

City of Riverside Public Utilities

2023 WATER COST OF SERVICE AND RATE DESIGN STUDY

FINAL | May 2023

Contents

Section 1	1
Introduction	1
1.1 Study Purpose	1
1.2 Overview of the Rate Setting Process	2
1.3 Forward-Looking Statement	3
1.4 Riverside Public Utility Background	3
1.4.1 Impact of Weather Conditions	7
1.5 Capital Improvement Plan	8
1.6 Existing Rate Structure	8
Section 2	11
Water Usage and Supply	11
2.1 Growth and Water Demand	11
2.1.1 Customer Account Growth	11
2.1.2 Water Usage	12
Section 3	15
Revenue Requirements	15
3.1 Introduction	15
3.2 Ongoing Costs and Offsetting Revenues	16
3.2.1 Operating and Maintenance Costs	16
3.3 Debt Service	17
3.4 Capital Improvement Plan	18
3.4.1 CIP Funding	19
3.4.2 Projected Debt Issuances	19
3.5 Reserve Requirements	20
3.6 Offsetting Revenues	21
3.7 Revenue Requirement Forecast	22
Section 4	25
Water Cost of Service Analysis	25
4.1 Functional Cost Allocation	26
4.1.1 Water Production and Operations	30

4.1.2 Water Field Operations	33
4.1.3 Water Engineering	34
4.1.4 Office of Operations Technology	34
4.1.5 Debt Service	34
4.2 Rate Component Allocation	34
4.2.1 Max Day and Max Hour Analysis	35
4.2.2 Rate Component Allocation Results	36
4.2.3 Fixed and Variable Cost Recovery	37
4.3 Rate Code Allocation	46
4.3.2 Water Supply Allocation	47
4.3.3 Water Demand Characteristics – Units of Service	49
4.3.4 Interruptible Rates	49
Section 5	52
Water Rate Design	52
5.1 Selecting Rate Structures	52
5.1.1 Ratemaking Principles	52
5.1.2 Proposed Water Rate Structure	53
5.2 Fixed Charges	53
5.3 Variable Rates	55
5.3.1 Seasonally Adjusted Rates	55
5.3.2 Single Family Residential Rates	56
5.3.3 Proposed Single Family Rate Structure	56
5.3.4 Proposed Single Family Rates	57
5.3.5 Multi-Family Residential Rates	66
5.3.6 Commercial and Industrial Rates	69
5.3.7 Landscape Irrigation Rates	73
5.3.8 Temporary Service Rates	76
5.3.9 Riverside Water Company Irrigators Rates	78
5.3.10 Interruptible City Irrigation and Recycled Water Rates	79
5.4 Outside City Surcharge	83
5.5 Demand Reduction Rates	85
Section 6	91

Legal Requirements	91
6.1 Introduction	91
6.2 Article XIII D	91
6.3 California Assembly Bill 2882	92
6.4 Article XIII C	93
6.5 Article X	94

Appendices

Appendix A	Revenue Requirement and Financial Information
Appendix B	Functionalization of Costs
Appendix C	Cost of Service Allocation
Appendix D	Customer Class Allocation
Appendix E	Cost of Water Analysis
Appendix F	Supply Allocation
Appendix G	Customer Data and Projections
Appendix H	Rate Calculations
Appendix I	Outside City Surcharge Calculation
Appendix J	Demand Reduction Rates

Tables

Table 1	Existing Rate Class Descriptions	9
Table 2	Existing (FY 2023) Rates and Charges by Customer Class	10
Table 3	Account Growth	12
Table 4	Projected Sales by Class (thousand CCF)	13
Table 5	Projected Water O&M and other Ongoing Expenditures (thousand \$)	17
Table 6	Outstanding Water Debt Obligations and Debt Service (thousand \$)	18
Table 7	CIP Funding by Source (millions \$)	19
Table 8	Projected Bond and Short-Term Issuances (thousand \$)	20
Table 9	Undesignated Reserve Level Metrics	20
Table 10	Projected Undesignated Min & Max Target Reserve Calculations (millions \$)	21
Table 11	Projected Offsetting Revenues (millions \$)	22
Table 12	Results of Revenue Requirement Analysis (millions \$)	23
Table 13	Required Rate Revenue (millions \$)	24

Table 14	Allocation Summary of O&M by Cost Center	28
Table 15	Allocation Summary of Debt Service	29
Table 16	Water Production by Source	31
Table 17	Historic Source of Supply Costs	32
Table 18	Estimated Potable Retail Supply Costs	33
Table 19	System Demand Factors Calculation	35
Table 20	Extra Capacity Allocation Calculations	36
Table 21	O&M Allocation Factors	39
Table 22	Rate Category Allocation of O&M Expenditures (\$ millions)	40
Table 23	Rate Category Allocation of Debt Service (\$ millions)	41
Table 24	Rate Category Allocation of CIP (\$ millions)	42
Table 25	Rate Category Allocation of Total Revenue Requirements (\$ millions)	43
Table 26	Rate Category Allocation of Baseline Rate Revenue Requirements for FY 2023/24 to FY 2027/28 (\$ thousands)	45
Table 27	Supply Allocation by Rate Code (CCF)	48
Table 28	Units of Service	50
Table 29	Rate Code Allocation for FY 2023/24 (thousands \$)	51
Table 30	Monthly Component Charges	53
Table 31	Components to Proposed Fixed Charge (FY 2023/24)	54
Table 32	Proposed Monthly Fixed Charges (FY 2023/24 to FY 2027/28)	54
Table 33	Seasonal Peak Factors Calculation	56
Table 34	SFR Proposed Rate Calculation: Base/Extra Capacity by Tier (FY 2023/24)	57
Table 35	SFR Seasonal Allocation Percentage Calculation (FY 2023/24)	58
Table 36	SFR Proposed Rate Calculation: Base/Extra Capacity Costs by Season (FY 2023/24)	58
Table 37	SFR Proposed Rate Calculation: Supply by Tier (FY 2023/24)	59
Table 38	SFR Proposed Rate Calculation: Supply Costs by Season (FY 2023/24) (\$1,000s)	60
Table 39	SFR Proposed Rate Calculation (FY 2023/24)	60
Table 40	Proposed Single Family Rates	61
Table 41	Single Family Test Customers	63
Table 42	Single Family Monthly Bill Impacts	66
Table 43	Proposed Multi-Family Rates	67
Table 44	Multi-Family Test Customers	67

Table 45	Multi-Family Monthly Bill Impacts	69
Table 46	Commercial and Industrial Rate Calculation (FY 2023/24)	70
Table 47	Proposed Commercial and Industrial Rates	70
Table 48	Commercial and Industrial Test Customers	71
Table 49	Commercial/Industrial Monthly Bill Impacts	73
Table 50	Landscape Rate Calculation (FY 2023/24)	73
Table 51	Proposed Landscape Rates	74
Table 52	Landscape Test Customers	74
Table 53	Landscape Monthly Bill Impacts	76
Table 54	Temporary Service Daily Rental Fee Calculation (FY 2023/24)	77
Table 55	Proposed Temporary Service Daily Rental Fees and Maximum Monthly Charges	77
Table 56	Temporary Service Rate Calculation (FY 2023/24)	78
Table 57	Proposed Temporary Service Rates	78
Table 58	Proposed Riverside Water Company Irrigators Rates	79
Table 59	Interruptible City Irrigation and Recycled Water Rate Calculation (FY 2023/24)	80
Table 60	Proposed Interruptible City Irrigation and Recycled Water Rates	80
Table 61	Interruptible Irrigation and Recycled Water Test Customers	81
Table 62	Interruptible Irrigation and Recycled Water Monthly Bill Impacts	83
Table 63	Projected Outside City Costs (\$ thousands)	84
Table 64	Outside City Revenues Without Surcharge	84
Table 65	Outside City Surcharge Calculation	84
Table 66	Fixed Service Charges for Reduction Stage 1: 15 Percent	86
Table 67	Volumetric Rates for Reduction Stage 1: 15 Percent	86
Table 68	Fixed Service Charges for Reduction Stage 2: 20 Percent	88
Table 69	Volumetric Rates for Reduction Stage 2: 20 Percent	88
Table 70	Fixed Service Charges for Reduction Stage 3: 30 Percent	89
Table 71	Volumetric Rates for Reduction Stage 3: 30 Percent	90

Figures

Figure 1	Cost of Service Rate Study Process	2
Figure 2	RPU Service Area	4
Figure 3	Groundwater Basins	5

Figure 4	Treatment and Transmission Facilities	6
Figure 5	Distribution System	7
Figure 6	Projected Water Sales	14
Figure 7	Percent of Projected Consumption per Rate Code (FY 2023/24)	14
Figure 8	Five Year CIP Costs	19
Figure 9	Fixed Cost Recovery	38
Figure 10	SFR Projected Usage	62
Figure 11	SFR Projected Revenue by Monthly Usage	62
Figure 12	SFR Monthly Usage Distribution	64
Figure 13	SFR Average Monthly Bill by Usage Percentile	64
Figure 14	SFR Increase in Average Monthly Bill	65
Figure 15	SFR Annual Bill Increase	65
Figure 16	MFR Average Monthly Bill by Usage Percentile	68
Figure 17	MFR Increase in Average Monthly Bill	68
Figure 18	MFR Annual Bill Increase	69
Figure 19	Commercial/Industrial Average Monthly Bill by Usage Percentile	71
Figure 20	Commercial/Industrial Increase in Average Monthly Bill	72
Figure 21	Commercial/Industrial Annual Bill Increase	72
Figure 22	Landscape Average Monthly Bill by Usage Percentile	75
Figure 23	Landscape Increase in Average Monthly Bill	75
Figure 24	Landscape Annual Bill Increase	76
Figure 25	Interruptible Irrigation and Recycled Water Average Monthly Bill by Usage Percentile	81
Figure 26	Interruptible Irrigation and Recycled Water Increase in Average Monthly Bill	82
Figure 27	Interruptible Irrigation and Recycled Water Annual Bill Increase	82

Abbreviations

AB	Assembly Bill
AF	acre-feet
AFY	acre-feet per year
ADD	average day demand
BAB	Build America Bonds
Carollo	Carollo Engineers
CCF	hundred cubic feet
CIP	capital improvement plan (program)
City	City of Riverside
COSA	cost of service analysis
DSCR	debt service coverage ratio
DU	dwelling unit
FY	fiscal year
GFT	general fund transfer
GPCD	gallons per capita per day
kWh	kilowatt-hour
LOC	line of credit
MDD	maximum day demand
MEU	Meter Equivalent Unit
MFR	multi-family residential
MHD	maximum hour demand
O&M	operations and maintenance
RPU	Riverside Public Utilities
RWQCP	Regional Water Quality Control Plant
SFR	single family residential
SHARE	Sharing Households Assist Riverside's Energy program
Study	rate design study
SWRCB	State Water Resources Control Board
WMWD	Western Municipal Water District
WSCP	water shortage contingency plans

Section 1

INTRODUCTION

1.1 Study Purpose

The City of Riverside (City) Public Utilities (RPU) Department provides safe and reliable water to approximately 66,000 service connections in an environmentally and financially responsible manner. In the face of significant challenges for the water utility industry, including aging infrastructure, climate change, and regulations aimed at curbing its impact, RPU has developed a comprehensive financial plan including a capital infrastructure improvement plan. This capital infrastructure capital improvement plan reimagines RPU's water service by replacing infrastructure and expanding system capacity to meet future demand. To fund future capital infrastructure costs, operations, and maintenance costs, RPU retained Carollo Engineers (Carollo) to conduct a five-year rate design study (Study) from fiscal year (FY) 2024 through FY 2028. This study incorporates and builds upon the projections in the financial pro forma and consumption forecasts, and draws on several other sources including, but not limited to, historical billing data, cost of water analyses, and engineering data related to RPU's water systems.

The current rates reflect recommendations from the previous 2018 Study which adjusted the balance of fixed and variable revenue recovery. Most significantly, the percentage of costs recovered by the fixed charge increased to approximately 40 percent of retail revenues to improve revenue stability and the number of tiers in the residential and commercial classes were reduced. Additionally, it recommended implementing a uniform meter size-based flat monthly charge applied to all customer classes, combined or removed many customer classes, and distinguished single family residential (SFR) customers from multi-family residential (MFR) customers to allow for a three-tier seasonal rate structure and two-tier rate structure, respectively. Lastly, two rate classes were created for customers that use water for outdoor irrigation. The landscape class is for users with on demand access to water for irrigation, and the interruptible class is primarily for government accounts that can be required to shut down during times of drought or otherwise mandated conservation.

The variable wet weather conditions and dry seasons have somewhat alleviated drought conditions, but statewide, water scarcity remains an ongoing challenge. While the City was not under drought mandates during the period of this Study, it is expected that weather variability, conservation efforts, and continued messaging from the State and other entities will result in sustained demand reductions. These uncertainties underscore the need for integrated financial planning and flexible rate design. At the outset of the study, Carollo and RPU discussed and summarized key study goals. Several key issues and challenges that were considered during the cost of service analysis and rate design project included:

- Review implications of ongoing water conservation.
- Implement cost of service-based demand reduction rates compliant with Proposition 218 and adaptable to changing water demands.
- Maintain financial stability while incentivizing efficient water usage.
- Align fixed and variable revenue collection with costs.
- Evaluate tier breakpoints and pricing structure for residential customers.
- Achieve customer equity under continued changes to consumption.

- Review customer demand impacts from implementing a new rate structure.
- Identify future fiscal, operational, and capital impacts and considerations.

The purpose of this report is to address each of these key issues as part of the systematic evaluation and development of the cost of service analysis and RPU rate design.

The study was divided into three main phases to address these issues and prepare the rate design:

1. Cost of Service Analysis.
2. Water Utility Rate Trends Analysis.
3. Rate Design Recommendations.

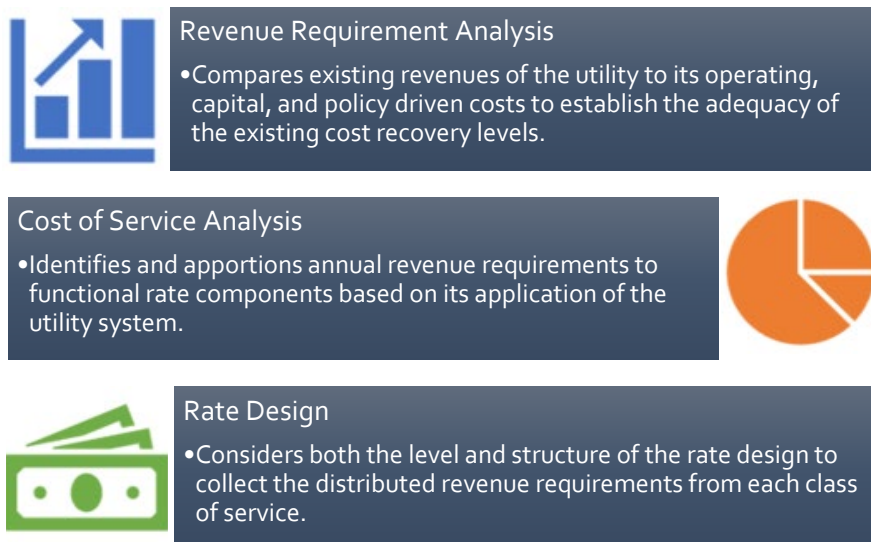
This Cost of Service Analysis Report (COSA) addresses the cost of service analysis and the rate design recommendations. Earlier in the study process, water utility rate trends were reviewed to explore and evaluate industry rate trends and present alternatives that might be appropriate for RPU to consider.

1.2 Overview of the Rate Setting Process

Rate analyses should be performed periodically so that revenues from rates adequately fund utility operations, maintenance, and capital investments. Additionally, in California, water rates must adhere to the cost of service requirements imposed by Proposition 218 and the State Constitution. Proposition 218 requires that property related fees and charges, including water rates, do not exceed the reasonable cost of providing the service. In addition to Proposition 218 requirements, Article X (2) of the State Constitution establishes the need to preserve the State's water supplies and discourage the wasteful or unreasonable use of water by encouraging conservation. The proposed rate plan accounts for both the proportionality requirement of Proposition 218, along with encouraging efficient use of water.

The cost of service rate analysis presented within this report consists of the following three interconnected processes:

Figure 1 Cost of Service Rate Study Process



The processes presented above are advocated by the American Water Works Association (AWWA) for cost of service rate setting. While the process is described in a linear step by step approach, it is better understood as an iterative process where the ultimate objective is to balance revenues with costs in an equitable manner for customers. These three processes will form the basis for the rate analyses presented within this report.

1.3 Forward-Looking Statement

The rate calculations presented within this report are based on the reasonable projections of existing service costs, water demands, system operations with information available, and on existing legal requirements. Moreover, RPU developed the financial pro forma that serves as the basis for all rate calculations. Significant changes in RPU's operations or costs or the capital improvement plan (CIP), changes occurring in California law, deviation from the projected water demands, or further regulatory actions by the Governor or the State Water Resources Control Board (SWRCB) in regard to water use may result in the projected rate revenues deviating from Carollo's projections and could require RPU to revisit the cost of service analysis.

1.4 Riverside Public Utility Background

The current RPU service area is approximately 75 square miles and includes about 66,000 water service connections. The service area is primarily within the City limits and includes approximately five square miles of land served by RPU outside of the City limits as shown on Figure 2. RPU's potable water system consists of groundwater basins, groundwater wells, a supply transmission system, water treatment plants, and a water distribution system. These water supplies are used to meet both ongoing, year-round and peak summer demands, as well as provide a level of resiliency for drought conditions.

RPU has facilities to extract groundwater from five groundwater basins: Bunker Hill, Rialto-Colton, Riverside North, Riverside South, and Arlington Basins. RPU's groundwater supply production is based on the 1969 Western-San Bernardino Judgment that regulates basin extraction amounts. The location of these groundwater basins, the City boundaries, and RPU's groundwater wells are depicted on Figure 3 (Figure 2.3 from master plan).

Groundwater pumped from RPU's wells is conveyed to the Linden-Evans Reservoirs for blending and temporary storage through a network of water supply transmission lines. This supply system consists of four transmission mains: Gage Pipeline, Waterman Pipeline, North Orange Pipeline, and the Flume Pipeline. Prior to reaching the Linden-Evans Reservoirs, groundwater from several wells is treated at one of RPU's six water treatment facilities. See Figure 4 (Figure 2.4 from master plan) for a diagram of the supply system.

From Linden-Evans Reservoirs, water is distributed to RPU's customers. The distribution system includes approximately 66,000 connections and consists of 44 pressure zones, 993 miles of pipelines, 16 storage reservoirs, 38 booster pump stations, and 28 pressure regulating stations. See Figure 5 (Figure 2.5 from master plan) for a diagram of the distribution system.

RPU also distributes a small amount of recycled water (between 150 and 300 acre-feet-per-year [AFY]) from the City's Regional Water Quality Control Plant (RWQCP). Current deliveries are to nine meters located near the RWQCP. Based on current effluent flows, the RWQCP has the potential to deliver approximately 5,400 AFY, after subtracting a 25,000 AFY environmental commitment. Since the previous COSA study, RPU has invested in expanding the recycled water system and is now exploring options to incentivize customers to connect. Additionally, a recycled water master plan is currently underway and upon its completion, a detailed recycled water rate analysis will be conducted.

Figure 2 RPU Service Area

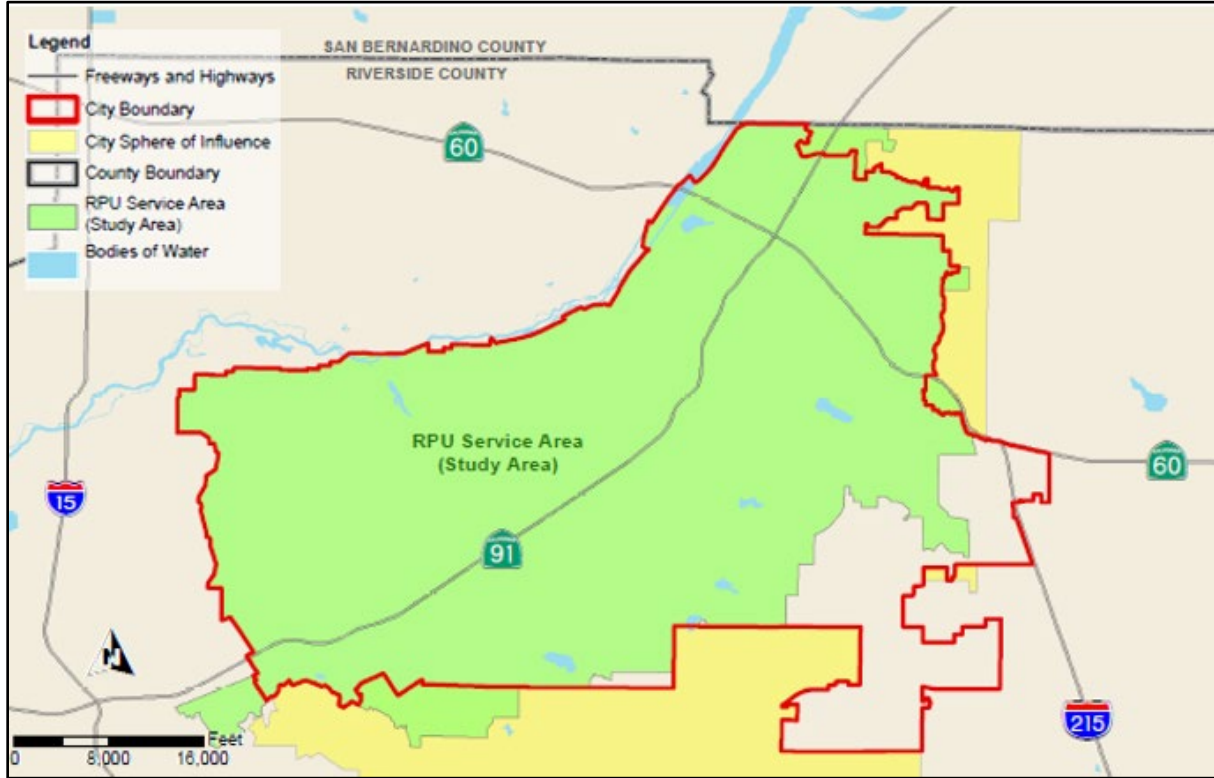


Figure 3 Groundwater Basins

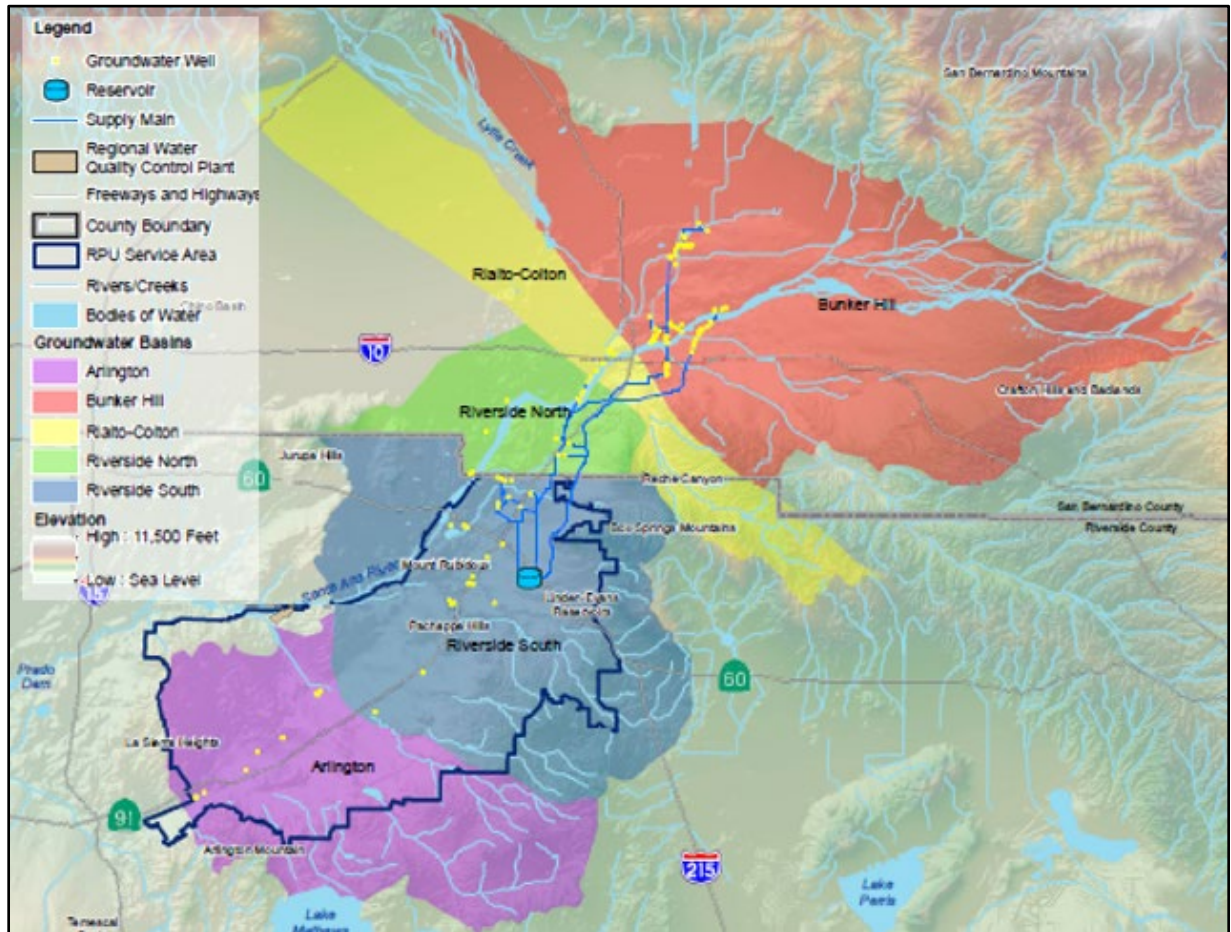


Figure 4 Treatment and Transmission Facilities

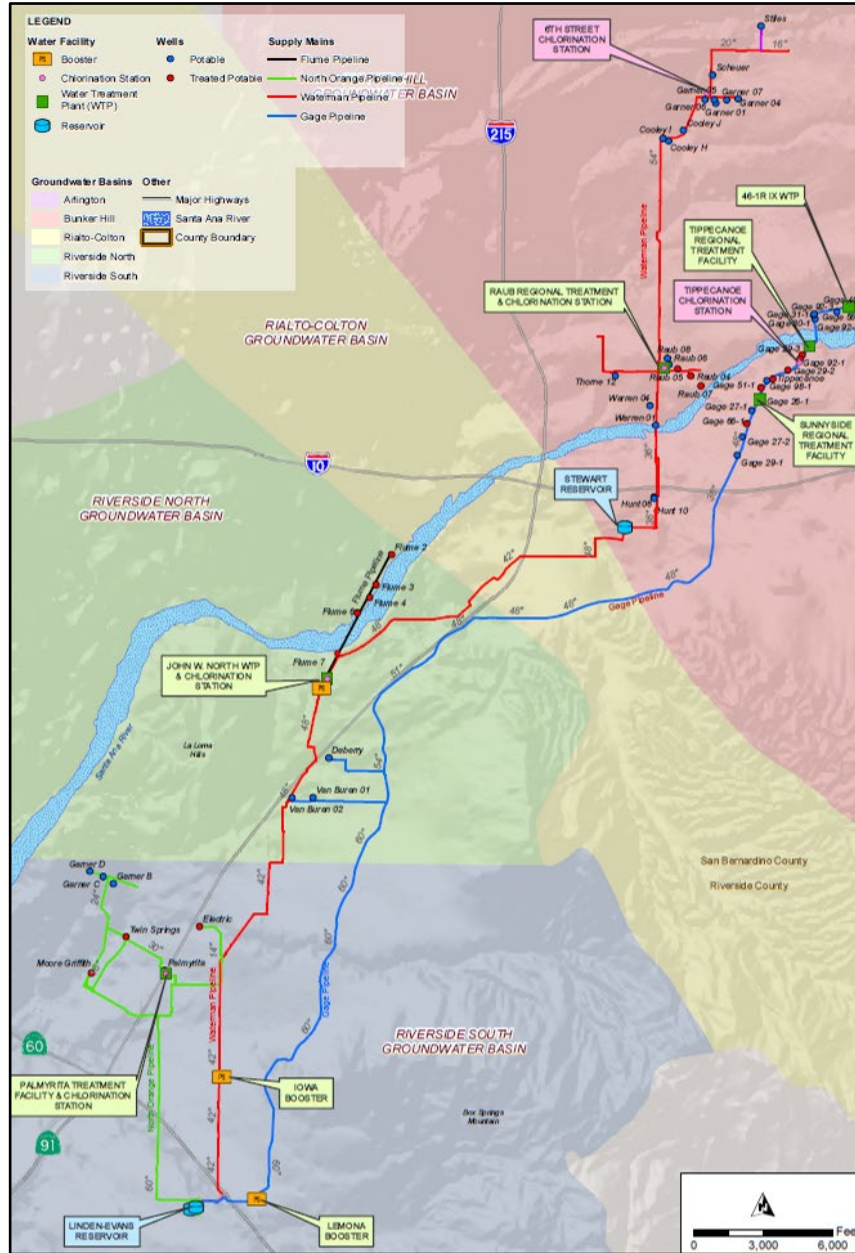
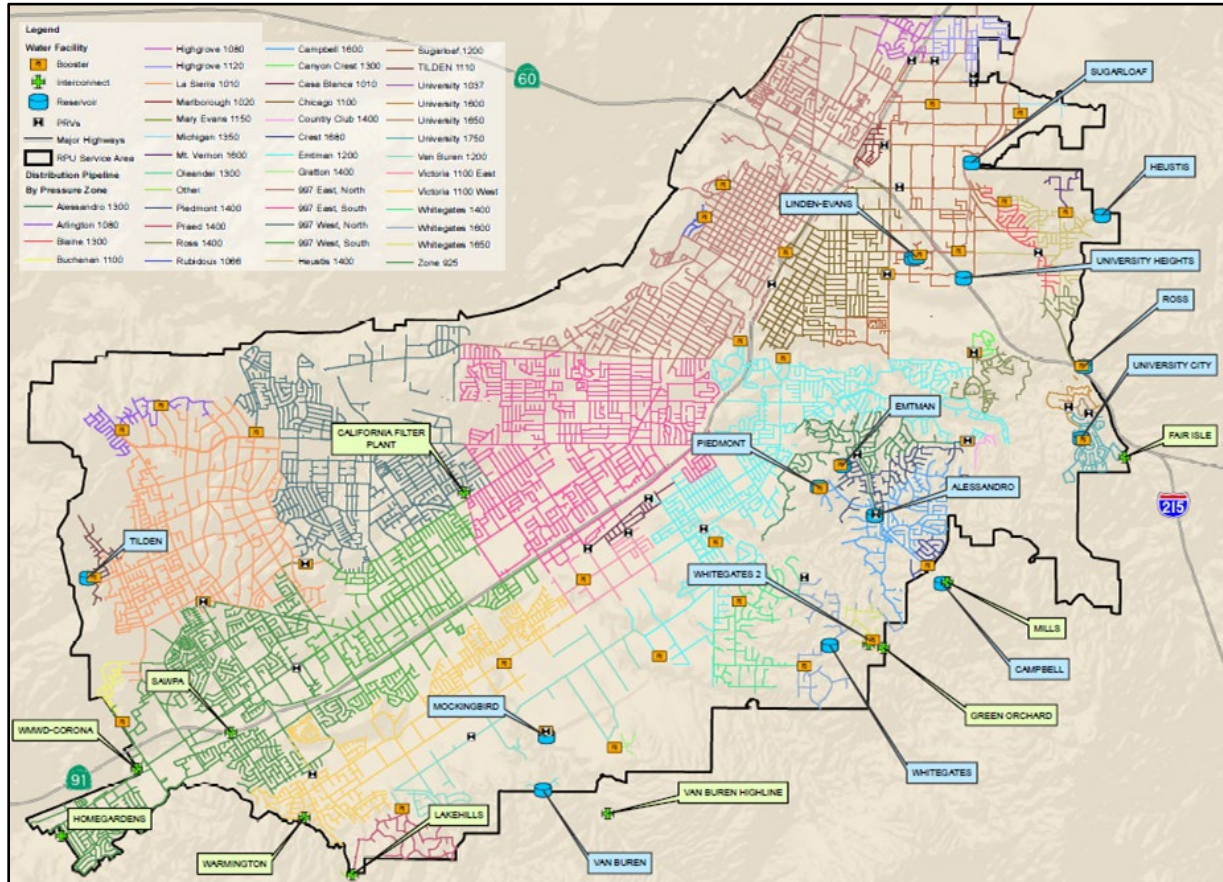


Figure 5 Distribution System



1.4.1 Impact of Weather Conditions

In response to a pattern of droughts in the Western US, the SWRCB can institute mandatory restrictions to achieve a total conservation target. This emergency response policy has evolved to allow agencies to self-certify that sufficient supply is available and thus modify their mandatory curtailments. Emergency conservation actions, however, do not reduce RPU’s need to conserve water in compliance with State Senate bill SBX7-7 (2009). Furthermore, conservation is the centerpiece of Riverside’s water supply plan, and the City Council can deem it appropriate to remain within a drought stage as needed. Such was the case during the previous Study, so the analysis and recommendations were based on the Water Conservation Stage 1 status.

Though wet winters have caused the State to lift mandatory usage curtailments, water usage remains below historical levels due to demand hardening from conservation and decreased irrigation demands during wet seasons. In May 2022, the SWRCB adopted a resolution to reduce water demand and improve water conservation, one component of that resolution was a requirement that urban water retailers implement level 2 of their water shortage contingency plans (WSCP). As of the writing of this report, the resolution has not been rescinded and RPU remains in stage 2 of its WSCP.

Further, the State is developing long-term conservation measures given the California Water Supply Strategy (August 2022) which includes, among other actions, “Freeing up 500,000 acre-feet of water through more efficient water use and conservation, helping make up for water lost due to climate change.” The rule making process is currently moving forward for “Making Conservation a California Way of Life”.

Under this initiative, urban retail water suppliers will have a water use objective that essentially sets an overall water budget for each retailer. The standards are set to be adopted later this year and will effectively establish a permanent efficiency target for RPU.

This Study conducted an analysis of RPU's water demands for FY 2016 through FY 2022. Based upon that analysis and guidance from RPU, the demand projection used for the study includes a 10-percent reduction from the average demands in FY 2019 through FY 2022. The water demand analyses completed for this cost of service Study center on comparing usage on a fiscal year basis, since this method is in line with RPU's accounting practices.

1.5 Capital Improvement Plan

RPU maintains a CIP that is updated regularly based on infrastructure and water supply needs and funding availability. The CIP is adopted as part of the City's biennial budget process. The CIP included in the COSA holds its basis in the five-year CIP adopted with the 2022-2024 adopted budget but has been refined to reflect information that has become available since the budget's adoption.

As analyzed, the CIP totals \$183.7 million in projects over the five-year study period. This includes \$119.6 million for transmission and distribution infrastructure including reservoirs and pumps stations, \$16.9 million for wells and treatment, \$19.2 million for technology projects, and \$28.0 million for supply sustainability projects.

1.6 Existing Rate Structure

The existing water rates are based on industry accepted, cost of service structures. The rate program incorporates a number of different features, such as tiers and seasonal rates in order to account for the increase cost of water delivery during peak periods. The previous Study significantly condensed and reduced the rate structure, leaving the current rate program with three major rate categories (as eleven total rate codes) as shown in Table 1.

Table 1 Existing Rate Class Descriptions

Class	Code and Name	Rate Structure Description
RESIDENTIAL		
WA-1A	Single Family Residential (SFR)	<ul style="list-style-type: none"> • Three inclining rate tiers (CCF). • Seasonal rate for Tier 3. <ul style="list-style-type: none"> – Summer: June through October. – Winter: November through May.
WA-1B	Multi-Family Residential (MFR)	<ul style="list-style-type: none"> • Two inclining rate tiers (CCF). • Seasonal Rate for Tier 2. <ul style="list-style-type: none"> – Summer: June through October. – Winter: November through May.
COMMERCIAL/INDUSTRIAL		
WA-6	Commercial and Industrial	<ul style="list-style-type: none"> • Non-tiered seasonal rates using WA-1 seasons described above.
WA-7	Interruptible Irrigation	<ul style="list-style-type: none"> • Flat rate structure for City irrigation. • Users can be required to curtail or cease demands in times of drought or otherwise limited water supply.
WA-11	Landscape Irrigation	<ul style="list-style-type: none"> • Non-tiered seasonal rates using WA-1 seasons described above.
OTHER		
WA-4	Riverside Water Company Irrigators	<ul style="list-style-type: none"> • Three inclining rate tiers (CCF). • Open only to former customers of the Riverside Water Company. • Seasonal rate for Tier 3. <ul style="list-style-type: none"> – Summer: June through October. – Winter: November through May.
WA-2	Flat Rate – Temporary Service	<ul style="list-style-type: none"> • Uniform rate for construction water and bulk permit delivery.
WA-5	Fire Protection Services & Fire Hydrants	<ul style="list-style-type: none"> • Fixed monthly charges per connection for maintenance of valves and meters or hydrants.
WA-8	Greenbelt Irrigation Service	<ul style="list-style-type: none"> • Properties in greenbelt able to take service from Gage Canal facilities. • Monthly account charge plus volumetric Gage Canal pass-through charge.
WA-10	Recycled Water Service	<ul style="list-style-type: none"> • Uniform rate structure for direct use of recycled water for irrigation.
WA-12	Agricultural Service	<ul style="list-style-type: none"> • Three inclining rate tiers (CCF). • Residential agriculture meters. <ul style="list-style-type: none"> – Charges based on WA-1A SFR rates. – Residential customers have three inclining rate tiers (CCF). – Tier 1: 9 CCF plus agricultural allotment; Tier 2: additional 26 CCF; Tier 3: excess of Tier 2. • Without residence customers have two inclining rate tiers (CCF). <ul style="list-style-type: none"> – Tier 1: agricultural allotment charged at WA-1A tier 1 rate; Tier 2: above allotment charged at WA-6 rate.

Table 2 presents the current rates and monthly fixed charges for the majority of the customers in the City: SFR (WA-1A), MFR (WA-1B), and Commercial/Industrial (WA-6).

Table 2 Existing (FY 2023) Rates and Charges by Customer Class

Class	Summer Rates Jun to Oct	Winter Rates Nov to May	Meter Size	Fixed Charge
WA-1A Single Family Residential			5/8"	\$26.00
First 9 CCF	\$1.30	\$1.30	3/4"	26.00
10 to 35 CCF	1.64	1.64	1"	41.26
All over 35 CCF	3.66	3.01	1.5"	79.08
WA-1B Multi-Family Residential			2"	124.64
First 7 CCF	\$1.30	\$1.30	3"	231.03
All over 7 CCF	2.12	1.87	4"	382.97
WA-2 Flat Rate – Temp. Service			6"	838.59
All CCF	\$2.39	\$2.39	8"	1,370.06
WA-4 Riverside Irrigators			10"	2,129.34
First 15 CCF	\$1.32	\$1.32	12"	3,040.57
16 to 70 CCF	1.58	1.58		
All over 70 CCF	3.17	2.46		
WA-6 Commercial/Industrial				
All CCF	\$1.84	\$1.58		
WA-7 & WA-10 Interruptible/Recycled				
All CCF	\$1.57	\$1.57		
WA-11 Landscape				
All CCF	\$2.14	\$1.67		

Section 2

WATER USAGE AND SUPPLY

RPU maintains a diversified portfolio of water sources and has invested in redundant supplies to create a highly localized and resilient system. To this end, RPU has expanded the recycled water distribution system and is working to connect additional customers. Further, RPU will be making additional investments in supply sustainability projects to help ensure the long-term availability of local supplies.

In addition to these localized supplies, RPU also can purchase water from Western Municipal Water District (WMWD). These supplemental, imported supplies are significantly more expensive than RPU's local supplies and supply is not guaranteed. Due to the development of local supply sources, RPU has not needed to purchase imported water over the past decade and does not anticipate any future purchases.

Water demands vary annually based on weather conditions, which dictate the amount of water needed for outdoor irrigation, and are influenced by other factors such as State mandated conservation measures and conservation messaging, and customer growth. The lowest demand year in recent years was FY 2016 with total sales of 21.9 million CCF. Over the past three fiscal years (FY 2019 to FY 2022) annual demands have averaged 26.0 million CCF.

2.1 Growth and Water Demand

2.1.1 Customer Account Growth

Expected customer growth over the projection period from FY 2022/23 through FY 2027/28 varies by customer class. A moderate level of account growth is expected for commercial customers (average of 0.72 percent per year) while industrial and residential customers have a lower growth projection (average of 0.23 and 0.28 percent per year, respectively). Table 3 presents the projected accounts for each customer class. These account growth expectations were applied to the number of accounts in each rate class indicated in RPU's billing records to estimate the number of accounts by rate class each year.

Table 3 Account Growth

Class	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28
Residential	0.23%	0.24%	0.24%	0.23%	0.23%
Commercial/Industrial	0.68%	0.69%	0.69%	0.69%	0.69%
Other	0.00%	0.00%	0.00%	0.00%	0.00%
Projected accounts:					
SFR (WA-1A)	59,025	59,163	59,302	59,442	59,582
MFR (WA-1B)	1,133	1,136	1,138	1,141	1,144
Flat Rate – Temp. Service (WA-2)	78	78	78	78	78
Riverside Irrigators (WA-4)	25	25	25	25	25
Commercial/Industrial (WA-6)	5,305	5,342	5,378	5,415	5,452
Interruptible Irrigation (WA-7)	553	557	561	565	569
Greenbelt (WA-8)	10	10	10	10	10
Recycled (WA-10)	15	15	15	15	15
Landscape (WA-11)	513	517	520	524	528
Agricultural (WA-12)	222	222	222	222	222
TOTAL ACCOUNTS	66,879	67,064	67,250	67,436	67,623

Notes:

(1) Totals may be off due to rounding.

2.1.2 Water Usage

Water sales are RPU's primary source of water revenues. Consequently, it is critical to examine and analyze potential shifts in short- and long-term water demands. Carollo evaluated several years of billing data to examine historical water demand patterns and potential developing trends. RPU also maintains an internal demand forecast used for system and financial planning. This forecast accounts for these changing demand patterns, type of future development, and price elasticity.

Over the past three fiscal years (FY 2019 through FY 2022) RPU has delivered an annual average of 26.0 million CCF of water to its retail customers. This level of demand represents a rebound of approximately 19-percent compared to the lowest year of sales in recent history, FY 2016, which saw deliveries of only 21.9 million CCF. During FY 2016, California was amid a serious drought and had implemented statewide mandatory conservation measures.

Though emergency mandatory conservation targets have been lifted, RPU's demands have not rebounded to pre-drought levels. Permanent conservation resulting from removal of irrigated landscapes or conversion to more efficient planting, use of more water efficient fixtures and appliances, and changes in customer behavior have all led to permanent conservation. Further, water scarcity remains an issue in California and the conservation messaging from the State and other entities continues.

In August 2022, the State published the California Water Supply Strategy (August 2022). The strategy includes, among other actions, “Freeing up 500,000 acre-feet of water through more efficient water use and conservation, helping make up for water lost due to climate change.” Regardless of any mandatory actions imposed on RPU, the messaging and outreach associated with the strategy is likely to lead to further conservation by RPU customers.

At the direction of RPU, Carollo applied a ten percent reduction to a three-year averaged demand (FY 2019 through 2022) to develop the demand projection that is used as the basis for calculating the proposed rate plan. Monthly water usage data for the past three fiscal years was analyzed to develop a reasonable projection of water demands for the extent of this five-year Study (FY 2022/23 through FY 2027/28). The projected ten percent decreases in consumption were applied to each rate class and tier (where applicable). Table 4 below shows the projected sales that serve as the basis of the cost of service analysis.

Table 4 Projected Sales by Class (thousand CCF)

Class	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28
SFR (WA-1A)	13,476	13,568	13,663	13,760	13,861
MFR (WA-1B)	369	371	374	376	379
Flat Rate – Temp. Service (WA-2)	44	44	44	44	44
Riverside Irrigators (WA-4)	9	9	9	9	9
Commercial/Industrial (WA-6)	7,358	7,464	7,573	7,683	7,795
Interruptible Irrigation & Recycled (WA-7 & WA-10)	807	818	830	842	854
Landscape (WA-11)	759	770	781	793	804
Agricultural (WA-12)	523	523	523	523	523
TOTAL CCF	23,345	23,568	23,797	24,030	24,269

Notes:

(2) 1 unit of water = 1 CCF (hundred cubic feet) = 748 gallons.

(3) Totals may be off due to rounding.

Figure 6, on the next page, shows these projected sales by major rate category (Residential, Commercial/Industrial, and Other) over the duration of this rate setting period. Landscape irrigation and interruptible City irrigation demands are included in the Commercial/Industrial category. Flat Rate – Temp. Service, Riverside Water Company Irrigators, Recycled Water, and Agricultural demands are included in the Other category.

Figure 7, on the next page, shows the percent of annual consumption from each customer rate code for the projected FY 2023/24. Residential accounts from WA-1 are the primary users of water making up roughly 60 percent of annual water usage. The remaining 40 percent is split between commercial, industrial, irrigation, and other accounts. Riverside Water Company Irrigators (WA-4) account for less than 0.1-percent of total consumption.

Figure 6 Projected Water Sales

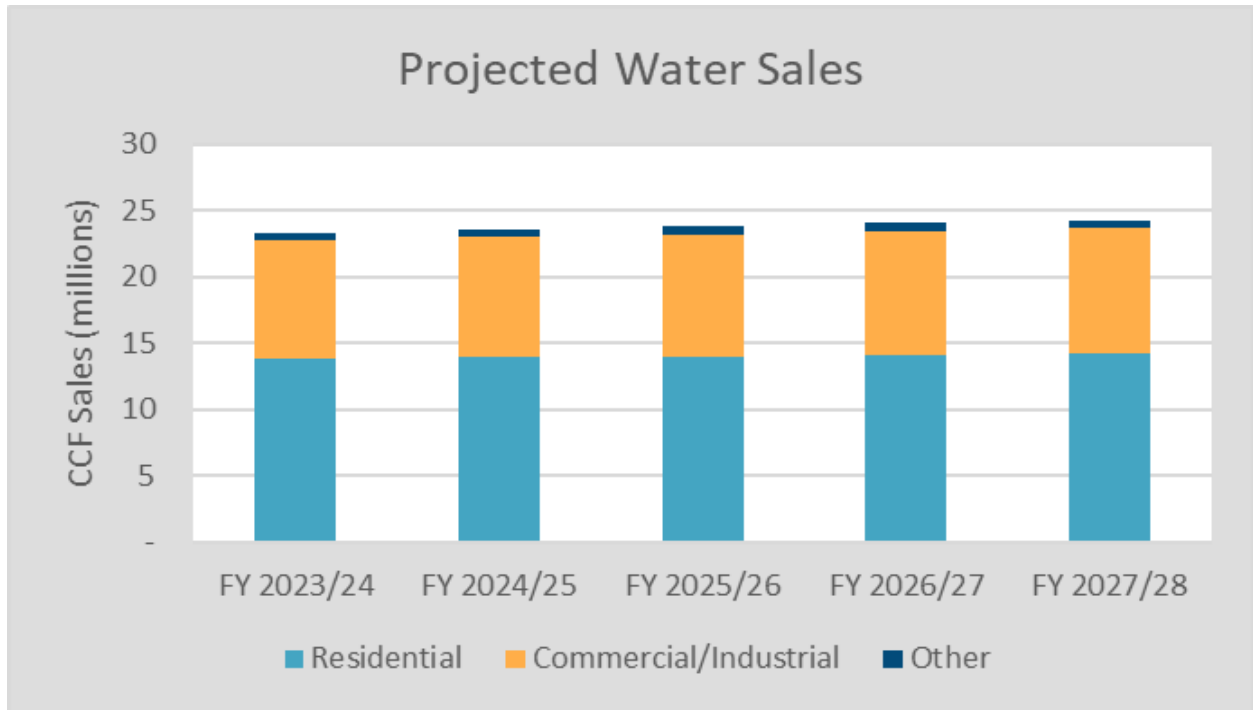
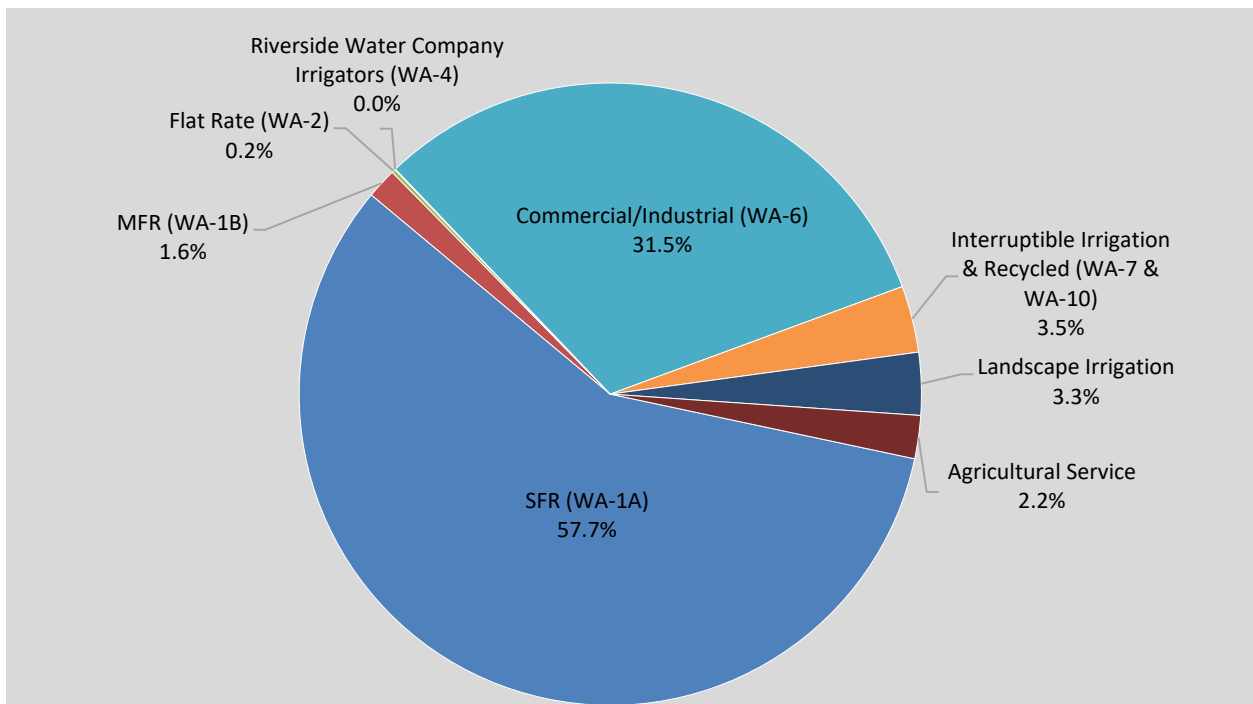


Figure 7 Percent of Projected Consumption per Rate Code (FY 2023/24)



Section 3

REVENUE REQUIREMENTS

3.1 Introduction

The revenue requirement analysis is a test of a utility's fiscal health, which evaluates the adequacy of current revenues and establishes rate revenue needs that are used to develop RPU's rate plan. The analysis accounts for RPU's revenues, expenses, debt, reserve policies, and fiscal policies. If system revenues and reserve balances are insufficient in a given fiscal year, the revenue requirement analysis calculates the needed additional cash flows to meet RPU's funding goals.

