-	-	-	-	-
7215	Software Maintenance	General Inflation	1,700	1,743	1,786	1,831	1,876
7216	Computer Maintenance	General Inflation	-				
7220	Vehicle Maint	General Inflation	-	-	-	-	-
7221	Wash and Wax	General Inflation	1,500	1,538	1,576	1,615	1,656
7222	Other Equip Maintenance	General Inflation	500	513	525	538	552
7225	Car Wash Repairs	General Inflation	-				
7226	Pipeline Maintenance	General Inflation	55,000	56,375	57,784	59,229	60,710
7227	FIRE HYDRANT MAINT - CITY	General Inflation	5,000	5,125	5,253	5,384	5,519
7230	Routine Building Mainteance	General Inflation	1,000	1,025	1,051	1,077	1,104
7241	Asphalt Repairs	General Inflation	1,000	1,025	1,051	1,077	1,104
7249	Maintenance, Repair and Rehab	General Inflation	3,243	3,324	3,407	3,492	3,580
7400	Audit	General Inflation	-	-	-	-	-
7410	Legal	General Inflation	-	-	-	-	-
7435	Administrative	General Inflation	-	-	-	-	-
7480	Claims Admin	General Inflation	-	-	-	-	-
7490	Misc Professional Services	General Inflation	188,480	193,192	198,022	202,972	208,047
7500	Encina Services	General Inflation	1,575,000	1,614,375	1,654,734	1,696,103	1,738,505
7500	Encina Services (Pension Payoff)	No Annual Increase	-	(71,778)	(73,704)	(75,823)	(78,002)
7510	City Generated	General Inflation	-	-	-	-	-
7511	Citizen Generated	General Inflation	-	-	-	-	-
7550	Miscellaneous Outside Services	General Inflation	191,000	195,775	200,669	205,686	210,828
7551	Bank Services	General Inflation	1,200	1,230	1,261	1,292	1,325
7552	Book Binding	General Inflation	-	-	-	-	-
7554	Regulatory/Permitting Fees	General Inflation	30,000	30,750	31,519	32,307	33,114
7556	Misc Services	General Inflation	-	-	-	-	-
7557	MWD/CWA Fixed Charges	General Inflation	-	-	-	-	-
7558	Laundry and Uniform Mainteance	General Inflation	3,000	3,075	3,152	3,231	3,311
7559	Electrical/SCADA services	General Inflation	35,000	35,875	36,772	37,691	38,633
7564	Landscaping Services	General Inflation	22,000	22,550	23,114	23,692	24,284
7710	Ads and Publishing	General Inflation	-	-	-	-	-
7711	Dues and Subscriptions	General Inflation	8,300	8,508	8,720	8,938	9,162

CODE	LINE ITEM	ESCALATOR	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
7712	Books and Publications	General Inflation	500	513	525	538	552
7713	Audio-Visual Materials	General Inflation	-	-	-	-	-
7715	Printing	General Inflation	4,000	4,100	4,203	4,308	4,415
7720	Postage	General Inflation	1,000	1,025	1,051	1,077	1,104
7725	Office Supplies	General Inflation	1,000	1,025	1,051	1,077	1,104
7726	Office Furniture & Equipment	General Inflation	2,500	2,563	2,627	2,692	2,760
7730	Computer Software	General Inflation	5,000	5,125	5,253	5,384	5,519
7731	Misc. Computer Hardware	General Inflation	2,000	2,050	2,101	2,154	2,208
7735	Promo Materials	General Inflation	1,000	1,025	1,051	1,077	1,104
7741	Preschool	General Inflation	-	-	-	-	-
7750	Heat and Light	Utilities Inflation	329,400	345,870	363,164	381,322	400,388
7751	Telephone & Communications	Utilities Inflation	900	945	992	1,042	1,094
7752	Waste Dispoal Services	Utilities Inflation	-	-	-	-	-
7753	Water	Utilities Inflation	4,500	4,725	4,961	5,209	5,470
7801	Building Maintenance	General Inflation	-	-	-	-	-
7810	Electrical Supplies	General Inflation	500	513	525	538	552
7811	Janitorial Supplies	General Inflation	-	-	-	-	-
7820	Parts-Vehicles	General Inflation	-				
7821	Parts-Equip	General Inflation	67,500	69,188	70,917	72,690	74,507
7830	Rock and Mineral Products	General Inflation	1,000	1,025	1,051	1,077	1,104
7831	Asphalt	General Inflation	1,000	1,025	1,051	1,077	1,104
7850	Small Tools	General Inflation	600	615	630	646	662
7851	Safety Equipment	General Inflation	16,900	17,323	17,756	18,199	18,654
7852	Uniforms and Accessories	General Inflation	3,000	3,075	3,152	3,231	3,311
7853	Meters/Fittings - New	General Inflation	23,700	24,293	24,900	25,522	26,160
7863	Meters/Fittings - Replacement	General Inflation	20,000	20,500	21,013	21,538	22,076
7855	Fire Hose and Appliances	General Inflation	-	-	-	-	-
7856	Rescue Equipment	General Inflation	-	-	-	-	-
7857	Personal Protective Equipment	General Inflation	-	-	-	-	-
7858	Breathing Apparatus Equipment	General Inflation	-	-	-	-	-
7860	Shooting Range Supplies	General Inflation	-	-	-	-	-
7880	Gasoline and Oil	Utilities Inflation	-	-	-	-	-
7883	Chemicals	General Inflation	-				
7890	CMWD Purc Water-Outside Agency	General Inflation	2,268,646	2,336,705	2,406,806	2,479,010	2,553,381
7891	CMWD Purch Water-From City	Utilities Inflation	18,000	18,900	19,845	20,837	21,879
7899	Misc Supplies	General Inflation	7,000	7,175	7,354	7,538	7,727
8110	Employee Training	General Inflation	750	769	788	808	828
8120	Tuition Reimbursement	General Inflation	-	-	-	-	-
8130	Training/Training Related Travel	General Inflation	6,000	6,150	6,304	6,461	6,623
8500	Depreciation	Depreciation Funding	1,400,000	1,416,660	1,433,235	1,449,860	1,466,534
	Depreciation - Phase III Expansion	Construction Inflation	-	-	-	-	-
8510	Prop Taxes PD	General Inflation	-	-	-	-	-
8520	Conference/Meeting Travel	General Inflation	500	513	525	538	552
8522	Misc. Meals/Miles	General Inflation	4,500	4,613	4,728	4,846	4,967
8530	Bad Debt Exp - Other Inv/Bills	General Inflation	2,900	2,973	3,047	3,123	3,201
8534	Reg Over/Short	General Inflation	-	-	-	-	-
8610	Settlements	General Inflation	-	-	-	-	-
8612	Prior Period Adjustment	One Time Expense	-	-	-	-	-
8614	Repayments	General Inflation	-	-	-	-	-
8615	Interest on Deposit	General Inflation	-	-	-	-	-
8699	Misc Expenditures	General Inflation	-	-	-	-	-
8700	Contingencies	General Inflation	-	-	-	-	-
8809	Vehicle Direct Charges	General Inflation	-				
8810	Vehicle Mainteance	General Inflation	20,940	21,464	22,000	22,550	23,114
8811	Vehicle Replacement	General Inflation	25,931	26,579	27,244	27,925	28,623
8820	Street Lighting	General Inflation	-	-	-	-	-
8822	Median Maintenace	General Inflation	-	-	-	-	-
8830	General Liab	General Inflation	61,130	62,658	64,225	65,830	67,476
8855	Records Management Interdept	General Inflation	-	-	-	-	-
8860	Information Technologies	General Inflation	152,514	156,327	160,235	164,241	168,347
8890	Misc Interdepartmental Charges	General Inflation	577,147	591,576	606,365	621,524	637,062
8891	Mis Chg Back	General Inflation	-	-	-	-	-
8892	Utility Billing Chargeback	General Inflation	-	-	-	-	-
8910	Fiscal Agent Fees	General Inflation	-	-	-	-	-
8911	Arbitrage Costs	General Inflation	-	-	-	-	-
8920	Principal	[Calculated]	1,659,000	2,295,671	2,346,586	2,398,658	1,805,054
8921	Interest Expense	[Calculated]	218,000	601,472	550,556	498,484	445,229
8922	Int Exp-Capitalized Interest	One Time Expense	-	-	-	-	-
	Other	General Inflation	-	-	-	-	-
	Additional Maintenance & Equipment	[Calculated Below]	(390,465)	(398,275)	(406,240)	(414,365)	(422,652)
	Total Maintenance & Equipment Costs		**$ 8,641,915**	**$ 9,763,178**	**$ 9,938,792**	**$ 10,119,141**	**$ 9,657,652**

CODE	LINE ITEM	ESCALATOR	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Capital Outlay							
9006	Non-Budgeted Cap Equip <$10K	General Inflation	$ -	$ -	$ -	$ -	$ -
9005	Capital Outlay <$10K New	General Inflation	-	-	-	-	-
9010	Cap Outlay - Vehicles	General Inflation	-	-	-	-	-
9020	Computer Equip > $10K - Repl	General Inflation	-	-	-	-	-
9021	Office Equipment	General Inflation	-	-	-	-	-
9022	Other Equipment	General Inflation	-	-	-	-	-
9050	Capitalized Assets	One Time Expense	-	-	-	-	-
9060	Capital Projects	One Time Expense	-	-	-	-	-
	Other Capital Outlay	General Inflation	-	-	-	-	-
	Total Capital Outlay Costs		**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Other Financing Uses							
9999	Transfers Out	One Time Expense	$ -	$ -	$ -	$ -	$ -
	Other Other Financing Uses	General Inflation	-	-	-	-	-
	Total Other Financing Uses Costs		**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
	TOTAL EXPENDITURES		**$ 10,481,969**	**$ 11,901,336**	**$ 12,167,263**	**$ 12,445,051**	**$ 12,080,204**

	Rate Revenues Without Increases						
	Commodity Usage	Customer Growth	6,298,912	6,341,176	6,371,831	6,406,508	6,416,601
	Water Delivery Charges	Customer Growth	1,201,465	1,209,527	1,215,374	1,221,988	1,223,913
	Total Rate Revenues Without Increases		**$ 7,500,377**	**$ 7,550,702**	**$ 7,587,205**	**$ 7,628,496**	**$ 7,640,514**

Appendix E

REVENUE REQUIREMENT ANALYSIS

CASH FLOW TEST

REVENUES

	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Commodity Charges	$ 28,288,970	$ 29,048,360	$ 29,772,560	$ 30,533,280	$ 31,193,020
Delivery Charges	12,541,990	12,878,660	13,199,740	13,537,010	13,829,500
Non-Rate Charges for Services	323,680	333,940	343,910	354,380	363,790
Developer Fees	-	-	-	-	-
Tax Revenues	3,680,500	3,816,200	3,927,210	4,043,020	4,173,130
Licenses and Permits	-	-	-	-	-
Intergovernmental	7,400	7,590	7,780	7,970	8,170
Fines & Forfeitures	104,650	107,270	109,950	112,700	115,520
Income from Prop & Investments	637,130	652,680	669,000	685,720	702,860
Interdepartmental	45,000	46,130	47,280	48,460	49,670
Other Revenues	85,000	87,130	89,300	91,540	93,820
Other Financing Sources	-	-	-	-	-
TOTAL REVENUES	**$ 45,714,320**	**$ 46,977,960**	**$ 48,166,730**	**$ 49,414,080**	**$ 50,529,480**

