



Carollo Engineers, Inc.
3400 Central Avenue, Suite 205 • Riverside, California 92506
P. 951.776.3955 • F. 951.776.4207
carollo.com



RECYCLED WATER RATE STUDY

April 2022

Eastern Municipal Water District

Contents

RECYCLED WATER RATE STUDY

Chapter 1 - Introduction	1
1.1 Background	1
1.2 Study Purpose and Key Drivers	1
1.3 Overview of Rate-Setting Process	2
1.3.1 Revenue Requirement Analysis	2
1.3.2 Recycled Water Demand Analysis	2
1.3.3 Cost-of-Service Analysis	2
1.3.4 Rate Design & Calculation	3
1.4 Statutory Guidance	3
Chapter 2 - Pricing Policies and Market Analysis	4
2.1 Rate Structure Objectives and Goals	4
2.2 Pricing and Rate Policies	5
2.2.1 Daily Service Charges	5
2.2.2 Agricultural Incentives	5
2.2.3 Retrofits	5
2.2.4 Agreements	6
2.3 Wastewater Transfer for Avoided Discharge Costs	6
2.3.1 Avoided Operations and Maintenance Costs	6
2.3.2 Avoided Capital Costs	8
2.3.3 Total Avoided Discharge Costs	9
2.4 Non-Operations and Maintenance Cost Components	9
2.5 Recycled Water Market Analysis	10
Chapter 3 - Revenue Requirement Analysis	11
3.1 Recycled Water Customers and Demands	11
3.2 Projected Revenues	13
3.3 Projected Expenditures	14
3.3.1 Operating Expenses	14
3.3.2 Debt Service	14
3.3.3 Capital Improvement Plan	15

3.4 Revenue Requirement Tests Before Increases	16
3.5 Revenue Requirement Analysis Results	17
Chapter 4 - Cost Allocation Analysis	19
4.1 Functional Cost Allocation	19
4.1.1 EMWD Cost Allocation Strategy	19
4.2 Functional Cost Categories	19
4.2.1 Backbone System Costs Categories – Applicable to All Users	20
4.2.2 Stabilized System Cost Categories – Applicable Only to Stabilized Users	20
4.2.3 Customer Services Costs	20
4.2.4 Discharge Costs	21
4.2.5 General Benefit Costs	21
4.2.6 Facility Specific Allocations	21
4.2.7 Asset (Plant in Service) Allocation	22
4.2.8 Capital Cost Allocation	24
4.2.9 Operations and Maintenance Allocation	24
4.2.10 Rate Revenue Requirements Allocation	26
4.3 Rate Class Allocation	31
Chapter 5 - Rate Design Analysis	34
5.1 Rate Design	34
Chapter 6 - Conclusion And Recommendations	38

Appendices

Appendix A	Avoided Discharge Cost Analysis
Appendix B	Recycled Water Market Analysis
Appendix C	Projected Operations and Maintenance Costs
Appendix D	Capital Improvement Plan
Appendix E	Fixed Assets Allocation Summary
Appendix F	Functionalization of Operations and Maintenance

Tables

Table 2.1	Wastewater Volumes	6
Table 2.2	Avoided Energy Dissipation and Dechlorination O&M (\$1,000s)	7
Table 2.3	Avoided Pumping Facilities O&M (\$1,000s)	7

Table 2.4	Avoided Pipeline O&M (\$1,000s)	8
Table 2.5	Avoided Capital Replacement Costs (\$1,000s)	9
Table 2.6	Total Avoided Discharge Costs (\$1,000s)	9
Table 3.1	Recycled Water Demands	12
Table 3.2	Projected Revenues before Rate Increases (\$1,000s)	13
Table 3.3	Escalator Factors Summary	14
Table 3.4	Projected Operating Expenses (\$1,000s)	14
Table 3.5	Projected Debt Service Payments (\$1,000s)	15
Table 3.6	Capital Improvement Plan Summary (escalated) (\$1,000s)	15
Table 3.7	Capital Funding Sources (\$1,000s)	16
Table 3.8	Financial Forecast before Rate Increases (\$1,000s)	16
Table 3.9	Financial Forecast after Rate Increases (\$1,000s)	18
Table 4.1	Pump Station Allocation Factors	21
Table 4.2	Booster Station Allocation Factors	22
Table 4.3	Long Term Storage Facility Allocation Factors	22
Table 4.4	Above Ground Storage Facility Allocation Factors	22
Table 4.5	Functionalization of Operation and Maintenance Costs (\$1,000s)	28
Table 4.6	Rate Revenue Requirements Allocation (\$1,000s)	29
Table 4.7	Retail Rate User Demands	31
Table 4.8	Test Year (FYE 2023) Unit Costs	32
Table 4.9	Rate Class Allocation	33
Table 5.1	Remaining Wastewater Transfer for Rate Design	34
Table 5.2	Calculation of Rates with Existing Wastewater Transfer, FYE 2023	35
Table 5.3	Calculation of Proposed Rates, FYE 2023	35
Table 5.4	Proposed Retail User Rates	36
Table 5.5	Wastewater Transfer to Support Proposed Rates (\$1,000s)	36
Table 5.6	Assumed Daily Service Charges	37
Table 5.7	Assumed Commodity Rates per AF for Contracted Agreements	37
Table 6.1	Proposed Retail User Rates	38

Figures

Figure 1.1	Conceptual Overview of the Rate-Setting Process	2
Figure 3.1	Recycled Water Sales	12
Figure 4.1	Fixed Assets Allocation	23

Figure 4.2	Capital Improvement Plan Costs Allocation	24
Figure 4.3	Operation and Maintenance Allocation	26
Figure 4.4	Rate Revenue Requirements Allocation	27

Chapter 1

INTRODUCTION

1.1 Background

The Eastern Municipal Water District's (EMWD or District) recycled water program provides an integral service to agricultural and irrigation customers while at the same time providing benefits to the District's potable water and sewer programs. By serving as a wastewater disposal system and minimizing discharges to Temescal Creek, the recycled water system provides significant cost savings to wastewater users.

Recycled water also plays an important role in achieving EMWD's goal of developing a drought-proof and sustainable water supply for its customers. Promoting recycled water use for irrigation as a substitute for groundwater production help to maintain the sustainability of the District's groundwater basin and frees groundwater supplies to be used for potable water production. The use of recycled water as a substitute for potable water results in lower overall water supply costs by decreasing the District's reliance on potable water.

The analysis in this study focuses on the benefits provided to the wastewater system by the recycled water system and accounts for the associated cost savings in the recycled water rate structure by offsetting costs. Future rate setting efforts may also include a quantification of the benefits provide to the potable system and their inclusion in the recycled water structure as well.

EMWD's recycled water system currently receives and treats more than 45 million gallons of wastewater each day at its four operating regional treatment plants. The treated water is then distributed throughout the service area, through more than 200 miles of pipeline.

1.2 Study Purpose and Key Drivers

Eastern Municipal Water District retained Carollo Engineers (Carollo) to conduct a Recycled Water Rate Study (Study) to evaluate the costs and benefits of the District's recycled water program and design rates to reflect those costs and benefits. The Study encompasses five years, fiscal year ending (FYE) 2022 through FYE 2027. If adopted, the first rate updates proposed by the Study would be implemented on January 1, 2023. While the study presents proposed rates for five years, the District may opt to adopt rates for fewer years.

The overall goal of the Study is to develop a recycled water funding strategy and rate plan that reflects the most appropriate way to balance funding of the disposal of treated wastewater and the District's recycled water program.

Key drivers and considerations influencing the Study included:

- Recognition that recycled water is a general benefit to the District as a byproduct of wastewater treatment. Pricing should consider the general benefit to the region by reducing reliance on imported and groundwater supplies by keeping rates affordable to promote usage.
- Wastewater customers benefit from the recycled water system as it serves a disposal system for treated wastewater resulting in significant cost avoidance.

- By reducing demands for potable water, the use of recycled water results in lower capital infrastructure costs for the potable water system.
- Recycled water rates are a function of multiple considerations, including market conditions.
- Recycled water rates may be able to support additional costs, as appropriate, including allocation of general, administrative, and overhead costs, operating fixed assets, and discretionary pension contributions.

1.3 Overview of Rate-Setting Process

Carollo’s rate-setting methodology is consistent with industry guidelines established by the *M1 Manual* and *Manual of Practice No. 27*, respectively, as published by the American Water Works Association (AWWA) and Water Environment Federation (WEF), national industry trade groups that recommend generally accepted practices in the water and wastewater industries. Figure 1.1 outlines an overview of this approach.

1.3.1 Revenue Requirement Analysis

The revenue requirement analysis compares the District’s forecasted revenues (under existing rates and forecasted demands) against their forecasted operating and capital costs. This step tests the adequacy of the existing rates to recover the District’s forecasted costs. If shortfalls exist, increases to rate revenues are recommended until the tests are met or exceeded.

1.3.2 Recycled Water Demand Analysis

Forecasting recycled water sales is a critical component in the rate-setting process. For this Study, forecasted recycled water sales are held flat at the FYE 2021 levels. While customer growth is expected from non-agricultural users, that growth is likely to be offset by eventual change in land use in the District’s agricultural areas. Future recycled water rate setting efforts should include an analysis of projected customer demands as expected land use changes in the future will result in changes to the District’s customer base.

1.3.3 Cost-of-Service Analysis

This step builds a link between EMWD’s cost of service and proposed rates for each customer. More specifically, after determining the revenue requirement, the cost to provide each unit of recycled water and serve each customer is identified.

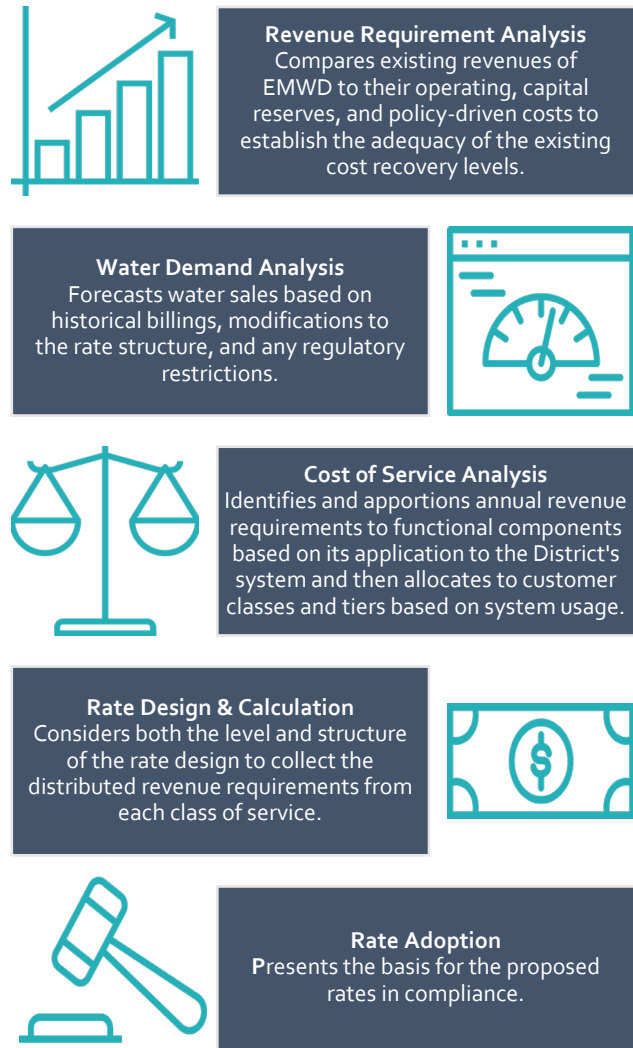


Figure 1.1 Conceptual Overview of the Rate-Setting Process

This process takes each item in the respective systems' budget and allocates it according to its function. For example, some cost items support the ability to deliver water throughout the system while other costs are incurred to provide customer service or to fund capital replacement. Organizing the budget in terms of end function connects a budgeted line item to the rate charged to customers and bridges the costs incurred by the District and the unique and varied benefits delivered to each customer class.

1.3.4 Rate Design & Calculation

Rate design involves developing a rate structure that equitably and proportionately recovers costs from customers. This rate equity is built upon each customer's relative use of the system. As such, the rate structure must be tailored to customer accounts and demand profiles.

Furthermore, rate design requires a fine balance of objectives. Rates should be resilient and flexible enough to handle changing costs and demand scenarios while concurrently maintaining affordability, equity, and ease of understanding. By collecting different cost drivers from different rate components, the District can ideally balance these goals.

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

1.4 Statutory Guidance

Throughout the study process, the District has engaged with legal counsel to provide guidance on recycled water rate setting and procedural requirements. Based on that guidance, the District understands that:

Recycled water rates are generally subject to Proposition 26 rather than Proposition 218 because use of that service is typically optional or otherwise not necessary for the use of property. However, the District has made use of recycled water mandatory for certain uses (like irrigation) in the Required Reuse Area (RRA). Accordingly, the District concludes those rates are subject to Proposition 218. The District chooses to comply with the Proposition 218 as to all recycled water rates in the interest of transparency and dialog with its customers. However, Proposition 218 compliance is required only for rates paid in the RRA.

Chapter 2

PRICING POLICIES AND MARKET ANALYSIS

Recycled water rates are unique for the District in that more flexibility is available in the rate setting process as compared to potable water or wastewater rates. While the District must proportionally and equitably allocate costs to customers, the District has the ability to shape rates in a manner that maximizes the sale of recycled water and associated revenues. This ability is afforded to the recycled water system by its position as a byproduct of wastewater treatment, the quantifiable benefits provided to wastewater customers by the recycled water system, and the benefits provided to the region's water supply portfolio. Support from the wastewater fund to recognize avoided discharge costs allow for pricing policies that incentivize recycled water users while avoiding rates that exceed the proportionate cost of service as well as interclass subsidies.

The District's recycled water system can be split into two component systems the backbone system and the stabilized system. The backbone system is not stabilized for pressure and flow and provides service directly to most of the District's agricultural users and feeds into the stabilized system. The stabilized system has additional operational storage and pumping infrastructure allowing the District to provide on demand service to customers in the Required Reuse Area (RRA). Agricultural users connected to the backbone system may receive water at inconsistent pressures and are occasionally subject to quantity and flow restrictions depending on the amount of recycled water available within the system. In contrast, users connected to the stabilized system within the RRA have on demand access to recycled water at consistent pressure and flow. The rates charged to each type of customer reflect the level of service that they receive based on the system to which they are connected.

2.1 Rate Structure Objectives and Goals

Given the numerous and, at times, competing elements of rate design, selection of an appropriate rate structure is complex. There is no single structure that meets all objectives equally. Furthermore, not all objectives are valued equally by all agencies. Each objective has merit and plays an important role when implementing changes and evaluating the overall effectiveness of proposed changes. These elements and competing objectives were discussed and evaluated at length throughout the rate study process.

The overarching goals of the District's recycled water rate setting are to maximize beneficial use of recycled water, avoid discharges to Temescal Creek and to maximize recycled water revenue. Thus, it is imperative that the rate structure balances these objectives appropriately to avoid disincentivizing recycled water use or creating revenue shortfalls. This balance was struck by taking care to understand market conditions for recycled water and performing thorough analysis of financial needs, cost allocations, and rate design.

Key considerations throughout the rate setting process included:

- **Financial Resilience** - Develop a cost recovery structure and rates that promote the resiliency and sustainability of the recycled water program.
- **Proportionality** - Develop rates that reflect the systems cost drivers and appropriately recover costs based on the services provided.
- **Affordability** - Ensure that rates remain affordable to recycled water users to promote full utilization of recycled water.
- **Collaboration** - Employ an open and transparent public process to develop and adopt direct use and recharge rates.

- **Legal Compliance** - Ensure that rates and other cost recovery mechanisms adhere to State legal requirements.
- **Water Resources** - Leverage the use of recycled water to preserve groundwater and reduce reliance on imported water

2.2 Pricing and Rate Policies

The District's current recycled water rate structure reflects several pricing and rate policies that have been incorporated into this study. The policies are in place to promote recycled water use from agricultural users, provide incentives for certain potable users to switch to recycled water, and to provide consistency with the District's other rates.

2.2.1 Daily Service Charges

By policy, recycled water users pay the same Daily Service Charges (DSCs) as potable users. This analysis treats DSC revenues as offsetting revenues that decrease the amount that needs to be recovered through the volumetric recycled water rates. DSC revenues for the financial forecast and revenue requirements analysis of this study were estimated based on assumed DSC rate increases of 5-percent per year. The District is currently in the process of updating its potable water cost-of-service analysis to set DSCs for the coming years, once those rates are adopted, the District can confirm that the adopted rates will not adversely impact the finances of the recycled water fund.

2.2.2 Agricultural Incentives

Several rate and pricing policies are in place to promote usage by agricultural users as they provide outsized benefits as a form of wastewater disposal due to the large volumes that they consume and because some users can take water during times of otherwise low demands.

2.2.2.1 Winter Rates

Winter (November through April) agricultural rates for customers connected to the backbone system are set at approximately 58.5-percent of the summer rates. The lower rate provides an incentive for farmers to take recycled water during the winter months when demands from other users are lowest. This helps the District balance seasonal demands and minimize discharge to Temescal Creek.

2.2.2.2 Demand Agricultural Rates

Demand agricultural users are connected to the stabilized system as their operations require a higher level of service than the backbone system alone can provide. To incentivize agricultural users in this circumstance to take recycled water rather than pumping groundwater, demand agricultural rates are set at 80-percent of the non-agricultural recycled water rate.

2.2.2.3 In-Lieu Rates

Two large agricultural users have entered into recycled water in-lieu agreements whereby the users take recycled water at an incentivized rate (lower than the agricultural rate) and agree not to pump groundwater. The difference between the in-lieu rate and the agricultural rate is paid to the District by the watermaster.

2.2.3 Retrofits

The District operates a recycled water retrofit program to encourage users who currently use potable water for landscape irrigation or industrial processes to switch to recycled water. Retrofit users agree to pay rates that are assessed at a set percentage of specific potable water rates.

2.2.4 Agreements

The District has wholesale recycled water agreements with several third-party entities with rates governed by specific contracts.

2.3 Wastewater Transfer for Avoided Discharge Costs

When the District originally began treating wastewater in the 1960’s treated effluent was disposed through onsite percolation/evaporation ponds. As flows increased, EMWD began marketing recycled water within its service area, delivering recycled water to local farmers for the irrigation of feed and fodder crops and began extending transmission facilities to deliver this recycled water to new customers.

Expansion of the recycled water system has continued since that time including additional agricultural connections, initial pressurization projects starting in 2003, and the addition of extensive system stabilization projects beginning in 2011.

For wastewater customers, the recycled water system serves as a means of disposing treated wastewater and avoiding discharge to Temescal Creek. This ultimately results in lower costs for wastewater customers as energy dissipation and dechlorination costs are avoided. Further, recycled water users support the operation, maintenance, and capital replacement of assets and facilities that would otherwise be needed for wastewater disposal and funded by wastewater rates.

To account for the avoided cost of disposal benefit provided to wastewater customers by the recycled water system, the District transfers a portion of wastewater revenues to the recycled water fund each year. The current transfer is set to 2.9-percent (approximately \$3.4 million in FYE 2022) of wastewater rate revenues based on a historical analysis of discharge costs. As a component of this study, the wastewater transfer has been reevaluated using a detailed analysis of the avoided disposal costs (operating and capital) provided to the wastewater system by the recycled water system.

Without the recycled water system, the District would need to discharge all of its treated wastewater to Temescal Creek. The total discharge volume would be 48,166 Acre Ft (AF) as shown in Table 2.1.

Table 2.1 Wastewater Volumes

Item	Amount
Wastewater Effluent (MGD)	43.0
Full Discharge Volume (AFY)	48,166
Pond Loss (Evap and Percolation)	16%
Recycled Water Available (AF)	40,460

2.3.1 Avoided Operations and Maintenance Costs

Avoided operation and maintenance disposal costs include energy dissipation, dechlorination, pumping facilities, and pipelines.

2.3.1.1 Energy Dissipation and Dechlorination

The District owns and operates energy dissipation and dechlorination facilities that are necessary to prepare tertiary treated effluent for discharge to Temescal Creek. The dechlorination facility removes chlorine residuals from the treated effluent to acceptable levels prior to discharging. The energy dissipation facility is used to ensure that the discharges occur in a manner that does not cause erosion or other damage to Temescal Creek.

Avoided energy dissipation and dechlorination costs were evaluated by analyzing actual costs and discharge volumes for the past five fiscal years. Line item costs were escalated to current year dollars using the consumer price index (CPI) and assigned as either fixed costs that do not vary based on discharge volumes or variable costs that do. Along with the average annual fixed cost, an average unit cost per AF for variable costs was calculated by dividing the five-year average variable costs by the five year average discharge volume. The average costs were then used along with estimated of the full discharge volume to determine the avoided discharge costs associated with operation and maintenance of the facilities.

Avoided energy dissipation and dechlorination costs are shown in Table 2.2. At the estimated full discharge of 48,166 AF, avoided costs are estimated at just under \$2.29 million per year.

Table 2.2 Avoided Energy Dissipation and Dechlorination O&M (\$1,000s)

	Average Costs (Current Dollars)		
	Total	Fixed	Variable
Energy Dissipation	\$215.5	\$153.8	\$61.8
Dechlorination	\$162.8	\$46.2	\$116.6
Total	\$378.3	\$199.9	\$178.4
Average Discharge Volume (AF) ¹			3,754
Unit Cost (\$/AF)			\$47.52
Full Discharge Volume to Temescal Creek (AF)			48,166
Discharge Cost as Full Volume	\$2,488.7	\$199.9	\$2,288.8

(1) Average annual discharge volume during the evaluated five-year period of FYE 2017 through FYE 2021.

(2) Column or line totals may not tie due to rounding.

2.3.1.2 Pumping Facilities

Avoided pumping facilities costs were estimated based on the FYE 2022 budget and the specific pumping facilities that are required to discharge to Temescal Creek. Costs for the applicable pump stations were split into energy costs (variable) and other operations and maintenance cost (fixed). Energy costs in the FYE 2022 budget (based on pumping approximately 40,460 AF) were scaled by a factor of 1.19 (48,166/40,460) reflect the full discharge volume of 48,166 AF. The total avoided pumping costs of \$1.02 million are then estimated by adding the scaled energy costs to the non-energy costs as shown in Table 2.3.

Table 2.3 Avoided Pumping Facilities O&M (\$1,000s)

Pumping Facility	FYE 2022 O&M (Energy Costs) ¹	FYE 2022 O&M (Non-Energy Costs) ¹	Energy Costs Scaled to Full Discharge	Total O&M with Scaled Energy Costs
AF to be Pumped	40,460 AF		48,166 AF	
Leon Road Recycled Booster	\$49.6	\$39.8	\$59.0	\$98.8
Palomar Booster	\$529.6	\$197.8	\$630.5	\$828.3
Rancho Club Drive Recycled PS	\$18.9	\$59.9	\$22.5	\$82.4
Temecula Valley Recycled PS	\$0.0	\$10.8	\$0.0	\$10.8
Total	\$598.1	\$308.4	\$712.0	\$1,020.4

(1) Projected costs for FYE 2022 based on FYE 2022 recycled water budget and analysis of FYE 2021 actual costs by pumping facility. Costs reflect normal operations (with recycled water sales) and pumping approximately 40,460 AF of recycled water over the course of the year.

(2) Column or line totals may not tie due to rounding.

2.3.1.3 Pipelines

Avoided operation and maintenance costs for pipelines were estimated based on the FYE 2022 budget and an analysis of GIS data to determine the portion of operation and maintenance costs related to pipelines that are needed to discharge.

An estimated replacement cost for each pipeline in the GIS dataset was calculated based on each pipeline’s length and diameter, and standard replacement costs per foot for each pipe diameter. Values for each pipe were then assigned to discharge or non-discharge based on the following assumptions:

1. All pipelines located outside of the RRA with diameters of 24 inches or larger are assumed necessary for discharge.
2. Pipelines within the RRA with diameters of 24 inches or larger are assumed necessary for discharge.

The analysis results in an allocation of 72.7-percent of pipeline costs needed for discharge, which is applied to the distribution operation and maintenance costs that relate to transporting water through the system. As shown in Table 2.4, the estimated avoided pipeline operation and maintenance costs are \$495,100 per year.

Table 2.4 Avoided Pipeline O&M (\$1,000s)

Distribution O&M Cost Group	FYE 2022 O&M	Applicable to Discharge	
Meter Maintenance, Replacement & Installation	\$62.9		\$0.0
Control Valve Facilities Maintenance	\$11.8	72.7%	\$8.6
Telemetry & Control Buried Cables	\$0.8	72.7%	\$0.6
Cross Connection & Backflow Device Costs	\$466.0		\$0.0
Other	\$69.3	72.7%	\$50.4
Operational Costs Recycled Water Distribution System	\$362.8	72.7%	\$263.8
Meter Reading Expense	\$6.9		\$0.0
Pipeline Maintenance & Repair	\$232.7	72.7%	\$169.1
Cathodic Protection	\$3.6	72.7%	\$2.6
Total	\$1,216.8		\$495.1

(1) Column or line totals may not tie due to rounding.

2.3.2 Avoided Capital Costs

Wastewater customers also avoid the capital costs necessary to construct, repair, and replace a dedicated disposal system as the recycled water fund supports those costs. Avoided capital costs were estimated based on the District’s fixed asset records for recycled water system assets that effectively serve as the wastewater disposal system. An annualized replacement cost was estimated for each applicable asset by escalating the original value of the asset to current dollars using the Engineering News Record Construction Cost Index (ENR CCI). The current value is annualized by dividing it by the useful life of each asset. For the pipeline, the same 72.7-percent factor used for the operations and maintenance allocation, is applied to reflect only discharge related pipelines. Additionally, only 50-percent of annualized pipeline costs are included under the assumption that a portion of the existing infrastructure was funded by wastewater customers and that replacement of those assets may be funded by wastewater customers in the future.

Table 2.5 shows the avoided capital costs, which total approximately \$3.47 million per year.

Table 2.5 Avoided Capital Replacement Costs (\$1,000s)

Facility Type	Annualized Replacement Cost	Applicable to Discharge	Replacement Funded by Recycled	Annual Avoided Cost
Energy Dissipation	\$550.4	100%	100%	\$550.4
Dechlorination	\$273.0	100%	100%	\$273.0
Pipelines	\$5,140.7	72.7%	50%	\$1,868.2
Pumping (Applicable Facilities)	\$777.9	100%	100%	\$777.9
Total Capital Replacement	\$6,741.9			\$3,469.5

(1) Column or line totals may not tie due to rounding.

2.3.3 Total Avoided Discharge Costs

Based on this analysis, the District could justify a transfer from the wastewater fund to the recycled water fund of up to \$7.5 million to recognize avoided discharge costs, as shown in Table 2.6. While the analysis sets a maximum amount based on certain assumptions, the District is not required to transfer the full amount. Rather, the District can work within the supported maximum to transfer funds needed to support the rate policy goals and objectives for the recycled water fund. Further, the results presented use conservative assumptions to estimate the maximum supported transfer and refinements could potentially support a higher transfer in the future. For example, if recycled water users are expected to fund 100-percent of pipeline capital rather than the assumed 50-percent, the total transfer supported could be approximately \$9.3 million (FYE 2022 dollars). Additional tables detailing the avoided cost calculations are included in Appendix A.

Table 2.6 Total Avoided Discharge Costs (\$1,000s)

FYE 2022	O&M	Capital Replacement	Total
Energy Dissipation & Dechlorination	\$2,488.7	\$823.4	\$3,312.1
Transmission Pipelines	\$495.1	\$1,868.2	\$2,363.3
Transmission Pumping	\$1,020.4	\$777.9	\$1,798.2
Total	\$4,004.2	\$3,469.5	\$7,473.6

2.4 Non-Operations and Maintenance Cost Components

The Study developed several scenarios to test the rate impacts of various cost component that could be recovered through recycled water rates. Historically, the recycled water fund included, and recycled water rates supported:

- **Operating Costs** – Operations and maintenance to provide recycled water service including allocated support costs.
- **Debt Service** – Recycled water share of outstanding debt service, covered using wastewater financial participation charge revenues.
- **Rate Funded Capital** – CIP projects funded using rate revenue, total projects less water supply development fees, financial participation charges, debt proceeds, etc.

In addition to the cost components above, the recycled water fund could also, by policy, support the following costs which are currently held in the wastewater fund and paid for with non-rate revenues:

- **General and Administrative Allocations** – Allocated share of Human Resources, Information Services, Finance, Risk Management and other administrative costs.
- **Operating Fixed Assets** – fixed asset replacement for recycled the recycled water system.
- **Discretionary Pension Contributions** – The recycled water fund’s share of the District’s \$19 million per year in discretionary catch-up contributions, additional to the pension contributions for staff assigned to the recycled water program already included in the loaded labor costs.

Ultimately, the District elected to set recycled water rates assuming that operating fixed assets and discretionary pension contributions are included in the recycled water revenue requirements. Operating fixed assets costs are based directly on the recycled water system facilities and thus appropriately recovered from recycled water users. Similarly, discretionary pension contributions are proportional to staff costs and recycled water can appropriately be allocated a share of those costs based on its staffing level. General and administrative allocations are not included as they are funded using non-rate revenues and their inclusion would have no net impact on the recycled water fund.

2.5 Recycled Water Market Analysis

A market analysis for recycled water was conducted as a component of the study to provide insight and guidance to the rate making process. The majority of recycled water sales are to agricultural users who are particularly price conscious, many of whom have access to wells to pump groundwater as an alternative source. Thus, to meet the goals of maximizing recycled water sales and revenues, care needs to be taken in rate setting to avoid disincentivizing agricultural usage. While the results of the market analysis are not used directly in rate setting, they provided a valuable comparison point for the calculated rates to ensure the continued affordability of recycled water.

The market analysis analyzed the current agricultural user customer base to determine the blended cost paid by customers by rate class and to understand how different types of customers are utilizing the water. It also included an analysis to estimate the cost for users to switch to groundwater pumping to understand the level of recycled water rates that could cause customers to abandon recycled water service.

Ultimately, the market analysis showed that the current agricultural rates are in-line with estimated groundwater pumping costs and the District concluded that keeping agricultural rates at or near the current level would likely not adversely affect sales. Additional discussion of the market analysis is included in Appendix B.

Chapter 3

REVENUE REQUIREMENT ANALYSIS

The revenue requirement analysis tests a utility's fiscal health, scrutinizing the adequacy of existing revenues against funding needs. More specifically, this analysis sets the basis for rate planning and reviews the viability of a utility's revenues against expenses, debts, and reserve policies. Where cash flows and balances are insufficient, the revenue requirement analysis recommends additional cash flows to meet all funding goals.

Carollo used the District's FYE 2022 budget expenses as the base to project future O&M costs. Carollo also collected actual and budgeted revenues and expenditures, recycled water other post-employment benefit (OBEB) and Operating Fixed Assets (OFA) costs, reserve fund balances and policies, budgeted CIP expenditures, current and future annual debt service, and other relevant financial data to forecast funding needs. Once this forecast was established, the following three tests defined the annual revenues necessary:

- **The cash flow sufficiency test** checks if annual revenues projected cover operating expenses, annual debt service, and rate funded capital. A utility should aim to cover these expenses fully with operating revenues. Shortfalls are then used to calculate needed rate revenue increases.
- **The debt service coverage test** assesses a utility's ability to meet its bond covenants. Utility bond issuances regularly include a stipulation that the agency must maintain enough cash flows to cover the planned debt service plus an additional amount. Currently, the District holds five outstanding debt obligations that have components for recycled water.

Revenues should be sufficient to satisfy all applicable tests. If revenues do not satisfy more than one of the tests, then the greater deficiency (shortfall) drives the minimum modeled rate revenue increase.

3.1 Recycled Water Customers and Demands

The recycled water demand projection underpins much of the analysis as it is the basis of user revenues, used to allocate costs among the retail customer classes, and becomes the denominator of rate calculations. The study considered the past three fiscal years of demands in setting the projected usage. Based on that analysis and with input from the District, the study assumes that recycled water demands will remain flat at the levels seen in FYE 2021, with total recycled water usage projected at 33,717 AF per year. Future rate analysis and updates should incorporate then in effect demand projections by customer type.

Figure 3.1 shows the recycled water sales by customer type for FYE 2021. Approximately 68-percent of recycled water sold was used by agricultural customers, including in-lieu customers. Approximately 17-percent was used by non-agricultural customers including retail recycled water users, retrofit customers, and temporary construction meters. The balance of sales, 15-percent, was delivered to wholesale and other customers via agreements.