The revenue requirement forecast is derived from RPU's financial pro forma, including major cost components: production costs, personnel costs, other operations and maintenance (O&M), debt service requirements; and rate funded capital outlays. Policy requirements are also considered in RPU's financial pro forma and used to derive the revenue requirement. The revenue requirement forecast of the pro forma incorporates RPU's FY 2022/23 and 23/34 adopted budgets with projected adjustments based on actual past performance to projected costs thereafter. Additionally, applicable costs savings have been included based on actual costs in prior years. The relevant financial information for this analysis was provided by RPU including: current reserve ending balances, budgeted capital improvement plan expenditures, other future expenses, other future revenues, and other miscellaneous financial information.

The revenue requirement analysis is comprised of two tests:

- The **cash flow sufficiency test** compares projected system revenues to the cost to operate, maintain, and improve the water system. This test evaluates whether revenues meet expenses; when they do not, this test calculates the amount of rate revenue that must be raised to fund the projected expenditures and to meet RPU's reserve policy.
- The **debt service coverage test** determines if there is sufficient cash flow to meet utility bond issuance stipulations which ensure that the agency can fund annual operating expenses while meeting its debt obligations, as indicated by a debt service coverage ratio (DSCR) which is a percent of issued debt. If cash flow falls below this ratio, this test calculates the additional revenue required.

The revenue requirement analysis determines if RPU must increase system revenues to meet its ongoing obligations. If revenues are found to be insufficient to meet ongoing expenses (cash flow test) and/or debt obligation (debt service coverage test), revenues must be increased to achieve the higher of the two needs.

The cash-flow sufficiency test compares projected cash requirements in each given year necessary to operate, maintain, and improve the utility systems. Cash requirements include O&M expenses, rate-funded capital expenditures, debt service payments, and policy-driven additions to reserves. RPU must maintain certain reserve targets for working capital, rate stabilization, capital emergency, capital system improvements, and debt service as outlined in the reserve policy.

The debt service coverage test measures the ability of the water utility to meet its debt obligations on an annual basis. When a municipality issues a bond, the bond Official Statement defines the financial obligations that must be met in order to remain in legal compliance. As part of the bond covenant as set forth in the Official Statement, the utility must collect a defined amount of annual revenue to illustrate that it has the financial capacity to repay bondholders.

More specifically, annual net revenues, in excess of operations and maintenance, must equal to a minimum of 1.25 times the annual debt service payments for senior lien debt. However, as is the case for RPU's water utility that has maintained a AA+ rating from Standard and Poor's and Fitch Ratings, this coverage factor can be set at a higher level for planning purposes in order to assist in maintain or achieve a higher bond rating. For the purposes of this analysis, the pro forma targets a coverage factor of 2.00 times while maintaining a target minimum coverage factor of 1.75 times for financial planning purposes.

The pro forma recommendations presented within this report were developed by RPU staff based on best known information as of the writing of this report.

3.2 Ongoing Costs and Offsetting Revenues

3.2.1 Operating and Maintenance Costs

O&M costs are expenditures that RPU incurs in the day-to-day operations of its water system - e.g., employee salaries and benefits, fuel, chemicals, power, supplies, and debt service. Other costs in the operating budget include indirect costs for services provided to RPU by other City departments or funds. The water O&M costs projected in the pro forma are the backbone of the revenue requirements analysis.

Table 5 summarizes the projected water O&M costs for FY 2023/24 through FY 2027/28.

Production Costs

Production costs are variable O&M costs incurred by RPU to provide water service. Specific items included in this category are electricity, gas, other utilities, and water production charges associated with each of RPU's groundwater sources.

Electricity costs account for the majority of production costs. In an effort to control production costs, RPU constructed solar power generating facilities used to power wells, pumps, and other equipment at several of the production sites.

Personnel Costs

Personnel costs include all of the direct and overhead costs associated with RPU staff. These costs are considered to be fixed costs, as staffing requirements generally do not change based on fluctuations in water demands.

Other O&M Costs

Other O&M costs include materials, supplies, and services, as well as services from other funds. Some of these costs are offset by services that RPU provides to other funds. In all, Other O&M costs are generally not impacted by water demands and are therefore considered to be fixed.

Additional O&M for CIP and Advanced Technology

Several of the CIP projects will be accompanied by annual O&M costs as projects are completed or programs are initiated. Estimated O&M costs associated with CIP projects were provided by RPU engineering staff and those associated with the Advanced Technology program were provided using estimated project implementation costs from the Strategic Technology Plan. Annual costs for this category are expected to begin at \$1.8 million in FY 2025 to \$2.6 million in FY 2028.

Non-rate Revenue Support for Agricultural Rates and Low-Income Assistance

After the completion of the previous COSA, the City convened an Agricultural Rates Task Force to develop a rate structure to support and maintain agricultural activities within RPU's service area. The WA-12 Agricultural Water Service Rates assigns an agricultural water allotment to each participating user based on the type and amount of irrigated area or acreage of the qualifying crops that they grow or other agricultural activities such as pasture for qualifying livestock. All water usage within the agricultural allotment is billed at the tier 1 rate similar to single family residential (WA-1A). Any use above the allotment is billed at the otherwise applicable rate, WA-1A for users with residences or WA-6 for users without residences.

The difference in the amount of revenues billed under the agricultural water service rates and the otherwise applicable rates is supported using non-rate revenues. Per Council Resolution 23499, the maximum that can be supported with non-rate revenues is \$684,000 per year and once that threshold is reached, the rate class will be closed unless additional sources of non-rate revenues to support the program are identified.

The City's Sharing Households Assist Riverside's Energy program (SHARE) provides water bill assistance to qualifying low-income customers. Customers enrolled in the program currently receive an incentive for water payment assistance of \$3.25 per month, not to exceed \$39.00 per customer over a 12-month period. The annual budget for the program is \$150,000 and non-rate revenues are assigned to cover the costs. The costs for the program are included in the *Other Operating and Maintenance Costs* line in Table 5.

General Fund Transfer

The Riverside City Charter requires RPU to annually transfer to the general fund an amount not to exceed 11.5 percent of the previous year's gross operating revenues (the Water GFT). Riverside voters reaffirmed the Water GFT in June of 2013. Because the Water GFT is based upon revenues, the annual amount fluctuates with water demands.

Table 5 Projected Water O&M and other Ongoing Expenditures (thousand \$)

Expenditures	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28
Production Costs	\$7,808	\$7,964	\$8,123	\$8,286	\$8,602
Personnel Costs	18,465	18,811	19,052	19,193	19,596
Other Operating and Maintenance Costs	26,071	26,377	26,629	27,155	27,693
Additional O&M for CIP and Advanced Tech	-	1,756	2,199	2,363	2,817
Subtotal: Ongoing Operating Expenses	\$52,344	\$54,908	\$56,003	\$56,997	\$58,709
General Fund Transfer	8,114	8,583	9,192	9,846	10,563
Use of Non-Rate Revenue for WA-12	684	684	684	684	684
TOTAL ONGOING EXPENDITURES	\$61,142	\$64,175	\$65,879	\$67,527	\$69,956

Notes:

(1) Totals may be off due to rounding.

3.3 Debt Service

In addition to O&M expenditures, RPU holds several outstanding debt obligations that provided funding for past capital projects and acquisitions. Table 6 shows RPU's outstanding water debt obligations and associated debt service for each year of the projection period. Additional debt that will be required to fund CIP expenditures is discussed in Section 3.3 of this report.

Table 6 Outstanding Water Debt Obligations and Debt Service (thousand \$)

Debt Issued	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28
2009B (\$67.790M FIXED BABs) - Net of BABs ⁽¹⁾	\$5,221	\$5,215	\$5,209	\$5,199	\$5,189
2011A (\$59.0M VARIABLE)	789	789	789	789	789
2019 A Refunding Water Revenue Bonds	9,379	9,365	9,345	9,328	9,314
New Debt Service ⁽²⁾	4,579	4,496	6,698	10,277	10,193
Subtotal: Bond Payments	\$19,968	\$19,865	\$22,042	\$25,593	\$25,486
Advance from City – Pension Obligation	2,282	2,420	2,429	2,307	1,646
Capital Lease	835	835	835	835	575
Other Debt Costs ⁽³⁾	241	245	247	250	253
TOTAL ANNUAL DEBT SERVICE	\$23,325	\$23,364	\$25,553	\$28,984	\$27,960

Notes:

- (1) Net of Treasury credit for Build America Bonds (BABs).
- (2) Debt service associated with new bonds to be issued starting in 2023, discussed further in the next section.
- (3) Fiscal charges and amortization.
- (4) Totals may be off due to rounding.

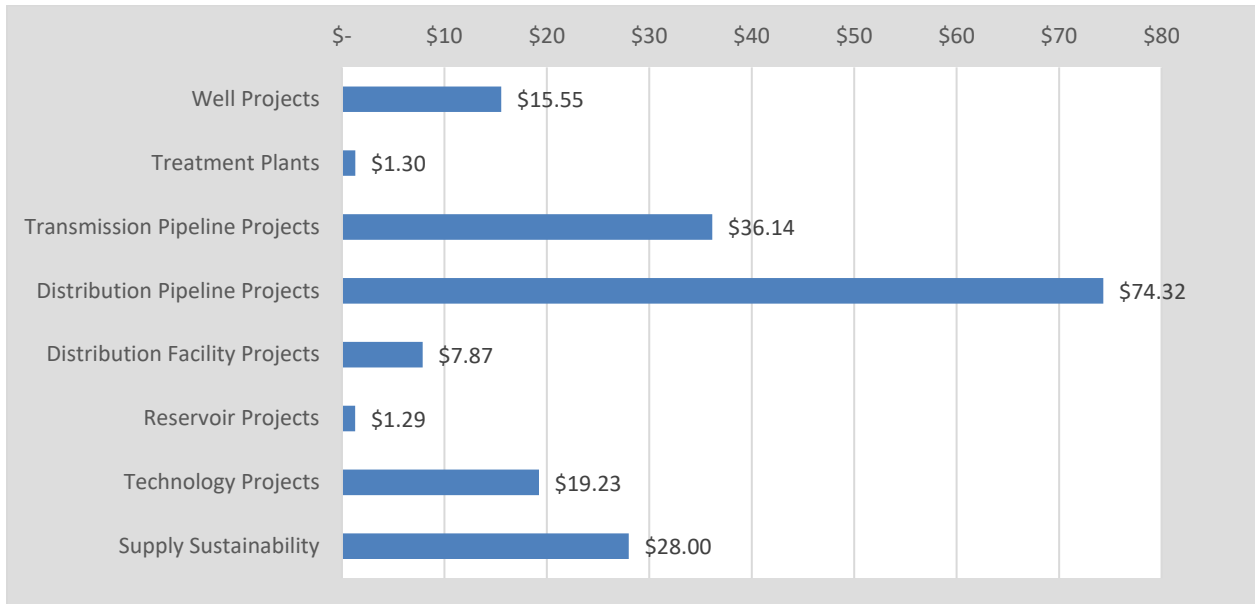
3.4 Capital Improvement Plan

Over the past several years, RPU has undertaken an effort to develop a detailed CIP. Beginning with the Integrated Water Management Plan in 2013, RPU identified necessary improvements related to rehabilitation and replacement of existing infrastructure, enhancements to existing water supply, development of new sources of supply, expansion of the recycled water system, and rollout of new technologies. RPU staff has continued to refine the proposed projects, expenditures, and implementation schedule.

As analyzed, the CIP totals \$183.7 million in projects over the five-year study period. This includes \$119.6 million for transmission and distribution infrastructure including reservoirs and pumps stations, \$16.9 million for wells and treatment, \$19.2 million for technology projects, and \$28.0 million for supply sustainability projects.

The total cost of the CIP for FY 2023/24 through FY 2027/28, with capital costs assumed to escalate at 2.85-percent annually, is \$184 million. Figure 8 shows a full breakdown of the costs by project type.

Figure 8 Five Year CIP Costs



3.4.1 CIP Funding

Completion of the CIP will require RPU to utilize funding from several different sources. The pro forma has been developed to strike a balance between debt financing, use of reserves, and rate funding in order to minimize impacts to ratepayers while promoting financial sustainability. Table 7 shows the funding from each source by fiscal year of the rate projection period as well as the total funding from each source.

Table 7 CIP Funding by Source (millions \$)

Funding Source	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	Five-Year Total
Bond Financing	\$20.03	\$18.83	\$34.36	\$41.28	\$28.94	\$143.43
Use of Rates and Reserves	8.90	9.74	3.46	6.41	6.74	35.26
Developer Contributions	1.00	1.00	1.00	1.00	1.00	5.00
TOTAL ANNUAL CIP FUNDING	\$29.93	\$29.57	\$38.82	\$48.69	\$36.68	\$183.69

Notes:

(1) Totals may be off due to rounding.

3.4.2 Projected Debt Issuances

As shown in Table 7, RPU anticipates issuing additional debt to fund the capital improvement program over the next 5 years. Based on the pro forma developed for this study, RPU will require a total of \$148.0 million in financing proceeds to fund capital projects from FY 2022/23 through FY 2027/28 with \$143.4 million to be used within the five-year study period (FY 2023/24 through FY 2027/28).

Debt service associated with projected bond issuances has been estimated based on typical financing assumptions and incorporated into the cost of service analysis. Bond issuances are projected to fund capital projects for a three-year period.

The projected bond issuance in FY 2026 is in anticipation of the continuation of the 5-year plan and will fund projected capital projects over a 3-year period from FY 2026 through FY 2028. Table 8 shows the FY 2023 bond issuance (issued November 2022) and anticipated FY 2026 bond issuance and associated debt service.

Table 8 Projected Bond and Short-Term Issuances (thousand \$)

Fiscal Year of Issuance	Issuance Amount	Annual Debt Service
2023	\$62,440	\$3,611
2026	91,425	5,947

3.5 Reserve Requirements

RPU has a robust reserve policy, which is designed to promote fiscal sustainability, minimize borrowing costs, and providing a source of emergency funds to rapidly respond to market volatility, emergencies, demand reductions, or regulatory changes. The reserve policy guidelines were adopted by City Council on March 22, 2016 and later incorporated into the fiscal policy which was adopted by City Council on July 26, 2016. The policy was subsequently updated in July 2018 and September 2021.

The overall undesignated reserve target is comprised of five risk categories that each have a target based on specific metrics. Table 9 provides a summary of the metrics that are used to calculate the undesignated target minimum and maximum reserve levels for each risk category.

Table 9 Undesignated Reserve Level Metrics

Component and Description	Minimum Target	Maximum Level
Operating (Working Capital): maintain sufficient resources to pay budgeted operating and maintenance expenses recognizing the timing differences between payment of expenditures and receipt of revenues.	60 Days of Operating Expenses	90 Days of Operating Expenses
Rate Stabilization: mitigates rate shock due to temporary and transitional regulatory changes, loss of a major resource, sharp demand reduction, or market volatility.	7 Percent of Operating Revenues	15 Percent of Operating Revenues
Emergency Capital: provides funds to maintain ability to repair system after an emergency or natural disaster such as a flood, earthquake, or major storm.	1 Percent of Depreciable Assets	2 Percent of Depreciable Assets
System Improvements Capital: provide funds to maintain continuity of construction over fiscal years to be funded by bond proceeds or other resources.	6 Months of 3-year average approved CIP ⁽¹⁾	9 Months of 3-year average approved CIP ⁽¹⁾
Debt Service: maintain ability to make debt service payments in an extreme event that may impact RPU's ability to provide services, thus impacting revenues at a time critical infrastructure repairs are needed to restore systems. The Debt Service Reserve is intended to prevent an event where RPU would be unable to pay its debt service obligations during such emergencies, or extreme market disruptions.	Maximum Annual Debt Service in Upcoming Fiscal Year	Maximum Annual Debt Service in Upcoming Fiscal Year

Notes:

(1) Three-year average CIP determined using most recent year's actual costs, the current year budget, and the next year's forecasted budget.

Since its initial adoption, the reserve policy has been updated to include a line of credit (LOC) as available reserves to meet unrestricted undesignated reserve targets. The water utility's portion of RPU's current line of credit is \$25 million and is anticipated to increase to \$28 million in FY 2026.

The reserve levels vary in each year based on the expenditures or revenues used to calculate each component. Table 10 shows the projected target minimum and maximum reserve levels for each year of the five-year rate projection.

Table 10 Projected Undesignated Min & Max Target Reserve Calculations (millions \$)

Component	Target	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28
Working Capital	Min	\$8.60	\$9.03	\$9.21	\$9.37	\$9.65
	Max	12.91	13.54	13.81	14.05	14.48
Rate Stabilization	Min	\$5.93	\$6.38	\$6.81	\$7.27	\$7.76
	Max	12.71	13.68	14.59	15.59	16.62
Capital - Emergency	Min	\$7.96	\$8.26	\$8.65	\$9.15	\$9.52
	Max	15.92	16.52	17.31	18.30	19.04
Capital - System Improvements	Min	\$14.05	\$14.85	\$16.03	\$18.77	\$19.45
	Max	21.08	22.27	24.05	28.15	29.18
Debt Service (Max Annual Debt Service in Upcoming FY)	Min	\$14.41	\$15.67	\$18.31	\$18.48	\$19.85
	Max	14.41	15.67	18.31	18.48	19.85
Total	Min	\$50.97	\$54.18	\$59.01	\$63.04	\$66.24
	Max	77.03	81.67	88.07	94.57	99.18

Notes:

(1) Totals may be off due to rounding.

3.6 Offsetting Revenues

The rate revenue needs are defined as the amount of revenues that must be recovered through water rates to cover expenditures, less any offsetting revenues. Offsetting revenues include water conveyance revenue, wholesale water sales revenues, interest income, settlement revenues, interest earnings, lease revenues, and other operating and non-operating revenues. Table 11 identifies the projected offsetting revenues for the upcoming five years.

Table 11 Projected Offsetting Revenues (millions \$)

Offsetting Revenues	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28
Interest income	\$1.77	\$1.63	\$2.23	\$2.64	\$2.03
Miscellaneous income	3.06	3.10	3.08	3.13	3.17
Water Conveyance Revenues	3.51	3.64	3.77	3.92	4.06
Settlement reimb - Lockheed/Shell	2.41	2.53	2.66	2.79	2.79
Wholesale Sales	2.49	3.24	3.36	3.48	3.62
Outside City Surcharge	2.07	2.13	2.19	2.26	2.32
Fire Service Charges	0.62	0.62	0.62	0.62	0.62
TOTAL OFFSETTING REVENUES	\$15.94	\$16.90	\$17.91	\$18.84	\$18.62

Notes:

(1) Totals may be off due to rounding.

RPU can take advantage of surplus local water supplies and its production and transmission infrastructure to earn additional revenues from outside agencies to help offset rate increases for RPU retail customers. Water conveyance revenues reflect a wheeling agreement through which RPU conveys water owned by WMWD from the groundwater basin to WMWD and is compensated to do so. Wholesale sales to local water agencies including WMWD and Norco allow RPU to generate revenues through the production and sale of surplus water supplies.

3.7 Revenue Requirement Forecast

Overall, RPU must raise rate revenues in order to meet its debt coverage and reserve targets while continuing to fund the CIP. System average rate revenue increases at 6.5-percent per year will be required in each year of the study period. Table 12 presents a summary financial forecast with the revenues, expenditures, and overall rate revenue increases for the forecast period beginning in FY 2023/24 through FY 2027/28.

Table 12 Results of Revenue Requirement Analysis (millions \$)

Component	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28
Revenues					
Rate Revenue before annual rate and demand increase ¹	\$69.54	\$74.20	\$79.57	\$85.33	\$91.52
Offsetting Revenues	15.94	16.90	17.91	18.84	18.62
TOTAL REVENUES BEFORE INCREASE	\$85.48	\$91.10	\$97.48	\$104.17	\$110.14
Expenditures					
Production Costs	\$7.81	\$7.96	\$8.12	\$8.29	\$8.60
Personnel Costs	18.47	18.81	19.05	19.19	19.60
Other Operating and Maintenance Costs	26.07	26.38	26.63	27.16	27.69
Additional O&M for CIP and Advanced Tech	-	1.76	2.20	2.36	2.82
Debt Service Requirements	23.33	23.36	25.55	28.98	27.96
General Fund Transfer	8.11	8.58	9.19	9.85	10.56
Capital Outlay Financed by Rates	9.40	10.24	3.96	6.92	7.24
Use of Non-Rate Revenue for WA-12	0.68	0.68	0.68	0.68	0.68
TOTAL EXPENDITURES	\$93.87	\$97.78	\$95.39	\$103.43	\$105.16
Allocation to (Use of) Reserves Prior to Increases	\$(8.39)	\$(6.68)	\$2.09	\$0.74	\$4.98
Demand and Growth Increase	0.00%	0.94%	0.96%	0.97%	0.98%
Rate Revenue Increase	6.50%	6.50%	6.50%	6.50%	6.50%
Month of Rate Increase	July	July	July	July	July
Revenues from Demand and Rate Increases	\$4.72	\$5.43	\$5.83	\$6.25	\$6.63
TOTAL REVENUES	\$90.19	\$96.53	\$103.31	\$110.42	\$116.77
Allocation to (Use of) Reserves After Increases	\$(3.67)	\$(1.25)	\$7.91	\$6.99	\$11.61
<i>Unrestricted Undesignated Reserves</i>	<i>\$31.50</i>	<i>\$28.41</i>	<i>\$33.24</i>	<i>\$38.33</i>	<i>\$47.73</i>
<i>Line of Credit</i>	<i>25.00</i>	<i>25.00</i>	<i>28.00</i>	<i>28.00</i>	<i>28.00</i>
<i>Unrestricted Undesignated Reserves w/ LOC</i>	<i>\$56.50</i>	<i>\$53.41</i>	<i>\$61.24</i>	<i>\$66.33</i>	<i>\$75.73</i>
<i>Debt Service Coverage Ratio²</i>	<i>1.69x</i>	<i>1.86x</i>	<i>1.92x</i>	<i>1.91x</i>	<i>2.13x</i>

Notes:

- (1) Projected revenues prior to each fiscal year's demand and rate increases, includes the impact of increases from previous years.
- (2) Net of BABs treasury credit.
- (3) Totals may be off due to rounding.

The amount of revenue to be collected from user rates is defined by the total revenue requirements less any offsetting revenues. Table 13 presents the revenue required from user rates that provides the basis for the cost of service analysis and rate design.

Table 13 Required Rate Revenue (millions \$)

	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28
Total Expenditures	\$93.87	\$97.78	\$95.39	\$103.43	\$105.16
Allocation to (Use of) Reserves After Increases	(3.67)	(1.25)	7.91	6.99	11.61
Less Offsetting Revenues:	(15.94)	(16.90)	(17.91)	(18.84)	(18.62)
Revenue Requirements for Rate Design	\$74.26	\$79.63	\$85.39	\$91.58	\$98.15

Notes:

(1) Totals may be off due to rounding.

Section 4

WATER COST OF SERVICE ANALYSIS

With RPU's water utility's revenue requirements outlined—including needed rate increases—the next step is to link each cost item with a specific service to the system that it supports. This is commonly referred to as the cost of service analysis, or the functional cost allocation, because it connects each cost of the utility with a functional category or purpose that it funds. For instance, expenses related to the billing system are allocated under the umbrella of the customer service function, while costs for operating the distribution system are allocated to the distribution function.

The costs incurred are generally responsive to the specific service requirements or cost drivers imposed on the system and its water resources by its customers. The principal service requirements that drive costs include the annual volume of water consumed, the peak water demands incurred, and the number of customers or meter equivalents in the system. Accordingly, these service requirements are the basis for the selection of the categories utilized in the functional allocation process.

The AWWA M1 Manual outlines the two most widely used methods for allocation of costs—the Base-Extra Capacity Method and the Commodity Demand Method. Both recognize that the cost of serving a customer depends not only on the total volume of water used, but also on the rate of use or peak-demand requirements.

The Base-Extra Capacity Method recognizes that cost of service “depends not only on the total volume of water used, but also on the rate of use, or peak demand requirements.” Costs incurred by RPU are not incurred uniformly, or simply based on the total volume of water used. The cost of service changes based on when water is used. This methodology accounts for this by including an extra capacity category to recover costs associated with capacity that is not used consistently and that impacts operating costs and capital asset related costs to accommodate peak flows.

The proposed rates presented within this report are developed using the Base-Extra Capacity Method. This approach allocates costs among: (1) Base to provide baseline water service or average day demand; (2) Extra Capacity to provide peak demand service, often split into maximum day and maximum hour components; and (3) Customer to provide services that do not vary with water usage, such as customer service and billing. As noted in the AWWA M1 Manual, in detailed rate studies, such as the one performed for this Study, some of these elements might be broken down further into two or more subcomponents.

Based on the City's expenditures and system characteristics, the Customer (or fixed monthly) component was separated into two subcomponents: (1) Customer (accounts) and (2) Capacity (meter equivalents). This bifurcation of the Customer component is done to better identify and allocate costs that vary based on capacity needs (as defined by the size of the meter) from those that should be equally shared by each customer account. Similarly, variable rate component costs were split into base, max day, max hour, supply sustainability and/or the four sources of supply. These are designed to better distinguish that not all demand (and peaking) is equal. Different facilities, such as distribution and storage facilities, and the O&M costs associated with those facilities, are designed to meet the peaking demands of customers. Therefore, these extra capacity costs allocated across base, max day, and max hour include the O&M and capital costs associated with meeting peak customer demand. Further, costs to produce water from each or RPU's supply sources vary, and the costs for most expensive sources of supply can be attributed to the need to serve peak demand.

4.1 Functional Cost Allocation

The objective of this cost of service Study is to develop rate structures that proportionally recover costs from RPU's customers. To do so, the Base-Extra Capacity Method uses a two-part allocation process. First, the functional cost allocation assigns the revenue requirement for the test year by major system function. Then each functional category is allocated to specific rate components, which can easily be assigned to customer classes and rates. RPU groups its operating costs in functional divisions based on the activities that it undertakes to operate and maintain the water system. These functional groups include:

Pumping: RPU operates 41 booster pump stations to move water throughout the system and maintain service pressure. This category includes the capital, engineering, and debt service costs related to RPU's pumping infrastructure. Operating and maintenance costs from the Water Production and Operations division related to pumping are identified as distribution costs based on RPU's Cost of Water Analysis.

Treatment: The water system includes six treatment facilities used to treat groundwater and thus maximize the use of RPU's local resources. This category includes the capital, engineering, and debt service costs related to RPU's treatment infrastructure. Operating and maintenance costs from the Water Production and Operations division related to treatment are identified for each supply source based on RPU's Cost of Water Analysis and therefore allocated to Source of Supply.

Storage: RPU's 16 storage facilities are used to maintain water availability and pressure throughout the system. Additionally, the Linden-Evans reservoir is used to blend water from each of RPU's sources to maintain consistent water quality. This category includes the capital, engineering, and debt service costs related to RPU's storage infrastructure. Operating and maintenance costs from the Water Production and Operations division related to storage are identified as distribution costs based on RPU's Cost of Water Analysis and therefore allocated to Distribution.

Distribution: RPU's distribution system (after the Linden-Evans reservoir) is used to serve water to each of the system's 66,700 customer connections (projected accounts for FY 2023/24). This category includes the costs of operating and maintaining RPU's water distribution infrastructure as well as capital, engineering, and debt service costs related to the distribution system.

Transmission: The transmission system consists of pipeline infrastructure used to convey water from the supply sources to the Linden-Evans reservoir. This category includes the capital, engineering, and debt service costs related to RPU's transmission infrastructure. Operating and maintenance costs from the Water Production and Operations division related to transmission are identified for each supply source based on RPU's Cost of Water Analysis and therefore allocated to Source of Supply.

Source of Supply: RPU owns and operates infrastructure including wells, transmission lines, treatment, and ancillary equipment to produce groundwater from five basins. Currently, potable water is supplied from four of the basins. This category includes the costs of operating and maintaining RPU's water production facilities as well as capital, engineering, and debt service costs related to water supply facilities excluding the costs of supply sustainability projects.

General: This category includes costs related to RPU's service provision, such as buildings and office supplies, that provide a general benefit to PRU and cannot be assigned to a single functional group.

Customer: This category includes the costs of customer service and billing activities.

Meter Services: This category includes the costs of reading, installing, and maintaining water meters.

Admin: This category includes the costs of administration, management, and technical support for the operation of the water Utility.

Fixed Maintenance: This category includes the costs of anticipated and regular maintenance of RPU's facilities and equipment, primarily motor pool costs for Water Field Operations and maintenance and repair of buildings and improvements.

To perform the functional allocation, the cost of service analysis combines information from the pro forma, RPU's detailed operating budget, historical billing data, and additional operational and system information provided by RPU. The allocation to each functional component was calculated based on the detailed budget and cost information and applied to the five-year average revenue requirements calculated in the pro forma for the study period, FY 2023/24 through FY 2027/28. Table 14 and Table 15 present a summary of the functional allocation of O&M by cost center and Debt Service by bond, respectively. A detailed allocation of O&M cost centers, debt service, and the conservation program to functional groups can be found in the Appendix.

The functionalization and allocation of O&M is performed using detailed expenditures from RPU's budget projections from the City's Questica budget system. The pro forma, that serves as the basis of the revenue requirements, utilizes those projections but applies minor adjustments to the summarized projections based on current conditions and other factors that may impact future costs. For example, supplemental personnel costs are added based on staffing plans that are not included in Questica. Due to the adjustments, the detailed O&M that is used for the functionalization and allocation differs slightly from the total O&M costs in the pro forma, however the adjustments do not have any material impact on the percentage allocations.

To develop allocated rate revenue requirements, the allocation percentages determined based on the detailed O&M are applied to the revenue requirements from the pro forma.

Table 14 Allocation Summary of O&M by Cost Center

O&M Cost Center	5-Yr Avg Rev. Req. (\$ million)	Pumping	Treatment	Storage	Distribution	Transmission	Source of Supply	Supply Sustainability	General	Customer	Meter Service	Admin	Fixed Maintenance	As All Others
Water Production & Operations	\$25.58				\$7.73		\$17.85							
					30.2%		69.8%							
Water Field Operations	\$17.09				\$6.30				\$0.21	\$1.30	\$0.43	\$1.83	\$3.13	\$3.90
					36.9%				1.2%	7.6%	2.5%	10.7%	18.3%	22.8%
Water Engineering	10.48	0.21	\$0.04	\$0.04	\$3.15	\$0.98	\$1.94			\$0.91	\$0.53	\$0.79		\$1.90
		2.0%	0.3%	0.3%	30.0%	9.4%	18.5%			8.7%	5.0%	7.6%		18.1%
Water-Office of Ops Technology	\$1.03												\$0.25	\$0.78
													24.0%	76.0%
TOTAL ALLOCATED	\$ 54.18	\$0.21	\$0.04	\$0.04	\$17.18	\$0.98	\$19.79		\$0.21	\$2.21	\$0.95	\$2.62	\$3.38	\$6.58
TOTAL WITH AS ALL OTHER REALLOCATED (\$)	\$54.18	\$0.24	\$0.04	\$0.04	\$19.56	\$1.12	\$22.53	-	\$0.23	\$2.52	\$1.08	\$2.98	\$3.85	
	100.0%	0.4%	0.1%	0.1%	36.1%	2.1%	41.6%	0.0%	0.4%	4.6%	2.0%	5.5%	7.1%	

Notes:

(1) Totals may be off due to rounding.

Table 15 Allocation Summary of Debt Service

	5-Yr Avg Rev. Req. (\$ million)	Pumping	Treatment	Storage	Distribution	Transmission	Source of Supply	Supply Sustainability	General	Customer	Meter Services	Admin	Fixed Maintenance
2009B ISSUE (\$67.790M FIXED BABs) - Net of BABs	\$5.21	\$0.05	\$0.04		\$2.94	\$0.71	\$1.47						
		1.0%	0.7%		56.4%	13.6%	28.3%						
2011A ISSUE (\$59.0M VARIABLE)	\$0.79	\$0.06	\$0.02	\$0.12	\$0.34	\$0.16	\$0.08				\$0.01		
		7.1%	3.1%	15.4%	43.0%	20.5%	10.3%				0.7%		
2019 A Refunding Water Revenue Bonds	\$9.35	\$0.44	\$0.66	\$0.31	\$4.05	\$1.66	\$2.22						
		4.7%	7.1%	3.3%	43.3%	17.8%	23.8%						
New Debt Service - Bonds	\$7.25	\$0.30	\$0.05	\$0.05	\$2.81	\$1.36	\$0.59	\$1.37			\$0.73		
		4.1%	0.7%	0.7%	38.7%	18.8%	8.1%	18.8%			10.1%		
Advance from City - Pension Obligations	\$2.22				\$0.67		\$1.55						
					30.2%		69.8%						
Capital Lease	\$0.78								\$0.78				
									100.0%				
Other Interest Expenses	\$0.25								\$0.25				
									100.0%				
TOTAL	\$25.84	\$0.85	\$0.77	\$0.48	\$10.80	\$3.90	\$5.91	\$1.37	\$1.03	-	\$0.74	-	-
	100.0%	3.3%	3.0%	1.9%	41.8%	15.1%	22.9%	5.3%	4.0%	0.0%	2.8%	0.0%	0.0%

Notes:

(1) Totals may be off due to rounding.

4.1.1 Water Production and Operations

The first set of costs to allocate amongst the functional cost components is the Water Production and Operations costs. This allocation defines how RPU's water supply costs, which include the production, purchasing, storage, and distribution of water, are distributed among each of RPU's sources of supply.

Costs within the Water Production and Operations division include the costs to produce, treat, and blend water from each groundwater source as well as distribution costs after Linden-Evans reservoir. As a component of this Study, RPU staff reviewed and reaffirmed the methodology and assumptions used to allocate costs to each supply source and to distribution after Linden-Evans reservoir.

For this COSA study, supply allocations and associated cost allocations have been developed based on an analysis of supply and cost data for FY 2019/20 through FY 2021/22. This methodology provides an accurate representation of the total supply available to RPU retail customers, including both utilized and resilient supply. The allocations developed are then applied to the projected costs for each year of the study period in the cost of service analysis.

4.1.1.1 Water Supply

All potable water produced by RPU is pumped from RPU's five groundwater basins and is treated at one of six treatment facilities, then blended and stored in the Linden-Evans Reservoir. Over the past decade, this system has provided all of RPU's potable water needs. RPU can also take imported water from the Metropolitan Water District along with these local supplies, however imported supplies have not been needed in recent years resulting in a significant portion of RPU's costs being related to the production and distribution of water from its groundwater resources. An allocation has been developed for the "Water Production and Operations division of RPU's operating budget to allocate those costs.

4.1.1.2 Available Supply

RPU pumps groundwater from several groundwater basins that underlie or are nearby the City. The sources are grouped into four distinct supply sources referred to as Gage, Riverside North and South, Waterman, and Flume. The amount of water available from each supply is governed by the adjudicated pumping rights held by RPU. The average production levels by source for FY 2020/21 and FY 2021/22 serve as the basis of supply availability for the cost of service analysis. Because the available supply should reflect the total amount of water that RPU could access in a normal year, FY 2019/20 was excluded from the determination of available supplies. Production in that year was abnormally low due to the impact of the COVID-19 pandemic on water sales as well as higher than average precipitation.

Based on the projected levels of demand, RPU's existing water supplies will continue to meet the demands of RPU's projected customer base. Table 16 shows the total production from each source for FY 2019/2020 through FY 2021/22, water used for purposes other than RPU retail, water losses, and the amount available for RPU retail customers.

Table 16 Water Production by Source

	Supply 1 Gage	Supply 2 Riverside South/North	Supply 3 Waterman	Supply 4 Flume	Total
Potable Production (AF)					Above Linden- Evans
FY 2019/20	20,786	17,421	26,321	6,424	70,952
FY 2020/21	22,032	16,577	32,533	5,472	76,613
FY 2021/22	20,615	15,585	31,189	5,472	72,861
Water Loss Above Linden-Evans (AF)					
FY 2019/20	(300)	(251)	(379)	(93)	(1,023)
FY 2020/21	-	-	-	-	-
FY 2021/22	-	-	-	-	-
Potable Wheeled to WMWD (AF)					
FY 2019/20	-	-	(5,102)	-	(5,102)
FY 2020/21	-	-	(4,404)	-	(4,404)
FY 2021/22	-	-	(4,910)	-	(4,910)
Wholesale to WMWD and NORCO (AF)					
FY 2019/20	(674)	(565)	(854)	(208)	-
FY 2020/21	(1,037)	(781)	(1,532)	(258)	-
FY 2021/22	(238)	(180)	(360)	(63)	-
Water Loss Below Linden-Evans (AF)					Below Linden- Evans
FY 2019/20	(1,824)	(1,529)	(2,310)	(564)	(6,228)
FY 2020/21	(1,897)	(1,428)	(2,802)	(471)	(6,598)
FY 2021/22	(1,873)	(1,416)	(2,834)	(497)	(6,620)
Available For Potable Use (Estimated) (AF)					
FY 2019/20	17,988	15,076	17,676	5,559	56,299
FY 2020/21	19,097	14,369	23,796	4,743	62,004
FY 2021/22	18,504	13,989	23,086	4,912	60,490
Determination of Available Supply for Potable Retail Based on FY 2020/21 and FY 2021/22					
Average (AF) <i>(FY 2020/21 and 2021/22)</i>	18,801	14,179	23,441	4,827	61,247
Average (CCF) <i>(FY 2020/21 and 2021/22)</i>	8,189,522	6,176,272	10,210,739	2,102,732	26,679,265

Notes:

(1) Totals may be off due to rounding.

4.1.1.3 Water Supply and Production Costs

Through the projection period, RPU produced and anticipates continuing to produce all of its water needs locally from the groundwater basins in which it owns pumping and export rights. Each basin has a specific cost associated with water production. Costs associated with water supply are tracked in the Water Production and Operations Division of RPU's water operating budget. Those costs are then allocated to each source of supply as well as distribution by operations and engineering staff based on several factors including pumping charges or dues for each basin, the amount of water produced from each basin, the level of treatment required for water from each basin, and the amount of maintenance required for facilities in each basin. Table 17 below presents a summary of the cost of water allocation for each year and the average of FY 2019/20 through FY 2021/22.

Table 17 Historic Source of Supply Costs

	Gage Supply 1	Riverside South/North Supply 2	Waterman Supply 3	Flume Supply 4	Rialto Colton (no potable production)	Distribution (After Linden Reservoir)
FY 2019/20						
Total Allocated Costs (millions)	\$3.596	\$3.312	\$4.926	\$1.214	\$0.087	\$6.131
Production (AF)	26,403	22,357	26,321	6,864	458	56,299
Unit Cost (per AF)	\$136.19	\$148.15	\$187.14	\$176.86	\$188.99	\$108.91
FY 2020/21						
Total Allocated Costs (millions)	\$3.880	\$3.339	\$5.810	\$1.252	\$0.063	\$6.076
Production (AF)	28,589	22,486	32,533	5,783	62	62,107
Unit Cost (per AF)	\$135.70	\$148.48	\$178.60	\$216.58	\$1,019.41	\$97.84
FY 2021/22						
Total Allocated Costs (millions)	\$3.999	\$3.846	\$5.891	\$1.318	\$0.067	\$6.234
Production (AF)	27,438	22,135	31,189	5,608	15	60,788
Unit Cost (per AF)	\$145.76	\$173.74	\$188.88	\$235.08	\$4,437.11	\$102.55
Three-Year Average						
Total Allocated Costs (millions)	\$3.825	\$3.499	\$5.542	\$1.262	\$0.072	\$6.147
Percent of Costs	18.8%	17.2%	27.2%	6.2%	0.4%	30.2%

Notes:

(1) Totals may be off due to rounding.

The available water supplies have been prioritized based on unit costs. Water from Gage, the lowest cost source, is considered priority 1 supply (Supply 1), water from Riverside North and South is priority 2 supply (Supply 2), water from Waterman is priority 3 supply (Supply 3), and water from Flume (the most expensive source) is priority 4 supply (Supply 4). Costs for Rialto Colton are not included in the allocations as no potable water is produced from the Rialto Colton basin. Costs associated with distribution (after the Linden-Evans reservoir) are related to water distribution and allocated to the Distribution function.

Based on these proportions, Water Production and Operations costs are functionally allocated to Distribution (30.2 percent) and Source of Supply (69.8 percent). A line-item cost center allocation is provided in the Appendix.

An additional allocation was performed to calculate the breakdown of costs specifically incurred to produce potable water for retail sales between each of the supply sources. To estimate potable production costs from each supply, the unit costs for each supply and fiscal year from Table 17 are multiplied by the potable acre feet for each supply and fiscal year from Table 16. The three-year average cost to produce potable water from each source is then used to allocate projected source of supply costs for each fiscal year to each of the supply sources in the cost of service analysis. Table 18 shows the estimated potable production costs for each supply and resulting allocation percentages.

Table 18 Estimated Potable Retail Supply Costs

	Supply 1 Gage	Supply 2 Riverside South/North	Supply 3 Waterman	Supply 4 Flume
AF for Potable Use				
FY 2019/20	17,988	15,076	17,676	5,559
FY 2020/21	19,097	14,369	23,796	4,743
FY 2021/22	18,504	13,989	23,086	4,912
Cost for Potable Production (millions)				
FY 2019/20	\$2.450	\$2.233	\$3.308	\$0.983
FY 2020/21	\$2.591	\$2.133	\$4.250	\$1.027
FY 2021/22	\$2.697	\$2.430	\$4.360	\$1.155
Average	\$2.579	\$2.266	\$3.973	\$1.055
Total Allocation	26.1%	22.9%	40.2%	10.7%

Notes:
(1) Totals may be off due to rounding.

4.1.2 Water Field Operations

The primary role RPU's Water Field Operations division is to perform operations and maintenance activities on the distribution system. Some staff members also perform customer service, meter service, and/or administrative duties as well. Staff costs and costs related to the level of staffing were allocated based on an analysis of estimated staffing costs by position and each position's role in RPU's operations. The staff cost analysis resulted in an allocation of 79.0 percent to Distribution, 10.3 percent to Administration, 5.6 percent to Meter Services, 2.7 percent to General, and 2.5 percent to Customer.

Non-personnel field operations costs are allocated to Fixed Maintenance, Administration or – if they cannot be tied directly to specific functions – As All Others. A line-item cost center allocation is provided in the Appendix.

4.1.3 Water Engineering

Staff in RPU’s water engineering group split their time between supporting the capital program and supporting operations. Engineering staff working on capital projects charge their time directly to those projects, administrative staff costs within the Water Engineering category are budgeted as O&M expenditures. RPU provided the percentage of time that each staff member in the Water Engineering division spends on capital work orders, production/supply, distribution, and administration. Those allocations were then used along with the allocated CIP and estimated staff cost for each position to functionalize the projected Water Engineering Staff costs. The results of the analysis indicate that 45.8 percent of staff time is spent on Distribution tasks, 28.2 percent on Source of Supply, 14.3 percent on Transmission, 7.6 percent on Meter Services, 3.1 percent on Pumping, and the remaining 1 percent split equally between Treatment and Storage.

Non-personnel costs within Water Engineering include consultant services, equipment and software purchases, insurance, and other operational expenses. As most of these costs cannot be directly tied to specific functions within the system, they are allocated to As All Others, which is proportionally redistributed. The calculations used to develop the allocations are provided in the Appendix.

4.1.4 Office of Operations Technology

Cost items in the Office of Operations Technology are either fully allocated to Fixed Maintenance expenses or are considered As All Others and redistributed proportionately to the Operating Expenditures subtotal. The calculations used to develop the allocations are provided in the Appendix.

4.1.5 Debt Service

RPU has five outstanding debt obligations as well as pension obligations and lease agreements that are paid with user rate revenues. An analysis was completed to allocate the existing and new debt service obligations to function based on the types of projects that were funded by each debt issue. The new debt issuance is strictly for CIP and therefore allocated based on those upcoming projects. Based on that analysis, Table 15 from above presents the allocations assigned to each issuance.

4.2 Rate Component Allocation

The second step in the cost of service analysis allocates these functional groups to the rate components of the utility’s primary functions including base demand, peak demand, customer costs (customer and capacity), and water supply costs. These were broken down into the following subcomponents to better identify and allocate costs that may vary based on meter size or demand patterns. Using the five-year average revenue requirements for FY 2023/24 through FY 2027/28, revenue requirements for each functional group were distributed between the following rate components:

Customer: Customer costs are fixed expenditures that relate to the RPU’s support activities, which include utility billing, customer service, and administrative support. These expenditures are common to all customers and uniformly recovered from each customer through the monthly delivery charge.

Capacity: Capacity costs are annual expenditures that RPU will incur each year regardless of the quantity of water sold. Capacity costs are fixed expenditures that include meter- and capacity-related costs, such as meter maintenance, a portion of debt service, and a portion of capital costs that are recovered based on the meter’s hydraulic capacity.

Base: Base costs are operating and capital costs incurred by the water system to provide a basic level of service to each customer. It is assumed that allocated costs benefit all customers uniformly and do not vary based on system peaking. These costs are recovered based on the total water demands.

Max Day: Max day costs are operating, and capital costs incurred by the water system to provide service during peak conditions, specifically maximum day demands (MDD). These costs are assigned to rate codes based on maximum day extra capacity (as calculated using system demands) and recovered based on water use.

Max Hour: Max hour costs are operating, and capital costs incurred by the water system to provide service during peak conditions, specifically maximum hour demands (MHD). These costs are assigned to rate codes based on maximum hour extra capacity (as calculated using system demands) and recovered based on water use.

Supply 1: Operating costs associated with the lowest cost source of potable water supply, Gage.

Supply 2: Operating costs associated with the second lowest cost source of potable water supply, the Riverside North and South basins.

Supply 3: Operating costs associated with the second most expensive cost source of potable water supply, Waterman.

Supply 4: Operating costs associated with the most expensive cost source of potable water supply, Flume.

Supply Sustainability: Debt service costs for new bonds associated with the supply sustainability projects in the CIP.

4.2.1 Max Day and Max Hour Analysis

Allocating functional costs to the Max Day and Max Hour rate components first requires calculating the system demand factors, which indicates the ratio of maximum day and hour peaking compared to average day demand, as shown in Table 19. The analysis utilizes the MDD and MHD ratios from the 2022 RPU Focused water Master Plan. The system Max Day Ratio is the quotient of MDD divided by average day demand (ADD); the system Max Hour Ratio is the quotient of MHD divided by ADD; and the system Max Hour to Max Day Ratio is the quotient of MHD divided by MDD.