EXPENDITURES

	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Ongoing Operating Expenses					
Personnel	$ 4,178,302	$ 4,837,380	$ 5,041,396	$ 5,261,179	$ 5,479,397
Maintenance & Equipment (w/o depreciation)	35,733,029	37,405,102	38,920,408	40,593,730	42,316,292
Capital Outlay	-	-	-	-	-
Other Financing Uses	-	-	-	-	-
Other Operating Expenses					
Debt Service	-	-	-	-	-
Rate-Funded Capital	-	-	-	-	-
Total Operating Expenditures	**$ 39,911,331**	**$ 42,242,482**	**$ 43,961,805**	**$ 45,854,909**	**$ 47,795,689**
Policy Expenditures					
Replacement Funding	$ 4,500,000	$ 4,553,550	$ 4,606,827	$ 4,660,266	$ 4,713,859
Transfer to Capital Fund	4,000,000	-	-	-	-
Additions to Meet Minimum Fund Balances	-	-	-	-	-
Total Policy Expenditures	**$ 8,500,000**	**$ 4,553,550**	**$ 4,606,827**	**$ 4,660,266**	**$ 4,713,859**
TOTAL for Cash Flow Test	**$ 48,411,331**	**$ 46,796,032**	**$ 48,568,631**	**$ 50,515,175**	**$ 52,509,547**
CASH FLOW SURPLUS (DEFICIT)	**$ (2,697,011)**	**$ 181,928**	**$ (401,901)**	**$ (1,101,095)**	**$ (1,980,067)**

DEBT COVERAGE TEST

1.25 x Bond Coverage

	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
REVENUES					
Water Revenues	$ 45,714,320	$ 46,977,960	$ 48,166,730	$ 49,414,080	$ 50,529,480
Water Connection Fee Revenues Allowed					
Total Revenues	**$ 45,714,320**	**$ 46,977,960**	**$ 48,166,730**	**$ 49,414,080**	**$ 50,529,480**
EXPENDITURES					
Water Expenditures	$ 39,911,331	$ 42,242,482	$ 43,961,805	$ 45,854,909	$ 47,795,689
Debt Service	-	-	-	-	-
Coverage	-	-	-	-	-
Total Expenditures	**$ 39,911,331**	**$ 42,242,482**	**$ 43,961,805**	**$ 45,854,909**	**$ 47,795,689**
BOND COVERAGE SURPLUS (DEFICIT)	**$ 5,802,989**	**$ 4,735,478**	**$ 4,204,925**	**$ 3,559,171**	**$ 2,733,791**

REVENUE REQUIREMENT

Revenue Shortfalls	$ (2,697,011)	$ 181,928	$ (401,901)	$ (1,101,095)	$ (1,980,067)
	Cash Flow Driven	*Surplus*	*Cash Flow Driven*	*Cash Flow Driven*	*Cash Flow Driven*
Month of implementation	March	January	January	January	January
Calculated Revenue Increase (%)	19.82%	0.00%	1.87%	5.00%	8.80%
Revenue Increase Override (INPUT in Dashboard)	**2.00%**	**2.00%**	**2.00%**	**2.00%**	**2.00%**
Implemented Rate Increase	**2.00%**	**2.00%**	**2.00%**	**2.00%**	**2.00%**
Cumulative Rate Increase	*12.5%*	*14.7%*	*17.0%*	*19.4%*	*21.8%*
SFR Rate	**$27.81**	**$28.37**	**$28.93**	**$29.51**	**$30.10**

CASH FLOW

	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Revenues Before Rate Increase	$ 45,714,320	$ 46,977,960	$ 48,166,730	$ 49,414,080	$ 50,529,480
Revenues From Rate Increase	816,619	838,540	859,446	881,406	900,450
LESS: Rate Increase Delay	(544,413)	(419,270)	(429,723)	(440,703)	(450,225)
LESS: Expenditures	(48,411,331)	(46,796,032)	(48,568,631)	(50,515,175)	(52,509,547)
Cash Flow	**$ (2,424,805)**	**$ 601,198**	**$ 27,822**	**$ (660,392)**	**$ (1,529,842)**
Total Available Fund - Potable Water					
Beginning Balance	$ 120,695,327	$ 102,801,186	$ 93,727,737	$ 77,160,731	$ 59,513,370
Ending Fund Balance	102,801,186	93,727,737	77,160,731	59,513,370	55,541,211
Fund change	**$ (17,894,141)**	**$ (9,073,449)**	**$ (16,567,007)**	**$ (17,647,360)**	**$ (3,972,159)**
	941 Days	*810 Days*	*641 Days*	*474 Days*	*424 Days*
Operating Fund - Potable Water					
Beginning Balance	$ 26,403,277	$ 15,964,532	$ 16,565,730	$ 16,593,552	$ 15,933,160
Cash Flow	(2,424,805)	601,198	27,822	(660,392)	(1,529,842)
Transfers to Capital Fund	-	-	-	-	-
Ending Fund Balance	**$ 23,978,472**	**$ 16,565,730**	**$ 16,593,552**	**$ 15,933,160**	**$ 14,403,318**

CASH FLOW TEST

REVENUES

	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Commodity Charges	$ 7,023,680	$ 7,353,640	$ 7,684,760	$ 8,035,640	$ 8,370,230
Delivery Charges	1,186,870	1,242,620	1,298,570	1,357,870	1,414,410
Non-Rate Charges for Services	1,350	1,390	1,430	1,470	1,510
Developer Fees	-	-	-	-	-
Intergovernmental (CWA)	-	-	-	-	-
Fines and Forfeitures	4,230	4,340	4,450	4,560	4,670
Income from Property & Investments	(23,390)	-	-	-	-
Interdepartmental	20,000	20,500	21,010	21,540	22,080
Other Revenues	-	-	-	-	-
Other Financing Sources	-	-	-	-	-
TOTAL	**$ 8,212,740**	**$ 8,622,490**	**$ 9,010,220**	**$ 9,421,080**	**$ 9,812,900**

EXPENDITURES

	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Ongoing Operating Expenses					
Personnel	$ 1,840,054	$ 2,138,158	$ 2,228,471	$ 2,325,911	$ 2,422,553
Maintenance & Equipment (w/o depreciation)	5,364,915	5,449,376	5,608,415	5,772,138	5,940,835
Capital Outlay	-	-	-	-	-
Other Financing Uses	-	-	-	-	-
Other Operating Expenses					
Debt Service - Recycled Water	**1,877,000**	**2,897,142**	**2,897,142**	**2,897,142**	**2,250,283**
Rate-Funded Capital - Recycled Water	**2,589,677**	**-**	**-**	**-**	**-**
Total Operating Expenditures	**$ 11,671,646**	**$ 10,484,676**	**$ 10,734,028**	**$ 10,995,191**	**$ 10,613,671**
Policy Expenditures					
Replacement Funding	$ 1,400,000	$ 1,416,660	$ 1,433,235	$ 1,449,860	$ 1,466,534
Transfer to Capital Fund	-	-	-	-	-
Additions to Meet Minimum Fund Balances	-	-	-	-	-
Total Policy Expenditures	**$ 1,400,000**	**$ 1,416,660**	**$ 1,433,235**	**$ 1,449,860**	**$ 1,466,534**
TOTAL for Cash Flow Test	**$ 13,071,646**	**$ 11,901,336**	**$ 12,167,263**	**$ 12,445,051**	**$ 12,080,204**
CASH FLOW SURPLUS (DEFICIT)	**$ (4,858,906)**	**$ (3,278,846)**	**$ (3,157,043)**	**$ (3,023,971)**	**$ (2,267,304)**

DEBT COVERAGE TEST

Recycled Operations

1.25 x Bond Coverage

	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
REVENUES					
Recycled Water Revenues	$ 8,212,740	$ 8,622,490	$ 9,010,220	$ 9,421,080	$ 9,812,900
Recycled Water Connection Fee Revenues Allowed					
Total Revenues	**$ 8,212,740**	**$ 8,622,490**	**$ 9,010,220**	**$ 9,421,080**	**$ 9,812,900**
EXPENDITURES					
Recycled Water Expenditures	$ 7,204,969	$ 7,587,534	$ 7,836,886	$ 8,098,049	$ 8,363,388
Debt Service - Recycled Water	1,877,000	2,897,142	2,897,142	2,897,142	2,250,283
Coverage	469,250	724,286	724,286	724,286	562,571
Total Expenditures	**$ 9,551,219**	**$ 11,208,961**	**$ 11,458,314**	**$ 11,719,477**	**$ 11,176,241**
BOND COVERAGE SURPLUS (DEFICIT)	**($1,338,479)**	**($2,586,471)**	**($2,448,094)**	**($2,298,397)**	**($1,363,341)**

REVENUE REQUIREMENT

Revenue Shortfalls	**$ (4,858,906)**	**$ (3,278,846)**	**$ (3,157,043)**	**$ (3,023,971)**	**$ (2,267,304)**
	Cash Flow Driven	*Cash Flow Driven*	*Cash Flow Driven*	*Cash Flow Driven*	*Cash Flow Driven*
Month of implementation	March	January	January	January	January
Calculated Revenue Increase (%)	177.54%	76.29%	70.29%	64.38%	46.34%
Revenue Increase Override (INPUT in Dashboard)	**4.00%**	**4.00%**	**4.00%**	**4.00%**	**4.00%**
Implemented Rate Increase	**4.00%**	**4.00%**	**4.00%**	**4.00%**	**4.00%**
Cumulative Rate Increase	*-1.0%*	*3.0%*	*7.0%*	*11.4%*	*15.8%*
SFR Rate	**$23.45**	**$24.39**	**$25.36**	**$26.38**	**$27.43**

CASH FLOW

	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Revenues Before Rate Increase	$ 8,212,740	$ 8,622,490	$ 9,010,220	$ 9,421,080	$ 9,812,900
Revenues From Rate Increase	328,422	343,850	359,333	375,740	391,386
LESS: Rate Increase Delay	(218,948)	(171,925)	(179,667)	(187,870)	(195,693)
LESS: Expenditures	(13,071,646)	(11,901,336)	(12,167,263)	(12,445,051)	(12,080,204)
Cash Flow	**$ (4,749,432)**	**$ (3,106,921)**	**$ (2,977,376)**	**$ (2,836,101)**	**$ (2,071,612)**
Debt Coverage per Covenant					
Debt Service	$ 1,877,000	$ 2,897,142	$ 2,897,142	$ 2,897,142	$ 2,250,283
Net revenue (bond covenant definition of "net")	1,117,245	1,206,882	1,353,001	1,510,902	1,645,205
Debt service coverage	0.60 x	0.42 x	0.47 x	0.52 x	0.73 x
Total Available Fund - Recycled Water					
Beginning Balance	$ 12,814,944	$ 4,980,414	$ 19,589,045	$ 16,863,493	$ 14,242,789
Ending Fund Balance (includes Capital Fund)	4,980,414	19,589,045	16,863,493	14,242,789	12,737,432
Fund change	**$ (7,834,530)**	**$ 14,608,631**	**$ (2,725,553)**	**$ (2,620,703)**	**$ (1,505,357)**
	252 Days	*942 Days*	*785 Days*	*642 Days*	*556 Days*
Operating Fund					
Beginning Balance	$ 9,729,846	$ 4,980,414	$ 11,223,493	$ 8,246,117	$ 5,410,016
Cash Flow	(4,749,432)	(3,106,921)	(2,977,376)	(2,836,101)	(2,071,612)
Transfers to Capital Fund	-	9,350,000	-	-	-
Ending Fund Balance	**$ 4,980,414**	**$ 11,223,493**	**$ 8,246,117**	**$ 5,410,016**	**$ 3,338,404**