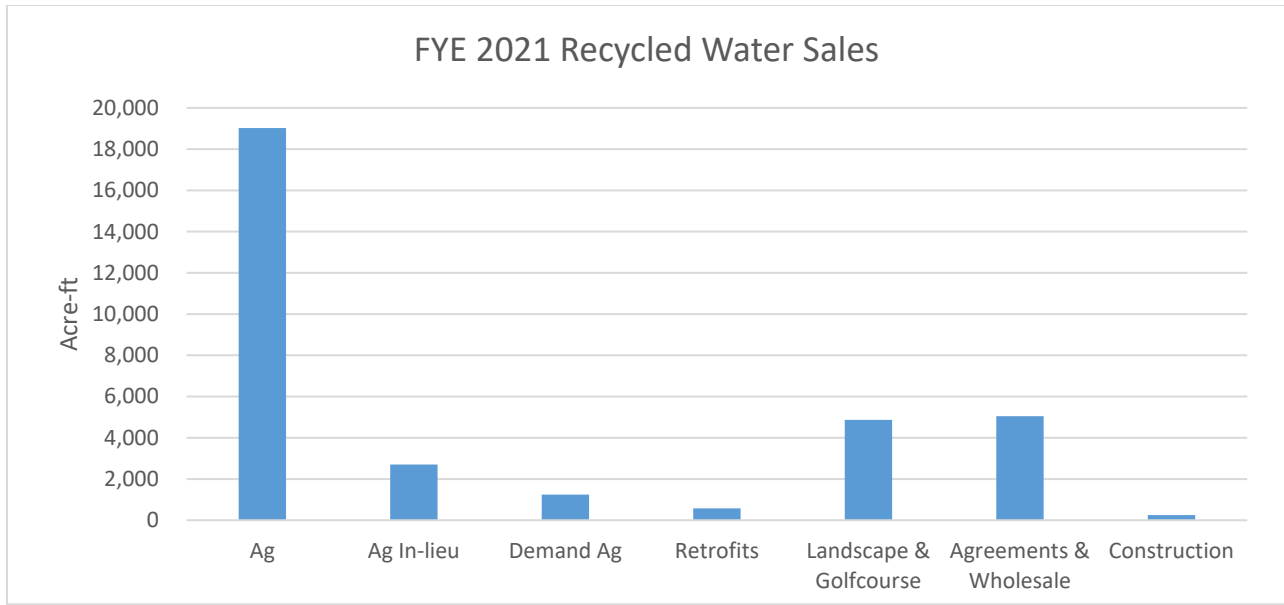


Figure 3.1 Recycled Water Sales

In FYE 2021, the District served approximately 650 recycled water accounts. Table 3.1 summarizes the units and usage by rate code.

Table 3.1 Recycled Water Demands

Water Code	Rate Types	# Of Connections	Usage (AF)
R401	Retrofit, Chained to Potable	38	419
R402	Retrofit, Chained to Potable	6	140
R403	Retrofit, Chained to Potable	1	19
R432	Retail Recycled Rate (Backbone)	4	143
R43W	Retail Recycled Rate (Backbone)		61
R442	Retail Recycled Rate (Stabilized)	11	263
R462	Retail Recycled Rate (Stabilized)	477	3,844
R500	Heartland, Chained to Potable (Stabilized)	1	389
R632	Retail Recycled Rate (Backbone)	54	11,949
R63W	Retail Recycled Rate (Backbone)		6,869
R642	Retail Recycled Rate (Stabilized)	8	979
R662	Retail Recycled Rate (Stabilized)	11	1,023
R682	Fish & Wildlife Agreement	6	3,996
RC42	Retail Temporary Construction (Stabilized)	30	254
RPRC	Retail Recycled Rate (Stabilized)	1	54
R4RC	Wholesale Users (Backbone)	1	121
R693	Ag In-Lieu Agreement (Backbone)	4	2,704
TOTAL:		653	33,717

3.2 Projected Revenues

The District's Recycled Water Program's total revenue is comprised of retail user rate revenues as well as other revenue sources including retrofit agreements, wholesale and in-lieu agreements and watermaster subsidies. Further, the recycled water fund receives a share of wastewater financial participation charge (FPC) revenues that are used for specific capital projects as well as to cover debt service payments as well as a portion of water supply development (WSD) fees that can be applied to eligible capital projects and developer reimbursements for pipeline expansion projects. As discussed previously, the recycled water fund also receives transfer revenues from the wastewater fund to account for avoided discharge costs.

Retail user rates revenues have two components: daily service charges based on meter size and commodity rates based on water usage and water code.

Revenues for users who pay rates set by agreements or contracts (Potable Chained Rates (Retrofits, Heartland, and Temporary Construction), California Department of Fish and Wildlife (F&W), Wholesale Users, and In-Lieu users) are calculated based on their projected usage and adopted or assumed rates. For the purpose of the financial projection, increases in rates for these users for FYE 2024 and onward were assumed based on their agreements and expected cost escalation. Actual increases for these users will reflect the provisions of their respective agreements or contracts and the conditions at the time they are updated.

Table 3.2 summarizes the projected revenues before the rate increases for the 5-year rate-setting period (FYE 2023 – FYE 2027).

Table 3.2 Projected Revenues *before* Rate Increases (\$1,000s)

Description	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027
Rate Revenue: Retail (Ag and non-Ag)					
Recycled Rate	\$6,550.5	\$6,550.5	\$6,550.5	\$6,550.5	\$6,550.5
Daily Service Charges	\$700.6	\$733.1	\$769.8	\$808.3	\$848.7
User Revenue: Agreements, In-Lieu, and Special					
Potable Chained Rates	\$1,180.6	\$1,214.8	\$1,251.2	\$1,288.8	\$1,327.4
F&W Agreement	\$323.4	\$388.1	\$399.7	\$411.7	\$424.0
In-Lieu Agreement	\$257.9	\$267.2	\$275.3	\$283.5	\$292.0
Wholesale Take-or-Pay (R4RC)	\$720.2	\$741.8	\$764.0	\$786.9	\$810.5
In-Lieu Subsidy (Watermaster)	\$137.7	\$131.6	\$135.5	\$139.6	\$143.8
Other Revenue					
Wastewater Transfer	\$3,420.8	\$3,489.2	\$3,559.0	\$3,630.2	\$3,702.8
Wastewater FPC Revenues	\$3,368.1	\$3,469.1	\$3,573.2	\$3,680.4	\$3,790.8
WSD Fee Revenues	\$1,116.0	\$1,149.5	\$1,184.0	\$1,219.5	\$1,256.1
Total Revenues	\$17,775.8	\$18,134.9	\$18,462.2	\$18,799.3	\$19,146.7

(1) Column or line totals may not tie due to rounding.

3.3 Projected Expenditures

3.3.1 Operating Expenses

The District's operating expenses are organized by facility and projected using different escalator factors based on the respective type of expense. The expenses included in the analysis have been projected using the FYE 2022 budget as a basis and applying typical escalation factors. Table 3.3 summarizes escalation factors used throughout the study period. Table 3.3 below summarizes operating expenses for the next 5 years. Additional tables detailing projections are included in Appendix C.

Table 3.3 Escalator Factors Summary

Escalator	Description
General Inflation	This escalator applies to most expenses in the operating expense forecast. It is set at the long-term inflation rate of 3 percent.
Labor Inflation	Labor-related expenses are assumed to increase at 3.5 percent.
Energy Inflation	Energy-related expenses are assumed to increase at 4 percent.
Chemical Inflation	Chemical expenses are assumed to increase at 4 percent.
Utilities Inflation	Utilities are assumed to increase at 4 percent.

Table 3.4 Projected Operating Expenses (\$1,000s)

Description	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027
Recycled Water Allocated Support	\$4,654.9	\$4,795.9	\$4,941.2	\$5,090.9	\$5,245.2
Recycled Water Dechlorination Facility	\$99.2	\$102.7	\$106.3	\$110.0	\$113.8
Recycled Water Distribution System	\$1,257.1	\$1,298.6	\$1,341.6	\$1,386.0	\$1,431.9
Recycled Water Energy Dissipation Facility	\$172.7	\$178.1	\$183.7	\$189.5	\$195.4
Recycled Water Pumping Facilities	\$1,771.3	\$1,836.3	\$1,903.8	\$1,973.8	\$2,046.3
Recycled Water Storage Facilities	\$393.8	\$406.8	\$420.3	\$434.2	\$448.6
Recycled Water OFA	\$268.2	\$278.9	\$290.0	\$301.6	\$313.7
Recycled Water Discretionary Pension Contributions	\$1,090.4	\$1,090.4	\$1,090.4	\$1,090.4	\$1,090.4
TOTAL OPERATING EXPENSES:	\$9,707.5	\$9,987.8	\$10,277.3	\$10,576.4	\$10,885.3

(1) Column or line totals may not tie due to rounding.

3.3.2 Debt Service

The District's Recycled Water Program shares portions of five outstanding debt obligations. Additionally, for projection purposes, the financial forecast includes an assumed debt issuance of \$18.5 million in FYE 2026 to fund capital projects that the District has identified but do not currently have an assigned funding source. Debt service for the assumed issuance is estimated assuming a 4.0-percent interest rate and a 20-year term. At the time the debt funded projects are implemented, the District may elect to seek alternative funding sources or cash fund a portion of the projects. Table 2.3 summarizes the annual debt service payments to be paid by recycled water for next 5 years.

Table 3.5 Projected Debt Service Payments (\$1,000s)

Description (RW portion)	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027
2016B Revenue Bond (0.80%)	\$43.8	\$43.8	\$64.2	\$64.3	\$64.6
2017C Revenue Bond (5.53%)	\$347.4	\$347.5	\$0.0	\$0.0	\$0.0
2018A Revenue Bond (21.38%)	\$2.0	\$2.0	\$12.7	\$12.7	\$13.8
2020A Revenue Bond (8.00%)	\$449.6	\$449.6	\$647.7	\$650.8	\$652.5
2020B Revenue Bond (21.38%)	\$431.9	\$455.3	\$1,779.3	\$1,773.2	\$1,758.5
Payments on Outstanding Debt	\$1,274.7	\$1,298.1	\$2,504.0	\$2,501.0	\$2,489.4
Estimated Payments on Assumed Debt	\$0.0	\$0.0	\$0.0	\$1,374.9	\$1,374.9
Total Debt Service Payments	\$1,274.7	\$1,298.1	\$2,504.0	\$3,875.9	\$3,864.2

(1) Column or line totals may not tie due to rounding.

3.3.3 Capital Improvement Plan

The District provided Carollo with their 10-year CIP projections in present-day (FYE 2022) dollars. Capital costs included in the funding calculations have been escalated at 4.0-percent per year to account for inflationary increases in construction costs. Table 3.6 summarizes CIP projections based on type for the Study period. Additional tables detailing the CIP are included in Appendix D.

Table 3.6 Capital Improvement Plan Summary (escalated) (\$1,000s)

	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027
Recycled Water Storage					
R&R	\$340.9	\$262.5	\$707.1	\$1,396.9	\$139.5
Betterment	\$340.9	\$262.5	\$707.1	\$1,396.9	\$104.9
Expansion	\$351.2	\$270.5	\$728.5	\$1,439.2	\$178.4
Recycled Water Storage	\$1,033.0	\$795.5	\$2,142.8	\$4,233.1	\$422.8
Recycled Water Transmission					
R&R	\$2,398.1	\$1,476.5	\$1,739.3	\$2,639.4	\$1,323.6
Betterment	\$2,398.1	\$1,476.5	\$1,244.4	\$1,469.5	\$196.8
Expansion	\$2,470.7	\$1,521.2	\$1,282.1	\$1,514.1	\$415.5
Recycled Water Transmission	\$7,266.8	\$4,474.2	\$4,265.8	\$5,623.0	\$1,935.8
Total CIP (escalated)	\$8,299.8	\$5,269.7	\$6,408.6	\$9,856.1	\$2,358.6

(1) Column or line totals may not tie due to rounding.

Recycled water capital projects are generally funded through various sources such as grants, bonds, or reserves/rate-funded capital. The District is expected to fund these projects with a combination of their Water Supply Development (WSD) Fees, FPC revenues, potential new bond proceeds, and rate-funded capital. Table 3.7 summarizes and illustrates the District's funding sources for the next 5 years.

Table 3.7 Capital Funding Sources (\$1,000s)

	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027
WSD Fees	\$1,116.0	\$1,149.5	\$1,184.0	\$1,219.5	\$1,256.1
FPC Revenues	\$2,821.9	\$1,791.7	\$1,616.3	\$1,179.4	\$593.9
Use of Bond/Loan Proceeds	\$0.0	\$0.0	\$0.0	\$7,457.2	\$508.7
Rate Funded (Pay As You Go)	\$4,361.9	\$2,328.5	\$3,608.3	\$0.0	\$0.0
Total	\$8,299.8	\$5,269.7	\$6,408.6	\$9,856.1	\$2,358.6

(1) Column or line totals may not tie due to rounding.

3.4 Revenue Requirement Tests Before Increases

As previously mentioned, the cash flow sufficiency test evaluates the District's revenues to ensure they adequately meet both operating and non-operating expenses. The debt service coverage test measures a utility's ability to meet its bond covenant requirements. Table 3.8 outlines the 5-year rate-setting cash flow projections *before* rate revenue increases. Also, as illustrated annual debt service coverage is well above the debt service coverage requirement of 1.15 times the annual debt service.

 Table 3.8 Financial Forecast *before* Rate Increases (\$1,000s)

Description	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027
Rate Revenue: Retail (Ag and non-Ag)					
Recycled Rate	\$6,550.5	\$6,550.5	\$6,550.5	\$6,550.5	\$6,550.5
Daily Service Charges ¹	\$700.6	\$733.1	\$769.8	\$808.3	\$848.7
Rate Revenue: Agreements, In-Lieu, and Special	\$2,619.8	\$2,743.4	\$2,825.7	\$2,910.5	\$2,997.8
Wastewater Transfer	\$3,420.8	\$3,489.2	\$3,559.0	\$3,630.2	\$3,702.8
Wastewater FPC Revenues - For Debt Service	\$1,274.7	\$1,298.1	\$2,504.0	\$2,501.0	\$2,489.4
Operating Revenues Prior to Rate Increases	\$14,566.4	\$14,814.4	\$16,209.0	\$16,400.5	\$16,589.2
Less: Expenses					
Operations and Maintenance	(\$9,707.5)	(\$9,987.8)	(\$10,277.3)	(\$10,576.4)	(\$10,885.3)
Debt Service	(\$1,274.7)	(\$1,298.1)	(\$2,504.0)	(\$3,875.9)	(\$3,864.2)
Rate Funded Capital	(\$4,361.9)	(\$2,328.5)	(\$3,608.3)	\$0.0	\$0.0
Resulting Cash Flow (Prior to Increases)	(\$777.6)	\$1,200.0	(\$180.6)	\$1,948.2	\$1,839.6
Debt Service Coverage Ratio (DSCR)	3.81 x	3.87 x	2.53 x	1.66 x	1.69 x

(1) Increases in Daily Service Charges are assumed at 5-percent per year for projection purposes. Actual increases will reflect those determined by the District's recently initiated cost of service study.

(2) Column or line totals may not tie due to rounding.

3.5 Revenue Requirement Analysis Results

Carollo recommends the District adopt 3-percent annual revenue increases throughout the study period. These revenue increases are projected to keep the District's revenues in line with cost inflation while also providing adequate funding to support capital improvement expenditures. The updated tests, discussed earlier in this chapter, are detailed in Table 3.9 for the next 5 years. Based on the revenue requirement analysis, the District's recycled water enterprise fund is in a stable financial position and is expected to maintain its financial viability throughout the study period.

Based on the financial forecast the District would realize positive cash flows in FYE 2026 and FYE 2027 of \$2.7 million and \$2.8 million respectively. These cash flows reflect the assumption that approximately \$8.0 million in capital costs for FYE 2026 and FYE 2027, for projects that do not yet have an assigned funding source in the District's CIP budget, are funded using debt proceeds. However, the District has indicated that a portion of the projects is related to rehabilitation and replacement will likely be funded with cash from user rates. Utilizing cash to fund capital projects will result in decreased cash flows and available reserves for FYE 2026 and FYE 2027.

The proposed increases are necessary to maintain debt service coverage ratio at a favorable level and to maintain the operating reserve related to the recycled water fund's share outstanding and planned debt. Per the District's Master Resolution, the District has covenanted that net revenues shall be at least 1.15 times the sum of all debt service on parity obligations, plus the amount of all deposits required to be made to the Operating Reserve Fund. Though the legal required debt coverage ratio is 1.15, water agencies typically target higher ratios for planning purposes to maintain more favorable credit ratings and provide financial resiliency to account for unforeseen shortfalls. The proposed increase would allow the recycled water fund to maintain a coverage ratio in its share of debt at a minimum of 1.69x.

The District also covenanted that it will maintain a minimum of one quarter (25-Percent) of its annual maintenance and operating costs as set forth in its operating budget in a reserve fund. The proposed rate increases will allow the recycled water fund to build reserves and contribute its proportional share to the District's overall operating reserve. As shown in the last three lines of Table 3.9, the projected year end operating reserves would build toward the 25-percent target over several years, eventually exceeding the target amount in FYE 2026. The amount above the target (shown in the last line of Table 3.9) would be available to fund capital projects or O&M expenses.

Table 3.9 Financial Forecast *after* Rate Increases (\$1,000s)

Description	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027
Rate Revenue: Retail (Ag and non-Ag)					
Rate Revenue Increase	3.0%	3.0%	3.0%	3.0%	3.0%
Recycled Rate - Prior to Increases	\$6,550.5	\$6,550.5	\$6,550.5	\$6,550.5	\$6,550.5
Revenue from Rate Increases	\$98.3	\$297.7	\$503.2	\$714.8	\$932.7
Total Recycled Rate Revenues	\$6,648.7	\$6,848.2	\$7,053.7	\$7,265.3	\$7,483.2
Daily Service Charges ¹	\$700.6	\$733.1	\$769.8	\$808.3	\$848.7
Other Rate Revenue: Agreements, In-Lieu, and Special	\$2,619.8	\$2,743.4	\$2,825.7	\$2,910.5	\$2,997.8
Wastewater Transfer	\$3,420.8	\$3,489.2	\$3,559.0	\$3,630.2	\$3,702.8
Wastewater FPC Revenues - For Debt Service	\$1,274.7	\$1,298.1	\$2,504.0	\$2,501.0	\$2,489.4
Operating Revenues With Rate Increases	\$14,664.7	\$15,112.1	\$16,712.1	\$17,115.3	\$17,521.9
Less: Expenses					
Operations and Maintenance	(\$9,707.5)	(\$9,987.8)	(\$10,277.3)	(\$10,576.4)	(\$10,885.3)
Debt Service	(\$1,274.7)	(\$1,298.1)	(\$2,504.0)	(\$3,875.9)	(\$3,864.2)
Rate Funded Capital	(\$4,361.9)	(\$2,328.5)	(\$3,608.3)	\$0.0	\$0.0
Resulting Cash Flow (With Increases)	(\$679.4)	\$1,497.7	\$322.5	\$2,663.0	\$2,772.3
Debt Service Coverage Ratio (DSCR)	3.89 x	3.95 x	2.57 x	1.69 x	1.72 x
Operating Reserve Projection					
Beginning Operating Reserve Balance ²	\$1,313.2	\$633.8	\$2,131.5	\$2,454.1	\$5,117.1
Cash Flows (from above)	(\$679.4)	\$1,497.7	\$322.5	\$2,663.0	\$2,772.3
Projected Year End Operating Reserves	\$633.8	\$2,131.5	\$2,454.1	\$5,117.1	\$7,889.4
<i>25-Percent Reserve per Master Resolution Covenant</i>	<i>\$2,426.9</i>	<i>\$2,496.9</i>	<i>\$2,569.3</i>	<i>\$2,644.1</i>	<i>\$2,721.3</i>
<i>Available for Capital and/or O&M Expenses</i>	<i>(\$1,793.0)</i>	<i>(\$365.4)</i>	<i>(\$115.2)</i>	<i>\$2,473.0</i>	<i>\$5,168.1</i>

- (1) Increases in Daily Service Charges are assumed at 5-percent per year for projection purposes. Actual increases will reflect those determined by the District's recently initiated cost of service study.
- (2) The District indicated a starting operating reserve balance for FYE 2022 of \$0 for the Recycled Water Fund. The beginning balance for FYE 2023 is equal to the expected net cash flows for FYE 2022 based on expected revenues at current rates and usage, budgeted operating and capital costs including OFA and discretionary pension contributions, and expected WSD and FCP revenues available for capital projects.
- (3) Column or line totals may not tie due to rounding.

Chapter 4

COST ALLOCATION ANALYSIS

With the revenue requirements outlined—including any recommended revenue increases—the next step is to link each cost item with the specific system function that it supports, and then allocate the resulting totals to each customer class, in accordance with demand on the system.

This cost-of-service analysis is commonly referred to as the functional cost allocation because it connects each of the District's cost with a functional category or purpose that it supports, either directly (for instance, energy or chemicals to water treatment) or indirectly (i.e., debt service used to fund multiple projects with different functions).

The resulting analysis provides a rational basis for distributing the full costs of the District's services to each customer rate class. These costs should be allocated in proportion to the demands placed on the system. As an example, customer service costs are typically allocated on a per account basis because the function of this category rarely changes from one customer to the next, regardless of meter size or demand. In contrast, transmission costs can be allocated based on demand because there is a clear connection between the amount of water used by a customer, and the amount of water transported by the District: increased demand results in increased transmission costs.

4.1 Functional Cost Allocation

A functional cost allocation is performed to assign total revenue requirements by major function. These functional costs include the system's existing O&M expenses, annual debt service, and capital costs. These costs are offset by other miscellaneous revenue sources (e.g., non-rate funding for capital projects, wholesale recycled water revenues, agreement and in-lieu revenues, and revenues from retrofit users) and include the change (increase or decrease) in cash fund balances.

4.1.1 EMWD Cost Allocation Strategy

The District's recycled water customers can be treated as two large groups based on the level of service that they receive, which is dictated by the part of the recycled water system to which they are connected. Agricultural users connected to the backbone system may receive water at inconsistent pressures and are occasionally subject to quantity and flow restrictions depending on the amount of recycled water available within the system. In contrast, users connected to the stabilized system within the RRA have on demand access to recycled water at consistent pressure and flow.

The disparate level of service between backbone system customers and stabilized system customers defines the cost allocation strategy and ultimately supports specific rates for each type of user. The District has invested significantly in stabilization projects such as operational storage, pumping facilities, and distribution pipelines in order to provide on demand water for users connected to the stabilized system. The increased capital costs along with increased operating and maintenance costs for those facilities drives results in a higher cost of service for stabilized system users.

4.2 Functional Cost Categories

The recycled water system functional allocation is organized by the following categories.

4.2.1 Backbone System Costs Categories – Applicable to All Users

The backbone system provides a basic level of service to the agricultural customers that are directly connected to it as well as providing recycled water to the stabilized system. As such, costs for the backbone system are recovered from all users of the system as they all benefit from the backbone system. The costs categories for the backbone system are:

- **Long Term Storage** – This category includes the costs to construct, operate, and maintain the District’s seasonal storage facilities. These facilities allow for a portion of the recycled water produced during the winter months to be stored for later use when demands increase in the spring and summer.
- **Transmission** – This category includes the costs to construct, operate, and maintain the District’s recycled water transmission infrastructure including a share of pumping facilities and pipelines. Specifically, this category accounts for pumping facilities and pipelines outside of the RRA and a portion of pumping facilities and large pipelines within the RRA that are used to move large quantities of water throughout the recycled water system, from the treatment plants or long-term storage facilities to backbone system customers or localized distribution networks.

4.2.2 Stabilized System Cost Categories – Applicable Only to Stabilized Users

The stabilized system provides an incremental increase in the level of service provided by the backbone system. Only the users connected to the stabilized system benefit from these costs, thus they are recovered exclusively from those users. The costs categories for the stabilized system are:

- **Operational Storage** – This category includes the costs to construct, operate, and maintain the District’s operational (short term) storage facilities that serve the stabilized distribution system within the RRA. These facilities allow for on demand water within the RRA, providing a higher level of service than that provided by only the backbone system.
- **Stabilized Distribution** – This category includes the costs to construct, operate, and maintain the District’s pumping facilities and localized distribution system that serve users within the RRA. Specifically, this category accounts for the share of pumping facilities that provides pressure and flow stabilization within the RRA as well as the local distribution network that serves RRA users.

4.2.3 Customer Services Costs

Along with the costs to construct, operate, and maintain the recycled water systems, the District incurs costs to provide customer and meter service to its users. For the purpose of cost allocation, service costs are allocated to categories specific to the backbone system and the stabilized system. The customer service cost categories are:

- **Backbone Services** – This category includes customer and meter service related costs incurred to serve users connected to the backbone system. Customer service costs include regulatory compliance, records management and copy center costs, meter reading expenses, and administration costs. Meter service costs include meter maintenance, replacement, and installation as well as cross connection control and backflow devices costs.
- **Stabilized Services** – This category includes customer and meter service related costs incurred to serve users connected to the stabilized system within the RRA. Customer service costs include regulatory compliance, records management and copy center costs, meter reading expenses, and administration costs. Meter service costs include meter maintenance, replacement, and installation as well as cross connection control and backflow devices costs.

4.2.4 Discharge Costs

Along with the costs incurred to provide recycled water service, the Recycled Water fund also tracks the costs related to the discharge of water to Temescal Creek. Specifically, costs allocated to this category include costs to construct, operate, and maintain the District’s energy dissipation facility and the dechlorinating facility, which are utilized whenever water is discharged. These costs are covered using an assigned portion of the wastewater transfer and therefore not recovered from recycled water users. This offset is shown later in this document in Section 4.3.

4.2.5 General Benefit Costs

Costs that are not directly assignable or provide a general benefit to the system are allocated “As All Others” based on the pro rata share allocation of all directly allocable costs to the functional categories.

4.2.6 Facility Specific Allocations

The District tracks operating and capital costs for the recycled water system for pumping, booster stations, long term storage facilities, and above ground storage tanks on facility basis. Each facility provides specific benefits to the backbone and/or stabilized system and operating and maintenance and capital are allocated according to those benefits.

The following tables (Table 4.1 through Table 4.4) show the allocation of pump station, booster station, long term storage, and elevated storage tank operating, maintenance, and capital costs to the functional components described above. The percentage allocations are based on guidance from District operations staff and represent a reasonable understanding of the benefits provided by each facility under current conditions. As the District undertakes subsequent rate planning in the future, the percentage allocations should be validated or refined based on system conditions at that time or to reflect any changes to the facilities.

Table 4.1 Pump Station Allocation Factors

Facility Name	Facility Code	Transmission	Stabilized Distribution
Hemet/San Jacinto Recycled Pump Station	B9801	100%	0%
San Jacinto / Metropolitan Reservoir	B9802	100%	0%
Alessandro Pond Pump Station	B9803	100%	0%
Sun City Pond Transfer Pump Station	B9820	100%	0%
Sun City Pond 8 Pump Station (Built-In)	B9824	0%	100%
Temecula Valley Recycled Pump Station ¹	B9840	33%	67%
Leon Road Recycled Booster	B9842	100%	0%
Winchester Recycled Pump Station	B9860	20%	80%
MV South Recycled Pump Station - Nandina Pump Station	B9881	50%	50%
Skiland I - North (Floating Pump)	B9883	60%	40%
Trumble Rd Recycled Pump Station	B9886	40%	60%
PVWRF Case Pond Floating Pump	B9887	0%	100%
Perris Raw Water Augmentation Pump Station ¹	B9888	33%	67%
North Trumble Rd Floating Pump	B9890	40%	60%

(1) Facility identified as providing an overall or general system benefit, costs allocated based on overall allocation of pump station and booster station costs.

Table 4.2 Booster Station Allocation Factors

Facility Name	Facility Code	Transmission	Stabilized Distribution
Reach 4 Pressurization (Bidirectional) Into 1627 Pressure Zone	B9823	30%	70%
Rancho Club Drive Recycled Pump Station	B9841	67%	33%
Palomar Booster	B9850	100%	0%
Simpson & California Booster	B9862	0%	100%
Morgan Recycled Pump Station ¹	B9882	33%	67%
Skiland II - South (In-Line Booster) ¹	B9884	33%	67%

(1) Facility identified as providing an overall or general system benefit, costs allocated based on overall allocation of pump station and booster station costs.

Table 4.3 Long Term Storage Facility Allocation Factors

Facility Name	Facility Code	Long-Term Storage	Stabilized Operational Storage
Met Ponds at San Jacinto Reservoir	S9810	100%	0%
Skiland Reservoir	S9812	60%	40%
Sun City Ponds	S9816	30%	70%
Trumble Rd Recycled Storage Facility	S9815	50%	50%
Winchester Reservoir Recycled Storage Facility	S9814	50%	50%
North Trumble Road Storage Pond	S9823	50%	50%
Alessandro Ponds	S9811	100%	0%

Table 4.4 Above Ground Storage Facility Allocation Factors

Facility Name	Facility Code	Long-Term Storage	Stabilized Operational Storage
Landmark Reservoir Recycled Storage Facility	S9813	0%	100%
Chambers Recycled Water Tank	S9817	0%	100%
Benton Road Recycled Water Tank	S9822	0%	100%
Fruitvale Recycled Water Tank	S9818	0%	100%
Longfellow Recycled Water Tank	S9820	0%	100%
Gibbel Road RW Tank	S9819	0%	100%

4.2.7 Asset (Plant in Service) Allocation

Once the functional categories and allocation factors have been defined, financial information can be allocated to each category. The first step in the allocation process is the assignment of the recycled water system's fixed assets (plant in service) to functional groups. To perform the fixed asset allocation, the replacement cost of each active asset in the system was estimated using information from the District's fixed asset registry. The replacement cost new in current dollars of each asset is estimated by applying the ENR CCI to the original cost of each asset. Then, the assets' replacement values are allocated to each functional category.

Some assets, such as energy dissipation facilities and the dechlorination facilities can be assigned directly to a single functional category. Pumping and booster station assets are assigned to Stabilized Distribution or Transmission using the allocation factors shown in Table 4.1 and Table 4.2.

Similarly, storage facilities are assigned to Long Term Storage or Operation storage using the allocation factors shown in Table 4.3 and Table 4.4.

Records within the accounting system are insufficiently detailed to allocate recycled water pipeline assets to Stabilized Distribution and Transmission. Instead, an analysis of GIS pipeline data was used to estimate the allocation of pipelines between Stabilized Distribution and Transmission. An estimated replacement cost for each pipeline in the GIS dataset was calculated based on each pipeline’s length and diameter, and standard replacement costs per foot for each pipe diameter. Values for each pipe were then assigned to Transmission or Stabilized Distribution based on the following assumptions:

1. All pipelines located outside of the RRA are considered Transmission.
2. All pipelines located within the RRA and less than 24 inches in diameter are considered Stabilized Distribution.
3. Pipelines within the RRA with diameters of 24 inches or larger are split between Transmission and Stabilized Distribution based on the percentage of total recycled water use within the stabilized system, 23.4-percent.

The analysis results in the pipeline assets being split 68-percent to Transmission and 32-percent to Stabilized Distribution. This allocation factor is also used to allocate certain distribution costs in the operation and maintenance costs allocation.

Figure 4.1 shows the overall allocation of fixed assets to the functional categories. As shown a small amount of the assets are allocated to the As All Other category reflecting items such as Buildings, Land, and Computer software that are not directly allocable or provide a general benefit. The overall asset allocation is used with the cost allocation process to allocate asset related costs such as Recycled Water OFA and Asset and Facilities Management allocations to the functional categories. Additional tables detailing the fixed asset allocation are included in Appendix E.

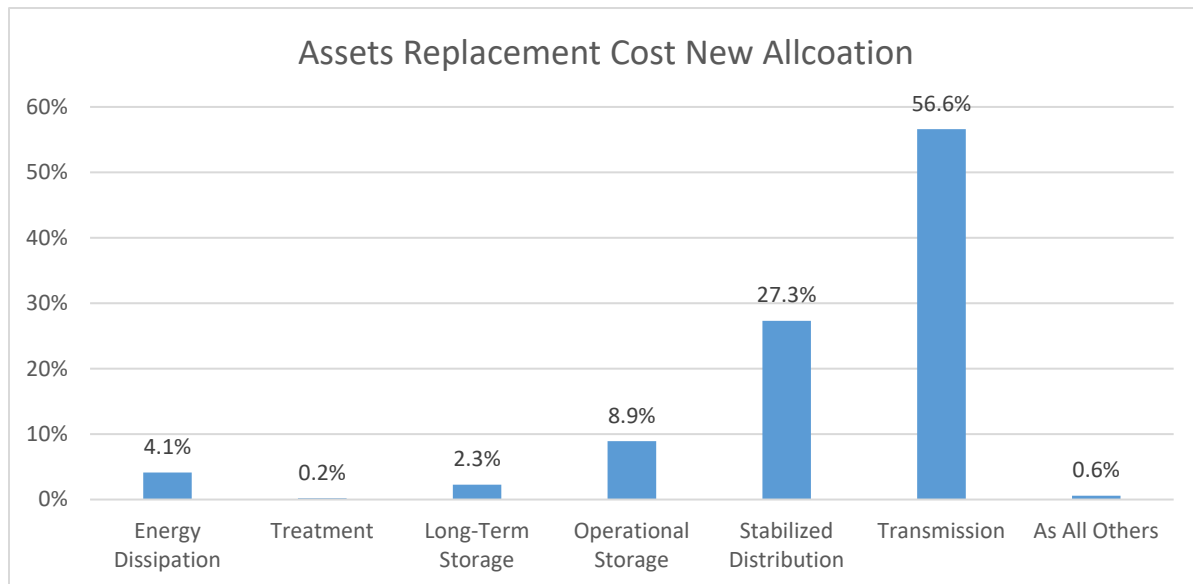


Figure 4.1 Fixed Assets Allocation

4.2.8 Capital Cost Allocation

Capital costs are allocated to each functional category on a project-by-project basis to reflect the specific purpose that each project will serve. District staff provided input on which recycled water storage and recycled water distribution projects related to the backbone or stabilized systems. The allocation uses the total long-term CIP (FYE 2022 through FYE 2032) so that collected rate revenues match the overall investments expected for the system. Using the total CIP also helps to avoid allocation and rate volatility driven by project timing.