Table 19 System Demand Factors Calculation

Component	Factor
System Max Day Ratio (MDD/ADD)	1.47
System Max Hour Ratio (MHD/ADD)	1.75
System Max Hour / Max Day Ratio (MHD/MDD)	1.19

Notes:

(1) FY 2020/21 information provided by RPU based on demand records and peak factors from the 2022 RPU Focused Water Master Plan.

Each peaking factor ratio is then differentiated by Base, Max Day, and Max Hour to establish the extra capacity allocation percentages assigned to functionalized expenditures, as shown in Table 20. Base is defined as 100 percent of average (non-peak) use and is therefore always assigned 1.00 ratio.

For Base on Max Day, the remaining system ratio of 0.47 (1.47 minus 1.00) is assigned to Max Day. This equates to a 68.0 and 32.0 percentage split of Base and Max Day, respectively. The allocation calculation for Base, Max Day, and Max Hour is similarly calculated, with any excess of 1.47 assigned to Max Hour from the 1.75 System Max Hour Ratio. Lastly, any functional expenses that are driven only by peaking demand are allocated based on percentages derived from the calculated Max Day to Average Day Demand (1.47) and Max Hour (0.28).

Table 20 Extra Capacity Allocation Calculations

Extra Capacity Component	Ratio	Percentage
Base on Max Day		
Base	1.00	68.0%
Max Day	0.47	32.0%
Max Day to Average Day Demand	1.47	100.0%
Base, Max Day, and Max Hour		
Base	1.00	57.1%
Max Day	0.47	26.9%
Max Hour	0.28	16.0%
Max Hour to Average Day Demand	1.75	100.0%
Max Day and Max Hour		
Max Day	1.47	84.0%
Max Hour	0.28	16.0%
Max Hour to Average Day Demand	1.75	100.0%

4.2.2 Rate Component Allocation Results

The allocation to rate components was performed by first allocating the component elements of total revenue requirements, then combining those allocations along with offsetting revenues and other costs to determine the overall allocation.

4.2.2.1 Allocated O&M Costs

Functionalized O&M costs were allocated to rate components Table 21 presents a summary the functional expense allocation factors and Table 22 details the allocation of O&M expenses to rate components. O&M costs for each function are allocated to rate categories as follows:

- Costs in the pumping and treatment functions are allocated to Max Day and Max Hour using the allocation shown in Table 20.
- Treatment costs are allocated to Base and Max Day using the allocation shown in Table 20.
- Distribution and Transmission costs are allocated to Base, Max Day, and Max Hour using the allocation shown in Table 20.
- Source of Supply costs are allocated to each supply using the allocation shown in Table 18.
- General costs are allocated to As All Other, then proportionally redistributed based on the overall allocation for allocable costs.
- Customer costs are allocated entirely to the Customer category.
- Meter Services costs are allocated entirely to the Capacity category.
- Administration costs are allocated to the Customer and Capacity categories.

- Fixed Maintenance costs are allocated to the Capacity component.

4.2.2.2 Allocated Debt Service

Functionalized debt service costs are allocated to rate categories based on the types of projects funded with the debt instruments and how the infrastructure benefits RPU's customers.

- As debt service is a fixed cost, most functions are allocated to the fixed Capacity component since each customer's capacity, as dictated by their meter size, relates to the sizing of infrastructure. Debt service costs in the Pumping, Storage, Distribution, Transmission, and Meter Services.
- Treatment and Source of Supply debt service costs are allocated to Max Day since the need for, and/or sizing of, those facilities is driven largely by peak demands.
- Debt service for Supply Sustainability projects is allocated to the Supply Sustainability category.

The allocation of debt service to rate categories is summarized in Table 23.

4.2.2.3 Allocated CIP

Functionalized CIP costs are allocated to rate categories using the same methodology as that discussed above for debt service. The CIP allocations rely on the project costs prior to adding cost escalation. The allocation of the CIP to rate categories is summarized in Table 24.

4.2.2.4 Revenue Requirements Allocation

Table 25 summarizes the rate component allocation of the Total Rate Revenue Requirement. The resulting percentage allocations are then applied to the revenue requirements for each fiscal year of the study period. All allocations are shown in line-item detail in the Appendix.

4.2.3 Fixed and Variable Cost Recovery

Based on the results of the rate category allocation, the proposed rates would recover 40.4-percent of rate revenue requirements via the fixed charges and the remaining 59.6-percent through variable rates. This split is generally in alignment with the current rates which are expected to generate 39-percent of rate revenues via the fixed charges and 61-percent of rate revenues through variable rates.

Figure 9 compares the fixed and variable revenue collection for the current rates and proposed rates to RPU's actual fixed and variable costs. As shown, RPU's actual costs are 85-percent fixed and 15-percent variable as the only truly variable costs are those related to utilities, consumables, and volumetric fees associated with producing and distributing water. Most water agencies with a similar supply portfolio to RPU's, one not reliant on expensive imported water, show a similar discrepancy between the truly fixed costs and the proposed fixed revenue collection. It is generally not feasible to structure rates to directly match the actual fixed and variable cost split as it can lead to rate shock and removes much of the control that customers have over their water bills.

Though the discrepancy between fixed and variable costs can place RPU at risk of under collecting fixed costs during times of substantial conservation, the other attributes of the rate structure for variable rates has considered potential revenue volatility. Specifically, the incremental charge for tier 3 as compared to tier 2 for SFR customers has moderated leading to reduced potential for volatility. During the previous COSA study, several rate structure modifications to further reduce volatility including the change to non-tiered rates for commercial, industrial and landscape customers and the removal of tier 4 for SFR customers. Those changes have been retained in the proposed rate structure.

Figure 9 Fixed Cost Recovery

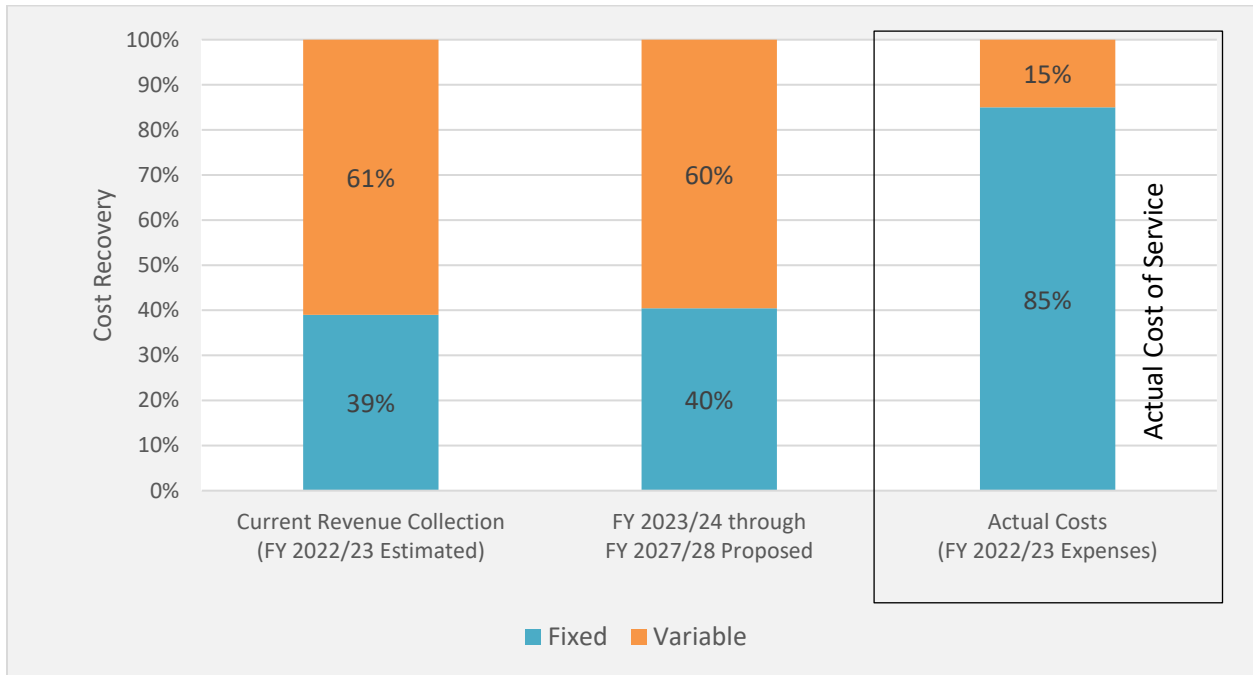


Table 21 O&M Allocation Factors

Category	Customer	Capacity	Base	Max Day	Max Hour	Supply 1	Supply 2	Supply 3	Supply 4	Supply Sustainability	As All Others
Pumping	-	-	-	84.0%	16.0%	-	-	-	-	-	-
Treatment	-	-	68.0%	32.0%	-	-	-	-	-	-	-
Storage	-	-	-	84.0%	16.0%	-	-	-	-	-	-
Distribution	-	-	57.1%	26.9%	16.0%	-	-	-	-	-	-
Transmission	-	-	57.1%	26.9%	16.0%	-	-	-	-	-	-
Source of Supply	-	-	-	-	-	26.1%	22.9%	40.2%	10.7%	-	-
Supply Sustainability	-	-	-	-	-	-	-	-	-	100.0%	-
General	-	-	-	-	-	-	-	-	-	-	100.0%
Customer	100.0%	-	-	-	-	-	-	-	-	-	-
Meter Services	-	100.0%	-	-	-	-	-	-	-	-	-
Admin	25.0%	75.0%	-	-	-	-	-	-	-	-	-
Fixed Maintenance	-	100.0%	-	-	-	-	-	-	-	-	-

Table 22 Rate Category Allocation of O&M Expenditures (\$ millions)

Category	Five-Year Average	Customer	Capacity	Base	Max Day	Max Hour	Supply 1	Supply 2	Supply 3	Supply 4	Supply Sustainability	As All Others
Pumping	\$0.24	\$-	\$-	\$-	\$0.20	\$0.04	\$-	\$-	\$-	\$-	\$-	\$-
Treatment	0.04	-	-	0.03	0.01	-	-	-	-	-	-	-
Storage	0.04	-	-	-	0.03	0.01	-	-	-	-	-	-
Distribution	19.56	-	-	11.17	5.25	3.13	-	-	-	-	-	-
Transmission	1.12	-	-	0.64	0.30	0.18	-	-	-	-	-	-
Source Of Supply	22.53	-	-	-	-	-	5.89	5.17	9.06	2.41	-	-
Supply Sustainability	-	-	-	-	-	-	-	-	-	-	-	-
General	0.23	-	-	-	-	-	-	-	-	-	-	0.23
Customer	2.52	2.52	-	-	-	-	-	-	-	-	-	-
Meter Services	1.08	-	1.08	-	-	-	-	-	-	-	-	-
Admin	2.98	0.75	2.24	-	-	-	-	-	-	-	-	-
Fixed Maintenance	3.85	-	3.85	-	-	-	-	-	-	-	-	-
TOTAL ALLOCATION	\$54.18	\$3.26	\$7.17	\$11.84	\$5.80	\$3.35	\$5.89	\$5.17	\$9.06	\$2.41	\$-	\$0.23
TOTAL WITH AS ALL OTHER REALLOCATED (\$)	\$54.18	\$3.28	\$7.20	\$11.89	\$5.83	\$3.37	\$5.91	\$5.19	\$9.10	\$2.42	\$-	\$-
TOTAL (%)	100.0%	6.0%	13.3%	21.9%	10.8%	6.2%	10.9%	9.6%	16.8%	4.5%	-	-

Notes:

(1) Totals may be off due to rounding.

Table 23 Rate Category Allocation of Debt Service (\$ millions)

Division/Category	Five-Year Average	Customer	Capacity	Base	Max Day	Max Hour	Supply 1	Supply 2	Supply 3	Supply 4	Supply Sustainability	As All Others
Pumping	\$0.85	\$-	\$0.85	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-
Treatment	0.77	-	-	-	0.77	-	-	-	-	-	-	-
Storage	0.48	-	0.48	-	-	-	-	-	-	-	-	-
Distribution	10.80	-	10.80	-	-	-	-	-	-	-	-	-
Transmission	3.90	-	3.90	-	-	-	-	-	-	-	-	-
Source of Supply	5.91	-	-	-	5.91	-	-	-	-	-	-	-
Conservation	1.37	-	-	-	-	-	-	-	-	-	1.37	-
General	1.03	-	-	-	-	-	-	-	-	-	-	1.03
Customer	-	-	-	-	-	-	-	-	-	-	-	-
Meter Services	0.74	-	0.74	-	-	-	-	-	-	-	-	-
Administration	-	-	-	-	-	-	-	-	-	-	-	-
Fixed Maintenance	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL ALLOCATION	\$25.84	\$-	\$16.77	\$-	\$6.68	\$-	\$-	\$-	\$-	\$-	\$1.37	\$1.03
TOTAL - AS ALL OTHER REALLOCATED (\$)	\$25.84	\$-	\$17.46	\$-	\$6.95	\$-	\$-	\$-	\$-	\$-	\$1.42	\$-
TOTAL (%)	100.0%	-	67.6%	-	26.9%	-	-	-	-	-	5.5%	-

Notes:

(1) Totals may be off due to rounding.

Table 24 Rate Category Allocation of CIP (\$ millions)

Division/Category	Five-Year Total	Customer	Capacity	Base	Max Day	Max Hour	Supply 1	Supply 2	Supply 3	Supply 4	Supply Sustainability	As All Others
Pumping	\$6.1	\$-	\$6.1	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-
Treatment	1.0	-	-	-	1.0	-	-	-	-	-	-	-
Storage	1.0	-	1.0	-	-	-	-	-	-	-	-	-
Distribution	57.6	-	57.6	-	-	-	-	-	-	-	-	-
Transmission	27.9	-	27.9	-	-	-	-	-	-	-	-	-
Source of Supply	12.0	-	-	-	12.0	-	-	-	-	-	-	-
Conservation	28.0	-	-	-	-	-	-	-	-	-	28.0	-
General	-	-	-	-	-	-	-	-	-	-	-	-
Customer	-	-	-	-	-	-	-	-	-	-	-	-
Meter Services	15.0	-	15.0	-	-	-	-	-	-	-	-	-
Administration	-	-	-	-	-	-	-	-	-	-	-	-
Fixed Maintenance	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL ALLOCATION	\$148.6	\$-	\$107.6	\$-	\$13.0	\$-	\$-	\$-	\$-	\$-	\$28.0	\$-
TOTAL - AS ALL OTHER REALLOCATED (\$)	\$148.6	\$-	\$107.6	\$-	\$13.0	\$-	\$-	\$-	\$-	\$-	\$28.0	\$-
TOTAL (%)	100.0%	-	72.4%	-	8.7%	-	-	-	-	-	18.8%	-
ALLOCATION Without Supply Sustainability	100.0%	-	89.2%	-	10.8%	-	-	-	-	-	-	-

Notes:

(1) Totals may be off due to rounding.

Table 25 Rate Category Allocation of Total Revenue Requirements (\$ millions)

	Five-Year Average	Customer	Capacity	Base	Max Day	Max Hour	Supply 1	Supply 2	Supply 3	Supply 4	Supply Sustainability	As All Others
Requirements												
Operating Revenue Requirements	\$53.97	\$3.26	\$7.17	\$11.84	\$5.80	\$3.35	\$5.89	\$5.17	\$9.07	\$2.41	\$-	\$-
Additional O&M for CIP and Advanced Tech	1.83	0.11	0.24	0.40	0.20	0.11	0.20	0.18	0.31	0.08	-	-
Required Reduction in O&M	-	-	-	-	-	-	-	-	-	-	-	-
Debt Service Requirements: Bonds, Leases, and Minor Debts	25.84	-	17.46	-	6.95	-	-	-	-	-	1.42	-
Debt Service Requirements: WIFIA	-	-	-	-	-	-	-	-	-	-	-	-
General Fund Transfer	9.26	-	-	-	-	-	-	-	-	-	-	9.26
Capital Outlay Financed by Rates	7.55	-	6.74	-	0.81	-	-	-	-	-	-	-
Conservation Program	1.66	-	-	-	1.39	0.27	-	-	-	-	-	-
Use of Non-Rate Revenue for WA-12	0.68	-	-	-	-	-	-	-	-	-	-	0.68
Less: Offsetting Requirements												
Conservation Surcharge	(1.66)	-	-	-	(1.39)	(0.27)	-	-	-	-	-	-
Interest income	(2.06)	-	-	-	-	-	-	-	-	-	-	(2.06)
Miscellaneous income	(3.11)	-	-	-	-	-	-	-	-	-	-	(3.11)
Water Conveyance Revenues	(3.78)	-	-	-	-	-	-	-	-	-	-	(3.78)
Settlement reimb - Lockheed/Shell	(2.64)	-	-	-	-	-	(1.38)	(0.70)	(0.56)	-	-	-
Wholesale Sales- WMWD	(2.40)	-	-	-	-	-	-	-	-	-	-	(2.40)

	Five-Year Average	Customer	Capacity	Base	Max Day	Max Hour	Supply 1	Supply 2	Supply 3	Supply 4	Supply Sustainability	As All Others
Wholesale sales - Norco	(0.84)	-	-	-	-	-	-	-	-	-	-	(0.84)
Outside City Surcharge	(2.19)	-	-	-	-	-	-	-	-	-	-	(2.19)
Fire Service Charges	(0.62)	-	-	-	-	-	-	-	-	-	-	(0.62)
Projected Cash Flows - (Use of) Contributions to Reserves	\$4.32	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$4.32
Adjustment for Rate Increase Delay	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-
TOTAL RATE REVENUE REQUIREMENT	\$85.80	\$3.37	\$31.61	\$12.24	\$13.77	\$3.47	\$4.71	\$4.65	\$8.81	\$2.49	\$1.42	\$(0.74)
TOTAL - AS ALL OTHER REALLOCATED (\$)	\$85.80	\$3.34	\$31.34	\$12.14	\$13.65	\$3.44	\$4.67	\$4.61	\$8.73	\$2.47	\$1.41	\$-
Percentage Allocation	100.0%	3.9%	36.5%	14.1%	15.9%	4.0%	5.4%	5.4%	10.2%	2.9%	1.6%	

Notes:

(1) Totals may be off due to rounding.

The allocation percentages calculated in Table 25 are applied to the baseline rate revenue requirements for each fiscal year of this rate-setting period, as shown in Table 26.

Table 26 Rate Category Allocation of Baseline Rate Revenue Requirements for FY 2023/24 to FY 2027/28 (\$ thousands)

Category	Revenue Requirement	Customer	Capacity	Base	Max Day	Max Hour	Supply 1	Supply 2	Supply 3	Supply 4	Supply Sustainability
Allocation (%)		3.9%	36.5%	14.1%	15.9%	4.0%	5.4%	5.4%	10.2%	2.9%	1.6%
FY 23/24	\$74,257	\$2,895	\$27,123	\$10,507	\$11,814	\$2,975	\$4,038	\$3,990	\$7,559	\$2,136	\$1,221
FY 24/25	79,627	3,104	29,084	11,266	12,669	3,191	4,330	4,279	8,105	2,290	1,309
FY 25/26	85,393	3,329	31,190	12,082	13,586	3,422	4,644	4,589	8,692	2,456	1,404
FY 26/27	91,583	3,570	33,451	12,958	14,571	3,670	4,980	4,921	9,322	2,634	1,505
FY 27/28	98,148	3,826	35,849	13,887	15,615	3,933	5,338	5,274	9,990	2,823	1,613

Notes:

(1) Totals may be off due to rounding.

4.3 Rate Code Allocation

The next step in the cost of service analysis is the allocation of costs to each rate class. This step utilizes the results of the functional allocation and the customer usage and account data, to proportionally allocate costs based on the level of service provided to each rate class.

Carollo analyzed customer billing data for the three-year period FY 2019/20 through FY 2021/22 to understand how different types of customers use the water and wastewater systems, including how COVID-19 has impacted customer usage patterns. This analysis drives the allocation of costs to improve equity among customers.

To allocate costs of service to the different customer rate codes, each rate component must be split and divided appropriately. Each cost component is allocated in proportion to each rate code's share of the total annual service units of the respective component. The rate code allocation uses the five-year average service units for each rate code. Rate component costs are allocated to each rate code shown below, additional detail of the allocation methodology and service units are included in the following sections.

4.3.1.1 Fixed Rate Components

Customer: Allocated based on the number of accounts.

Capacity: Allocated based on the number of meter equivalents.

Note: fixed rate components are included in the rate code allocation to assess the total revenue requirements allocated to each code. However, because the fixed charges do not vary by rate code, fixed charges are calculated using the total revenue requirements allocated to the Customer and Capacity components.

4.3.1.2 Variable Rate Components

Base: Allocated based on each rate code's share of total demands.

Max Day: Allocated based on each rate code's share of max day extra capacity with adjustment for interruptible rates to remove supply related debt service and CIP costs.

Max Hour: Allocated based on each rate code's share of max day extra capacity.

Supply 1: Allocated based on each rate code's share of Supply 1 (Gage) water based on the supply allocation.

Supply 2: Allocated based on each rate code's share of Supply 2 (Riverside North/South) water based on the supply allocation.

Supply 3: Allocated based on each rate code's share of Supply 3 (Waterman) water based on the supply allocation.

Supply 4: Allocated based on each rate code's share of Supply 4 (Flume) water based on the supply allocation.

Supply Sustainability: Allocated based on each rate code's share of max day extra capacity. No Supply Sustainability costs are allocated to interruptible users.

4.3.2 Water Supply Allocation

The supply allocation serves to assign the lower cost sources of supply to cover basic demands and the higher cost sources of supplies to cover peak demands based on supply availability and each class's annual demand pattern. A step-by-step process is used to assign sources of supply to each class starting by assigning the lowest cost source of supply to cover a minimal amount of demands then progressively applying the higher cost sources of supply to greater levels of demand.

This allocation of available supply to each customer class was performed using the four-step process described below:

1. Allocate supply to the first increment of demand to all classes based on annualized three-month minimum usage.

The annualized three-month minimum demand is assumed to represent the basic minimum level of usage for each customer class. This initial step of the supply allocation exhausts all Supply 1 water (8.19 million CCF), all available Supply 2 water (6.18 million CCF), and a portion of Supply 3 water (0.88 million CCF).

2. Allocate supply to the second increment of needed supply based on annualized winter consumption.

Annualized winter demand represents the next increment of demand from each customer class. It represents annual demands associated with usage levels using RPU's seven-month winter (November through May). The supply allocated to each class in step one is subtracted from the annualized winter demand prior to the allocation of remaining supply 3 water. Step 3 of the allocation exhausts 4.63 million CCF of Supply 3 water, leaving 4.70 million CCF of Supply 3 to and all of Supply 4, 2.10 million CCF, to be allocated.

3. Allocate supply to the remaining demand based on total usage.

Step three allocates supplies to cover the remaining demand from each customer class based on total usage. The supply allocated to each class in step one and step two is subtracted from the total annual demand prior to the allocation of remaining Supply 3 water and Supply 4. Step 4 of the allocation exhausts the majority of remaining Supply 3 water (3.47 million CCF). The Supply 3 water remaining after step 4 (1.23 million CCF) and all of the Supply 4 water (2.10 million CCF), is considered resilient supply and is reallocated in step four.

4. Allocate remaining Supply 3 and Supply 4 water to account for supply resiliency.

The remaining Supply 3 water and Supply 4 water is allocated to each customer class based on each's allocation of Supply 3 water. This reallocation is intended to reflect the supply resiliency afforded to each class by the excess Supply 3 and Supply 4 water. Resilient supply is not allocated to the WA-7 and WA-10 class since they are considered to be interruptible and would be cut off in the event that supplies became limited.

Table 27 presents the summary of allocated supply with the resiliency component by CCF and percentage, respectively. A detailed calculation is provided in the Appendix.

Table 27 Supply Allocation by Rate Code (CCF)

Rate Code	Total	Supply 1	Supply 2	Supply 3	Supply 4
Total With Reallocation for Resiliency					
SFR (WA-1A)	15,073,945	5,359,778	4,042,171	4,664,340	1,007,655
MFR (WA-1B)	397,834	167,693	126,469	85,254	18,418
Flat Rate – Temp. Service (WA-2)	56,507	7,700	5,807	35,360	7,639
Riverside WC (WA-4)	10,495	2,929	2,209	4,406	952
Commercial/Industrial (WA-6)	8,748,379	2,173,028	1,638,827	4,059,528	876,995
Interruptible Irrigation/Recycled (WA-7/WA-10)	807,384	188,118	141,873	477,393	-
Landscape (WA-11)	924,468	192,397	145,100	482,693	104,278
Agricultural (WA-12)	660,253	97,877	73,816	401,765	86,795
TOTAL	26,679,265	8,189,522	6,176,272	10,210,739	2,102,732
Percentage Allocation					
SFR (WA-1A)	56.50%	65.45%	65.45%	45.68%	47.92%
MFR (WA-1B)	1.49%	2.05%	2.05%	0.83%	0.88%
Flat Rate – Temp. Service (WA-2)	0.21%	0.09%	0.09%	0.35%	0.36%
Riverside WC (WA-4)	0.04%	0.04%	0.04%	0.04%	0.05%
Commercial/Industrial (WA-6)	32.79%	26.53%	26.53%	39.76%	41.71%
Interruptible Irrigation/Recycled (WA-7/WA-10)	3.03%	2.30%	2.30%	4.68%	0.00%
Landscape (WA-11)	3.47%	2.35%	2.35%	4.73%	4.96%
Agricultural (WA-12)	2.47%	1.20%	1.20%	3.93%	4.13%
TOTAL	100.00%	100.00%	100.00%	100.00%	100.00%

Notes:
 (1) Totals may be off due to rounding.

4.3.3 Water Demand Characteristics – Units of Service

As discussed previously, costs allocated to the variable functional categories (Base, Max Day, Max Hour, Supplies 1 through 4, and Supply Sustainability) are allocated based on the amount of demand in each of those categories for each rate code. This directly ties the incremental cost of water to each class's consumption and to volumetric rate tiers (where applicable). Every unit of water has an element of Base, Max Day, Max Hour, and Supply costs. Supply Sustainability costs are spread across all units of water for rate codes without tiered rates and from the upper tiers for rate codes with tiered rates.

Costs for each rate component, for each fiscal year, are allocated to each rate code using five-year average units of service for the Study period. The peak factors and calculated max day and max hour extra capacity for each rate code were determined using the detailed customer billing data analysis, demand projections, and the overall system max day and max hour peak factors presented previously in Table 19. Table 28 shows the five-year average units of service for each rate code, additional detail is included for reference in the Appendix.

Table 29 shows the rate component costs allocated to each rate code for FY 2023/24. This allocation is performed for each fiscal year of the study period and the variable costs allocated to each code are then used to calculate rates. Allocated costs for each fiscal year are included in the Appendix.

4.3.4 Interruptible Rates

Along with the exclusion of resilient supply, the allocated costs for interruptible customers are adjusted to remove costs associated with development of supply sources as well as costs in the Supply Sustainability category. These users are not considered to benefit from investments in water supply resiliency because they will be required to stop using water in the event that system wide usage must be curtailed, or if a system failure or other event leads to a decrease in available supplies.

Supply related debt service and capital costs are allocated to the Max Day component thus, the allocation of Max Day costs for interruptible users is adjusted to remove the debt service and capital costs that are associated with developing or enhancing water supply sources. No costs in the Supply Sustainability category are allocated to the interruptible users. No interruptible adjustments are made for the Customer, Capacity, Base, Max Hour, or Supply 1, 2, and 3 allocations.

Table 28 Units of Service

Rate Class	Total Use (Five-Year Avg.)		Max Day Extra Capacity (Five-Year Avg.)				Max Hour Extra Capacity (Five-Year Avg.)		
	CCF	%	Peak Factor	CCF	%	% with Interruptible Adjustment	Peak Factor	CCF	%
SFR (WA-1A)	13,665,519	57.4%	1.48	18,078	57.8%	59.9%	1.77	48,015	57.4%
MFR (WA-1B)	373,810	1.6%	1.36	373	1.2%	1.2%	1.62	1,290	1.5%
Flat Rate – Temp. Service (WA-2)	44,394	0.2%	2.29	157	0.5%	0.5%	2.73	175	0.2%
Riverside WC (WA-4)	8,986	0.04%	1.69	17	0.05%	0.1%	2.01	33	0.0%
Commercial/Industrial (WA-6)	7,574,471	31.8%	1.40	8,352	26.7%	27.7%	1.67	26,296	31.5%
Interrupt. Irrigation/Recycled (WA-7/WA-10)	830,364	3.5%	1.84	1,913	6.1%	2.8%	2.19	3,073	3.7%
Landscape (WA-11)	781,477	3.3%	1.67	1,426	4.6%	4.7%	1.98	2,820	3.4%
Greenbelt (WA-8)	-	0.0%	2.07	-	0.0%	0.0%	2.47	-	0.0%
Agricultural (WA-12)	522,624	2.2%	1.66	939	3.0%	3.1%	1.97	1,884	2.3%
Total	23,801,644	100.0%		31,255	100.0%	100.0%		83,584	100.0%

Notes:

(1) Totals may be off due to rounding.

Table 29 Rate Code Allocation for FY 2023/24 (thousands \$)

Category	SFR (WA-1A)	MFR (WA-1B)	COMM/INDU (WA-6)	INTERRUPT. IRR / RECYC (WA-7/WA-10)	LANDSCAPE (WA-11)	FLAT RATE – TEMP. SERVICE (WA-2)	RIVERSIDE WC (WA-4)	GREENBELT (WA-8)	AGRICULTURAL (WA-12)	SYSTEM TOTAL
Customer	\$2,554.6	\$49.0	\$229.6	\$24.6	\$22.2	\$3.4	\$1.1	\$0.4	\$9.6	\$2,894.5
Capacity	18,393.4	385.4	6,918.0	548.0	507.7	216.2	14.0	-	140.5	27,123.1
Base	6,032.2	165.0	3,343.5	366.5	345.0	19.6	4.0	-	230.7	10,506.5
Max Day	7,073.1	145.9	3,267.5	334.5	557.8	61.4	6.6	-	367.5	11,814.4
Max Hour	1,709.2	45.9	936.0	109.4	100.4	6.2	1.2	-	67.0	2,975.4
Supply 1	2,642.9	82.7	1,071.5	92.8	94.9	3.8	1.4	-	48.3	4,038.3
Supply 2	2,611.5	81.7	1,058.8	91.7	93.7	3.8	1.4	-	47.7	3,990.2
Supply 3	3,452.8	63.1	3,005.1	353.4	357.3	26.2	3.3	-	297.4	7,558.5
Supply 4	1,023.6	18.7	890.8	-	105.9	7.8	1.0	-	88.2	2,135.9
Supply Sustainability	752.1	15.5	347.4	-	59.3	6.5	0.7	-	39.1	1,220.6
Total	\$46,245.3	\$1,052.9	\$21,068.3	\$1,920.8	\$2,244.3	\$354.8	\$34.6	\$0.4	\$1,336.0	\$74,257.5

Notes:

(1) Totals may be off due to rounding.

Section 5

WATER RATE DESIGN

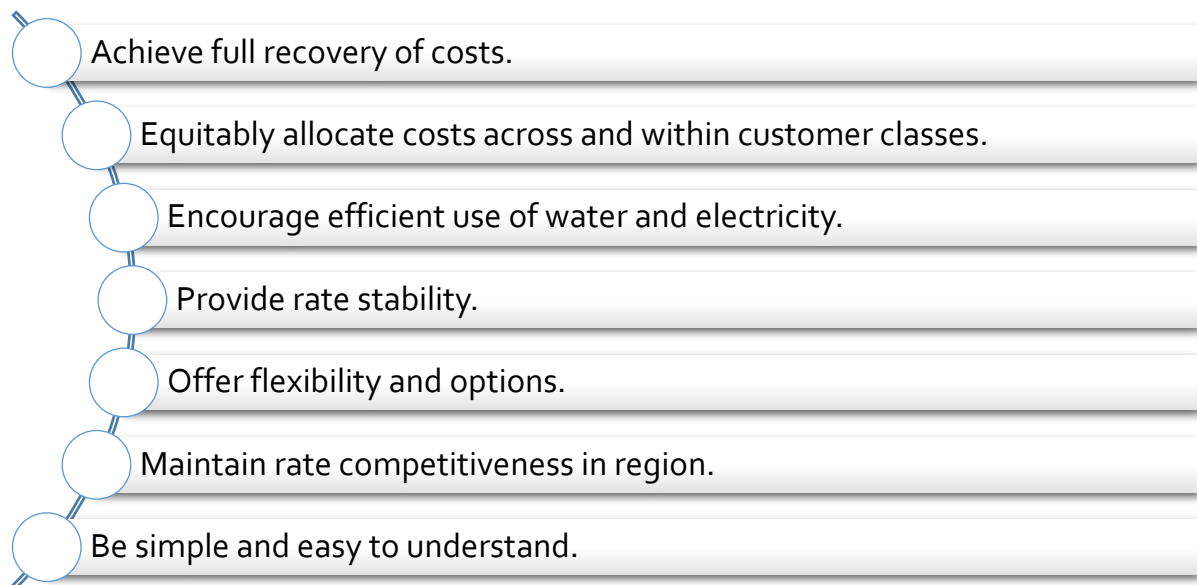
The rate design analysis links the rate code costs identified in Section 4 with the water rates necessary to achieve cost recovery. The focus of this process is to achieve full cost recovery and substantiate that each rate code is paying their fair and proportionate share of system costs.

5.1 Selecting Rate Structures

Once costs have been equitably allocated to each customer class, RPU does have some flexibility in designing the rate structure to meet its policy objectives. In determining the appropriate rate level and structure, Carollo analyzed various rate design alternatives and the corresponding customer and utility implications. Beyond the identified study objectives, Carollo identified additional criteria for considerations and discussed them at length with RPU staff. Listed below are RPU's ratemaking principles:

5.1.1 Ratemaking Principles

RPU rate structures will be designed to provide a transition to rates that align with the transformational changes occurring in the electric and water industries. RPU's rates shall be designed to achieve the following goals:

- 
- Achieve full recovery of costs.
 - Equitably allocate costs across and within customer classes.
 - Encourage efficient use of water and electricity.
 - Provide rate stability.
 - Offer flexibility and options.
 - Maintain rate competitiveness in region.
 - Be simple and easy to understand.

Given the numerous and, at times, competing elements, selection of an appropriate rate structure is complex. There is no single structure that meets all objectives equally, nor are all objectives or elements valued the same by the utility or customers. Each criteria or element has merit and plays an important role in the rates implementation and overall effectiveness. These elements and competing objectives were discussed and evaluated at length throughout the financial and rate study process.

5.1.2 Proposed Water Rate Structure

Based on discussion with RPU staff and careful review of the cost of service analysis, Carollo recommends that RPU implement the following rate design modifications:

- Revise the SFR Tier 1 allotment from 9 CCF to 8 CCF to reflect updated State guidance for indoor water usage, 47 gallons per capita per day (GPCD), and assuming 4 persons per household.
- Revise the MFR Tier 1 allotment from 7 CCF to 6 CCF to reflect updated State guidance for indoor water usage, 47 GPCD, and assuming 4 persons per household.

5.2 Fixed Charges

The fixed charge is intended to provide a stable revenue source that is related to how customers use the system expressed as the system capacity required to serve them. The proposed fixed charge is a combination of the Customer and Capacity functional components. The Customer component recovers costs that apply to all accounts in the system, regardless of usage or the size of the connection to the system. The proposed fixed charge is designed to collect costs associated with capital expenditures (debt service, rate funded capital, and a portion of engineering) as well as maintenance costs based on each customer’s capacity share as measured by Meter Equivalent Units (MEU). The customer share accounts for billing and administrative costs that are independent of each customer’s capacity share and therefore equal for each account.

Table 30 presents the calculation of monthly unit charges for both account and MEU as the first step to determining the fixed charge.

Table 30 Monthly Component Charges

	Existing	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28
Number of Accounts	66,694	66,879	67,064	67,250	67,436	67,623
Customer Revenue to Recover (\$ millions)		\$2.89	\$3.10	\$3.33	\$3.57	\$3.83
Monthly Component Charge Per Account		\$3.61	\$3.86	\$4.12	\$4.41	\$4.71
Number of MEUs	95,061	95,337	95,661	95,987	96,290	96,594
Capacity Revenue to Recover (\$ millions)		\$27.12	\$29.08	\$31.19	\$33.45	\$35.85
Monthly Component Charge per MEU		\$23.71	\$25.34	\$27.08	\$28.95	\$30.93

Notes:

(1) Totals may be off due to rounding.

To determine the fixed charge, the meter unit cost is then multiplied by the meter capacity ratios previously developed by RPU to calculate the meter capacity cost. These ratios are based on ratios identified in the AWWA M6 Manual *Water Meters - Selection, Installation, Testing, and Maintenance* and represent the types of meters used by Riverside. The ratios are calculated using the average of maximum flow for meters of each size. The meter Capacity cost is then added to the Customer cost to calculate the cost based fixed charges, presented in Table 31.

While an increased fixed charge provides a stable source of revenues for the utility, increasing the fixed charge reduces the amount allocated to the commodity rates, and thus has the incidental effect of reducing incentives for conservation. The proposed revenue adjustments, as a percentage, do not equal or necessarily correlate to an equivalent percentage increase to rates or monthly bills. The results of the cost of service analysis and rate redesign will affect users differently based on their meter size and water consumption habits. Table 32 summarizes the proposed monthly fixed charges for the duration of this rate-setting period.

Table 31 Components to Proposed Fixed Charge (FY 2023/24)

Meter Size	Capacity Ratio	Customer Component	Capacity Component	Total Monthly Charge
3/4" & 5/8"	1.00	\$3.61	\$23.70	\$27.31
1"	1.67	3.61	39.59	43.20
1.5"	3.33	3.61	78.94	82.55
2"	5.33	3.61	126.36	129.97
3"	10.00	3.61	237.08	240.69
4"	16.67	3.61	395.21	398.82
6"	36.67	3.61	869.37	872.98
8"	60.00	3.61	1,422.48	1,426.09
10"	93.33	3.61	2,212.67	2,216.28
12"	133.33	3.61	3,160.99	3,164.60

Table 32 Proposed Monthly Fixed Charges (FY 2023/24 to FY 2027/28)

Meter Size	Existing	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28
3/4" & 5/8"	\$26.00	\$27.31	\$29.19	\$31.20	\$33.36	\$35.64
1"	41.26	43.20	46.17	49.35	52.76	56.36
1.5"	79.08	82.55	88.23	94.30	100.82	107.70
2"	124.64	129.97	138.90	148.45	158.72	169.56
3"	231.03	240.69	257.22	274.91	293.91	313.99
4"	382.97	398.82	426.21	455.53	487.01	520.28
6"	838.59	872.98	932.94	997.11	1,066.02	1,138.84
8"	1,370.06	1,426.09	1,524.04	1,628.85	1,741.43	1,860.39
10"	2,129.34	2,216.28	2,368.50	2,531.39	2,706.35	2,891.22
12"	3,040.57	3,164.60	3,381.95	3,614.54	3,864.36	4,128.34

5.3 Variable Rates

The variable rates are developed for each rate code and are designed to recover the costs proportionate to water demands. Cost of service-based rates were developed for each rate code based on the principle of maintaining vertical and horizontal customer-class equity. Rate codes, such as single-family residential or commercial, only pay for their assigned share of costs of service, and within each rate code, each account will pay a fair share of the costs assigned to that rate code based on their demands. The water commodity rate for each rate code is calculated based on the rate code's share of revenue requirements and their forecasted water demands.

5.3.1 Seasonally Adjusted Rates

Like RPU's current rate structure, the proposed variable rates for several customer classes will be seasonally adjusted. Rates are increased in the summer months to reflect the increased costs associated with providing water during times of peak usage. The seasonal adjustment also provides the additional benefit of promoting efficient usage throughout the year.

Under the existing rate structure, summer months include June through October and winter months include November through May. Based on current water usage patterns these seasonal definitions were found to be in alignment with customer usage patterns and were therefore maintained for the proposed rates.

The seasonal adjustment to the proposed rates was made by allocating a greater share of Max Day costs to the highest tier summer rate based on the ratio of demands in the average summer months to the demands in the average winter month. For classes with tiered rates (single family, multi-family, and Riverside Water Company Irrigators), seasonal adjustments are applied only to the highest tier. As such, this ratio is calculated for the highest tier of the tiered rate classes, or for the rate code as a whole for Commercial/Industrial WA-6 and Landscape WA-11.

The first step to calculating the seasonal ratio is to sum each season's forecasted usage for FY 2023/24 and divide by the number of months in that season; five summer months and seven winter months. Then, the ratio of summer to winter usage is the seasonal ratio used in rate design. Table 33 presents the summary of these calculations.

Table 33 Seasonal Peak Factors Calculation

Rate Class	Winter CCF	Summer CCF	Seasonal Ratio
Number of Months	7	5	
WA-1A SFR (Tier 3)			
Avg. Seasonal Use	781,054	1,260,772	
Avg. Monthly Use	111,579	252,154	2.26
WA-1B MFR (Tier 2)			
Avg. Seasonal Use	90,208	95,879	
Avg. Monthly Use	12,887	19,176	1.49
WA-4 Riverside Irrigators (Tier 3)			
Avg. Seasonal Use	392	636	
Avg. Monthly Use	56	127	2.27
WA-6 Commercial/Industrial (All)			
Avg. Seasonal Use	3,814,280	3,543,456	
Avg. Monthly Use	544,897	708,691	1.30
WA-11 Landscape (All)			
Avg. Seasonal Use	337,300	421,816	
Avg. Monthly Use	48,186	84,363	1.75

Notes:

(1) Totals may be off due to rounding.

5.3.2 Single Family Residential Rates

Given the State’s ongoing water resources concerns and calls for conservation, and RPU’s continued investment in supply resiliency, it is important that the proposed water rate structure promotes efficient water usage and passes the true cost of providing water service on to the customers who utilize that service. The study reviewed the appropriateness and applicability of several rate structure alternatives for the Single Family residential customer class. These options included seasonal and non-seasonal rates, various methods to set tier breaks, and various methods to allocate costs to each tier.

5.3.3 Proposed Single Family Rate Structure

The proposed single family rates maintain the fixed and variable tiered structure but reduce the breakpoint from 9 CCF to 8 CCF in Tier 1. The proposed rates have been developed with a three-tiered inclining block structure, with tier three rates that vary seasonally. The CCF allotments for each tier will remain constant throughout the course of the year. The proposed tier allotments have been set based on water needs for each customer and on the actual usage patterns observed in the customer billing data.

Tier 1 Allotment – Indoor Usage: The proposed tier one allotment is 8 CCF per account per month. This allotment was calculated based on an assumed 4 persons per household and 47 gallons per capita per day to reflect state indoor water use guidance.

Tier 2 Allotment – Efficient Outdoor Usage: The tier two allotment is an additional 27 CCF per month above the tier one allotment. This allotment maintains RPU’s existing tier two breakpoint of 35 CCF per month and is in alignment with the 75th percentile user in the maximum month.

Tier 3 – High Usage: Any usage above 35 CCF will be charged the tier three rate.

Seasonal adjustment of the tier three rates helps to reflect the additional cost of seasonal peaking on the system.

5.3.4 Proposed Single Family Rates

Volumetric rates for each tier are calculated by allocating the variable revenue to recover from the SFR rate class (summarized in Table 25) to each tier based on usage per tier and supply available in each tier. Due to the pressure that seasonal variability places on the system, the revenue to recover through volumetric rates for SFR tier three is further allocated to winter and summer proportionate to its seasonal ratio.

5.3.4.1 Base, Max Day, Max Hour, and Supply Sustainability

The first step to developing these component rates is to allocate the calculated revenue to recover by tier based on forecasted use, as shown in Table 32.

Base and Extra Capacity (Max Day and Max Hour) costs are allocated proportionate to the share of usage in each tier for the associated unit of service and are independent of source of supply costs. Base costs are allocated in proportion to average day demands, Max Day costs are allocated in proportion to Max Day extra capacity, and Max hour costs are allocated in proportion to Max Hour extra capacity. SFR's share of Supply Sustainability costs are allocated entirely to Tier 3 since the highest users drive the need to secure additional sources of supply.

Table 34 SFR Proposed Rate Calculation: Base/Extra Capacity by Tier (FY 2023/24)

	Total	Tier 1	Tier 2	Tier 3
Base/Extra Capacity Use (CCF)				
Base (Average Day)		13,678	17,649	5,594
Max Day		2,475	9,790	5,563
Max Hour		16,755	22,875	7,719
Supply Sustainability		-	-	-
Base/Extra Capacity Use (%)				
Base		37.0%	47.8%	15.2%
Max Day		13.9%	54.9%	31.2%
Max Hour		35.4%	48.3%	16.3%
Supply Sustainability				100.0%
Revenue to Recover (\$ thousands)				
Base	\$6,032	\$2,235	\$2,883	\$914
Max Day	7,073	982	3,884	2,207
Max Hour	1,709	605	826	279
Supply Sustainability	752	-	-	752

Notes:

(1) Totals may be off due to rounding.

After costs have been allocated to each tier, they are split between winter and summer based upon the projected usage per tier in each season. Table 35 summarizes the seasonal percentages which are applied to the revenue by tier above, resulting in the winter and summer revenue to recover by tier in Table 36.

An additional seasonal rate adjustment for tier three is created by applying the peaking factor calculated in Table 33. A corresponding allocation is made to the allocated winter tier three costs to maintain revenue neutrality over the entire year.

For tier three, which is seasonally adjusted, Base costs are allocated to winter and summer proportional to the use in each season, resulting in 38.3-percent of costs allocated to winter and 61.7-percent of costs allocated to the summer. To account for the increased peak demand burden in the summer season, peak costs in the Max Day and Max Hour categories are allocated using the seasonally weighted allocation. The seasonally weighted allocation applies the 2.26 seasonal ratio, from Table 33, to the summer demands resulting in 21.5-percent of costs allocated to winter and 78.5-percent of costs allocated to summer.

Table 35 SFR Seasonal Allocation Percentage Calculation (FY 2023/24)

Season	Tier 1	Tier 2	Tier 3 ⁽¹⁾	Tier 3 Seasonally Weighted ⁽²⁾
Annual (CCF)	4,992,538	6,441,753	2,041,826	n/a
Winter (CCF)	2,848,873	3,039,262	781,054	781,054
Winter (%)	57.1%	47.2%	38.3%	21.5%
Summer (CCF)	2,143,665	3,402,491	1,260,772	2,849,181
Summer (%)	42.9%	52.8%	61.7%	78.5%

Notes:

- (1) Based on projected winter and summer demands, used to allocate Base costs that are not driven by peaking.
- (2) Seasonally weighed summer CCF calculated by multiplying non-weighted CCF of 1,260,772 by tier three seasonal ratio of 2.26. The seasonally adjusted allocation is applied to peak costs in the Max Day and Max Hour categories as peaking is higher in the summer months.
- (3) Totals may be off due to rounding.

Table 36 SFR Proposed Rate Calculation: Base/Extra Capacity Costs by Season (FY 2023/24)

	Tier 1	Tier 2	Tier 3
Winter Rev. Req. (\$ thousands)			
Base	\$1,275	\$1,360	\$350
Max Day	560	1,832	475
Max Hour	345	390	60
Supply Sustainability	-	-	288
Subtotal: Winter	\$2,181	\$3,583	\$1,172
Summer Rev. Req. (\$ thousands)			
Base	\$960	\$1,523	\$564
Max Day	422	2,051	1,732
Max Hour	260	436	219
Supply Sustainability	-	-	464
Subtotal: Summer	\$1,641	\$4,011	\$2,980

Notes:

- (1) Totals may be off due to rounding.

5.3.4.2 Sources of Supply

Costs for each priority of supply (Supply 1, Supply 2, Supply 3, and Supply 4) are allocated to each tier based on exhausting the lowest cost source of supply to each tier before allocating costs associated with the next source of supply. Supply cost allocation to each tier were developed based on the five-year average consumption per tier, and the five year average supply allocated to single family residential customers to maintain consistency.

Based on current demand levels, RPU has some available, unused supplies. These supplies provide a critical level of resiliency for the water system and are available to meet high-level, peak demands as other supply sources become restricted. As noted in the report above, RPU is able to sell some of these supplies to offset its operational costs and rate impacts. However, because these supplies provide the greatest level of benefit to high volume users, costs associated with supply resiliency are allocated into tier 3, to reflect the supply available for high volume users and the peak strain that they place on the system. But for the fact that RPU's customers peak on the system, new local supplies and the associated facilities would not have been developed. A direct example of these cost investments is the John W. North Water Treatment Plant.

The resilient supply costs considered in the analysis include only those that will be incurred based on the projected usage, and the fixed costs incurred to maintain access to those supplies. Variable costs associated with resilient supplies such as electricity or chemicals are not included in the analysis. Though the resilient supply allocated into Tier 3 shows an excess of available supply, the costs allocated into each tier reflect only costs that RPU will actually incur.