Appendix F

POTABLE COST OF SERVICE ANALYSIS

Line	Allocation Basis	Notes	Customer Account Service	Meters and Services	Admin	Distribution	Supply	SDCWA Variable	SDCWA Fixed	SDCWA IAC	Desal	Conservation	Fire Protection	Cross Connection Control	Engineering	General	As All Others
1	Customer Account Service	*Determined based on detailed staff cost allocation.*	100%														0%
2	Meters and Services	*Applies to customer service related functions.*		100%													0%
3	Admin				100%												0%
4	Distribution					100%											0%
5	Supply						100%										0%
6	SDCWA Variable							100%									
7	SDCWA Fixed								100%								0%
8	SDCWA IAC									100%							0%
9	Desal										100%						0%
10	Conservation											100%					0%
11	Fire Protection												100%				0%
12	Cross Connection Control													100%			0%
13	Engineering														100%		0%
14	General															100%	0%
15	Staff Allocation	*Determined based on detailed staff cost allocation.*	0%	16%	7%	35%	5%	0%	0%	0%	0%	2%	0%	3%	10%	23%	0%
16	Vehicle Costs Allocation	*Determined based on typical CMWD vehicle use*	0%	30%	0%	44%	6%	0%	0%	0%	0%	0%	0%	5%	0%	14%	0%
17	Uniforms Cost Allocation	*Determined based on uniformed staff positions*	0%	32%	0%	54%	8%	0%	0%	0%	0%	0%	0%	6%	0%	0%	0%
18	Miscellaneous Professional Services - 7490	*Determined based on line item allocation*	3%	0%	30%	35%	0%	0%	0%	0%	0%	0%	4%	0%	10%	17%	0%
19	Miscellaneous Outside Services - 7550	*Determined based on line item allocation*	0%	3%	0%	90%	2%	0%	0%	0%	0%	0%	0%	0%	0%	5%	
20	As Weighed Average																100%

	Operating Expenditures	2022		Customer Account Service	Meters and Services	Admin	Distribution	Supply	SDCWA Variable	SDCWA Fixed	SDCWA IAC	Desal	Conservation	Fire Protection	Cross Connection Control	Engineering	General	As All Others
21	***Water Operating Expenditures***																	
22	**Personnel**																	
23	Reg Salaries	$ 2,662,637	Staff Allocation	$ -	$ 412,948	$ 191,167	$ 920,970	$ 127,443	$ -	$ -	$ -	$ -	$ 54,844	$ -	$ 92,181	$ 257,914	$ 605,170	$ -
24	Incentive Pay	$ -	Staff Allocation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	Other Personnel	$ -	Staff Allocation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	IOD Worker's Comp	$ -	Staff Allocation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	Overtime Salaries	$ 110,000	Staff Allocation	-	17,060	7,898	38,047	5,265	-	-	-	-	2,266	-	3,808	10,655	25,001	-
28	Standby Pay	$ 24,000	Staff Allocation	-	3,722	1,723	8,301	1,149	-	-	-	-	494	-	831	2,325	5,455	-
29	Parttime Salaries	$ 18,776	Staff Allocation	-	2,912	1,348	6,494	899	-	-	-	-	387	-	650	1,819	4,267	-
30	Intern Salaries	$ 7,429	Staff Allocation	-	1,152	533	2,570	356	-	-	-	-	153	-	257	720	1,688	-
31	Elected Officials' Salaries	$ 7,000	Staff Allocation	-	1,086	503	2,421	335	-	-	-	-	144	-	242	678	1,591	-
32	Temporary Help	$ 40,000	Staff Allocation	-	6,204	2,872	13,835	1,915	-	-	-	-	824	-	1,385	3,875	9,091	-
33	Health Insurance	$ 505,472	Staff Allocation	-	78,394	36,291	174,836	24,194	-	-	-	-	10,412	-	17,500	48,962	114,885	-
34	Life Insurance	$ 1,860	Staff Allocation	-	288	134	643	89	-	-	-	-	38	-	64	180	423	-
35	AD&D City Paid	$ 931	Staff Allocation	-	144	67	322	45	-	-	-	-	19	-	32	90	212	-
36	Vision Insurance	$ -	Staff Allocation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37	Medicare	$ 40,825	Staff Allocation	-	6,332	2,931	14,121	1,954	-	-	-	-	841	-	1,413	3,954	9,279	-
38	MTG Physicals	$ -	Staff Allocation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	Cell Phone Allowance	$ -	Staff Allocation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40	Auto Allowance	$ 1,625	Staff Allocation	-	252	117	562	78	-	-	-	-	33	-	56	157	369	-
41	Earned Leave Accrual	$ -	Staff Allocation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	Healthy Emp Awards	$ -	Staff Allocation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	Final Vacation Pay	$ 35,000	Staff Allocation	-	5,428	2,513	12,106	1,675	-	-	-	-	721	-	1,212	3,390	7,955	-
44	Final Sick Leave Pay	$ -	Staff Allocation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	Disability	$ 24,092	Staff Allocation	-	3,736	1,730	8,333	1,153	-	-	-	-	496	-	834	2,334	5,476	-
46	Unemployment	$ 13,361	Staff Allocation	-	2,072	959	4,621	639	-	-	-	-	275	-	463	1,294	3,037	-
47	Worker's Compensation	$ 50,210	Staff Allocation	-	7,787	3,605	17,367	2,403	-	-	-	-	1,034	-	1,738	4,864	11,412	-
48	PERS	$ 323,511	Staff Allocation	-	50,173	23,227	111,898	15,484	-	-	-	-	6,664	-	11,200	31,337	73,528	-
49	PERS UAL Exp	$ -	Staff Allocation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50	PERS (GASB 68 Contra Account)	$ -	Staff Allocation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51	PERS - Repayment	$ -	Staff Allocation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52	OPEB Expense	$ -	Staff Allocation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53	PERS Unfunded Liability Expense	$ 310,869	Staff Allocation	-	48,212	22,319	107,525	14,879	-	-	-	-	6,403	-	10,762	30,112	70,655	-
54	Social Security	$ -	Staff Allocation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55	Deferred Comp	$ 705	Staff Allocation	-	109	51	244	34	-	-	-	-	15	-	24	68	160	-
56	Def Comp Match	$ -	Staff Allocation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57	Other Personnel	$ -	Staff Allocation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

	Operating Expenditures	2022		Customer Account Service	Meters and Services	Admin	Distribution	Supply	SDCWA Variable	SDCWA Fixed	SDCWA IAC	Desal	Conservation	Fire Protection	Cross Connection Control	Engineering	General	As All Others
58	**Maintenance & Equipment**																	
59	Office Equip Rental	$ 500	Staff Allocation	$ -	$ 78	$ 36	$ 173	$ 24	$ -	$ -	$ -	$ -	$ 10	$ -	$ 17	$ 48	$ 114	$ -
60	Other Mach & Equip	$ 2,000	Staff Allocation	-	310	144	692	96	-	-	-	-	41	-	69	194	455	-
61	Vehicle Rentals	$ 17,150	Vehicle Costs Allocation	-	5,179	-	7,577	1,082	-	-	-	-	-	-	849	-	2,462	-
62	Misc Rentals	$ 14,000	General	-	-	-	-	-	-	-	-	-	-	-	-	-	14,000	-
63	Misc Leases	$ -	General	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64	Office Equip Maintenance	$ -	Staff Allocation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65	Communication Equip Maintenance	$ 3,000	Staff Allocation	-	465	215	1,038	144	-	-	-	-	62	-	104	291	682	-
66	Software Maintenance	$ 50,000	Admin	-	-	50,000	-	-	-	-	-	-	-	-	-	-	-	-
67	Computer Maintenance	$ -	General	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
68	Vehicle Maint	$ 30,000	Vehicle Costs Allocation	-	9,059	-	13,255	1,894	-	-	-	-	-	-	1,485	-	4,307	-
69	Wash and Wax	$ 23,450	Vehicle Costs Allocation	-	7,081	-	10,361	1,480	-	-	-	-	-	-	1,161	-	3,367	-
70	Other Equip Maintenance	$ 100	General	-	-	-	-	-	-	-	-	-	-	-	-	-	100	-
71	Car Wash Repairs	$ -	Staff Allocation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
72	Pipeline Maintenance	$ 234,500	Distribution	-	-	-	234,500	-	-	-	-	-	-	-	-	-	-	-
73	Fire Hydrant Maintenance - City	$ 21,000	Fire Protection	-	-	-	-	-	-	-	-	-	-	21,000	-	-	-	-
74	FIRE HYDRANT MAINTENANCE - OTHER	$ 25,000	Fire Protection	-	-	-	-	-	-	-	-	-	-	25,000	-	-	-	-
75	Routine Building Maintenance	$ 5,000	General	-	-	-	-	-	-	-	-	-	-	-	-	-	5,000	-
76	Asphalt Repairs	$ 50,000	General	-	-	-	-	-	-	-	-	-	-	-	-	-	50,000	-
77	Street Sweeping	$ -	General	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
78	Maintenance, Repair and Rehab	$ 10,000	General	-	-	-	-	-	-	-	-	-	-	-	-	-	10,000	-
79	Audit	$ -	General	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
80	Legal	$ 70,000	Admin	-	-	70,000	-	-	-	-	-	-	-	-	-	-	-	-
81	Administrative	$ 45,000	Admin	-	-	45,000	-	-	-	-	-	-	-	-	-	-	-	-
82	Claims Admin	$ -	General	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
83	Misc Professional Services	$ 521,500	laneous Professional Services -	13,173	1,907	154,494	184,280	588	-	-	-	-	253	21,955	426	53,882	90,542	-
84	Encina Services	$ -	General	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
85	City Generated	$ -	General	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
86	Citizen Generated	$ -	General	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
87	Miscellaneous Outside Services	$ 500,100	cellaneous Outside Services - 75	1,100	15,000	-	449,000	10,000	-	-	-	-	-	-	-	-	25,000	-
88	Bank Services	$ 38,600	Admin	-	-	38,600	-	-	-	-	-	-	-	-	-	-	-	-
89	Book Binding	$ -	Admin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
90	Comm Arts Support	$ -	Admin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
91	Regulatory/Permitting Fees	$ 143,400	Admin	-	-	143,400	-	-	-	-	-	-	-	-	-	-	-	-
92	Misc Services	$ -	General	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
93	Customer Service Charge	$ 807,150	SDCWA Fixed	-	-	-	-	-	-	807,150	-	-	-	-	-	-	-	-
94	Emergency Storage Charge	$ 2,047,662	SDCWA Fixed	-	-	-	-	-	-	2,047,662	-	-	-	-	-	-	-	-
95	Infrastructure Access Charge	$ 1,857,888	SDCWA IAC	-	-	-	-	-	-	-	1,857,888	-	-	-	-	-	-	-
96	Supply Reliability Charge	$ 1,350,210	SDCWA Fixed	-	-	-	-	-	-	1,350,210	-	-	-	-	-	-	-	-
97	MWD Capacity Reservation Charge	$ 287,640	SDCWA Fixed	-	-	-	-	-	-	287,640	-	-	-	-	-	-	-	-
98	MWD Readiness to Service Charge	$ 397,800	SDCWA Fixed	-	-	-	-	-	-	397,800	-	-	-	-	-	-	-	-
99	Laundry and Uniform Maintenance	$ 8,000	Uniforms Cost Allocation	-	2,570	-	4,327	618	-	-	-	-	-	-	485	-	-	-
100	Electrical/Scada Services	$ 85,000	Distribution	-	-	-	85,000	-	-	-	-	-	-	-	-	-	-	-
101	Water Sampling Services	$ 147,500	Supply	-	-	-	-	147,500	-	-	-	-	-	-	-	-	-	-
102	Water Conservation Services	$ 22,500	Conservation	-	-	-	-	-	-	-	-	-	22,500	-	-	-	-	-
103	Landscaping Services	$ 93,000	General	-	-	-	-	-	-	-	-	-	-	-	-	-	93,000	-
104	Ads and Publishing	$ 500	Admin	-	-	500	-	-	-	-	-	-	-	-	-	-	-	-
105	Dues and Subscriptions	$ 42,500	Staff Allocation	-	6,591	3,051	14,700	2,034	-	-	-	-	875	-	1,471	4,117	9,659	-
106	Books and Publications	$ 1,200	Staff Allocation	-	186	86	415	57	-	-	-	-	25	-	42	116	273	-
107	Audio-Visual Materials	$ -	General	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
108	Printing	$ 15,000	Customer Account Service	15,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
109	Postage	$ 7,000	Customer Account Service	7,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
110	Office Supplies	$ 11,000	Staff Allocation	-	1,706	790	3,805	526	-	-	-	-	227	-	381	1,066	2,500	-
111	Office Furniture & Equipment	$ 15,000	Staff Allocation	-	2,326	1,077	5,188	718	-	-	-	-	309	-	519	1,453	3,409	-
112	Computer Software	$ 10,000	Admin	-	-	10,000	-	-	-	-	-	-	-	-	-	-	-	-
113	Misc. Computer Hardware	$ 5,000	Admin	-	-	5,000	-	-	-	-	-	-	-	-	-	-	-	-
114	Promo Materials	$ 6,000	Admin	-	-	6,000	-	-	-	-	-	-	-	-	-	-	-	-
115	Preschool	$ -	General	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
116	Food Expense	$ -	General	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
117	Heat and Light	$ 126,270	Distribution	-	-	-	126,270	-	-	-	-	-	-	-	-	-	-	-
118	Telephone & Communications	$ 13,600	Staff Allocation	-	2,109	976	4,704	651	-	-	-	-	280	-	471	1,317	3,091	-
119	Waste Disposal Services	$ 12,000	Staff Allocation	-	1,861	862	4,151	574	-	-	-	-	247	-	415	1,162	2,727	-
120	Water	$ 17,000	Staff Allocation	-	2,637	1,221	5,880	814	-	-	-	-	350	-	589	1,647	3,864	-
121	Building Maintenance	$ -	General	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
122	Electrical Supplies	$ -	General	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
123	Janitorial Supplies	$ -	General	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
124	Sign Materials	$ -	General	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
125	Parts-Vehicles	$ -	General	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
126	Parts-Equip	$ 223,000	Distribution	-	-	-	223,000	-	-	-	-	-	-	-	-	-	-	-
127	Rock and Mineral Products	$ 15,000	Distribution	-	-	-	15,000	-	-	-	-	-	-	-	-	-	-	-
128	Asphalt	$ 5,000	Distribution	-	-	-	5,000	-	-	-	-	-	-	-	-	-	-	-
129	Small Tools	$ 5,000	Distribution	-	-	-	5,000	-	-	-	-	-	-	-	-	-	-	-
130	Safety Equipment	$ 25,000	Staff Allocation	-	3,877	1,795	8,647	1,197	-	-	-	-	515	-	866	2,422	5,682	-
131	Uniforms and Accessories	$ 4,000	Uniforms Cost Allocation	-	1,285	-	2,164	309	-	-	-	-	-	-	242	-	-	-
132	Meters/Fittings - New Development	$ 106,000	Meters and Services	-	106,000	-	-	-	-	-	-	-	-	-	-	-	-	-
133	Meters/Fittings - Replacement	$ 136,000	Meters and Services	-	136,000	-	-	-	-	-	-	-	-	-	-	-	-	-
134	Fire Hose and Appliances	$ -	General	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
135	Rescue Equipment	$ -	General	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
136	Personal Protective Equipment	$ -	General	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
137	Breathing Apparatus Equipment	$ -	General	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