Figure 4.2 shows the overall allocation of CIP costs to the functional categories. As shown a small amount of the CIP is allocated to the As All Other category based on projects that provide a general benefit. Additional tables detailing the CIP allocation are included in Appendix D.

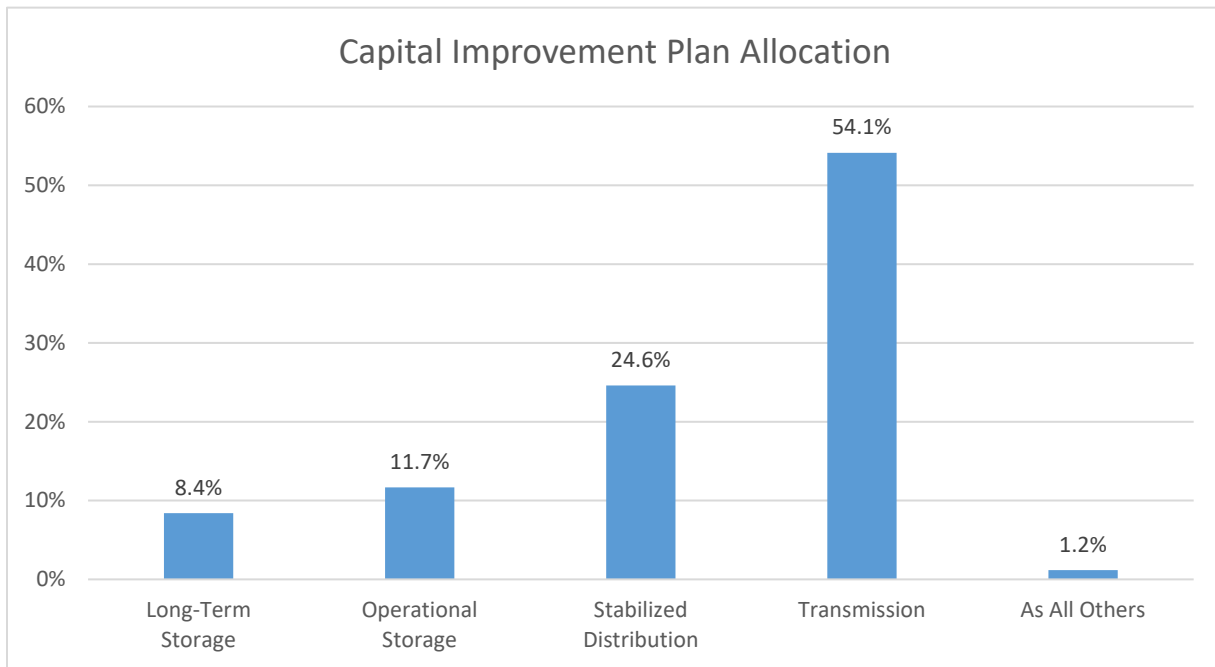


Figure 4.2 Capital Improvement Plan Costs Allocation

4.2.9 Operations and Maintenance Allocation

Operations and maintenance costs are allocated to each functional category on a cost center, facility, and/or line-item basis to reflect the reason that each cost is incurred and the benefits each provides to users of recycled water. Operations and maintenance costs are allocated as follows:

- Recycled Water Allocated Support Costs – Allocated Support Costs are allocated on a line-item basis based on the services provided to the recycled water system for each line-item cost.
 - Customer Service costs included in this cost center include Regulatory Compliance, Records Management, Copy Center, Development Services, and Water Operations Administration. These costs are allocated to the Backbone Services and Stabilized Services categories based on the number of customers connected to each system.
 - Asset related costs in this cost center include Maintenance Services, Asset and Facilities Management, and Mechanical Services. These costs are allocated to functional categories based on the fixed asset allocation discussed previously.

- Pipeline Locating costs are allocated between Transmission and Stabilized Distribution based on the length of pipe associated with each system.
- Electrical Services costs are allocated based on the overall allocation of electrical utilities costs, incurred by the other cost centers, to the functional components.
- Field Services, Construction costs are allocated to functional categories based on the CIP allocation discussed previously.
- Laboratory costs are allocated to the Discharge category.
- Several line items in this cost center provide a general benefit to the recycled water system and are allocated to the As All Other category. Those line items include Operations Supervision, Wastewater Collection Services, Engineering Services, Recycled Water Operations, and Water Operations Central Control.
- Recycled Water Dechlorination Facility – Dechlorination Facilities costs are allocated to the Discharge category.
- Recycled Water Distribution System – The Distribution System cost center includes costs to operate and maintain the transmission and stabilized distribution systems as well as several meter service related costs.
 - Transmission and stabilized distribution system costs within this cost center include Control Valve Facilities Maintenance, Telemetry and Control Cables Costs, System Operations Costs, Pipeline Maintenance and Repair, and Cathodic protection. These costs are allocated to the Transmission and Stabilized Distribution categories based on the previously discussed analysis of pipeline GIS data (Section 4.2.7).
 - Meter service related costs within this cost center include Meter Maintenance, Replacement, and Installation, Cross Connection and Backflow Device Costs, and Meter Reading Expenses. These costs are allocated to the Backbone Services and Stabilized Services categories based on the number of Meter Equivalent Units (MEUs) connected to each system.
 - A small amount of other costs within this cost center are allocated to the As All Other category.
- Recycled Water Energy Dissipation Facility – Energy Dissipation Facility Costs are allocated to the Discharge category.
- Recycled Water Pumping Facilities – Recycled Water Pumping Facilities Costs are allocated between Transmission and Stabilized Distribution on a facility basis using the allocation factors shown in Table 4.1 and Table 4.2.
- Recycled Water Storage Facilities – Recycled Water Storage Facilities Costs are allocated between Long Term Storage and Operational Storage on a facility basis using the allocation factors shown in Table 4.3 and Table 4.4.
- Recycled Water OFA – OFA costs are allocated to functional categories based on the fixed asset allocation discussed previously.
- Recycled Water Discretionary Pension Contributions – Discretionary Pension Contribution costs are allocated to the As All Other category.

Figure 4.3 shows the overall allocation of operation and maintenance costs to the functional categories. Table 4.5 includes additional detail of allocated costs by cost center. Additional tables detailing the operation and maintenance allocations are included in Appendix F.

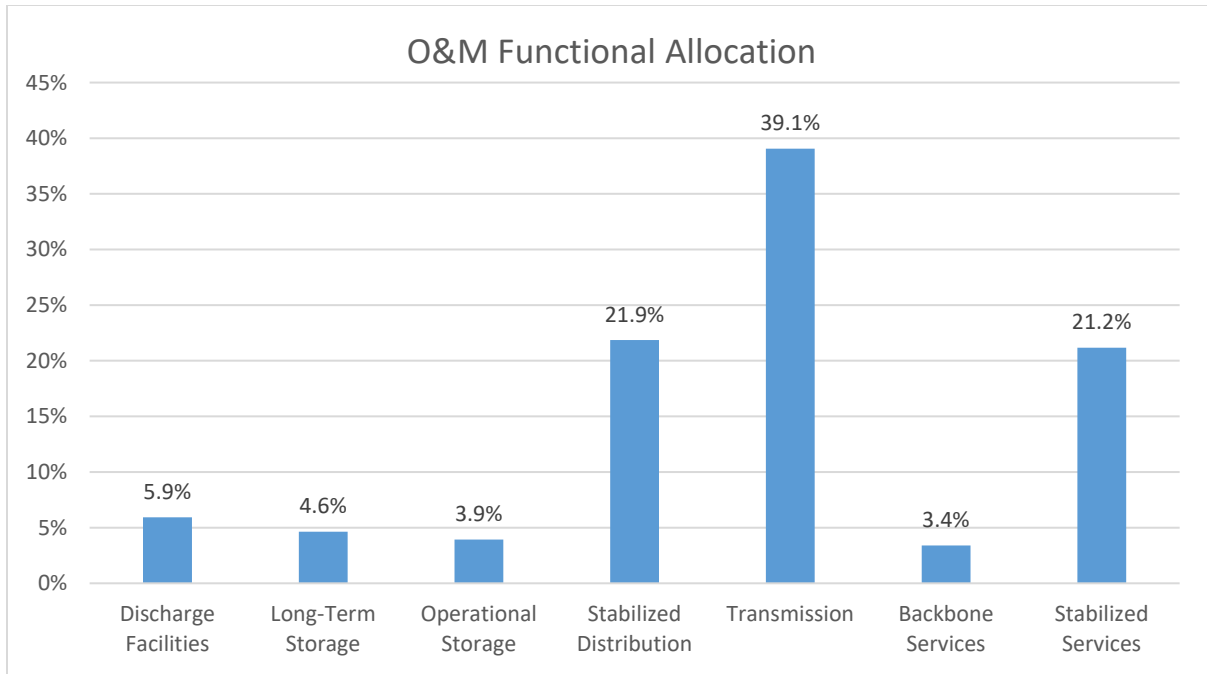


Figure 4.3 Operation and Maintenance Allocation

4.2.10 Rate Revenue Requirements Allocation

The rate revenue requirements allocation incorporates the results of the operations and maintenance cost allocation, capital costs and funding sources, debt service, and offsetting revenues to determine the amount of revenue that needs to be generated through user rate by functional category.

The components of the rate revenue requirement allocation are allocated as follows:

- Operations and Maintenance – Operations and maintenance requirements are allocated as discussed in Section 4.2.9 and shown in Table 4.5.
- Debt Service Payments – Debt service payments are allocated based on the fixed asset allocation discussed previously in Section 4.2.7.
- CIP Costs – CIP costs are allocated based on the CIP allocation discussed previously in Section 4.2.8.
- Offsetting Revenues – Offsetting Revenues are allocated on a line item basis to reflect the unique source of each revenue and the costs that it should most reasonably offset.
 - FPC revenues used to pay debt service costs are allocated based on the fixed asset allocation to match the allocation of debt service costs.
 - WSD Fees and FPC revenues used to fund capital projects are allocated based using the CIP allocation since they offset CIP costs.
 - Daily Service Charge revenues, revenues from retrofit users, and revenues from wholesale users are allocated to the As All Other category to provide a proportional benefit to the other recycled water system users.
 - Revenues from the Fish and Wildlife agreement, the R693 In-lieu agreement, and the Watermaster In-lieu Subsidy are allocated to the backbone system components (Treatment, Long-Term Storage, and Transmission) as the water used under those agreements is served by the backbone system.

- Deposit to or Use of Reserves – The deposit to or use of reserves (cash flow) is allocated using the CIP allocation as the use of reserves is driven by the need to fund CIP projects.

Because the District adopts rates on a calendar year basis but completes its financial accounting and planning (including this study) on a fiscal year basis, the rate revenue requirements include an “Adjustment for Mid-year Increase”. The financial projections discussed earlier in this report assume that rates are implemented on a calendar year basis and decrease the expected revenues from planned rate increases accordingly since they will only be in place for 6 months of the fiscal year in which they are implemented. The rate design process divides the rate revenue requirements by a full year’s worth of usage and thus the rate revenue requirements used in the rate design should reflect a full year of increases. The “Adjustment for Mid-year Increase” line accomplishes this by adding back the rate increase delay that is removed in the financial projections. The adjustment for “Adjustment for Mid-year Increase” line is allocated to the As All Other category as it should equal the overall system allocation.

Rather than being applied during the rate revenue requirement allocation, offsetting revenues from the wastewater transfer are applied later during the rate design analysis. Because the wastewater transfer revenues are discretionary, the District can use them to meet rate policy goals, a process that is more easily accomplished during the rate class allocation and rate design. Further, this allows for the determination of full cost rates (without the wastewater transfer included) which serves as a valuable comparison point to the District and the recycled water users.

Figure 4.4 shows the overall allocation of rate revenue requirements to the functional categories. Table 4.6 includes additional detail of allocated costs by component.

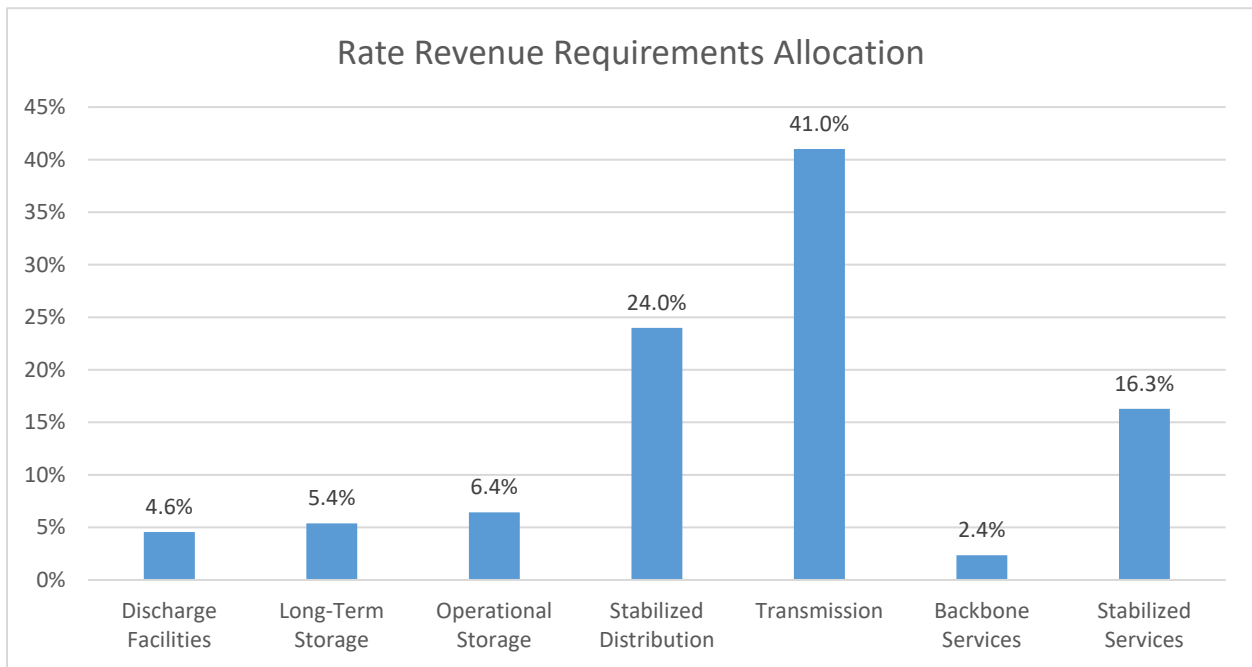


Figure 4.4 Rate Revenue Requirements Allocation

Table 4.5 Functionalization of Operation and Maintenance Costs (\$1,000s)

Cost Center	Discharge Facilities	Long-Term Storage	Operational Storage	Stabilized Distribution	Transmission	Backbone Services	Stabilized Services	As All Others	Total
Recycled Water Allocated Support	\$100.1	\$32.2	\$99.0	\$561.9	\$755.1	\$109.7	\$928.2	\$2,068.8	\$4,654.9
Recycled Water Dechlorination Facility	\$99.2	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$99.2
Recycled Water Distribution System	\$0.0	\$0.0	\$0.0	\$202.3	\$429.9	\$110.3	\$443.2	\$71.4	\$1,257.1
Recycled Water Energy Dissipation Facility	\$172.7	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$172.7
Recycled Water Pumping Facilities	\$0.0	\$0.0	\$0.0	\$578.4	\$1,192.9	\$0.0	\$0.0	\$0.0	\$1,771.3
Recycled Water Storage Facilities	\$0.0	\$262.0	\$131.8	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$393.8
Recycled Water OFA	\$11.6	\$6.1	\$23.9	\$73.2	\$151.8	\$0.0	\$0.0	\$1.6	\$268.2
Discretionary Pension Contributions	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$1,090.4	\$1,090.4
Total Allocated O&M	\$383.6	\$300.2	\$254.8	\$1,415.9	\$2,529.6	\$220.0	\$1,371.3	\$3,232.1	\$9,707.5
Reallocation of As All Other	\$191.5	\$149.8	\$127.2	\$706.7	\$1,262.6	\$109.8	\$684.5	(\$3,232.1)	\$0.0
Resulting O&M Allocation	\$575.1	\$450.0	\$381.9	\$2,122.6	\$3,792.2	\$329.8	\$2,055.8	\$0.0	\$9,707.5
<i>Percentage Allocation</i>	<i>5.9%</i>	<i>4.6%</i>	<i>3.9%</i>	<i>21.9%</i>	<i>39.1%</i>	<i>3.4%</i>	<i>21.2%</i>	<i>0.0%</i>	<i>100.0%</i>

(1) Column or line totals may not tie due to rounding.

Table 4.6 Rate Revenue Requirements Allocation (\$1,000s)

	Discharge Facilities	Long-Term Storage	Operational Storage	Stabilized Distribution	Transmission	Backbone Services	Stabilized Services	As All Others	Total
Allocated O&M Costs	\$575.1	\$450.0	\$381.9	\$2,122.6	\$3,792.2	\$329.8	\$2,055.8		\$9,707.5
Non-Operating Expenses									
Debt Service Payment	\$55.0	\$28.9	\$113.8	\$348.1	\$721.5	\$0.0	\$0.0	\$7.4	\$1,274.7
Capital Projects	\$0.0	\$698.0	\$969.5	\$2,042.1	\$4,492.6	\$0.0	\$0.0	\$97.5	\$8,299.8
Adjustment for Mid-Year Increase	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$101.5	\$101.5
Offsetting Revenues for Debt and Capital									
FPC Revenues for Debt Service	(\$55.0)	(\$28.9)	(\$113.8)	(\$348.1)	(\$721.5)	\$0.0	\$0.0	(\$7.4)	(\$1,274.7)
WSD Fees	\$0.0	(\$93.9)	(\$130.4)	(\$274.6)	(\$604.1)	\$0.0	\$0.0	(\$13.1)	(\$1,116.0)
FPC Revenues	\$0.0	(\$237.3)	(\$329.6)	(\$694.3)	(\$1,527.5)	\$0.0	\$0.0	(\$33.2)	(\$2,821.9)
Offsetting Revenues from Special Rates and Agreements									
Daily Service Charges	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	(\$700.6)	(\$700.6)
Potable Chained	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	(\$1,180.6)	(\$1,180.6)
F&W Agreement	\$0.0	(\$36.2)	\$0.0	\$0.0	(\$272.6)	(\$14.6)	\$0.0	\$0.0	(\$323.4)
In-Lieu Agreement	\$0.0	(\$28.9)	\$0.0	\$0.0	(\$217.4)	(\$11.7)	\$0.0	\$0.0	(\$257.9)
Wholesale Take-or-Pay (R4RC)	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	(\$720.2)	(\$720.2)
In-Lieu Subsidy (Watermaster)	\$0.0	(\$15.4)	\$0.0	\$0.0	(\$116.1)	(\$6.2)	\$0.0	\$0.0	(\$137.7)
Deposit To (Use Of) Reserves	\$0.0	(\$57.1)	(\$79.4)	(\$167.2)	(\$367.7)	\$0.0	\$0.0	(\$8.0)	(\$679.4)

	Discharge Facilities	Long-Term Storage	Operational Storage	Stabilized Distribution	Transmission	Backbone Services	Stabilized Services	As All Others	Total
Allocated Rate Revenue Requirements Prior to Wastewater Transfer	\$575.1	\$679.3	\$812.1	\$3,028.7	\$5,179.4	\$297.3	\$2,055.8	(\$2,459.8)	\$10,167.8
Reallocation of As All Other	(\$112.0)	(\$132.3)	(\$158.2)	(\$590.0)	(\$1,008.9)	(\$57.9)	(\$400.5)	\$2,459.8	\$0.0
Resulting Allocation	\$463.1	\$546.9	\$653.9	\$2,438.7	\$4,170.4	\$239.4	\$1,655.4	\$0.0	\$10,167.8
<i>Percentage Allocation</i>	4.6%	5.4%	6.4%	24.0%	41.0%	2.4%	16.3%	0.0%	100.0%

(1) Column or line totals may not tie due to rounding.

4.3 Rate Class Allocation

After rate revenue requirements have been allocated to functional components they must be further allocated to each rate class to reflect each class’s use of the system. Costs are allocated to each rate class by determining a unit cost per AF for the rate revenue requirements in each category then multiplying that unit rate by each user’s demands.

The rate class allocation is focused on the recycled water customers who pay retail recycled water rates including agricultural rates (backbone system), demand agricultural rates (stabilized system), non-agricultural rates (stabilized system), and temporary construction rates (rate analysis assumes all are stabilized). Cost to serve other users (retrofit users, users charge based on agreements (in-lieu and Fish and Wildlife), and wholesale users) are recovered through prescribed rates. The revenue from those rates is used to offset the rate revenue requirements of the retail rate customers as shown in Table 4.6. Table 4.7 shows the expected usage for retail rate users.

Table 4.7 Retail Rate User Demands

Customer Type	Rate Code	FYE 2023 Usage (AF)
Backbone Retail Users		
Summer Ag - Up to 4" Meter	R432	143
Summer Ag - 6" Meter and Larger	R632	11,949
Subtotal: Summer Ag		12,092
Winter Ag - Up to 4" Meter	R43W	61
Winter Ag - 6" Meter and Larger	R63W	6,869
Subtotal: Winter Ag		6,930
Subtotal: Backbone Retail Usage		19,022
Stabilized Retail Users		
Demand Ag - Up to 4" Meter	R442	263
Demand Ag - 6" Meter and Larger	R642	979
Subtotal: Demand Ag		1,243
Non-Ag - Up to 4" Meter	R462	3,844
Non-Ag - 6" Meter and Larger	R662	1,023
Non-Ag Pechanga	RPRC	544
Subtotal: Stabilized Retail Usage		6,653
Total Retail Usage		25,675

(1) Column or line totals may not tie due to rounding.

The unit basis (AF) used for each cost category is selected to match the specific rate classes that benefit from those costs. Backbone system costs (Energy Dissipation, Treatment, Long-Term Storage, and Transmission costs) are incurred to serve all users, accordingly, their unit cost is calculated using the total usage from stabilized and backbone rate payers.

Table 4.8 shows the determination of unit costs for each functional category.

Table 4.8 Test Year (FYE 2023) Unit Costs

Cost Category	Revenue Requirement (\$1,000s)	Unit Basis	Units		Unit Cost (\$/AF)
Discharge Facilities	\$463.1	All RW Rate Usage	25,675	AF	\$18.04
Long-Term Storage	\$546.9	All RW Rate Usage	25,675	AF	\$21.30
Operational Storage	\$653.9	RRA RW Rate Usage	6,653	AF	\$98.28
Stabilized Distribution	\$2,438.7	RRA RW Rate Usage	6,653	AF	\$366.55
Transmission	\$4,170.4	All RW Rate Usage	25,675	AF	\$162.43
Backbone Services	\$239.4	Backbone Usage	19,022	AF	\$12.58
Stabilized Services	\$1,655.4	RRA RW Rate Usage	6,653	AF	\$248.81
Total Revenue Requirements	\$10,167.8				

(1) Column or line totals may not tie due to rounding.

The allocation of rate revenue requirements to each rate class is summarized in Table 4.9. Costs in each functional category, for each rate class, are calculated by multiplying each rate class’s usage in AF by the unit costs per AF shown in Table 4.8.

A portion of wastewater transfer revenues are applied to offset the Discharge Facilities revenue requirements for all customer classes. The costs within this category are incurred to discharge wastewater to Temescal Creek rather than to serve recycled water customers. As such, they are entirely offset using wastewater transfer revenues so that they do not impact the rates calculated for each recycled water rate class.

The rate class allocation also includes the application of a portion of wastewater transfer revenues to the Winter Agricultural (R43W and R63W) and Demand Agricultural (R442 and R642) rate classes to meet the District’s pricing policies for those rates. Winter Agricultural rates have historically been set to be approximately 58.5-percent of the Summer Agricultural Rates. The lower rates in winter are used to promote usage by agricultural users during the winter months when recycled water availability typically exceeds demand. To meet this pricing objective, approximately \$565,200 of the wastewater transfer is applied directly to offset Winter Agricultural rate revenue requirements.

Per the District’s rate definition, Demand Agricultural rates are set to be 80-percent of the non-agricultural rates. The lower rates are intended to promote usage by this class of customers. To meet this pricing objective, approximately \$223,100 of the wastewater transfer is applied directly to offset Demand Agricultural rate revenue requirements.

The rate class unit costs shown in the last line of Table 4.9 represent the full cost to provide service to each type of customer based on the cost allocation analyses. In the rate design analysis, the remaining wastewater transfer revenues can be applied in a specific manner to meet the District’s rate structure goals.

Table 4.9 Rate Class Allocation

Rate Description	Summer Ag Rates	Winter Ag Rates	Demand Ag	Non-Ag Demand (Stabilized)	Total
Rate Codes Included	R432, R632	R43W, R63W	R462, R662, RPRC	R442, R642	
Usage (AF)	12,092	6,930	1,243	5,410	
Allocated Costs (\$1,000s)					
Discharge Facilities	\$218.1	\$125.0	\$22.4	\$97.6	\$463.1
	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Long-Term Storage	\$257.6	\$147.6	\$26.5	\$115.3	\$546.9
Operational Storage	n/a	n/a	\$122.2	\$531.7	\$653.9
Stabilized Distribution	n/a	n/a	\$455.6	\$1,983.1	\$2,438.7
Transmission	\$1,964.0	\$1,125.7	\$201.9	\$878.8	\$4,170.4
Backbone Services	\$152.2	\$87.2	n/a	n/a	\$239.4
Stabilized Services	n/a	n/a	\$309.2	\$1,346.1	\$1,655.4
Allocated Revenue Requirements	\$2,591.9	\$1,485.6	\$1,137.7	\$4,952.6	\$10,167.8
Wastewater Transfer to Offset Discharge Facilities Costs	(\$218.1)	(\$125.0)	(\$22.4)	(\$97.6)	(\$463.1)
Wastewater Transfer Assigned to Meet Rate Policies		(\$565.2)	(\$223.1)		(\$788.3)
Allocated Rev. Reqs. After Assigned Wastewater Transfers	\$2,373.8	\$795.4	\$892.3	\$4,855.1	\$8,916.5
Rate Class Unit Cost Prior to Application of Remaining Wastewater Transfers (\$/AF)	\$196.32	\$114.77	\$717.90	\$897.38	

(1) Column or line totals may not tie due to rounding.

Chapter 5

RATE DESIGN ANALYSIS

The rate design analysis links the customer class costs with the water rates necessary to achieve cost recovery. The focus of this process is to achieve full cost recovery and substantiate that each customer class is paying their fair and proportionate share of system costs.

5.1 Rate Design

Recycled water rates are calculated by applying the remaining wastewater transfer revenues to each class to determine the adjusted rate revenue requirements. The adjusted revenue requirements are then divided by each class’s usage to calculate rates.

The District has flexibility in how the remaining wastewater transfer revenues are allocated to each rate class and can shape the allocation to meet policy objectives. The calculated rates for each class remain in compliance with cost-of-service requirements as long as the rates do not exceed the full cost unit rates shown in the last line of Table 4.9. The remaining wastewater transfer revenues to be assigned in the rate design are shown in Table 5.1.

Table 5.1 Remaining Wastewater Transfer for Rate Design

	FYE 2023
Wastewater Transfer - Budget Projection	\$3,420.8
Applied to Offset Discharge Facilities Costs (all classes)	(\$463.1)
Applied to Winter Ag per Policy	(\$565.2)
Applied to Demand Ag per Rate Definition	(\$223.1)
Remaining Wastewater Transfer for Rate Design	\$2,169.5

(1) Column or line totals may not tie due to rounding.

As discussed previously in this report, an important goal of the District’s recycled water rate setting is to maximize the use of recycled water to decrease discharges to Temescal Creek. Maintaining affordable rates for agricultural customers is key to achieving this goal as they use a majority of recycled water, are particularly price conscious, and are able to take water during times of low recycled water demand. To this end, the remaining wastewater transfer revenues are allocated first to the backbone agricultural rates classes so that their rates can be held equal to the current rates. The balance of the remaining wastewater transfer revenues is then allocated to the stabilized customers proportional to their rate revenue requirements. This calculation, detailed in Table 5.2, would result in rate increases of approximately 5.1-percent for stabilized customers.

To further the goal of maintaining affordable rates for recycled water customers, the District will take advantage of the ability to increase the wastewater transfer so that rates for stabilized users can be held to 3-percent increases. To do so, the wastewater transfer will need to be increased by approximately \$80,000 in FYE 2023 and thereafter. The additional wastewater transfer revenues are applied to each of the stabilized rate classes to hold their rate increase to 3-percent. Table 5.3 shows the calculation of the proposed rates for FYE 2023.

Table 5.2 Calculation of Rates with Existing Wastewater Transfer, FYE 2023

Rate Description	Summer Ag Rates	Winter Ag Rates	Demand Ag	Non-Ag Demand (Stabilized)	Total
Rate Codes Included	R432, R632	R43W, R63W	R462, R662, RPRC	R442, R642	
Allocated Rev. Reqs. After Assigned Wastewater Transfers (\$1,000s)	\$2,373.8	\$795.4	\$892.3	\$4,855.1	\$8,916.5
Remaining Wastewater Transfer Applied (\$1,000s)	(\$375.6)	(\$125.8)	(\$259.0)	(\$1,409.1)	(\$2,169.5)
Rate Revenue Requirements (\$1,000s)	\$1,998.2	\$669.5	\$633.3	\$3,445.9	\$6,747.0
Usage (AF)	12,092	6,930	1,243	5,410	
Calculated Rate (\$/AF)	\$165.26	\$96.61	\$509.54	\$636.92	
<i>Current Rates (\$/AF)</i>	<i>\$165.26</i>	<i>\$96.61</i>	<i>\$484.99</i>	<i>\$606.24</i>	
<i>Increase without Additional Wastewater Transfer</i>	<i>\$0.00</i>	<i>\$0.00</i>	<i>\$24.55</i>	<i>\$30.68</i>	
	<i>0.0%</i>	<i>0.0%</i>	<i>5.1%</i>	<i>5.1%</i>	

(1) Column or line totals may not tie due to rounding.

Table 5.3 Calculation of Proposed Rates, FYE 2023

Rate Description	Summer Ag Rates	Winter Ag Rates	Demand Ag	Non-Ag Demand (Stabilized)	Total
Rate Codes Included	R432, R632	R43W, R63W	R462, R662, RPRC	R442, R642	
Allocated Rev. Reqs. After Assigned Wastewater Transfers (\$1,000s)	\$2,373.8	\$795.4	\$892.3	\$4,855.1	\$8,916.5
Remaining Wastewater Transfer Applied (\$1,000s)	(\$375.6)	(\$125.8)	(\$259.0)	(\$1,409.1)	(\$2,169.5)
Additional Wastewater Transfer (\$1,000s)			(\$12.4)	(\$67.6)	(\$80.0)
Rate Revenue Requirements (\$1,000s)	\$1,998.2	\$669.5	\$620.9	\$3,378.3	\$6,667.0
Usage (AF)	12,092	6,930	1,243	5,410	
Proposed Rate (\$/AF)	\$165.26	\$96.61	\$499.54	\$624.43	
<i>Current Rates (\$/AF)</i>	<i>\$165.26</i>	<i>\$96.61</i>	<i>\$484.99</i>	<i>\$606.24</i>	
<i>Increase with Additional Wastewater Transfer</i>	<i>\$0.00</i>	<i>\$0.00</i>	<i>\$14.55</i>	<i>\$18.19</i>	
	<i>0.0%</i>	<i>0.0%</i>	<i>3.0%</i>	<i>3.0%</i>	

(1) Column or line totals may not tie due to rounding.