The source of supply allocations are based on the five-year average to correspond to the allocation of available supplies to each customer class calculated in Table 27. Using the same seasonal allocation calculated in Table 33, the development of the allocation of each supply cost to each tier based on the five-year average consumption over the rate planning period is shown in Table 37 below.

Table 37 SFR Proposed Rate Calculation: Supply by Tier (FY 2023/24)

	Total	Tier 1	Tier 2	Tier 3
Available Supply (CCF)				
Supply 1	5,359,778	4,992,538	367,240	-
Supply 2	4,042,171	-	4,042,171	-
Supply 3	4,664,340	-	2,032,342	2,631,999
Supply 4	1,007,655	-	-	1,007,655
Available Supply (%)				
Supply 1		93.1%	6.9%	0.0%
Supply 2		0.0%	100.0%	0.0%
Supply 3		0.0%	43.6%	56.4%
Supply 4		0.0%	0.0%	100.0%
Revenue to Recover (\$ thousands)				
Supply 1	\$2,643	\$2,462	\$181	\$-
Supply 2	2,611	-	2,611	-
Supply 3	3,453	-	1,504	1,948
Supply 4	1,024	-	-	1,024

Notes:

(1) Totals may be off due to rounding.

Similar to the seasonal allocation calculated for the Base/Extra Capacity components, the supply-related costs per tier are allocated to winter and summer based on its projected usage and percentages calculated in Table 35, resulting in seasonal revenue to recover by tier in Table 38.

Table 38 SFR Proposed Rate Calculation: Supply Costs by Season (FY 2023/24) (\$1,000s)

	Tier 1	Tier 2	Tier 3
Winter Supply Rev. Req. (\$ thousands)			
Supply 1	\$1,405	\$85	\$-
Supply 2	-	1,232	-
Supply 3	-	710	745
Supply 4	-	-	392
Subtotal: Winter	\$1,405	\$2,027	\$1,137
Summer Supply Rev. Req. (\$ thousands)			
Supply 1	\$1,057	\$96	\$-
Supply 2	-	1,379	-
Supply 3	-	795	1,203
Supply 4	-	-	632
Subtotal: Summer	\$1,057	\$2,270	\$1,835

Notes:

(1) Totals may be off due to rounding.

5.3.4.3 Proposed Single Family Residential Rates

The costs allocated to each tier in each season are summed and then divided by the projected usage for the corresponding tier and season to calculate the volumetric rates. The SFR rate calculation for FY 2023/24 is shown in Table 39 below.

Table 39 SFR Proposed Rate Calculation (FY 2023/24)

	Tier 1	Tier 2	Tier 3
Projected Usage (CCF)			
Winter	2,848,873	3,039,262	781,054
Summer	2,143,665	3,402,491	1,260,772
Revenue Requirement (\$ thousands)			
Winter			
Base, Max Day, Max Hour, and Supply Sustainability (Table 36)	\$2,181	\$3,583	\$1,172
Supply Costs (Table 38)	1,405	2,027	1,137
Winter Rev. Req.	\$3,585	\$5,610	\$2,309
Summer			
Base, Max Day, Max Hour, and Supply Sustainability (Table 36)	\$1,641	\$4,011	\$2,980
Supply Costs (Table 38)	1,057	2,270	1,835
Summer Rev. Req.	\$2,698	\$6,280	\$4,815
Rate (\$/CCF)			
Winter	\$1.26	\$1.85	\$2.96
Summer	1.26	1.85	3.82

Notes:

(1) Totals may be off due to rounding.

The calculation is repeated for each year of the analysis based on each years' projected usage and allocated costs to develop the rate presented in Table 40. The Appendix provides additional detail of the SFR rate calculations.

Table 40 Proposed Single Family Rates

Tier	Existing	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28
Winter Rates						
Tier 1	\$1.30	\$1.26	\$1.34	\$1.43	\$1.52	\$1.62
Tier 2	1.64	1.85	1.97	2.09	2.23	2.37
Tier 3	3.01	2.96	3.15	3.35	3.57	3.80
Summer Rates						
Tier 1	\$1.30	\$1.26	\$1.34	\$1.43	\$1.52	\$1.62
Tier 2	1.64	1.85	1.97	2.09	2.23	2.37
Tier 3	3.66	3.82	4.07	4.33	4.61	4.91

5.3.4.4 Single Family Residential Revenue Volatility

One of the goals of the rate design analysis was to create a rate structure that controls revenue volatility, while conforming to the requirements of Proposition 218, and RPU's other rate setting principles. As a component of the rate analysis, the proposed rates were analyzed along with historical and projected demand patterns to test whether rate structure and pricing changes have an adverse impact on revenue volatility. That analysis showed that the proposed SFR rates recover costs from customers at various usage levels in a manner very similar to the current rates.

Figure 10 and Figure 11 show the results of the volatility analysis. For presentation comparison purposes, estimated revenues and usage from individual customers were grouped into 10-CCF blocks up to 70 CCF, followed by a final block for customers with more than 70 CCF of monthly usage.

Figure 10 shows the percent of customers within each usage block and the projected usage by each block based on the billing data analysis and demand projection. The left axis corresponds to the total annual usage expected to fall within each monthly usage group, presented as bars, and the right axis shows the percent of accounts within each monthly usage group, presented as an orange line. As shown, customer bills with over 70 CCF of monthly usage represent just 2.8-percent of accounts but are responsible for approximately 1.85 million CCF of demands, constituting 13.7-percent of total SFR sales.

Figure 10 SFR Projected Usage

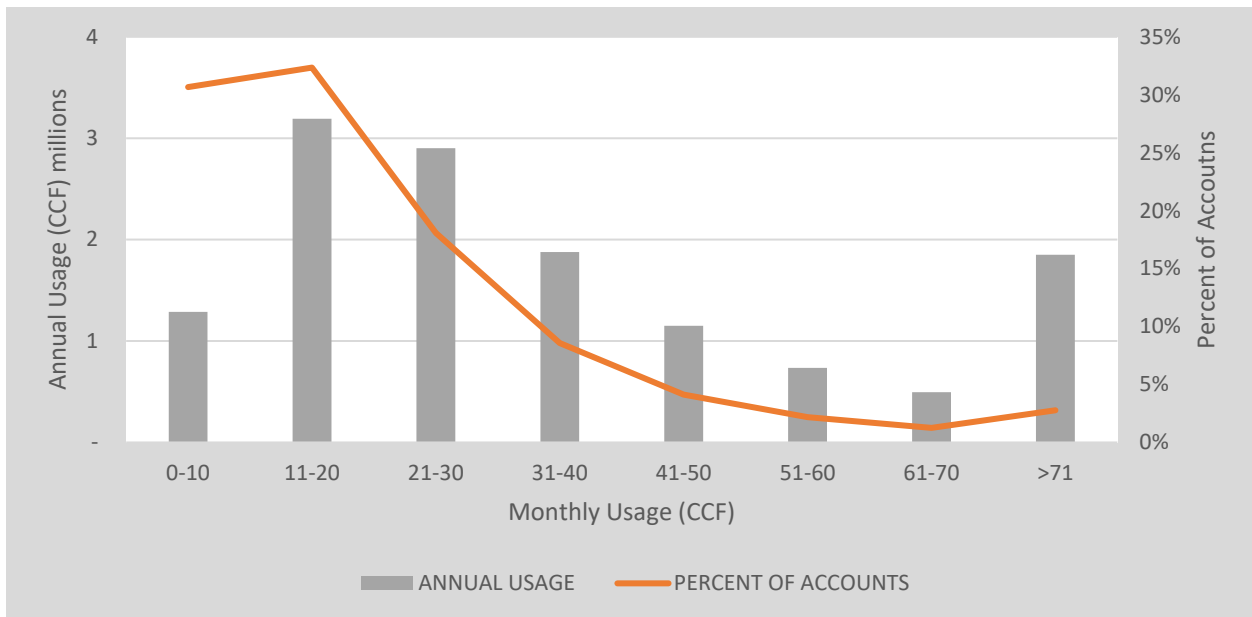
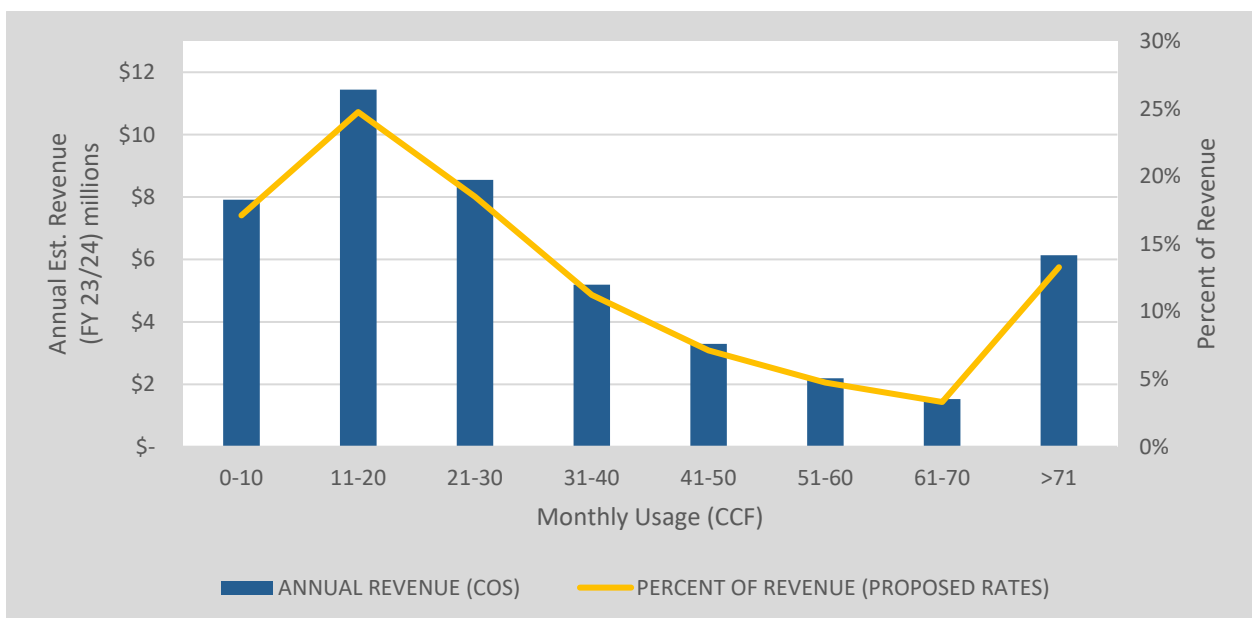


Figure 11 shows the revenue generated by SFR users, in the same 10 CCF blocks, including both fixed and variable revenues for FY 2023/24. The left axis corresponds to the blue bars that show the annual revenue expected from users within each usage group. The right axis corresponds to the orange line that shows the percent of annual revenues from users within each group.

As shown, under the proposed rates customers with monthly use over 70 CCF would pay approximately \$6.1 million in fixed and variable charges, making up approximately 13.3-percent of SFR revenues. This percentage is slightly less than the 13.5-percent of revenues generated by those users under the current rates.

Figure 11 SFR Projected Revenue by Monthly Usage



5.3.4.5 Single Family Bill Impact Analysis

Due to the changes in the rate structure, monthly bill impacts will vary for specific customers based on their level of usage, seasonal peaking, and meter size. The primary rate structure updates, and their impact on customer bills is discussed below. Note that the calculated bills and impacts presented within this report do not include RPU's Water Conservation Surcharge.

An analysis was completed to assess and understand the impact of the rate structure updates across a wide variety of customers with differing usage levels and meter sizes.

Factors influencing SFR bill impacts:

Decreased Tier 1 Allotment: The decrease of the Tier 1 breakpoint from 9 CCF to 8 CCF will impact customers whose usage typically falls above 8 CCF per month. Due to the lowered breakpoint, more of their usage will be charged at the higher Tier 2 rate rather than the Tier 1 rate. A portion of this increase will be offset by the change in the Tier 1 rate, which will drop to \$1.26 in FY 2023/24 from the current rate of \$1.30.

Tier 2 and 3 Pricing: Unit costs for each supply source have come together since the previous study leading to less incremental increase from Tier 2 to Tier 3. Less overall costs allocated to supply resiliency capital, O&M, and debt service as compared to the previous COSA. These changes result in a larger increase to the Tier 2 rate and a relatively smaller increase in the Tier 3 Summer rate and a small reduction in the Tier 3 Winter Rate. These changes result in year 1 bill impacts slightly higher than the systemwide increases for bills with demands between approximately 20 and 60 CCF.

Along with an analysis of bills at all monthly consumption levels between 0 CCF and 500 CCF, bill impacts were calculated for various winter and summer percentiles, defined as the levels of consumption at which a given percentage of customers fall at or below. For example, the 10th percentile corresponds to monthly usage of 5 CCF or below in the winter and 6 CCF or below in the summer. The customer attributes for each percentile are shown below in Table 41.

Table 41 Single Family Test Customers

Percentile	Assumed Meter Size	Winter CCF	Summer CCF	Average Annual Use
10th	3/4" & 5/8"	5	6	6
20th	3/4" & 5/8"	8	12	10
50th (Median)	3/4" & 5/8"	13	20	17
75th	1"	22	32	27
90th	1"	34	49	42

Figure 12 demonstrates seasonal consumption by number of accounts (left axis) and the cumulative percent of accounts (right axis). As shown, the usage distribution varies based on the season with more accounts at higher levels of monthly consumption in the summer, and more accounts at lower levels of consumption in the winter.

Figure 12 SFR Monthly Usage Distribution

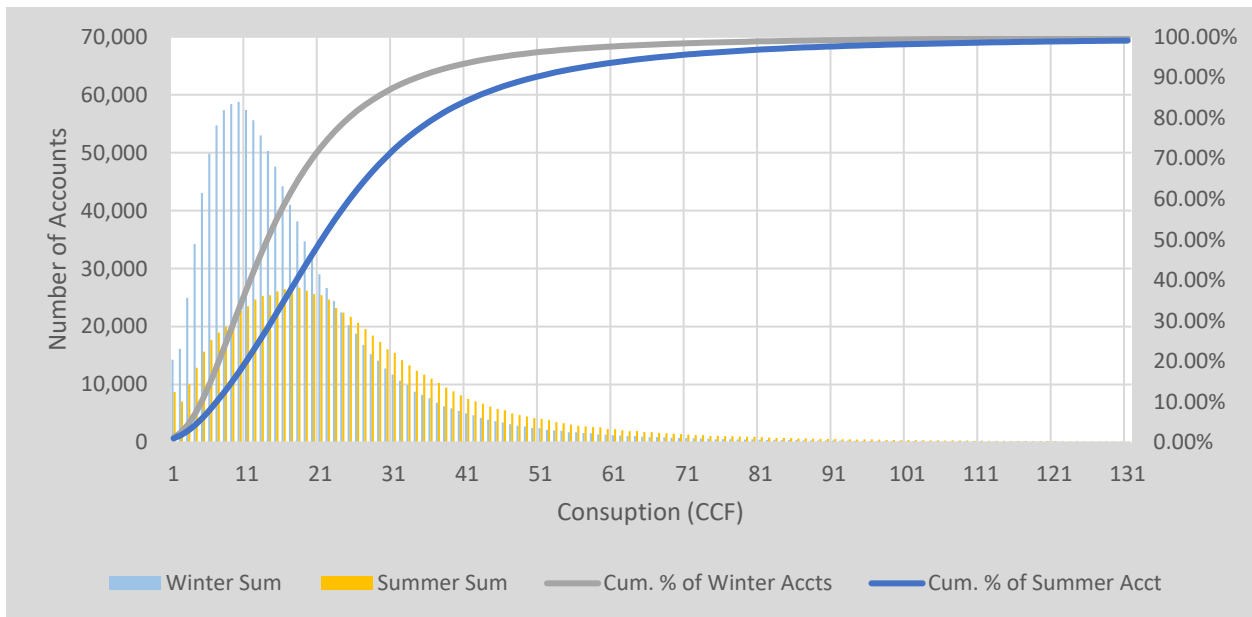


Figure 13 below shows the average demands of customer accounts at each usage level with their corresponding average monthly bill currently and forecasted for beginning and end of this rate-setting period. On an annual average basis, the majority of customers, about 90 percent, use less than 34 CCF per month in the winter and 49 CCF per month in the summer.

Figure 13 SFR Average Monthly Bill by Usage Percentile

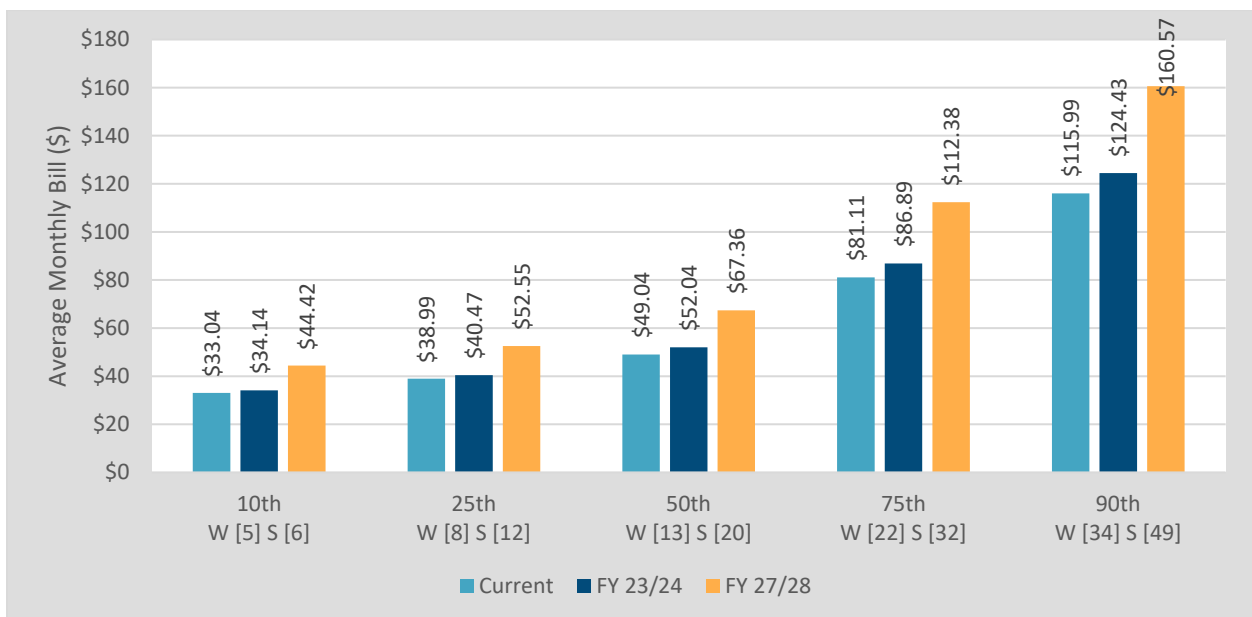


Figure 14 and Figure 15 present this bill impact as a dollars-per-month forecasted change and annual bill percentage change, respectively. In FY 2023/24 (Year 1), the average monthly bill for a 50th percentile (median) customer will increase by \$3.00 per month in FY 2023/24 (Year 1) and an average of \$3.83 per month in FY 2024/25 to FY 2027/28 (Years 2 to 5).

The annual bill change for FY 2023/24 (Year 1) is highest for customers using above the 50th percentile due to the Tier 2 and Tier 3 rate increases. However, the annual bill change for FY 2024/25 to FY 2027/28 (Years 2 to 5) remains nearly constant.

Figure 14 SFR Increase in Average Monthly Bill

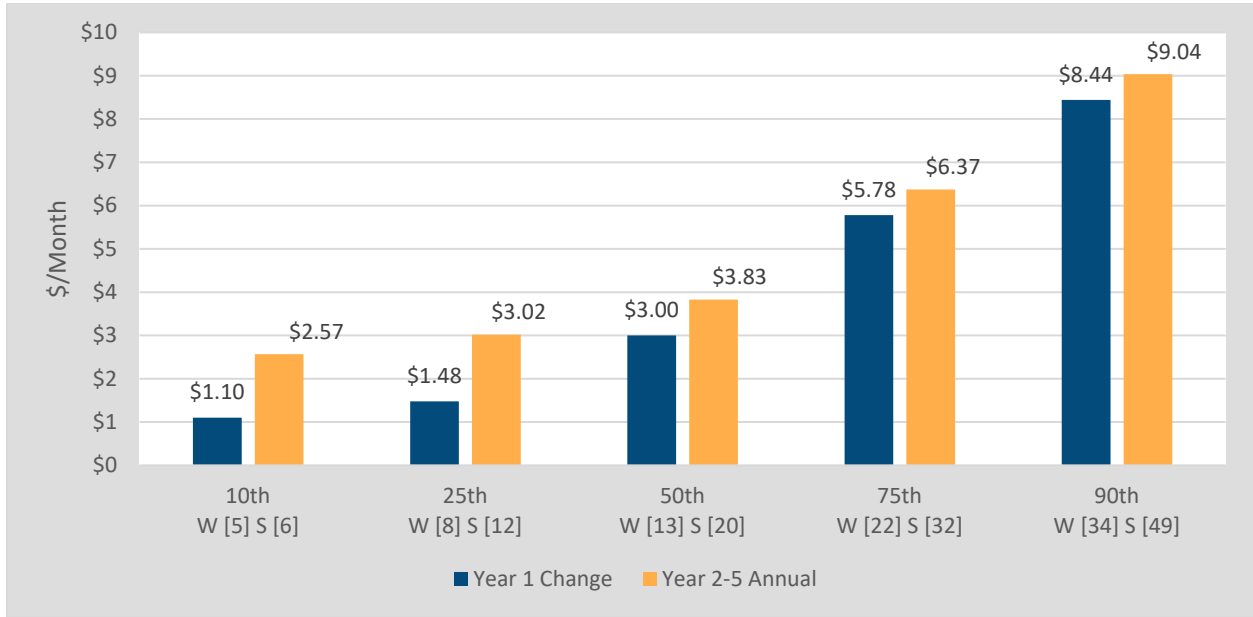


Figure 15 SFR Annual Bill Increase

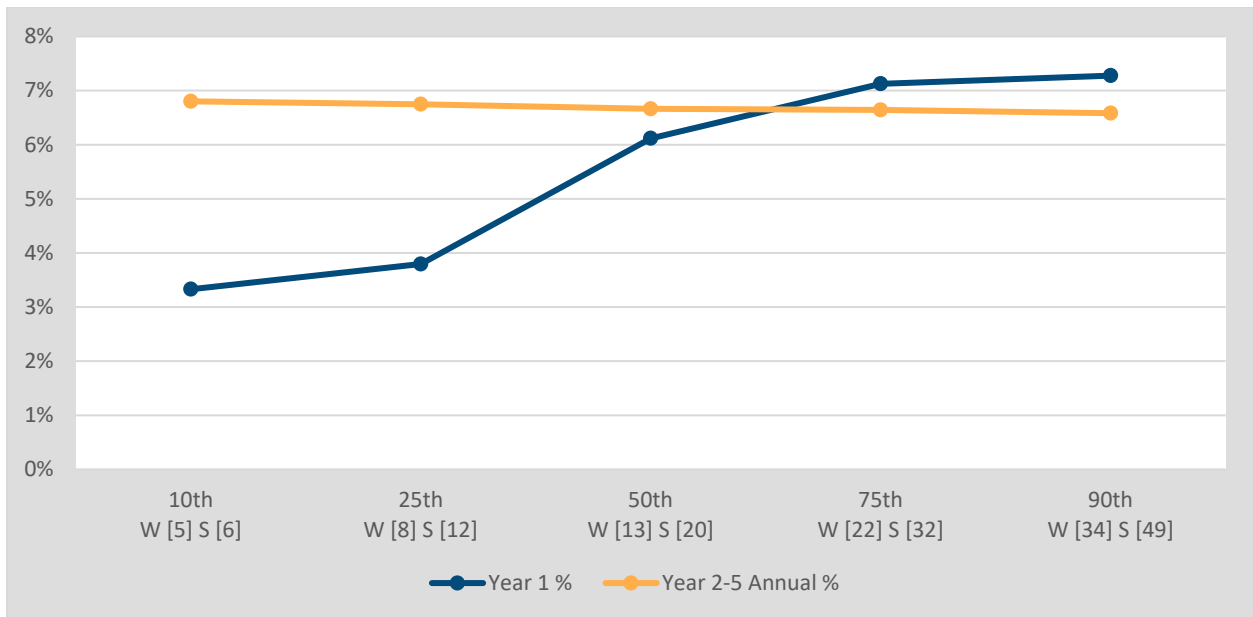


Table 42 presents the average monthly bills for each user under the current rates and under the proposed rates in FY 2023/24 (Year 1) and in FY 2027/28 (Year 5). Also shown are the percentage increases in Year 1 and the average percentage increases for Years 2 through 5.

Table 42 Single Family Monthly Bill Impacts

Customer Size	CCF Usage Win Sum	Avg Monthly (Current)	Avg Monthly (Year 1)	Annual Avg % (Year 1)	Avg Monthly (Year 5)	Annual Avg % (Year 2-5)	5-Year Annualized Increase
10th	5 6	\$33.04	\$34.14	↑3.3%	\$44.42	↑6.8%	\$2.28
25th	8 12	38.99	40.47	↑3.8%	52.55	↑6.7%	\$2.71
50th (Median)	13 20	49.04	52.04	↑6.1%	67.36	↑6.7%	\$3.66
75th	22 32	81.11	86.89	↑7.1%	112.38	↑6.6%	\$6.25
90th	34 49	115.99	124.43	↑7.3%	160.57	↑6.6%	\$8.92

5.3.5 Multi-Family Residential Rates

Due to the high variance in account characteristics among individual customers, traditional tiered rate structures are often not a good fit for multi-family accounts. While multi-family usage is relatively homogeneous per dwelling unit, the number of units per complex varies widely. Relying only on account total information to develop and impose rates would penalize large complexes rather than excessive use or peaking. Therefore, tiered rate structures for multi-family accounts are typically developed based on allotments per dwelling unit rather than allotments per account.

RPU’s multi-family rates are applied to residential users with two, three, or four dwelling units served by a common meter. Multi-family connections with more than four dwelling units are grouped into the WA-6 Commercial rate code and charged based on those rates.

5.3.5.1 Proposed Multi-Family Rates

The proposed rates have been developed within the existing two-tiered inclining block structure, with rates that vary seasonally. The per dwelling unit CCF allotments will remain constant throughout the year. The proposed tier allotments have been set based on water needs for each customer and on the actual usage patterns observed in the customer billing data. Setting tier allotments on a per dwelling unit basis helps to place all accounts on an even playing field and enables tiered rates to appropriately standardize multi-family accounts to target efficiency and peaking, rather than demand alone.

- Tier 1 Allotment – Indoor Usage: The proposed tier one allotment is 6 CCF per account per month. This allotment was calculated based on an assumed 3 persons per household and 47 gallons per capita per day.
- Tier 2: Any usage above 6 CCF per dwelling unit will be charged the tier two rate.

Similar to SFR rates, seasonal adjustment of the tier two rates helps to promote year-round efficient water usage. The seasonal adjustment to the rates was made by allocating a greater share of costs to the tier three summer rate based on the annualized summer to annual average usage peak factor.

The rate calculation for the multi-family rates follows a process nearly identical to that outlined for the SFR rates above, but with only two tiers rather than three. Detailed calculations for the multi-family rates are included for reference in the Appendix. Table 43 below shows the proposed multi-family rates.

Table 43 Proposed Multi-Family Rates

Tier	Existing	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28
Winter Rates						
Tier 1	\$1.30	\$1.26	\$1.34	\$1.43	\$1.52	\$1.62
Tier 2	1.87	1.94	2.07	2.20	2.34	2.49
Summer Rates						
Tier 1	\$1.30	\$1.26	\$1.34	\$1.43	\$1.52	\$1.62
Tier 2	2.12	2.23	2.37	2.52	2.69	2.86

5.3.5.2 Multi-Family Bill Impact Analysis

Monthly bill impacts will vary for specific customers based on their level of usage, seasonal peaking, and meter size. An analysis was completed in order to assess and understand the impact of the rate structure updates across a wide variety of customers with differing usage levels and meter sizes. Bill impacts were calculated for various winter and summer percentiles, defined as the levels of consumption at which a given percentage of customers fall at or below. For example, the 10th percentile corresponds to monthly usage of 9 CCF or below in the winter and 12 CCF or below in the summer. The customer attributes for each percentile are shown below in Table 44.

Table 44 Multi-Family Test Customers

Percentile	Assumed Meter Size	Assumed Dwelling Units	Winter CCF	Summer CCF	Average Annual Use
10th	3/4" & 5/8"	2	9	12	11
20th	3/4" & 5/8"	2	14	18	16
50th (Median)	3/4" & 5/8"	3	22	28	25
75th	1"	3	34	42	38
90th	1"	4	48	61	55

Figure 16 below shows the average demands of customer accounts at each usage level with their corresponding average monthly bill currently and forecasted for beginning and end of this rate-setting period. On an annual average basis, the majority of customers, about 90 percent, use less than 48 CCF per month in the winter and 61 CCF per month in the summer.

Figure 16 MFR Average Monthly Bill by Usage Percentile

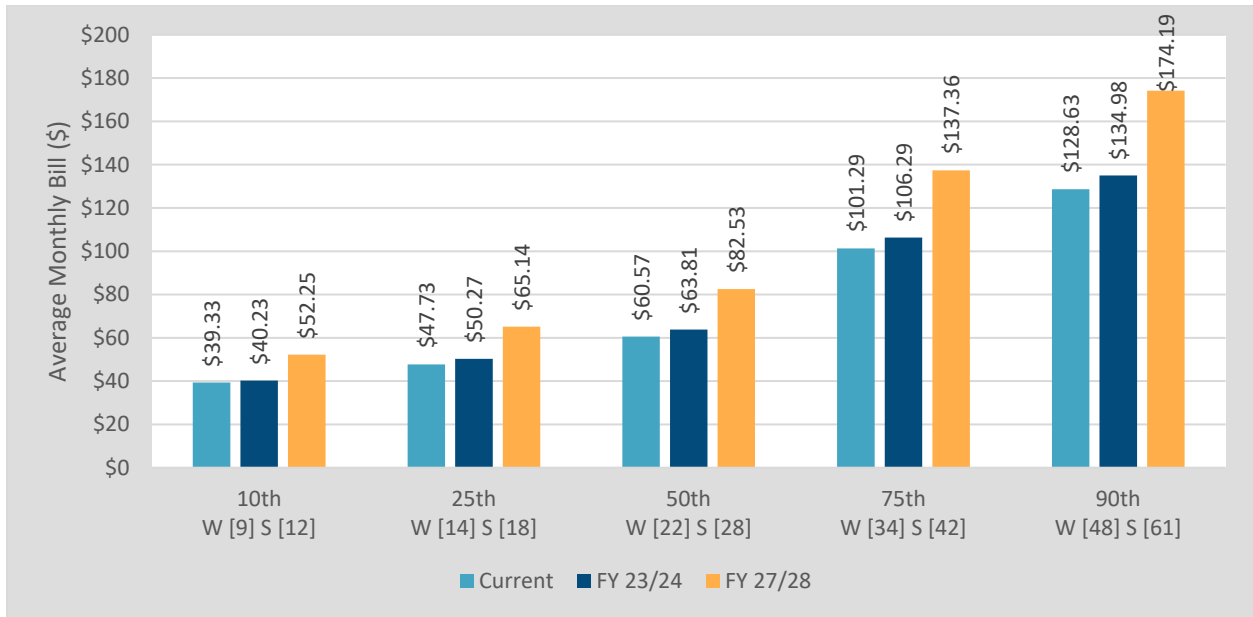


Figure 17 and Figure 18 present this bill impact as a dollars-per-month forecasted change and annual bill percentage change, respectively. In FY 2023/24 (Year 1), the average monthly bill for a 50th percentile (median) customer will increase by \$3.24 per month in FY 2023/24 (Year 1) and an average of \$4.68 per month in FY 2024/25 to FY 2027/28 (Years 2 to 5).

Figure 17 MFR Increase in Average Monthly Bill

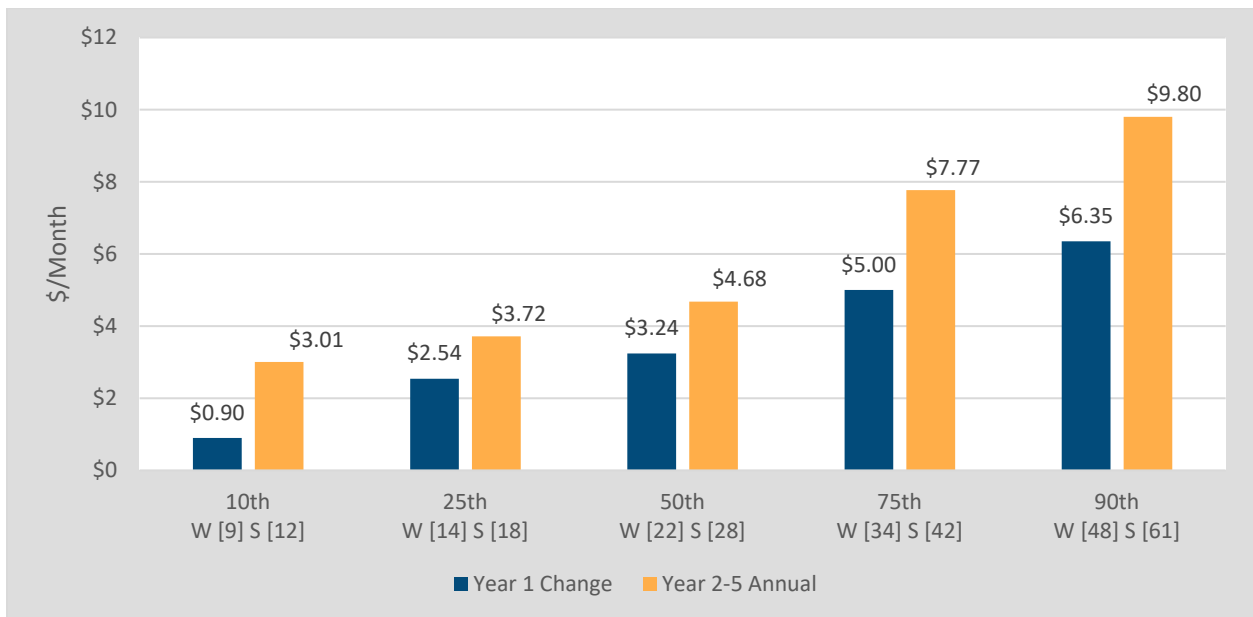


Figure 18 MFR Annual Bill Increase

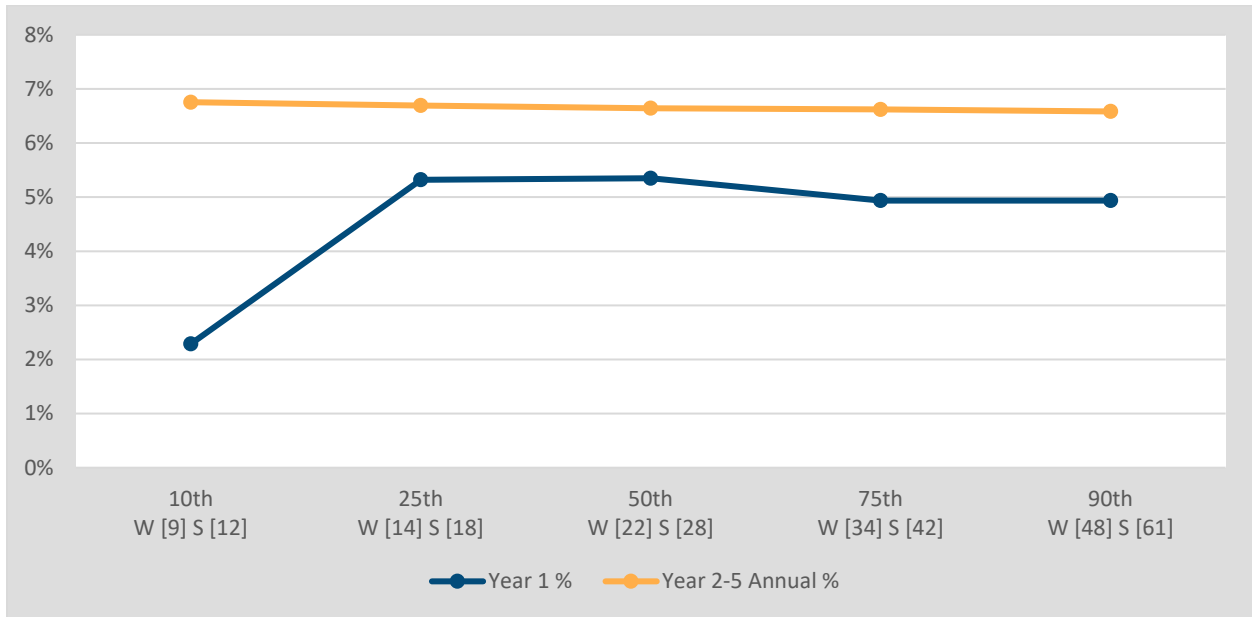


Table 45 below presents the average monthly bills for each user under the current rates and under the proposed rates in FY 2023/24 (Year 1) and in FY 2027/28 (Year 5). Also shown are the percentage increases in Year 1 and the average percentage increases for Years 2 through 5.

Table 45 Multi-Family Monthly Bill Impacts

Customer Size	CCF Usage Win Sum	Dwelling Units	Avg Monthly (Current)	Avg Monthly (Year 1)	Annual Avg % (Year 1)	Avg Monthly (Year 5)	Annual Avg % (Year 2-5)	5-Year Annualized Increase
10th	9 12	2	\$39.33	\$40.23	↑2.3%	\$52.25	↑6.8%	\$2.58
25th	14 18	2	47.73	50.27	↑5.3%	65.14	↑6.7%	\$3.48
50th (Median)	22 28	3	60.57	63.81	↑5.3%	82.53	↑6.6%	\$4.39
75th	34 42	3	101.29	106.29	↑4.9%	137.36	↑6.6%	\$7.21
90th	48 61	4	128.63	134.98	↑4.9%	174.19	↑6.6%	\$9.11

5.3.6 Commercial and Industrial Rates

Commercial and industrial users are charges using a seasonally adjusted uniform rate. Due to the large degree of demand variability between non-residential users, tiered rate structures are typically not applicable to commercial and industrial rate codes. The proposed rates maintain the current structure with a seasonally adjusted uniform rate with an adjustment to the calculation determining the seasonal adjustment consistent with the calculation for SFR and MFR.

5.3.6.1 Proposed Commercial and Industrial Rates

The proposed Commercial and Industrial rates are calculated in a manner similar to the SFR rates shown above, however the calculation can be simplified because the proposed rates are uniform rather than tiered. As an example, Table 46 below shows the calculation of the Commercial and Industrial rates for FY 2023/24. Detailed calculations of the Commercial and Industrial rates are provided for reference in the Appendix.

Table 46 Commercial and Industrial Rate Calculation (FY 2023/24)

	Total	Winter	Summer
Seasonal Factor (For Max Day and Max Hour)		1.00	1.30
Allocated Rev. Req. (\$ thousands)			
Base	\$3,344	\$1,733	\$1,610
Max Day	3,268	1,480	1,788
Max Hour	936	424	512
Supply 1	1,072	555	516
Supply 2	1,059	549	510
Supply 3	3,005	1,558	1,447
Supply 4	891	462	429
Supply Sustainability	347	180	167
Total Rev. Req.	\$13,921	\$6,941	\$6,980
Projected Usage (CCF)	7,357,736	3,814,280	3,543,456
Rate		\$1.82	\$1.97

Notes:

(1) Totals may be off due to rounding.

Table 47 below shows the proposed Commercial and Industrial rates for each year of the rate plan. Detailed calculations for other years are included for reference in the Appendix.

Table 47 Proposed Commercial and Industrial Rates

Tier	Existing	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28
Winter Rates						
All Usage	\$1.58	\$1.82	\$1.92	\$2.03	\$2.15	\$2.27
Summer Rates						
All Usage	\$1.84	\$1.97	\$2.08	\$2.20	\$2.33	\$2.46

Notes:

(1) Totals may be off due to rounding.

5.3.6.2 Commercial and Industrial Bill Impact Analysis

An analysis was completed in order to assess and understand the impact of the rate structure updates across a wide variety of customers with differing usage levels and meter sizes. Bill impacts were calculated for various winter and summer percentiles, defined as the levels of consumption at which a given percentage of customers fall at or below. For example, the 10th percentile corresponds to monthly usage of 2 CCF or below in the winter and 3 CCF or below in the summer. The customer attributes for each percentile are shown below in Table 48.

Table 48 Commercial and Industrial Test Customers

Percentile	Assumed Meter Size	Winter CCF	Summer CCF	Average Annual Use
10th	3/4" & 5/8"	2	3	3
20th	3/4" & 5/8"	9	11	10
50th (Median)	1"	33	41	37
75th	2"	102	133	118
90th	3"	285	360	323

Figure 19 below shows the average demands of customer accounts at each usage level with their corresponding average monthly bill currently and forecasted for beginning and end of this rate-setting period. On an annual average basis, the majority of customers, about 90 percent, use less than 285 CCF per month in the winter and 360 CCF per month in the summer.

Figure 19 Commercial/Industrial Average Monthly Bill by Usage Percentile

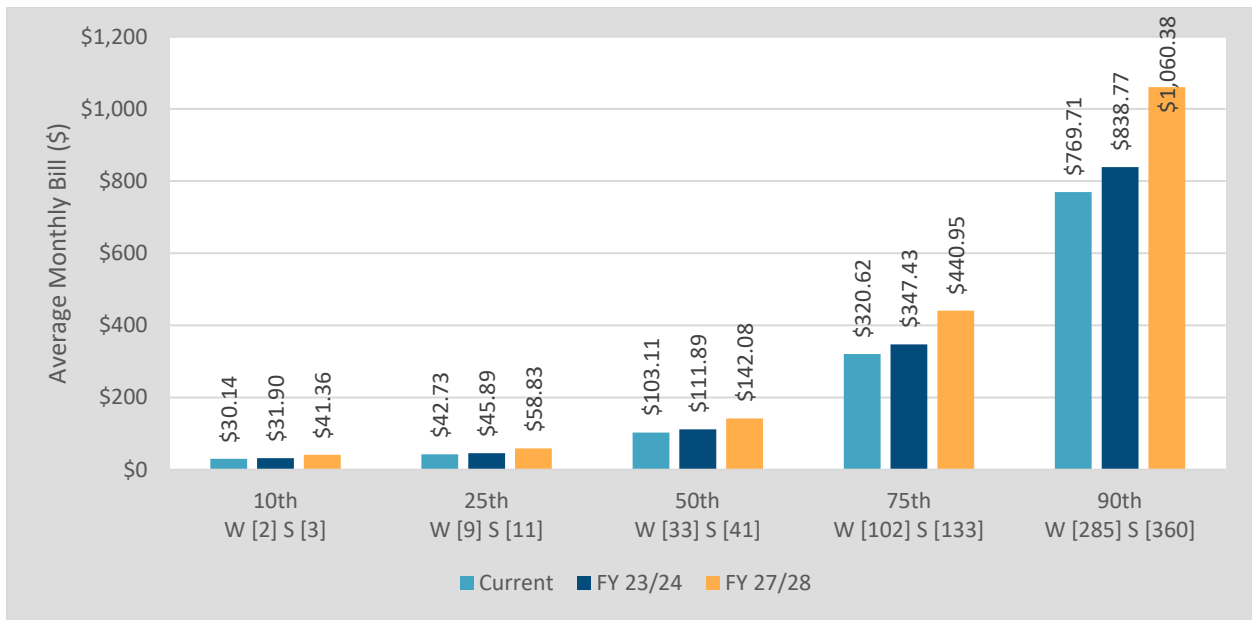


Figure 20 and Figure 21 present this bill impact as a dollars-per-month forecasted change and annual bill percentage change, respectively. In FY 2023/24 (Year 1), the average monthly bill for a 50th percentile (median) customer will increase by \$8.78 per month in FY 2023/24 (Year 1) and an average of \$7.55 per month in FY 2024/25 to FY 2027/28 (Years 2 to 5).

Figure 20 Commercial/Industrial Increase in Average Monthly Bill

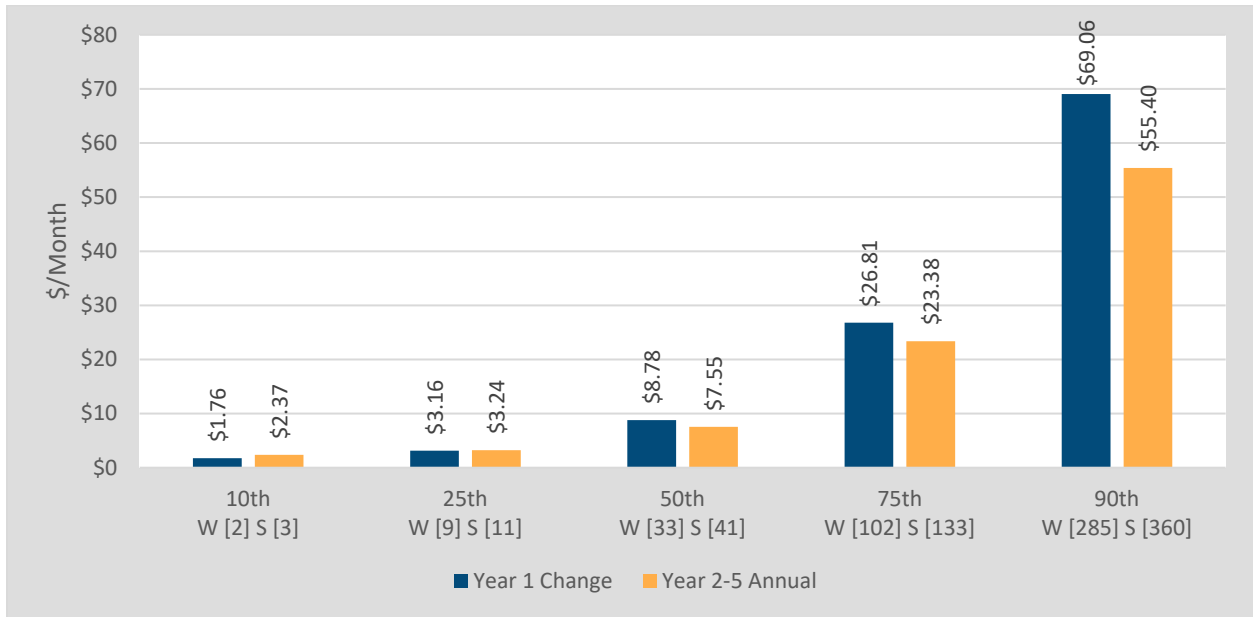


Figure 21 Commercial/Industrial Annual Bill Increase

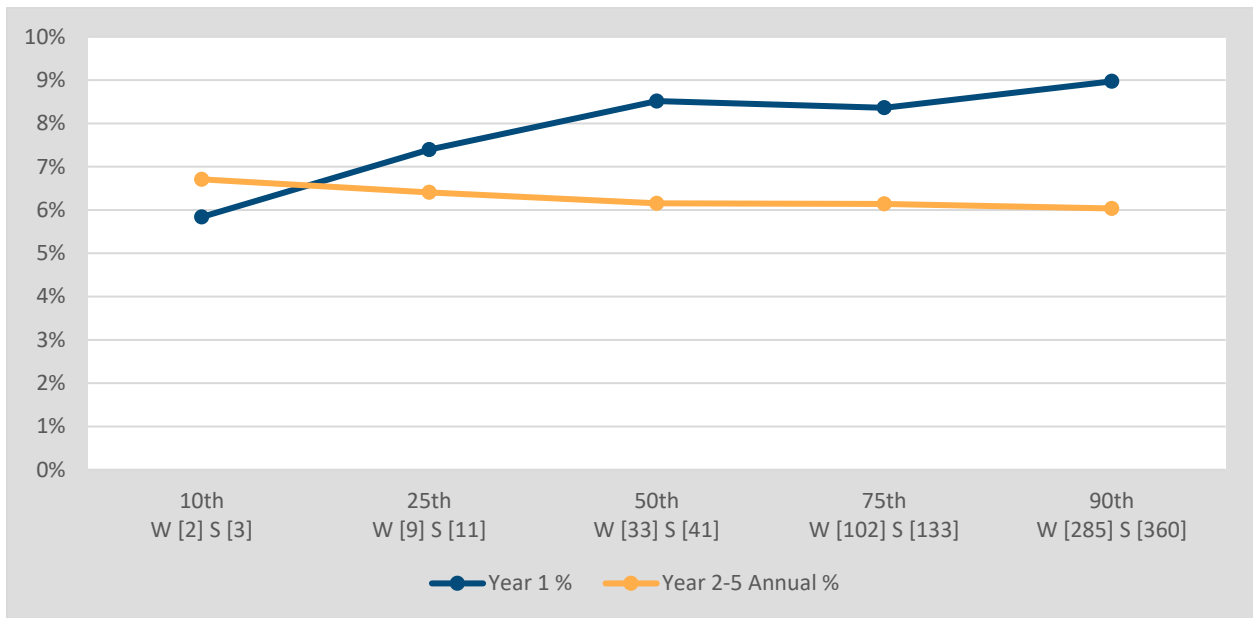


Table 49 below presents the average monthly bills for each user under the current rates and under the proposed rates in FY 2023/24 (Year 1) and in FY 2027/28 (Year 5). Also shown are the percentage increases in Year 1 and the average percentage increases for Years 2 through 5.