	Operating Expenditures	2022		Customer Account Service	Meters and Services	Admin	Distribution	Supply	SDCWA Variable	SDCWA Fixed	SDCWA IAC	Desal	Conservation	Fire Protection	Cross Connection Control	Engineering	General	As All Others
138	Automated Meter Program	$ -	General	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
139	Gasoline and Oil	$ 2,000	Distribution	-	-	-	2,000	-	-	-	-	-	-	-	-	-	-	-
140	Propane	$ 500	Distribution	-	-	-	500	-	-	-	-	-	-	-	-	-	-	-
141	Other Petrol Products	$ -	General	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
142	Chemicals	$ 33,000	Supply	-	-	-	-	33,000	-	-	-	-	-	-	-	-	-	-
143	CMWD Purc Water-Outside Agency	$ 17,516,149	SDCWA Variable	-	-	-	-	-	17,516,149	-	-	-	-	-	-	-	-	-
144	Desal Costs	$ 7,090,728	Desal	-	-	-	-	-	-	-	-	7,090,728	-	-	-	-	-	-
145	Misc Supplies	$ 45,000	General	-	-	-	-	-	-	-	-	-	-	-	-	-	45,000	-
146	Employee Training	$ 6,000	Staff Allocation	-	931	431	2,075	287	-	-	-	-	124	-	208	581	1,364	-
147	Tuition Reimbursement	$ -	General	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
148	Training/Training Related Travel	$ 4,500	Staff Allocation	-	698	323	1,556	215	-	-	-	-	93	-	156	436	1,023	-
149	Depreciation	Included in Capital Allocation																
150	Prop Taxes PD	$ 5,000	General	-	-	-	-	-	-	-	-	-	-	-	-	-	5,000	-
151	Conference Travel	$ 1,500	Staff Allocation	-	233	108	519	72	-	-	-	-	31	-	52	145	341	-
152	Misc. Meals/Miles	$ 7,000	Staff Allocation	-	1,086	503	2,421	335	-	-	-	-	144	-	242	678	1,591	-
153	Bad Debt Exp - Other Inv/Bills	$ 47,850	Admin	-	-	47,850	-	-	-	-	-	-	-	-	-	-	-	-
154	Disposal of Assets	$ -	General	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
155	Reg Over/Short	$ -	General	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
156	Settlements	$ -	General	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
157	Interest on Deposit	$ -	General	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
158	Interfund Services	$ -	General	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
159	Misc Expenditures	$ -	General	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
160	Contingencies	$ -	General	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
161	Vehicle Direct Charges	$ 34,003	Vehicle Costs Allocation	-	10,268	-	15,024	2,146	-	-	-	-	-	-	1,683	-	4,882	-
162	Vehicle Maintenance	$ 160,512	Vehicle Costs Allocation	-	48,471	-	70,919	10,131	-	-	-	-	-	-	7,946	-	23,044	-
163	Vehicle Replacement	$ 178,609	Vehicle Costs Allocation	-	53,936	-	78,915	11,274	-	-	-	-	-	-	8,842	-	25,642	-
164	Street Lighting	$ -	General	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
165	Median Maintenance	$ -	General	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
166	General Lab	$ 158,530	Supply	-	-	-	-	158,530	-	-	-	-	-	-	-	-	-	-
167	Copy Services	$ -	General	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
168	Records Management Interdept	$ -	General	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
169	Information Technologies	$ 632,427	Meters and Services	-	632,427	-	-	-	-	-	-	-	-	-	-	-	-	-
170	Misc Interdepartmental Charges	$ 1,805,116	Admin	-	-	1,805,116	-	-	-	-	-	-	-	-	-	-	-	-
171	Mis Chg Back	$ -	General	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
172	Utility Billing Chargeback	$ -	General	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
173	Fiscal Agent Fees	$ -	General	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
174	Arbitrage Costs	$ -	General	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
175	Misc Debt Expense	$ -	General	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
176	Principal	$ -	General	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
177	Interest Expense	$ -	General	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
178	Int Exp-Capitalized Interest	$ -	General	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
179	Amortization Expense	$ -	General	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180	Issuance Costs	$ -	General	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
181	Other	$ -	General	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
182	Additional Maintenance & Equipment	$ (1,705,116)	As Weighed Average	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(1,705,116)
183	**Capital Outlay**																	
184	Non-Budgeted Cap Equip <$10K	$ -	Supply	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
185	Capital Outlay <$10K New	$ -	Supply	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
186	Capital Outlay < $10K - Repl	$ -	Supply	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
187	Cap Outlay - Vehicles	$ -	Supply	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
188	Computer Equip > $10K - Repl	$ -	Supply	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
189	Office Equipment	$ -	Supply	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
190	Other Equipment	$ -	Supply	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
191	Office Furniture	$ -	Supply	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
192	Reclass Capital Outlay	$ -	Supply	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
193	Capitalized Assets	$ -	Supply	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
194	Other Capital Outlay	$ -	Supply	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
195	**Other Financing Uses**																	
196	Other Other Financing Uses	$ -	As Weighed Average	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
197	**Operating Expenditures Sub Total**	**$ 39,911,331**		**$ 36,273**	**$ 1,702,289**	**$ 2,687,563**	**$ 3,033,274**	**$ 586,286**	**$ 17,516,149**	**$ 4,890,462**	**$ 1,857,888**	**$ 7,090,728**	**$ 112,149**	**$ 67,955**	**$ 173,375**	**$ 474,283**	**$ 1,387,773**	**$ (1,705,116)**
198	**Reallocation of "As All Others"**			**(1,486)**	**(69,746)**	**(110,115)**	**(124,280)**	**(24,021)**	**(717,675)**	**(200,373)**	**(76,122)**	**(290,522)**	**(4,595)**	**(2,784)**	**(7,104)**	**(19,432)**	**(56,860)**	**1,705,116**
199	**Total Allocation**	**$ 39,911,331**		**$ 34,787**	**$ 1,632,543**	**$ 2,577,448**	**$ 2,908,994**	**$ 562,264**	**$ 16,798,475**	**$ 4,690,089**	**$ 1,781,766**	**$ 6,800,206**	**$ 107,554**	**$ 65,170**	**$ 166,272**	**$ 454,850**	**$ 1,330,913**	**$ -**
200	**Resulting Allocation**	100%		0.1%	4.1%	6.5%	7.3%	1.4%	42.1%	11.8%	4.5%	17.0%	0.3%	0.2%	0.4%	1.1%	3.3%	0.0%

Cost Allocation Basis: **FYE 2022**

Line	Allocation Basis	Notes	Fixed Charge: Customer	Fixed Charge: Service	Commodity Charge: Base	Commodity Charge: Max Day	Commodity Charge: Max Hour	Private Fire	SDCWA	Desal	As All Others
1	**Customer Only**	*Applies to customer service related functions.*	96.2%					3.8%			0%
3	**Service Only**	*Applies to service related functions.*		98.5%				1.5%			0%
4	**Service Only - No Fire**	*Applies to service related functions, excludes fire.*		100.0%							0%
5	**Customer and Meter Service**	*50% to Customer Functions, 50% related to Meter Size*	48.1%	49.3%				2.7%			0%
10	**SDCWA Only**	*Applies to costs associated with SDCWA only.*							100.0%		0%
11	**Desal Only**			0.0%	0.0%	0.0%				100.0%	0%
12	**Base**	*Applies to base water usage.*			100.0%						0%
13	**Max Day**	*Applies to high demand water functions.*				100.0%					0%
17	**Max Day/Max Hour**	*Split 50-50 between Max Day and Max Hour.*				55.8%	44.2%				0%
20	**Plant-In-Service**	*Based on allocated assets*	0.1%	51.2%	4.2%	23.9%	19.0%	1.5%	0.0%	0.0%	0%
21	**As All Others**	*Applies total allocation to remaining line items.*									100%