Typically, rates for following years would be calculated by applying the overall revenue increases from the revenue requirement analysis to the FYE 2023 rates. However, to continue to incentivize usage, backbone agricultural rates will be held flat for an additional year with 3-percent increases to start during FYE 2025 on January 1, 2025. Holding rates constant for this additional year will require a further addition to the wastewater transfer of approximately \$80,000 in FYE 2024 and thereafter. The increases in the wastewater transfer will result in the total wastewater transfer increasing from 2.9-percent of wastewater revenues to 3.0-percent in FYE 2023 and 3.1-percent in FYE 2024. Thereafter the transfer would remain at 3.1-percent of wastewater revenues barring future rate setting policy changes. Table 5.4 shows the proposed rates for backbone and stabilized system retail customers for the next five years. Table 5.5 shows the total wastewater transfers that will be needed to support the proposed rate plan. The total wastewater transfer would remain well within the \$7.5 to \$9.3 million dollar maximum discussed previously in Section 2.3 .

Table 5.4 Proposed Retail User Rates

Rate Code	Rate Description	Current Rates	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027
			January 1, 2023	January 1, 2024	January 1, 2025	January 1, 2026	January 1, 2027
Backbone System Retail Customers							
R432	Summer Ag - Up to 4" Meter	\$165.26	\$165.26	\$165.26	\$170.22	\$175.32	\$180.58
R632	Summer Ag - 6" Meter and Larger	\$165.26	\$165.26	\$165.26	\$170.22	\$175.32	\$180.58
R43W	Winter Ag - Up to 4" Meter	\$96.61	\$96.61	\$96.61	\$99.51	\$102.49	\$105.57
R63W	Winter Ag - 6" Meter and Larger	\$96.61	\$96.61	\$96.61	\$99.51	\$102.49	\$105.57
Stabilized System Retail Customers							
R442	Demand Ag - Up to 4" Meter	\$484.99	\$499.54	\$514.53	\$529.96	\$545.86	\$562.24
R642	Demand Ag - 6" Meter and Larger	\$484.99	\$499.54	\$514.53	\$529.96	\$545.86	\$562.24
R462	Non-Ag - Up to 4" Meter	\$606.24	\$624.43	\$643.16	\$662.45	\$682.33	\$702.80
R662	Non-Ag - 6" Meter and Larger	\$606.24	\$624.43	\$643.16	\$662.45	\$682.33	\$702.80
RPRC	Non-Ag Pechanga	\$606.24	\$624.43	\$643.16	\$662.45	\$682.33	\$702.80

Table 5.5 Wastewater Transfer to Support Proposed Rates (\$1,000s)

Component	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027
Current 2.9% of Wastewater Revenues	\$3,420.8	\$3,489.2	\$3,559.0	\$3,630.2	\$3,702.8
Additional Transfer for Stabilized Rate Increase Reduction	\$80.0	\$82.4	\$84.9	\$87.5	\$90.1
Additional Transfer for Backbone Rate Increase Delay	\$0.0	\$80.0	\$82.4	\$84.9	\$87.5
Total Wastewater Transfer	\$3,500.9	\$3,651.7	\$3,726.4	\$3,802.6	\$3,880.3

As noted previously, recycled water customers pay daily service charges that are the same as those charged to potable users. In order to project revenues from the daily service charge, which offset the retail rate revenue requirements, the study relied on the assumed DSCs shown in Table 5.6. Actual DSCs for recycled water users will be updated through the Cost of Service Study update that the District recently commenced.

Table 5.6 Assumed Daily Service Charges

Meter Size	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027
5/8"	\$0.50	\$0.53	\$0.55	\$0.58	\$0.61
3/4"	\$0.50	\$0.53	\$0.55	\$0.58	\$0.61
1"	\$0.69	\$0.72	\$0.76	\$0.80	\$0.84
1.5"	\$1.88	\$1.97	\$2.07	\$2.18	\$2.29
2"	\$2.93	\$3.08	\$3.23	\$3.39	\$3.56
3"	\$4.29	\$4.50	\$4.73	\$4.97	\$5.21
4"	\$5.68	\$5.96	\$6.26	\$6.58	\$6.90
6"	\$5.68	\$5.96	\$6.26	\$6.58	\$6.90
8"	\$5.68	\$5.96	\$6.26	\$6.58	\$6.90
10"	\$5.68	\$5.96	\$6.26	\$6.58	\$6.90
12"	\$5.68	\$5.96	\$6.26	\$6.58	\$6.90
16"	\$5.68	\$5.96	\$6.26	\$6.58	\$6.90

(1) Increases in Daily Service Charges are assumed at 5-percent per year for projection purposes. Actual increases will reflect those determined by the District’s recently initiated cost of service study.

Similar to the DSCs, rates for the customers that are charged under agreements were assumed so that offsetting revenues could be determined. Most of these agreements also have limits on the escalation of rates. Assumed rates for these agreements are outlined in Table 5.7. The rates in each case have been escalated going forward based on historic inflation rates for these costs. Actual rates will be updated on an annual basis by the District to reflect conditions at that the time of each update.

Table 5.7 Assumed Commodity Rates per AF for Contracted Agreements

Code	TYPE	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027
R401	Retrofit ^{1,2}	\$1,225.13	\$1,261.88	\$1,299.74	\$1,338.73	\$1,378.89
R402	Retrofit ^{1,2}	\$1,051.97	\$1,083.53	\$1,116.03	\$1,149.52	\$1,184.00
R403	Retrofit ^{1,2}	\$1,084.64	\$1,117.18	\$1,150.69	\$1,185.22	\$1,220.77
R500	Heartland Rate ^{1,2}	\$804.99	\$829.14	\$854.01	\$879.63	\$906.02
R682	F&W Agreement ^{1,2}	\$97.11	\$100.02	\$103.02	\$106.11	\$109.30
R693	In-Lieu Agreement ^{1,2}	\$98.82	\$101.78	\$104.84	\$107.98	\$111.22
R4RC	Wholesale ^{1,2}	\$367.91	\$378.94	\$390.31	\$402.02	\$414.08
RC42	Temporary Construction ^{1,2}	\$867.71	\$893.74	\$920.55	\$948.17	\$976.62
R43D	Other Special ³	\$48.30	\$48.30	\$49.75	\$51.24	\$52.78
R63D	Other Special ³	\$48.30	\$48.30	\$49.75	\$51.24	\$52.78
RAUG	Other Special ⁴	\$855.00	\$903.00	\$953.00	\$1,005.00	\$1,060.00

- (1) Rates to be implemented January 1, 2023, previously approved by the Board.
- (2) FYE 2024 and later Increases are assumed for projection purposes. Actual increases will reflect the provisions of each contract, agreement, or rate definition and conditions at the time of each update. Increases for R401, R402, R403, R500, R682, R693, and R4RC are assumed at 3.0-percent per year.
- (3) Equal to 50-percent of the winter agricultural rate (R43W or R63W)
- (4) Rate equal to Metropolitan Water District (MWD) Untreated Tier 1 rate per District rate definition. FYE 2023 and FYE 2024 set to adopted MWD rates. Subsequent years projected assuming 5.5-percent annual increases based on MWD’s projections.

Chapter 6

CONCLUSION AND RECOMMENDATIONS

Recycled water is an integral component of District’s operations as it provides for the beneficial reuse of treated wastewater and avoidance of disposal costs. Further, the use of recycled water benefits the regional water supply portfolio by decreasing pressure on the local groundwater basins and reducing dependency on imported water. As such, setting rates in a manner that promote the continued use of recycled water is imperative. Based on the results of the Study, Carollo recommends the following:

Rate Setting and Pricing Policies

- Continue to recognize the avoided cost benefit provided to the wastewater system by recycled water through the wastewater transfer.
- Include recycled water operating fixed assets and discretionary pension contributions in financial and rate planning for the recycled water system.
- Aim to maintain agricultural rates at a level that will not discourage recycled water use.

Revenue Requirements

- Plan for annual rate revenue increases for retail recycled water customers at 3.0 percent per year.

Cost Allocation and Rate Design

- Utilize the flexibility provided by the wastewater transfer to adopt rates as proposed in Table 6.1.
- Increase the wastewater transfer by approximately \$80,000 in FYE 2023 to support holding stabilized retail user increases to 3.0-percent in FYE 2023.
- Increase the wastewater transfer by an additional approximately \$80,000 in FYE 2024 to support holding backbone agricultural rates flat through the end of calendar year 2024.

Table 6.1 Proposed Retail User Rates

Rate Code	Rate Description	Current Rates	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027
			January 1, 2023	January 1, 2024	January 1, 2025	January 1, 2026	January 1, 2027
Backbone System Retail Customers							
R432	Summer Ag - Up to 4" Meter	\$165.26	\$165.26	\$165.26	\$170.22	\$175.32	\$180.58
R632	Summer Ag - 6" Meter and Larger	\$165.26	\$165.26	\$165.26	\$170.22	\$175.32	\$180.58
R43W	Winter Ag - Up to 4" Meter	\$96.61	\$96.61	\$96.61	\$99.51	\$102.49	\$105.57
R63W	Winter Ag - 6" Meter and Larger	\$96.61	\$96.61	\$96.61	\$99.51	\$102.49	\$105.57
Stabilized System Retail Customers							
R442	Demand Ag - Up to 4" Meter	\$484.99	\$499.54	\$514.53	\$529.96	\$545.86	\$562.24
R642	Demand Ag - 6" Meter and Larger	\$484.99	\$499.54	\$514.53	\$529.96	\$545.86	\$562.24
R462	Non-Ag - Up to 4" Meter	\$606.24	\$624.43	\$643.16	\$662.45	\$682.33	\$702.80
R662	Non-Ag - 6" Meter and Larger	\$606.24	\$624.43	\$643.16	\$662.45	\$682.33	\$702.80
RPRC	Non-Ag Pechanga	\$606.24	\$624.43	\$643.16	\$662.45	\$682.33	\$702.80
RC42	Temporary Construction	\$841.58	\$866.83	\$892.83	\$919.62	\$947.21	\$975.62

Appendix A

AVOIDED DISCHARGE COST ANALYSIS



	Fixed	Variable	actual FYE 2017	actual FYE 2018	actual FYE 2019	actual FYE 2020	actual FYE 2021
--	-------	----------	--------------------	--------------------	--------------------	--------------------	--------------------

Wastewater Discharge Costs

Assumed Inflation - June to June CPI:

Current Discharge Costs

Adjustment to Current Dollars:

046XXX - Dissipator								
Total 53150 - DIRECT LABOR	046XXX - Dissipator	29%	71%	\$ 35,050	\$ 14,272	\$ 50,455	\$ 65,116	\$ 55,663
Total 54120 - DIRECT MATERIALS	046XXX - Dissipator	21%	79%	7,921	2,528	17,853	9,365	14,904
Total 54140 - INVENTORY MATERIALS	046XXX - Dissipator	0%	100%	5,684	256	690	988	626
Total 55170 - ELECTRIC POWER	046XXX - Dissipator	0%	100%	3,175	3,055	3,221	5,622	4,856
Total 55472 - OTHER UTILITIES	046XXX - Dissipator	0%	100%	717	633	652	666	809
Total 56160 - OUTSIDE SERVICES	046XXX - Dissipator	0%	100%	186	77	6,388	2,411	5,354
Total 56164 - SAWPA FEES VOLUMETRIC	046XXX - Dissipator	0%	100%	979	-	7,739	1,457	1,482
Total 56166 - SAWPA FEES TSS&BOD	046XXX - Dissipator	0%	100%	308	-	301	19	-
Total 56177 - REPAIRS-OTHER	046XXX - Dissipator	100%	0%				353	-
Total 56180 - JANITORIAL SERVICES	046XXX - Dissipator	100%	0%	276	283	283	378	405
Total 56434 - TESTS-OUTSIDE LAB	046XXX - Dissipator	0%	100%	6,035	-	4,217	9,127	6,833
Total 56768 - OUTSIDE PERMIT FEES	046XXX - Dissipator	100%	0%	111,175	108,683	120,946	136,652	146,496
Total 56770 - SCAQMD FEES	046XXX - Dissipator	100%	0%	605	634	672	695	695
Total 57130 - OUTSIDE EQUIPMENT	046XXX - Dissipator	0%	100%	452	-	-	1,235	1,264
Total 57133 - MAINTENANCE CONTRACTS	046XXX - Dissipator	100%	0%	467	480	496	604	705
Total 57235 - EQUIPMENT RENTAL	046XXX - Dissipator	100%	0%	-	2,021	503	1,532	383
Total 58161 - EMPLOYEE TRAVEL AND MEAL EXPENSE	046XXX - Dissipator	100%	0%			30	-	-
Total 0098	GRAND TOTAL			\$ 173,028	\$ 132,922	\$ 214,446	\$ 236,220	\$ 240,476

047XXX - Dechlorination								
Total 53150 - DIRECT LABOR	047XXX - Dechlorination	93%	7%	\$ 28,576	\$ 30,221	\$ 23,482	\$ 44,656	\$ 36,701
Total 53160 - HAZMAT RESPONSE LABOR	047XXX - Dechlorination	0%	100%	800	-	-	5,714	-
Total 54120 - DIRECT MATERIALS	047XXX - Dechlorination	29%	71%	24,597	6,055	21,423	17,525	21,405
Total 54121 - NON-ELECTRONIC EQUIPMENT & FURNITUR	047XXX - Dechlorination	0%	100%	283	-	-	-	-
Total 54140 - INVENTORY MATERIALS	047XXX - Dechlorination	0%	100%	2,721	1,206	4,616	7,247	1,090
Total 54242 - CHEMICALS	047XXX - Dechlorination	0%	100%	63,194	-	142,860	154,280	43,868
Total 56160 - OUTSIDE SERVICES	047XXX - Dechlorination	0%	100%	9,926	-	11,381	14,612	1,736
Total 56177 - REPAIRS-OTHER	047XXX - Dechlorination	100%	0%				3,996	534
Total 56181 - REFUSE & WASTE HAULING	047XXX - Dechlorination	100%	0%	142	14,706	-	-	-
Total 57133 - MAINTENANCE CONTRACTS	047XXX - Dechlorination	100%	0%	1,229	864	1,152	1,152	1,256
Total 57235 - EQUIPMENT RENTAL	047XXX - Dechlorination	100%	0%	2,196	2,849	2,699	546	-
Total 58161 - EMPLOYEE TRAVEL AND MEAL EXPENSE	047XXX - Dechlorination	100%	0%			30	-	-
Total 0098	GRAND TOTAL			\$ 133,663	\$ 55,900	\$ 207,644	\$ 249,729	\$ 106,588

Total Discharge Cost				\$ 306,692	\$ 188,822	\$ 422,089	\$ 485,949	\$ 347,064
Actual AF Discharged				2,899	-	6,116	7,275	2,480
				AF	AF	AF	AF	AF



EASTERN MUNICIPAL WATER DISTRICT
RECYCLED WATER RATE STUDY
Avoided Wastewater Discharge Costs

	Fixed	Variable	<i>actual</i> FYE 2017	<i>actual</i> FYE 2018	<i>actual</i> FYE 2019	<i>actual</i> FYE 2020	<i>actual</i> FYE 2021
Estimated Avoided Costs With Fixed and Variable							
Fixed			\$ 161,622	\$ 165,114	\$ 173,130	\$ 213,283	\$ 210,006
Variable			\$ 145,069	\$ 23,708	\$ 248,959	\$ 272,666	\$ 137,058
Variable per AF			\$ 50.04		\$ 40.71	\$ 37.48	\$ 55.27
Variable Avoided Costs							
Fixed Avoided Costs							
Total Avoided Costs							
Capital Replacement Costs							
Annual Escalation							
Capital Replacement for Basic Cost Sharing							
Energy Dissipation							
Dechlorination							
Subtotal: Capital Replacement for Basic Cost Sharing							



EASTERN MUNICIPAL WATER DISTRICT
 RECYCLED WATER RATE STUDY
 Avoided Wastewater Discharge Costs

	adj. actual FYE 2017	adj. actual FYE 2018	adj. actual FYE 2019	adj. actual FYE 2020	adj. actual FYE 2021	Five Year Average
--	-------------------------	-------------------------	-------------------------	-------------------------	-------------------------	-------------------

Wastewater Discharge Costs

	1.6%	2.9%	1.6%	0.6%	5.4%	
Current Discharge Costs	1.13	1.11	1.08	1.06	1.05	
046XXX - Dissipator						
Total 53150 - DIRECT LABOR	\$ 39,511	\$ 15,830	\$ 54,401	\$ 69,070	\$ 58,664	\$ 47,495
Total 54120 - DIRECT MATERIALS	8,929	2,804	19,249	9,934	15,708	11,325
Total 54140 - INVENTORY MATERIALS	6,407	284	744	1,048	660	1,829
Total 55170 - ELECTRIC POWER	3,579	3,388	3,473	5,964	5,118	4,304
Total 55472 - OTHER UTILITIES	808	703	703	706	853	755
Total 56160 - OUTSIDE SERVICES	209	85	6,888	2,557	5,642	3,076
Total 56164 - SAWPA FEES VOLUMETRIC	1,104	-	8,344	1,546	1,562	2,511
Total 56166 - SAWPA FEES TSS&BOD	348	-	324	20	-	138
Total 56177 - REPAIRS-OTHER	-	-	-	374	-	75
Total 56180 - JANITORIAL SERVICES	311	314	305	401	427	352
Total 56434 - TESTS-OUTSIDE LAB	6,803	-	4,547	9,681	7,202	5,646
Total 56768 - OUTSIDE PERMIT FEES	125,326	120,548	130,405	144,950	154,394	135,124
Total 56770 - SCAQMD FEES	682	704	724	737	733	716
Total 57130 - OUTSIDE EQUIPMENT	509	-	-	1,310	1,333	630
Total 57133 - MAINTENANCE CONTRACTS	527	532	534	641	743	595
Total 57235 - EQUIPMENT RENTAL	-	2,242	542	1,625	404	963
Total 58161 - EMPLOYEE TRAVEL AND MEAL EXPENSE	-	-	32	-	-	6
Total 0098	\$ 195,052	\$ 147,433	\$ 231,217	\$ 250,564	\$ 253,441	\$ 215,541
047XXX - Dechlorination						
Total 53150 - DIRECT LABOR	\$ 32,213	\$ 33,520	\$ 25,319	\$ 47,368	\$ 38,680	\$ 35,420
Total 53160 - HAZMAT RESPONSE LABOR	902	-	-	6,061	-	1,393
Total 54120 - DIRECT MATERIALS	27,728	6,716	23,099	18,589	22,559	19,738
Total 54121 - NON-ELECTRONIC EQUIPMENT & FURNITUR	319	-	-	-	-	64
Total 54140 - INVENTORY MATERIALS	3,067	1,337	4,977	7,687	1,148	3,643
Total 54242 - CHEMICALS	71,237	-	154,032	163,648	46,233	87,030
Total 56160 - OUTSIDE SERVICES	11,189	-	12,271	15,500	1,830	8,158
Total 56177 - REPAIRS-OTHER	-	-	-	4,238	563	960
Total 56181 - REFUSE & WASTE HAULING	160	16,311	-	-	-	3,294
Total 57133 - MAINTENANCE CONTRACTS	1,385	958	1,242	1,222	1,323	1,226
Total 57235 - EQUIPMENT RENTAL	2,476	3,160	2,910	579	-	1,825
Total 58161 - EMPLOYEE TRAVEL AND MEAL EXPENSE	-	-	32	-	-	6
Total 0098	\$ 150,676	\$ 62,002	\$ 223,882	\$ 264,892	\$ 112,335	\$ 162,758
Total Discharge Cost	\$ 345,729	\$ 209,435	\$ 455,099	\$ 515,456	\$ 365,776	\$ 378,299
	2,899	-	6,116	7,275	2,480	3,754
	AF	AF	AF	AF	AF	AF



EASTERN MUNICIPAL WATER DISTRICT
 RECYCLED WATER RATE STUDY
Avoided Wastewater Discharge Costs

	<i>adj. actual</i> FYE 2017	<i>adj. actual</i> FYE 2018	<i>adj. actual</i> FYE 2019	<i>adj. actual</i> FYE 2020	<i>adj. actual</i> FYE 2021	Five Year Average
Estimated Avoided Costs With Fixed and Variable						
Fixed	\$ 182,194	\$ 183,139	\$ 186,670	\$ 226,233	\$ 221,328	\$ 199,913
Variable	\$ 163,534	\$ 26,296	\$ 268,429	\$ 289,222	\$ 144,448	\$ 178,386
Variable per AF	\$ 56.41		\$ 43.89	\$ 39.76	\$ 58.25	\$ 47.52
Variable Avoided Costs						
Fixed Avoided Costs						
Total Avoided Costs						
Capital Replacement Costs						
Annual Escalation						
Capital Replacement for Basic Cost Sharing						
Energy Dissipation						
Dechlorination						
Subtotal: Capital Replacement for Basic Cost Sharing						



	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027
--	----------	----------	----------	----------	----------	----------

Wastewater Discharge Costs

Current Discharge Costs

046XXX - Dissipator

Total 53150 - DIRECT LABOR	\$ 31,407	\$ 32,506	\$ 33,644	\$ 34,822	\$ 36,040	\$ 37,302
Total 54120 - DIRECT MATERIALS	4,318	4,448	4,581	4,718	4,860	5,006
Total 54140 - INVENTORY MATERIALS	1,311	1,350	1,391	1,433	1,476	1,520
Total 55170 - ELECTRIC POWER	4,670	4,857	5,051	5,253	5,463	5,682
Total 55472 - OTHER UTILITIES	700	728	757	787	819	852
Total 56160 - OUTSIDE SERVICES	-	-	-	-	-	-
Total 56164 - SAWPA FEES VOLUMETRIC	2,000	2,060	2,122	2,185	2,251	2,319
Total 56166 - SAWPA FEES TSS&BOD	-	-	-	-	-	-
Total 56177 - REPAIRS-OTHER	-	-	-	-	-	-
Total 56180 - JANITORIAL SERVICES	400	412	424	437	450	464
Total 56434 - TESTS-OUTSIDE LAB	1,000	1,030	1,061	1,093	1,126	1,159
Total 56768 - OUTSIDE PERMIT FEES	120,000	123,600	127,308	131,127	135,061	139,113
Total 56770 - SCAQMD FEES	700	721	743	765	788	811
Total 57130 - OUTSIDE EQUIPMENT	500	515	530	546	563	580
Total 57133 - MAINTENANCE CONTRACTS	505	520	536	552	568	585
Total 57235 - EQUIPMENT RENTAL	-	-	-	-	-	-
Total 58161 - EMPLOYEE TRAVEL AND MEAL EXPENSE	-	-	-	-	-	-

Total 0098	\$ 167,511	\$ 172,747	\$ 178,148	\$ 183,719	\$ 189,465	\$ 195,392
-------------------	-------------------	-------------------	-------------------	-------------------	-------------------	-------------------

047XXX - Dechlorination

Total 53150 - DIRECT LABOR	\$ 28,244	\$ 29,233	\$ 30,256	\$ 31,315	\$ 32,411	\$ 33,545
Total 53160 - HAZMAT RESPONSE LABOR	-	-	-	-	-	-
Total 54120 - DIRECT MATERIALS	18,102	18,645	19,204	19,781	20,374	20,985
Total 54121 - NON-ELECTRONIC EQUIPMENT & FURNITUR	-	-	-	-	-	-
Total 54140 - INVENTORY MATERIALS	3,207	3,303	3,402	3,504	3,610	3,718
Total 54242 - CHEMICALS	32,320	33,613	34,957	36,356	37,810	39,322
Total 56160 - OUTSIDE SERVICES	12,505	12,880	13,267	13,665	14,074	14,497
Total 56177 - REPAIRS-OTHER	-	-	-	-	-	-
Total 56181 - REFUSE & WASTE HAULING	-	-	-	-	-	-
Total 57133 - MAINTENANCE CONTRACTS	1,503	1,548	1,595	1,642	1,692	1,742
Total 57235 - EQUIPMENT RENTAL	-	-	-	-	-	-
Total 58161 - EMPLOYEE TRAVEL AND MEAL EXPENSE	-	-	-	-	-	-

Total 0098	\$ 95,881	\$ 99,222	\$ 102,681	\$ 106,262	\$ 109,970	\$ 113,809
-------------------	------------------	------------------	-------------------	-------------------	-------------------	-------------------

Total Discharge Cost	\$ 263,392	\$ 271,969	\$ 280,829	\$ 289,981	\$ 299,435	\$ 309,201
-----------------------------	-------------------	-------------------	-------------------	-------------------	-------------------	-------------------



EASTERN MUNICIPAL WATER DISTRICT
 RECYCLED WATER RATE STUDY
Avoided Wastewater Discharge Costs

	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027
Estimated Avoided Costs With Fixed and Variable						
Fixed	\$ 199,913	\$ 206,423	\$ 213,147	\$ 220,094	\$ 227,269	\$ 234,682
Variable	\$ 178,386	\$ 184,195	\$ 190,195	\$ 196,393	\$ 202,796	\$ 209,411
Variable per AF	\$ 47.52	\$ 49.07	\$ 50.66	\$ 52.32	\$ 54.02	\$ 55.78
Variable Avoided Costs	\$ 1,907,385	\$ 1,969,496	\$ 2,033,654	\$ 2,099,930	\$ 2,168,393	\$ 2,239,116
Fixed Avoided Costs	199,913	206,423	213,147	220,094	227,269	234,682
Total Avoided Costs	\$ 2,107,298	\$ 2,175,918	\$ 2,246,802	\$ 2,320,024	\$ 2,395,662	\$ 2,473,798
Capital Replacement Costs						
Annual Escalation		3.0%	3.0%	3.0%	3.0%	3.0%
Capital Replacement for Basic Cost Sharing						
Energy Dissipation	\$ 550,433	\$ 566,946	\$ 583,954	\$ 601,473	\$ 619,517	\$ 638,103
Dechlorination	272,978	281,168	289,603	298,291	307,239	316,457
Subtotal: Capital Replacement for Basic Cost Sharing	\$ 823,411	\$ 848,113	\$ 873,557	\$ 899,763	\$ 926,756	\$ 954,559



FYE 2022 FYE 2023 FYE 2024 FYE 2025 FYE 2026 FYE 2027

Wastewater Discharge Costs

Potential Additional Discharge Costs

Operating Costs for Facilities used to Discharge

Recycled Water Distribution

	Applicable to Discharge												
Projected O&M		\$	1,216,832	\$	1,257,070	\$	1,298,648	\$	1,341,609	\$	1,386,001	\$	1,431,871
0422 - METER MAINT, REPLACEMENT & INSTALLATION	No		62,930		64,956		67,047		69,205		71,434		73,735
0424 - CONTROL VALVE FACILITIES MAINTENANCE	Yes		11,836		12,228		12,633		13,051		13,483		13,930
0427 - TELEMETRY & CONTROL BURIED CABLES	Yes		778		803		829		855		883		911
0428 - CROSS CONNECTION & BACKFLOW DEVICE COSTS	No		466,023		481,414		497,316		513,746		530,722		548,261
0429 - OTHER	Yes		69,271		71,360		73,513		75,731		78,015		80,369
0420 - OPERATIONAL COSTS RECYC WATER DIST SYS	Yes		362,839		375,216		388,017		401,256		414,948		429,109
0421 - METER READING EXPENSE - RECYC WATER DIST S	No		6,889		7,130		7,380		7,638		7,905		8,182
0423 - PIPELINE MAINTENANCE & REPAIR - RECYC WATE	Yes		232,666		240,234		248,051		256,126		264,466		273,080
0425 - CATHODIC PROTECTION - RECYC WATER DIST SYS	Yes		3,600		3,729		3,863		4,001		4,145		4,294
Applicable to Discharge		\$	680,990	\$	703,571	\$	726,906	\$	751,020	\$	775,940	\$	801,693

Benefiting Discharge (Based on Asset Allocation/Pipeline) 72.7% 68.0% 68.0% 68.0% 68.0% 68.0%

Backbone System Recycled Water Distribution O&M \$ **495,080** \$ **478,382** \$ **494,248** \$ **510,644** \$ **527,588** \$ **545,098**

Recycled Water Pumping

	Energy* Elec/NG												
Leon Road Recycled Booster (to PZ 1627 or PZ1508)	55%	\$	89,400	\$	92,217	\$	95,124	\$	98,122	\$	101,215	\$	104,407
PALOMAR BOOSTER	73%		727,414		755,089		783,826		813,666		844,652		876,828
RANCHO CLUB DRIVE RECYC PS	24%		78,801		81,561		84,419		87,378		90,442		93,614
TEMECULA VALLEY RECYC PS			10,843		11,168		11,503		11,848		12,203		12,570
Applicable Facilities		\$	906,458	\$	940,035	\$	974,871	\$	1,011,014	\$	1,048,512	\$	1,087,418

**based on analysis of line-item costs*

Electricity and Natural Gas \$ 598,059 \$ 620,431 \$ 643,650 \$ 667,747 \$ 692,756 \$ 718,712

Discharge Related (During Discharge) 100.0% 100.0% 100.0% 100.0% 100.0% 100.0%

Full Discharge Recycled Water Pumping O&M \$ **906,458** \$ **940,035** \$ **974,871** \$ **1,011,014** \$ **1,048,512** \$ **1,087,418**



	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027
--	----------	----------	----------	----------	----------	----------

Maximum Wastewater Transfer Options

Include Ponds, Approx 40,000 Discharged

Amount Discharged	40,460	40,460	40,460	40,460	40,460	40,460
Avoided Discharge O&M Costs						
Energy Dissipation and Dechlorination	\$ 2,122,505	\$ 2,191,621	\$ 2,263,016	\$ 2,336,766	\$ 2,412,950	\$ 2,491,650
Pipelines	495,080	478,382	494,248	510,644	527,588	545,098
Pumping	906,458	940,035	974,871	1,011,014	1,048,512	1,087,418
Storage Ponds	271,437	280,499	289,866	299,550	309,560	319,908
Subtotal: Avoided Discharge O&M Costs	\$ 3,795,480	\$ 3,890,537	\$ 4,022,002	\$ 4,157,974	\$ 4,298,611	\$ 4,444,074
Avoided Discharge Capital Replacement Costs						
Energy Dissipation and Dechlorination	\$ 823,411	\$ 848,113	\$ 873,557	\$ 899,763	\$ 926,756	\$ 954,559
Pipelines	1,868,185	1,924,231	1,981,958	2,041,416	2,102,659	2,165,739
Pumping	777,871	777,871	777,871	777,871	777,871	777,871
Storage Ponds	378,454	378,454	378,454	378,454	378,454	378,454
Subtotal: Avoided Discharge Capital Replacement Costs	\$ 3,847,922	\$ 3,928,670	\$ 4,011,840	\$ 4,097,506	\$ 4,185,741	\$ 4,276,623
Option A: Total Avoided Discharge Costs	\$ 7,643,402	\$ 7,819,207	\$ 8,033,842	\$ 8,255,480	\$ 8,484,352	\$ 8,720,698

Exclude Ponds, Approx 48,000 Discharged

Amount Discharged	48,166	48,166	48,166	48,166	48,166	48,166
Avoided Discharge O&M Costs						
Energy Dissipation and Dechlorination	\$ 2,488,713	\$ 2,569,754	\$ 2,653,467	\$ 2,739,942	\$ 2,829,270	\$ 2,921,548
Pipelines	495,080	478,382	494,248	510,644	527,588	545,098
Pumping	1,020,374	1,058,213	1,097,471	1,138,204	1,180,466	1,224,315
Subtotal: Avoided Discharge O&M Costs	\$ 4,004,167	\$ 4,106,349	\$ 4,245,186	\$ 4,388,790	\$ 4,537,324	\$ 4,690,962
Avoided Discharge Capital Replacement Costs						
Energy Dissipation and Dechlorination	\$ 823,411	\$ 848,113	\$ 873,557	\$ 899,763	\$ 926,756	\$ 954,559
Pipelines	1,868,185	1,924,231	1,981,958	2,041,416	2,102,659	2,165,739
Pumping	777,871	777,871	777,871	777,871	777,871	777,871
Subtotal: Avoided Discharge Capital Replacement Costs	\$ 3,469,468	\$ 3,550,216	\$ 3,633,386	\$ 3,719,051	\$ 3,807,287	\$ 3,898,169
Option B: Total Avoided Discharge Costs	\$ 7,473,635	\$ 7,656,564	\$ 7,878,572	\$ 8,107,841	\$ 8,344,611	\$ 8,589,131

Appendix B

RECYCLED WATER MARKET ANALYSIS

RECYCLED WATER MARKET ANALYSIS

A market analysis for recycled water was conducted as a component of the study to provide insight and guidance to the rate making process. The majority of recycled water sales are to agricultural users who are particularly price conscious, many of whom have access to wells to pump groundwater as an alternative source. Thus, to meet the goals of maximizing recycled water sales and revenues, care needs to be taken in rate setting to avoid disincentivizing agricultural usage. While the results of the market analysis are not used directly in rate setting, they provided a valuable comparison point for the calculated rates to ensure the continued affordability of recycled water.