Table 49 Commercial/Industrial Monthly Bill Impacts

Customer Size	CCF Usage Win Sum	Avg Monthly (Current)	Avg Monthly (Year 1)	Annual Avg % (Year 1)	Avg Monthly (Year 5)	Annual Avg % (Year 2-5)	5-Year Annualized Increase
10th	2 3	\$30.14	\$31.90	↑5.8%	\$41.36	↑6.7%	\$2.24
25th	9 11	42.73	45.89	↑7.4%	58.83	↑6.4%	\$3.22
50th (Median)	33 41	103.11	111.89	↑8.5%	142.08	↑6.2%	\$7.79
75th	102 133	320.62	347.43	↑8.4%	440.95	↑6.1%	\$24.07
90th	285 360	769.71	838.77	↑9.0%	1,060.38	↑6.0%	\$58.13

5.3.7 Landscape Irrigation Rates

Under the existing rate structure, landscape irrigation users are placed into varying rate classes. Most users fall into the Commercial/Industrial rate class (WA-6) but there are a small number of users flagged as Landscape irrigation accounts previously within the WA-1 (Residential) class. Landscape users typically place a higher peak burden on the water system as they use water heavily in the hottest and driest summer months, with significantly less usage in the winter. Thus, the previous Study appropriately separated Landscape users into a unique rate class that reflects the increased burden that they place on the system.

5.3.7.1 Proposed Landscape Rates

Similar to the seasonal calculation for Commercial/Industrial WA-6, the proposed landscape rates distinguish a winter and summer rate due to their heavy demand during dry months. Table 50 below shows the calculation of the Landscape rates for FY 2023/24. The total volumetric costs allocated to the landscape customers are split between summer and winter based on the annualized summer to annualized winter peak factor. Those seasonal costs are then divided by the projected consumption for each season to calculate the volumetric rates. Detailed calculations of the Landscape rates are provided for reference in the Appendix.

Table 50 Landscape Rate Calculation (FY 2023/24)

	FY 2023/24 Total	Winter	Summer
Seasonal Factor (For Max Day and Max Hour)		1.00	1.75
Allocated Rev. Req. (\$ thousands)			
Base	\$345	\$153	\$192
Max Day	558	175	383
Max Hour	100	31	69
Supply 1	95	42	53
Supply 2	94	42	52
Supply 3	357	159	199
Supply 4	106	47	59
Supply Sustainability	59	26	33
Total Rev. Req.	\$1,714	\$676	\$1,039
Projected Usage (CCF)	759,116	337,300	421,816
Rate		\$2.00	\$2.46

Notes:

(1) Totals may be off due to rounding.

Table 51 below shows the proposed Landscape rates for each year of the rate plan. Existing rates are included for reference in the Appendix.

Table 51 Proposed Landscape Rates

Tier	Existing	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28
Winter Rates						
All Usage	\$1.67	\$2.00	\$2.11	\$2.23	\$2.36	\$2.49
Summer Rates						
All Usage	\$2.14	\$2.46	\$2.60	\$2.74	\$2.90	\$3.06

5.3.7.2 Landscape Irrigation Bill Impact Analysis

Monthly bill impacts will vary for specific customers based on their level of usage, seasonal peaking, and meter size. An analysis was completed in order to assess and understand the impact of the rate structure updates across a wide variety of customers with differing usage levels and meter sizes. Bill impacts were calculated for various winter and summer percentiles, defined as the levels of consumption at which a given percentage of customers fall at or below. For example, the 10th percentile corresponds to monthly usage of 9 CCF or below in the winter and 15 CCF or below in the summer. The customer attributes for each percentile are shown below in Table 52.

Table 52 Landscape Test Customers

Percentile	Assumed Meter Size	Winter CCF	Summer CCF	Average Annual Use
10th	3/4"	9	15	12
20th	3/4"	26	43	35
50th (Median)	1.5"	76	130	103
75th	2"	175	297	236
90th	3"	366	567	466

Figure 22 shows the average demands of customer accounts at each usage level with their corresponding average monthly bill currently and forecasted for beginning and end of this rate-setting period. On an annual average basis, the majority of customers, about 90 percent, use less than 366 CCF per month in the winter and 567 CCF per month in the summer.

Figure 22 Landscape Average Monthly Bill by Usage Percentile

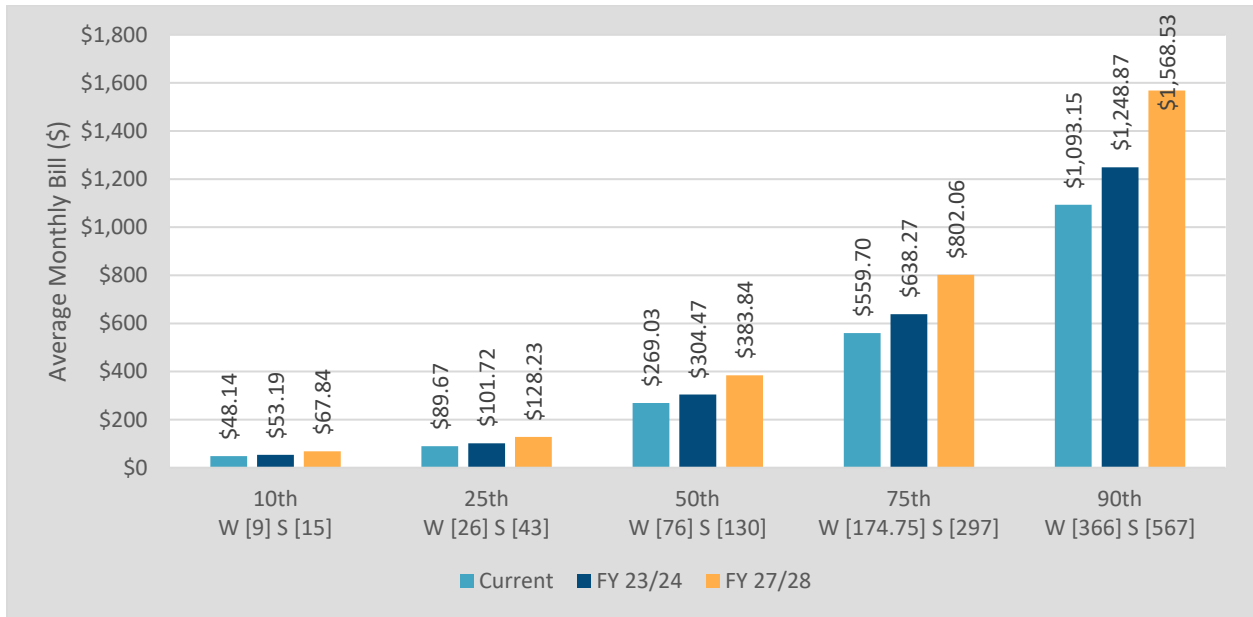


Figure 23 and Figure 24 present this bill impact as a dollars-per-month forecasted change and annual bill percentage change, respectively. In FY 2023/24 (Year 1), the average monthly bill for a 50th percentile (median) customer will increase by \$35.44 per month in FY 2023/24 (Year 1) and an average of \$19.84 per month in FY 2024/25 to FY 2027/28 (Years 2 to 5).

Figure 23 Landscape Increase in Average Monthly Bill

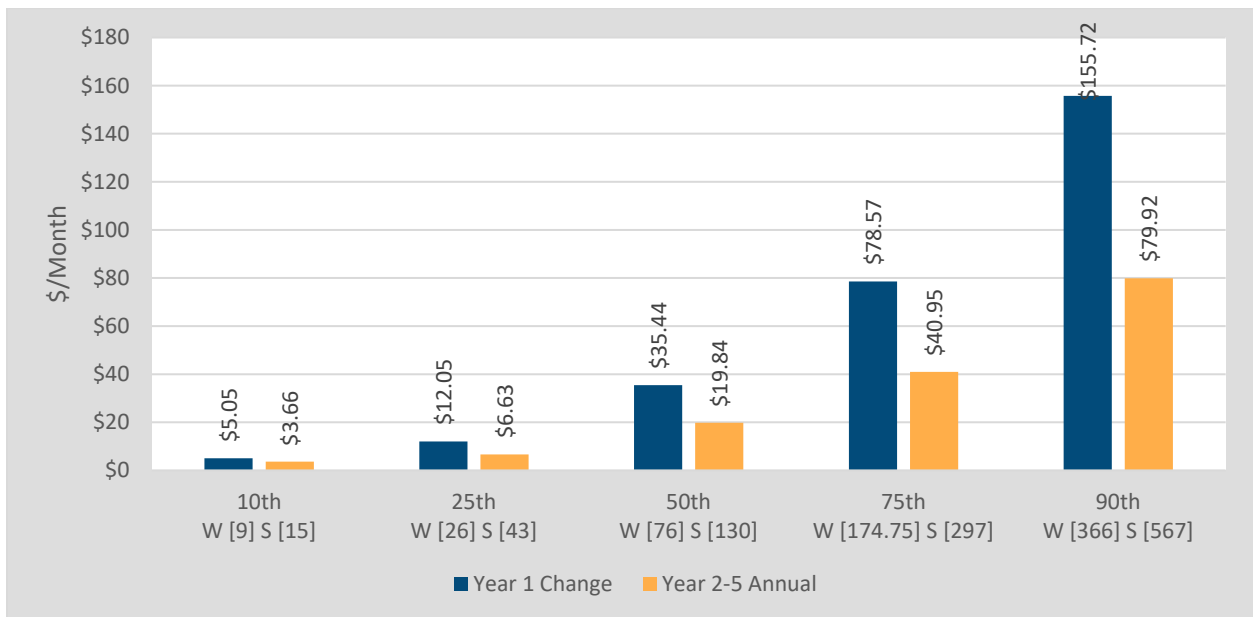


Figure 24 Landscape Annual Bill Increase

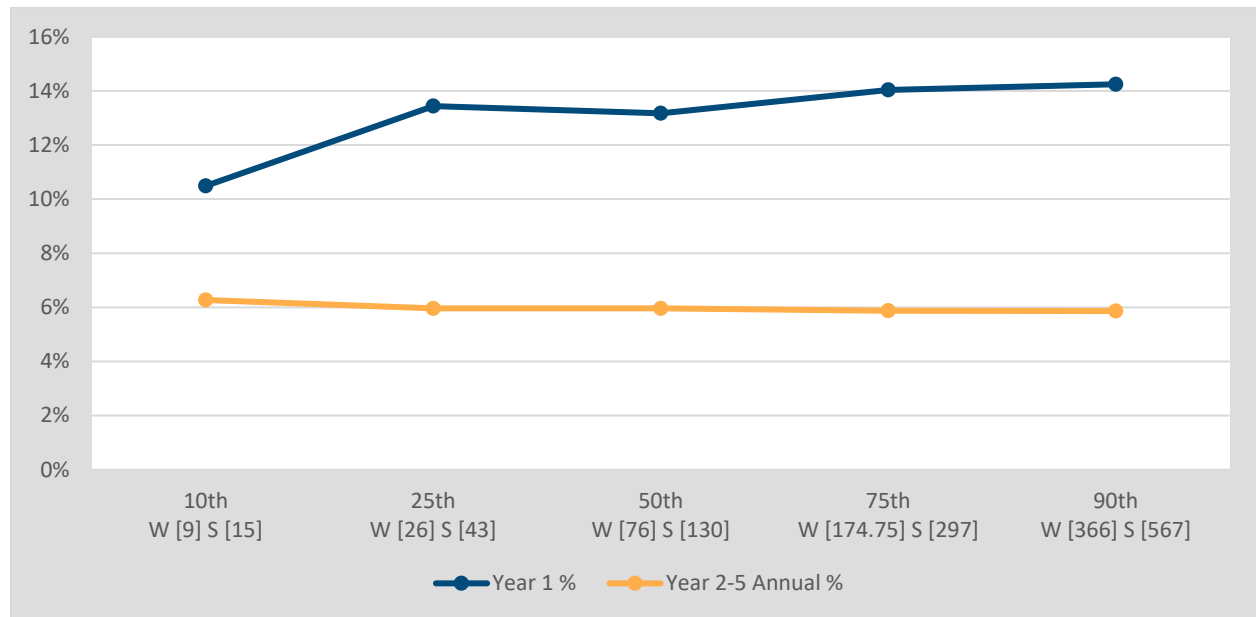


Table 53 below presents the average monthly bills for each user under the current rates and under the proposed rates in FY 2023/24 (Year 1) and in FY 2027/28 (Year 5). Also shown are the percentage increases in Year 1 and the average percentage increases for Years 2 through 5.

Table 53 Landscape Monthly Bill Impacts

Customer Size	CCF Usage Win Sum	Avg Monthly (Current)	Avg Monthly (Year 1)	Annual Avg % (Year 1)	Avg Monthly (Year 5)	Annual Avg % (Year 2-5)	5-Year Annualized Increase
10th	9 15	\$48.14	\$53.19	↑10.5%	\$67.84	↑6.3%	\$3.94
25th	26 43	89.67	101.72	↑13.4%	128.23	↑6.0%	\$7.71
50th (Median)	76 130	269.03	304.47	↑13.2%	383.84	↑6.0%	\$22.96
75th	175 297	559.70	638.27	↑14.0%	802.06	↑5.9%	\$48.47
90th	366 567	1,093.15	1,248.87	↑14.2%	1,568.53	↑5.9%	\$95.08

5.3.8 Temporary Service Rates

The Temporary Service WA-2 rate class is primarily used by developers or contractors to provide water service for construction sites. The current rate structure consists of a daily meter rental fee of \$13.90 per day, with a maximum rental charge of \$416.87 per month. The rate for all usage is \$2.39 per CCF, there is no monthly fixed charge. Under the proposed rate structure, Temporary Service users would continue to pay a meter rental fee and volumetric charge.

5.3.8.1 Fees and Charges for Fire Hydrant Meters

Temporary service customers at construction sites are served via a metered connection to a fire hydrant. The daily rental fee that they pay includes a component to cover the cost of the 3-inch meter and backflow prevention unit that is connected to serve each customer, as well as a daily fixed service charge component based on the proposed fixed service charges.

The meter cost component is calculated by dividing the annualized cost of the meter by the estimated annual days in service, then applying an adjustment to account for the 11.5 percent general fund transfer. The meter cost component is escalated annually based on the capital escalation factor of 2.85 percent per year. The daily fixed service charge component is calculated by multiplying the proposed monthly charge for a 3-inch meter by 12 and dividing by 360.

Table 54 below shows the calculation of the daily rental fee for FY 2023/24. The maximum monthly charge is calculated by adding 30 days of the daily meter cost with the general fund transfer to the proposed monthly fixed service charge for a 3-inch meter.

Table 54 Temporary Service Daily Rental Fee Calculation (FY 2023/24)

Daily Rental Fee	FY 2023/24
Meter Cost	\$2,603
Depreciable Life (Years)	5
Annualized Cost	\$521
Utilization	25%
Annual Days in Service	90
Daily Meter Cost	\$5.78
General Fund Transfer (GFT)	11.50%
Daily Meter Cost with GFT	\$6.45
3" Meter Charge	\$240.69
Daily Fixed Charge	\$8.02
Total Daily Rental Fee (Sum of Daily Meter Cost with GFT and Daily Fixed Charge)	\$14.47
Maximum Monthly Charge	\$434.14

Notes:

(1) Totals may be off due to rounding.

Table 55 below shows the proposed daily rental fees and maximum monthly charges for each year of the rate plan. Detailed calculations of the daily rental fee and maximum monthly charge are included for reference in the Appendix.

Table 55 Proposed Temporary Service Daily Rental Fees and Maximum Monthly Charges

	Existing	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28
Daily Rental Fee	\$13.90	\$14.47	\$15.21	\$15.99	\$16.81	\$17.68
Maximum Monthly Charge	416.87	434.14	456.19	479.55	504.39	530.47

5.3.8.2 Proposed Temporary Service Rates

The proposed Temporary Service rates are calculated using a simplified methodology of the Commercial and Industrial rates above, which is modified because the rates are not seasonally adjusted. As an example, Table 56 below shows the calculation of the Temporary Service rates for FY 2023/24. Detailed calculations of the Temporary Service rates are provided for reference in the Appendix.

Table 56 Temporary Service Rate Calculation (FY 2023/24)

	FY 2023/24
Allocated Rev. Req. (\$ thousands)	
Base	\$20
Max Day	61
Max Hour	6
Supply 1	4
Supply 2	4
Supply 3	26
Supply 4	8
Supply Sustainability	7
Total Rev. Req.	\$135
Projected Usage (CCF)	44,394
Rate	\$3.05

Notes:

(1) Totals may be off due to rounding.

Table 57 below shows the proposed Temporary Service rates for each year of the rate plan. Though the volumetric charge represents a decrease as compared to the existing rates, imposition of a prorated daily fixed charge will result in an increase overall for most Temporary Service Users.

Table 57 Proposed Temporary Service Rates

Tier	Existing	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28
All Usage	\$2.39	\$3.05	\$3.27	\$3.50	\$3.76	\$4.03

5.3.9 Riverside Water Company Irrigators Rates

The Irrigation metered service WA-4 rates provide service to primarily residential customers located in a specific region of RPU's service area who were shareholders in the Riverside Water Company. When RPU acquired Riverside Water Company and as a condition of acquisition, these customers transferred water rights from the Riverside Water Company to RPU. This rate class is closed to new users and RPU intends to phase it out in accord with the acquisition agreement. The current rate structure is a three-tiered volumetric rate with a tier one allotment of 15 CCF per month, and a tier two allotment of 70 CCF per month. All usage over 70 CCF per month is charged at the tier three rate. The rates are seasonally adjusted.

5.3.9.1 Proposed Riverside Water Company Irrigators Rates

The proposed rates maintain the current structure and update the volumetric rates based on the cost of service analysis. Volumetric rates for each tier are calculated using the same methodology as that used to calculate the SFR rates described previously. Detailed calculations for the rates are included for reference in the Appendix. Table 58 below shows the proposed Riverside Water Company Irrigators rates.

Table 58 Proposed Riverside Water Company Irrigators Rates

Tier	Existing	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28
Winter Rates						
Tier 1	\$1.32	\$1.40	\$1.50	\$1.60	\$1.72	\$1.84
Tier 2	1.54	2.14	2.30	2.47	2.65	2.83
Tier 3	2.46	4.13	4.43	4.75	5.10	5.46
Summer Rates						
Tier 1	\$1.32	\$1.40	\$1.50	\$1.60	\$1.72	\$1.84
Tier 2	1.58	2.14	2.30	2.47	2.65	2.83
Tier 3	3.17	5.30	5.69	6.10	6.54	7.01

5.3.10 Interruptible City Irrigation and Recycled Water Rates

In general, interruptible service and rates are most appropriate for customers whose service can be reliably curtailed or service can be shut off without implication for public health and safety. For RPU the accounts that fall into that category are the City irrigation accounts, primarily those for parks and medians irrigation, and recycled water accounts, because the water consumed is used exclusively for irrigation. Equally as important, because the City is the customer, RPU has certainty that service can be shut off on demand for extended periods of time without breaching service requirements or agreements.

After the previous Study, Recycled water users WA-10 combined with Interruptible WA-7 users because of their similarities in usage patterns, customer characteristics, and the level of service provided.

The rates for WA-7 and WA-10 users are developed to reflect the interruptible nature of the service, and therefore do not include costs associated with supply resiliency. In the event that system wide usage must be curtailed, or if a system failure or other event leads to a decrease in available supplies, the interruptible accounts can be shut off, leaving their share of supply available to serve other users.

5.3.10.1 Proposed Interruptible City Irrigation and Recycled Water Rates

The proposed Interruptible WA-7 and WA-10 rates are calculated using the same methodology as that discussed above for Temporary Service WA-2. As an example, Table 59 below shows the calculation of the Interruptible WA-7 rates for FY 2023/24.

Table 59 Interruptible City Irrigation and Recycled Water Rate Calculation (FY 2023/24)

	FY 23/24
Allocated Rev. Req. (\$ thousands)	
Base	\$367
Max Day	335
Max Hour	109
Supply 1	93
Supply 2	92
Supply 3	353
Supply 4	-
Supply Sustainability	-
Total Rev. Req.	\$1,348
Projected Usage (CCF)	807,384
Rate	\$1.67

Notes:

(1) Totals may be off due to rounding.

Table 60 presents the rates for each year of the rate plan. Detailed calculations of the Interruptible and Recycled WA-7/WA-10 rates are provided for reference in the Appendix.

Table 60 Proposed Interruptible City Irrigation and Recycled Water Rates

Tier	Existing	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28
All Usage	\$1.57	\$1.67	\$1.77	\$1.87	\$1.97	\$2.09

5.3.10.2 Interruptible City Irrigation and Recycled Water Bill Impact Analysis

Monthly bill impacts will vary for specific customers based on their level of usage, seasonal peaking, and meter size. An analysis was completed in order to assess and understand the impact of the rate structure updates across a wide variety of customers with differing usage levels and meter sizes. Bill impacts were calculated for various winter and summer percentiles, defined as the levels of consumption at which a given percentage of customers fall at or below. For example, the 10th percentile corresponds to monthly usage of 5 CCF or below in the winter and 8 CCF or below in the summer. The customer attributes for each percentile are shown in Table 61.

Table 61 Interruptible Irrigation and Recycled Water Test Customers

Percentile	Assumed Meter Size	Winter CCF	Summer CCF	Average Annual Use
10th	3/4"	5	8	7
20th	3/4"	15	21	18
50th (Median)	1"	45	66	55
75th	2"	134	231	183
90th	3"	398	762	580

Figure 25 below shows the average demands of customer accounts at each usage level with their corresponding average monthly bill currently and forecasted for beginning and end of this rate-setting period. On an annual average basis, the majority of customers, about 90 percent, use less than 398 CCF per month in the winter and 762 CCF per month in the summer.

Figure 25 Interruptible Irrigation and Recycled Water Average Monthly Bill by Usage Percentile

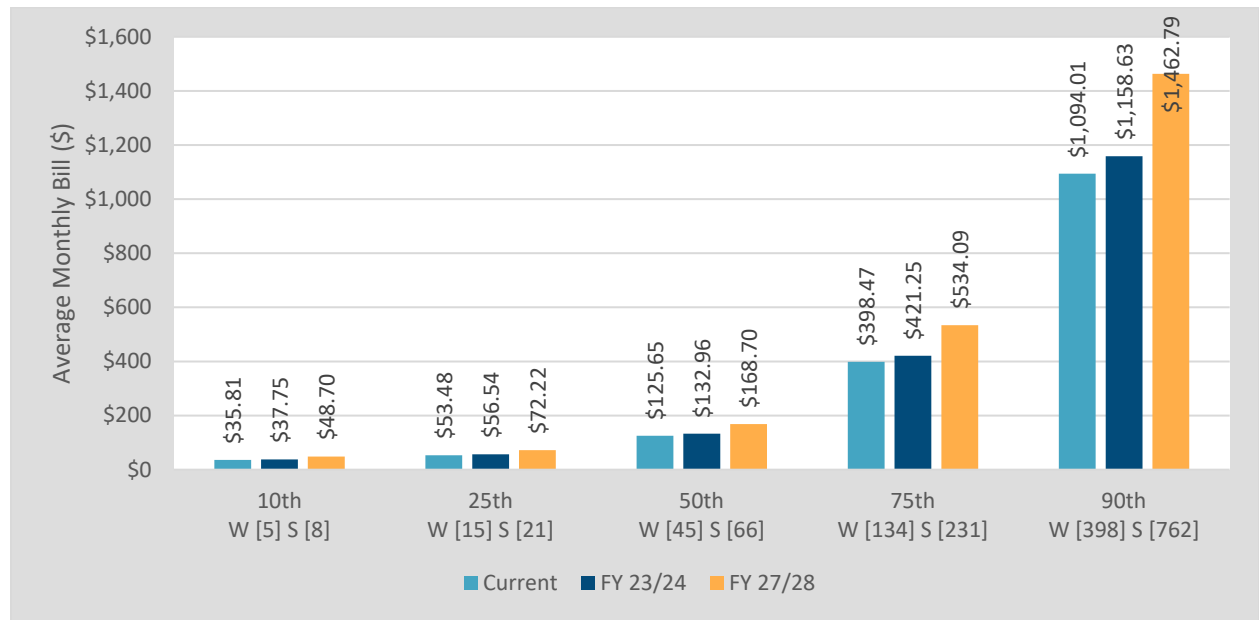


Figure 26 and Figure 27 present this bill impact as a dollars-per-month forecasted change and annual bill percentage change, respectively. In FY 2023/24 (Year 1), the average monthly bill for a 50th percentile (median) customer will increase by \$7.31 per month in FY 2023/24 (Year 1) and an average of \$8.94 per month in FY 2024/25 to FY 2027/28 (Years 2 to 5).

Figure 26 Interruptible Irrigation and Recycled Water Increase in Average Monthly Bill

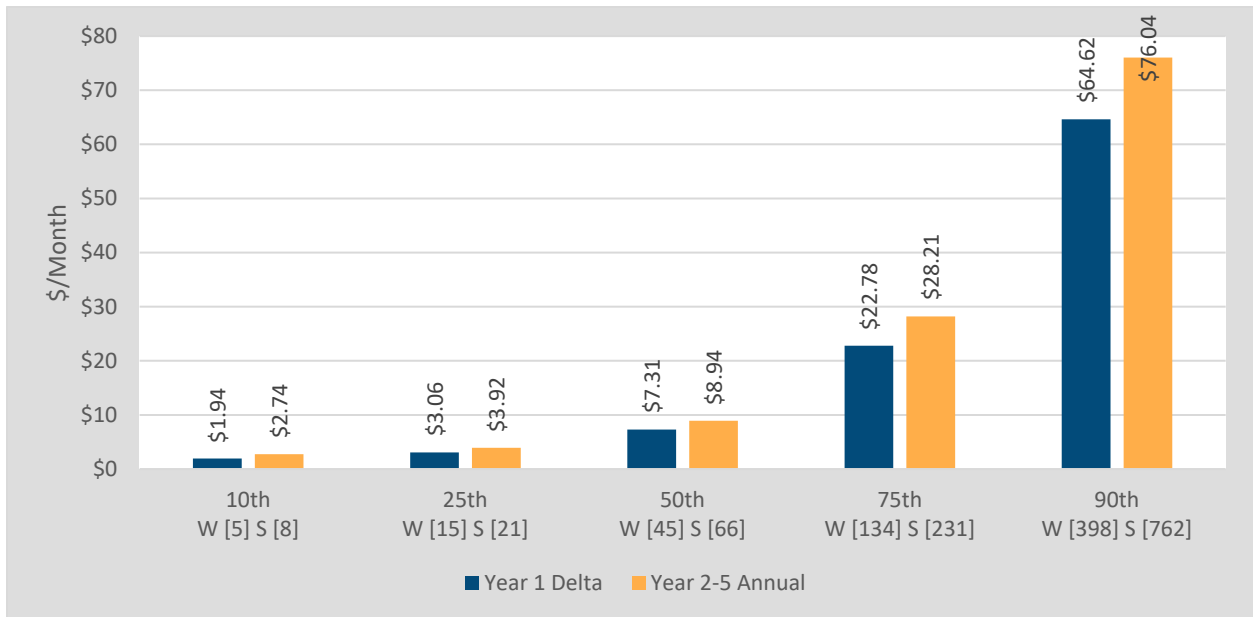


Figure 27 Interruptible Irrigation and Recycled Water Annual Bill Increase

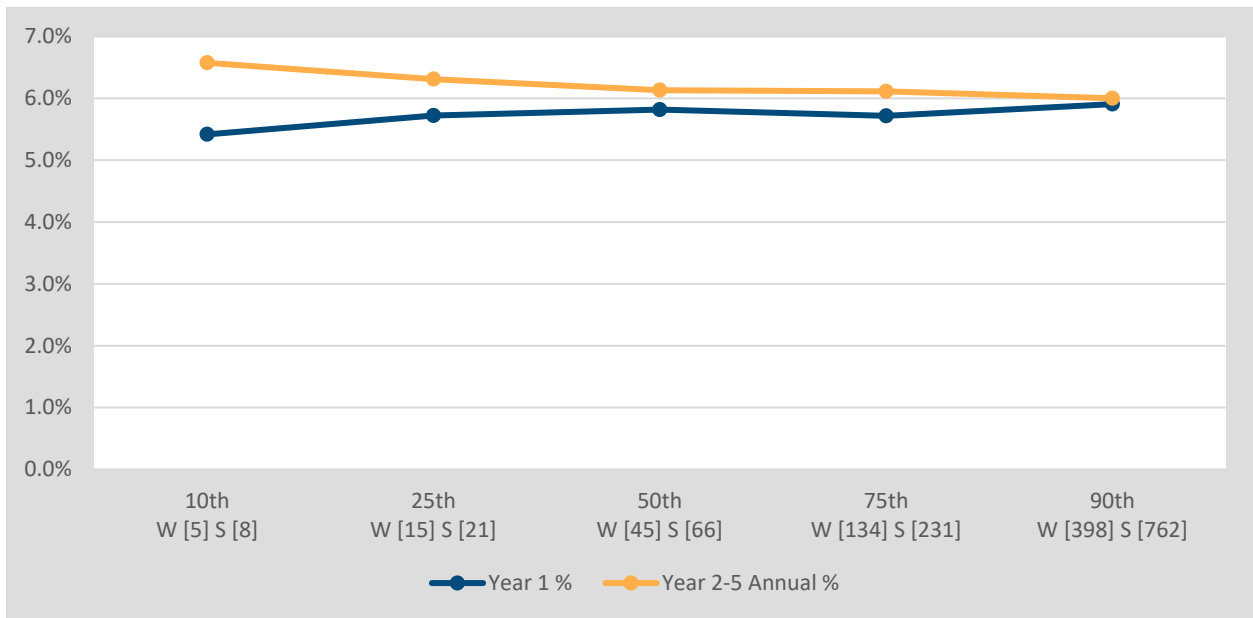


Table 62 presents the average monthly bills for each user under the current rates and under the proposed rates in FY 2023/24 (Year 1) and in FY 2027/28 (Year 5). Also shown are the percentage increases in Year 1 and the average percentage increases for Years 2 through 5.

Table 62 Interruptible Irrigation and Recycled Water Monthly Bill Impacts

Customer Size	CCF Usage Win Sum	Avg Monthly (Current)	Avg Monthly (Year 1)	Annual Avg % (Year 1)	Avg Monthly (Year 5)	Annual Avg % (Year 2-5)	5-Year Annualized Increase
10th	5 8	\$35.81	\$37.75	↑5.4%	\$48.70	↑6.6%	\$2.58
25th	15 21	53.48	56.54	↑5.7%	72.22	↑6.3%	3.75
50th (Median)	45 66	125.65	132.96	↑5.8%	168.70	↑6.1%	8.61
75th	134 231	398.47	421.25	↑5.7%	534.09	↑6.1%	27.12
90th	398 762	1,094.01	1,158.63	↑5.9%	1,462.79	↑6.0%	73.76

5.4 Outside City Surcharge

Along with customers within the City of Riverside, RPU provides water service to about 4,000 residential, commercial, industrial, and landscape accounts that are located outside of City limits. Because these customers are located outside City limits, RPU incurs additional capital and operating costs to provide them with water service. To recover those costs, the rates charged to outside City users include a percentage surcharge based on the incremental capital and operational costs that they require. The current Outside City Surcharge is 47 percent, thus users pay 1.47 times the In-City rate for comparable service.

5.4.1.1 Proposed Outside City Surcharge

The Outside City Surcharge was updated as a component of the cost of service analysis. The calculation of the updated surcharge includes three main steps: (1) determine the incremental costs associated with providing service to outside City users, (2) determine the amount of revenue generated by outside City users without applying the surcharge, and (3) divide the incremental costs (step 1) by the revenue without the surcharge (step 2) to determine the required Outside City Surcharge. The calculations are completed using the five-year total incremental costs and revenues to provide rate stability.

5.4.1.2 Incremental Costs

The incremental capital and O&M costs were determined based on information provided by RPU’s engineering and operations departments. The Outside City user’s share of capital assets (facilities and pipelines), energy needs, and flow was evaluated based on RPU’s hydraulic model and system schematic. Capital costs are annualized based on accounting depreciation assuming a 50 year life for pipelines and a 30 year life for facilities. The annual cost was then escalated at 2.85 percent per year, consistent with the capital escalation factor used throughout the pro forma and cost of service analysis.

Energy costs are estimated based on the amount of energy required to serve outside City users annually (kWh) and an assumed energy cost. Energy costs are escalated at 2.8 percent per year consistent with the escalation factors in the pro forma. Table 63 summarizes the costs associated with serving outside City users. Detailed calculations of the capital and energy costs are included for reference in the Appendix.

Table 63 Projected Outside City Costs (\$ thousands)

Outside City Costs	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	Five-Year Total
Capital Costs	\$2,002	\$2,059	\$2,118	\$2,178	\$2,240	\$10,598
Energy Costs	70	72	75	78	81	375
Total Outside City Costs	\$2,072	\$2,131	\$2,193	\$2,256	\$2,321	\$10,973

Notes:

(1) Totals may be off due to rounding.

5.4.1.3 Revenues without Surcharge

The estimated revenues from outside City users without the surcharge were calculated by applying the proposed inside City volumetric rates presented within this report to the projected outside City usage, and adding the expected fixed revenues based on the number of accounts by meter size. Table 64 below summarizes the projected revenues, detailed calculations are included for reference in the Appendix.

5.4.1.4 Surcharge Calculation

The proposed outside City surcharge of 50 percent has been calculated by dividing the total incremental costs for FY 2023/24 through FY 2027/28 by the projected revenues without the surcharge for the same period. Using this five year approach mitigates year-over-year changes to the surcharge, while recovering cost equitably from outside City users. Table 65 below presents the calculation of the proposed Outside City Surcharge, detailed calculations are included for reference in the Appendix.

Table 64 Outside City Revenues Without Surcharge

Outside City Revenues	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	Five-Year Total
Total Variable Revenue without Surcharge	\$2,069	\$2,285	\$2,462	\$2,639	\$2,889	\$12,344
Total Fixed Revenue without Surcharge	1,610	1,762	1,926	2,105	2,298	9,702
Total Outside City Without Surcharge	\$3,680	\$4,046	\$4,388	\$4,744	\$5,187	\$22,046

Notes:

(1) Totals may be off due to rounding.

Table 65 Outside City Surcharge Calculation

Outside City Costs	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	Five-Year Total
Total Revenues Without Surcharge	\$3,680	\$4,046	\$4,388	\$4,744	\$5,187	\$22,046
Surcharge Costs to Collect	\$2,072	\$2,131	\$2,193	\$2,256	\$2,321	10,973
Required Percentage Surcharge						50%

Notes:

(1) Totals may be off due to rounding.

5.5 Demand Reduction Rates

Due to the variability of water demand and need for financial resiliency, the COSA developed demand reduction rates. The demand reduction rates are an alternate set of monthly fixed charges and variable rates that may be imposed by RPU during levels of extreme water demand reductions, taking the place of the normal rate structure. The objective of these rates is to provide cost recovery to the agency if customers' potable water usage declines as a result of expanded or future water shortage conditions. As discussed previously, many of RPU's costs are fixed, in that they do not fluctuate with changes in water demands.

The demand reduction rates would be adopted by the City Council along with the normal rates through the Proposition 218 process but would not be charged to customers automatically. Rather, the rates would be approved and available for implementation by the Council if needed. When the Council implements the WSCP or when it reviews or changes the WSCP stage, they could optionally implement the corresponding drought rates to mitigate potential revenue shortfalls.

Based on an extreme water curtailment period, the RPU estimated three potential demand reduction scenarios. Because the ongoing drought has led to projected water usage that is much lower than historic norms, additional cutbacks in the drought scenarios have been capped to 30 percent.

Demand Reduction Stage 1 would equate to a slight reduction in demands (15 percent).

Demand Reduction Stage 2 would equate to a larger reduction in demands (20 percent).

Demand Reduction Stage 3 would equate to the maximum expected reduction in demands (30 percent).

The demand reductions for each stage are set to relate to historic levels of demand based on the average demands for FY 2019/20 through FY 2021/22. Since the overall analysis includes an assumed 10-percent reduction from that level as a baseline assumption, the projected demands for each demand reduction stage are adjusted accordingly. For example, the projected demands for Demand Reduction Stage 1 are calculated assuming an additional 5-percent reduction to the baseline analysis, for a total reduction from historic demands of 15-percent.

To safeguard against these significant financial implications, RPU is proposing to implement the following Demand Reduction Surcharge rates. Once in effect, these surcharges will help to provide revenues needed to continue to meet RPU's expenditures and debt obligations, despite significant reductions in demand/sales.

5.5.1.1 Proposed Demand Reduction Rates

The Proposed Demand Reduction rates are designed to recover revenues through both RPU's fixed monthly service charge and the water commodity charges. For example, in Stage 1 (15 percent usage reduction), 10 percent of the forecasted revenue shortfall would be funded through a fixed surcharge on a meter equivalent basis. The remaining costs would be collected by increases to the volumetric rates. This approach recovers a portion of RPU's fixed expenditures in proportion to each customer's reserved capacity within the system and the remaining portion based on each customer's usage of the system and water purchases.

The tables below present the proposed Demand Reduction rates for each reduction scenario. The rates presented are for the specified usage reduction. Additionally, the rate calculations are based on assumed water demand reductions by customer class and class tier. Because it is not possible to exactly predict how customer demands might change across customer classes and tiers, it is important for RPU to monitor revenues and adjust if and as necessary. The usage reductions by tier are reasonable, based on usage pattern changes, but cannot be guaranteed.

5.5.1.2 Stage 1 Demand Reduction: 15 percent

The Stage 1 demand reduction rates have been calculated assuming a 15 percent departure from historical demand levels. Ten percent of the reduction in revenues will be recovered through the fixed service charge on a per MEU basis, the remaining 90 percent will be recovered through increases to the volumetric rates.

Table 66 Fixed Service Charges for Reduction Stage 1: 15 Percent

Meter Size	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28
3/4" & 5/8"	\$27.53	\$29.43	\$31.45	\$33.63	\$35.93
1"	43.57	46.56	49.76	53.21	56.84
1.5"	83.28	89.01	95.13	101.71	108.66
2"	131.14	140.15	149.79	160.15	171.09
3"	242.88	259.57	277.42	296.60	316.86
4"	402.48	430.12	459.71	491.48	525.06
6"	881.02	941.54	1,006.29	1,075.85	1,149.35
8"	1,439.25	1,538.11	1,643.89	1,757.52	1,877.58
10"	2,236.75	2,390.39	2,554.78	2,731.37	2,917.95
12"	3,193.85	3,413.23	3,647.95	3,900.10	4,166.53

Table 67 Volumetric Rates for Reduction Stage 1: 15 Percent

Class and Tier	CCF	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28
Single Family Residential						
Winter Tier 1	First 8	\$1.29	\$1.37	\$1.46	\$1.56	\$1.66
Winter Tier 2	8-35	1.87	1.99	2.12	2.26	2.40
Winter Tier 3	>35	3.27	3.48	3.71	3.95	4.21
Summer Tier 1	First 8	1.29	1.37	1.46	1.56	1.66
Summer Tier 2	8-35	1.87	1.99	2.12	2.26	2.40
Summer Tier 3	>35	4.15	4.42	4.71	5.02	5.34
Multi-Family Residential						
Winter Tier 1	First 6	\$1.29	\$1.37	\$1.46	\$1.56	\$1.66
Winter Tier 2	>7	2.08	2.21	2.36	2.51	2.67
Summer Tier 1	First 6	1.29	1.37	1.46	1.56	1.66
Summer Tier 2	>7	2.38	2.54	2.70	2.88	3.06
Commercial/Industrial						
Winter	All	\$1.93	\$2.04	\$2.15	\$2.28	\$2.41
Summer	All	2.09	2.21	2.33	2.47	2.61

Class and Tier	CCF	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28
Landscape						
Winter	All	\$2.16	\$2.29	\$2.42	\$2.56	\$2.70
Summer	All	2.64	2.79	2.95	3.12	3.30
Interruptible/Recycled						
Non-Seasonal	All	\$1.78	\$1.88	\$1.99	\$2.11	\$2.23
Flat Temporary Service						
Non-Seasonal	All	\$3.17	\$3.40	\$3.64	\$3.91	\$4.19
Riverside Irrigators						
Winter Tier 1	First 15	\$1.43	\$1.53	\$1.64	\$1.76	\$1.89
Winter Tier 2	16-70	2.20	2.36	2.53	2.71	2.91
Winter Tier 3	>70	4.68	5.02	5.38	5.78	6.19
Summer Tier 1	First 15	1.43	1.53	1.64	1.76	1.89
Summer Tier 2	16-70	2.20	2.36	2.53	2.71	2.91
Summer Tier 3	>70	5.90	6.33	6.79	7.28	7.81

5.5.1.3 Stage 2 Demand Reduction: 20 Percent

The Stage 2 demand reduction rates have been calculated assuming a 20 percent departure from historical demands. Ten percent of the reduction in revenues will be recovered through the fixed service charge on a per MEU basis, the remaining 90 percent will be recovered through increases to the volumetric rates.

Table 68 Fixed Service Charges for Reduction Stage 2: 20 Percent

Meter Size	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28
3/4" & 5/8"	\$27.75	\$29.66	\$31.70	\$33.90	\$36.22
1"	43.93	46.95	50.18	53.65	57.32
1.5"	84.02	89.79	95.97	102.60	109.61
2"	132.31	141.40	151.13	161.57	172.61
3"	245.08	261.91	279.92	299.28	319.72
4"	406.14	434.03	463.88	495.95	529.83
6"	889.08	950.14	1,015.48	1,085.68	1,159.84
8"	1,452.42	1,552.18	1,658.92	1,773.60	1,894.76
10"	2,257.24	2,412.28	2,578.15	2,756.38	2,944.67
12"	3,223.12	3,444.50	3,681.35	3,935.83	4,204.70

Table 69 Volumetric Rates for Reduction Stage 2: 20 Percent

Class and Tier	CCF	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28
Single Family Residential						
Winter Tier 1	First 8	\$1.32	\$1.41	\$1.50	\$1.60	\$1.71
Winter Tier 2	8-35	1.89	2.02	2.15	2.29	2.44
Winter Tier 3	>35	3.61	3.85	4.10	4.37	4.65
Summer Tier 1	First 8	1.32	1.41	1.50	1.60	1.71
Summer Tier 2	8-35	1.89	2.02	2.15	2.29	2.44
Summer Tier 3	>35	4.51	4.81	5.12	5.46	5.81
Multi-Family Residential						
Winter Tier 1	First 6	\$1.32	\$1.41	\$1.50	\$1.60	\$1.70
Winter Tier 2	>7	2.24	2.39	2.55	2.71	2.89
Summer Tier 1	First 6	1.32	1.41	1.50	1.60	1.70
Summer Tier 2	>7	2.56	2.73	2.91	3.10	3.30
Commercial/Industrial						
Winter	All	\$2.05	\$2.17	\$2.29	\$2.43	\$2.56
Summer	All	2.22	2.35	2.48	2.63	2.78
Landscape						
Winter	All	\$2.34	\$2.48	\$2.62	\$2.77	\$2.93

Class and Tier	CCF	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28
Summer	All	2.87	3.03	3.21	3.39	3.58
Interruptible/Recycled						
Non-Seasonal	All	\$1.91	\$2.02	\$2.14	\$2.26	\$2.39
Flat Temporary Service						
Non-Seasonal	All	\$3.30	\$3.54	\$3.80	\$4.08	\$4.37
Riverside Irrigators						
Winter Tier 1	First 15	\$1.49	\$1.60	\$1.71	\$1.84	\$1.97
Winter Tier 2	16-70	2.24	2.40	2.58	2.76	2.96
Winter Tier 3	>70	5.34	5.73	6.15	6.60	7.07
Summer Tier 1	First 15	1.49	1.60	1.71	1.84	1.97
Summer Tier 2	16-70	2.24	2.40	2.58	2.76	2.96
Summer Tier 3	>70	6.58	7.07	7.58	8.14	8.73

5.5.1.4 Stage 3 Demand Reduction: 30 Percent

The Stage 3 demand reduction rates have been calculated assuming a 30 percent departure from historical demands. Ten percent of the reduction in revenues will be recovered through the fixed service charge on a per MEU basis, the remaining 90 percent will be recovered through increases to the volumetric rates.

Table 70 Fixed Service Charges for Reduction Stage 3: 30 Percent

Meter Size	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28
3/4" & 5/8"	\$28.24	\$30.19	\$32.26	\$34.50	\$36.85
1"	44.75	47.83	51.12	54.65	58.39
1.5"	85.65	91.53	97.83	104.59	111.74
2"	134.92	144.19	154.11	164.76	176.02
3"	249.98	267.15	285.52	305.26	326.12
4"	414.32	442.77	473.21	505.93	540.49
6"	907.07	969.36	1,035.99	1,107.63	1,183.30
8"	1,481.86	1,583.63	1,692.48	1,809.52	1,933.13
10"	2,303.03	2,461.19	2,630.36	2,812.25	3,004.36
12"	3,288.54	3,514.37	3,755.92	4,015.66	4,289.97

Table 71 Volumetric Rates for Reduction Stage 3: 30 Percent

Class and Tier	CCF	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28
Single Family Residential						
Winter Tier 1	First 8	\$1.46	\$1.56	\$1.66	\$1.77	\$1.89
Winter Tier 2	8-35	2.01	2.15	2.29	2.44	2.60
Winter Tier 3	>35	4.66	4.97	5.30	5.66	6.03
Summer Tier 1	First 8	1.46	1.56	1.66	1.77	1.89
Summer Tier 2	8-35	2.01	2.15	2.29	2.44	2.60
Summer Tier 3	>35	5.54	5.91	6.30	6.72	7.16
Multi-Family Residential						
Winter Tier 1	First 6	\$1.44	\$1.54	\$1.64	\$1.75	\$1.86
Winter Tier 2	>7	2.64	2.82	3.01	3.21	3.42
Summer Tier 1	First 6	1.44	1.54	1.64	1.75	1.86
Summer Tier 2	>7	3.01	3.21	3.42	3.65	3.89
Commercial/Industrial						
Winter	All	\$2.36	\$2.50	\$2.65	\$2.81	\$2.97
Summer	All	2.56	2.71	2.87	3.04	3.22
Landscape						
Winter	All	\$2.82	\$2.98	\$3.16	\$3.34	\$3.54
Summer	All	3.49	3.69	3.91	4.14	4.37
Interruptible/Recycled						
Non-Seasonal	All	\$2.24	\$2.38	\$2.52	\$2.67	\$2.82
Flat Temporary Service						
Non-Seasonal	All	\$3.61	\$3.88	\$4.17	\$4.47	\$4.80
Riverside Irrigators						
Winter Tier 1	First 15	\$1.71	\$1.84	\$1.97	\$2.12	\$2.27
Winter Tier 2	16-70	2.33	2.50	2.68	2.88	3.09
Winter Tier 3	>70	6.76	7.27	7.81	8.39	9.00
Summer Tier 1	First 15	1.71	1.84	1.97	2.12	2.27
Summer Tier 2	16-70	2.33	2.50	2.68	2.88	3.09
Summer Tier 3	>70	8.06	8.66	9.31	10.00	10.73

Section 6

LEGAL REQUIREMENTS

6.1 Introduction

Carollo's analysis provides the record illustrating how RPU develops rates in conformance with cost of service principles. The discussion below sets forth the legal framework under which Carollo evaluated RPU's rates.

RPU's water rates and rate setting process must adhere to California constitutional and statutory requirements. Procedural requirements apply to the rate-setting process. The principal substantive requirements governing the rates are that revenues recovered through the rates do not exceed costs, and that the costs recovered from users do not exceed the cost for such service. The cost of service principles used for this analysis include these substantive requirements.