22	Operating Expenditures	2022	Allocation	Customer	Service	Base	Max Day	Max Hour	Private Fire	SDCWA	Desal	As All Others
23	***Functionalized Operating Expenditures***											
24	Customer Account Service	$ 34,787	Customer Only	$ 33,453	$ -	$ -	$ -	$ -	$ 1,334	$ -	$ -	$ -
25	Meters and Services	$ 1,632,543	Customer and Meter Service	784,972	804,139	-	-	-	43,433	-	-	-
26	Admin	$ 2,577,448	Customer Only	2,478,616	-	-	-	-	98,832	-	-	-
27	Distribution	$ 2,908,994	Max Day/Max Hour	-	-	-	1,623,491	1,285,503	-	-	-	-
28	Supply	$ 562,264	Base	-	-	562,264	-	-	-	-	-	-
29	SDCWA Variable	$ 16,798,475	SDCWA Only	-	-	-	-	-	-	16,798,475	-	-
30	SDCWA Fixed	$ 4,690,089	Service Only - No Fire	-	4,690,089	-	-	-	-	-	-	-
31	SDCWA IAC	$ 1,781,766	Service Only - No Fire	-	1,781,766	-	-	-	-	-	-	-
32	Desal	$ 6,800,206	Desal Only	-	-	-	-	-	-	-	6,800,206	-
33	Conservation	$ 107,554	Max Day	-	-	-	107,554	-	-	-	-	-
34	Fire Protection	$ 65,170	Service Only	-	64,202	-	-	-	969	-	-	-
35	Cross Connection Control	$ 166,272	Service Only	-	163,800	-	-	-	2,471	-	-	-
36	Engineering	$ 454,850	Plant-In-Service	640	233,085	19,307	108,861	86,198	6,761	-	-	-
37	General	$ 1,330,913	As All Others	-	-	-	-	-	-	-	-	1,330,913
38	**Operating Expenditures Sub Total**	**$ 39,911,331**		**$ 3,297,680**	**$ 7,737,081**	**$ 581,571**	**$ 1,839,907**	**$ 1,371,700**	**$ 153,799**	**$ 16,798,475**	**$ 6,800,206**	**$ 1,330,913**
39	**Reallocation of "As All Others"**			**113,760**	**266,907**	**20,063**	**63,471**	**47,320**	**5,306**	**579,499**	**234,587**	**(1,330,913)**
40	**Total Allocation**	**$ 39,911,331**		**$ 3,411,441**	**$ 8,003,987**	**$ 601,633**	**$ 1,903,378**	**$ 1,419,020**	**$ 159,104**	**$ 17,377,974**	**$ 7,034,793**	**$ -**
41	**Resulting Allocation**	100%		**8.5%**	**20.1%**	**1.5%**	**4.8%**	**3.6%**	**0.4%**	**43.5%**	**17.6%**	**0.0%**

	Rate Revenue Requirement	2022	Allocation	Customer	Service	Base	Max Day	Max Hour	Private Fire	SDCWA	Desal	As All Others
43	Operating Expenses	$ 39,911,331	Resulting O&M Allocation	$ 3,411,441	$ 8,003,987	$ 601,633	$ 1,903,378	$ 1,419,020	$ 159,104	$ 17,377,974	$ 7,034,793	$ -
44	Debt	-	Service Only	-	-	-	-	-	-	-	-	-
45	Rate Funded Capital	-	Service Only	-	-	-	-	-	-	-	-	-
46	Replacement Funding (Depreciation Fundi	4,500,000	Plant-In-Service	6,331	2,305,991	191,008	1,077,000	852,784	66,887	-	-	-
47	Transfer to Capital Fund	4,000,000	Plant-In-Service	5,627	2,049,769	169,785	957,334	758,030	59,455	-	-	-
48	Cash Flows	(2,424,805)	As All Others	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (2,424,805)
49	Less Offsetting Revenues											
50	Adj. for Mid Year Increase	544,413	As All Others	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 544,413
51	Non-Rate Charges for Services	(323,680)	As All Others	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (323,680)
52	Developer Fees	-	As All Others	-	-	-	-	-	-	-	-	-
53	Tax Revenues	(3,680,500)	As All Others	-	-	-	-	-	-	-	-	(3,680,500)
54	Licenses and Permits	-	As All Others	-	-	-	-	-	-	-	-	-
55	Intergovernmental	(7,400)	As All Others	-	-	-	-	-	-	-	-	(7,400)
56	Fines & Forfeitures	(104,650)	As All Others	-	-	-	-	-	-	-	-	(104,650)
57	Income from Prop & Investments	(637,130)	As All Others	-	-	-	-	-	-	-	-	(637,130)
58	Interdepartmental	(45,000)	As All Others	-	-	-	-	-	-	-	-	(45,000)
59	Other Revenues	(85,000)	As All Others	-	-	-	-	-	-	-	-	(85,000)
60	Other Financing Sources	-	As All Others	-	-	-	-	-	-	-	-	-
61	**Total Rate Revenues to be Collected**	**$ 41,647,579**		**$ 3,423,399**	**$ 12,359,747**	**$ 962,426**	**$ 3,937,712**	**$ 3,029,834**	**$ 285,446**	**$ 17,377,974**	**$ 7,034,793**	**$ (6,763,752)**
62	**Reallocation of "As All Others"**			**(478,298)**	**(1,726,833)**	**(134,465)**	**(550,154)**	**(423,311)**	**(39,881)**	**(2,427,950)**	**(982,861)**	**6,763,752**
63	**Total Allocation**	**$ 41,647,579**		**$ 2,945,102**	**$ 10,632,915**	**$ 827,961**	**$ 3,387,558**	**$ 2,606,523**	**$ 245,565**	**$ 14,950,023**	**$ 6,051,933**	**$ -**
64	**Resulting Allocation**	100%		**7%**	**26%**	**2%**	**8%**	**6%**	**1%**	**36%**	**15%**	**0%**

	Unit Cost Calculations	2022	Customer	Service	Base	Max Day	Max Hour	Private Fire	SDCWA	Desal
66	Allocation Basis		# Accounts	# MEUs	Usage (ccf)	Peak Usage	Peak Usage	Usage	Usage	Usage
67	Total Units		349,201	1,161,220	7,672,372	3,087,135	3,087,135		-	-
68	Amount Allocable to Constituent		$ 2,945,102	$ 10,632,915	$ 827,961	$ 3,387,558	$ 2,606,523	$ 245,565	$ 14,950,023	$ 6,051,933
69	**Unit Costs**		**$ 8.43**	**$ 9.16**	**$ 0.11**	**$ 1.10**	**$ 0.84**	**$ -**	**$ -**	**$ -**

	Plant In Service	Replacement Cost	% Total	Customer	Service	Base	Max Day	Max Hour	Fire Protection	SDCWA	Desal	As All Others
71	Land	$ 10,447,332	2.7%		100%							0%
72	Buildings	$ 10,764,503	2.7%		100%							0%
73	Water Service & Meters	$ 1,105,608	0.3%	50%	50%							0%
74	Machinery & Equipment	$ 229,190	0.1%		100%							0%
75	Fire Hydrants	$ 17,889	0.0%						100%			0%
76	Reservoirs	$ 96,735,194	24.6%		34%	17%	18%	14%	16%			0%
77	Pipes & Pumping	$ 273,633,042	69.6%		35%	0%	28%	22%	15%			0%
78	Construction in Progress	-										100%
79	**Plant-In-Service Sub Total**	**392,932,758**		**$ 552,804**	**$ 150,492,437**	**$ 16,678,482**	**$ 94,041,937**	**$ 74,463,699**	**$ 56,703,399**	**$ -**	**$ -**	**$ -**
80	**Reallocation of "As All Others"**			-	-	-	-	-	-	-	-	-
81	**Total Allocation**	**$ 392,932,758**		**$ 552,804**	**$ 150,492,437**	**$ 16,678,482**	**$ 94,041,937**	**$ 74,463,699**	**$ 56,703,399**	**$ -**	**$ -**	**$ -**
82	**Resulting Allocation**	100%		**0.1%**	**38.3%**	**4.2%**	**23.9%**	**19.0%**	**14.4%**	**0%**	**0%**	**0%**

Appendix G

RECYCLED COST OF SERVICE ANALYSIS

Cost Allocation Basis **FYE 2022**

Line	Allocations	Notes	Customer Account Service	Meters and Services	Admin	Distribution	Supply	Cross Connection Control	Engineering	General	As All Others
1	Customer Account Service	*Applies to customer and service related functions*	100%								0%
2	Meters and Services	*Applies to customer and source related functions*		100%							0%
3	Admin	*Applies to only source functions.*			100%						0%
4	Distribution	*Applies to only customer functions.*				100%					0%
5	Supply	*Applies to variable functions.*					100%				0%
9	Cross Connection Control	*Applies total allocation to remaining line items.*						100%			0%
10	Engineering								100%		0%
11	General									100%	0%
12	Staff Allocation		0%	5%	4%	18%	2%	31%	26%	14%	0%
13	Vehicle Costs Allocation		0%	11%	0%	26%	3%	53%	0%	7%	
14	Uniforms Cost Allocation		0%	14%	0%	32%	5%	50%	0%	0%	
15	As All Other										100%
16	Plant In Service	*See Plant in Service section below.*	0%	0%	0%	78%	22%	0%	0%	0%	0%

	Plant In Service	Original Cost	Customer Account Service	Meters and Services	Admin	Distribution	Supply	Cross Connection Control	Engineering	General	As All Others
17											
18	Recycled Mains	$ 43,766,075				100%					0%
19	Recycled Water Stations	8,198,346				100%					0%
20	Recycled Water Facility	14,951,103					100%				0%
21	Construction in Progress	-									100%
22	**Plant-In-Service Sub Total**	**$ 66,915,523**	**$ -**	**$ -**	**$ -**	**$ 51,964,420**	**$ 14,951,103**			**$ -**	**$ -**
23	**Reallocation of "As All Others"**		-	-	-	-	-			-	-
24	**Total Allocation**	**$ 66,915,523**	**$ -**	**$ -**	**$ -**	**$ 51,964,420**	**$ 14,951,103**			**$ -**	**$ -**
25	Resulting Allocations	100%	0%	0%	0%	78%	22%			0%	0%

	Operating Expenditures	FYE 2022		Customer Account Service	Meters and Services	Admin	Distribution	Supply	Cross Connection Control	Engineering	General	As All Others
26												
27	***Recycled Water Operating Expenditures***											
28	**Personnel**											
29	Reg Salaries	$ 1,217,881	Staff Allocation	$ -	$ 60,326	$ 42,859	$ 224,254	$ 29,397	$ 376,799	$ 316,085	$ 168,161	$ -
30	Incentive Pay	-	Staff Allocation	-	-	-	-	-	-	-	-	-
31	Other Personnel	-	Staff Allocation	-	-	-	-	-	-	-	-	-
32	IOD Worker's Comp	-	Staff Allocation	-	-	-	-	-	-	-	-	-
33	Overtime Salaries	30,000	Staff Allocation	-	1,486	1,056	5,524	724	9,282	7,786	4,142	-
34	Standby Pay	4,000	Staff Allocation	-	198	141	737	97	1,238	1,038	552	-
35	Parttimes Salaries	9,388	Staff Allocation	-	465	330	1,729	227	2,905	2,437	1,296	-
36	Intern Salaries	3,716	Staff Allocation	-	184	131	684	90	1,150	964	513	-
37	Elected Officials' Salaries	-	Staff Allocation	-	-	-	-	-	-	-	-	-
38	Mgt Physicals	-	Staff Allocation	-	-	-	-	-	-	-	-	-
39	Temproary Help	-	Staff Allocation	-	-	-	-	-	-	-	-	-
40	Health Insurance	211,460	Staff Allocation	-	10,474	7,442	38,937	5,104	65,423	54,882	29,198	-
41	Life Insurance	882	Staff Allocation	-	44	31	162	21	273	229	122	-
42	AD&D - City Paid	441	Staff Allocation	-	22	16	81	11	136	114	61	-
43	Vision Insurance	-	Staff Allocation	-	-	-	-	-	-	-	-	-
44	Medicare	18,290	Staff Allocation	-	906	644	3,368	441	5,659	4,747	2,525	-
45	Cell Phone Allowance	-	Staff Allocation	-	-	-	-	-	-	-	-	-
46	Auto Allowance	488	Staff Allocation	-	24	17	90	12	151	127	67	-
47	Earned Leave Accrual	-	Staff Allocation	-	-	-	-	-	-	-	-	-
48	Healthy Emp Awards	-	Staff Allocation	-	-	-	-	-	-	-	-	-
49	Final Vacation Pay	14,000	Staff Allocation	-	693	493	2,578	338	4,331	3,634	1,933	-
50	Final Sick Leave Pay	-	Staff Allocation	-	-	-	-	-	-	-	-	-
51	Disability	11,021	Staff Allocation	-	546	388	2,029	266	3,410	2,860	1,522	-
52	Unemployment	6,114	Staff Allocation	-	303	215	1,126	148	1,892	1,587	844	-
53	Worker's Compensation	21,890	Staff Allocation	-	1,084	770	4,031	528	6,773	5,681	3,023	-
54	PERS	147,973	Staff Allocation	-	7,330	5,207	27,247	3,572	45,781	38,405	20,432	-
55	PERS - Repayment	-	Staff Allocation	-	-	-	-	-	-	-	-	-
56	OPEB Expense	-	Staff Allocation	-	-	-	-	-	-	-	-	-
57	PERS Unfunded Liability Exp	142,158	Staff Allocation	-	7,042	5,003	26,176	3,431	43,982	36,895	19,629	-
58	Social Security	-	Staff Allocation	-	-	-	-	-	-	-	-	-
59	Deffered Comp	353	Staff Allocation	-	17	12	65	9	109	92	49	-
60	Def Comp Match	-	Staff Allocation	-	-	-	-	-	-	-	-	-
61	Other Personnel	-	Staff Allocation	-	-	-	-	-	-	-	-	-