The market analysis analyzed the current agricultural user customer base to determine the blended cost paid by customers by rate class and to understand how different types of customers are utilizing the water. It also included an analysis to estimate the cost for users to switch to groundwater pumping to understand the level of recycled water rates that could cause customers to abandon recycled water service.

1.1 Agricultural Customer Base

Customer billing data from July 2018 through June of 2021 was analyzed to understand the usage characteristics of the District's agricultural recycled water users. Based on the analyzed dataset, 77 active agricultural users were identified. The majority of the users are in the R432 and R632 customer classes and are charged at the standard agricultural rates (current rates of \$165.26 in the summer months and \$96.61 in the winter months). A summary of the users by rate class and crop type (as recorded in the District billing system) is shown below in Table 1.

Table 1 Identified Agricultural Users

Crop Type	Customer Type	In-Lieu Agreement R693	Backbone Retail R432	Backbone Retail R632	Demand Ag R442	Demand Ag R642	All Users
	CY 2022 \$/AF	\$95.38	S - \$165.26 W - \$96.61	S - \$165.26 W - \$96.61	\$484.99	\$484.99	
DL - AG - RECYCLED FODDER		4	3	18			25
DI - RCYL - AG- ROW-MIXED VEGRTABLE				4	6	7	17
DO - RYCL-AG-ROW CROPS- GRAINS				11			11
DF - AG - CROPS - ROW				7	1		8
DM - RYCL- AG- ROW- POTATOES				5			5
DP - RYCL-AG-SOD				5			5
DQ - RECYL-AG-NURSERY					3		3
DG - AG - CROPS - SOD				2			2
DB - AG - DAIRY				1			1
All Types		4	3	53	10	7	77

Table 2 shows the three-year average usage by agricultural recycled water customers. Customers in the standard agricultural classes (R432 and R632) comprise a majority of sales

Table 2 Agricultural Users Average Usage

Crop Type	Customer Type	In-Lieu Agreement R693	Backbone Retail R432	Backbone Retail R632	Demand Ag R442	Demand Ag R642	All Users
	CY 2022 \$/AF	\$95.38	S - \$165.26 W - \$96.61	S - \$165.26 W - \$96.61	\$484.99	\$484.99	
DL - AG - RECYCLED FODDER		2,980	171	5,530			8,680
DI - RCYL - AG- ROW-MIXED VEGRTABLE				1,078	196	888	2,163
DO - RYCL-AG-ROW CROPS- GRAINS				1,812			1,812
DF - AG - CROPS - ROW				2,181	29		2,210
DM - RYCL- AG- ROW- POTATOES				1,228			1,228
DP - RYCL-AG-SOD				2,216			2,216
DQ - RECYL-AG-NURSERY					17		17
DG - AG - CROPS - SOD				1,016			1,016
DB - AG - DAIRY				116			116
All Types		2,980	171	15,177	242	888	19,475

Figure 1 shows the three year average percentage of recycled water use and revenues for customers in each rate class. The standard agricultural rate classes (R432 and R632) made up approximately 81-percent of use and approximately 72-percent of revenues.

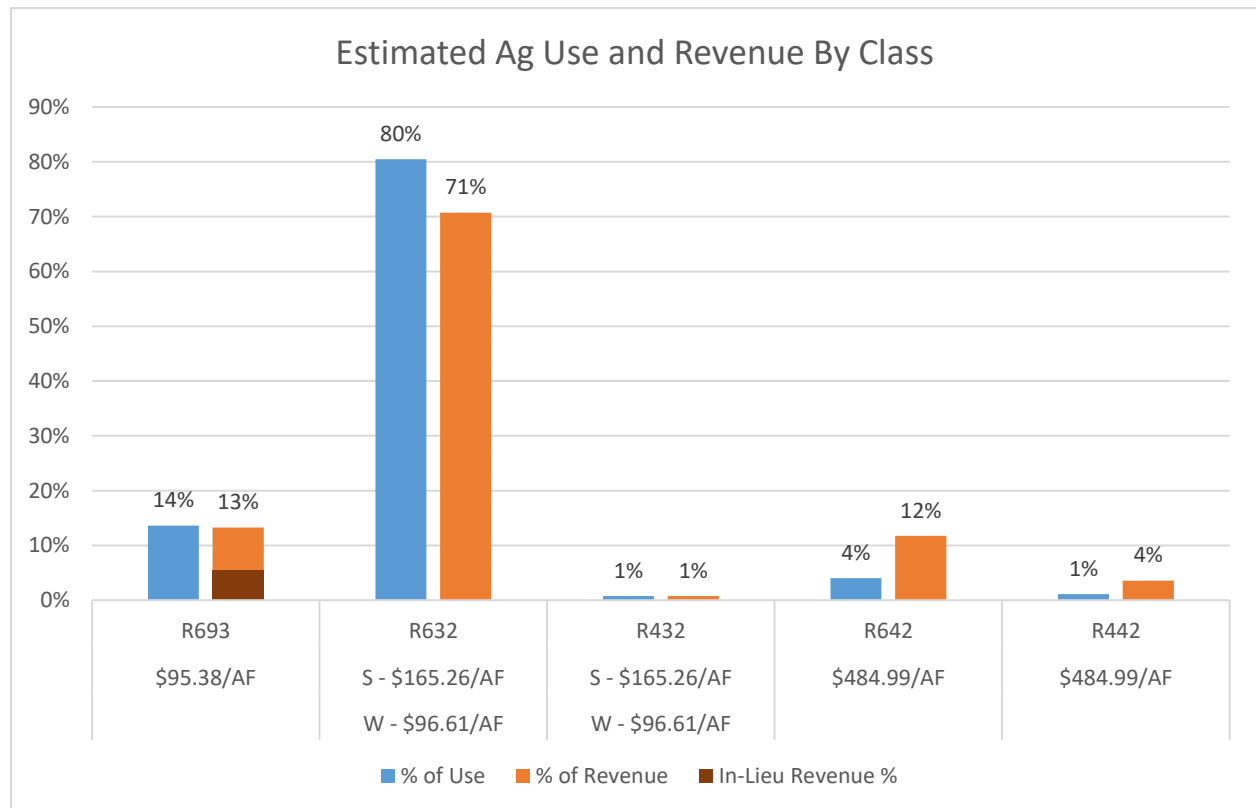


Figure 1 Estimated Agricultural Use and Revenue by Class

Figure 2 shows the number of customers by annual use in 100 AF per year (AFY) increments as well as the percentage of total use from customers within each increment. During the years evaluated, approximately one third (25 customers) used 100 AFY or less on average comprising only 4-percent of total usage. 38 customers used between 100 AFY and 500 AFY per year comprising 46-percent of total sales, 12 customers used between 500 and 1,000 AFY comprising 39-percent of total sales, and just 2 customers used over 1,000 AFY comprising 11-percent of total sales.

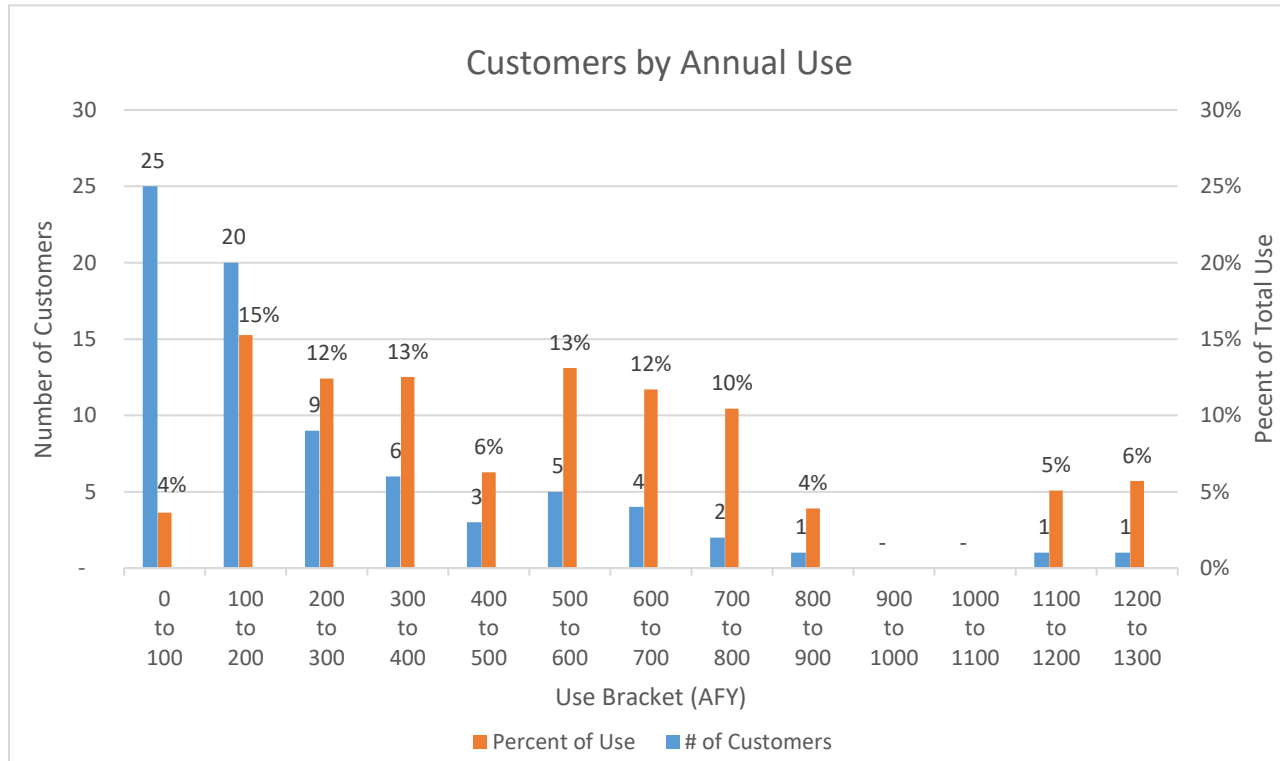


Figure 2 Customers by Annual Use

Based on the analysis of the recycled water customer base, the affordability assessment focused on customers in the standard agricultural rate classes (R432 and R632) for the following reasons.

1. Customers in the standard agricultural rate classes (R432 and R632) make up the majority of the connections, use, and revenue.
2. In-Lieu Agreement (R693) customers’ rates are governed by their contract and increases are set to match the inflation
3. Demand Ag (R442 and R642) customers comprise only a small amount of overall agricultural usage and have opted into the more expensive rate class to receive a higher level of service.
4. Many customers in the standard agricultural rate classes (R432 and R632) have access to groundwater and they are the most likely to switch to groundwater pumping if recycled water becomes prohibitively expensive.

1.2 Estimated Pumping Costs

The primary alternative source of water for the District’s agricultural customers is pumped groundwater. Thus, the approximate cost for users to pump groundwater is a valuable as a comparison point for the

current recycled water rates and can give insight into the level of recycled water rates that could be supported without driving users to alternative sources of water.

Estimated pumping costs were determined for a range of well sizes and well total dynamic head (TDH) using information from the customer billing records, estimated capital costs for wells, electricity rates from Southern California Edison (SCE), as well as other data sources and guidance provided by this District. The analysis used the following general steps to estimate pumping costs:

1. Estimate well sizing in gallons per minute (gpm) using average AF deliveries and assumed run time based on customer data
2. Estimate capital cost for each size of well
3. Estimate annual maintenance costs based on a high level assumption of 1-percent of capital construction costs incurred for maintenance each year
4. Estimate energy costs based on SCE small-medium or large irrigation pumping rates assuming a low TDH of 300ft and a high TDH of 500ft
Note: Based on District records wells in the East Valley show debt to water varying between approximately 140ft (static) and 600ft (pumping)
5. Sum energy and maintenance costs to estimate the cost per acre-ft to operate and maintain existing wells

1.2.1 Well Capacity and Costs

Table 3 shows the assumed well capacities that were used to estimate pumping costs. The range of capacities was set to roughly align with the usage brackets shown previously in Figure 2. The AF capacity for each size of well is calculated assuming that any well could be run for 30-percent of the time over the course of an entire year. Based on the average seasonality of recycled water demands, this would result in a typical well running for between 10 and 12 hours per day in the highest demand summer months and between 2 and 3 hours per day in the winter.

Table 3 Analyzed Well Capacities and Costs

Well GPM	Total AFY (based on 30% run factor)	Well Capital Cost (\$M) ^{1,2}	Annual Maintenance Cost (\$)	Maintenance Cost per AF (\$)
2,500	1,210	\$1.56	\$15,600	\$13
2,000	968	\$1.36	\$13,600	\$14
1,500	726	\$1.15	\$11,500	\$16
1,000	484	\$0.90	\$9,000	\$19
750	363	\$0.76	\$7,600	\$21
500	242	\$0.59	\$5,900	\$24
250	121	\$0.39	\$3,900	\$32
125	60	\$0.26	\$2,600	\$43

- (1) Well capital costs estimated at \$900,000 for a 1,000 gpm, 800 ft deep well based on a drilling quote from LO Lynch and assumed mechanical and outfitting costs of approximately \$500,000.
- (2) Capital costs for other GPM capacities are estimated using a standard 0.6 scaling factor.
Equation: $Cost\ B = Cost\ A \times (Capacity\ B / Capacity\ A)^{0.6}$

1.2.2 Electricity Costs

Electricity costs are based on the current SCE tariff schedule, the GPM capacity of each well, the 30-percent run factor, and assumed TDH. An all-in blended rate of \$0.20 per kWh was assumed to calculate electricity costs per AF produced for each well capacity. The \$0.20 per kWh is inclusive of all SCE charges (delivery, generation, customer charge, and demand charges) and was confirmed by calculating electricity costs for each well capacity per SCE's rate structure as described below.

1. Energy demands for each well capacity were estimated based on TDH, GPM, and seasonality of water use.
2. The applicable time of use rates schedule was determined for each well capacity based on the estimated electricity needs either Small-Medium Ag and Pumping <200 kW (Schedule TOU-PA-2-RTP) or Large Ag and Pumping >200kW (Schedule TOU-PA-3-RTP).
 - a. The detailed analysis of SCE rates for each well capacity yielded blended dollar per kWh costs ranging from \$0.19 to \$0.22 per kWh.
 - b. To simplify the analysis for comparison purposes, an assumed blended cost of \$0.20 per kWh was applied to all well capacities.
3. Energy costs per AF were calculated by applying the assumed cost per kWh to the kWh demands for each well capacity and dividing by the AF produced.

The analysis of electricity costs resulted in estimated energy costs of \$111 per AF at 300ft of TDH and \$185 per AF at 500ft of TDH.

1.2.3 Operating and Maintenance Costs per AF

The estimated operation and maintenance (O&M) cost for each well capacity equal to the sum of the maintenance cost per AF from Table 3 and the electricity cost per AF describes previously. Table 4 and Table 5 show the estimated O&M costs for each well capacity, respectively.

At 300ft of TDH, estimated pumping costs vary from \$124 per AF for the largest wells to \$154 per AF for the smallest. This range of costs falls below the current standard agricultural rate for the summer (\$165.26) but above the winter rate (\$96.61).

At 500ft of TDH, estimated pumping costs vary from \$198 per AF for the largest wells to \$228 per AF for the smallest wells, above the current summer rate of \$165.26.

When seasonal demands and the current rates are applied to the current R432 and R632 users, their estimated all-in cost per AF ranges from approximately \$145 per AF to \$200 per AF for typical users. Users with very low usage pay higher effective rates per AF due to the cost of their DSCs being spread over less consumption, however this applies to only a small number of users.

Table 4 Estimated Pumping O&M, 300 ft TDH

Well GPM	2,500	2,000	1,500	1,000	750	500	250	125
Total AFY (based on 30% run factor)	1,210	968	726	484	363	242	121	60
Cost per AF								
Well O&M (1% of construction cost)	\$13	\$14	\$16	\$19	\$21	\$24	\$32	\$43
Energy Cost per AF	\$111	\$111	\$111	\$111	\$111	\$111	\$111	\$111
O&M Cost per AF 300' TDH	\$124	\$125	\$127	\$130	\$132	\$135	\$143	\$154

Table 5 Estimated Pumping O&M, 500 ft TDH

Well GPM	2,500	2,000	1,500	1,000	750	500	250	125
Total AFY (based on 30% run factor)	1,210	968	726	484	363	242	121	60
Cost per AF								
Well O&M (1% of construction cost)	\$13	\$14	\$16	\$19	\$21	\$24	\$32	\$43
Energy Cost per AF	\$185	\$185	\$185	\$185	\$185	\$185	\$185	\$185
O&M Cost per AF 500' TDH	\$198	\$199	\$201	\$204	\$206	\$209	\$217	\$228

Figure 3 compares the estimated pumping cost for each well capacity to the estimated blended cost per AF paid by the District’s agricultural users under the current rates. As shown, the current summer rates for standard agricultural customers are within the range of estimated pumping costs. Costs for in-lieu customers (R693) fall below estimated pumping costs. Demand agricultural users costs are above the cost to pump however those users have opted into that rate class in order to receive a higher level of service.

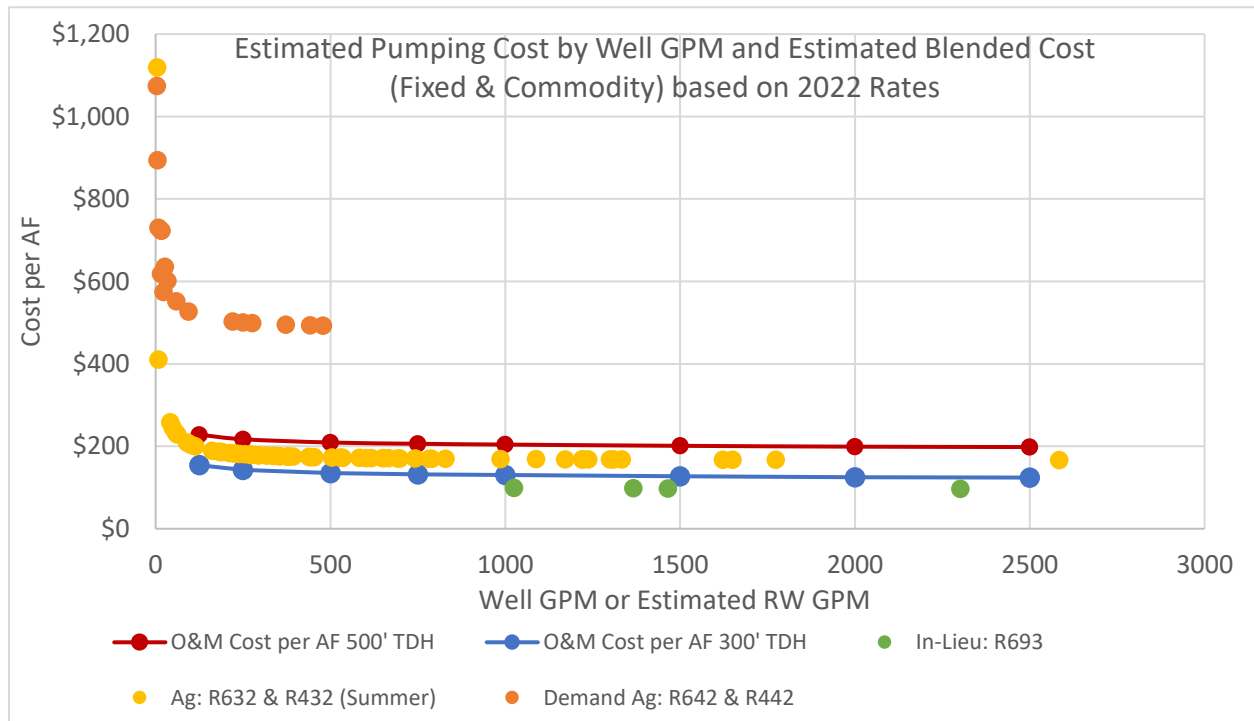


Figure 3 Estimated Pumping Cost by Well GPM and Estimated Blended Cost for Recycled Users

1.3 Conclusions

Ultimately, the market analysis shows that the current agricultural rates are in-line with estimated groundwater pumping costs and the District concluded that keeping agricultural rates at or near the current level would likely not adversely affect sales. Further, development of new wells would be very costly for users without existing wells as evidenced by the estimated capital costs shown in Table 3. This could preclude many users from developing new wells.

Appendix C

PROJECTED OPERATIONS AND MAINTENANCE COSTS

		actual	budget	Forecasted -->					
	ESCALATOR FACTOR	FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027	

REVENUES

RATE REVENUE		* Rate Revenue "before" Increase (Revenue from Increase in Revenue Requirement)							
41900 - RECYCLED WATER-COMMODITY CHG	[calculated]								
Recycled Rate		\$ 7,804,450	\$ 6,434,681	\$ 6,550,489	\$ 6,550,489	\$ 6,550,489	\$ 6,550,489	\$ 6,550,489	\$ 6,550,489
Potable Chained		\$ 1,136,107	\$ 1,180,607	\$ 1,214,802	\$ 1,214,802	\$ 1,251,246	\$ 1,288,784	\$ 1,327,447	\$ 1,327,447
F&W Agreement		\$ 269,491	\$ 323,397	\$ 388,053	\$ 388,053	\$ 399,694	\$ 411,685	\$ 424,036	\$ 424,036
In-Lieu Agreement		\$ 248,995	\$ 257,946	\$ 267,250	\$ 267,250	\$ 275,267	\$ 283,525	\$ 292,031	\$ 292,031
41901 - RECYCLED WATER-DAILY SERVICE CHG		581,425	671,841	700,588	733,110	769,765	808,253	848,666	
41910 - RECYCLED WATER COMMODITY - TAKE-OR-PAY (MISC A	[calculated]	741,492	707,417	720,159	741,764	764,017	786,938	810,546	
41915 - RECYCLED WATER COMMODITY - IN-LIEU SUBSIDY (MIS	[calculated]	120,078	144,829	137,700	131,555	135,502	139,567	143,754	
41920 - RECYCLED WATER-GRP CREDIT	One time revenue	701,928	142,500	-	-	-	-	-	
Subtotal RATE REVENUE		\$ 9,949,372	\$ 9,755,861	\$ 9,870,886	\$ 10,027,022	\$ 10,145,980	\$ 10,269,241	\$ 10,396,968	

OTHER REVENUES									
57500 - INTERFUND TRANSFERS (from WW)	WW Transfer Revenue	\$ 3,100,000	\$ 3,353,750	\$ 3,420,825	\$ 3,489,242	\$ 3,559,026	\$ 3,630,207	\$ 3,702,811	
57500 - INTERFUND TRANSFERS	Demand + Growth	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Support From Potable Water	[Input on Dashboard]	-	-	-	-	-	-	-	
Additional Support From Wastewater	[Input on Dashboard]	-	-	-	-	-	-	-	
FPC Revenues for Debt Service	[Calculated]	-	1,068,633	1,274,731	1,298,139	2,503,961	2,501,038	2,489,371	
Subtotal OTHER REVENUES		\$ 3,100,000	\$ 4,422,383	\$ 4,695,556	\$ 4,787,380	\$ 6,062,987	\$ 6,131,244	\$ 6,192,182	
TOTAL REVENUES		\$ 13,049,372	\$ 14,178,244	\$ 14,566,442	\$ 14,814,402	\$ 16,208,968	\$ 16,400,485	\$ 16,589,150	

EXPENSES

RECYCLED WATER ALLOCATED SUPPORT									
GENERAL									
0490 - OPERATIONS SUPERVISION									
53150 - DIRECT LABOR	Labor	\$ 180,752	\$ 207,850	\$ 215,125	\$ 222,654	\$ 230,447	\$ 238,513	\$ 246,861	
0493 - PIPELINE LOCATING									
53150 - DIRECT LABOR	Labor	43,772	60,368	62,481	64,668	66,931	69,274	71,698	
0492 - RESOURCE DEVELOPMENT PROJECT									
54140 - INVENTORY MATERIALS	Operations	-	-	-	-	-	-	-	
0498 - ALLOCATED COSTS - RECYC WATER ADMIN OPS									
59174 - WASTEWATER COLLECTION SERVICE ALLOC - 796	Operations	30,927	29,649	30,538	31,455	32,398	33,370	34,371	
59175 - REGULATORY COMPLIANCE ALLOC - 747	Operations	224,694	271,103	279,236	287,613	296,242	305,129	314,283	
59177 - MAINTENANCE SERVICES ALLOC - 750	Operations	217,583	211,819	218,174	224,719	231,460	238,404	245,556	
59178 - ELECTRICAL SERVICES ALLOC - 755	Operations	298,144	362,351	373,222	384,418	395,951	407,829	420,064	
59179 - ASSET & FACILITIES MGMT ALLOC - 757	Operations	295,921	321,449	331,092	341,025	351,256	361,794	372,647	
59183 - MAPS & RECORDS ALLOC-735,736,767		642,286							
735 - ENGINEERING SERVICES	Operations		783,229	806,726	830,928	855,855	881,531	907,977	
736 - RECORDS MANAGEMENT	Operations		25,535	26,301	27,090	27,903	28,740	29,602	
767 - COPY CENTER	Operations		57,365	59,086	60,859	62,684	64,565	66,502	
59184 - RECYCLED WATER OPS ALLOC-754	Operations	679,361	744,487	766,822	789,826	813,521	837,927	863,064	
59185 - FIELD SVCS CONSTRUCTION ALLOC-753	Operations	121,393	125,776	129,549	133,436	137,439	141,562	145,809	
59187 - DEVELOPMENT SERVICES - 733	Operations	401,720	427,214	440,030	453,231	466,828	480,833	495,258	
59188 - LABORATORY ALLOCATION-749	Operations	42,296	49,495	50,980	52,509	54,085	55,707	57,378	
59192 - WATER OPS CENTRAL CONTROL ALLOC-741	Operations	224,044	235,530	242,596	249,874	257,370	265,091	273,044	
59193 - WATER OPS ADMIN ALLOC-743	Operations	218,465	226,382	233,173	240,169	247,374	254,795	262,439	
59194 - MECHANICAL SVCS ALLOC-745	Operations	344,276	378,372	389,723	401,415	413,457	425,861	438,637	
Subtotal RECYCLED WATER ALLOCATED SUPPORT		\$ 3,965,635	\$ 4,517,974	\$ 4,654,854	\$ 4,795,888	\$ 4,941,201	\$ 5,090,924	\$ 5,245,191	

RECYCLED WATER DECHLORINATION FACILITY									
GENERAL									
0470 - OPERATIONAL COSTS									
53150 - DIRECT LABOR	Labor	\$ 29,389	\$ 20,151	\$ 20,857	\$ 21,587	\$ 22,342	\$ 23,124	\$ 23,934	
53160 - HAZMAT RESPONSE LABOR	Labor	-	-	-	-	-	-	-	
54120 - DIRECT MATERIALS	Operations	5,885	5,000	5,150	5,305	5,464	5,628	5,796	
54140 - INVENTORY MATERIALS	Operations	917	2,000	2,060	2,122	2,185	2,251	2,319	
54242 - CHEMICALS	Chemicals	43,868	32,320	33,613	34,957	36,356	37,810	39,322	
56160 - OUTSIDE SERVICES	Operations	220	5,510	5,676	5,846	6,021	6,202	6,388	
56177 - REPAIRS-OTHER	Operations	534	-	-	-	-	-	-	
57133 - MAINTENANCE CONTRACTS	Operations	1,152	1,200	1,236	1,273	1,311	1,351	1,391	
57235 - EQUIPMENT RENTAL	Operations	-	-	-	-	-	-	-	
58161 - EMPLOYEE TRAVEL AND MEAL EXPENSE	Operations	-	-	-	-	-	-	-	
0472 - GROUNDS MAINTENANCE									
54120 - DIRECT MATERIALS	Operations	\$ -	\$ 151	\$ 156	\$ 160	\$ 165	\$ 170	\$ 175	
54140 - INVENTORY MATERIALS	Operations	-	101	104	107	110	114	117	
0473 - BUILDING STRUCTURE MAINT & REPAIR									
53150 - DIRECT LABOR	Labor	\$ 200	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
54120 - DIRECT MATERIALS	Operations	-	151	156	160	165	170	175	
54140 - INVENTORY MATERIALS	Operations	-	101	104	107	110	114	117	
56160 - OUTSIDE SERVICES	Operations	110	505	520	536	552	568	585	
57133 - MAINTENANCE CONTRACTS	Operations	104	303	312	321	331	341	351	
57235 - EQUIPMENT RENTAL	Operations	-	-	-	-	-	-	-	
58161 - EMPLOYEE TRAVEL AND MEAL EXPENSE	Operations	-	-	-	-	-	-	-	
0474 - PIPING/VALVES MAINT & REPAIR									
53150 - DIRECT LABOR	Labor	\$ 2,919	\$ 3,486	\$ 3,608	\$ 3,734	\$ 3,865	\$ 4,000	\$ 4,140	
53160 - HAZMAT RESPONSE LABOR	Labor	-	-	-	-	-	-	-	
54120 - DIRECT MATERIALS	Operations	7,405	4,000	4,120	4,244	4,371	4,502	4,637	
54140 - INVENTORY MATERIALS	Operations	-	505	520	536	552	568	585	
0476 - GENERAL ELECTRICAL MAINT & REPAIR									
53150 - DIRECT LABOR	Labor	\$ 2,172	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
54120 - DIRECT MATERIALS	Operations	343	-	-	-	-	-	-	
54140 - INVENTORY MATERIALS	Operations	100	-	-	-	-	-	-	
0477 - TELEMETRY MAINT & REPAIR									
53150 - DIRECT LABOR	Labor	\$ 1,537	\$ 4,283	\$ 4,433	\$ 4,588	\$ 4,749	\$ 4,915	\$ 5,087	
54120 - DIRECT MATERIALS	Operations	1,797	1,800	1,854	1,910	1,967	2,026	2,087	
54140 - INVENTORY MATERIALS	Operations	73	500	515	530	546	563	580	
57235 - EQUIPMENT RENTAL	Operations	-	-	-	-	-	-	-	
0478 - CHEMICAL EQUIPMENT MAINTENANCE & REPAIR									
54120 - DIRECT MATERIALS	Operations	\$ 5,974	\$ 7,000	\$ 7,210	\$ 7,426	\$ 7,649	\$ 7,879	\$ 8,115	
56160 - OUTSIDE SERVICES	Operations	931	6,000	6,180	6,365	6,556	6,753	6,956	
Subtotal GENERAL		\$ 105,630	\$ 95,068	\$ 98,383	\$ 101,815	\$ 105,368	\$ 109,048	\$ 112,857	

LA VENTAN DECHLORINATION FACILITY									
0470 - OPERATIONAL COSTS									
53150 - DIRECT LABOR	Labor	\$ 313	\$ 324	\$ 335	\$ 347	\$ 359	\$ 371	\$ 384	

	ESCALATOR FACTOR	actual		budget				
		FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027
54120 - DIRECT MATERIALS	Operations	-	-	-	-	-	-	-
54140 - INVENTORY MATERIALS	Operations	-	-	-	-	-	-	-
56160 - OUTSIDE SERVICES	Operations	475	490	504	519	535	551	568
0473 - BUILDING STRUCTURE MAINT & REPAIR								
53150 - DIRECT LABOR	Labor	\$ 170	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
56160 - OUTSIDE SERVICES	Operations	-	-	-	-	-	-	-
Subtotal LA VENTANA DECHLORINATION FACILITY		\$ 958	\$ 813	\$ 839	\$ 866	\$ 894	\$ 922	\$ 952
Subtotal RECYCLED WATER DECHLORINATION FACILITY		\$ 106,588	\$ 95,881	\$ 99,222	\$ 102,681	\$ 106,262	\$ 109,970	\$ 113,809