RPU's water rate structure includes tiered rates for some customer classes. The use of tiered water rates has been determined to be consistent with constitutional requirements pertaining to reasonable cost of service. The 2015 opinion in *Capistrano Taxpayers Association, Inc. v. City of San Juan Capistrano* ("San Juan") upheld tiered water rates under California Constitution Article XIII D (enacted by Proposition 218), noting that the tiers must correspond to the actual cost of furnishing service at a given level of usage. However, the San Juan Court held that the City of San Juan Capistrano did not attempt to calculate the actual costs of providing water at various tier levels. In reaching its conclusions, the San Juan Court treated all of the tiers as property-related services subject to Article XIII D, as interpreted by the California Supreme Court in its 2006 decision in *Bighorn-Desert View Water Agency v. Verjil*, 39 Cal. 4th 205 (2006) ("Bighorn"), that charges for domestic water delivery are charges for a property related service. On the facts and arguments presented in San Juan, the Court found no basis for altering its application of Article XIII D in either Article XIII C ("Proposition 26") or Article X, Section 2 ("Article X").

Further judicial and legislative interpretation may provide additional guidance in the use of tiered water rates, including the application of Proposition 26's provisions concerning levies, charges and exactions other than property-related fees and the application of Article X. For the purposes of this cost of service analysis, it has been assumed that RPU's tiered water and recycled water rate structures are to be analyzed under the requirements of Article XIII D and implementing statutory provisions, described below.

6.2 Article XIII D

In November 1996, California voters approved Proposition 218, which amended the California Constitution by adding Article XIII C and Article XIII D. Article XIII D placed substantive limitations on the use of the revenue collected from property-related fees and on the amount of the fee that may be imposed on each parcel. The substantive requirements, contained in Article XIII D, Section 6, include that the amount of a fee "shall not exceed the proportional cost of the service attributable to the parcel," and that revenues from the rates "shall not exceed the funds required to provide the service" and "shall not be used for any purpose other than that for which the fee was imposed." Additionally, Proposition 218 established procedural requirements for imposing new, or increasing existing, property-related fees.

Following the passage of Proposition 218, there have been a number of court rulings interpreting and applying its language, and implementing statutes have also been enacted. In *City of Palmdale v. Palmdale Water District*, the court recognized that California Constitution Article X, Section 2 may be harmonized with Article XIII D, section 6 to allow for budget based and tiered rates that promote water conservation, provided conservation is attained in a manner that “shall not exceed the proportional cost of the service attributable to the parcel”. As noted in *San Juan*, the 2011 Palmdale decision recognized that budget based water rates on their own do not violate Proposition 218. In Palmdale, the district failed to demonstrate a basis for the more restrictive tiered budgets and progression through the tiers in the irrigation customer class as compared to the other customer classes.

The *San Juan* decision rejected the argument that for purposes of the proportional cost allocation required by Article XIII D, the agency’s calculation is a matter within legislative or quasi-legislative discretion shielded from judicial review. It did recognize some degree of latitude in making such calculations. The *San Juan* Court notes, for example, that it is not necessary to figure a rate for each parcel and it is permissible to allocate cost within tiers, as long as tiers are based on costs at various levels of usage. The opinion also explains that the time frame for the calculation of true water cost, particularly capital cost, may be long and calculation on a billing-cycle by billing-cycle basis is not required.

Cost and revenue projections are necessarily based on the best available information, and demand and consumption will be affected by weather and other factors that cannot be predicted. See *San Juan*, fn 11 (acknowledging projections of Metropolitan Water District rates as included in rate-setting process). Projections such as this may result in operating surplus and carryover, maintaining cost of service standards on a year over year basis through the inclusion of these amounts in subsequent years’ budget processes.

6.3 California Assembly Bill 2882

Among the legislative enactments implementing Proposition 218 is California Assembly Bill (AB) 2882, which became law at the beginning of 2009. AB 2882 (Sections 370-374 of the California Water Code) defined the elements of allocation-based conservation pricing under Proposition 218, including the appropriate property characteristics (i.e., number of occupants, land use, irrigable area, and local climate data) to establish a reasonable basic use allocation. While rates for all water used within the basic allocation must be established following cost causation principles, AB 2882 provides authority for higher charges on increments of water used in excess of the basic use allocation.

This statute creates a framework under which water agencies may establish cost of service based rates while simultaneously allowing for the deterrence of wasteful water use. Under AB 2882, the elements of an allocation-based conservation water rate structure compliant with the mandates of both Article X and Proposition 218 are:

1. Water bills must be based on metered water use.
2. A water allocation of “basic use” must be established, providing a reasonable amount of water for each customer’s basic needs based on property characteristics. Allocation factors may include, but are not limited to, number of occupants, type of land use, size of irrigated area, and local climate data.
3. All water used within the basic use allocation must be a basic volumetric unit rate that is established following cost causation principles for the cost of water service.
4. A “conservation charge” can be imposed on all increments of water use in excess of the basic use allocation. The conservation charge must also be a volumetric charge and should be designed to encourage water conservation and efficiency.

The cost of service analysis of RPU's water rate structures is performed within the requirements of Article XIII D. While RPU is not recommending a water budget-based rate structure at this time, the cost of service allocation as presented within this report does consider the framework of AB 2882, allowing the City to more easily transition to that type of rate structure in the future as and if desired. RPU's water rates are designed to both recover costs proportionally from system users as well as encourage conservation. RPU's cost of service approach thereby conforms to the requirements of Article XIII D.

6.4 Article XIII C

The application of Proposition 26 in the structuring of water rates is presently undetermined. The San Juan decision briefly touched upon one aspect of the Article XIII C provisions enacted by Proposition 26, finding that tiered water charges would not appropriately be characterized as penalties. Other aspects of the application of Proposition 26 to tiered rate structures may be addressed in future judicial decisions and legislative enactments.

The voters in the State approved Proposition 26 on November 2, 2010. Proposition 26 amended Article XIII C of the State Constitution to expand the definition of "tax" to include "any levy, charge, or exaction of any kind imposed by a local government" with listed exceptions. By means of these exceptions, Article XIII C classifies several types of charges, in addition to property-related charges, that are not taxes, such as charges for specific services or benefits, regulatory charges and penalties.

Article XIII C's definition of "tax" lists the following exceptions: (1) a charge imposed for a specific benefit conferred or privilege granted directly to the payor that is not provided to those not charged, and which does not exceed the reasonable costs to the local government of conferring the benefit or granting the privilege; (2) a charge imposed for a specific government service or product provided directly to the payor that is not provided to those not charged, and which does not exceed the reasonable costs to the local government of providing the service or product; (3) a charge imposed for the reasonable regulatory costs to a local government for issuing licenses and permits, performing investigations, inspections, and audits, enforcing agricultural marketing orders, and the administrative enforcement and adjudication thereof; (4) a charge imposed for entrance to or use of local government property, or the purchase, rental, or lease of local government property; (5) a fine, penalty, or other monetary charge imposed by the judicial branch of government or a local government, as a result of a violation of law; (6) a charge imposed as a condition of property development; and (7) assessments and property-related fees imposed in accordance with the provisions of Article XIII D.

Proposition 26 also provides that the local government bears the burden of proving by a preponderance of the evidence that a levy, charge, or other exaction is not a tax, that the amount is no more than necessary to cover the reasonable costs of the governmental activity, and that the manner in which those costs are allocated to a payor bear a fair or reasonable relationship to the payor's burdens on, or benefits received from, the governmental activity. Like the proportionality requirements of Article XIII D, assessment of rates under these requirements, if applicable, would be supported by the cost of service approach.

6.5 Article X

Article X, enacted as an amendment to the California Constitution in 1928 pursuant to an electoral initiative, provides that:

“It is hereby declared that because of the conditions prevailing in this State the general welfare requires that the water resources of the State be put to beneficial use to the fullest extent of which they are capable, and that the waste or unreasonable use or unreasonable method of use of water be prevented, and that the conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare.”

Article X conveys further that the right to water does not “extend to the waste or unreasonable use” of water. California Water Code Section 100 restates the policy that the waste of water shall be prevented. As indicated above, judicial interpretation in the Palmdale and San Juan decisions analyzed tiered water rates as property-related charges and, as such, found them to be compliant with Article XIII D provided that the tiers correspond to the actual cost of furnishing service at a given level of usage. Pricing signal was assumed to result from this manner of design. The use of tiered structures in compliance with Article XIII D restrictions was found to work in harmony with Article X. Further refinement through judicial and legislative interpretation may provide more specific guidance in this area, such as on the use of pricing signals.

Appendix A

REVENUE REQUIREMENT AND FINANCIAL INFORMATION

City of Riverside - Water Utility

PROJECTED STATEMENT OF OPERATIONS AND RETAINED EARNINGS

For the Fiscal Years Ending

	Projected 2024	Projected 2025	Projected 2026	Projected 2027	Projected 2028
	(In Thousands)	(In Thousands)	(In Thousands)	(In Thousands)	(In Thousands)
Operating revenues:					
Water Sales	\$ 76,265	\$ 81,694	\$ 87,521	\$ 93,775	\$ 100,405
Water Conveyance	3,509	3,639	3,773	3,917	4,064
Water Conservation	1,144	1,225	1,313	1,407	1,506
Other	5,212	6,085	6,262	6,516	6,660
Total operating revenues	86,130	92,643	98,870	105,614	112,634
Reserve for uncollectible	(229)	(245)	(263)	(281)	(301)
Total operating revenue, net of allowance	85,901	92,398	98,607	105,333	112,333
Operating expenses:					
Production costs	7,808	7,964	8,123	8,286	8,602
Personnel expense, excluding PERS	22,906	23,280	23,591	23,826	24,302
Personnel - PERS	3,115	3,163	3,246	3,308	3,394
Supplies & services	15,371	15,547	15,869	16,205	16,529
Special projects	227	232	237	241	241
Service from other funds	10,473	10,598	10,523	10,709	10,923
Less charges to other	(7,555)	(7,632)	(7,785)	(7,941)	(8,100)
Additional O&M for CIP/Advanced Tech/Low Income	0	1,756	2,199	2,363	2,817
Water Conservation Programs	1,645	1,678	1,711	1,746	1,506
Depreciation	16,714	17,343	18,173	19,213	19,996
Total operating expenses	70,704	73,929	75,888	77,955	80,211
Operating income	15,197	18,469	22,719	27,378	32,122
Non-operating revenues (expenses):					
Interest income	1,770	1,632	2,225	2,641	2,034
Interest expense (inc amort)	(10,275)	(9,990)	(11,580)	(13,301)	(12,886)
Line of Credit	-	-	-	-	-
Gain on sale of capital assets	120	120	120	120	120
Other (misc. income)	3,298	3,390	3,483	3,581	3,667
Non-operating revenues(expenses)	(5,087)	(4,848)	(5,752)	(6,959)	(7,065)
Income before CIA and operating transfers	10,110	13,621	16,967	20,419	25,057
General fund contribution	(8,114)	(8,583)	(9,192)	(9,846)	(10,563)
Transfer In	0	0	0	0	0
Contributions in aid of construction-Cash	2,000	2,000	2,000	2,000	2,000
Contributions in aid of construction-Non Cash	0	0	0	0	0
Special Item	0	0	0	0	0
Net income (Loss)	3,996	7,038	9,775	12,573	16,494
Net position, July 1, As Previously Reported	313,795	317,791	324,829	334,604	347,177
Cumulative Effect of Change in Accounting Principle	0	0	0	0	0
Net position, July 1, As Restated	313,795	317,791	324,829	334,604	347,177
Net position, June 30	\$317,791	\$324,829	\$334,604	\$347,177	\$ 363,671

Cash Balances

Fiscal Year	2024	2025	2026	2027	2028
Unrestricted cash and reserves:	(In Thousands)	(In Thousands)	(In Thousands)	(In Thousands)	(In Thousands)
Undesignated reserves	\$ 31,499	\$ 28,410	\$ 33,235	38,326	47,733
Water property reserve	5,203	5,203	5,203	5,203	5,203
Operating cash reserve	-	-	-	-	-
Cash reserved for recycled water project	1,097	1,097	1,097	1,097	1,097
Customer deposits reserve	770	770	770	770	770
Capital repair/replacement reserve	2,340	2,340	2,340	2,340	2,340
Cash reserved for Purchased Water	-	-	-	-	-
Legally restricted cash and cash equivalents:					
Reserved for debt service - monthly set aside	9,229	9,965	11,746	11,966	12,796
Reserved for equipment lease	-	-	-	-	-
Reserved for bond construction	25,153	6,482	69,777	28,993	5,454
Reserved for short term financing construction	-	-	-	-	-
Reserve for Water Conservation	1,532	1,079	680	342	342
Restricted cash and investment at fiscal agent:					
Reserved for debt service (Fiscal Agent)	-	-	-	-	-
Total	\$ 76,823	\$ 55,346	\$ 124,849	\$ 89,037	\$ 75,735
	TRUE	TRUE	TRUE	TRUE	TRUE

Revenue Requirements

Fiscal Year	2024	2025	2026	2027	2028
Production costs	\$ 7,808	\$ 7,964	\$ 8,123	\$ 8,286	\$ 8,602
Personnel costs	18,465	18,811	19,052	19,193	19,596
Other operating and maintenance costs	① 26,071	26,377	26,629	27,155	27,693
Additional O&M for CIP and Advanced Tech	② -	1,756	2,199	2,363	2,817
Required Reduction in O&M	③ -	-	-	-	-
Debt service requirements	23,325	23,364	25,553	28,984	27,960
General fund transfer	8,114	8,583	9,192	9,846	10,563
Capital outlay financed by rates	9,399	10,241	3,961	6,915	7,243
Total Revenue Requirements	\$ 93,183	\$ 97,096	\$ 94,709	\$ 102,741	\$ 104,475
	TRUE	TRUE	TRUE	TRUE	TRUE
O&M Subtotal for Chart Below	①+②+③ \$ 26,071	\$ 28,133	\$ 28,828	\$ 29,518	\$ 30,511

Available Revenues

Fiscal Year	2024	2025	2026	2027	2028
Revenue at current rates	\$ 71,548	\$ 76,265	\$ 81,694	\$ 87,521	\$ 93,775
Current year increase	4,716	5,430	5,827	6,253	6,630
Interest income	1,770	1,632	2,225	2,641	2,034
Miscellaneous income	11,474	12,521	12,876	13,321	13,645
Total Available Revenues	\$ 89,509	\$ 95,847	\$ 102,622	\$ 109,736	\$ 116,084
Use of/(Contributions to) Reserves	\$ 3,674	\$ 1,249	\$ (7,913)	\$ (6,995)	\$ (11,609)
	TRUE	TRUE	TRUE	TRUE	TRUE

City of Riverside Water Utility

Minimum Cash Reserve

[Back to Proforma Index](#)

LOC Applicable factor	70%
1 month Libor	0.52%
Applicable Spread	0.40%

	Fiscal Year End				
	2024	2025	2026	2027	2028
	(In Thousands)	(In Thousands)	(In Thousands)	(In Thousands)	(In Thousands)
<u>Working Capital</u>					
Operating Expenses (exc Deprec & Wtr Cons.)	\$ 52,344	\$ 54,908	\$ 56,003	\$ 56,997	\$ 58,709
Per day (365 Days)	\$ 143	\$ 150	\$ 153	\$ 156	\$ 161
60 Days of Operating Expenses	\$ 8,605	\$ 9,026	\$ 9,206	\$ 9,369	\$ 9,651
90 Days of Operating Expenses	\$ 12,907	\$ 13,539	\$ 13,809	\$ 14,054	\$ 14,476
<u>Rate Stabilization</u>					
Operating Revenues (exc Wtr Cons.)	\$ 84,757	\$ 91,173	\$ 97,294	\$ 103,926	\$ 110,827
7%	\$ 5,933	\$ 6,382	\$ 6,811	\$ 7,275	\$ 7,758
15%	\$ 12,714	\$ 13,676	\$ 14,594	\$ 15,589	\$ 16,624
<u>Capital- Emergency</u>					
Depreciable Assets	\$ 795,893	\$ 825,860	\$ 865,382	\$ 914,925	\$ 952,204
1%	\$ 7,959	\$ 8,259	\$ 8,654	\$ 9,149	\$ 9,522
2%	\$ 15,918	\$ 16,517	\$ 17,308	\$ 18,299	\$ 19,044
<u>Capital- System Improvements</u>					
Annual CIP for Following Year- Use Budget when Available	\$ 29,931	\$ 29,569	\$ 24,823	\$ 34,691	\$ 36,679
FY Actual CIP Expenses					
Budgeted CIP					
Less Designated Reserve Funding (Recycled Wtr/Property)	\$ -	\$ -	\$ -	\$ -	\$ -
Revised Annual CIP for Following Year	\$ 29,931	\$ 29,569	\$ 24,823	\$ 34,691	\$ 36,679
6 Months of Annual CIP	\$ 14,054	\$ 14,847	\$ 16,032	\$ 18,766	\$ 19,451
9 Months of Annual CIP	\$ 21,081	\$ 22,271	\$ 24,048	\$ 28,149	\$ 29,176
0.5	0.300%	0.300%	0.300%	0.300%	0.300%
0.75			\$ 28,000	\$ 28,000	\$ 28,000
	\$ 87.53	\$ 87.53	\$ 87.53	\$ 87.53	\$ 87.53
<u>Debt Service (Max Annual D/S in upcoming FY)</u>					
Principal	\$ 9,622	\$ 9,957	\$ 11,687	\$ 12,126	\$ 12,578
Semi-Annual Interest	\$ 9,454	\$ 11,296	\$ 13,116	\$ 12,570	\$ 14,421
/2	\$ 4,727	\$ 5,648	\$ 6,558	\$ 6,285	\$ 7,210
Monthly Interest	\$ 789	\$ 789	\$ 789	\$ 789	\$ 789
/12	\$ 66	\$ 66	\$ 66	\$ 66	\$ 66
Total (Includes New Proposed Debt)	\$ 14,415	\$ 15,671	\$ 18,311	\$ 18,477	\$ 19,854
Minimum Reserve Requirement	\$ 50,965	\$ 54,185	\$ 59,013	\$ 63,036	\$ 66,236
Maximum Reserve Requirement	\$ 77,034	\$ 81,674	\$ 88,070	\$ 94,567	\$ 99,175

Appendix B

FUNCTIONALIZATION OF COSTS

Appendix B, Functionalization of Costs, presents the allocation of O&M, capital, debt service, and other costs by system function. The dollar value of each expense and each revenue is associated with a certain process or function of the system. To provide rate stability over the cost of service study period, the functionalization is completed using the 5-year average of costs for FY 2023/24 through FY 2027/28.

WATER-OFFICE OF OPS TECHNOLOGY

NON-PERSONNEL SUBTOTAL	\$ 1,008,508
Prof Svcs/RPU-OTO-AMI/NCS/MDMS	181,921
Software Maintenance/Support	761,160
Citywide IT Projects	65,427
CHARGES FROM OTHERS SUBTOTAL	23,836
General Fund Allocation Chgs	23,836
Utilization Chgs from 101 Fund	-
Utilization Chgs from 510 Fund	-

Fixed Maintenance	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
As All Others	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Fixed Maintenance	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
As All Others	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
As All Others	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
As All Others	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

0.0%	100.0%
100.0%	100.0%
0.0%	100.0%
100.0%	100.0%
100.0%	100.0%
100.0%	100.0%

\$ 54,184,837	\$ -	\$ 214,149	\$ 35,106	\$ 35,106	\$ 17,180,418	\$ 981,223	\$ 19,789,155	\$ -	\$ 205,800	\$ 2,211,055	\$ 950,640	\$ 2,618,536	\$ 3,381,069	\$ 6,582,580	\$ 54,184,837
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	\$ 29,613	\$ 4,855	\$ 4,855	\$ 2,375,759	\$ 135,686	\$ 2,736,503	\$ -	\$ 28,459	\$ 305,751	\$ 131,457	\$ 362,099	\$ 467,544	TRUE		
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\$ 54,184,837	\$ 243,762	\$ 39,961	\$ 39,961	\$ 19,556,177	\$ 1,116,909	\$ 22,525,658	\$ -	\$ 234,259	\$ 2,516,806	\$ 1,082,097	\$ 2,980,635	\$ 3,848,613	#		
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Resulting Allocation	TRUE 100.00%	0.45%	0.07%	0.07%	36.09%	2.06%	41.57%	0.00%	0.43%	4.64%	2.00%	5.50%	7.10%
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CHECK	
Total From Above	\$ 54,184,837
Total Allocated	\$ 54,184,837
	\$ -
	OKAY

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ALLOCATION OF DEBT SERVICE

Bonds, Leases, and Minor Debt	5-YEAR AVERAGE	ALLOCATION BASIS	PUMPING	TREATMENT	STORAGE	DISTRIBUTION	TRANSMISSION	SOURCE OF SUPPLY	SUPPLY SUSTAINABILITY	GENERAL	CUSTOMER	METER SERVICES	ADMIN	FIXED MAINTENANCE	AS ALL OTHERS	TOTAL
2008B ISSUE (\$58.235M FIXED)	-	2008B ISSUE (\$58.235M FIXED)	1.6%	15.6%	0.0%	41.3%	2.7%	38.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
2009A ISSUE (\$31.895M FIXED)	-	2009A ISSUE (\$31.895M FIXED)	3.1%	0.5%	29.1%	28.8%	27.1%	11.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
2009B ISSUE (\$67.790M FIXED BABs) - Net of BABs	5,206,613	2009B ISSUE (\$67.790M FIXED BABs) Net of BABs	1.0%	0.7%	0.0%	56.4%	13.6%	28.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
2011A ISSUE (\$59.0M VARIABLE)	789,330	2011A ISSUE (\$59.0M VARIABLE)	7.1%	3.1%	15.4%	43.0%	20.5%	10.3%	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	100.0%
2019 A Refunding Water Revenue Bonds	9,346,201	2019 A Refunding Water Revenue Bonds	4.7%	7.1%	3.3%	43.3%	17.8%	23.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
New Debt Service - Bonds	7,248,497	CIP - 5-Year	4.1%	0.7%	0.7%	38.7%	18.8%	8.1%	18.8%	0.0%	0.0%	10.1%	0.0%	0.0%	0.0%	100.0%
Advance from City - Pension Obligation (\$)	2,216,784	Source of Supply (Cost of Water)	0.0%	0.0%	0.0%	30.2%	0.0%	69.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Capital Lease (\$)	782,547	General	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Other Interest Expenses (inc. Capitalized Interest, Amortiz)	247,145	General	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
\$ 25,837,116	\$ 25,837,116	\$ 847,638	\$ 770,423	\$ 483,635	\$ 10,800,970	\$ 3,897,887	\$ 5,905,766	\$ 1,365,837	\$ 1,029,692	\$ -	\$ 735,269	\$ -	\$ -	\$ -	\$ -	\$ 25,837,116
			3.28%	2.98%	1.87%	41.80%	15.09%	22.86%	5.29%	3.99%	0.00%	2.85%	0.00%	0.00%		

Appendix C

COST OF SERVICE ALLOCATION

Appendix C, Cost of Service Allocation, presents the allocation of the functionalized expenses and offsetting revenues to each rate component. The dollar value of each functionalized expense and revenue is associated with a certain process of the system. This process is, in turn, associated with the water system's ability to provide services in each component category: Customer, Capacity, Base, Max Day, Max Hour, Supply 1, Supply 2, Supply 3, Supply 4, and Supply Sustainability. The dollar value of any expense or revenue is allocated to each of these cost components in the same proportion that it's related process or program is allocated.

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

COST OF SERVICE ALLOCATION

FUNCTION CATEGORIES		CUSTOMER	CAPACITY	BASE	MAX DAY	MAX HOUR	SUPPLY 1	SUPPLY 2	SUPPLY 3	SUPPLY 4	SUPPLY SUSTAINABILITY	AS ALL OTHERS	TOTAL
Customer Only	Applies to customer service related functions.	100.0%										0.0%	100.0%
Capacity Only	Applies to service related functions.		100.0%									0.0%	100.0%
Customer and Meter Service	25% to Customer Functions, 75% related to Meter Size	25.0%	75.0%									0.0%	100.0%
Max Day	Applies to high demand water functions.				100.0%							0.0%	100.0%
Base/Max Day	Resulting allocation from system demand factor analysis.			68.0%	32.0%							0.0%	100.0%
Base/Max Day/Max Hour	Resulting allocation from system demand factor analysis.			57.1%	26.9%	16.0%						0.0%	100.0%
Max Day/Max Hour	Split 50-50 between Max Day and Max Hour.				84.0%	16.0%						0.0%	100.0%
Supplies	Based on the cost of water						26.1%	22.9%	40.2%	10.7%		0.0%	100.0%
Supply Sustainability	All costs allocated to Supply Sustainability.										100.0%		
Settlement reimb - Lockheed/Shell (345457)	Based on reimbursements assigned to each supply based on RPU cost of water analysis.						52.3%	26.4%	21.4%	0.0%			
As All Others	Applies total allocation to remaining line items.											100.0%	100.0%

FUNCTIONALIZED O&M EXPENDITURES	5-YEAR AVERAGE	ALLOCATION	CUSTOMER	CAPACITY	BASE	MAX DAY	MAX HOUR	SUPPLY 1	SUPPLY 2	SUPPLY 3	SUPPLY 4	SUPPLY SUSTAINABILITY	AS ALL OTHERS	TOTAL
PUMPING	\$ 243,762	Max Day/Max Hour	\$ -	\$ -	\$ -	\$ 204,760	\$ 39,002	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 243,762
TREATMENT	39,961	Base/Max Day	-	-	27,184	12,777	-	-	-	-	-	-	-	39,961
STORAGE	39,961	Max Day/Max Hour	-	-	-	33,567	6,394	-	-	-	-	-	-	39,961
DISTRIBUTION	19,556,177	Base/Max Day/Max Hour	-	-	11,174,958	5,252,230	3,128,988	-	-	-	-	-	-	19,556,177
TRANSMISSION	1,116,909	Base/Max Day/Max Hour	-	-	638,234	299,970	178,705	-	-	-	-	-	-	1,116,909
SOURCE OF SUPPLY	22,525,658	Supplies	-	-	-	-	-	5,885,255	5,169,498	9,063,836	2,407,069	-	-	22,525,658
SUPPLY SUSTAINABILITY	-	Supply Sustainability	-	-	-	-	-	-	-	-	-	-	-	-
GENERAL	234,259	As All Others	-	-	-	-	-	-	-	-	-	-	234,259	234,259
CUSTOMER	2,516,806	Customer Only	2,516,806	-	-	-	-	-	-	-	-	-	-	2,516,806
METER SERVICES	1,082,097	Capacity Only	-	1,082,097	-	-	-	-	-	-	-	-	-	1,082,097
ADMIN	2,980,635	Customer and Meter Service	745,159	2,235,476	-	-	-	-	-	-	-	-	-	2,980,635
FIXED MAINTENANCE	3,848,613	Capacity Only	-	3,848,613	-	-	-	-	-	-	-	-	-	3,848,613
OPERATING EXPENDITURES SUBTOTAL	\$ 54,184,837		\$ 3,261,964	\$ 7,166,186	\$ 11,840,376	\$ 5,803,304	\$ 3,353,089	\$ 5,885,255	\$ 5,169,498	\$ 9,063,836	\$ 2,407,069	\$ -	\$ 234,259	\$ 54,184,837
<i>Reallocation of "As All Others"</i>			\$ 14,164	\$ 31,116	\$ 51,412	\$ 25,199	\$ 14,559	\$ 25,554	\$ 22,446	\$ 39,356	\$ 10,452	\$ -	TRUE	
O&M ALLOCATION	\$ 54,184,837		\$ 3,276,128	\$ 7,197,303	\$ 11,891,788	\$ 5,828,503	\$ 3,367,649	\$ 5,910,810	\$ 5,191,944	\$ 9,103,192	\$ 2,417,521	\$ -		

Resulting O&M Allocation 100.00% 6.05% 13.28% 21.95% 10.76% 6.22% 10.91% 9.58% 16.80% 4.46% 0.00%

FUNCTIONALIZED DEBT SERVICE: Bonds, Leases, and Minor Debt	5-YEAR AVERAGE	ALLOCATION	CUSTOMER	CAPACITY	BASE	MAX DAY	MAX HOUR	SUPPLY 1	SUPPLY 2	SUPPLY 3	SUPPLY 4	SUPPLY SUSTAINABILITY	AS ALL OTHERS	TOTAL
PUMPING	\$ 847,638	Capacity Only	\$ -	\$ 847,638	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 847,638
TREATMENT	770,423	Max Day	-	-	-	770,423	-	-	-	-	-	-	-	770,423
STORAGE	483,635	Capacity Only	-	483,635	-	-	-	-	-	-	-	-	-	483,635
DISTRIBUTION	10,800,970	Capacity Only	-	10,800,970	-	-	-	-	-	-	-	-	-	10,800,970
TRANSMISSION	3,897,887	Capacity Only	-	3,897,887	-	-	-	-	-	-	-	-	-	3,897,887
SOURCE OF SUPPLY	5,905,766	Max Day	-	-	-	5,905,766	-	-	-	-	-	-	-	5,905,766
SUPPLY SUSTAINABILITY	1,365,837	Supply Sustainability	-	-	-	-	-	-	-	-	-	1,365,837	-	1,365,837
GENERAL	1,029,692	As All Others	-	-	-	-	-	-	-	-	-	-	1,029,692	1,029,692
CUSTOMER	-	Customer Only	-	-	-	-	-	-	-	-	-	-	-	-
METER SERVICES	735,269	Capacity Only	-	735,269	-	-	-	-	-	-	-	-	-	735,269
ADMIN	-	Capacity Only	-	-	-	-	-	-	-	-	-	-	-	-
FIXED MAINTENANCE	-	Capacity Only	-	-	-	-	-	-	-	-	-	-	-	-
DEBT SERVICE SUBTOTAL	\$ 25,837,116		\$ -	\$ 16,765,399	\$ -	\$ 6,676,189	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,365,837	\$ 1,029,692	\$ 25,837,116
<i>Reallocation of "As All Others"</i>			\$ -	\$ 695,888	\$ -	\$ 277,111	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 56,692		
DEBT SERVICE ALLOCATION	\$ 25,837,116		\$ -	\$ 17,461,287	\$ -	\$ 6,953,300	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,422,529		

Resulting Debt Service Allocation 100.00% 0.00% 67.58% 0.00% 26.91% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 5.51%

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

COST OF SERVICE ALLOCATION

FUNCTION CATEGORIES	CUSTOMER	CAPACITY	BASE	MAX DAY	MAX HOUR	SUPPLY 1	SUPPLY 2	SUPPLY 3	SUPPLY 4	SUPPLY SUSTAINABILITY	AS ALL OTHERS	TOTAL									
													Fixed	Fixed	Variable	Variable	Variable	Variable	Variable	Variable	Variable
																		Gage	Riverside South/North	Waterman	Flume
FUNCTIONALIZED CIP	Five Year Total FY 2023/24 thru FY 2027/28	ALLOCATION	CUSTOMER	CAPACITY	BASE	MAX DAY	MAX HOUR	SUPPLY 1	SUPPLY 2	SUPPLY 3	SUPPLY 4	SUPPLY SUSTAINABILITY	AS ALL OTHERS	TOTAL							
PUMPING	\$ 6,100,000	Capacity Only	\$ -	6,100,000	\$ -	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 6,100,000							
TREATMENT	\$ 1,000,000	Max Day	\$ -	-	-	1,000,000	-	-	-	-	-	\$ -	-	\$ 1,000,000							
STORAGE	\$ 1,000,000	Capacity Only	\$ -	1,000,000	-	-	-	-	-	-	-	-	-	\$ 1,000,000							
DISTRIBUTION	\$ 57,580,000	Capacity Only	\$ -	57,580,000	-	-	-	-	-	-	-	-	-	\$ 57,580,000							
TRANSMISSION	\$ 27,950,000	Capacity Only	\$ -	27,950,000	-	-	-	-	-	-	-	-	-	\$ 27,950,000							
SOURCE OF SUPPLY	\$ 12,000,000	Max Day	\$ -	-	-	12,000,000	-	-	-	-	-	-	-	\$ 12,000,000							
SUPPLY SUSTAINABILITY	\$ 28,000,000	Supply Sustainability	\$ -	-	-	-	-	-	-	-	-	28,000,000	-	\$ 28,000,000							
GENERAL	\$ -	Capacity Only	\$ -	-	-	-	-	-	-	-	-	-	-	\$ -							
CUSTOMER	\$ -	Capacity Only	\$ -	-	-	-	-	-	-	-	-	-	-	\$ -							
METER SERVICES	\$ 14,966,000	Capacity Only	\$ -	14,966,000	-	-	-	-	-	-	-	-	-	\$ 14,966,000							
ADMIN	\$ -	Capacity Only	\$ -	-	-	-	-	-	-	-	-	-	-	\$ -							
FIXED MAINTENANCE	\$ -	Capacity Only	\$ -	-	-	-	-	-	-	-	-	-	-	\$ -							
CIP SUBTOTAL	\$ 148,596,000		\$ -	\$ 107,596,000	\$ -	\$ 13,000,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 28,000,000	\$ -	\$ 148,596,000							
<i>Reallocation of "As All Others"</i>			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-	TRUE							
CIP ALLOCATION	\$ 148,596,000		\$ -	\$ 107,596,000	\$ -	\$ 13,000,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 28,000,000	\$ -								
Resulting CIP Allocation		100.00%	0.00%	72.41%	0.00%	8.75%	0.00%	0.00%	0.00%	0.00%	0.00%	18.84%									
CIP ALLOCATION WITHOUT SUPPLY SUSTAINABILITY	\$ 120,596,000		\$ -	\$ 107,596,000	\$ -	\$ 13,000,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 120,596,000							
<i>Reallocation of "As All Others"</i>			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-	TRUE							
CIP ALLOCATION	\$ 120,596,000		\$ -	\$ 107,596,000	\$ -	\$ 13,000,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -								
Allocation w/o WIFIA Projects			0.00%	89.22%	0.00%	10.78%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%									
FUNCTIONALIZED ASSETS	RCNLD	ALLOCATION	CUSTOMER	CAPACITY	BASE	MAX DAY	MAX HOUR	SUPPLY 1	SUPPLY 2	SUPPLY 3	SUPPLY 4	SUPPLY SUSTAINABILITY	AS ALL OTHERS	TOTAL							
PUMPING	\$ 27,604,310	Max Day/Max Hour	\$ -	\$ -	\$ -	23,187,620	\$ 4,416,690	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 27,604,310							
TREATMENT	40,513,781	Base/Max Day	-	-	27,560,395	12,953,386	-	-	-	-	-	-	-	40,513,781							
STORAGE	58,534,765	Max Day/Max Hour	-	-	-	49,169,202	9,365,562	-	-	-	-	-	-	58,534,765							
DISTRIBUTION	349,970,110	Base/Max Day/Max Hour	-	-	199,982,920	93,991,972	55,995,218	-	-	-	-	-	-	349,970,110							
TRANSMISSION	-	Base/Max Day/Max Hour	-	-	-	-	-	-	-	-	-	-	-	-							
SOURCE OF SUPPLY	74,703,397	Supplies	-	-	-	-	-	19,517,679	17,143,962	30,059,026	7,982,730	-	-	74,703,397							
SUPPLY SUSTAINABILITY	-	Customer and Meter Service	-	-	-	-	-	-	-	-	-	-	-	-							
GENERAL	2,692,406	As All Others	-	-	-	-	-	-	-	-	-	-	2,692,406	2,692,406							
CUSTOMER	22,108,517	Customer Only	22,108,517	-	-	-	-	-	-	-	-	-	-	22,108,517							
METER SERVICES	73,278,397	Customer and Meter Service	18,319,599	54,958,798	-	-	-	-	-	-	-	-	-	73,278,397							
ADMIN	791,208	Customer and Meter Service	197,802	593,406	-	-	-	-	-	-	-	-	-	791,208							
FIXED MAINTENANCE	-	Customer and Meter Service	-	-	-	-	-	-	-	-	-	-	-	-							
AS ALL OTHERS	\$ 45,078	As All Others	-	-	-	-	-	-	-	-	-	-	45,078	45,078							
ASSETS SUBTOTAL	\$ 650,241,970		\$ 40,625,919	\$ 55,552,204	\$ 227,543,315	\$ 179,302,181	\$ 69,777,470	\$ 19,517,679	\$ 17,143,962	\$ 30,059,026	\$ 7,982,730	\$ -	\$ 2,737,484	\$ 650,241,970							
<i>Reallocation of "As All Others"</i>			\$ 171,756	\$ 234,861	\$ 961,995	\$ 758,044	\$ 295,001	\$ 82,516	\$ 72,480	\$ 127,082	\$ 33,749	\$ -	-	TRUE							
ASSET ALLOCATION	\$ 650,241,970		\$ 40,797,675	\$ 55,787,065	\$ 228,505,310	\$ 180,060,225	\$ 70,072,471	\$ 19,600,194	\$ 17,216,442	\$ 30,186,108	\$ 8,016,479	\$ -	\$ -								
Resulting Asset Allocation		100.00%	6.27%	8.58%	35.14%	27.69%	10.78%	3.01%	2.65%	4.64%	1.23%	0.00%									
TOTAL ALLOCATION	\$ 878,859,922		\$ 44,073,803	\$ 188,041,654	\$ 240,397,099	\$ 205,842,027	\$ 73,440,120	\$ 25,511,004	\$ 22,408,386	\$ 39,289,300	\$ 10,434,000	\$ 29,422,529	\$ -								
Total Resulting Allocation		100.00%	5.01%	21.40%	27.35%	23.42%	8.36%	2.90%	2.55%	4.47%	1.19%	3.35%									

Appendix D

CUSTOMER CLASS ALLOCATION

Appendix D, Customer Class Allocation, allocates the total rate revenue requirements for each fiscal year to each rate component based on the overall allocations as determined in the Cost of Service Allocation (Appendix C).

Additionally, within this appendix each of the cost components is allocated amongst the various customer categories in direct proportion with that category's share of whichever unit (number of accounts, number of MEUs, level of consumption) is associated with each cost component.

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

MULTI-YEAR FUNCTIONAL COST ALLOCATION AND CUSTOMER CLASS ALLOCATION

CUSTOMER CLASS ALLOCATION	5-YEAR AVERAGE	SFR (WA-1A)	MFR (WA-1B)	COMM/INDU (WA-6)	INTERRUPT. IRR / RECYC (WA-7/WA-10)	LANDSCAPE (WA-11)	FLAT RATE (WA-2)	RIVERSIDE WC (WA-4)	GREENBELT (WA-8)	AGRICULTURAL (WA-12)
CUSTOMER		SFR (WA-1A)	MFR (WA-1B)	COMM/INDU (WA-6)	INTERRUPT. IRR / RECYC (WA-7/WA-10)	LANDSCAPE (WA-11)	FLAT RATE (WA-2)	RIVERSIDE WC (WA-4)	GREENBELT (WA-8)	AGRICULTURAL (WA-12)
Baseline Allocation		88.26%	1.69%	7.93%	0.85%	0.77%	0.12%	0.04%	0.02%	0.33%
Interruptible		No	No	No	No	No	No	No	No	No
Interruptible Adjustment		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Effective Allocation Adjustment		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Baseline Allocation With Adjustment		88.26%	1.69%	7.93%	0.85%	0.77%	0.12%	0.04%	0.02%	0.33%
Reallocation to Non-Interruptible		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Allocation		88.26%	1.69%	7.93%	0.85%	0.77%	0.12%	0.04%	0.02%	0.33%
FY 23/24	\$ 2,894,502	\$ 2,554,570	\$ 49,037	\$ 229,617	\$ 24,576	\$ 22,209	\$ 3,361	\$ 1,091	\$ 437	\$ 9,604
FY 24/25	3,103,816	2,739,302	52,583	246,221	26,353	23,815	3,604	1,170	468	10,298
FY 25/26	3,328,561	2,937,653	56,391	264,050	28,261	25,540	3,865	1,255	502	11,044
FY 26/27	3,569,842	3,150,597	60,478	283,191	30,310	27,391	4,146	1,346	538	11,845
FY 27/28	3,825,746	3,376,448	64,814	303,491	32,483	29,355	4,443	1,442	577	12,694
CAPACITY		SFR (WA-1A)	MFR (WA-1B)	COMM/INDU (WA-6)	INTERRUPT. IRR / RECYC (WA-7/WA-10)	LANDSCAPE (WA-11)	FLAT RATE (WA-2)	RIVERSIDE WC (WA-4)	GREENBELT (WA-8)	AGRICULTURAL (WA-12)
Baseline Allocation		67.81%	1.42%	25.51%	2.02%	1.87%	0.80%	0.05%	0.00%	0.52%
Interruptible		No	No	No	No	No	No	No	No	No
Interruptible Adjustment		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Effective Allocation Adjustment		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Baseline Allocation With Adjustment		67.81%	1.42%	25.51%	2.02%	1.87%	0.80%	0.05%	0.00%	0.52%
Reallocation to Non-Interruptible		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Allocation		67.81%	1.42%	25.51%	2.02%	1.87%	0.80%	0.05%	0.00%	0.52%
FY 23/24	\$ 27,123,103	\$ 18,393,423	\$ 385,357	\$ 6,918,015	\$ 547,972	\$ 507,682	\$ 216,176	\$ 13,969	\$ -	\$ 140,508
FY 24/25	29,084,497	19,723,535	413,224	7,418,288	587,599	544,395	231,808	14,979	-	150,669
FY 25/26	31,190,483	21,151,701	443,146	7,955,440	630,146	583,814	248,593	16,064	-	161,579
FY 26/27	33,451,419	22,684,945	475,268	8,532,114	675,824	626,134	266,613	17,228	-	173,291
FY 27/28	35,849,387	24,311,118	509,338	9,143,739	724,271	671,018	285,726	18,463	-	185,714

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

MULTI-YEAR FUNCTIONAL COST ALLOCATION AND CUSTOMER CLASS ALLOCATION

BASE		SFR (WA-1A)	MFR (WA-1B)	COMM/INDU (WA-6)	INTERRUPT. IRR / RECYC (WA-7/WA-10)	LANDSCAPE (WA-11)	FLAT RATE (WA-2)	RIVERSIDE WC (WA-4)	GREENBELT (WA-8)	AGRICULTURAL (WA-12)
Baseline Allocation		57.41%	1.57%	31.82%	3.49%	3.28%	0.19%	0.04%	0.00%	2.20%
Interruptible		No	No	No	No	No	No	No	No	No
Interruptible Adjustment		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Effective Allocation Adjustment		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Baseline Allocation With Adjustment		57.41%	1.57%	31.82%	3.49%	3.28%	0.19%	0.04%	0.00%	2.20%
Reallocation to Non-Interruptible		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Allocation		57.41%	1.57%	31.82%	3.49%	3.28%	0.19%	0.04%	0.00%	2.20%
FY 23/24	\$ 10,506,549	\$ 6,032,249	\$ 165,008	\$ 3,343,532	\$ 366,540	\$ 344,960	\$ 19,596	\$ 3,966	\$ -	\$ 230,697
FY 24/25	11,266,325	6,468,468	176,940	3,585,318	393,046	369,906	21,014	4,253	-	247,380
FY 25/26	12,082,111	6,936,845	189,752	3,844,928	421,507	396,691	22,535	4,561	-	265,292
FY 26/27	12,957,919	7,439,683	203,507	4,123,639	452,061	425,446	24,169	4,892	-	284,523
FY 27/28	13,886,809	7,972,997	218,096	4,419,242	484,467	455,944	25,901	5,243	-	304,919

MAX DAY		SFR (WA-1A)	MFR (WA-1B)	COMM/INDU (WA-6)	INTERRUPT. IRR / RECYC (WA-7/WA-10)	LANDSCAPE (WA-11)	FLAT RATE (WA-2)	RIVERSIDE WC (WA-4)	GREENBELT (WA-8)	AGRICULTURAL (WA-12)
Baseline Allocation		57.84%	1.19%	26.72%	6.12%	4.56%	0.50%	0.05%	0.00%	3.01%
Interruptible		No	No	No	Yes	No	No	No	No	No
Interruptible Adjustment		0.00%	0.00%	0.00%	-53.75%	0.00%	0.00%	0.00%	0.00%	0.00%
Effective Allocation Adjustment		0.00%	0.00%	0.00%	-3.29%	0.00%	0.00%	0.00%	0.00%	0.00%
Baseline Allocation With Adjustment		57.84%	1.19%	26.72%	2.83%	4.56%	0.50%	0.05%	0.00%	3.01%
Reallocation to Non-Interruptible		2.03%	0.04%	0.94%	0.00%	0.16%	0.02%	0.00%	0.00%	0.11%
Total Allocation		59.87%	1.23%	27.66%	2.83%	4.72%	0.52%	0.06%	0.00%	3.11%
FY 23/24	\$ 11,814,420	\$ 7,073,092	\$ 145,859	\$ 3,267,511	\$ 334,531	\$ 557,849	\$ 61,416	\$ 6,633	\$ -	\$ 367,530
FY 24/25	12,668,774	7,584,579	156,407	3,503,800	358,722	598,189	65,857	7,112	-	394,108
FY 25/26	13,586,111	8,133,772	167,732	3,757,507	384,697	641,504	70,626	7,627	-	422,645
FY 26/27	14,570,940	8,723,373	179,891	4,029,881	412,583	688,005	75,745	8,180	-	453,281
FY 27/28	15,615,460	9,348,709	192,786	4,318,764	442,159	737,325	81,175	8,767	-	485,775

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

MULTI-YEAR FUNCTIONAL COST ALLOCATION AND CUSTOMER CLASS ALLOCATION

MAX HOUR		SFR (WA-1A)	MFR (WA-1B)	COMM/INDU (WA-6)	INTERRUPT. IRR / RECYC (WA-7/WA-10)	LANDSCAPE (WA-11)	FLAT RATE (WA-2)	RIVERSIDE WC (WA-4)	GREENBELT (WA-8)	AGRICULTURAL (WA-12)
Baseline Allocation		57.44%	1.54%	31.46%	3.68%	3.37%	0.21%	0.04%	0.00%	2.25%
Interruptible		No	No	No	Yes	No	No	No	No	No
Interruptible Adjustment		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Effective Allocation Adjustment		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Baseline Allocation With Adjustment		57.44%	1.54%	31.46%	3.68%	3.37%	0.21%	0.04%	0.00%	2.25%
Reallocation to Non-Interruptible		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Allocation		57.44%	1.54%	31.46%	3.68%	3.37%	0.21%	0.04%	0.00%	2.25%
FY 23/24	\$ 2,975,361	\$ 1,709,184	\$ 45,928	\$ 936,044	\$ 109,381	\$ 100,399	\$ 6,219	\$ 1,158	\$ -	\$ 67,047
FY 24/25	3,190,523	1,832,783	49,250	1,003,734	117,291	107,660	6,668	1,242	-	71,896
FY 25/26	3,421,547	1,965,494	52,816	1,076,414	125,784	115,455	7,151	1,332	-	77,102
FY 26/27	3,669,568	2,107,968	56,644	1,154,441	134,901	123,824	7,670	1,428	-	82,691
FY 27/28	3,932,621	2,259,078	60,705	1,237,197	144,572	132,701	8,219	1,531	-	88,619

SUPPLY 1		SFR (WA-1A)	MFR (WA-1B)	COMM/INDU (WA-6)	INTERRUPT. IRR / RECYC (WA-7/WA-10)	LANDSCAPE (WA-11)	FLAT RATE (WA-2)	RIVERSIDE WC (WA-4)	GREENBELT (WA-8)	AGRICULTURAL (WA-12)
Baseline Allocation		65.45%	2.05%	26.53%	2.30%	2.35%	0.09%	0.04%	0.00%	1.20%
Interruptible		No	No	No	Yes	No	No	No	No	No
Interruptible Adjustment		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Effective Allocation Adjustment		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Baseline Allocation With Adjustment		65.45%	2.05%	26.53%	2.30%	2.35%	0.09%	0.04%	0.00%	1.20%
Reallocation to Non-Interruptible		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Allocation		65.45%	2.05%	26.53%	2.30%	2.35%	0.09%	0.04%	0.00%	1.20%
FY 23/24	\$ 4,038,289	\$ 2,642,930	\$ 82,690	\$ 1,071,530	\$ 92,762	\$ 94,872	\$ 3,797	\$ 1,444	\$ -	\$ 48,264
FY 24/25	4,330,316	2,834,053	88,670	1,149,017	99,470	101,733	4,072	1,549	-	51,754
FY 25/26	4,643,871	3,039,264	95,091	1,232,216	106,673	109,099	4,366	1,661	-	55,501
FY 26/27	4,980,496	3,259,574	101,984	1,321,537	114,405	117,007	4,683	1,781	-	59,525
FY 27/28	5,337,524	3,493,237	109,294	1,416,272	122,606	125,395	5,019	1,909	-	63,792

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

MULTI-YEAR FUNCTIONAL COST ALLOCATION AND CUSTOMER CLASS ALLOCATION

SUPPLY 2		SFR (WA-1A)	MFR (WA-1B)	COMM/INDU (WA-6)	INTERRUPT. IRR / RECYC (WA-7/WA-10)	LANDSCAPE (WA-11)	FLAT RATE (WA-2)	RIVERSIDE WC (WA-4)	GREENBELT (WA-8)	AGRICULTURAL (WA-12)
Baseline Allocation		65.45%	2.05%	26.53%	2.30%	2.35%	0.09%	0.04%	0.00%	1.20%
Interruptible		No	No	No	Yes	No	No	No	No	No
Interruptible Adjustment		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Effective Allocation Adjustment		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Baseline Allocation With Adjustment		65.45%	2.05%	26.53%	2.30%	2.35%	0.09%	0.04%	0.00%	1.20%
Reallocation to Non-Interruptible		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Allocation		65.45%	2.05%	26.53%	2.30%	2.35%	0.09%	0.04%	0.00%	1.20%
FY 23/24	\$ 3,990,203	\$ 2,611,459	\$ 81,706	\$ 1,058,770	\$ 91,657	\$ 93,742	\$ 3,752	\$ 1,427	\$ -	\$ 47,689
FY 24/25	4,278,752	2,800,305	87,614	1,135,335	98,286	100,521	4,023	1,530	-	51,138
FY 25/26	4,588,573	3,003,073	93,958	1,217,543	105,402	107,800	4,314	1,641	-	54,841
FY 26/27	4,921,190	3,220,760	100,769	1,305,801	113,043	115,614	4,627	1,760	-	58,816
FY 27/28	5,273,966	3,451,641	107,993	1,399,407	121,146	123,902	4,959	1,886	-	63,032

SUPPLY 3		SFR (WA-1A)	MFR (WA-1B)	COMM/INDU (WA-6)	INTERRUPT. IRR / RECYC (WA-7/WA-10)	LANDSCAPE (WA-11)	FLAT RATE (WA-2)	RIVERSIDE WC (WA-4)	GREENBELT (WA-8)	AGRICULTURAL (WA-12)
Baseline Allocation		45.68%	0.83%	39.76%	4.68%	4.73%	0.35%	0.04%	0.00%	3.93%
Interruptible		No	No	No	Yes	No	No	No	No	No
Interruptible Adjustment		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Effective Allocation Adjustment		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Baseline Allocation With Adjustment		45.68%	0.83%	39.76%	4.68%	4.73%	0.35%	0.04%	0.00%	3.93%
Reallocation to Non-Interruptible		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Allocation		45.68%	0.83%	39.76%	4.68%	4.73%	0.35%	0.04%	0.00%	3.93%
FY 23/24	\$ 7,558,515	\$ 3,452,785	\$ 63,110	\$ 3,005,072	\$ 353,391	\$ 357,314	\$ 26,176	\$ 3,261	\$ -	\$ 297,407
FY 24/25	8,105,106	3,702,472	67,673	3,222,382	378,946	383,153	28,068	3,497	-	318,914
FY 25/26	8,691,990	3,970,565	72,573	3,455,713	406,385	410,897	30,101	3,750	-	342,006
FY 26/27	9,322,055	4,258,383	77,834	3,706,210	435,843	440,682	32,283	4,022	-	366,798
FY 27/28	9,990,308	4,563,646	83,414	3,971,890	467,087	472,272	34,597	4,310	-	393,091

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

MULTI-YEAR FUNCTIONAL COST ALLOCATION AND CUSTOMER CLASS ALLOCATION

SUPPLY 4		SFR (WA-1A)	MFR (WA-1B)	COMM/INDU (WA-6)	INTERRUPT. IRR / RECYC (WA-7/WA-10)	LANDSCAPE (WA-11)	FLAT RATE (WA-2)	RIVERSIDE WC (WA-4)	GREENBELT (WA-8)	AGRICULTURAL (WA-12)
Baseline Allocation		47.92%	0.88%	41.71%	0.00%	4.96%	0.36%	0.05%	0.00%	4.13%
Interruptible		No	No	No	Yes	No	No	No	No	No
Interruptible Adjustment		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Effective Allocation Adjustment		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Baseline Allocation With Adjustment		47.92%	0.88%	41.71%	0.00%	4.96%	0.36%	0.05%	0.00%	4.13%
Reallocation to Non-Interruptible		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Allocation		47.92%	0.88%	41.71%	0.00%	4.96%	0.36%	0.05%	0.00%	4.13%
FY 23/24	\$ 2,135,911	\$ 1,023,555	\$ 18,708	\$ 890,834	\$ -	\$ 105,923	\$ 7,760	\$ 967	\$ -	\$ 88,164
FY 24/25	2,290,369	1,097,573	20,061	955,254	-	113,583	8,321	1,037	-	94,540
FY 25/26	2,456,212	1,177,048	21,514	1,024,423	-	121,808	8,923	1,112	-	101,385
FY 26/27	2,634,258	1,262,369	23,073	1,098,681	-	130,637	9,570	1,192	-	108,735
FY 27/28	2,823,095	1,352,862	24,727	1,177,440	-	140,002	10,256	1,278	-	116,529

SUPPLY SUSTAINABILITY		SFR (WA-1A)	MFR (WA-1B)	COMM/INDU (WA-6)	INTERRUPT. IRR / RECYC (WA-7/WA-10)	LANDSCAPE (WA-11)	FLAT RATE (WA-2)	RIVERSIDE WC (WA-4)	GREENBELT (WA-8)	AGRICULTURAL (WA-12)
Baseline Allocation		57.84%	1.19%	26.72%	6.12%	4.56%	0.50%	0.05%	0.00%	3.01%
No Allocated Costs		No	No	No	Yes	No	No	No	No	No
Interruptible		No	No	No	Yes	No	No	No	No	No
Interruptible Adjustment		0.00%	0.00%	0.00%	-100.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Effective Allocation Adjustment		0.00%	0.00%	0.00%	-6.12%	0.00%	0.00%	0.00%	0.00%	0.00%
Baseline Allocation With Adjustment		57.84%	1.19%	26.72%	0.00%	4.56%	0.50%	0.05%	0.00%	3.01%
Reallocation to Non-Interruptible		3.77%	0.08%	1.74%	0.00%	0.30%	0.03%	0.00%	0.00%	0.20%
Total Allocation		61.61%	1.27%	28.46%	0.00%	4.86%	0.53%	0.06%	0.00%	3.20%
FY 23/24	\$ 1,220,615	\$ 752,056	\$ 15,509	\$ 347,422	\$ -	\$ 59,314	\$ 6,530	\$ 705	\$ -	\$ 39,078
FY 24/25	1,308,883	806,440	16,630	372,546	-	63,603	7,002	756	-	41,904
FY 25/26	1,403,658	864,834	17,834	399,522	-	68,209	7,509	811	-	44,938
FY 26/27	1,505,406	927,524	19,127	428,483	-	73,153	8,054	870	-	48,196
FY 27/28	1,613,321	994,014	20,498	459,198	-	78,397	8,631	932	-	51,651

Appendix E

COST OF WATER ANALYSIS

Appendix E, *Cost of Water Allocation*, summarizes all of the costs associated with supplying any of the four sources of water. Included in the summary are purchase costs, distribution costs, and other costs. The costs associated with each of the four sources are then summarized. In conjunction with the total quantity of water, CCF, to be provided by each source, the unique unit cost of providing water from each source is determined. The percentage of costs for potable water production from each source are then applied to RPU's forecast water production costs to determine projected costs for each source.