	Operating Expenditures	FYE 2022		Customer Account Service	Meters and Services	Admin	Distribution	Supply	Cross Connection Control	Engineering	General	As All Others
26												
62	**Maintenance & Equipment**											
63	Office Equp Rental	$ -	Staff Allocation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
64	Other Mach & Equip	-	Staff Allocation	-	-	-	-	-	-	-	-	-
65	Misc Rentals	500	General	-	-	-	-	-	-	-	500	-
66	Misc Leases	-	General	-	-	-	-	-	-	-	-	-
67	Office Equip Maintenance	-	Staff Allocation	-	-	-	-	-	-	-	-	-
68	Communication Equip Maintenance	-	Staff Allocation	-	-	-	-	-	-	-	-	-
69	Software Maintenance	1,700	Admin	-	-	1,700	-	-	-	-	-	-
70	Computer Maintenance	-	Admin	-	-	-	-	-	-	-	-	-
71	Vehicle Maint	-	Vehicle Costs Allocation	-	-	-	-	-	-	-	-	-
72	Wash and Wax	1,500	Vehicle Costs Allocation	-	160	-	385	45	800	-	110	-
73	Other Equip Maintenance	500	General	-	-	-	-	-	-	-	500	-
74	Car Wash Repairs	-	General	-	-	-	-	-	-	-	-	-
75	Pipeline Maintenance	55,000	Distribution	-	-	-	55,000	-	-	-	-	-
76	FIRE HYDRANT MAINT - CITY	5,000	Distribution	-	-	-	5,000	-	-	-	-	-
77	Routine Building Mainteance	1,000	Distribution	-	-	-	1,000	-	-	-	-	-
78	Asphalt Repairs	1,000	Distribution	-	-	-	1,000	-	-	-	-	-
79	Maintenance, Repair and Rehab	3,243	Distribution	-	-	-	3,243	-	-	-	-	-
80	Audit	-	Admin	-	-	-	-	-	-	-	-	-
81	Legal	-	Admin	-	-	-	-	-	-	-	-	-
82	Administrative	-	Admin	-	-	-	-	-	-	-	-	-
83	Claims Admin	-	Admin	-	-	-	-	-	-	-	-	-
84	Misc Professional Services	188,480	Distribution	-	-	-	188,480	-	-	-	-	-
85	Encina Services	1,575,000	Supply	-	-	-	-	1,575,000	-	-	-	-
85	Encina Services (Pension Payoff)	-	Supply	-	-	-	-	-	-	-	-	-
86	City Generated	-	General	-	-	-	-	-	-	-	-	-
87	Citizen Generated	-	General	-	-	-	-	-	-	-	-	-
88	Miscellaneous Outside Services	191,000	Distribution	-	-	-	191,000	-	-	-	-	-
89	Bank Services	1,200	Admin	-	-	1,200	-	-	-	-	-	-
90	Book Binding	-	Admin	-	-	-	-	-	-	-	-	-
91	Regulatory/Permitting Fees	30,000	General	-	-	-	-	-	-	-	30,000	-
92	Misc Services	-	General	-	-	-	-	-	-	-	-	-
93	MWD/CWA Fixed Charges	-	General	-	-	-	-	-	-	-	-	-
94	Laundry and Uniform Mainteance	3,000	Uniforms Cost Allocation	-	420	-	945	135	1,500	-	-	-
95	Electrical/SCADA services	35,000	Distribution	-	-	-	35,000	-	-	-	-	-
96	Landscaping Services	22,000	General	-	-	-	-	-	-	-	22,000	-
97	Ads and Publishing	-	Admin	-	-	-	-	-	-	-	-	-
98	Dues and Subscriptions	8,300	Staff Allocation	-	411	292	1,528	200	2,568	2,154	1,146	-
99	Books and Publications	500	Staff Allocation	-	25	18	92	12	155	130	69	-
100	Audio-Visual Materials	-	General	-	-	-	-	-	-	-	-	-
100	Printing	4,000	Customer Account Service	4,000	-	-	-	-	-	-	-	-
101	Postage	1,000	Customer Account Service	1,000	-	-	-	-	-	-	-	-
102	Office Supplies	1,000	Staff Allocation	-	50	35	184	24	309	260	138	-
103	Office Furniture & Equipment	2,500	Staff Allocation	-	124	88	460	60	773	649	345	-
104	Computer Software	5,000	Admin	-	-	5,000	-	-	-	-	-	-
105	Misc. Computer Hardware	2,000	Admin	-	-	2,000	-	-	-	-	-	-
106	Promo Materials	1,000	Admin	-	-	1,000	-	-	-	-	-	-
107	Preschool	-	Admin	-	-	-	-	-	-	-	-	-
108	Heat and Light	329,400	Distribution	-	-	-	329,400	-	-	-	-	-
109	Telephone & Communications	900	Staff Allocation	-	45	32	166	22	278	234	124	-
110	Waste Dispoal Services	-	Staff Allocation	-	-	-	-	-	-	-	-	-
111	Water	4,500	Staff Allocation	-	223	158	829	109	1,392	1,168	621	-
112	Building Maintenance	-	General	-	-	-	-	-	-	-	-	-
113	Electrical Supplies	500	Distribution	-	-	-	500	-	-	-	-	-
114	Janitorial Supplies	-	General	-	-	-	-	-	-	-	-	-
115	Parts-Equip	67,500	Distribution	-	-	-	67,500	-	-	-	-	-
116	Rock and Mineral Products	1,000	Distribution	-	-	-	1,000	-	-	-	-	-
117	Asphalt	1,000	Distribution	-	-	-	1,000	-	-	-	-	-
118	Small Tools	600	Distribution	-	-	-	600	-	-	-	-	-
119	Safety Equipment	16,900	Staff Allocation	-	837	595	3,112	408	5,229	4,386	2,333	-
120	Uniforms and Accessories	3,000	Uniforms Cost Allocation	-	420	-	945	135	1,500	-	-	-
121	Meters/Fittings - New	23,700	Meters and Services	-	23,700	-	-	-	-	-	-	-
122	Meters/Fittings - Replacement	20,000	Meters and Services	-	20,000	-	-	-	-	-	-	-
122	Fire Hose and Appliances	-	General	-	-	-	-	-	-	-	-	-
123	Rescue Equipment	-	General	-	-	-	-	-	-	-	-	-
124	Personal Protective Equipment	-	General	-	-	-	-	-	-	-	-	-
125	Breathing Apparatus Equipment	-	General	-	-	-	-	-	-	-	-	-
126	Shooting Range Supplies	-	General	-	-	-	-	-	-	-	-	-
127	Gasoline and Oil	-	General	-	-	-	-	-	-	-	-	-
128	CMWD Purc Water-Outside Agency	2,268,646	Supply	-	-	-	-	2,268,646	-	-	-	-

	Operating Expenditures	FYE 2022		Customer Account Service	Meters and Services	Admin	Distribution	Supply	Cross Connection Control	Engineering	General	As All Others
26												
129	CMWD Purch Water-From City	18,000	Supply	-	-	-	-	18,000	-	-	-	-
130	Misc Supplies	7,000	General	-	-	-	-	-	-	-	7,000	-
131	Employee Training	750	Staff Allocation	-	37	26	138	18	232	195	104	-
132	Tuition Reimbursement	-	Staff Allocation	-	-	-	-	-	-	-	-	-
133	Training/Training Related Travel	6,000	Staff Allocation	-	297	211	1,105	145	1,856	1,557	828	-
134	Prop Taxes PD	$ -	General	-	-	-	-	-	-	-	-	-
135	Conference/Meeting Travel	500	Staff Allocation	-	25	18	92	12	155	130	69	-
136	Misc. Meals/Miles	4,500	Staff Allocation	-	223	158	829	109	1,392	1,168	621	-
137	Bad Debt Exp - Other Inv/Bills	2,900	Admin	-	-	2,900	-	-	-	-	-	-
138	Reg Over/Short	-	General	-	-	-	-	-	-	-	-	-
139	Settlements	-	General	-	-	-	-	-	-	-	-	-
140	Prior Period Adjustment	-	General	-	-	-	-	-	-	-	-	-
141	Repayments	-	General	-	-	-	-	-	-	-	-	-
142	Interest on Deposit	-	General	-	-	-	-	-	-	-	-	-
143	Misc Expenditures	-	General	-	-	-	-	-	-	-	-	-
144	Contingencies	-	General	-	-	-	-	-	-	-	-	-
145	Vehicle Direct Charges	-	Vehicle Costs Allocation	-	-	-	-	-	-	-	-	-
145	Vehicle Mainteance	20,940	Vehicle Costs Allocation	-	2,234	-	5,375	628	11,168	-	1,536	-
146	Vehicle Replacement	25,931	Vehicle Costs Allocation	-	2,766	-	6,656	778	13,830	-	1,902	-
147	Street Lighting	-	General	-	-	-	-	-	-	-	-	-
148	Median Maintenace	-	General	-	-	-	-	-	-	-	-	-
149	General Liab	61,130	Admin	-	-	61,130	-	-	-	-	-	-
150	Records Management Interdept	-	General	-	-	-	-	-	-	-	-	-
151	Information Technologies	152,514	Meters and Services	-	152,514	-	-	-	-	-	-	-
152	Misc Interdepartmental Charges	577,147	Admin	-	-	577,147	-	-	-	-	-	-
153	Mis Chg Back	-	General	-	-	-	-	-	-	-	-	-
154	Utility Billing Chargeback	-	General	-	-	-	-	-	-	-	-	-
155	Other	-	General	-	-	-	-	-	-	-	-	-
156	Additional Maintenance & Equipment	(390,465)	As All Other	-	-	-	-	-	-	-	-	(390,465)
157	**Capital Outlay**											
158	Non-Budgeted Cap Equip <$10K	$ -	Distribution	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
159	Capital Outlay <$10K New	-	Distribution	-	-	-	-	-	-	-	-	-
160	Cap Outlay - Vehicles	-	Distribution	-	-	-	-	-	-	-	-	-
161	Computer Equip > $10K - Repl	-	Distribution	-	-	-	-	-	-	-	-	-
162	Office Equipment	-	Distribution	-	-	-	-	-	-	-	-	-
163	Other Equipment	-	Distribution	-	-	-	-	-	-	-	-	-
164	Capitalized Assets	-	Distribution	-	-	-	-	-	-	-	-	-
165	Capital Projects	-	Distribution	-	-	-	-	-	-	-	-	-
166	Other Capital Outlay	-	Distribution	-	-	-	-	-	-	-	-	-
167	**Other Financing Uses**											
168	Other Other Financing Uses	-	Distribution	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
169	**Operating Expenditures Sub Total**	**$ 7,204,969**		**$ 5,000**	**$ 295,654**	**$ 718,463**	**$ 1,241,380**	**$ 3,908,900**	**$ 612,431**	**$ 489,591**	**$ 324,016**	**$ (390,465)**
170	**Reallocation of "As All Others"**			**(257.04)**	**(15,198.94)**	**(36,934.66)**	**(63,816.76)**	**(200,948.34)**	**(31,483.78)**	**(25,168.86)**	**(16,656.97)**	**390,465.34**
171	**Total Allocation**	**$ 7,204,969**		**$ 4,743**	**$ 280,455**	**$ 681,528**	**$ 1,177,564**	**$ 3,707,952**	**$ 580,947**	**$ 464,423**	**$ 307,359**	**$ -**
172	Percentage Allocation	100%		0.07%	3.89%	9.46%	16.34%	51.46%	8.06%	6.45%	4.27%	0.00%