RECYCLED WATER DISTRIBUTION SYSTEM

GENERAL								
0422 - METER MAINT, REPLACEMENT & INSTALLATION								
53150 - DIRECT LABOR	Labor	\$ 29,967	\$ 27,526	\$ 28,489	\$ 29,487	\$ 30,519	\$ 31,587	\$ 32,692
54120 - DIRECT MATERIALS	Operations	15,991	20,604	21,222	21,859	22,515	23,190	23,886
54140 - INVENTORY MATERIALS	Operations	16,203	12,000	12,360	12,731	13,113	13,506	13,911
56160 - OUTSIDE SERVICES	Operations	6,501	-	-	-	-	-	-
57130 - OUTSIDE EQUIPMENT	Operations	586	-	-	-	-	-	-
57235 - EQUIPMENT RENTAL	Operations	3,332	2,800	2,884	2,971	3,060	3,151	3,246
58161 - EMPLOYEE TRAVEL AND MEAL EXPENSE	Operations	-	-	-	-	-	-	-
0424 - CONTROL VALVE FACILITIES MAINTENANCE								
53150 - DIRECT LABOR	Labor	\$ 3,644	\$ 7,336	\$ 7,593	\$ 7,859	\$ 8,134	\$ 8,418	\$ 8,713
54120 - DIRECT MATERIALS	Operations	402	1,500	1,545	1,591	1,639	1,688	1,739
54140 - INVENTORY MATERIALS	Operations	2,249	3,000	3,090	3,183	3,278	3,377	3,478
56160 - OUTSIDE SERVICES	Operations	-	-	-	-	-	-	-
57235 - EQUIPMENT RENTAL	Operations	-	-	-	-	-	-	-
0427 - TELEMETRY & CONTROL BURIED CABLES								
53150 - DIRECT LABOR	Labor	\$ 147	\$ 328	\$ 339	\$ 351	\$ 364	\$ 376	\$ 390
54120 - DIRECT MATERIALS	Operations	-	250	258	265	273	281	290
54140 - INVENTORY MATERIALS	Operations	-	200	206	212	219	225	232
0428 - CROSS CONNECTION & BACKFLOW DEVICE COSTS								
53150 - DIRECT LABOR	Labor	\$ 252,469	\$ 282,023	\$ 291,894	\$ 302,110	\$ 312,684	\$ 323,628	\$ 334,955
54120 - DIRECT MATERIALS	Operations	337	4,000	4,120	4,244	4,371	4,502	4,637
56160 - OUTSIDE SERVICES	Operations	132,126	170,000	175,100	180,353	185,764	191,336	197,077
56179 - MAJOR MAINTENANCE & REPAIR-UNPLANNED	Operations	-	10,000	10,300	10,609	10,927	11,255	11,593
0429 - OTHER								
53150 - DIRECT LABOR	Labor	\$ 1,015	\$ 2,271	\$ 2,350	\$ 2,433	\$ 2,518	\$ 2,606	\$ 2,697
56160 - OUTSIDE SERVICES	Operations	53,240	55,000	56,650	58,350	60,100	61,903	63,760
56768 - OUTSIDE PERMIT FEES	Operations	7,197	12,000	12,360	12,731	13,113	13,506	13,911
Subtotal GENERAL		\$ 525,405	\$ 610,838	\$ 630,761	\$ 651,337	\$ 672,588	\$ 694,537	\$ 717,206

RECYC WATER DIST SYS

0420 - OPERATIONAL COSTS RECYC WATER DIST SYS								
53150 - DIRECT LABOR	Labor	\$ 281,395	\$ 298,439	\$ 308,884	\$ 319,695	\$ 330,885	\$ 342,466	\$ 354,452
53151 - ENGINEERING LABOR	Labor	-	-	-	-	-	-	-
53550 - STANDBY LABOR	Labor	604	-	-	-	-	-	-
54120 - DIRECT MATERIALS	Operations	15,084	20,000	20,600	21,218	21,855	22,510	23,185
54140 - INVENTORY MATERIALS	Operations	28,040	20,000	20,600	21,218	21,855	22,510	23,185
54446 - TOOLS	Operations	-	-	-	-	-	-	-
55170 - ELECTRIC POWER	Energy	-	-	-	-	-	-	-
55472 - OTHER UTILITIES	Utilities	-	-	-	-	-	-	-
56160 - OUTSIDE SERVICES	Operations	10,020	15,000	15,450	15,914	16,391	16,883	17,389
56179 - MAJOR MAINTENANCE & REPAIR-UNPLANNED	Construction / Capital	77,951	-	-	-	-	-	-
56267 - CONSULTANTS-ENGINEERING	Operations	1,760	3,000	3,090	3,183	3,278	3,377	3,478
56434 - TESTS-OUTSIDE LAB	Operations	3,701	-	-	-	-	-	-
56768 - OUTSIDE PERMIT FEES	Operations	(676)	2,500	2,575	2,652	2,732	2,814	2,898
57130 - OUTSIDE EQUIPMENT	Operations	-	-	-	-	-	-	-
57133 - MAINTENANCE CONTRACTS	Operations	207	-	-	-	-	-	-
57235 - EQUIPMENT RENTAL	Operations	8,323	3,900	4,017	4,138	4,262	4,389	4,521
58161 - EMPLOYEE TRAVEL AND MEAL EXPENSE	Operations	90	-	-	-	-	-	-
0421 - METER READING EXPENSE - RECYC WATER DIST SYS								
53150 - DIRECT LABOR	Labor	\$ 7,077	\$ 6,889	\$ 7,130	\$ 7,380	\$ 7,638	\$ 7,905	\$ 8,182
0423 - PIPELINE MAINTENANCE & REPAIR - RECYC WATER DIST SYS								
53150 - DIRECT LABOR	Labor	\$ 45,250	\$ 67,141	\$ 69,491	\$ 71,923	\$ 74,440	\$ 77,046	\$ 79,742
54120 - DIRECT MATERIALS	Operations	845	72,000	74,160	76,385	78,676	81,037	83,468
54140 - INVENTORY MATERIALS	Operations	24,161	17,120	17,634	18,163	18,707	19,269	19,847
56160 - OUTSIDE SERVICES	Operations	23,224	35,000	36,050	37,132	38,245	39,393	40,575
56179 - MAJOR MAINTENANCE & REPAIR-UNPLANNED	Construction / Capital	9,228	25,250	26,260	27,310	28,403	29,539	30,720
56768 - OUTSIDE PERMIT FEES	Operations	5,165	6,855	7,061	7,272	7,491	7,715	7,947
57235 - EQUIPMENT RENTAL	Operations	6,180	9,300	9,579	9,866	10,162	10,467	10,781
58161 - EMPLOYEE TRAVEL AND MEAL EXPENSE	Operations	-	-	-	-	-	-	-
0425 - CATHODIC PROTECTION - RECYC WATER DIST SYS								
54120 - DIRECT MATERIALS	Operations	\$ -	\$ 500	\$ 515	\$ 530	\$ 546	\$ 563	\$ 580
54140 - INVENTORY MATERIALS	Operations	-	500	515	530	546	563	580
55170 - ELECTRIC POWER	Energy	2,030	2,100	2,184	2,271	2,362	2,457	2,555
56160 - OUTSIDE SERVICES	Operations	-	500	515	530	546	563	580
Subtotal RECYC WATER DIST SYS		\$ 549,659	\$ 605,994	\$ 626,310	\$ 647,311	\$ 669,021	\$ 691,464	\$ 714,665
Subtotal RECYCLED WATER DISTRIBUTION SYSTEM		\$ 1,075,064	\$ 1,216,832	\$ 1,257,070	\$ 1,298,648	\$ 1,341,609	\$ 1,386,001	\$ 1,431,871

RECYCLED WATER ENERGY DISSIPATION FACILITY

GENERAL								
0460 - OPERATIONAL COSTS								
53150 - DIRECT LABOR	Labor	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
54120 - DIRECT MATERIALS	Operations	-	-	-	-	-	-	-
55170 - ELECTRIC POWER	Energy	-	-	-	-	-	-	-
55472 - OTHER UTILITIES	Utilities	-	-	-	-	-	-	-
56164 - SAWPA FEES VOLUMETRIC	Operations	-	-	-	-	-	-	-
56180 - JANITORIAL SERVICES	Operations	-	-	-	-	-	-	-
56434 - TESTS-OUTSIDE LAB	Operations	-	-	-	-	-	-	-
56768 - OUTSIDE PERMIT FEES	Operations	-	-	-	-	-	-	-
56770 - SCAQMD FEES	Operations	-	-	-	-	-	-	-
57130 - OUTSIDE EQUIPMENT	Operations	-	-	-	-	-	-	-
0462 - GROUNDS MAINTENANCE								
53150 - DIRECT LABOR	Labor	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
54120 - DIRECT MATERIALS	Operations	-	-	-	-	-	-	-
54140 - INVENTORY MATERIALS	Operations	-	-	-	-	-	-	-
57133 - MAINTENANCE CONTRACTS	Operations	-	-	-	-	-	-	-
0463 - BUILDING STRUCTURE MAINTENANCE & REPAIR								
53150 - DIRECT LABOR	Labor	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
54120 - DIRECT MATERIALS	Operations	-	-	-	-	-	-	-
0464 - PUMPS/PIPING/MECHANICAL MAINTENANCE & REPAIR								
53150 - DIRECT LABOR	Labor	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
54120 - DIRECT MATERIALS	Operations	-	-	-	-	-	-	-

		actual		budget		Forecasted --->				
ESCALATOR FACTOR		FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027		
54140 - INVENTORY MATERIALS	Operations	-	-	-	-	-	-	-	-	
0465 - GAS ENGINE MAINTENANCE & REPAIR										
53150 - DIRECT LABOR	Labor	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
54120 - DIRECT MATERIALS	Operations	-	-	-	-	-	-	-	-	
54140 - INVENTORY MATERIALS	Operations	-	-	-	-	-	-	-	-	
0466 - ELECTRICAL/MOTOR/MAINTENANCE & REPAIR										
54120 - DIRECT MATERIALS	Operations	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
0467 - TELEMTRY/PLC/INSTRUMENTATION										
53150 - DIRECT LABOR	Labor	\$ 2,810	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
54120 - DIRECT MATERIALS	Operations	-	-	-	-	-	-	-	-	
54140 - INVENTORY MATERIALS	Operations	-	-	-	-	-	-	-	-	
Subtotal GENERAL		\$ 2,810	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	

LA VENTANA DECHLOR FACILITY

0465 - GAS ENGINE MAINTENANCE & REPAIR									
53150 - DIRECT LABOR	Labor	\$ 3,192	\$ 5,317	\$ 5,503	\$ 5,696	\$ 5,895	\$ 6,101	\$ 6,315	\$ 6,315
54120 - DIRECT MATERIALS	Operations	52	1,010	1,040	1,072	1,104	1,137	1,171	1,171
54140 - INVENTORY MATERIALS	Operations	439	606	624	643	662	682	703	703
Subtotal LA VENTANA DECHLOR FACILITY		\$ 3,682	\$ 6,933	\$ 7,168	\$ 7,410	\$ 7,661	\$ 7,920	\$ 8,188	\$ 8,188

RECYC WATER ENERGY DISSIPATION FACILITY

0460 - OPERATIONAL COSTS									
53150 - DIRECT LABOR	Labor	\$ 38,734	\$ 16,329	\$ 16,901	\$ 17,492	\$ 18,104	\$ 18,738	\$ 19,394	\$ 19,394
54120 - DIRECT MATERIALS	Operations	2,263	2,000	2,060	2,122	2,185	2,251	2,319	2,319
55170 - ELECTRIC POWER	Energy	4,856	4,670	4,857	5,051	5,253	5,463	5,682	5,682
55472 - OTHER UTILITIES	Utilities	809	700	728	757	787	819	852	852
56160 - OUTSIDE SERVICES	Operations	5,354	-	-	-	-	-	-	-
56164 - SAWPA FEES VOLUMETRIC	Operations	1,482	2,000	2,060	2,122	2,185	2,251	2,319	2,319
56166 - SAWPA FEES TSS&BOD	Operations	-	-	-	-	-	-	-	-
56180 - JANITORIAL SERVICES	Operations	405	400	412	424	437	450	464	464
56434 - TESTS-OUTSIDE LAB	Operations	6,833	1,000	1,030	1,061	1,093	1,126	1,159	1,159
56768 - OUTSIDE PERMIT FEES	Operations	146,496	120,000	123,600	127,308	131,127	135,061	139,113	139,113
56770 - SCAQMD FEES	Operations	695	700	721	743	765	788	811	811
57130 - OUTSIDE EQUIPMENT	Operations	1,264	500	515	530	546	563	580	580
0462 - GROUNDS MAINTENANCE									
53150 - DIRECT LABOR	Labor	\$ 4,699	\$ 142	\$ 147	\$ 152	\$ 157	\$ 163	\$ 169	\$ 169
54120 - DIRECT MATERIALS	Operations	524	151	156	160	165	170	175	175
54140 - INVENTORY MATERIALS	Operations	188	152	157	161	166	171	176	176
56160 - OUTSIDE SERVICES	Operations	-	-	-	-	-	-	-	-
57133 - MAINTENANCE CONTRACTS	Operations	705	505	520	536	552	568	585	585
57235 - EQUIPMENT RENTAL	Operations	383	-	-	-	-	-	-	-
0463 - BUILDING STRUCTURE MAINTENANCE & REPAIR									
53150 - DIRECT LABOR	Labor	\$ 566	\$ 1,307	\$ 1,353	\$ 1,400	\$ 1,449	\$ 1,500	\$ 1,552	\$ 1,552
54120 - DIRECT MATERIALS	Operations	-	152	157	161	166	171	176	176
56177 - REPAIRS-OTHER	Operations	-	-	-	-	-	-	-	-
57235 - EQUIPMENT RENTAL	Operations	-	-	-	-	-	-	-	-
0464 - PUMPS/PIPING/MECHANICAL MAINTENANCE & REPAIR									
53150 - DIRECT LABOR	Labor	\$ 704	\$ 919	\$ 951	\$ 984	\$ 1,019	\$ 1,055	\$ 1,091	\$ 1,091
54120 - DIRECT MATERIALS	Operations	2,269	505	520	536	552	568	585	585
54140 - INVENTORY MATERIALS	Operations	-	303	312	321	331	341	351	351
57235 - EQUIPMENT RENTAL	Operations	-	-	-	-	-	-	-	-
58161 - EMPLOYEE TRAVEL AND MEAL EXPENSE	Operations	-	-	-	-	-	-	-	-
0466 - ELECTRICAL/MOTOR/MAINTENANCE & REPAIR									
53150 - DIRECT LABOR	Labor	\$ 1,261	\$ 1,000	\$ 1,035	\$ 1,071	\$ 1,109	\$ 1,148	\$ 1,188	\$ 1,188
0467 - TELEMTRY/PLC/INSTRUMENTATION									
53150 - DIRECT LABOR	Labor	\$ 3,699	\$ 6,393	\$ 6,617	\$ 6,848	\$ 7,088	\$ 7,336	\$ 7,593	\$ 7,593
54120 - DIRECT MATERIALS	Operations	9,796	500	515	530	546	563	580	580
54140 - INVENTORY MATERIALS	Operations	-	250	258	265	273	281	290	290
0469 - OTHER									
53150 - DIRECT LABOR	Labor	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
54120 - DIRECT MATERIALS	Operations	-	-	-	-	-	-	-	-
Subtotal RECYC WATER ENERGY DISSIPATION FACILITY		\$ 233,984	\$ 160,578	\$ 165,579	\$ 170,738	\$ 176,058	\$ 181,544	\$ 187,203	\$ 187,203
Subtotal RECYCLED WATER ENERGY DISSIPATION FACILITY		\$ 240,476	\$ 167,511	\$ 172,747	\$ 178,148	\$ 183,719	\$ 189,465	\$ 195,392	\$ 195,392

RECYCLED WATER PUMPING FACILITIES

GENERAL	Projected costs at facility level, general allocated same as overall pumping stations								
Subtotal GENERAL	\$ -	\$ 154,976	\$ 159,590	\$ 164,766	\$ 170,111	\$ 175,630	\$ 181,328	\$ 187,016	\$ 192,704

ALESSANDRO POND PUMP STATION

043003 - OPERATIONAL COSTS									
53150 - DIRECT LABOR	Labor	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
55170 - ELECTRIC POWER	Operations	26,985	27,794.68	28,629	29,487	30,372	31,283	32,222	32,222
57133 - MAINTENANCE CONTRACTS	No Increase	626	626	626	626	626	626	626	626
043403 - PUMPS, PIPING, MECHANICAL									
54120 - DIRECT MATERIALS	Operations	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
54244 - OIL & LUBRICANTS	Operations	-	-	-	-	-	-	-	-
043603 - ELECTRICAL MAINTENANCE & REPAIR									
53150 - DIRECT LABOR	Labor	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
043903 - OTHER									
53150 - DIRECT LABOR	Labor	\$ 419	\$ 434	\$ 449	\$ 465	\$ 481	\$ 498	\$ 515	\$ 515
Subtotal ALESSANDRO POND PUMP STATION		\$ 28,030	\$ 28,855	\$ 29,704	\$ 30,578	\$ 31,479	\$ 32,407	\$ 33,363	\$ 33,363

HEMET/SAN JACINTO RECYC PS

0430 - OPERATIONAL COSTS - HEMET/SAN JACINTO RECYC PS									
53150 - DIRECT LABOR	Labor	\$ 176	\$ 183	\$ 189	\$ 196	\$ 202	\$ 209	\$ 217	\$ 217
54140 - INVENTORY MATERIALS	Operations	-	-	-	-	-	-	-	-
57235 - EQUIPMENT RENTAL	Operations	-	-	-	-	-	-	-	-
0434 - PUMPS/PIPING/MECHANICAL - HEMET/SAN JACINTO RECYC PS									
54120 - DIRECT MATERIALS	Operations	\$ 10,937	\$ 11,265	\$ 11,603	\$ 11,951	\$ 12,309	\$ 12,679	\$ 13,059	\$ 13,059
0435 - GAS ENGINE MAINTENANCE & REPAIR - HEMET/SAN JACINTO RECYC PS									
54120 - DIRECT MATERIALS	Operations	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
0438 - CHEMICAL EQUIPMENT MAINT & REPAIR - HEMET									
53150 - DIRECT LABOR	Labor	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
043901 - OTHER									
53150 - DIRECT LABOR	Labor	\$ 919	\$ 951	\$ 984	\$ 1,018	\$ 1,054	\$ 1,091	\$ 1,129	\$ 1,129
Subtotal HEMET/SAN JACINTO RECYC PS		\$ 12,032	\$ 12,398	\$ 12,776	\$ 13,165	\$ 13,566	\$ 13,979	\$ 14,405	\$ 14,405

Leon Road Recycled Booster (to PZ 1627 or PZ1508)

0430 - OPERATIONAL COSTS - HEMET/SAN JACINTO RECYC PS									
53150 - DIRECT LABOR	Labor	\$ 21,222	\$ 21,965	\$ 22,733	\$ 23,529	\$ 24,353	\$ 25,205	\$ 26,087	\$ 26,087

		actual		budget					Forecasted --->				
ESCALATOR FACTOR		FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027	FYE 2028	FYE 2029	FYE 2030		
54140 - INVENTORY MATERIALS	Operations	-	-	-	-	-	-	-	-	-	-		
55170 - ELECTRIC POWER	Operations	48,129	49,573	51,061	52,592	54,170	55,795	57,469					
56160 - OUTSIDE SERVICES	Operations	-	-	-	-	-	-	-					
043242 - GROUNDS MAINT													
53150 - DIRECT LABOR	Labor	3,409	3,528	3,652	3,780	3,912	4,049	4,190					
54120 - DIRECT MATERIALS	Operations	369	380	392	403	416	428	441					
56160 - OUTSIDE SERVICES	Operations	7,850	8,086	8,328	8,578	8,835	9,100	9,373					
57133 - MAINTENANCE CONTRACTS	Operations	749	772	795	818	843	868	894					
043342 - BUILDING STRUCTURE MAINT & REPAIR													
53150 - DIRECT LABOR	Labor	-	-	-	-	-	-	-					
57133 - MAINTENANCE CONTRACTS	operations	49	50	52	53	55	56	58					
043442 - PUMPS/PIPING/MECHANICAL													
53150 - DIRECT LABOR	Labor	141	145	151	156	161	167	173					
54120 - DIRECT MATERIALS	Operations	3,423	3,526	3,632	3,741	3,853	3,969	4,088					
043642 - GEN ELECT/ELECT MOTOR/MCC MAINT & REPAIR													
53150 - DIRECT LABOR	Labor	924	957	990	1,025	1,061	1,098	1,136					
043742 - TELEMETRY, PLC, INSTRUMENT, MAINT & REPAIR													
53150 - DIRECT LABOR	Labor	154	160	165	171	177	183	190					
54140 - INVENTORY MATERIALS	Operations	-	-	-	-	-	-	-					
56160 - OUTSIDE SERVICES	Operations	-	-	-	-	-	-	-					
043942 - OTHER													
53150 - DIRECT LABOR	Labor	250	259	268	277	287	297	307					
Subtotal Leon Road Recycled Booster (to PZ 1627 or PZ1508)		\$ 86,670	\$ 89,400	\$ 92,217	\$ 95,124	\$ 98,122	\$ 101,215	\$ 104,407					
MORGAN RECYC PS													
043082 - OPERATIONAL COSTS- MORGAN RECYC PS													
53150 - DIRECT LABOR	Labor	-	-	-	-	-	-	-					
043282 - GROUNDS MAINTENANCE													
57133 - MAINTENANCE CONTRACTS	Operations	437	450	463	477	492	506	522					
Subtotal MORGAN RECYC PS		\$ 471	\$ 450	\$ 463	\$ 477	\$ 492	\$ 506	\$ 522					
MV SOUTH RECYC PS - NANDINA PS													
0430 - OPERATIONAL COSTS- MV SOUTH RECYC PS													
54140 - INVENTORY MATERIALS	Operations	-	-	-	-	-	-	-					
55170 - ELECTRIC POWER	Energy	14,696	15,283.58	15,895	16,531	17,192	17,880	18,595					
0432 - GROUNDS MAINTENANCE - MV SOUTH RECYC PS													
53150 - DIRECT LABOR	Operations	-	-	-	-	-	-	-					
57133 - MAINTENANCE CONTRACTS	Operations	-	-	-	-	-	-	-					
Subtotal MV SOUTH RECYC PS - NANDINA PS		\$ 14,696	\$ 15,284	\$ 15,895	\$ 16,531	\$ 17,192	\$ 17,880	\$ 18,595					
NORTH TRUMBLE RD FLOATING PUMP													
043990 - OTHER													
53150 - DIRECT LABOR	Labor	7,298	7,553	7,817	8,091	8,374	8,667	8,971					
54140 - INVENTORY MATERIALS	Operations	-	-	-	-	-	-	-					
Subtotal NORTH TRUMBLE RD FLOATING PUMP		\$ 7,298	\$ 7,553	\$ 7,817	\$ 8,091	\$ 8,374	\$ 8,667	\$ 8,971					
PALOMAR BOOSTER													
043050 - OPERATIONAL COSTS													
53150 - DIRECT LABOR	Labor	47,432	49,093	50,811	52,589	54,430	56,335	58,307					
54120 - DIRECT MATERIALS	Operations	2,792	2,876	2,962	3,051	3,142	3,237	3,334					
54140 - INVENTORY MATERIALS	Operations	1,026	1,057	1,089	1,121	1,155	1,190	1,225					
55170 - ELECTRIC POWER	Energy	357,088	371,372	386,227	401,676	417,743	434,452	451,831					
55271 - NATURAL GAS	Utilities	152,157	158,243	164,573	171,156	178,002	185,122	192,527					
55472 - OTHER UTILITIES	Operations	2,443	2,516	2,592	2,670	2,750	2,832	2,917					
56160 - OUTSIDE SERVICES	Operations	-	-	-	-	-	-	-					
56180 - JANITORIAL SERVICES	Operations	405	418	430	443	456	470	484					
56430 - AIR QUALITY COMPLIANCE COSTS	Operations	17,749	18,281	18,830	19,395	19,977	20,576	21,193					
56768 - OUTSIDE PERMIT FEES	Operations	3,290	3,389	3,490	3,595	3,703	3,814	3,928					
56770 - SCAQMD FEES	Operations	2,919	3,006	3,096	3,189	3,285	3,383	3,485					
57133 - MAINTENANCE CONTRACTS	No Increase	576	576	576	576	576	576	576					
043150 - LANDSCAPE MAINTENANCE													
57133 - MAINTENANCE CONTRACTS	Operations	684	704	725	747	770	793	816					
043250 - GROUNDS MAINTENANCE-PALOMAR BOOSTER													
53150 - DIRECT LABOR	Labor	875	905	937	970	1,004	1,039	1,075					
54120 - DIRECT MATERIALS	Operations	-	-	-	-	-	-	-					
57133 - MAINTENANCE CONTRACTS	Operations	2,994	3,084	3,177	3,272	3,370	3,471	3,575					
043350 - BUILDING STRUCTURE MAINTENANCE & REPAIR - PALOMAR ROAD BOOSTER													
53150 - DIRECT LABOR	Labor	9,103	9,422	9,752	10,093	10,446	10,812	11,191					
54120 - DIRECT MATERIALS	Operations	371	382	394	406	418	430	443					
54140 - INVENTORY MATERIALS	Operations	405	417	429	442	455	469	483					
56160 - OUTSIDE SERVICES	Operations	-	-	-	-	-	-	-					
56177 - REPAIRS-OTHER	Operations	2,428	2,501	2,576	2,654	2,733	2,815	2,900					
57133 - MAINTENANCE CONTRACTS	Operations	97	100	103	106	109	113	116					
043450 - PUMPS/PIPING/MECHANICAL													
53150 - DIRECT LABOR	Labor	5,845	6,050	6,261	6,481	6,707	6,942	7,185					
54120 - DIRECT MATERIALS	Operations	1,843	1,898	1,955	2,013	2,074	2,136	2,200					
54140 - INVENTORY MATERIALS	Operations	552	569	586	603	621	640	659					
043550 - GAS ENGINE MAINT & REPAIR													
53150 - DIRECT LABOR	Labor	29,573	30,608	31,679	32,788	33,936	35,123	36,353					
54120 - DIRECT MATERIALS	Operations	158	163	168	173	178	183	189					
54140 - INVENTORY MATERIALS	Operations	19,477	20,062	20,664	21,283	21,922	22,580	23,257					
54244 - OIL & LUBRICANTS	Operations	12,826	13,211	13,608	14,016	14,436	14,869	15,315					
56181 - REFUSE & WASTE HAULING	Operations	739	762	784	808	832	857	883					
57130 - OUTSIDE EQUIPMENT	Operations	659	679	699	720	742	764	787					
57235 - EQUIPMENT RENTAL	Operations	1,861	1,916	1,974	2,033	2,094	2,157	2,222					
043650 - GEN ELEC, ELECT MOTOR, MCC MAINT & REPR													
53150 - DIRECT LABOR	Labor	4,129	4,274	4,423	4,578	4,738	4,904	5,076					
54120 - DIRECT MATERIALS	Operations	648	668	688	708	729	751	774					
54140 - INVENTORY MATERIALS	Operations	442	455	469	483	497	512	528					
043750 - TELEMETRY, PLC, INSTRUMENTATION MAINT & RPR													
53150 - DIRECT LABOR	Labor	13,371	13,839	14,323	14,824	15,343	15,880	16,436					
54120 - DIRECT MATERIALS	Operations	3,193	3,289	3,388	3,489	3,594	3,702	3,813					
54140 - INVENTORY MATERIALS	Operations	154	159	163	168	173	178	184					
043950 - OTHER													
53150 - DIRECT LABOR	Labor	456	472	489	506	524	542	561					
Subtotal PALOMAR BOOSTER		\$ 700,763	\$ 727,414	\$ 755,089	\$ 783,826	\$ 813,666	\$ 844,652	\$ 876,828					
Perris Raw Water Augmentation Pump Stn.													
043088 - OPERATIONAL COSTS													
53150 - DIRECT LABOR	Labor	1,181	1,223	1,265	1,310	1,355	1,403	1,452					
54120 - DIRECT MATERIALS	Operations	-	-	-	-	-	-	-					

	ESCALATOR FACTOR	actual		budget					
		FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027	
043288 - GROUNDS MAINTENANCE									
53150 - DIRECT LABOR	Labor	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
043488 - PUMPS, PIPING, MECH. MAINT & REPAIR									
53150 - DIRECT LABOR	Labor	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
043688 - GEN ELEC, ELECT MOTOR, MCC MAINT & REPAIR									
53150 - DIRECT LABOR	Labor	\$ 1,045	\$ 1,082	\$ 1,120	\$ 1,159	\$ 1,200	\$ 1,242	\$ 1,285	
54120 - DIRECT MATERIALS	Operations	-	-	-	-	-	-	-	
043788 - TELEMTRY, PLC, INSTRUM, MAINT & REPAIR									
53150 - DIRECT LABOR	Labor	\$ 649	\$ 672	\$ 695	\$ 720	\$ 745	\$ 771	\$ 798	
54120 - DIRECT MATERIALS	Operations	-	-	-	-	-	-	-	
Subtotal Perris Raw Water Augmentation Pump Stn.		\$ 2,876	\$ 2,976	\$ 3,080	\$ 3,188	\$ 3,300	\$ 3,415	\$ 3,535	

PVRWRF Case Pond Floating Pump

043087 - OPERATIONAL COSTS									
53150 - DIRECT LABOR	Labor	\$ 12,248	\$ 12,677	\$ 13,120	\$ 13,580	\$ 14,055	\$ 14,547	\$ 15,056	
043287 - GROUNDS MAINTENANCE									
53150 - DIRECT LABOR	Labor	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
54120 - DIRECT MATERIALS	Operations	-	-	-	-	-	-	-	
54140 - INVENTORY MATERIALS	Operations	-	-	-	-	-	-	-	
57235 - EQUIPMENT RENTAL	Operations	-	-	-	-	-	-	-	
043487 - PIPES/VALVES MAINT & REPAIR									
53150 - DIRECT LABOR	Labor	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
043687 - ELECTRICAL MAINTENANCE & REPAIR									
53150 - DIRECT LABOR	Labor	\$ 349	\$ 361	\$ 374	\$ 387	\$ 400	\$ 414	\$ 429	
043787 - TELEMTRY, PLC, INSTRUMENT, MAINT & REPAIR									
53150 - DIRECT LABOR	Labor	\$ 325	\$ 337	\$ 348	\$ 361	\$ 373	\$ 386	\$ 400	
54140 - INVENTORY MATERIALS	Operations	55	57	59	60	62	64	66	
043987 - OTHER									
53150 - DIRECT LABOR	Labor	\$ 546	\$ 565	\$ 585	\$ 605	\$ 626	\$ 648	\$ 671	
Subtotal PVRWRF Case Pond Floating Pump		\$ 13,523	\$ 13,996	\$ 14,486	\$ 14,993	\$ 15,517	\$ 16,060	\$ 16,622	

RANCHO CLUB DRIVE RECYC PS

043041 - OPERATIONAL COSTS - RANCHO CLUB DRIVE RECYC PS									
53150 - DIRECT LABOR	Labor	\$ 24,591	\$ 25,452	\$ 26,343	\$ 27,265	\$ 28,219	\$ 29,207	\$ 30,229	
54140 - INVENTORY MATERIALS	Operations	3,155	3,250	3,348	3,448	3,551	3,658	3,768	
55170 - ELECTRIC POWER	Energy	5,137	5,343	5,556	5,779	6,010	6,250	6,500	
55271 - NATURAL GAS	Utilities	13,008	13,528	14,069	14,632	15,217	15,826	16,459	
56160 - OUTSIDE SERVICES	Operations	125	129	133	137	141	145	149	
56430 - AIR QUALITY COMPLIANCE COSTS	Operations	4,110	4,233	4,360	4,491	4,625	4,764	4,907	
56768 - OUTSIDE PERMIT FEES	Operations	1,032	1,063	1,095	1,128	1,161	1,196	1,232	
56770 - SCAQMD FEES	Operations	1,644	1,694	1,744	1,797	1,851	1,906	1,963	
57235 - EQUIPMENT RENTAL	Operations	985	1,015	1,045	1,076	1,109	1,142	1,176	
043141 - LANDSCAPE MAINTENANCE-RANCHO CLUB DRIVE RECYC PS									
56177 - REPAIRS-OTHER	Operations	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
57133 - MAINTENANCE CONTRACTS	Operations	1,632	1,681	1,732	1,784	1,837	1,892	1,949	
043241 - GROUNDS MAINTENANCE - RANCHO CLUB DR RECYC PS									
53150 - DIRECT LABOR	Labor	\$ 97	\$ 100	\$ 104	\$ 107	\$ 111	\$ 115	\$ 119	
56160 - OUTSIDE SERVICES	Operations	1,762	1,815	1,869	1,925	1,983	2,042	2,104	
043341 - BUILDING STRUCTURE MAINTENANCE & REPAIR - RANCHO CLUB DR RECYC PS									
53150 - DIRECT LABOR	Labor	\$ 1,754	\$ 1,816	\$ 1,879	\$ 1,945	\$ 2,013	\$ 2,083	\$ 2,156	
54120 - DIRECT MATERIALS	Operations	386	397	409	422	434	447	461	
54140 - INVENTORY MATERIALS	Operations	150	155	160	164	169	174	180	
57235 - EQUIPMENT RENTAL	Operations	-	-	-	-	-	-	-	
043441 - PUMPS/PIPING/MECHANICAL - RANCHO CLUB DRIVE RECYC PS									
53150 - DIRECT LABOR	Labor	\$ 4,366	\$ 4,519	\$ 4,677	\$ 4,840	\$ 5,010	\$ 5,185	\$ 5,367	
54120 - DIRECT MATERIALS	Operations	693	714	735	758	780	804	828	
54140 - INVENTORY MATERIALS	Operations	465	479	493	508	523	539	555	
57235 - EQUIPMENT RENTAL	Operations	-	-	-	-	-	-	-	
043541 - GAS ENGINE MAINTENANCE & REPAIR - RANCHO CLUB DRIVE RECYC PS									
53150 - DIRECT LABOR	Labor	\$ 8,577	\$ 8,877	\$ 9,188	\$ 9,509	\$ 9,842	\$ 10,186	\$ 10,543	
54120 - DIRECT MATERIALS	Operations	292	301	310	319	329	338	349	
54140 - INVENTORY MATERIALS	Operations	-	-	-	-	-	-	-	
54244 - OIL & LUBRICANTS	Operations	-	-	-	-	-	-	-	
57235 - EQUIPMENT RENTAL	Operations	700	721	743	765	788	812	836	
043641 - ELECTRICAL/MOTOR/MAINTENANCE & REPAIR - RANCHO CLUB DRIVE RECYC PS									
53150 - DIRECT LABOR	Labor	\$ 243	\$ 251	\$ 260	\$ 269	\$ 278	\$ 288	\$ 298	
043741 - TELEMTRY/CONTROL MAINTENANCE & REPAIR - RANCHO CLUB DRIVE RECYC PS									
53150 - DIRECT LABOR	Labor	\$ 481	\$ 498	\$ 516	\$ 534	\$ 552	\$ 572	\$ 592	
54120 - DIRECT MATERIALS	Operations	748	771	794	818	842	868	894	
54140 - INVENTORY MATERIALS	Operations	-	-	-	-	-	-	-	
Subtotal RANCHO CLUB DRIVE RECYC PS		\$ 76,135	\$ 78,801	\$ 81,561	\$ 84,419	\$ 87,378	\$ 90,442	\$ 93,614	