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

COST OF WATER

	<u>Supply 1</u>	<u>Supply 2</u>	<u>Supply 3</u>	<u>Supply 4</u>	<u>N/A</u>	
	Gage	Riverside South/North	Waterman	Flume	Rialto/Colton Basin	Distribution
Production						Sum RPU Retail
FY 2019/20	26,403	22,357	26,321	6,864	458	56,299
FY 2020/21	28,589	22,486	32,533	5,783	62	62,107
FY 2021/22	27,438	22,135	31,189	5,608	15	60,788
3-Year Sum	82,430	66,978	90,043	18,255	535	179,194
Costs						
			Supply Costs			Distribution Cost
FY 2019/20	\$ 3,595,811	\$ 3,312,176	\$ 4,925,630	\$ 1,213,962	\$ 86,556	\$ 6,131,487
FY 2020/21	3,879,520	3,338,714	5,810,403	1,252,467	63,204	6,076,303
FY 2021/22	3,999,491	3,845,700	5,890,833	1,318,338	66,557	6,234,063
3-Year Sum	\$ 11,474,822	\$ 10,496,590	\$ 16,626,866	\$ 3,784,767	\$ 216,316	\$ 18,441,854
Total Allocation	18.8%	17.2%	27.2%	6.2%	0.4%	30.2%
Supply Only	26.9%	24.6%	39.0%	8.9%	0.5%	
Unit Cost per AF			Supply Costs			Distribution Cost
FY 2019/20	\$136.19	\$148.15	\$187.14	\$176.86	\$188.99	\$108.91
FY 2020/21	135.70	148.48	178.60	216.58	1,019.41	97.84
FY 2021/22	145.76	173.74	188.88	235.08	4,437.11	102.55
3-Year Average	\$139.21	\$156.72	\$184.65	\$207.33	\$404.33	\$102.92
Potable Production						Total
FY 2019/20	20,786	17,421	26,321	6,424	-	70,952
FY 2020/21	22,032	16,577	32,533	5,472	-	76,613
FY 2021/22	20,615	15,585	31,189	5,472	-	72,861
3-Year Sum	63,433	49,583	90,043	17,368	-	220,427

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

COST OF WATER

POTABLE ADJUSTMENTS	Supply 1	Supply 2	Supply 3	Supply 4	N/A	Total
	Gage	Riverside South/North	Waterman	Flume	Rialto/Colton Basin	
Water Loss Above Linden-Evans						Total
FY 2019/20	(300)	(251)	(379)	(93)	-	(1,023)
FY 2020/21	-	-	-	-	-	-
FY 2021/22	-	-	-	-	-	-
3-Year Sum	(300)	(251)	(379)	(93)	-	(1,023)
Potable Wheeled to WMWD						Total
FY 2019/20			(5,102)			(5,102)
FY 2020/21			(4,404)			(4,404)
FY 2021/22			(4,910)			(4,910)
3-Year Sum	-	-	(14,416)	-	-	(14,416)
Wholesale to WMWD						Total
FY 2019/20	(640)	(536)	(810)	(198)	-	(2,184)
FY 2020/21	(909)	(684)	(1,343)	(226)	-	(3,163)
FY 2021/22	(238)	(180)	(360)	(63)	-	(841)
3-Year Sum	(1,787)	(1,400)	(2,513)	(487)	-	(6,188)
NORCO Surplus						Total
FY 2019/20	(34)	(29)	(43)	(11)	-	(117)
FY 2020/21	(128)	(96)	(189)	(32)	-	(445)
FY 2021/22	-	-	-	-	-	-
3-Year Sum	(162)	(125)	(232)	(42)	-	(562)
Delivered to UCR						Total
FY 2019/20			-			-
FY 2020/21			-			-
FY 2021/22			-			-
3-Year Sum	-	-	-	-	-	-
Water Loss Below Linden-Evans						Total
FY 2019/20	(1,824)	(1,529)	(2,310)	(564)	-	(6,228)
FY 2020/21	(1,897)	(1,428)	(2,802)	(471)	-	(6,598)
FY 2021/22	(1,873)	(1,416)	(2,834)	(497)	-	(6,620)
3-Year Sum	(5,595)	(4,373)	(7,946)	(1,532)	-	(19,446)
Available For Potable Use (Estimated)						Total
FY 2019/20	17,988	15,076	17,676	5,559	-	56,299
FY 2020/21	19,097	14,369	23,796	4,743	-	62,004
FY 2021/22	18,504	13,989	23,086	4,912	-	60,490
3-Year Sum	55,589	43,433	64,557	15,214	-	178,793

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

COST OF WATER

CALCULATED POTABLE COSTS	<u>Supply 1</u>	<u>Supply 2</u>	<u>Supply 3</u>	<u>Supply 4</u>	<u>N/A</u>	
	Gage	Riverside South/North	Waterman	Flume	Rialto/Colton Basin	
Potable Supply Costs						
FY 2019/20	\$ 2,449,773	\$ 2,233,471	\$ 3,307,757	\$ 983,226	\$ -	
FY 2020/21	2,591,433	2,133,432	4,249,902	1,027,208	-	
FY 2021/22	2,697,273	2,430,431	4,360,312	1,154,604	-	
3-Year Sum	\$ 7,738,478	\$ 6,797,334	\$ 11,917,971	\$ 3,165,038	\$ -	
	<i>Supply Only</i>	26.1%	22.9%	40.2%	10.7%	0.0%
Distribution Costs						
FY 2019/20	\$ 1,959,067	\$ 1,641,903	\$ 1,925,047	\$ 605,470	\$ -	
FY 2020/21	1,868,355	1,405,757	2,328,066	464,028	-	
FY 2021/22	1,897,695	1,434,635	2,367,534	503,696	-	
3-Year Sum	\$ 5,725,118	\$ 4,482,295	\$ 6,620,647	\$ 1,573,193	\$ -	
Total Potable Costs						
FY 2019/20	\$ 4,408,840	\$ 3,875,374	\$ 5,232,805	\$ 1,588,695	\$ -	
FY 2020/21	4,459,788	3,539,189	6,577,967	1,491,236	-	
FY 2021/22	4,594,968	3,865,066	6,727,846	1,658,299	-	
3-Year Sum	\$ 13,463,597	\$ 11,279,629	\$ 18,538,618	\$ 4,738,231	\$ -	
	<i>Supply With Distribution</i>	28.0%	23.5%	38.6%	9.9%	0.0%

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

COST OF WATER

	<u>Supply 1</u>	<u>Supply 2</u>	<u>Supply 3</u>	<u>Supply 4</u>	<u>N/A</u>
THREE YEAR AVG	Gage	Riverside South/North	Waterman	Flume	Rialto/Colton Basin
Three Year Average Cost \$	2,579,493	\$ 2,265,778	\$ 3,972,657	\$ 1,055,013	\$ -
Average Available AF	18,530	14,478	21,519	5,071	-
Average Available CCF	8,071,535	6,306,521	9,373,657	2,209,041	-
Overall Unit Cost (\$/AF)	\$139.21	\$156.50	\$184.61	\$208.04	
Percent of Supply	31%	24%	36%	9%	0%
Percent of Potable Supply Costs	26%	23%	40%	11%	0%
Incremental Increase in Costs Above Supply 1	0%	12%	33%	49%	

	<u>Supply 1</u>	<u>Supply 2</u>	<u>Supply 3</u>	<u>Supply 4</u>	<u>N/A</u>
TWO YEAR AVG	Gage	Riverside South/North	Waterman	Flume	Rialto/Colton Basin
Two Year Average Cost \$	2,644,353	\$ 2,281,932	\$ 4,305,107	\$ 1,090,906	\$ -
Average Available AF	18,801	14,179	23,441	4,827	-
Average Available CCF	8,189,522	6,176,272	10,210,739	2,102,732	-
Overall Unit Cost (\$/AF)	\$140.65	\$160.94	\$183.66	\$225.99	
Percent of Supply	31%	23%	38%	8%	0%
Percent of Supply Costs	26%	22%	42%	11%	0%

Appendix F

SUPPLY ALLOCATION

Appendix F, Supply Allocation, presents an estimate of the percent of each water supply that is used by each customer class. This distribution of the water supplies amongst the customer class also incorporates an allocation between each customer class's tiers, where applicable. The cheapest of the water sources is allocated first to the lower tiers, while each progressively more expensive source is allocated as needed to meet the demands associated with each tier. The distribution of each water source's capacity is later used to calculate the value of water demanded by each tier within each customer class as shown in Appendix H.

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

SUPPLY ALLOCATION

CLASS ALLOCATION	FY 23/24 ACCOUNTS	FY 23/24 MEU	INDOOR USAGE MONTHLY CCF	GAGE	RIVERSIDE SOUTH/NORTH	WATERMAN	FLUME	TOTAL	FY 23/24 Forecasted Usage
				SUPPLY 1	SUPPLY 2	SUPPLY 3	SUPPLY 4		
Percent of Supplies				31%	24%	36%	9%	100%	
Total Available for RPU Retail				8,189,522	6,176,272	10,210,739	2,102,732	26,679,265	23,344,985

Step 1: allocate supply based on annualized 3-month min

ANNUALIZED 3-MONTH MINIMUM	ANNUALIZED 3 MONTH MIN	LESS DEDICATED ALLOCATION	REMAINING	SUPPLY 1	SUPPLY 2	SUPPLY 3	SUPPLY 4	TOTAL	SUBTOTAL ALLOCATED
Remaining Available Before Allocation				8,189,522	6,176,272	10,210,739	2,102,732	26,679,265	
Amount to be Allocated				8,189,522	6,176,272	882,052	0		
SFR (WA-1A)	9,979,224	-	9,979,224	5,359,778	4,042,171	577,274	-	9,979,224	9,979,224
MFR (WA-1B)	312,224	-	312,224	167,693	126,469	18,061	-	312,224	312,224
FLAT RATE (WA-2)	14,337	-	14,337	7,700	5,807	829	-	14,337	14,337
RIVERSIDE WC (WA-4)	5,453	-	5,453	2,929	2,209	315	-	5,453	5,453
COMM/INDU (WA-6)	4,045,901	-	4,045,901	2,173,028	1,638,827	234,046	-	4,045,901	4,045,901
INTERRUPT. IRR / RECYC (WA-7/WA-10)	350,252	-	350,252	188,118	141,873	20,261	-	350,252	350,252
LANDSCAPE (WA-11)	358,219	-	358,219	192,397	145,100	20,722	-	358,219	358,219
AGRICULTURAL (WA-12)	182,235	-	182,235	97,877	73,816	10,542	-	182,235	182,235
Total:	15,247,845	-	15,247,845	8,189,522	6,176,272	882,052	-	15,247,845	15,247,845

Remaining to Allocate **0** **0** **9,328,687** **2,102,732** **11,431,419**

Step 2: allocate supply based on annualized winter

ANNUALIZED WINTER	ANNUALIZED WINTER	LESS DEDICATED ALLOCATION	REMAINING	SUPPLY 1	SUPPLY 2	SUPPLY 3	SUPPLY 4	TOTAL	SUBTOTAL ALLOCATED
Remaining Available Before Allocation				0	0	9,328,687	2,102,732	11,431,419	
Amount to be Allocated				0	0	4,630,122	0		
SFR (WA-1A)	11,432,895	(9,979,224)	1,453,672	-	-	1,453,672	-	1,453,672	11,432,895
MFR (WA-1B)	334,390	(312,224)	22,166	-	-	22,166	-	22,166	334,390
FLAT RATE (WA-2)	30,758	(14,337)	16,421	-	-	16,421	-	16,421	30,758
RIVERSIDE WC (WA-4)	6,955	(5,453)	1,502	-	-	1,502	-	1,502	6,955
COMM/INDU (WA-6)	6,538,766	(4,045,901)	2,492,865	-	-	2,492,865	-	2,492,865	6,538,766
INTERRUPT. IRR / RECYC (WA-7/WA-10)	564,447	(350,252)	214,195	-	-	214,195	-	214,195	564,447
LANDSCAPE (WA-11)	578,229	(358,219)	220,009	-	-	220,009	-	220,009	578,229
AGRICULTURAL (WA-12)	391,527	(182,235)	209,292	-	-	209,292	-	209,292	391,527
Total:	19,877,967	(15,247,845)	4,630,122	-	-	4,630,122	-	4,630,122	19,877,967

Remaining to Allocate **0** **0** **4,698,565** **2,102,732** **6,801,297**

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

SUPPLY ALLOCATION

				GAGE	RIVERSIDE SOUTH/NORTH	WATERMAN	FLUME		
REMAINING USAGE	TOTAL USAGE	LESS PREVIOUSLY ALLOCATED	REMAINING	SUPPLY 1	SUPPLY 2	SUPPLY 3	SUPPLY 4	TOTAL	SUBTOTAL ALLOCATED
Remaining Available Before Allocation				0	0	4,698,565	2,102,732	6,801,297	
Amount to be Allocated				0	0	3,467,018	0		
SFR (WA-1A)	13,476,117	(11,432,895)	2,043,221	-	-	2,043,221	-	2,043,221	13,476,117
MFR (WA-1B)	368,630	(334,390)	34,239	-	-	34,239	-	34,239	368,630
FLAT RATE (WA-2)	44,394	(30,758)	13,636	-	-	13,636	-	13,636	44,394
RIVERSIDE WC (WA-4)	8,986	(6,955)	2,031	-	-	2,031	-	2,031	8,986
COMM/INDU (WA-6)	7,357,736	(6,538,766)	818,971	-	-	818,971	-	818,971	7,357,736
INTERRUPT. IRR / RECYC (WA-7/WA-10)	807,384	(564,447)	242,936	-	-	242,936	-	242,936	807,384
LANDSCAPE (WA-11)	759,116	(578,229)	180,887	-	-	180,887	-	180,887	759,116
AGRICULTURAL (WA-12)	522,624	(391,527)	131,096	-	-	131,096	-	131,096	522,624
Total:	23,344,985	(19,877,967)	3,467,018	-	-	3,467,018	-	3,467,018	23,344,985

Remaining to Allocate **0** **0** **1,231,548** **2,102,732** **3,334,279** *TRUE*

Step 4: summarize

REMAINING USAGE	SUPPLY 1	SUPPLY 2	SUPPLY 3	SUPPLY 4	TOTAL
SFR (WA-1A)	5,359,778	4,042,171	4,074,168	-	13,476,117
MFR (WA-1B)	167,693	126,469	74,467	-	368,630
FLAT RATE (WA-2)	7,700	5,807	30,886	-	44,394
RIVERSIDE WC (WA-4)	2,929	2,209	3,848	-	8,986
COMM/INDU (WA-6)	2,173,028	1,638,827	3,545,882	-	7,357,736
INTERRUPT. IRR / RECYC (WA-7/WA-10)	188,118	141,873	477,393	-	807,384
LANDSCAPE (WA-11)	192,397	145,100	421,618	-	759,116
AGRICULTURAL (WA-12)	97,877	73,816	350,930	-	522,624
Total:	8,189,522	6,176,272	8,979,192	-	23,344,985

check: Sum of steps 1 to 3 above. 8,189,522 6,176,272 8,979,192 - 23,344,985

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

SUPPLY ALLOCATION

Step 5: reallocate remaining supply

	GAGE	RIVERSIDE SOUTH/NORTH	WATERMAN	FLUME	
	WITH RESILIENCY COMPONENT				
TOTAL w/ REALLOCATION of REMAINING SUPPLY 4	SUPPLY 1	SUPPLY 2	SUPPLY 3	SUPPLY 4	TOTAL
SFR (WA-1A)	5,359,778	4,042,171	4,664,340	1,007,655	15,073,945
MFR (WA-1B)	167,693	126,469	85,254	18,418	397,834
FLAT RATE (WA-2)	7,700	5,807	35,360	7,639	56,507
RIVERSIDE WC (WA-4)	2,929	2,209	4,406	952	10,495
COMM/INDU (WA-6)	2,173,028	1,638,827	4,059,528	876,995	8,748,379
INTERRUPT. IRR / RECYC (WA-7/WA-10)	188,118	141,873	477,393	-	807,384
LANDSCAPE (WA-11)	192,397	145,100	482,693	104,278	924,468
AGRICULTURAL (WA-12)	97,877	73,816	401,765	86,795	660,253
Total:	8,189,522	6,176,272	10,210,739	2,102,732	26,679,265
	<i>check: Total available for RPU retail.</i>	8,189,522	6,176,272	10,210,739	2,102,732

PERCENT BY SUPPLY	SUPPLY 1	SUPPLY 2	SUPPLY 3	SUPPLY 4	TOTAL
SFR (WA-1A)	65.45%	65.45%	45.68%	47.92%	56.50%
MFR (WA-1B)	2.05%	2.05%	0.83%	0.88%	1.49%
FLAT RATE (WA-2)	0.09%	0.09%	0.35%	0.36%	0.21%
RIVERSIDE WC (WA-4)	0.04%	0.04%	0.04%	0.05%	0.04%
COMM/INDU (WA-6)	26.53%	26.53%	39.76%	41.71%	32.79%
INTERRUPT. IRR / RECYC (WA-7/WA-10)	2.30%	2.30%	4.68%	0.00%	3.03%
LANDSCAPE (WA-11)	2.35%	2.35%	4.73%	4.96%	3.47%
AGRICULTURAL (WA-12)	1.20%	1.20%	3.93%	4.13%	2.47%
Total:	100.00%	100.00%	100.00%	100.00%	100.00%

Appendix G

CUSTOMER DATA AND PROJECTIONS

Appendix G, Customer Data and Projections, shows the projected customer demands by class, season, and tier (where applicable). Appendix G also presents the calculation of Max Day and Max Hour peak factors and extra capacity for each customer class based on their projected monthly demands and the overall system Peak Hour and Peak Day factors for the master plan. This projected demand data and associated analysis are basis of the many of the cost of service allocation and used within the rate analyses.

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

UNITS OF SERVICE

	Summer	Summer	Summer	Summer	Winter	Winter	Winter	Winter	Winter	Winter	Winter	Summer	Projected Annual Use
FORECASTED USAGE (FY 23/24) - Input from Customer Data Analysis.xlsx	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	
RESIDENTIAL													
WA-1A Single Family Residential	1,350,819	1,459,380	1,433,518	1,320,574	1,184,713	968,804	786,362	824,567	883,877	921,661	1,099,205	1,242,637	13,476,117
Tier 1	429,029	430,573	430,132	427,442	422,074	409,668	390,518	397,471	404,750	405,699	418,693	426,489	4,992,538
Tier 2	678,112	731,394	718,599	658,844	582,274	448,382	325,046	351,919	394,675	409,234	527,732	615,542	6,441,753
Tier 3	243,678	297,413	284,786	234,288	180,365	110,754	70,798	75,177	84,452	106,728	152,780	200,606	2,041,826
WA-1B Multi-Family Residential	34,140	36,721	36,220	33,932	31,380	28,883	26,182	25,369	26,505	27,389	29,353	32,555	368,630
Tier 1	15,526	15,612	15,578	15,437	15,189	14,971	14,632	14,674	14,998	15,082	15,306	15,537	182,542
Tier 2	18,615	21,109	20,642	18,495	16,191	13,912	11,550	10,695	11,507	12,307	14,047	17,018	186,087
COMMERICAL/INDUSTRIAL													
WA-6 Commercial and Industrial	686,857	740,785	753,585	711,905	661,571	575,519	480,757	487,227	523,355	513,553	572,297	650,325	7,357,736
WA-7 & 10 Interruptible Irrigation & Recycled	92,075	108,554	104,292	89,238	70,376	51,004	29,817	35,553	43,939	41,315	57,256	83,964	807,384
WA-11 Landscape Irrigation	84,324	89,581	92,358	79,443	68,700	51,528	31,999	35,970	42,890	44,897	61,315	76,111	759,116
OTHER													
WA-4 Riverside Water Company Irrigators	990	1,069	1,108	943	908	608	432	452	528	479	649	818	8,986
Tier 1	310	298	308	318	311	270	224	238	242	245	272	299	3,334
Tier 2	554	598	617	541	453	257	163	197	250	226	317	450	4,623
Tier 3	127	174	183	84	145	81	45	17	36	8	61	69	1,028
WA-2 Flat Rate - Temp Service	3,773	7,090	7,426	4,602	3,556	2,752	1,289	1,401	2,175	3,083	3,686	3,561	44,394
WA-5 Fire Protection Services & Hydrant	0	0	0	0	0	0	0	0	0	0	0	0	0
WA-8 Greenbelt Irrigation Service	10,217	8,731	5,909	10,588	3,026	8,008	5,328	2,397	2,568	4,677	5,307	3,154	69,909
WA-12 Agricultural Service	58,112	61,774	63,207	54,402	43,533	28,646	22,305	25,603	31,412	33,440	43,452	56,737	522,624
WA-7 Interruptible Irrigation	82,724	97,926	94,854	82,070	64,239	46,913	27,949	32,756	40,513	38,207	53,841	77,651	739,645
WA-10 Recycled Water Service	9,351	10,628	9,438	7,168	6,137	4,091	3,868	2,797	3,426	3,108	3,414	6,312	67,739
TOTAL USAGE	2,321,307	2,513,686	2,497,623	2,305,627	2,067,763	1,715,753	1,384,471	1,438,539	1,557,251	1,590,494	1,872,521	2,149,861	23,414,894

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

UNITS OF SERVICE

Based on Updated Tier Breaks

AVERAGE MONTHLY USAGE in PERCENTAGE	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	Line Total
RESIDENTIAL													
WA-1A Single Family Residential	10.02%	10.83%	10.64%	9.80%	8.79%	7.19%	5.84%	6.12%	6.56%	6.84%	8.16%	9.22%	100%
Tier 1	8.59%	8.62%	8.62%	8.56%	8.45%	8.21%	7.82%	7.96%	8.11%	8.13%	8.39%	8.54%	100%
Tier 2	10.53%	11.35%	11.16%	10.23%	9.04%	6.96%	5.05%	5.46%	6.13%	6.35%	8.19%	9.56%	100%
Tier 3	11.93%	14.57%	13.95%	11.47%	8.83%	5.42%	3.47%	3.68%	4.14%	5.23%	7.48%	9.82%	100%
WA-1B Multi-Family Residential	9.26%	9.96%	9.83%	9.21%	8.51%	7.84%	7.10%	6.88%	7.19%	7.43%	7.96%	8.83%	100%
Tier 1	8.51%	8.55%	8.53%	8.46%	8.32%	8.20%	8.02%	8.04%	8.22%	8.26%	8.38%	8.51%	100%
Tier 2	10.00%	11.34%	11.09%	9.94%	8.70%	7.48%	6.21%	5.75%	6.18%	6.61%	7.55%	9.14%	100%
COMMERICAL/INDUSTRIAL													
WA-6 Commercial and Industrial	9.34%	10.07%	10.24%	9.68%	8.99%	7.82%	6.53%	6.62%	7.11%	6.98%	7.78%	8.84%	100%
WA-7 Interruptible Irrigation	11.18%	13.24%	12.82%	11.10%	8.69%	6.34%	3.78%	4.43%	5.48%	5.17%	7.28%	10.50%	100%
WA-11 Landscape Irrigation	11.11%	11.80%	12.17%	10.47%	9.05%	6.79%	4.22%	4.74%	5.65%	5.91%	8.08%	10.03%	100%
OTHER													
WA-4 Riverside Water Company Irrigators	11.02%	11.90%	12.33%	10.49%	10.11%	6.77%	4.81%	5.03%	5.88%	5.33%	7.22%	9.11%	100%
Tier 1	9.29%	8.94%	9.24%	9.54%	9.31%	8.08%	6.72%	7.14%	7.27%	7.36%	8.14%	8.97%	100%
Tier 2	11.98%	12.93%	13.35%	11.70%	9.80%	5.57%	3.53%	4.26%	5.41%	4.88%	6.85%	9.74%	100%
Tier 3	12.32%	16.88%	17.78%	8.14%	14.06%	7.92%	4.36%	1.64%	3.47%	0.81%	5.90%	6.71%	100%
WA-2 Flat Rate - Temp Service	8.50%	15.97%	16.73%	10.37%	8.01%	6.20%	2.90%	3.15%	4.90%	6.94%	8.30%	8.02%	100%
WA-5 Fire Protection Services & Hydrant	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0%
WA-8 Greenbelt Irrigation Service	14.61%	12.49%	8.45%	15.15%	4.33%	11.46%	7.62%	3.43%	3.67%	6.69%	7.59%	4.51%	100%
WA-10 Recycled Water Service	13.80%	15.69%	13.93%	10.58%	9.06%	6.04%	2.76%	4.13%	5.06%	4.59%	5.04%	9.32%	100%
WA-12 Agricultural Service	11.12%	11.82%	12.09%	10.41%	8.33%	5.48%	4.27%	4.90%	6.01%	6.40%	8.31%	10.86%	100%

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

UNITS OF SERVICE

FORECASTED USAGE (FY 23/24) - Input from Customer Data Analysis.xlsx	PROJECTIONS (MATCHED TO PRO FORMA)									7 months	5 months	Ratio
	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28	FY 28/29	FY 29/30	FY 30/31	FY 31/32	Winter	Summer	
RESIDENTIAL												
WA-1A Single Family Residential	13,476,117	13,567,968	13,662,795	13,760,195	13,860,518	13,961,573	14,060,743	14,161,425	14,263,314	952,741	1,361,386	1.43
Tier 1	4,992,538	5,026,567	5,061,697	5,097,782	5,134,949	5,172,387	5,209,126	5,246,426	5,284,174	406,982	428,733	1.05
Tier 2	6,441,753	6,485,659	6,530,987	6,577,546	6,625,502	6,673,807	6,721,211	6,769,339	6,818,043	434,180	680,498	1.57
Tier 3	2,041,826	2,055,742	2,070,110	2,084,868	2,100,068	2,115,379	2,130,405	2,145,660	2,161,097	111,579	252,154	2.26
WA-1B Multi-Family Residential	368,630	371,142	373,736	376,400	379,145	381,909	384,622	387,376	390,163	27,866	34,714	1.25
Tier 1	182,542	183,787	185,071	186,390	187,749	189,118	190,462	191,825	193,206	14,979	15,538	1.04
Tier 2	186,087	187,355	188,665	190,010	191,395	192,791	194,160	195,550	196,957	12,887	19,176	1.49
COMMERICAL/INDUSTRIAL												
WA-6 Commercial and Industrial	7,357,736	7,464,359	7,572,724	7,682,792	7,794,744	7,908,327	8,023,566	8,140,484	8,259,105	544,897	708,691	1.30
WA-7 & 10 Interruptible Irrigation & Recycled	807,384	818,102	829,979	842,043	854,313	866,761	879,392	892,206	905,207	47,037	95,625	2.03
WA-11 Landscape Irrigation	759,116	770,116	781,296	792,652	804,203	815,921	827,811	839,873	852,112	48,186	84,363	1.75
OTHER												
WA-4 Riverside Water Company Irrigators	8,986	8,986	8,986	8,986	8,986	8,986	8,986	8,986	8,986	580	986	1.70
Tier 1	3,334	3,334	3,334	3,334	3,334	3,334	3,334	3,334	3,334	257	307	1.19
Tier 2	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	266	552	2.07
Tier 3	1,028	1,028	1,028	1,028	1,028	1,028	1,028	1,028	1,028	56	127	2.27
WA-2 Flat Rate - Temp Service	44,394	44,394	44,394	44,394	44,394	44,394	44,394	44,394	44,394	2,563	5,290	2.06
WA-5 Fire Protection Services & Hydrant	0	0	0	0	0	0	0	0	0	0	0	0.00
WA-8 Greenbelt Irrigation Service	69,909	69,909	69,909	69,909	69,909	69,909	69,909	69,909	69,909	4,473	7,720	1.73
WA-12 Agricultural Service	522,624	522,624	522,624	522,624	522,624	522,624	522,624	522,624	522,624	32,627	58,847	1.80
TOTAL USAGE	23,414,894	23,637,599	23,866,442	24,099,994	24,338,834	24,580,403	24,822,044	25,067,276	25,315,813			

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

UNITS OF SERVICE

FORECASTED USAGE (FY 23/24) - Input from Customer Data Analysis.xlsx	FY 2024			FY 2025			FY 2026			FY 2027			FY 2028		
	Winter	Summer	Avg	Winter	Summer	Avg	Winter	Summer	Avg	Winter	Summer	Avg	Winter	Summer	Avg
RESIDENTIAL	0	0	0	1	1	1	2	2	2	3	3	3	4	4	4
WA-1A Single Family Residential	6,669,189	6,806,928	1,123,010	6,714,645	6,853,323	1,130,664	6,761,574	6,901,221	1,138,566	6,809,776	6,950,419	1,146,683	6,859,425	7,001,093	1,155,043
Tier 1	2,848,873	2,143,665	416,045	2,868,290	2,158,276	418,881	2,888,337	2,173,360	421,808	2,908,928	2,188,854	424,815	2,930,136	2,204,813	427,912
Tier 2	3,039,262	3,402,491	536,813	3,059,977	3,425,682	540,472	3,081,363	3,449,624	544,249	3,103,330	3,474,216	548,129	3,125,956	3,499,546	552,125
Tier 3	781,054	1,260,772	170,152	786,378	1,269,365	171,312	791,874	1,278,236	172,509	797,519	1,287,349	173,739	803,333	1,296,735	175,006
WA-1B Multi-Family Residential	195,061	173,568	30,719	196,391	174,751	30,929	197,763	175,973	31,145	199,173	177,227	31,367	200,625	178,519	31,595
Tier 1	104,853	77,690	15,212	105,567	78,219	15,316	106,305	78,766	15,423	107,063	79,327	15,533	107,844	79,906	15,646
Tier 2	90,208	95,879	15,507	90,823	96,532	15,613	91,458	97,207	15,722	92,110	97,900	15,834	92,781	98,614	15,950
COMMERICAL/INDUSTRIAL							0	0	0	0	0	0	0	0	0
WA-6 Commercial and Industrial	3,814,280	3,543,456	613,145	3,869,554	3,594,805	622,030	3,925,731	3,646,993	631,060	3,982,790	3,700,001	640,233	4,040,827	3,753,917	649,562
WA-7 & 10 Interruptible Irrigation & Recycled	329,261	478,123	67,282	333,632	484,470	68,175	338,476	491,503	69,165	343,395	498,647	70,170	348,399	505,913	71,193
WA-11 Landscape Irrigation	337,300	421,816	63,260	342,188	427,928	64,176	347,155	434,141	65,108	352,201	440,451	66,054	357,333	446,869	67,017
OTHER							0	0	0	0	0	0	0	0	0
WA-4 Riverside Water Company Irrigators	4,057	4,929	749	4,057	4,929	749	4,057	4,929	749	4,057	4,929	749	4,057	4,929	749
Tier 1	1,801	1,533	278	1,801	1,533	278	1,801	1,533	278	1,801	1,533	278	1,801	1,533	278
Tier 2	1,863	2,760	385	1,863	2,760	385	1,863	2,760	385	1,863	2,760	385	1,863	2,760	385
Tier 3	392	636	86	392	636	86	392	636	86	392	636	86	392	636	86
WA-2 Flat Rate - Temp Service	17,942	26,452	3,700	17,942	26,452	3,700	17,942	26,452	3,700	17,942	26,452	3,700	17,942	26,452	3,700
WA-5 Fire Protection Services & Hydrant	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WA-8 Greenbelt Irrigation Service	31,311	38,598	5,826	31,311	38,598	5,826	31,311	38,598	5,826	31,311	38,598	5,826	31,311	38,598	5,826
WA-12 Agricultural Service	228,391	294,233	43,552	228,391	294,233	43,552	228,391	294,233	43,552	228,391	294,233	43,552	228,391	294,233	43,552
TOTAL USAGE	11,626,792	11,788,103	1,951,243	11,738,111	11,899,489	1,969,801	11,852,400	12,014,043	1,988,871	11,969,036	12,130,957	2,008,334	12,088,310	12,250,523	2,028,237

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

UNITS OF SERVICE

Units of Service	FY 23/24 ANNUAL USE	365 days in a year				30.42 days in a month			MAX HOUR			MM/AVG
		AVG DAY	MAX MONTH	AVG MONTH	ADD of MM	MDD PEAKING FACTOR	TOTAL MDD CAPACITY	EXTRA CAPACITY	MDD PEAKING FACTOR	TOTAL MDD CAPACITY	EXTRA CAPACITY	For Comparison
RESIDENTIAL												
WA-1A Single Family Residential	13,476,117	36,921	1,459,380	1,123,010	47,974	1.48	54,749	17,828	1.77	65,177	47,349	1.30
Tier 1	4,992,538	13,678	430,573	416,045	14,154	1.18	16,153	2,475	1.41	19,230	16,755	
Tier 2	6,441,753	17,649	731,394	536,813	24,043	1.55	27,438	9,790	1.85	32,665	22,875	
Tier 3	2,041,826	5,594	297,413	170,152	9,777	1.99	11,157	5,563	2.37	13,283	7,719	
WA-1B Multi-Family Residential	368,630	1,010	36,721	30,719	1,207	1.36	1,378	368	1.62	1,640	1,272	1.20
Tier 1	182,542	500	15,612	15,212	513	1.17	586	86	1.39	697	612	
Tier 2	186,087	510	21,109	15,507	694	1.55	792	282	1.85	943	661	
COMMERICAL/INDUSTRIAL												
WA-6 Commercial and Industrial	7,357,736	20,158	753,585	613,145	24,773	1.40	28,271	8,113	1.67	33,656	25,543	1.23
WA-7 & 10 Interruptible Irrigation & Recycled	807,384	2,212	108,554	67,282	3,569	1.84	4,072	1,860	2.19	4,848	2,988	1.61
WA-11 Landscape Irrigation	759,116	2,080	92,358	63,260	3,036	1.67	3,465	1,385	1.98	4,125	2,740	1.46
OTHER												
WA-4 Riverside Water Company Irrigators	8,986	25	1,108	749	36	1.69	42	17	2.01	49	33	1.48
Tier 1	3,334	9	318	278	10	1.31	12	3	1.55	14	11	
Tier 2	4,623	13	617	385	20	1.83	23	10	2.18	28	17	
Tier 3	1,028	3	183	86	6	2.44	7	4	2.90	8	4	
WA-2 Flat Rate - Temp Service	44,394	122	7,426	3,700	244	2.29	279	157	2.73	332	175	2.01
WA-5 Fire Protection Services & Hydrant	0	0	0	0	0	0.00	0	0	0.00	-	-	
WA-8 Greenbelt Irrigation Service	69,909	192	10,588	5,826	348	2.07	397	206	2.47	473	267	1.82
WA-12 Agricultural Service	522,624	1,432	63,207	43,552	2,078	1.66	2,371	939	1.97	2,823	1,884	1.45
TOTAL USAGE	23,414,894	64,150	2,532,928	1,951,241	83,265	1.48	95,023	30,873	1.76	113,123	82,250	1.30

SYSTEM DEMAND FACTORS	CCF	NOTES
Max Month Demand	MMD 2,513,686	based on FY 23/24 projection above
Average Day Demand	ADD 64,150	based on FY 23/24 projection above
Max Day Demand (FY 2021)	MDD 94,301	
Max Hour Demand (FY 2021)	MHD 112,263	
Average Day of Max Month	ADD of MM 82,633	
System Max Day Ratio	MDD/ADD 1.47	based on FY 20/21 MDD/ADD
System Max Hour Ratio	MHD/ADD 1.75	based on FY 20/21 MHD/ADD
System Max Hour / Max Day Ratio	MHD/MDD 1.19	
System Max Day / Avg Day in Max Month	MDD/MMD 1.14	

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

UNITS OF SERVICE

EXTRA CAPACITY ALLOCATIONS	NOTES
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BASED ON MAX DAY

Base	1.00	68.0%
Max Day	0.47	32.0%
MDD/ADD	1.47	100.0%

BASE, MAX DAY, and MAX HOUR

Base	1.00	57.1%
Max Day	0.47	26.9%
Max Hour	0.28	16.0%
MHD / ADD	1.75	100.0%

MAX DAY and MAX HOUR

Max Day	1.47	84.0%
Max Hour	0.28	16.0%
MHD / ADD	1.75	100.0%

FISCAL YEAR	Retail (AF)	Retail (MG)	AVG DAY DEMAND	MAX DAY DEMAND	PEAK HOUR DEMAND
FY 18/19	55,451	18,070	34,380	50,538	60,164
FY 19/20	56,297	18,346	34,904	51,309	61,082
FY 20/21	57,656	18,788	35,747	52,548	62,557
			1.47	1.75	

Footnotes:

- (1) Fiscal Year Retail Water Use from "Schem summary-Fiscal" tabs, on this spreadsheet
- (2) = (AF *43,560*7.481)/1,000,000
- (3) = MG*1,000,000/(365*24*60)
- (4) = Average Day Demand (ADD) * 1.47; where the 1.47 peak factor is from the 2022 RPU Focused Water Master Plan
- (5) = Average Day Demand (MDD) *1.75; where the 1.75 peak factor is from the 2022 RPU Focused Water Master Plan;
Peak Hour Demand is also known as Maximum Hour Demand

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

UNITS OF SERVICE

FORECASTED USAGE (FY 23/24) - Input from Customer Data Analysis.xlsx	PROJECTIONS (MATCHED TO PRO FORMA)									7 months	5 months	Ratio
	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28	FY 28/29	FY 29/30	FY 30/31	FY 31/32	Winter	Summer	
RESIDENTIAL												
WA-1A Single Family Residential	13,476,117	13,567,968	13,662,795	13,760,195	13,860,518	13,961,573	14,060,743	14,161,425	14,263,314	952,741	1,361,386	1.43
Tier 1	4,992,538	5,026,567	5,061,697	5,097,782	5,134,949	5,172,387	5,209,126	5,246,426	5,284,174	406,982	428,733	1.05
Tier 2	6,441,753	6,485,659	6,530,987	6,577,546	6,625,502	6,673,807	6,721,211	6,769,339	6,818,043	434,180	680,498	1.57
Tier 3	2,041,826	2,055,742	2,070,110	2,084,868	2,100,068	2,115,379	2,130,405	2,145,660	2,161,097	111,579	252,154	2.26
WA-1B Multi-Family Residential	368,630	371,142	373,736	376,400	379,145	381,909	384,622	387,376	390,163	27,866	34,714	1.25
Tier 1	182,542	183,787	185,071	186,390	187,749	189,118	190,462	191,825	193,206	14,979	15,538	1.04
Tier 2	186,087	187,355	188,665	190,010	191,395	192,791	194,160	195,550	196,957	12,887	19,176	1.49
COMMERICAL/INDUSTRIAL												
WA-6 Commercial and Industrial	7,357,736	7,464,359	7,572,724	7,682,792	7,794,744	7,908,327	8,023,566	8,140,484	8,259,105	544,897	708,691	1.30
WA-7 & 10 Interruptible Irrigation & Recycled	807,384	818,102	829,979	842,043	854,313	866,761	879,392	892,206	905,207	47,037	95,625	2.03
WA-11 Landscape Irrigation	759,116	770,116	781,296	792,652	804,203	815,921	827,811	839,873	852,112	48,186	84,363	1.75
OTHER												
WA-4 Riverside Water Company Irrigators	8,986	8,986	8,986	8,986	8,986	8,986	8,986	8,986	8,986	580	986	1.70
Tier 1	3,334	3,334	3,334	3,334	3,334	3,334	3,334	3,334	3,334	257	307	1.19
Tier 2	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	266	552	2.07
Tier 3	1,028	1,028	1,028	1,028	1,028	1,028	1,028	1,028	1,028	56	127	2.27
WA-2 Flat Rate - Temp Service	44,394	44,394	44,394	44,394	44,394	44,394	44,394	44,394	44,394	2,563	5,290	2.06
WA-5 Fire Protection Services & Hydrant	0	0	0	0	0	0	0	0	0	0	0	0.00
WA-8 Greenbelt Irrigation Service	69,909	69,909	69,909	69,909	69,909	69,909	69,909	69,909	69,909	4,473	7,720	1.73
WA-12 Agricultural Service	522,624	522,624	522,624	522,624	522,624	522,624	522,624	522,624	522,624	32,627	58,847	1.80
TOTAL USAGE	23,414,894	23,637,599	23,866,442	24,099,994	24,338,834	24,580,403	24,822,044	25,067,276	25,315,813			

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

UNITS OF SERVICE

FORECASTED USAGE (FY 23/24) - Input from Customer Data Analysis.xlsx	FY 2024			FY 2025			FY 2026			FY 2027			FY 2028		
	Winter	Summer	Avg	Winter	Summer	Avg	Winter	Summer	Avg	Winter	Summer	Avg	Winter	Summer	Avg
RESIDENTIAL	0	0	0	1	1	1	2	2	2	3	3	3	4	4	4
WA-1A Single Family Residential	6,669,189	6,806,928	1,123,010	6,714,645	6,853,323	1,130,664	6,761,574	6,901,221	1,138,566	6,809,776	6,950,419	1,146,683	6,859,425	7,001,093	1,155,043
Tier 1	2,848,873	2,143,665	416,045	2,868,290	2,158,276	418,881	2,888,337	2,173,360	421,808	2,908,928	2,188,854	424,815	2,930,136	2,204,813	427,912
Tier 2	3,039,262	3,402,491	536,813	3,059,977	3,425,682	540,472	3,081,363	3,449,624	544,249	3,103,330	3,474,216	548,129	3,125,956	3,499,546	552,125
Tier 3	781,054	1,260,772	170,152	786,378	1,269,365	171,312	791,874	1,278,236	172,509	797,519	1,287,349	173,739	803,333	1,296,735	175,006
WA-1B Multi-Family Residential	195,061	173,568	30,719	196,391	174,751	30,929	197,763	175,973	31,145	199,173	177,227	31,367	200,625	178,519	31,595
Tier 1	104,853	77,690	15,212	105,567	78,219	15,316	106,305	78,766	15,423	107,063	79,327	15,533	107,844	79,906	15,646
Tier 2	90,208	95,879	15,507	90,823	96,532	15,613	91,458	97,207	15,722	92,110	97,900	15,834	92,781	98,614	15,950
COMMERICAL/INDUSTRIAL							0	0	0	0	0	0	0	0	0
WA-6 Commercial and Industrial	3,814,280	3,543,456	613,145	3,869,554	3,594,805	622,030	3,925,731	3,646,993	631,060	3,982,790	3,700,001	640,233	4,040,827	3,753,917	649,562
WA-7 & 10 Interruptible Irrigation & Recycled	329,261	478,123	67,282	333,632	484,470	68,175	338,476	491,503	69,165	343,395	498,647	70,170	348,399	505,913	71,193
WA-11 Landscape Irrigation	337,300	421,816	63,260	342,188	427,928	64,176	347,155	434,141	65,108	352,201	440,451	66,054	357,333	446,869	67,017
OTHER							0	0	0	0	0	0	0	0	0
WA-4 Riverside Water Company Irrigators	4,057	4,929	749	4,057	4,929	749	4,057	4,929	749	4,057	4,929	749	4,057	4,929	749
Tier 1	1,801	1,533	278	1,801	1,533	278	1,801	1,533	278	1,801	1,533	278	1,801	1,533	278
Tier 2	1,863	2,760	385	1,863	2,760	385	1,863	2,760	385	1,863	2,760	385	1,863	2,760	385
Tier 3	392	636	86	392	636	86	392	636	86	392	636	86	392	636	86
WA-2 Flat Rate - Temp Service	17,942	26,452	3,700	17,942	26,452	3,700	17,942	26,452	3,700	17,942	26,452	3,700	17,942	26,452	3,700
WA-5 Fire Protection Services & Hydrant	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WA-8 Greenbelt Irrigation Service	31,311	38,598	5,826	31,311	38,598	5,826	31,311	38,598	5,826	31,311	38,598	5,826	31,311	38,598	5,826
WA-12 Agricultural Service	228,391	294,233	43,552	228,391	294,233	43,552	228,391	294,233	43,552	228,391	294,233	43,552	228,391	294,233	43,552
TOTAL USAGE	11,626,792	11,788,103	1,951,243	11,738,111	11,899,489	1,969,801	11,852,400	12,014,043	1,988,871	11,969,036	12,130,957	2,008,334	12,088,310	12,250,523	2,028,237

Appendix H

RATE CALCULATIONS

Uniform Fixed Rates

Appendix H, Uniform Fixed Rates details the final calculation of the fixed monthly rates that are charged to all customers in relation to their meter size. The appendix shows the allocated costs related to providing service to customers regardless of meter size or customer class as well as the costs related to providing system capacity. The number of accounts and the number of MEUs as projected by the financial model are included.