Cost Allocation Basis: **FYE 2022**

Line	Allocations	Notes	Fixed Charge: Customer	Service	Base	Supply	As All Others
1	**Customer Only**	*Applies to customer and related functions*	100.0%				0%
2	**Customer and Meter Service**	*Applies to customer and source related functions*	25.0%	75.0%			0%
3	**Service Only**			100.0%			
4	**Base Only**				100.0%		0%
5	**Supply Only**					100.0%	0%
6	**As All Others**	*Applies total allocation to remaining line items.*					100%
7	**Plant In Service**	*See Plant in Service section below.*	**0%**	**20%**	**61%**	**19%**	**0%**

	Plant In Service	Original Cost	Customer	Service	Base	Supply	As All Others
8							
9	Recycled Mains	$ 65,806,156		20%	80%		0%
10	Recycled Water Stations	11,333,778		20%	80%		0%
11	Recycled Water Facility	24,156,590		20%		80%	0%
12	Construction in Progress	-					100%
13	**Plant-In-Service Sub Total**	**$ 101,296,525**	**$ -**	**$ 20,259,305**	**$ 61,711,948**	**$ 19,325,272**	**$ -**
14	**Reallocation of "As All Others"**		-	-	-	-	-
15	**Total Allocation**	**$ 101,296,525**	**$ -**	**$ 20,259,305**	**$ 61,711,948**	**$ 19,325,272**	**$ -**
16	Resulting Allocations	100%	**0%**	**20%**	**61%**	**19%**	**0%**

	Operating Expenditures	2022	Allocation	Customer	Service	Base	Supply	As All Others
17								
18	***Functionalized Operating Expenditures***							
19	Customer Account Service	$ 4,743	Customer Only	4,743	-	-	-	-
20	Meters and Services	280,455	Customer and Meter Service	70,114	210,341	-	-	-
21	Admin	681,528	Service Only	-	681,528	-	-	-
22	Distribution	1,177,564	Base Only	-	-	1,177,564	-	-
23	Supply	3,707,952	Supply Only	-	-	-	3,707,952	-
24	Cross Connection Control	580,947	Base Only	-	-	580,947	-	-
25	Engineering	464,423	Plant In Service	-	92,885	282,936	88,602	-
26	General	307,359	As All Others	-	-	-	-	307,359
27	**Operating Expenditures Sub Total**	**$ 7,204,969**		**$ 74,857**	**$ 984,754**	**$ 2,041,446**	**$ 3,796,554**	**$ 307,359**
28	**Reallocation of "As All Others"**			**3,335.63**	**43,880.81**	**90,967.24**	**169,175.16**	**(307,358.85)**
29	**Total Allocation**	**$ 7,204,969**		**$ 78,192**	**$ 1,028,634**	**$ 2,132,414**	**$ 3,965,729**	**$ -**
30	Percentage Allocation	100%		**1.09%**	**14.28%**	**29.60%**	**55.04%**	**0.00%**

	Rate Revenue Requirement	2022	Allocation	Customer	Service	Base	Supply	As All Others
31								
32	Operating Expenses	$ 7,204,969	As O&M	$ 78,192	$ 1,028,634	$ 2,132,414	$ 3,965,729	$ -
33	Debt Service	1,877,000	Base Only	-	-	1,877,000	-	-
34	Rate Funded Capital	2,589,677	Plant In Service	-	517,935	1,577,685	494,057	-
35	Replacement Funding	1,400,000	Plant In Service	-	280,000	852,909	267,091	-
36	Transfer to Capital Fund	-	Plant In Service	-	-	-	-	-
37	Cash Flows	(4,749,432)	As All Others	-	-	-	-	(4,749,432)
38	Less Offsetting Revenues							
39	*Offsetting Recycled Water Revenues*							
40	Adj. for Mid Year Increase	$ 218,948	As All Others	$ -	$ -	$ -	$ -	$ 218,948
41	Non-Rate Charges for Services	(1,350)	As All Others	-	-	-	-	(1,350)
42	Developer Fees	-	As All Others	-	-	-	-	-
43	Intergovernmental (CWA)	-	As All Others	-	-	-	-	-
44	Fines and Forfeitures	(4,230)	As All Others	-	-	-	-	(4,230)
45	Income from Property & Investments	23,390	As All Others	-	-	-	-	23,390
46	Interdepartmental	(20,000)	As All Others	-	-	-	-	(20,000)
47	Other Revenues	-	As All Others	-	-	-	-	-
48	Other Financing Sources	-	As All Others	-	-	-	-	-
49	**Total Rate Revenues to be Collected**	**$ 8,538,972**		**$ 78,192**	**$ 1,826,570**	**$ 6,440,008**	**$ 4,726,876**	**$ (4,532,674)**
50	**Reallocation of "As All Others"**			**(27,114)**	**(633,374)**	**(2,233,112)**	**(1,639,074)**	**4,532,674**
51	**Total Allocation**	**$ 8,538,972**		**$ 51,079**	**$ 1,193,195**	**$ 4,206,895**	**$ 3,087,803**	**$ -**
52	Percentage Allocation	100%		1%	14%	49%	36%	0%

	Retail Unit Cost Calculations	2022	Customer	Service	Base	Supply
53						
54	Allocation Basis		# Accounts	# MEUs	Usage (ccf)	Usage (ccf)
55	Total Units		11,061	63,379	1,853,214	1,853,214
56	Amount Allocable to Constituent		$ 51,079	$ 1,193,195	$ 4,206,895	$ 3,087,803
57	**Per Unit Costs**		**$ 4.62**	**$ 18.83**	**$ 2.27**	**$ 1.67**

Appendix H

POTABLE WATER CUSTOMER ALLOCATION

Allocation Year: FYE 2022

Line	Customer Statistics	SFR Single Family	MFR Multi-Family	NR Commercial	AR Agricultural	IR Irrigation	Fire	Total
1	**Number of Accounts**	24,179	1,241	1,736	16	813	1,116	**29,100**
2	**Number of MEUs**	27,620	5,487	8,890	186	4,355	50,230	**96,768**
3	**Annual Water Usage**	3,226,108	734,848	1,185,208	74,408	669,145		**5,889,716 ccf**
4	**Max Month**	341,684	69,225	113,821	10,020	76,557		**611,306 ccf**
5	**Max Day**	28,891	3,864	5,963	525	7,252		**46,495 ccf**
6	**Max Hour**	1,694	227	350	31	425		**2,727 ccf**
7	**SDCWA**	2,669,882	653,624	973,597	58,164	445,449		**4,800,716 ccf**
8	**Desal**	556,226	81,223	211,611	16,245	223,696		**1,089,000 ccf**

Line	Customer		Single Family	Multi-Family	Commercial	Agricultural	Irrigation	Total
10			86%	4%	6%	0%	3%	100%
11	Allocation Basis:	Number of Accounts	24,179	1,241	1,736	16	813	**27,984**
12	**Allocated Customer Costs**		**$ 2,544,593**	**$ 130,623**	**$ 182,669**	**$ 1,689**	**$ 85,527**	**$ 2,945,102**

Line	Service		Single Family	Multi-Family	Commercial	Agricultural	Irrigation	Total
14			59%	12%	19%	0%	9%	100%
15	Allocation Basis:	Number of MEUs	27,620	5,487	8,890	186	4,355	**46,538**
16	**Allocated Customer Costs**		**$ 6,310,599**	**$ 1,253,608**	**$ 2,031,096**	**$ 42,522**	**$ 995,089**	**$ 10,632,915**

Line	Base		Single Family	Multi-Family	Commercial	Agricultural	Irrigation	Total
18			54.78%	12.48%	20.12%	1.26%	11.36%	100%
19	Allocation Basis:	Annual Water Usage	3,226,108	734,848	1,185,208	74,408	669,145	**5,889,716**
20	**Allocated Customer Costs**		**$ 453,518**	**$ 103,303**	**$ 166,613**	**$ 10,460**	**$ 94,067**	**$ 827,961**

Line	Max Day		Single Family	Multi-Family	Commercial	Agricultural	Irrigation	Total
22			62.14%	8.31%	12.82%	1.13%	15.60%	100%
23	Allocation Basis:	Max Day	28,891	3,864	5,963	525	7,252	**46,495**
24	**Allocated Customer Costs**		**$ 2,104,935**	**$ 281,561**	**$ 434,427**	**$ 38,243**	**$ 528,392**	**$ 3,387,558**

Line	Max Hour		Single Family	Multi-Family	Commercial	Agricultural	Irrigation	Total
26			62.14%	8.31%	12.82%	1.13%	15.60%	100%
27	Allocation Basis:	Max Hour	1,694	227	350	31	425	**2,727**
28	**Allocated Customer Costs**		**$ 1,619,621**	**$ 216,644**	**$ 334,266**	**$ 29,426**	**$ 406,566**	**$ 2,606,523**

Line	SDCWA		Single Family	Multi-Family	Commercial	Agricultural	Irrigation	Total
30			55.61%	13.62%	20.28%	1.21%	9.28%	
31	Allocation Basis:	SDCWA	2,669,882	653,624	973,597	58,164	445,449	**4,800,716**
32	**Allocated Customer Costs**		**$ 8,314,342**	**$ 2,035,467**	**$ 3,031,902**	**$ 181,129**	**$ 1,387,184**	**$ 14,950,023**

Line	Desal		Single Family	Multi-Family	Commercial	Agricultural	Irrigation	Total
34			51.08%	7.46%	19.43%	1.49%	20.54%	
35	Allocation Basis:	Desal	556,226	81,223	211,611	16,245	223,696	**1,089,000**
36			**$ 3,091,129**	**$ 451,383**	**$ 1,175,991**	**$ 90,277**	**$ 1,243,152**	**$ 6,051,933**

Line	Private Fire		Fire	Total
38	Allocation Basis:	Number of MEUs	50,230	**50,230**
39	**Allocated Customer Costs**		**$ 245,565**	**$ 245,565**

Line	Cost Allocation Summary	Single Family	Multi-Family	Commercial	Agricultural	Irrigation	Fire	Total
41	Customer	$ 2,544,593	$ 130,623	$ 182,669	$ 1,689	$ 85,527	$ -	$ 2,945,102
42	Base	453,518	103,303	166,613	10,460	94,067	-	827,961
43	Max Day	2,104,935	281,561	434,427	38,243	528,392	-	3,387,558
44	Max Hour	1,619,621	216,644	334,266	29,426	406,566	-	2,606,523
45	SDCWA	8,314,342	2,035,467	3,031,902	181,129	1,387,184	-	14,950,023
46	Service	6,310,599	1,253,608	2,031,096	42,522	995,089	-	10,632,915
47	Desal	3,091,129	451,383	1,175,991	90,277	1,243,152	-	6,051,933
48	Private Fire	-	-	-	-	-	245,565	245,565
49	**Total**	**$ 24,438,737**	**$ 4,472,590**	**$ 7,356,964**	**$ 393,747**	**$ 4,739,976**	**$ 245,565**	**$ 41,647,579**