Reach 4 Pressurization (Bidirectional) into 1627 PZ

043000 - OPERATIONAL COSTS - RECYC WATER PS									
53150 - DIRECT LABOR	Labor	\$ 6,660	\$ 6,893	\$ 7,134	\$ 7,384	\$ 7,642	\$ 7,909	\$ 8,186	
54120 - DIRECT MATERIALS	Operations	-	-	-	-	-	-	-	
54140 - INVENTORY MATERIALS	Operations	-	-	-	-	-	-	-	
58161 - EMPLOYEE TRAVEL AND MEAL EXPENSE	Operations	-	-	-	-	-	-	-	
043423 - PUMPS/PIPING/MECH MAINT & REPAIR									
53150 - DIRECT LABOR	Labor	\$ 2,711	\$ 2,806	\$ 2,904	\$ 3,006	\$ 3,111	\$ 3,220	\$ 3,333	
54120 - DIRECT MATERIALS	Operations	-	-	-	-	-	-	-	
54140 - INVENTORY MATERIALS	Operations	4,559	4,696	4,837	4,982	5,131	5,285	5,444	
57235 - EQUIPMENT RENTAL	Operations	547	564	581	598	616	634	653	
043623 - ELECTRICAL/MOTOR/ MAINTENANCE & REPAIR									
53150 - DIRECT LABOR	Labor	\$ 536	\$ 555	\$ 574	\$ 594	\$ 615	\$ 637	\$ 659	
54120 - DIRECT MATERIALS	Operations	-	-	-	-	-	-	-	
56177 - REPAIRS-OTHER	Operations	-	-	-	-	-	-	-	
57235 - EQUIPMENT RENTAL	Operations	-	-	-	-	-	-	-	
043723 - TELEMTRY, PLC, INSTRUM, MAINT. & RPR									
53150 - DIRECT LABOR	Labor	\$ 11,859	\$ 12,274	\$ 12,704	\$ 13,148	\$ 13,608	\$ 14,085	\$ 14,578	
54120 - DIRECT MATERIALS	Operations	324	334	344	354	365	376	387	
54140 - INVENTORY MATERIALS	Operations	55	57	59	60	62	64	66	
043923 - PUMPING PLANT OTHER									
53150 - DIRECT LABOR	labor	\$ 220	\$ 228	\$ 236	\$ 244	\$ 253	\$ 262	\$ 271	
Subtotal Reach 4 Pressurization (Bidirectional) into 1627 PZ		\$ 27,472	\$ 28,406	\$ 29,372	\$ 30,371	\$ 31,404	\$ 32,473	\$ 33,577	

NEW (2) row 881

Reach 4 Wet Well > Brine Line Flushing Station

043021 - OPERATIONAL COSTS - REACH 4 RECYC PS									
53150 - DIRECT LABOR	Labor	\$ 48,066	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
54120 - DIRECT MATERIALS	Operations	460	-	-	-	-	-	-	
54140 - INVENTORY MATERIALS	Operations	-	-	-	-	-	-	-	
55170 - ELECTRIC POWER	Energy	221,478	-	-	-	-	-	-	

	ESCALATOR FACTOR	actual		budget		Forecasted -->				
		FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027		
55175 - ENERGY CREDITS	Energy	(6,933)	-	-	-	-	-	-	-	-
56160 - OUTSIDE SERVICES	No Increase	10,650	-	-	-	-	-	-	-	-
56180 - JANITORIAL SERVICES	Operations	405	-	-	-	-	-	-	-	-
57235 - EQUIPMENT RENTAL	Operations	-	-	-	-	-	-	-	-	-
043221 - GROUNDS MAINTENANCE - REACH 4 RECYC PS			0							
53150 - DIRECT LABOR	Labor	\$ 1,256	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
54120 - DIRECT MATERIALS	Operations	52	-	-	-	-	-	-	-	-
57235 - EQUIPMENT RENTAL	Operations	-	-	-	-	-	-	-	-	-
043221 - BUILDING STRUCTURE MAINTENANCE & REPAIR - REACH 4 RECYC PS- REACH 4			0							
53150 - DIRECT LABOR	Labor	\$ 1,206	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
54120 - DIRECT MATERIALS	Operations	626	-	-	-	-	-	-	-	-
54140 - INVENTORY MATERIALS	Operations	-	-	-	-	-	-	-	-	-
56160 - OUTSIDE SERVICES	Operations	-	-	-	-	-	-	-	-	-
56177 - REPAIRS-OTHER	Operations	-	-	-	-	-	-	-	-	-
57133 - MAINTENANCE CONTRACTS	Operations	97	-	-	-	-	-	-	-	-
57235 - EQUIPMENT RENTAL	Operations	-	-	-	-	-	-	-	-	-
043421 - PUMPS/PIPING/MECHANICAL - REACH 4 RECYC PS			0							
53150 - DIRECT LABOR	Labor	\$ 67	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
54120 - DIRECT MATERIALS	Operations	-	-	-	-	-	-	-	-	-
54140 - INVENTORY MATERIALS	Operations	-	-	-	-	-	-	-	-	-
56160 - OUTSIDE SERVICES	Operations	-	-	-	-	-	-	-	-	-
57235 - EQUIPMENT RENTAL	Operations	-	-	-	-	-	-	-	-	-
043521 - GAS ENGINE MAINTENANCE & REPAIR - REACH 4 RECYC PS			0							
53150 - DIRECT LABOR	Labor	\$ 709	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
043621 - ELECTRICAL/MOTOR/ MAINTENANCE & REPAIR - REACH RECYC PS			0							
53150 - DIRECT LABOR	Labor	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
54120 - DIRECT MATERIALS	Operations	-	-	-	-	-	-	-	-	-
54140 - INVENTORY MATERIALS	Operations	-	-	-	-	-	-	-	-	-
043721 - TELEMTRY/CONTROL MAINTENANCE & REPAIR - REACH 4 RECYC PS			0							
53150 - DIRECT LABOR	Labor	\$ 3,587	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
54120 - DIRECT MATERIALS	Operations	-	-	-	-	-	-	-	-	-
54140 - INVENTORY MATERIALS	Operations	831	-	-	-	-	-	-	-	-
57235 - EQUIPMENT RENTAL	Operations	-	-	-	-	-	-	-	-	-
Subtotal Reach 4 Wet Well > Brine Line Flushing Station		\$ 282,557	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

San Jacinto / Metropolitan Reservoir (old PS replaced with new)

043002 - OPERATIONAL COSTS - MWD RESERVOIR RECYC PS										
53150 - DIRECT LABOR	Labor	\$ 416	\$ 431	\$ 446	\$ 462	\$ 478	\$ 494	\$ 512		
55170 - ELECTRIC POWER	Energy	21,409	22,265	23,156	24,082	25,046	26,047	27,089		
57133 - MAINTENANCE CONTRACTS	Operations	154	158	163	168	173	178	183		
043202 - GROUNDS MAINTENANCE - MWD RESERVOIR RECYC PS										
53150 - DIRECT LABOR	Labor	\$ 1,186	\$ 1,227	\$ 1,270	\$ 1,315	\$ 1,361	\$ 1,409	\$ 1,458		
56160 - OUTSIDE SERVICES	Operations	55	57	58	60	62	64	66		
043302 - BUILDING STRUCTURE MAINTENANCE & REPAIR - MWD RESERVOIR RECYC PS										
53150 - DIRECT LABOR	Labor	\$ 1,451	\$ 1,502	\$ 1,554	\$ 1,608	\$ 1,665	\$ 1,723	\$ 1,783		
56160 - OUTSIDE SERVICES	Operations	4,849	4,994	5,144	5,298	5,457	5,621	5,790		
57235 - EQUIPMENT RENTAL	Operations	766	789	813	837	862	888	915		
043402 - PUMPS/PIPING/MECHANICAL - MWD RESERVOIR RECYC PS										
53150 - DIRECT LABOR	Labor	\$ 369	\$ 382	\$ 395	\$ 409	\$ 423	\$ 438	\$ 453		
54120 - DIRECT MATERIALS	Operations	33	34	35	36	37	38	39		
54140 - INVENTORY MATERIALS	Operations	-	-	-	-	-	-	-		
043602 - ELECTRICAL/MOTOR/MAINTENANCE & REPAIR - MWD RESERVOIR RECYC PS										
53150 - DIRECT LABOR	Labor	\$ 1,051	\$ 1,088	\$ 1,126	\$ 1,165	\$ 1,206	\$ 1,248	\$ 1,292		
54120 - DIRECT MATERIALS	Operations	-	-	-	-	-	-	-		
54140 - INVENTORY MATERIALS	Operations	-	-	-	-	-	-	-		
043702 - TELEMTRY/CONTROL/MAINTENANCE & REPAIR - San Jacinto/Metropolitan Reservoir										
53150 - DIRECT LABOR	Labor	\$ 671	\$ 694	\$ 718	\$ 744	\$ 770	\$ 797	\$ 824		
54120 - DIRECT MATERIALS	Operations	-	-	-	-	-	-	-		
54140 - INVENTORY MATERIALS	Operations	1,266	1,304	1,343	1,383	1,425	1,468	1,512		
Subtotal San Jacinto / Metropolitan Reservoir (old PS replaced with new)		\$ 33,675	\$ 34,925	\$ 36,222	\$ 37,568	\$ 38,964	\$ 40,413	\$ 41,916		

NEW (2) row 881

Simpson & California Booster (pumps to PZ 1719)

043062 - OPERATIONAL COSTS										
53150 - DIRECT LABOR	Labor	\$ 25,722	\$ 26,622	\$ 27,554	\$ 28,518	\$ 29,516	\$ 30,550	\$ 31,619		
54120 - DIRECT MATERIALS	Operations	-	-	-	-	-	-	-		
54140 - INVENTORY MATERIALS	Operations	-	-	-	-	-	-	-		
55170 - ELECTRIC POWER	Energy	120,467	125,285.87	130,297	135,509	140,930	146,567	152,429		
56160 - OUTSIDE SERVICES	Operations	-	-	-	-	-	-	-		
043262 - GROUNDS MAINTENANCE										
53150 - DIRECT LABOR	Labor	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
54140 - INVENTORY MATERIALS	Operations	-	-	-	-	-	-	-		
57133 - MAINTENANCE CONTRACTS	Operations	644	663	683	703	724	746	769		
043362 - BUILDING STRUCTURE MAINTENANCE & REPAIR										
53150 - DIRECT LABOR	Labor	\$ 202	\$ 209	\$ 217	\$ 224	\$ 232	\$ 240	\$ 249		
54120 - DIRECT MATERIALS	Operations	182	187	193	199	205	211	217		
56177 - REPAIRS-OTHER	Operations	451	465	478	493	508	523	539		
57133 - MAINTENANCE CONTRACTS	Operations	301	310	319	329	338	349	359		
043462 - PUMPS,PIPING,MECH MAINT & REPAIR										
53150 - DIRECT LABOR	Labor	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
54120 - DIRECT MATERIALS	Operations	-	-	-	-	-	-	-		
54140 - INVENTORY MATERIALS	Operations	-	-	-	-	-	-	-		
57235 - EQUIPMENT RENTAL	Operations	-	-	-	-	-	-	-		
043662 - GEN ELEC,ELECT MOTOR,MCC MAINT & REPAIR										
53150 - DIRECT LABOR	Labor	\$ 909	\$ 941	\$ 974	\$ 1,008	\$ 1,043	\$ 1,080	\$ 1,118		
54120 - DIRECT MATERIALS	Operations	-	-	-	-	-	-	-		
54140 - INVENTORY MATERIALS	Operations	361	371	383	394	406	418	431		
57235 - EQUIPMENT RENTAL	Operations	-	-	-	-	-	-	-		
043762 - TELEMTRY,PLC,INSTRUM,MAINT & RPR										
53150 - DIRECT LABOR	Labor	\$ 171	\$ 177	\$ 183	\$ 189	\$ 196	\$ 203	\$ 210		
54140 - INVENTORY MATERIALS	Operations	71	73	75	78	80	82	85		
043962 - OTHER										
53150 - DIRECT LABOR	Labor	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
54140 - INVENTORY MATERIALS	Operations	-	-	-	-	-	-	-		
Subtotal Simpson & California Booster (pumps to PZ 1719)		\$ 149,480	\$ 155,304	\$ 161,356	\$ 167,644	\$ 174,179	\$ 180,968	\$ 188,023		

Skiland I - North (Floating Pump)

043083 - OPERATIONAL COSTS - SKILAND RECYC PS										
53150 - DIRECT LABOR	Labor	\$ 4,735	\$ 4,900	\$ 5,072	\$ 5,249	\$ 5,433	\$ 5,623	\$ 5,820		
54140 - INVENTORY MATERIALS	Operations	6,908	7,115	7,328	7,548	7,775	8,008	8,248		
55170 - ELECTRIC POWER	Energy	25,967	27,006	28,086	29,210	30,378	31,593	32,857		
57235 - EQUIPMENT RENTAL	Operations	219	225	232	239	246	254	261		
043283 - GROUNDS MAINTENANCE - SKILAND RECYC PS										
53150 - DIRECT LABOR	Labor	\$ 46	\$ 47	\$ 49	\$ 51	\$ 52	\$ 54	\$ 56		

		actual		budget		Forecasted -->				
ESCALATOR FACTOR		FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027		
043786 - TELEMETRY/CONTROL MAINTENANCE & REPAIR - TRUMBLE RD RECYC PS										
53150 - DIRECT LABOR	Labor	\$ 1,661	\$ 1,719	\$ 1,780	\$ 1,842	\$ 1,906	\$ 1,973	\$ 2,042		
54120 - DIRECT MATERIALS	Operations	3,403	3,505	3,610	3,718	3,830	3,945	4,063		
54140 - INVENTORY MATERIALS	Operations	55	57	59	60	62	64	66		
043986 - PUMPING PLANT OTHER										
53150 - DIRECT LABOR	Labor	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
Subtotal TRUMBLE RD RECYC PS		\$ 74,507	\$ 77,201	\$ 79,993	\$ 82,887	\$ 85,886	\$ 88,995	\$ 92,217		
		NEW (2) row 925		74,507						
WINCHESTER RECYC PS										
043060 - OPERATIONAL COSTS - WINCHESTER RECYC PS										
53150 - DIRECT LABOR	Labor	\$ 7,280	\$ 7,534	\$ 7,798	\$ 8,071	\$ 8,353	\$ 8,646	\$ 8,948		
54120 - DIRECT MATERIALS	Operations	6,272	6,461	6,654	6,854	7,060	7,271	7,490		
54140 - INVENTORY MATERIALS	Operations	-	-	-	-	-	-	-		
55170 - ELECTRIC POWER	Energy	149,412	155,388.49	161,604	168,068	174,791	181,783	189,054		
55472 - OTHER UTILITIES	Utilities	1,305	1,357	1,411	1,468	1,527	1,588	1,651		
56160 - OUTSIDE SERVICES	Operations	55	57	58	60	62	64	66		
57235 - EQUIPMENT RENTAL	Operations	-	-	-	-	-	-	-		
043260 - GROUNDS MAINTENANCE - WINCHESTER RECYC PS										
53150 - DIRECT LABOR	Labor	\$ 45	\$ 46	\$ 48	\$ 49	\$ 51	\$ 53	\$ 55		
54120 - DIRECT MATERIALS	Operations	-	-	-	-	-	-	-		
57235 - EQUIPMENT RENTAL	Operations	-	-	-	-	-	-	-		
043360 - BUILDING STRUCTURE MAINTENANCE & REPAIR - WINCHESTER RECYC PS										
53150 - DIRECT LABOR	Labor	\$ 882	\$ 913	\$ 945	\$ 978	\$ 1,012	\$ 1,048	\$ 1,084		
54120 - DIRECT MATERIALS	Operations	348	359	369	380	392	404	416		
54140 - INVENTORY MATERIALS	Operations	219	226	232	239	247	254	262		
56177 - REPAIRS-OTHER	Operations	660	680	701	722	743	765	788		
57133 - MAINTENANCE CONTRACTS	Operations	-	-	-	-	-	-	-		
043460 - PUMPS/PIPING/MECHANICAL - WINCHESTER RECYC PS										
53150 - DIRECT LABOR	Labor	\$ 3,543	\$ 3,667	\$ 3,795	\$ 3,928	\$ 4,066	\$ 4,208	\$ 4,355		
54120 - DIRECT MATERIALS	Operations	-	-	-	-	-	-	-		
54140 - INVENTORY MATERIALS	Operations	6,742	6,945	7,153	7,367	7,588	7,816	8,051		
043660 - ELECTRICAL/MOTOR/MAINTENANCE & REPAIR - WINCHESTER RECYC PS										
53150 - DIRECT LABOR	Labor	\$ 3,440	\$ 3,560	\$ 3,685	\$ 3,814	\$ 3,947	\$ 4,085	\$ 4,228		
54120 - DIRECT MATERIALS	Operations	520	536	552	568	586	603	621		
54140 - INVENTORY MATERIALS	Operations	-	-	-	-	-	-	-		
56160 - OUTSIDE SERVICES	Operations	-	-	-	-	-	-	-		
57133 - MAINTENANCE CONTRACTS	Operations	902	929	957	986	1,015	1,046	1,077		
043760 - TELEMETRY/CONTROL MAINTENANCE & REPAIR - WINCHESTER RECYC PS										
53150 - DIRECT LABOR	Labor	\$ 574	\$ 595	\$ 615	\$ 637	\$ 659	\$ 682	\$ 706		
54120 - DIRECT MATERIALS	Operations	-	-	-	-	-	-	-		
54140 - INVENTORY MATERIALS	Operations	273	281	290	298	307	316	326		
043960 - FRIEDMAN HOMES										
53150 - DIRECT LABOR	Labor	\$ 164	\$ 170	\$ 176	\$ 182	\$ 188	\$ 195	\$ 201		
Subtotal WINCHESTER RECYC PS		\$ 182,637	\$ 189,702	\$ 197,043	\$ 204,670	\$ 212,594	\$ 220,826	\$ 229,379		
Subtotal RECYCLED WATER PUMPING FACILITIES		\$ 1,780,944	\$ 1,708,946	\$ 1,771,265	\$ 1,836,314	\$ 1,903,780	\$ 1,973,755	\$ 2,046,333		
RECYCLED WATER RECOVERY WELLS										
040001 - OPERATIONAL COSTS										
53150 - DIRECT LABOR	Labor	\$ 140	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
040101 - LANDSCAPE MAINTENANCE										
54140 - INVENTORY MATERIALS	Labor	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
040402 - PUMPS/PIPING MECHANICAL MAINT & REPAIR										
53150 - DIRECT LABOR	Labor	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
Subtotal RECYCLED WATER RECOVERY WELLS		\$ 140	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
RECYCLED WATER STORAGE FACILITIES										
GENERAL										
<i>Projected costs at facility level, general allocated same as overall storage facilities</i>										
Subtotal GENERAL		\$ -	\$ 84,396	\$ 87,113	\$ 89,917	\$ 92,813	\$ 95,802	\$ 98,888		
Met Ponds at San Jacinto Reservoir										
045010 - OPERATIONAL COSTS - MWD RESERVOIR RECYC STORAGE FAC										
53150 - DIRECT LABOR	Labor	\$ 39,261	\$ 40,635	\$ 42,058	\$ 43,530	\$ 45,053	\$ 46,630	\$ 48,262		
54120 - DIRECT MATERIALS	Operations	-	-	-	-	-	-	-		
54140 - INVENTORY MATERIALS	Operations	84	66	68	70	72	74	76		
56160 - OUTSIDE SERVICES	Operations	2,010	2,070	2,133	2,197	2,262	2,330	2,400		
57235 - EQUIPMENT RENTAL	Operations	4,043	4,074	4,196	4,322	4,451	4,585	4,723		
045110 - LANDSCAPE MAINTENANCE - MWD RESERVOIR RECYC STORAGE FAC										
56160 - OUTSIDE SERVICES	Operations	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
045210 - GROUNDS MAINTENANCE - MWD RESERVOIR RECYC STORAGE FAC										
53150 - DIRECT LABOR	Labor	\$ 358	\$ 2,076	\$ 2,149	\$ 2,224	\$ 2,302	\$ 2,382	\$ 2,466		
54120 - DIRECT MATERIALS	Operations	-	-	-	-	-	-	-		
56160 - OUTSIDE SERVICES	Operations	25,216	25,973	26,752	27,554	28,381	29,232	30,109		
56179 - MAJOR MAINTENANCE & REPAIR-UNPLANNED	Operations	-	-	-	-	-	-	-		
045410 - PIPING/VALVES/MAINTENANCE & REPAIR - MWD RESERVOIR RECYC STORAGE FAC										
53150 - DIRECT LABOR	Labor	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
54140 - INVENTORY MATERIALS	Operations	-	-	-	-	-	-	-		
045910 - OTHER										
56160 - OUTSIDE SERVICES	Operations	\$ 1,125	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
Subtotal Met Ponds at San Jacinto Reservoir		\$ 72,097	\$ 74,894	\$ 77,354	\$ 79,896	\$ 82,522	\$ 85,234	\$ 88,036		
Alessandro Ponds (Originally 14 ponds, now 3)										
045011 - OPERATIONAL COSTS										
53150 - DIRECT LABOR	Labor	\$ 39,185	\$ 40,557	\$ 41,976	\$ 43,446	\$ 44,966	\$ 46,540	\$ 48,169		
54120 - DIRECT MATERIALS	Operations	7,559	2,605	2,683	2,764	2,847	2,932	3,020		
54140 - INVENTORY MATERIALS	Operations	154	192	198	204	210	216	222		
56160 - OUTSIDE SERVICES	Operations	732	1,235	1,272	1,311	1,350	1,390	1,432		
57130 - OUTSIDE EQUIPMENT	Operations	-	-	-	-	-	-	-		
57235 - EQUIPMENT RENTAL	Operations	657	682	703	724	745	768	791		
045211 - GROUNDS MAINTENANCE										
56160 - OUTSIDE SERVICES	Operations	\$ 4,195	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
045911 - OTHER										
56160 - OUTSIDE SERVICES	Operations	\$ 110	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
Subtotal Alessandro Ponds (Originally 14 ponds, now 3)		\$ 52,592	\$ 45,271	\$ 46,832	\$ 48,447	\$ 50,118	\$ 51,846	\$ 53,634		
Skiland Reservoir										
045012 - OPERATIONAL COSTS - SKILAND RESERVOIR RECYC STORAGE FAC										
53150 - DIRECT LABOR	Labor	\$ 34,091	\$ 36,825	\$ 38,114	\$ 39,448	\$ 40,829	\$ 42,258	\$ 43,737		
54120 - DIRECT MATERIALS	Operations	-	-	-	-	-	-	-		
54140 - INVENTORY MATERIALS	Operations	-	-	-	-	-	-	-		
55472 - OTHER UTILITIES	Utilities	6,359	6,000	6,240	6,490	6,749	7,019	7,300		

		actual		budget					Forecasted -->				
ESCALATOR FACTOR		FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027
56160 - OUTSIDE SERVICES	Operations	93	196	202	208	214	221	227					
57130 - OUTSIDE EQUIPMENT	Operations	-	-	-	-	-	-	-					
57235 - EQUIPMENT RENTAL	Operations	1,279	744	766	789	813	838	863					
045212 - GROUNDS MAINTENANCE - SKILAND RESERVOIR RECYC STORAGE FAC													
53150 - DIRECT LABOR	Labor	\$ 7,808	\$ 7,629	\$ 7,896	\$ 8,172	\$ 8,458	\$ 8,754	\$ 9,061					
54120 - DIRECT MATERIALS	Operations	304	2,084	2,146	2,211	2,277	2,346	2,416					
56160 - OUTSIDE SERVICES	Operations	5,034	5,185	5,340	5,501	5,666	5,836	6,011					
56179 - MAJOR MAINTENANCE & REPAIR-UNPLANNED	Operations	-	-	-	-	-	-	-					
57235 - EQUIPMENT RENTAL	Operations	886	-	-	-	-	-	-					
045412 - PIPING/VALVES/MAINTENANCE & REPAIR - SKILAND RESERVOIR RECYC STORAGE FAC													
53150 - DIRECT LABOR	Labor	\$ 349	840	\$ 869	\$ 900	\$ 931	\$ 964	\$ 997					
045712 - TELEMETRY/CONTROL MAINTENANCE & REPAIR - SKILAND RESERVOIR RECYC STORAGE FAC													
53150 - DIRECT LABOR	Labor	\$ 447	-	\$ -	\$ -	\$ -	\$ -	\$ -					
Subtotal Skiland Reservoir		\$ 56,650	\$ 59,503	\$ 61,575	\$ 63,719	\$ 65,938	\$ 68,235	\$ 70,612					
LANDMARK RESERVOIR RECYC STORAGE FAC													
045013 - OPERATIONAL COSTS - LANDMARK RESERVOIR RECYC STORAGE FAC													
53150 - DIRECT LABOR	Labor	\$ 2,845	\$ 2,801	\$ 2,899	\$ 3,001	\$ 3,106	\$ 3,215	\$ 3,327					
57133 - MAINTENANCE CONTRACTS	Operations	4,503	2,536	2,612	2,690	2,771	2,854	2,940					
045213 - GROUNDS MAINTENANCE - LANDMARK RESERVOIR RECYC STORAGE FAC													
53150 - DIRECT LABOR	Labor	\$ 417	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -					
56160 - OUTSIDE SERVICES	Operations	1,468	1,512	1,558	1,604	1,652	1,702	1,753					
57133 - MAINTENANCE CONTRACTS	Operations	96	419	431	444	457	471	485					
57235 - EQUIPMENT RENTAL	Operations	776	-	-	-	-	-	-					
045713 - TELEMETRY, PLC, INSTRUM, MAINT. & RPR													
53150 - DIRECT LABOR	Labor	\$ 1,116	\$ 1,116	\$ 1,155	\$ 1,195	\$ 1,237	\$ 1,280	\$ 1,325					
54120 - DIRECT MATERIALS	Operations	62	62	64	65	67	69	71					
54140 - INVENTORY MATERIALS	Operations	625	505	520	536	552	568	585					
Subtotal LANDMARK RESERVOIR RECYC STORAGE FAC		\$ 11,907	\$ 8,950	\$ 9,239	\$ 9,536	\$ 9,843	\$ 10,160	\$ 10,487					
WINCHESTER RESEVOIR RECYC STORAGE FAC													
045014 - OPERATIONAL COSTS - WINCHESTER RESEVOIR RECYC STORAGE FAC													
53150 - DIRECT LABOR	Labor	\$ 31,949	\$ 32,785	\$ 33,933	\$ 35,120	\$ 36,350	\$ 37,622	\$ 38,939					
54120 - DIRECT MATERIALS	Operations	-	-	-	-	-	-	-					
54140 - INVENTORY MATERIALS	Operations	-	-	-	-	-	-	-					
56160 - OUTSIDE SERVICES	Operations	7,590	1,498	1,543	1,589	1,637	1,686	1,737					
56181 - REFUSE & WASTE HAULING	No Increase	1,260	1,200	1,200	1,200	1,200	1,200	1,200					
57130 - OUTSIDE EQUIPMENT	Operations	-	-	-	-	-	-	-					
57133 - MAINTENANCE CONTRACTS	Operations	15,036	12,243	12,611	12,989	13,379	13,780	14,193					
57235 - EQUIPMENT RENTAL	Operations	-	-	-	-	-	-	-					
045114 - LANDSCAPE MAINTENANCE - WINCHESTER RESEVOIR RECYC STORAGE FAC													
56160 - OUTSIDE SERVICES	Operations	\$ -	\$ 6,160	\$ 6,345	\$ 6,535	\$ 6,731	\$ 6,933	\$ 7,141					
56177 - REPAIRS-OTHER	Operations	-	-	-	-	-	-	-					
57133 - MAINTENANCE CONTRACTS	Operations	1,547	2,121	2,185	2,250	2,318	2,387	2,459					
045214 - GROUNDS MAINTENANCE - WINCHESTER RESEVOIR RECYC STORAGE FAC													
53150 - DIRECT LABOR	Labor	\$ 3,073	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -					
54120 - DIRECT MATERIALS	Operations	369	393	404	417	429	442	455					
54140 - INVENTORY MATERIALS	Operations	33	-	-	-	-	-	-					
56160 - OUTSIDE SERVICES	Operations	5,490	6,651	6,850	7,056	7,267	7,485	7,710					
57235 - EQUIPMENT RENTAL	Operations	613	-	-	-	-	-	-					
045314 - TANK STRUCTURE/RESERVOIR MAINTENANCE & REPAIR - WINCHESTER RESEVOIR RECYC STORAGE FAC													
54120 - DIRECT MATERIALS	Operations	\$ 21	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -					
045414 - PIPING/VALVES/MAINTENANCE & REPAIR - WINCHESTER RESEVOIR RECYC STORAGE FAC													
53150 - DIRECT LABOR	Labor	\$ 79	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -					
045614 - GEN ELECT/ELECT MOTOR/MCC MAINT & REPAIR-WINCHESTER RESEVOIR													
54120 - DIRECT MATERIALS	Operations	\$ (2)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -					
045714 - RECYC TELEMETRY MAINT & REPAIR WINCH													
53150 - DIRECT LABOR	Labor	\$ 809	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -					
54120 - DIRECT MATERIALS	Operations	3,842	-	-	-	-	-	-					
045914 - OTHER-WINCHESTER RESEVOIR													
53150 - DIRECT LABOR	Labor	\$ 165	\$ 434	\$ 449	\$ 465	\$ 481	\$ 498	\$ 515					
Subtotal WINCHESTER RESEVOIR RECYC STORAGE FAC		\$ 71,876	\$ 63,485	\$ 65,519	\$ 67,621	\$ 69,791	\$ 72,033	\$ 74,349					
TRUMBLE RD RECYC STORAGE FAC													
045015 - OPERATIONAL COSTS - TRUMBLE RD RECYC STORAGE FAC													
53150 - DIRECT LABOR	Labor	\$ 4,651	\$ 4,070	\$ 4,212	\$ 4,359	\$ 4,512	\$ 4,670	\$ 4,833					
54120 - DIRECT MATERIALS	Operations	4,468	-	-	-	-	-	-					
57130 - OUTSIDE EQUIPMENT	Operations	-	-	-	-	-	-	-					
57133 - MAINTENANCE CONTRACTS	Operations	738	-	-	-	-	-	-					
57235 - EQUIPMENT RENTAL	Operations	-	-	-	-	-	-	-					
045215 - GROUNDS MAINTENANCE - TRUMBLE RD RESERVOIR RECYC STORAGE FAC													
53150 - DIRECT LABOR	Labor	\$ 1,730	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -					
56160 - OUTSIDE SERVICES	Operations	6,571	-	-	-	-	-	-					
57235 - EQUIPMENT RENTAL	Operations	548	-	-	-	-	-	-					
045415 - PIPING/VALVES MAINTENANCE & REPAIR - TRUMBLE RD RECYC STORAGE FAC													
53150 - DIRECT LABOR	Labor	\$ 728	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -					
045715 - TELEMETRY, PLC, INSTRUMENTATION, MAINT & REPAIR													
53150 - DIRECT LABOR	Labor	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -					
54120 - DIRECT MATERIALS	Operations	-	-	-	-	-	-	-					
Subtotal TRUMBLE RD RECYC STORAGE FAC		\$ 19,434	\$ 4,070	\$ 4,212	\$ 4,359	\$ 4,512	\$ 4,670	\$ 4,833					
SUN CITY PONDS													
045016 - OPERATIONAL COSTS-SUN CITY PONDS													
53150 - DIRECT LABOR	Labor	\$ 7,576	\$ 11,767	\$ 12,179	\$ 12,605	\$ 13,047	\$ 13,503	\$ 13,976					
54120 - DIRECT MATERIALS	Operations	-	-	-	-	-	-	-					
54140 - INVENTORY MATERIALS	Operations	-	-	-	-	-	-	-					
56160 - OUTSIDE SERVICES	Operations	-	-	-	-	-	-	-					
57130 - OUTSIDE EQUIPMENT	Operations	2,125	10,000	10,300	10,609	10,927	11,255	11,593					
57133 - MAINTENANCE CONTRACTS	Operations	-	-	-	-	-	-	-					
57235 - EQUIPMENT RENTAL	Operations	1,480	-	-	-	-	-	-					
045216 - GROUNDS MAINT-SUN CITY PONDS													
57133 - MAINTENANCE CONTRACTS	Operations	\$ 6,800	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -					
Subtotal SUN CITY PONDS		\$ 17,981	\$ 21,767	\$ 22,479	\$ 23,214	\$ 23,974	\$ 24,758	\$ 25,569					
Chambers RW Tank (Formerly Potable S4121)													
045017 - OPERATION COSTS													
53150 - DIRECT LABOR	Labor	\$ 3,782	\$ 2,493	\$ 2,580	\$ 2,670	\$ 2,764	\$ 2,861	\$ 2,961					
54120 - DIRECT MATERIALS	Operations	199	199	205	211	218	224	231					
54140 - INVENTORY MATERIALS	Operations	1,823	1,823	1,878	1,934	1,992	2,052	2,114					
045217 - GROUNDS MAINTENANCE													
53150 - DIRECT LABOR	Labor	\$ 203	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -					