Appendix I

RATE DESIGN ANALYSIS

First year of rate adjustment **FYE 2022**

Line	Single Family Residential (SFR)	Customer	Service	Private Fire	Base	Max Day	Max Hour	SDCWA	Desal	Total
1	**Allocated 2022 Revenue Requirement**			$ -	$ 453,518	$ 2,104,935	$ 1,619,621	$ 8,314,342	$ 3,091,129	$ 15,583,545
2	Recovered through Account Charges	100%								
3	Number of Accounts									
4	**Monthly Fixed Charge Per Account**	$ 8.77	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 8.77
5	Recovered through Unit Charges		100%	100%						
6	Effective Number of MEUs (FY 2021)									
7	**Monthly Fixed Charge Per MEU**	$ -	$ 19.04	$ -	$ -	$ -	$ -	$ -		$ 19.04
8	Recovered through Volume Charges				100%	100%	100%	100%	100%	

	Tier Usage	%	ccf
9			
10	Tier 1	59%	1,898,561
11	Tier 2	18%	575,037
12	Tier 3	23%	752,509
13		100%	3,226,108

	Tier Limits (ccf)		Upper Limit
14			
15	Tier 1	0	10
16	Tier 2	11	18
17	Tier 3	19	999999

Tier	Use per Tier	Max Day Extra Capacity	Max Hour Extra Capacity	SDCWA	Desal
Tier 1	1,898,561	1,422,564	3,219,436	1,898,561	-
Tier 2	575,037	1,861,942	1,558,280	575,037	-
Tier 3	752,509	4,073,690	2,706,341	196,284	556,226
All Tiers	3,226,108	7,358,196	7,484,058	2,669,882	556,226

Tier 1	58.8%	19.3%	43.0%	71.1%	0.0%	
Tier 2	17.8%	25.3%	20.8%	21.5%	0.0%	
Tier 3	23.3%	55.4%	36.2%	7.4%	100.0%	
All Tiers	100.0%	100.0%	100.0%	100.0%	100.0%	

18	**Volume Charge ($/ccf)**	$ 0.14	$ 0.65	$ 0.50	$ 2.58	$ 0.96	
		TRUE	*TRUE*	*TRUE*	*TRUE*	*TRUE*	
19	**Tier Volume Charge per ccf:**						**Rounded Rates**
20	**Tier 1**	$ 0.14	$ 0.21	$ 0.37	$ 3.11	$ -	**$ 3.84**
21	**Tier 2**	$ 0.14	$ 0.93	$ 0.59	$ 3.11	$ -	**$ 4.77**
22	**Tier 3**	$ 0.14	$ 1.55	$ 0.78	$ 0.81	$ 4.11	**$ 7.39**

First year of rate adjustment **FYE 2022**

Multi-Family Residential (MFR)

	Customer	Service	Private Fire	Base	Max Day	Max Hour	SDCWA	Desal	Total
Allocated 2022 Revenue Requirement			$ -	$ 103,303	$ 281,561	$ 216,644	$ 2,035,467	$ 451,383	$ 3,088,359
Recovered through Account Charges	100%								
Number of Accounts (FY 2021)									
Monthly Fixed Charge Per Account	$ 8.77	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 8.77
Recovered through Unit Charges		100%	100%						
Effective Number of MEUs (FY 2021)									
Monthly Fixed Charge Per MEU	$ -	$ 19.04	$ -	$ -	$ -	$ -	$ -	$ -	$ 19.04
Recovered through Volume Charges				100%	100%	100%	100%	100%	

Tier Usage	%	ccf	Tier Peak Factor
Tier 1	80%	589,672	1.03
Tier 2	20%	145,176	1.22
Tier 3		-	2.44
Total MFR Usage	100%	734,848	*734,848*

Tier Limits (ccf/DU)		Upper Limit
Tier 1	0	5
Tier 2	6	10
Tier 3	11	999999

Tier	Use per Tier	Max Day Extra Capacity	Max Hour Extra Capacity	SDCWA	Desal
Tier 1	589,672	370,512	970,857	589,672	-
Tier 2	145,176	314,111	329,853	63,953	81,223
Tier 3					
All Tiers (ccf)	734,848	684,623	1,300,710	653,624	81,223
Tier 1	80.2%	54.1%	74.6%	90.2%	0.0%
Tier 2	19.8%	45.9%	25.4%	9.8%	100.0%
Tier 3	0.0%	0.0%	0.0%	0.0%	0.0%
All Tiers (ccf)	100.0%	100.0%	100.0%	100.0%	100.0%

TRUE

TRUE

TRUE

TRUE

FALSE

TRUE

							Rounded Rates
Volume Charge ($/ccf)	$ 0.14	$ 0.38	$ 0.29	$ 2.77	$ 0.61		
Tier Volume Charge per ccf:							
Tier 1	$ 0.14	$ 0.26	$ 0.27	$ 3.11	$ -		$ 3.79
Tier 2	$ 0.14	$ 0.89	$ 0.38	$ 1.37	$ 3.11		$ 5.89
Tier 3							$ -

First year of rate adjustment **FYE 2022**

	Commercial		Customer	Service	Private Fire	Base	Max Day	Max Hour	SDCWA	Desal	Total
47	**Allocated 2022 Revenue Requirement**				$ -	$ 166,613	$ 434,427	$ 334,266	$ 3,031,902	$ 1,175,991	$ 5,143,198
48	Recovered through Account Charges		100%								
49	Number of Accounts (FY 2021)										
50	**Monthly Fixed Charge Per Account**		$ 8.77	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 8.77
51	Recovered through Unit Charges			100%	100%						
52	Effective Number of MEUs (FY 2021)										
53	**Monthly Fixed Charge Per MEU**		$ -	$ 19.04	$ -	$ -	$ -	$ -	$ -	$ -	$ 19.04
54	Recovered through Volume Charges					100%	100%	100%	100%	100%	
55	Projected Billed Water Usage (ccf)	1,185,208									**Rounded Rates**
56	**Volume Charge ($/ccf)**		$ -	$ -	$ -	$ 0.14	$ 0.37	$ 0.28	$ 2.56	$ 0.99	$ 4.34

	First year of rate adjustment	**FYE 2022**														
57	**Agricultural**		**Customer**		**Service**		**Private Fire**		**Base**		**Max Day**		**Max Hour**		**SDCWA**		**Desal**		**Total**
58	**Allocated 2022 Revenue Requirement**						$ -		$ 10,460		$ 38,243		$ 29,426		$ 181,129		$ 90,277		$ 349,535
59	Percent Recovered Through Account Charges		100%																
60	Number of Accounts																		
61	**Monthly Fixed Charge Per Account**		$ 8.77		$ -		$ -		$ -		$ -		$ -		$ -		$ -		$ 8.77
62	Recovered through Unit Charges				100%		100%												
63	Effective Number of MEUs (FY 2021)																		
64	**Monthly Fixed Charge Per MEU**		$ -		$ 19.04		$ -		$ -		$ -		$ -		$ -		$ -		$ 19.04
65	Recovered through Volume Charges								100%		100%		100%		100%		100%		
66	Projected Billed Water Usage (ccf)	74,408																	**Rounded Rates**
67	**Volume Charge ($/ccf)**		$ -		$ -		$ -		$ 0.14		$ 0.51		$ 0.40		$ 2.43		$ 1.21		$ 4.70

	First year of rate adjustment	**FYE 2022**									
68	**Irrigation**		**Customer**	**Service**	**Private Fire**	**Base**	**Max Day**	**Max Hour**	**SDCWA**	**Desal**	**Total**
69	**Allocated 2022 Revenue Requirement**				$ -	$ 94,067	$ 528,392	$ 406,566	$ 1,387,184	$ 1,243,152	$ 3,659,360
70	Percent Recovered Through Account Charges		100%								
71	Number of Accounts										
72	**Monthly Fixed Charge Per Account**		$ 8.77	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 8.77
73	Recovered through Unit Charges			100%	100%						
74	Effective Number of MEUs (FY 2021)										
75	**Monthly Fixed Charge Per MEU**		$ -	$ 19.04	$ -	$ -	$ -	$ -	$ -	$ -	$ 19.04
76	Recovered through Volume Charges					100%	100%	100%	100%	100%	
77	Projected Billed Water Usage (ccf)	669,145									**Rounded Rates**
78	**Volume Charge ($/ccf)**		$ -	$ -	$ -	$ 0.14	$ 0.79	$ 0.61	$ 2.07	$ 1.86	$ 5.47

	First year of rate adjustment	**FYE 2022**				
79	**Private Fire**		**Private Fire**		**Total**	
80	**Allocated 2022 Revenue Requirement**		**$**	**245,565**	**$**	**245,565**
81	Percent Recovered Through Account Charges		**44%**			
82	Number of Accounts	**1,115.83**				
83	**Monthly Fixed Charge Per Account**		**$**	**8.10**	**$**	**8.10**
84	Recovered through Unit Charges		**56%**			
85	Effective Number of MEUs (FY 2021)	**50,230**			**Rounded Rates**	
86	**Monthly Fixed Charge Per MEU**		**$**	**0.23**	**$**	**0.23**

Appendix J

SUPPLY ALLOCATION

Line	Supply Allocation			SDCWA	Desal	Total
2	**Total Available for Retail (ccf)**			**4,800,716**	**1,089,000**	**5,889,716**
3	**Annualized 6-Month Minimum Use**					
4	**Remaining Available Before Allocation**			**4,800,716**	**1,089,000**	**5,889,716**
5	**Amount to be Allocated**			**4,800,716**	**412,619**	**5,213,335**
6	**Allocated**	**Min. 6 Month**	**Remaining**			
7	Single Family	2,899,357	**2,899,357**	2,669,882	229,475	2,899,357
	Tier 1					
	Tier 2					
	Tier 3					
8	Multi-Family	709,803	**709,803**	653,624	56,179	709,803
	Tier 1					
	Tier 2					
9	Commercial/Non-Residential	1,057,277	**1,057,277**	973,597	83,680	1,057,277
10	Agricultural	63,163	**63,163**	58,164	4,999	63,163
11	Irrigation	483,735	**483,735**	445,449	38,286	483,735
12	**Total (ccf)**	**5,213,335**	**5,213,335**	**4,800,716**	**412,619**	**5,213,335**
			Remaining to Allocate	**-**	**676,381**	**676,381**
	Annualized Average Use					
	Remaining Available Before Allocation			**-**	**676,381**	**676,381**
	Amount to be Allocated			**-**	**676,381**	**676,381**
13	**Allocated**	**Average Month**	**Less Previously Allocated** / **Remaining**			
14	Single Family	3,226,108	(2,899,357)	**326,751**	-	326,751	326,751
15	Multi-Family	734,848	(709,803)	**25,044**	-	25,044	25,044
16	Commercial/Non-Residential	1,185,208	(1,057,277)	**127,931**	-	127,931	127,931
17	Agricultural	74,408	(63,163)	**11,246**	-	11,246	11,246
18	Irrigation	669,145	(483,735)	**185,410**	-	185,410	185,410
19	**Total (ccf)**	**5,889,716**	**(5,213,335)**	**676,381**	**-**	**676,381**	**676,381**
				Remaining to Allocate	**-**	**0**	**0**
20	**Total Supply Allocation**				SDCWA	Desal	Total
21	Single Family			Single Family	2,669,882	556,226	3,226,108
22	Multi-Family			Multi-Family	653,624	81,223	734,848
23	Commercial/Non-Residential			Commercial/Non-Residential	973,597	211,611	1,185,208
24	Agricultural			Agricultural	58,164	16,245	74,408
25	Irrigation			Irrigation	445,449	223,696	669,145
26	**Total (ccf)**				**4,800,716**	**1,089,000**	**5,889,716**
27				*Check:*	*4,800,716*	*1,089,000*	*5,889,716*
28				Single Family	56%	51%	55%
29				Multi-Family	14%	7%	12%
30				Commercial/Non-Residential	20%	19%	20%
31				Agricultural	1.2%	1.5%	1.3%
32				Irrigation	9.3%	20.5%	11.4%
33					**100%**	**100%**	**100%**