		actual		budget		Forecasted -->				
ESCALATOR FACTOR		FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027		
54120 - DIRECT MATERIALS	Operations	220	-	-	-	-	-	-		
54140 - INVENTORY MATERIALS	Operations	-	-	-	-	-	-	-		
57133 - MAINTENANCE CONTRACTS	Operations	1,178	-	-	-	-	-	-		
045317 - TANK STRUCTURE MAINT & REPAIR										
56160 - OUTSIDE SERVICES	Operations	\$ 13,400	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
045417 - PIPING/VALVES MAINT & REPAIR										
53150 - DIRECT LABOR	Labor	\$ 175	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
Subtotal Chambers RW Tank (Formerly Potable S4121)		\$ 20,980	\$ 4,515	\$ 4,663	\$ 4,816	\$ 4,974	\$ 5,137	\$ 5,305		
Fruitvale RW Tank (Formerly Potable S4209)										
045018 - OPERATIONAL COSTS										
53150 - DIRECT LABOR	Labor	\$ 678	\$ 724	\$ 750	\$ 776	\$ 803	\$ 831	\$ 860		
55170 - ELECTRIC POWER	Energy	241	247	257	267	278	289	301		
045218 - GROUNDS MAINTENANCE										
53150 - DIRECT LABOR	Labor	\$ 374	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
56160 - OUTSIDE SERVICES	Operations	4,853	-	-	-	-	-	-		
57133 - MAINTENANCE CONTRACTS	Operations	1,073	-	-	-	-	-	-		
045318 - TANK STRUCTURE/RESERVOIR MAINT & REPAIR										
56160 - OUTSIDE SERVICES	Operations	\$ 5,300	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
045418 - PIPING/VALVES MAINT & REPAIR										
53150 - DIRECT LABOR	Labor	\$ 799	\$ 799	\$ 827	\$ 856	\$ 886	\$ 917	\$ 949		
54140 - INVENTORY MATERIALS	Operations	2,867	2,867	2,953	3,042	3,133	3,227	3,324		
045718 - TELEMETRY, PLC, INSTRUMENTATION MAINT & RPR										
53150 - DIRECT LABOR	Labor	\$ 545	\$ 564	\$ 584	\$ 604	\$ 625	\$ 647	\$ 670		
54140 - INVENTORY MATERIALS	Operations	55	-	-	-	-	-	-		
045918 - OTHER										
53150 - DIRECT LABOR	Labor	\$ 1,160	\$ 1,445	\$ 1,495	\$ 1,547	\$ 1,602	\$ 1,658	\$ 1,716		
Subtotal Fruitvale RW Tank (Formerly Potable S4209)		\$ 17,946	\$ 6,646	\$ 6,866	\$ 7,093	\$ 7,327	\$ 7,569	\$ 7,820		
Gibbel Road RW Tank (near S4203)										
045018 - OPERATIONAL COSTS										
53150 - DIRECT LABOR	Labor	\$ 719	\$ 868	\$ 898	\$ 929	\$ 962	\$ 996	\$ 1,031		
55170 - ELECTRIC POWER	Energy	178	198	206	214	223	231	241		
045218 - GROUNDS MAINTENANCE										
53150 - DIRECT LABOR	Labor	\$ 437	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
57133 - MAINTENANCE CONTRACTS	Operations	498	409	-	-	-	-	-		
045318 - TANK STRUCTURE/RESERVOIR MAINT & REPAIR										
56160 - OUTSIDE SERVICES	Operations	\$ 16,400	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
045418 - PIPING/VALVES MAINT & REPAIR										
53150 - DIRECT LABOR	Labor	\$ 470	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
Subtotal Gibbel Road RW Tank (near S4203)		\$ 18,702	\$ 1,475	\$ 1,104	\$ 1,143	\$ 1,185	\$ 1,227	\$ 1,271		
Longfellow RW Tank										
045020 - OPERATIONAL COSTS										
53150 - DIRECT LABOR	Labor	\$ 109	\$ 354	\$ 366	\$ 379	\$ 392	\$ 406	\$ 420		
54120 - DIRECT MATERIALS	Operations	-	-	-	-	-	-	-		
54140 - INVENTORY MATERIALS	Operations	-	-	-	-	-	-	-		
55170 - ELECTRIC POWER	Energy	194	199	207	215	223	232	242		
56160 - OUTSIDE SERVICES	Operations	-	-	-	-	-	-	-		
045220 - GROUNDS MAINTENANCE										
53150 - DIRECT LABOR	Labor	\$ 187	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
54120 - DIRECT MATERIALS	Operations	-	-	-	-	-	-	-		
045320 - TANK STRUCTURE/RESERVOIR MAINTENANCE										
56160 - OUTSIDE SERVICES	No Increase	\$ 14,650	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
045420 - PIPING/VALVES MAINTENANCE & REPAIR										
53150 - DIRECT LABOR	Labor	\$ 358	\$ 512	\$ 530	\$ 549	\$ 568	\$ 588	\$ 609		
57235 - EQUIPMENT RENTAL	Operations	-	-	-	-	-	-	-		
Subtotal Longfellow RW Tank		\$ 15,497	\$ 1,065	\$ 1,103	\$ 1,142	\$ 1,183	\$ 1,226	\$ 1,270		
Benton Road RW Tank (near S4306)										
045022 - OPERATIONAL COSTS										
53150 - DIRECT LABOR	Labor	\$ 760	\$ 989	\$ 1,024	\$ 1,060	\$ 1,097	\$ 1,135	\$ 1,175		
55170 - ELECTRIC POWER	Energy	192	219	227	237	246	256	266		
56160 - OUTSIDE SERVICES	Operations	-	-	-	-	-	-	-		
045222 - GROUNDS MAINTENANCE										
53150 - DIRECT LABOR	Labor	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
045322 - TANK STRUCTURE MAINTENANCE										
56160 - OUTSIDE SERVICES	No Increase	\$ 9,400	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
045422 - PIPING/VALVES MAINTENANCE & REPAIR										
53150 - DIRECT LABOR	Labor	\$ 1,324	\$ 634	\$ 657	\$ 680	\$ 703	\$ 728	\$ 753		
54120 - DIRECT MATERIALS	Operations	-	-	-	-	-	-	-		
54140 - INVENTORY MATERIALS	Operations	487	487	502	517	532	548	564		
045622 - ELECTRICAL MAINTENANCE & REPAIR										
53150 - DIRECT LABOR	Labor	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
045722 - TELEMETRY, PLC, INSTRUMENT & REPAIR										
53150 - DIRECT LABOR	Labor	\$ 61	\$ 774	\$ 801	\$ 829	\$ 858	\$ 888	\$ 919		
54120 - DIRECT MATERIALS	Operations	-	-	-	-	-	-	-		
54140 - INVENTORY MATERIALS	Operations	-	-	-	-	-	-	-		
Subtotal Benton Road RW Tank (near S4306)		\$ 12,224	\$ 3,103	\$ 3,210	\$ 3,321	\$ 3,436	\$ 3,555	\$ 3,678		
North Trumble Road Storage Pond										
045023 - OPERATIONAL COSTS										
53150 - DIRECT LABOR	Labor	\$ 2,199	\$ 1,367	\$ 1,415	\$ 1,465	\$ 1,516	\$ 1,569	\$ 1,624		
55472 - OTHER UTILITIES	Utilities	-	-	-	-	-	-	-		
57235 - EQUIPMENT RENTAL	Operations	-	-	-	-	-	-	-		
045223 - GROUNDS MAINTENANCE										
53150 - DIRECT LABOR	Labor	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
56160 - OUTSIDE SERVICES	Operations	4,853	1,079	1,112	1,145	1,180	1,215	1,251		
045423 - PIPING/VALVES MAINTENANCE & REPAIR										
53150 - DIRECT LABOR	Labor	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
54140 - INVENTORY MATERIALS	Operations	-	-	-	-	-	-	-		
045723 - TELEMETRY, PLC, INSTRUMENT, MAINT & REPAIR										
53150 - DIRECT LABOR	Labor	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
54120 - DIRECT MATERIALS	Operations	-	-	-	-	-	-	-		
Subtotal North Trumble Road Storage Pond		\$ 7,052	\$ 2,447	\$ 2,527	\$ 2,610	\$ 2,695	\$ 2,784	\$ 2,875		
Subtotal RECYCLED WATER STORAGE FACILITIES		\$ 394,937	\$ 381,587	\$ 393,796	\$ 406,836	\$ 420,311	\$ 434,237	\$ 448,628		

Appendix D

CAPITAL IMPROVEMENT PLAN

Functionalized CIP	Costs	%
LONG-TERM STORAGE	\$ 4,739,091	8.4%
OPERATIONAL STORAGE	\$ 6,582,504	11.7%
STABILIZED DISTRIBUTION	\$ 13,864,623	24.6%
TRANSMISSION	\$ 30,501,937	54.1%
Other	\$ 662,240	1.2%
Total CIP	\$ 56,350,395	100%

WSD Eligible Costs	\$	2,248,830	\$	4,084,035	\$	2,414,863	\$	2,654,999	\$	1,063,179	\$	40,998	\$	218,375	\$	1,069,998	\$	13,829	\$	-	\$	242,599
WSD Eligible Costs - Escalated	\$	2,248,830	\$	4,247,397	\$	2,611,916	\$	2,986,512	\$	1,243,769	\$	49,881	\$	276,314	\$	1,408,045	\$	18,926	\$	-	\$	359,106

Appendix E

FIXED ASSETS ALLOCATION SUMMARY

LINE	CATEGORY	ACQUISITION COST	NET BOOK VALUE (2022)	REPLACEMENT COST NEW	RCNLD	ANNUAL REPLACEMENT	ENERGY DISSIPATION	TREATMENT	LONG-TERM STORAGE	OPERATIONAL STORAGE	STABILIZED DISTRIBUTION	TRANSMISSION	BACKBONE SERVICES	STABILIZED SERVICES	METER COST	BACKFLOW	As All Other	
1	BUILDING IMPROVEMENTS	\$ 139,365	\$ 125,819	\$ 154,098	\$ 138,755	\$ 9,572											100%	
2	CAPITALIZED INTEREST	8,774	7,355	11,459	9,607	229											100%	
3	COMPUTER SOFTWARE	26,816	-	35,969	-	7,194											100%	
4	EASEMENTS	2,146,829	2,138,810	3,569,822	3,556,568	713,964											100%	
5	ENERGY DISS FAC	10,724,485	6,387,907	14,884,748	8,049,000	719,816	100%										0%	
6	LAND IMPROVEMENTS	266,432	174,919	330,331	205,114	18,321											100%	
7	LAND	3,258,742	3,214,846	7,333,674	7,258,822	1,466,735											100%	
8	MACHINERY & EQUIPMENT	13,534	-	24,039	-	4,808											100%	
9	RECLAIMED METER & SERVICE CONNECTION	1,637,108	1,099,608	2,108,990	1,359,230	101,827									100%		100%	
10	PLANS & DESIGNS	652,948	-	940,692	-	188,138											100%	
11	PUMP STATIONS	-	-	-	-	-												
12	Rancho Club	4,221	-	7,667	-	1,533					67%	33%					0%	
13	La Ventana	16,804	-	30,523	-	6,105											100%	
14	Winchester Pond B Floating Pump	4,481,544	562,431	7,208,128	693,814	684,759					80%	20%					0%	
15	Morgan Street	5,036	-	8,587	-	859											100%	
16	Unk Pump Station	2,706,418	1,285,321	4,701,093	1,976,156	161,537											100%	
17	Rancho Club Drive	445,236	56,841	780,806	100,281	42,687					67%	33%					0%	
18	Sun City Pond Transfer Pump Station	106,512	10,510	164,572	13,436	16,457					0%	100%					0%	
19	Trumble Rd Floating Pump	200,779	74,679	309,647	101,006	18,530					50%	50%					0%	
20	Palomar Road Booster	10,653,662	5,073,552	17,131,319	8,160,951	688,306					0%	100%					0%	
21	Skiland I - North (Floating Pump)	92,455	78	153,968	152	11,750					40%	60%					0%	
22	Simpson & California Booster (pumps to PZ 1719)	3,171,778	2,256,674	4,452,817	3,169,746	127,658					100%	0%					0%	
23	Skiland II - South (In-line booster)	713,435	-	1,041,895	-	104,190					33%	67%					0%	
24	Perris Raw Water Augmentation Pump Stn.	18,530	2,007	24,696	2,676	2,470					33%	67%					0%	
25	Winchester Reservoir (lds)	4,989,416	2,492,623	10,315,250	5,088,542	262,881					80%	20%					0%	
26	MV South - Nandina Pump Station (Note**)	2,969,574	1,424,812	4,125,525	1,970,347	206,276					50%	50%					0%	
27	Leon Road Recycled Booster (to PZ 1627 or PZ1508)	3,821,765	3,049,450	4,991,553	3,982,844	124,789					0%	100%					0%	
28	Alessandro Pond Pump Station	6,788,901	5,659,816	8,633,374	7,197,529	215,834					0%	100%					0%	
29	San Jacinto / Metropolitan Reservoir (old PS replaced with new)	3,167,305	2,685,611	3,932,196	3,334,175	98,305					0%	100%					0%	
30	North Trumble Rd Floating Pump	1,361,775	1,256,813	1,533,349	1,415,163	38,334					50%	50%					0%	
31	RECLAIMED WATER PIPELINES	153,546,143	114,380,829	238,471,088	168,513,719	5,140,661					32.0%	68.0%					0%	
32	RECLAIMED WATER FACILITY - WETLAND STORAGE	304,754	-	-	-	-											100%	
33	STORAGE	-	-	-	-	-												
34	Skiland Reservoir	527,031	96,323	830,057	141,130	62,300				60%	40%						0%	
35	Met Ponds at San Jacinto Reservoir	248,450	17,531	351,621	21,038	66,189				100%	0%						0%	
36	Sun City Ponds (Orig 9 Ponds, now 8)	558,139	390,730	677,999	446,898	36,437				30%	70%						0%	
37	Alessandro Ponds (Originally 14 ponds, now 3)	2,085,935	1,754,615	2,375,780	1,918,915	127,018				100%	0%						0%	
38	Trumble Road Reservoir	1,241,899	972,384	1,468,666	1,112,739	72,621				50%	50%						0%	
39	Landmark Reservoir	64,846	8,536	102,709	12,970	6,388				0%	100%						0%	
40	Gibbel Road RW Tank (near S4203)	7,006,418	5,585,669	9,149,664	7,294,748	230,092				0%	100%						0%	
41	Unk Storage	2,755,613	2,184,273	3,277,888	2,485,295	112,043											100%	
42	Benton Road RW Tank (near S4306)	6,663,208	5,317,549	8,702,723	6,945,176	217,568				0%	100%						0%	
43	Longfellow RW Tank	6,698,356	5,454,406	8,748,629	7,123,923	218,716				0%	100%						0%	
44	North Trumble Road Storage Pond	7,149,320	6,598,273	8,050,083	7,429,608	201,252				50%	50%						100%	
45	TELEMETRY EQUIPMENT	32,114	5,418	43,206	6,842	4,321											100%	
46	TREATMENT PLANTS	301,877	98,110	695,522	226,045	17,388		100%									0%	
47	Total Recycled Water Assets	\$253,774,281	\$181,905,129	\$381,886,024	\$261,462,959	\$12,556,858	Allocated RCN	\$14,884,748	\$695,522	\$8,188,090	\$32,269,441	\$98,702,057	\$204,575,793	--	--	\$2,108,990	--	\$20,461,381
48							Reallocation of As All Other	\$842,672	\$39,376	\$463,553	\$1,826,874	\$5,587,833	\$11,581,677	\$0	\$0	\$119,397	\$0	(\$20,461,381)
49							Total Allocation	15,727,421	734,898	8,651,644	34,096,316	104,289,890	216,157,470	--	--	2,228,386	--	--
50							Asset Allocation	4.1%	0.2%	2.3%	8.9%	27.3%	56.6%	0.0%	0.0%	0.6%	0.0%	0.0%

Summary of Pipeline Analysis to Identify Transmission and Distribution Allocations and Discharge Related Pipelines

Summary of Pipeline Analysis to Identify Transmission and Distribution Allocations and Discharge Related Pipelines													
Pipelines Outside RRA						Pipelines Within RRA					Adjust Based on Consumption By RRA Customers for Transmission/Distribution Split		
DIAMETER	Length (ft)	Diameter*Length	Est. Repl. Cost	Discharge	Type	Length (ft)	Diameter*Length	Est. Repl. Cost	Type	Discharge			
4	-	-	\$ -	-	Transmission	5,808	23,233	\$ 755,077	Distribution	-			
6	508	3,051	\$ 96,614	-	Transmission	42,872	257,231	\$ 8,145,634	Distribution	-			
8	4,801	38,406	\$ 984,163	-	Transmission	207,728	1,661,827	\$ 42,584,317	Distribution	-			
10	255	2,552	\$ 65,080	-	Transmission	1,394	13,945	\$ 355,587	Distribution	-			
12	20,698	248,376	\$ 5,484,964	-	Transmission	167,107	2,005,286	\$ 44,283,389	Distribution	-			
14	1,319	18,471	\$ 468,363	-	Transmission	93	1,306	\$ 33,116	Distribution	-			
16	143	2,295	\$ 50,931	-	Transmission	22,960	367,368	\$ 8,150,971	Distribution	-			
18	30,728	553,099	\$ 12,291,080	-	Transmission	73,872	1,329,700	\$ 29,548,884	Distribution	-			
20	42	846	\$ 18,605	-	Transmission	80	1,591	\$ 34,991	Distribution	-			
21	1,612	33,852	\$ 744,741	-	Transmission	199	4,177	\$ 91,904	Distribution	-			
24	36,088	866,123	\$ 18,224,666	100%	Transmission	161,932	3,886,371	\$ 81,775,727	Transmission	100%	23.4%	Length (ft)	Est. Repl. Cost
27	-	-	\$ -	100%	Transmission	-	-	\$ -	Transmission	100%	23.4%	-	\$ -
28	785	21,975	\$ 412,945	100%	Transmission	-	-	\$ -	Transmission	100%	23.4%	-	\$ -
30	2,041	61,232	\$ 1,081,770	100%	Transmission	30,692	920,763	\$ 16,266,817	Transmission	100%	23.4%	30,692	\$ 3,798,803
36	134,357	4,836,853	\$ 84,644,927	100%	Transmission	81,905	2,948,575	\$ 51,600,066	Transmission	100%	23.4%	81,905	\$ 12,050,206
42	10,564	443,687	\$ 7,975,795	100%	Transmission	-	-	\$ -	Transmission	100%	23.4%	-	\$ -
48	78,931	3,788,708	\$ 65,513,080	100%	Transmission	48,679	2,336,584	\$ 40,403,424	Transmission	100%	23.4%	48,679	\$ 9,435,445
54	35,444	1,914,001	\$ 32,538,022	100%	Transmission	10,685	577,000	\$ 9,809,002	Transmission	100%	23.4%	10,685	\$ 2,290,704
72	-	-	\$ -	-	Transmission	-	-	\$ -	Transmission	-	23.4%	-	\$ -
Total	358,318	12,833,527	\$ 230,595,746			856,008	16,334,956	\$ 333,838,908				333,893	\$ 46,672,313

Estimated Replacement	Outside RRA	Within RRA	Total		Pipeline Length	Outside RRA	Within RRA	Total		
Transmission	\$ 230,595,746	\$ 153,182,724	\$ 383,778,470	68.0%	68.0% Transmission	358,318	333,893	692,212	57.0%	57.0%
Distribution	\$ -	\$ 180,656,184	\$ 180,656,184	32.0%	32.0% Distribution	-	522,114	522,114	43.0%	43.0%
Total	\$ 230,595,746	\$ 333,838,908	\$ 564,434,654	100.0%	100.0% Total	358,318	856,008	1,214,326	100.0%	100.0%

Discharge Estimated Replacement	Outside RRA	Within RRA	Total		
Discharge	\$ 210,391,205	\$ 199,855,037	\$ 410,246,242	72.7%	72.7%
Not Discharge Related	\$ 20,204,541	\$ 133,983,871	\$ 154,188,413	27.3%	27.3%
Total	\$ 230,595,746	\$ 333,838,908	\$ 564,434,654	100.0%	100.0%

Note: Capital replacement estimated for avoided discharge costs are based on the District's booked asset values rather than the estimated costs in this table.

Pipeline Unit Cost Assumptions (Water/Recycled Water)

Diameter (in)	Cost per LF June 2017	Updated Cost per LF Oct. 2021	Cost per In-Dia. Per LF	ENR Adjustment	
				June 2017	10,284
4	\$100	\$130	\$32.50	October 2021	12,912
6	\$150	\$190	\$31.67		
8	\$160	\$205	\$25.63		
10	\$200	\$255	\$25.50		
12	\$210	\$265	\$22.08		
14	\$280	\$355	\$25.36		
16	\$280	\$355	\$22.19		
18	\$315	\$400	\$22.22		
20	\$350	\$440	\$22.00		
21		\$462	\$22.00		
24	\$400	\$505	\$21.04	Interpolation slope	
27		\$523	\$19.35	-0.5625	
28		\$526	\$18.79	interpolated	
30	\$420	\$530	\$17.67		
36	\$500	\$630	\$17.50		
42	\$600	\$755	\$17.98		
48	\$660	\$830	\$17.29		
54		\$918	\$17.00	assumed	
72		\$1,224	\$17.00	assumed	

Appendix F

FUNCTIONALIZATION OF OPERATIONS AND MAINTENANCE

LINE	CATEGORY	ALLOCATION	FYE 2023	DISCHARGE FACILITIES	LONG-TERM STORAGE	OPERATIONAL STORAGE	STABILIZED DISTRIBUTION	TRANSMISSION	BACKBONE SERVICES	STABILIZED SERVICES	AS ALL OTHERS
41	RECYCLED WATER PUMPING FACILITIES										
42	GENERAL	\$	159,590	\$ -	\$ -	\$ -	\$ 52,114	\$ 107,476	\$ -	\$ -	\$ -
43	ALESSANDRO POND PUMP STATION	\$	29,704	\$ -	\$ -	\$ -	\$ -	\$ 29,704	\$ -	\$ -	\$ -
44	HEMET/SAN JACINTO RECYC PS	\$	12,776	\$ -	\$ -	\$ -	\$ -	\$ 12,776	\$ -	\$ -	\$ -
45	LEON ROAD RECYCLED BOOSTER (to PZ 1627 or PZ1508)	\$	92,217	\$ -	\$ -	\$ -	\$ -	\$ 92,217	\$ -	\$ -	\$ -
46	MORGAN RECYC PS	\$	463	\$ -	\$ -	\$ -	\$ 151	\$ 312	\$ -	\$ -	\$ -
47	MV SOUTH RECYC PS - NANDINA PS	\$	15,895	\$ -	\$ -	\$ -	\$ 7,947	\$ 7,947	\$ -	\$ -	\$ -
48	NORTH TRUMBLE RD FLOATING PUMP	\$	7,817	\$ -	\$ -	\$ -	\$ 3,909	\$ 3,909	\$ -	\$ -	\$ -
49	PALOMAR BOOSTER	\$	755,089	\$ -	\$ -	\$ -	\$ -	\$ 755,089	\$ -	\$ -	\$ -
50	Perris Raw Water Augmentation Pump Stn.	\$	3,080	\$ -	\$ -	\$ -	\$ 1,006	\$ 2,075	\$ -	\$ -	\$ -
51	PVRWRF Case Pond Floating Pump	\$	14,486	\$ -	\$ -	\$ -	\$ 14,486	\$ -	\$ -	\$ -	\$ -
52	RANCHO CLUB DRIVE RECYC PS	\$	110,933	\$ -	\$ -	\$ -	\$ 54,374	\$ 27,187	\$ -	\$ -	\$ -
53	Reach 4 Pressurization (Bidirectional) into 1627 PZ	\$	29,372	\$ -	\$ -	\$ -	\$ 20,561	\$ 8,812	\$ -	\$ -	\$ -
54	San Jacinto / Metropolitan Reservoir (old PS replaced with new)	\$	36,222	\$ -	\$ -	\$ -	\$ -	\$ 36,222	\$ -	\$ -	\$ -
55	Simpson & California Booster (pumps to PZ 1719)	\$	161,356	\$ -	\$ -	\$ -	\$ 161,356	\$ -	\$ -	\$ -	\$ -
56	Skiland I - North (Floating Pump)	\$	43,351	\$ -	\$ -	\$ -	\$ 17,340	\$ 26,010	\$ -	\$ -	\$ -
57	Skiland II - South (In-line booster)	\$	4,929	\$ -	\$ -	\$ -	\$ 1,609	\$ 3,319	\$ -	\$ -	\$ -
58	Sun City Pond 8 Pump Station (Built-in)	\$	34,273	\$ -	\$ -	\$ -	\$ 34,273	\$ -	\$ -	\$ -	\$ -
59	Sun City Pond Transfer Pump Station	\$	880	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
60	TEMECULA VALLEY RECYC PS	\$	11,168	\$ -	\$ -	\$ -	\$ 3,647	\$ 7,521	\$ -	\$ -	\$ -
61	TRUMBLE RD RECYC PS	\$	79,993	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
62	WINCHESTER RECYC PS	\$	197,043	\$ -	\$ -	\$ -	\$ 157,635	\$ 39,409	\$ -	\$ -	\$ -
63	RECYCLED WATER STORAGE FACILITIES										
64	GENERAL	\$	87,113	\$ -	\$ 57,947	\$ 29,166	\$ -	\$ -	\$ -	\$ -	\$ -
65	Met Ponds at San Jacinto Reservoir	\$	77,354	\$ -	\$ 77,354	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
66	Alessandro Ponds (Originally 14 ponds, now 3)	\$	46,832	\$ -	\$ 46,832	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
67	Skiland Reservoir	\$	61,575	\$ -	\$ 36,945	\$ 24,630	\$ -	\$ -	\$ -	\$ -	\$ -
68	LANDMARK RESERVOIR RECYC STORAGE FAC	\$	9,239	\$ -	\$ -	\$ 9,239	\$ -	\$ -	\$ -	\$ -	\$ -
69	WINCHESTER RESEVOIR RECYC STORAGE FAC	\$	65,519	\$ -	\$ 32,760	\$ 32,760	\$ -	\$ -	\$ -	\$ -	\$ -
70	TRUMBLE RD RECYC STORAGE FAC	\$	4,212	\$ -	\$ 2,106	\$ 2,106	\$ -	\$ -	\$ -	\$ -	\$ -
71	SUN CITY PONDS	\$	22,479	\$ -	\$ 6,744	\$ 15,735	\$ -	\$ -	\$ -	\$ -	\$ -
72	Chambers RW Tank (Formerly Potable S4121)	\$	4,663	\$ -	\$ -	\$ 4,663	\$ -	\$ -	\$ -	\$ -	\$ -
73	Fruitvale RW Tank (Formerly Potable S4209)	\$	6,866	\$ -	\$ -	\$ 6,866	\$ -	\$ -	\$ -	\$ -	\$ -
74	Gibbel Road RW Tank (near S4203)	\$	1,104	\$ -	\$ -	\$ 1,104	\$ -	\$ -	\$ -	\$ -	\$ -
75	Longfellow RW Tank	\$	1,103	\$ -	\$ -	\$ 1,103	\$ -	\$ -	\$ -	\$ -	\$ -
76	Benton Road RW Tank (near S4306)	\$	3,210	\$ -	\$ -	\$ 3,210	\$ -	\$ -	\$ -	\$ -	\$ -
77	North Trumble Road Storage Pond	\$	2,527	\$ -	\$ 1,263	\$ 1,263	\$ -	\$ -	\$ -	\$ -	\$ -

LINE	CATEGORY	ALLOCATION	FYE 2023	DISCHARGE FACILITIES	LONG-TERM STORAGE	OPERATIONAL STORAGE	STABILIZED DISTRIBUTION	TRANSMISSION	BACKBONE SERVICES	STABILIZED SERVICES	AS ALL OTHERS
78	RECYCLED WATER OFA		\$ 268,164	\$ 11,560	\$ 6,075	\$ 23,943	\$ 73,233	\$ 151,788	\$ -	\$ -	\$ 1,565
79	RECYCLED WATER OPEB		\$ 1,090,368	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,090,368
80	RECYCLED WATER PUMPING FACILITIES										
81	RECYCLED WATER PUMPING FACILITIES		\$ 2,175,403	\$ -	\$ -	\$ -	\$ 578,404	\$ 1,192,861	\$ -	\$ -	\$ -
82	RECYCLED WATER PUMPING FACILITIES - 5-YEAR AVERAGE										
83	RECYCLED WATER STORAGE FACILITIES										
84	RECYCLED WATER STORAGE FACILITIES - 2023		\$ 393,796	\$ -	\$ 261,951	\$ 131,844	\$ -	\$ -	\$ -	\$ -	\$ -
85	RECYCLED WATER STORAGE FACILITIES - 5-YEAR AVERAGE										

Allocation Summary			FYE 2023	DISCHARGE FACILITIES	LONG-TERM STORAGE	OPERATIONAL STORAGE	STABILIZED DISTRIBUTION	TRANSMISSION	BACKBONE SERVICES	STABILIZED SERVICES	AS ALL OTHERS
87	RECYCLED WATER ALLOCATED SUPPORT		\$ 4,654,854	\$ 100,096	\$ 32,168	\$ 98,970	\$ 561,927	\$ 755,058	\$ 109,663	\$ 928,164	\$ 2,068,808
88	RECYCLED WATER DECHLORINATION FACILITY		\$ 99,222	\$ 99,222	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
89	RECYCLED WATER DISTRIBUTION SYSTEM		\$ 1,257,070	\$ -	\$ -	\$ -	\$ 202,349	\$ 429,861	\$ 110,317	\$ 443,182	\$ 71,360
90	RECYCLED WATER ENERGY DISSIPATION FACILITY		\$ 172,747	\$ 172,747	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
91	RECYCLED WATER PUMPING FACILITIES		\$ 1,771,265	\$ -	\$ -	\$ -	\$ 578,404	\$ 1,192,861	\$ -	\$ -	\$ -
92	RECYCLED WATER RECOVERY WELLS		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
93	RECYCLED WATER STORAGE FACILITIES		\$ 393,796	\$ -	\$ 261,951	\$ 131,844	\$ -	\$ -	\$ -	\$ -	\$ -
94	RECYCLED WATER OFA		\$ 268,164	\$ 11,560	\$ 6,075	\$ 23,943	\$ 73,233	\$ 151,788	\$ -	\$ -	\$ 1,565
95	RECYCLED WATER OPEB		\$ 1,090,368	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,090,368
97			\$ 9,707,486	\$ 383,625	\$ 300,195	\$ 254,757	\$ 1,415,912	\$ 2,529,569	\$ 219,980	\$ 1,371,346	\$ 3,232,102
98	Reallocation of As All Others			\$ 191,481	\$ 149,838	\$ 127,159	\$ 706,734	\$ 1,262,600	\$ 109,800	\$ 684,489	\$ (3,232,102)
99			\$ 13,231,079	\$ 575,107	\$ 450,033	\$ 381,916	\$ 2,122,646	\$ 3,792,169	\$ 329,781	\$ 2,055,835	\$ -
100	O&M Functional Allocation			5.92%	4.64%	3.93%	21.87%	39.06%	3.40%	21.18%	100.00%