The revenues to recover from the customer and capacity components are divided by the number of accounts and the number of MEU's, respectively, to determine monthly component charge per account and per MEU.

Customer related expenses are evenly recovered over each account. Capacity related expenses are recovered over each MEU, thereby allocating more in costs to those customers with larger meters and thus requiring more system capacity. Appendix H Uniform Fixed Rates presents the resulting fixed charge per meter size over the course of the next five fiscal years (2023/24 – 2027/28).

SFR

Appendix H, SFR details the final calculation of the winter and summer rates to be charged to any customers designated as Single-Family Residences (SFR) using the projections calculated within the financial model for the number of accounts, water usage, and allocated revenue requirements. Appendix H, SFR presents the calculated rates for each of the next five fiscal years (2023/24 – 2027/28).

The rate structure for customers designated as SFR includes three tiers. Based on the projected demands by tier and season (from Appendix G, and included in Appendix H), the seasonal peak adjustment ratio for Tier 3, and the supply allocation, the costs associated with serving SFR customers are allocated between the seasons and tiers. These costs are recovered over each CCF of consumption within each season and tier.

MFR

Appendix H, MFR details the final calculation of the winter and summer rates to be charged to any customers designated as Multi-Family Residences (MFR) using the projections calculated within the financial model for the number of accounts, water usage, and allocated revenue requirements. Appendix H, MFR presents the calculated rates for each of the next five fiscal years (2023/24 – 2027/28).

The rate structure for customers designated as MFR includes two tiers. Based on the projected demands by tier and season (from Appendix G, and included in Appendix H), the seasonal peak adjustment ratio for Tier 2, and the supply allocation, the costs associated with serving MFR customers are allocated between the seasons and tiers. These costs are recovered over each CCF of consumption within each season and tier.

WA-4

Appendix H, WA-4 details the final calculation of the winter and summer rates to be charged to any customers designated as Riverside Water Company Irrigators (WA-4) using the projections calculated within the financial model for the number of accounts, water usage, and allocated revenue requirements. Appendix H, WA-4 presents the calculated rates for each of the next five fiscal years (2023/24 – 2027/28).

The rate structure for customers designated as WA-4 includes three tiers. Based on the projected demands by tier and season (from Appendix G, and included in Appendix H), the seasonal peak adjustment ratio for Tier 3, and the supply allocation, the costs associated with serving WA-4 customers are allocated between the seasons and tiers. These costs are recovered over each CCF of consumption within each season and tier.

Variable Rates – No Tier

Appendix H, Variable Rates – No Tier details the final calculation of the winter and summer rates to be charged to any customers designated as Commercial/Industrial, Landscape, Temporary Service (WA-2) and Interruptible Irrigation (WA-7 & WA-10). Appendix H, Variable Rates – No Tier presents the calculated rates for each of the next five fiscal years (2023/24 – 2027/28).

Commercial/Industrial

The rate structure for customers designated as Commercial/Industrial does not include any tier breaks. However, rates vary between the winter and summer. As a result, the costs associated with serving Landscape customers are allocated over the projected seasonal consumption separately. Once split between the seasons the sum of costs for each season is divided by the corresponding seasonal usage to determine the summer or winter rate for each year within the projection.

Landscape

The rate structure for customers designated as Landscape does not include any tier breaks. However, rates vary between the winter and summer. As a result, the costs associated with serving Landscape customers are allocated over the projected seasonal consumption separately. Once split between the seasons the sum of costs for each season is divided by the corresponding seasonal usage to determine the summer or winter rate for each year within the projection.

Temporary Service (WA-2)

The rate structure for customers designated as WA-2 does not include any tier breaks and rates do not vary between the winter and summer. These customers are charged based on a uniform, non-seasonally adjusted rate. Rates are calculated for each year of the projection by dividing the costs to be recovered by the projected usage.

Interruptible Rates (WA-7 & WA-10)

The rate structure for customers designated as WA-7 and WA-10 does not include any tier breaks and rates do not vary between the winter and summer. These customers are charged based on a uniform, non-seasonally adjusted rate. Rates are calculated for each year of the projection by dividing the costs to be recovered by the projected usage.

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

UNIFORM FIXED RATES

Appendix H
Rate Calculations
Fixed

	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28
Number of Accounts		66,694	66,879	67,064	67,250	67,436	67,623
Number of MEUs		95,061	95,337	95,661	95,987	96,290	96,594
Customer Revenue to Recover			\$ 2,894,502	\$ 3,103,816	\$ 3,328,561	\$ 3,569,842	\$ 3,825,746
Capacity Revenue to Recover			\$ 27,123,103	\$ 29,084,497	\$ 31,190,483	\$ 33,451,419	\$ 35,849,387
Monthly Component Charge per Account			\$ 3.61	\$ 3.86	\$ 4.12	\$ 4.41	\$ 4.71
Monthly Component Charge per MEU			\$ 23.71	\$ 25.34	\$ 27.08	\$ 28.95	\$ 30.93

METER SIZE	METER EQUIVALENTS	MONTHLY FIXED CHARGES							
0.625	1.00	\$ 23.08	\$ 26.00	\$ 27.31	\$ 29.19	\$ 31.20	\$ 33.36	\$ 35.64	
0.75	1.00	23.08	26.00	27.31	29.19	31.20	33.36	35.64	
1	1.67	36.63	41.26	43.20	46.17	49.35	52.76	56.36	
1.5	3.33	70.22	79.08	82.55	88.23	94.30	100.82	107.70	
2	5.33	110.68	124.64	129.97	138.90	148.45	158.72	169.56	
3	10.00	205.16	231.03	240.69	257.22	274.91	293.91	313.99	
4	16.67	340.10	382.97	398.82	426.21	455.53	487.01	520.28	
6	36.67	744.72	838.59	872.98	932.94	997.11	1,066.02	1,138.84	
8	60.00	1,216.71	1,370.06	1,426.09	1,524.04	1,628.85	1,741.43	1,860.39	
10	93.33	1,891.02	2,129.34	2,216.28	2,368.50	2,531.39	2,706.35	2,891.22	
12	133.33	2,700.26	3,040.57	3,164.60	3,381.95	3,614.54	3,864.36	4,128.34	

METER SIZE	METER EQUIVALENTS	FY 21/22 REVENUE	FY 22/23 REVENUE	FY 23/24 REVENUE	FY 24/25 REVENUE	FY 25/26 REVENUE	FY 26/27 REVENUE	FY 27/28 REVENUE
0.625	1	\$ 1,760,671	\$ 1,989,403	\$ 2,094,831	\$ 2,244,568	\$ 2,405,054	\$ 2,577,924	\$ 2,760,933
0.75	1	13,048,066	14,746,035	15,528,000	16,638,446	17,828,649	19,110,751	20,468,103
1	1.67	4,226,060	4,793,098	5,034,176	5,396,835	5,786,321	6,205,397	6,649,464
1.5	3.33	1,039,449	1,201,335	1,262,441	1,357,972	1,460,725	1,571,993	1,690,315
2	5.33	2,000,372	2,315,867	2,431,842	2,616,407	2,815,110	3,030,594	3,259,877
3	10	630,918	724,900	755,757	810,555	869,398	931,486	997,272
4	16.67	534,583	613,882	639,689	686,807	737,463	790,500	846,726
6	36.67	634,610	728,395	758,504	814,439	874,560	937,344	1,003,885
8	60	1,036,637	1,189,315	1,237,954	1,329,107	1,427,057	1,529,189	1,637,397
10	93.33	226,922	260,342	270,972	290,923	312,364	334,719	358,404
12	133.33	-	-	-	-	-	-	-
Total Calculated Revenues*		\$ 25,138,288	\$ 28,562,572	\$ 30,014,166	\$ 32,186,060	\$ 34,516,702	\$ 37,019,898	\$ 39,672,377

*Note: Total calculated revenues vary slightly from the sum of allocated Customer and Capacity revenue requirements due to rounding of rates to the nearest \$0.01.

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

VARIABLE RATES - TIER (SFR)

Appendix H

Rate Calculations

SFR

	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28
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WA1A - SFR

REVENUE TO RECOVER

Base Revenue to Recover	\$ 6,032,249	\$ 6,468,468	\$ 6,936,845	\$ 7,439,683	\$ 7,972,997
Max Day Revenue to Recover	7,073,092	7,584,579	8,133,772	8,723,373	9,348,709
Max Hour Revenue to Recover	1,709,184	1,832,783	1,965,494	2,107,968	2,259,078
Supply 1 Revenue to Recover	2,642,930	2,834,053	3,039,264	3,259,574	3,493,237
Supply 2 Revenue to Recover	2,611,459	2,800,305	3,003,073	3,220,760	3,451,641
Supply 3 Revenue to Recover	3,452,785	3,702,472	3,970,565	4,258,383	4,563,646
Supply 4 Revenue to Recover	1,023,555	1,097,573	1,177,048	1,262,369	1,352,862
Supply Sustainability Revenue to Recover	752,056	806,440	864,834	927,524	994,014
Total Allocated Costs	\$ 25,297,311	\$ 27,126,674	\$ 29,090,895	\$ 31,199,635	\$ 33,436,184

REVENUE TO RECOVER - BY TIER

Base	Use per Tier					
Tier 1	37.0%	\$ 2,234,786	\$ 2,396,393	\$ 2,569,914	\$ 2,756,202	\$ 2,953,781
Tier 2	47.8%	2,883,491	3,092,009	3,315,899	3,556,262	3,811,193
Tier 3	15.2%	913,973	980,066	1,051,032	1,127,219	1,208,024
Max Day	Max Day Extra Capacity per Tier					
Tier 1	13.9%	\$ 981,855	\$ 1,052,857	\$ 1,129,094	\$ 1,210,940	\$ 1,297,746
Tier 2	54.9%	3,883,984	4,164,852	4,466,426	4,790,188	5,133,573
Tier 3	31.2%	2,207,253	2,366,869	2,538,252	2,722,245	2,917,389
Max Hour	Max Hour Extra Capacity per Tier					
Tier 1	35.4%	\$ 604,810	\$ 648,547	\$ 695,508	\$ 745,924	\$ 799,395
Tier 2	48.3%	825,728	885,440	949,554	1,018,385	1,091,388
Tier 3	16.3%	278,646	298,796	320,432	343,659	368,294
Supply 1	SFR Supply 1 Allocation by Tier					
Tier 1	93.1%	\$ 2,461,843	\$ 2,639,870	\$ 2,831,021	\$ 3,036,236	\$ 3,253,888
Tier 2	6.9%	181,088	194,183	208,244	223,339	239,349
Tier 3	0.0%	-	-	-	-	-
Supply 2	SFR Supply 2 Allocation by Tier					
Tier 1	0.0%	\$ -	\$ -	\$ -	\$ -	\$ -
Tier 2	100.0%	2,611,459	2,800,305	3,003,073	3,220,760	3,451,641
Tier 3	0.0%	-	-	-	-	-
Supply 3	SFR Supply 3 Allocation by Tier					
Tier 1	0.0%	\$ -	\$ -	\$ -	\$ -	\$ -
Tier 2	43.6%	1,504,444	1,613,237	1,730,051	1,855,459	1,988,467
Tier 3	56.4%	1,948,341	2,089,234	2,240,514	2,402,925	2,575,178
Supply 4	SFR Supply 4 Allocation by Tier					
Tier 1	0.0%	\$ -	\$ -	\$ -	\$ -	\$ -
Tier 2	0.0%	-	-	-	-	-
Tier 3	100.0%	1,023,555	1,097,573	1,177,048	1,262,369	1,352,862
Supply Sustainability	All to Tier 3					
Tier 1	0.0%	\$ -	\$ -	\$ -	\$ -	\$ -
Tier 2	0.0%	-	-	-	-	-
Tier 3	100.0%	752,056	806,440	864,834	927,524	994,014

PROJECTED USAGE (HFC)

Annual	13,476,117	13,567,968	13,662,795	13,760,195	13,860,518
Tier 1	4,992,538	5,026,567	5,061,697	5,097,782	5,134,949
Tier 2	6,441,753	6,485,659	6,530,987	6,577,546	6,625,502

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

VARIABLE RATES - TIER (SFR)

Appendix H
Rate Calculations
SFR

	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28
Tier 3		2,041,826	2,055,742	2,070,110	2,084,868	2,100,068
Winter						
Tier 1		2,848,873	2,868,290	2,888,337	2,908,928	2,930,136
Tier 2		3,039,262	3,059,977	3,081,363	3,103,330	3,125,956
Tier 3		781,054	786,378	791,874	797,519	803,333
Summer						
Tier 1		2,143,665	2,158,276	2,173,360	2,188,854	2,204,813
Tier 2		3,402,491	3,425,682	3,449,624	3,474,216	3,499,546
Tier 3		1,260,772	1,269,365	1,278,236	1,287,349	1,296,735

SUPPLY TIER USAGE (HCF)

	Tier Usage (HCF)	Supply 1 (HCF)	Supply 2 (HCF)	Supply 3 (HCF)	Supply 4 (HCF)	
		5,359,778	4,042,171	4,664,340	1,007,655	15,073,945
					Resilient Supply	1,597,828
Tier 1	4,992,538	4,992,538				
Tier 2	6,441,753	367,240	4,042,171	2,032,342	-	
Tier 3	2,041,826			2,631,999	1,007,655	
	13,476,117	5,359,778	4,042,171	4,664,340	1,007,655	15,073,945
Tier 1		93.1%	0.0%	0.0%	0.0%	
Tier 2		6.9%	100.0%	43.6%	0.0%	
Tier 3		0.0%	0.0%	56.4%	100.0%	

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

VARIABLE RATES - TIER (SFR)

Appendix H
Rate Calculations
SFR

	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28
Winter						
Base Rate						
Tier 1	\$ 1,275,227	\$ 1,367,445	\$ 1,466,460	\$ 1,572,761	\$ 1,685,505	
Tier 2	\$ 1,360,450	\$ 1,458,830	\$ 1,564,463	\$ 1,677,868	\$ 1,798,146	
Tier 3	\$ 349,619	\$ 374,902	\$ 402,049	\$ 431,192	\$ 462,102	
Max Day Rate						
	Seasonality Factor					
Tier 1		\$ 560,272	\$ 600,788	\$ 644,291	\$ 690,994	\$ 740,528
Tier 2		\$ 1,832,490	\$ 1,965,005	\$ 2,107,289	\$ 2,260,043	\$ 2,422,054
Tier 3	1.00	474,896	509,238	546,112	585,698	627,683
Max Hour Rate						
	Seasonality Factor					
Tier 1		\$ 345,121	\$ 370,078	\$ 396,875	\$ 425,644	\$ 456,156
Tier 2		\$ 389,584	\$ 417,757	\$ 448,006	\$ 480,481	\$ 514,924
Tier 3	1.00	59,951	64,287	68,942	73,939	79,239
Supply 1 Rate						
Tier 1	\$ 1,404,792	\$ 1,506,378	\$ 1,615,454	\$ 1,732,556	\$ 1,856,754	
Tier 2	\$ 85,438	\$ 91,617	\$ 98,251	\$ 105,373	\$ 112,926	
Tier 3	\$ -	\$ -	\$ -	\$ -	\$ -	
Supply 2 Rate						
Tier 1	\$ -	\$ -	\$ -	\$ -	\$ -	
Tier 2	\$ 1,232,104	\$ 1,321,203	\$ 1,416,870	\$ 1,519,576	\$ 1,628,507	
Tier 3	\$ -	\$ -	\$ -	\$ -	\$ -	
Supply 3 Rate						
Tier 1	\$ -	\$ -	\$ -	\$ -	\$ -	
Tier 2	\$ 709,807	\$ 761,136	\$ 816,249	\$ 875,418	\$ 938,172	
Tier 3	\$ 745,294	\$ 799,190	\$ 857,058	\$ 919,184	\$ 985,076	
Supply 4 Rate						
Tier 1	\$ -	\$ -	\$ -	\$ -	\$ -	
Tier 2	\$ -	\$ -	\$ -	\$ -	\$ -	
Tier 3	\$ 391,538	\$ 419,852	\$ 450,253	\$ 482,891	\$ 517,507	
Supply Sustainability Rate						
Tier 1	\$ -	\$ -	\$ -	\$ -	\$ -	
Tier 2	\$ -	\$ -	\$ -	\$ -	\$ -	
Tier 3	\$ 287,682	\$ 308,486	\$ 330,823	\$ 354,803	\$ 380,237	
Combined Winter Revenue Requirements by Tier						
Tier 1	\$ 3,585,412	\$ 3,844,689	\$ 4,123,080	\$ 4,421,954	\$ 4,738,942	
Tier 2	\$ 5,609,873	\$ 6,015,548	\$ 6,451,128	\$ 6,918,758	\$ 7,414,731	
Tier 3	\$ 2,308,980	\$ 2,475,954	\$ 2,655,236	\$ 2,847,708	\$ 3,051,844	
Tier 1 Winter Rate	\$ 1.30	\$ 1.26	\$ 1.34	\$ 1.43	\$ 1.52	\$ 1.62
Tier 2 Winter Rate	\$ 1.64	\$ 1.85	\$ 1.97	\$ 2.09	\$ 2.23	\$ 2.37
Tier 3 Winter Rate	\$ 3.01	\$ 2.96	\$ 3.15	\$ 3.35	\$ 3.57	\$ 3.80

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

VARIABLE RATES - TIER (SFR)

Appendix H
Rate Calculations
SFR

	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28
Summer						
Base Rate						
Tier 1	\$ 959,558	\$ 1,028,949	\$ 1,103,454	\$ 1,183,441	\$ 1,268,276	\$ 1,268,276
Tier 2	1,523,041	1,633,179	1,751,436	1,878,394	2,013,047	2,013,047
Tier 3	564,353	605,164	648,983	696,027	745,922	745,922
Max Day Rate						
	Seasonality Factor					
Tier 1	\$ 421,583	\$ 452,069	\$ 484,803	\$ 519,946	\$ 557,218	\$ 557,218
Tier 2	2,051,494	2,199,847	2,359,137	2,530,146	2,711,519	2,711,519
Tier 3	2.26	1,732,357	1,857,631	1,992,141	2,136,547	2,289,706
Max Hour Rate						
	Seasonality Factor					
Tier 1	\$ 259,690	\$ 278,469	\$ 298,633	\$ 320,280	\$ 343,239	\$ 343,239
Tier 2	436,144	467,684	501,548	537,904	576,464	576,464
Tier 3	2.26	218,695	234,509	251,490	269,720	289,055
Supply 1 Rate						
Tier 1	\$ 1,057,051	\$ 1,133,491	\$ 1,215,566	\$ 1,303,680	\$ 1,397,135	\$ 1,397,135
Tier 2	95,649	102,566	109,993	117,966	126,422	126,422
Tier 3	-	-	-	-	-	-
Supply 2 Rate						
Tier 1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Tier 2	1,379,355	1,479,103	1,586,203	1,701,184	1,823,134	1,823,134
Tier 3	-	-	-	-	-	-
Supply 3 Rate						
Tier 1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Tier 2	794,637	852,101	913,801	980,041	1,050,295	1,050,295
Tier 3	1,203,048	1,290,045	1,383,456	1,483,740	1,590,103	1,590,103
Supply 4 Rate						
Tier 1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Tier 2	-	-	-	-	-	-
Tier 3	632,018	677,722	726,794	779,479	835,356	835,356
Supply Sustainability Rate						
Tier 1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Tier 2	-	-	-	-	-	-
Tier 3	464,374	497,955	534,011	572,721	613,777	613,777
Combined Summer Revenue Requirements by Tier						
Tier 1	\$ 2,697,882	\$ 2,892,978	\$ 3,102,456	\$ 3,327,347	\$ 3,565,869	\$ 3,565,869
Tier 2	\$ 6,280,321	\$ 6,734,480	\$ 7,222,118	\$ 7,745,635	\$ 8,300,882	\$ 8,300,882
Tier 3	\$ 4,814,844	\$ 5,163,027	\$ 5,536,875	\$ 5,938,234	\$ 6,363,918	\$ 6,363,918
Tier 1 Summer Rate	\$ 1.30	\$ 1.26	\$ 1.34	\$ 1.43	\$ 1.52	\$ 1.62
Tier 2 Summer Rate	\$ 1.64	\$ 1.85	\$ 1.97	\$ 2.09	\$ 2.23	\$ 2.37
Tier 3 Summer Rate	\$ 3.66	\$ 3.82	\$ 4.07	\$ 4.33	\$ 4.61	\$ 4.91

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

VARIABLE RATES - TIER (MFR)

Appendix H
Rate Calculations
MFR

	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28
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WA1B - MFR

REVENUE TO RECOVER

Base Revenue to Recover	\$	165,008	\$	176,940	\$	189,752	\$	203,507	\$	218,096
Max Day Revenue to Recover		145,859		156,407		167,732		179,891		192,786
Max Hour Revenue to Recover		45,928		49,250		52,816		56,644		60,705
Supply 1 Revenue to Recover		82,690		88,670		95,091		101,984		109,294
Supply 2 Revenue to Recover		81,706		87,614		93,958		100,769		107,993
Supply 3 Revenue to Recover		63,110		67,673		72,573		77,834		83,414
Supply 4 Revenue to Recover		18,708		20,061		21,514		23,073		24,727
Supply Sustainability Revenue to Recover		15,509		16,630		17,834		19,127		20,498
Total Allocated Costs	\$	618,518	\$	663,246	\$	711,271	\$	762,830	\$	817,513

REVENUE TO RECOVER - BY TIER

Base

Use per Tier

Tier 1	49.5%	\$	81,711	\$	87,619	\$	93,964	\$	100,775	\$	107,999
Tier 2	50.5%		83,297		89,321		95,789		102,732		110,096

Max Day

Max Day Extra Capacity per Tier

Tier 1	23.3%	\$	33,943	\$	36,398	\$	39,034	\$	41,863	\$	44,864
Tier 2	76.7%		111,916		120,009		128,699		138,028		147,922

Max Hour

Max Hour Extra Capacity per Tier

Tier 1	48.1%	\$	22,080	\$	23,677	\$	25,391	\$	27,231	\$	29,184
Tier 2	51.9%		23,848		25,573		27,425		29,413		31,521

Supply 1

SFR Supply 1 Allocation by Tier

Tier 1	100.0%	\$	82,690	\$	88,670	\$	95,091	\$	101,984	\$	109,294
Tier 2	0.0%		-		-		-		-		-

Supply 2

SFR Supply 2 Allocation by Tier

Tier 1	11.7%	\$	9,593	\$	10,287	\$	11,032	\$	11,832	\$	12,680
Tier 2	88.3%		72,112		77,327		82,926		88,938		95,313

Supply 3

SFR Supply 3 Allocation by Tier

Tier 1	0.0%	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2	100.0%		63,110		67,673		72,573		77,834		83,414

Supply 4

SFR Supply 4 Allocation by Tier

Tier 1	0.0%	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2	100.0%		18,708		20,061		21,514		23,073		24,727

Supply Sustainability

All to Tier 3

Tier 1	0.0%	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2	100.0%		15,509		16,630		17,834		19,127		20,498

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

VARIABLE RATES - TIER (MFR)

Appendix H
Rate Calculations
MFR

PROJECTED USAGE (HFC)

	368,630	371,142	373,736	376,400	379,145
Annual					
Tier 1	182,542	183,787	185,071	186,390	187,749
Tier 2	186,087	187,355	188,665	190,010	191,395
Winter					
Tier 1	104,853	105,567	106,305	107,063	107,844
Tier 2	90,208	90,823	91,458	92,110	92,781
Summer					
Tier 1	77,690	78,219	78,766	79,327	79,906
Tier 2	95,879	96,532	97,207	97,900	98,614

SUPPLY TIER USAGE (HCF)

	Tier Usage (HCF)	Supply 1 (HCF)	Supply 2 (HCF)	Supply 3 (HCF)	Supply 4 (HCF)	
		167,693	126,469	85,254	18,418	397,834
					Resilient Supply	29,205
Tier 1	182,542	167,693	14,849			
Tier 2	186,087	-	111,620	85,254	18,418	
	368,630	167,693	126,469	85,254	18,418	397,834
Tier 1		100.0%	11.7%	0.0%	0.0%	
Tier 2		0.0%	88.3%	100.0%	100.0%	

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

VARIABLE RATES - TIER (MFR)

Appendix H
Rate Calculations
MFR

Winter

Base Rate

Tier 1	\$	46,935	\$	50,329	\$	53,973	\$	57,885	\$	62,035
Tier 2		40,379		43,299		46,435		49,801		53,370

Max Day Rate

Seasonality Factor

Tier 1	\$	19,497	\$	20,907	\$	22,421	\$	24,046	\$	25,770
Tier 2		43,352		46,487		49,853		53,467		57,300

1.00

Max Hour Rate

Seasonality Factor

Tier 1	\$	12,683	\$	13,600	\$	14,585	\$	15,642	\$	16,763
Tier 2		9,238		9,906		10,623		11,393		12,210

1.00

Supply 1 Rate

Tier 1	\$	47,498	\$	50,932	\$	54,620	\$	58,580	\$	62,779
Tier 2		-		-		-		-		-

Supply 2 Rate

Tier 1	\$	5,510	\$	5,909	\$	6,337	\$	6,796	\$	7,283
Tier 2		34,957		37,485		40,200		43,114		46,204

Supply 3 Rate

Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2		30,593		32,806		35,181		37,731		40,436

Supply 4 Rate

Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2		9,069		9,725		10,429		11,185		11,987

Supply Sustainability

Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2		7,518		8,062		8,645		9,272		9,937

Winter Revenue Requirement By Tier

Tier 1	\$	132,123	\$	141,676	\$	151,935	\$	162,949	\$	174,631
Tier 2	\$	175,107	\$	187,770	\$	201,367	\$	215,964	\$	231,444

Tier 1 Winter Rate	\$	1.30	\$	1.26	\$	1.34	\$	1.43	\$	1.52	\$	1.62
Tier 2 Winter Rate	\$	1.87	\$	1.94	\$	2.07	\$	2.20	\$	2.34	\$	2.49

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

VARIABLE RATES - TIER (MFR)

Appendix H
Rate Calculations
MFR

Summer

Base Rate

Tier 1	\$	34,776	\$	37,291	\$	39,991	\$	42,889	\$	45,964
Tier 2		42,918		46,021		49,354		52,931		56,726

Max Day Rate

Seasonality Factor

Tier 1	\$	14,446	\$	15,491	\$	16,613	\$	17,817	\$	19,094
Tier 2		68,564		73,522		78,845		84,561		90,623

1.49

Max Hour Rate

Seasonality Factor

Tier 1	\$	9,397	\$	10,077	\$	10,806	\$	11,590	\$	12,420
Tier 2		14,610		15,667		16,801		18,019		19,311

1.49

Supply 1 Rate

Tier 1	\$	35,193	\$	37,738	\$	40,470	\$	43,404	\$	46,516
Tier 2		-		-		-		-		-

Supply 2 Rate

Tier 1	\$	4,083	\$	4,378	\$	4,695	\$	5,035	\$	5,396
Tier 2		37,155		39,842		42,727		45,824		49,109

Supply 3 Rate

Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2		32,516		34,868		37,392		40,103		42,978

Supply 4 Rate

Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2		9,639		10,336		11,085		11,888		12,741

Supply Sustainability

Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2		7,991		8,568		9,189		9,855		10,561

Summer Revenue Requirement By Tier

Tier 1	\$	97,895	\$	104,974	\$	112,575	\$	120,735	\$	129,391
Tier 2	\$	213,393	\$	228,824	\$	245,393	\$	263,182	\$	282,048

Tier 1 Summer Rate	\$	1.30	\$	1.26	\$	1.34	\$	1.43	\$	1.52	\$	1.62
Tier 2 Summer Rate	\$	2.12	\$	2.23	\$	2.37	\$	2.52	\$	2.69	\$	2.86

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

VARIABLE RATES - TIER (WA4)

Appendix H

Rate Calculations

WA4: Riverside Water Company

	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28				
WA4 - Riverside Irrigators										
REVENUE TO RECOVER										
Base Revenue to Recover	\$	3,966	\$	4,253	\$	4,561	\$	4,892	\$	5,243
Max Day Revenue to Recover		6,633		7,112		7,627		8,180		8,767
Max Hour Revenue to Recover		1,158		1,242		1,332		1,428		1,531
Supply 1 Revenue to Recover		1,444		1,549		1,661		1,781		1,909
Supply 2 Revenue to Recover		1,427		1,530		1,641		1,760		1,886
Supply 3 Revenue to Recover		3,261		3,497		3,750		4,022		4,310
Supply 4 Revenue to Recover		967		1,037		1,112		1,192		1,278
Supply Sustainability Revenue To Recover		705		756		811		870		932
Total Allocated Costs	\$	19,562	\$	20,976	\$	22,495	\$	24,126	\$	25,855

REVENUE TO RECOVER - BY TIER											
Base Rate											
		<u>Use per Tier</u>									
Tier 1	37.1%	\$	1,472	\$	1,578	\$	1,692	\$	1,815	\$	1,945
Tier 2	51.5%		2,041		2,188		2,347		2,517		2,697
Tier 3	11.4%		454		487		522		560		600
Max Day Rate											
		<u>Max Day Extra Capacity per Tier</u>									
Tier 1	16.1%	\$	1,069	\$	1,147	\$	1,230	\$	1,319	\$	1,413
Tier 2	60.5%		4,015		4,306		4,617		4,952		5,307
Tier 3	23.3%		1,548		1,660		1,780		1,909		2,046
Max Hour Rate											
		<u>Max Hour Extra Capacity per Tier</u>									
Tier 1	35.0%	\$	405	\$	434	\$	466	\$	500	\$	536
Tier 2	52.4%		607		650		698		748		802
Tier 3	12.6%		146		157		168		181		194
Supply 1 Rate											
		<u>SFR Supply 1 Allocation by Tier</u>									
Tier 1	100.0%	\$	1,444	\$	1,549	\$	1,661	\$	1,781	\$	1,909
Tier 2	0.0%		-		-		-		-		-
Tier 3	0.0%		-		-		-		-		-
Supply 2 Rate											
		<u>SFR Supply 2 Allocation by Tier</u>									
Tier 1	18.4%	\$	262	\$	281	\$	301	\$	323	\$	346
Tier 2	81.6%		1,165		1,249		1,340		1,437		1,540
Tier 3	0.0%		-		-		-		-		-
Supply 3 Rate											
		<u>SFR Supply 3 Allocation by Tier</u>									
Tier 1	0.0%	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2	64.0%		2,087		2,238		2,400		2,574		2,759
Tier 3	36.0%		1,174		1,259		1,350		1,448		1,551
Supply 4 Rate											
		<u>SFR Supply 4 Allocation by Tier</u>									
Tier 1	0.0%	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2	0.0%		-		-		-		-		-
Tier 3	100.0%		967		1,037		1,112		1,192		1,278
Supply Sustainability											
		<u>All to Tier 3</u>									
Tier 1	0.0%	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2	0.0%		-		-		-		-		-
Tier 3	100.0%		705		756		811		870		932

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

VARIABLE RATES - TIER (WA4)

Appendix H

Rate Calculations

WA4: Riverside Water Company

PROJECTED USAGE (HFC)

	8,986	8,986	8,986	8,986	8,986
Annual					
Tier 1	3,334	3,334	3,334	3,334	3,334
Tier 2	4,623	4,623	4,623	4,623	4,623
Tier 3	1,028	1,028	1,028	1,028	1,028
Winter					
Tier 1	1,801	1,801	1,801	1,801	1,801
Tier 2	1,863	1,863	1,863	1,863	1,863
Tier 3	392	392	392	392	392
Summer					
Tier 1	1,533	1,533	1,533	1,533	1,533
Tier 2	2,760	2,760	2,760	2,760	2,760
Tier 3	636	636	636	636	636

SUPPLY TIER USAGE (HCF)

	Tier Usage (HCF)	Supply 1 (HCF)	Supply 2 (HCF)	Supply 3 (HCF)	Supply 4 (HCF)	
		2,929	2,209	4,406	952	10,495
					Resilient Supply	1,509
Tier 1	3,334	2,929	405			
Tier 2	4,623		1,803	2,820	-	
Tier 3	1,028			1,586	952	
	8,986	2,929	2,209	4,406	952	10,495
Tier 1		100.0%	18.4%	0.0%	0.0%	
Tier 2		0.0%	81.6%	64.0%	0.0%	
Tier 3		0.0%	0.0%	36.0%	100.0%	

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

VARIABLE RATES - TIER (WA4)

Appendix H

Rate Calculations

WA4: Riverside Water Company

Winter

Base Rate

Tier 1	\$	795	\$	852	\$	914	\$	980	\$	1,051
Tier 2		822		882		946		1,014		1,087
Tier 3		173		186		199		213		229

Max Day Rate

Seasonality Factor

Tier 1	\$	578	\$	619	\$	664	\$	712	\$	763
Tier 2		1,618		1,735		1,861		1,996		2,139
Tier 3		330		354		380		407		437

1.00

Max Hour Rate

Seasonality Factor

Tier 1	\$	219	\$	235	\$	252	\$	270	\$	289
Tier 2		244		262		281		301		323
Tier 3		31		34		36		39		41

1.00

Supply 1 Rate

Tier 1	\$	780	\$	836	\$	897	\$	962	\$	1,031
Tier 2		-		-		-		-		-
Tier 3		-		-		-		-		-

Supply 2 Rate

Tier 1	\$	141	\$	152	\$	163	\$	175	\$	187
Tier 2		469		503		540		579		621
Tier 3		-		-		-		-		-

Supply 3 Rate

Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2		841		902		967		1,037		1,112
Tier 3		447		480		515		552		591

Supply 4 Rate

Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2		-		-		-		-		-
Tier 3		369		395		424		455		487

Supply Sustainability Rate

Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2		-		-		-		-		-
Tier 3		269		288		309		332		355

Winter Revenue Requirement By Tier

Tier 1	\$	2,513	\$	2,695	\$	2,890	\$	3,099	\$	3,322
Tier 2	\$	3,995	\$	4,284	\$	4,595	\$	4,928	\$	5,281
Tier 3	\$	1,620	\$	1,737	\$	1,862	\$	1,997	\$	2,141

Tier 1 Winter Rate	\$	1.32	\$	1.40	\$	1.50	\$	1.60	\$	1.72	\$	1.84
Tier 2 Winter Rate	\$	1.54	\$	2.14	\$	2.30	\$	2.47	\$	2.65	\$	2.83
Tier 3 Winter Rate	\$	2.46	\$	4.13	\$	4.43	\$	4.75	\$	5.10	\$	5.46

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

VARIABLE RATES - TIER (WA4)

Appendix H

Rate Calculations

WA4: Riverside Water Company

Summer

Base Rate

Tier 1	\$	677	\$	726	\$	778	\$	835	\$	894
Tier 2		1,218		1,306		1,401		1,503		1,610
Tier 3		281		301		323		346		371

Max Day Rate

Seasonality Factor

Tier 1	\$	492	\$	527	\$	565	\$	606	\$	650
Tier 2		2,397		2,570		2,757		2,956		3,168
Tier 3		2.27		1,218		1,306		1,400		1,502

Max Hour Rate

Seasonality Factor

Tier 1	\$	186	\$	200	\$	214	\$	230	\$	246
Tier 2		362		388		416		447		479
Tier 3		2.27		115		124		132		142

Supply 1 Rate

Tier 1	\$	664	\$	712	\$	764	\$	819	\$	878
Tier 2		-		-		-		-		-
Tier 3		-		-		-		-		-

Supply 2 Rate

Tier 1	\$	120	\$	129	\$	138	\$	149	\$	159
Tier 2		696		746		800		858		919
Tier 3		-		-		-		-		-

Supply 3 Rate

Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2		1,246		1,336		1,433		1,537		1,647
Tier 3		726		779		835		895		960

Supply 4 Rate

Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2		-		-		-		-		-
Tier 3		598		641		688		737		790

Supply Sustainability Rate

Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2		-		-		-		-		-
Tier 3		436		468		502		538		577

Summer Revenue Requirement By Tier

Tier 1	\$	2,139	\$	2,294	\$	2,460	\$	2,638	\$	2,827
Tier 2	\$	5,919	\$	6,347	\$	6,807	\$	7,300	\$	7,824
Tier 3	\$	3,374	\$	3,618	\$	3,880	\$	4,161	\$	4,459

Tier 1 Summer Rate	\$1.32	\$	1.40	\$	1.50	\$	1.60	\$	1.72	\$	1.84
Tier 2 Summer Rate	\$1.58	\$	2.14	\$	2.30	\$	2.47	\$	2.65	\$	2.83
Tier 3 Summer Rate	\$3.17	\$	5.30	\$	5.69	\$	6.10	\$	6.54	\$	7.01

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

VARIABLE RATES - NO TIER (Comm/Ind, Landscape, WA2, WA7)

Appendix H
Rate Calculations
Non-Tiered Rates

	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28
WA6 - Commercial/Industrial						
REVENUE TO RECOVER						
Base Revenue to Recover	\$ 3,343,532	\$ 3,585,318	\$ 3,844,928	\$ 4,123,639	\$ 4,419,242	
Max Day Revenue to Recover	3,267,511	3,503,800	3,757,507	4,029,881	4,318,764	
Max Hour Revenue to Recover	936,044	1,003,734	1,076,414	1,154,441	1,237,197	
Supply 1 Revenue to Recover	1,071,530	1,149,017	1,232,216	1,321,537	1,416,272	
Supply 2 Revenue to Recover	1,058,770	1,135,335	1,217,543	1,305,801	1,399,407	
Supply 3 Revenue to Recover	3,005,072	3,222,382	3,455,713	3,706,210	3,971,890	
Supply 4 Revenue to Recover	890,834	955,254	1,024,423	1,098,681	1,177,440	
Supply Sustainability Revenue to Recover	347,422	372,546	399,522	428,483	459,198	
Total Allocated Costs	\$ 13,920,716	\$ 14,927,386	\$ 16,008,266	\$ 17,168,673	\$ 18,399,411	
PROJECTED USAGE (HFC)						
Projected Annual Usage (HCF)	7,357,736	7,464,359	7,572,724	7,682,792	7,794,744	
Projected Winter Usage (HCF)	3,814,280	3,869,554	3,925,731	3,982,790	4,040,827	
Projected Summer Usage (HCF)	3,543,456	3,594,805	3,646,993	3,700,002	3,753,917	
Winter						
	Seasonality Factor					
Base Revenue to Recover		\$1,733,300.26	\$1,858,643.29	\$1,993,226.27	\$2,137,710.94	\$2,290,953.28
Max Day Revenue to Recover	1.00	1,479,683.19	1,586,686.01	1,701,576.77	1,824,920.37	1,955,740.28
Max Hour Revenue to Recover	1.00	423,885.07	454,538.18	487,450.96	522,785.22	560,261.22
Supply 1 Revenue to Recover		555,485.25	595,654.98	638,785.92	685,090.13	734,200.98
Supply 2 Revenue to Recover		548,870.68	588,562.08	631,179.42	676,932.26	725,458.31
Supply 3 Revenue to Recover		1,557,841.41	1,670,496.18	1,791,455.58	1,921,314.33	2,059,044.22
Supply 4 Revenue to Recover		461,811.70	495,207.46	531,065.07	569,560.83	610,389.94
Supply Sustainability Revenue to Recover		180,105.21	193,129.46	207,113.82	222,127.05	238,050.29
Winter Rate	\$ 1.58	\$ 1.82	\$ 1.92	\$ 2.03	\$ 2.15	\$ 2.27
Summer						
	Seasonality Factor					
Base Revenue to Recover		\$1,610,231.56	\$1,726,674.45	\$1,851,701.54	\$1,985,927.92	\$2,128,289.02
Max Day Revenue to Recover	1.30	1,787,828.19	1,917,113.90	2,055,930.57	2,204,961.09	2,363,023.61
Max Hour Revenue to Recover	1.30	512,159.41	549,195.91	588,962.74	631,655.54	676,935.73
Supply 1 Revenue to Recover		516,044.39	553,361.82	593,430.30	636,446.95	682,070.61
Supply 2 Revenue to Recover		509,899.47	546,772.53	586,363.89	628,868.31	673,948.69
Supply 3 Revenue to Recover		1,447,230.73	1,551,886.31	1,664,257.14	1,784,896.03	1,912,846.17
Supply 4 Revenue to Recover		429,021.90	460,046.35	493,357.94	529,120.53	567,050.50
Supply Sustainability Revenue to Recover		167,317.28	179,416.73	192,408.15	206,355.46	221,148.03
Summer Rate	\$ 1.84	\$ 1.97	\$ 2.08	\$ 2.20	\$ 2.33	\$ 2.46

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

VARIABLE RATES - NO TIER (Comm/Ind, Landscape, WA2, WA7)

Appendix H
Rate Calculations
Non-Tiered Rates

	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28
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WA11 - Landscape

REVENUE TO RECOVER

Base Revenue to Recover	\$ 344,960	\$ 369,906	\$ 396,691	\$ 425,446	\$ 455,944
Max Day Revenue to Recover	557,849	598,189	641,504	688,005	737,325
Max Hour Revenue to Recover	100,399	107,660	115,455	123,824	132,701
Supply 1 Revenue to Recover	94,872	101,733	109,099	117,007	125,395
Supply 2 Revenue to Recover	93,742	100,521	107,800	115,614	123,902
Supply 3 Revenue to Recover	357,314	383,153	410,897	440,682	472,272
Supply 4 Revenue to Recover	105,923	113,583	121,808	130,637	140,002
Supply Sustainability Revenue to Recover	59,314	63,603	68,209	73,153	78,397
Total Allocated Costs	\$ 1,714,374	\$ 1,838,348	\$ 1,971,462	\$ 2,114,369	\$ 2,265,938

PROJECTED USAGE (HFC)

Projected Annual Usage (HCF)	759,116	770,116	781,296	792,652	804,203
Projected Winter Usage (HCF)	337,300	333,632	338,476	343,395	348,399
Projected Summer Usage (HCF)	421,816	436,484	442,820	449,257	455,804

Winter

	Seasonality Factor					
Base Revenue to Recover		\$ 153,277.20	\$ 160,251.77	\$ 171,855.70	\$ 184,312.82	\$ 197,525.37
Max Day Revenue to Recover	1.00	174,902.76	181,791.37	194,955.06	209,086.46	224,074.94
Max Hour Revenue to Recover	1.00	31,478.28	32,718.06	35,087.21	37,630.52	40,328.09
Supply 1 Revenue to Recover		42,154.75	44,072.92	47,264.26	50,690.26	54,324.01
Supply 2 Revenue to Recover		41,652.78	43,548.11	46,701.45	50,086.65	53,677.14
Supply 3 Revenue to Recover		158,766.39	165,990.73	178,010.22	190,913.46	204,599.17
Supply 4 Revenue to Recover		47,065.24	49,206.85	52,769.94	56,595.02	60,652.06
Supply Sustainability Revenue to Recover		26,355.17	27,554.41	29,549.64	31,691.57	33,963.40
Winter Rate		\$ 1.67	\$ 2.00	\$ 2.11	\$ 2.23	\$ 2.36

Summer

	Seasonality Factor					
Base Revenue to Recover		\$ 191,683.10	\$ 209,654.17	\$ 224,834.84	\$ 241,133.02	\$ 258,418.60
Max Day Revenue to Recover	1.75	382,946.10	416,398.06	446,548.80	478,918.72	513,249.96
Max Hour Revenue to Recover	1.75	68,921.06	74,941.61	80,368.02	86,193.82	92,372.62
Supply 1 Revenue to Recover		52,717.25	57,659.71	61,834.75	66,317.12	71,071.05
Supply 2 Revenue to Recover		52,089.51	56,973.12	61,098.43	65,527.43	70,224.75
Supply 3 Revenue to Recover		198,547.68	217,162.34	232,886.66	249,768.52	267,673.13
Supply 4 Revenue to Recover		58,858.14	64,376.33	69,037.70	74,042.21	79,349.91
Supply Sustainability Revenue to Recover		32,958.85	36,048.88	38,659.11	41,461.49	44,433.65
Summer Rate		\$ 2.14	\$ 2.46	\$ 2.60	\$ 2.74	\$ 2.90

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

VARIABLE RATES - NO TIER (Comm/Ind, Landscape, WA2, WA7)

Appendix H
Rate Calculations
Non-Tiered Rates

	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28
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WA2 - Flat Rate

REVENUE TO RECOVER

Base Revenue to Recover	\$ 19,596	\$ 21,014	\$ 22,535	\$ 24,169	\$ 25,901
Max Day Revenue to Recover	61,416	65,857	70,626	75,745	81,175
Max Hour Revenue to Recover	6,219	6,668	7,151	7,670	8,219
Supply 1 Revenue to Recover	3,797	4,072	4,366	4,683	5,019
Supply 2 Revenue to Recover	3,752	4,023	4,314	4,627	4,959
Supply 3 Revenue to Recover	26,176	28,068	30,101	32,283	34,597
Supply 4 Revenue to Recover	7,760	8,321	8,923	9,570	10,256
Supply Sustainability Revenue to Recover	6,530	7,002	7,509	8,054	8,631

Total Allocated Costs	\$ 135,245	\$ 145,025	\$ 155,526	\$ 166,800	\$ 178,757
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PROJECTED USAGE (HFC)

Projected Annual Usage (HCF)	44,394	44,394	44,394	44,394	44,394
Projected Winter Usage (HCF)	17,942	17,942	17,942	17,942	17,942
Projected Summer Usage (HCF)	26,452	26,452	26,452	26,452	26,452

Non-Seasonal Rate	\$ 2.39	\$ 3.05	\$ 3.27	\$ 3.50	\$ 3.76	\$ 4.03
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	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28
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WA7 & 10 - Interruptable

REVENUE TO RECOVER

Base Revenue to Recover	\$ 366,540	\$ 393,046	\$ 421,507	\$ 452,061	\$ 484,467
Max Day Revenue to Recover	334,531	358,722	384,697	412,583	442,159
Max Hour Revenue to Recover	109,381	117,291	125,784	134,901	144,572
Supply 1 Revenue to Recover	92,762	99,470	106,673	114,405	122,606
Supply 2 Revenue to Recover	91,657	98,286	105,402	113,043	121,146
Supply 3 Revenue to Recover	353,391	378,946	406,385	435,843	467,087
Supply 4 Revenue to Recover	-	-	-	-	-
Supply Sustainability Revenue to Recover	-	-	-	-	-

Total Allocated Costs	\$ 1,348,262	\$ 1,445,761	\$ 1,550,447	\$ 1,662,836	\$ 1,782,037
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PROJECTED USAGE (HFC)

Projected Annual Usage (HCF)	807,384	818,102	829,979	842,043	854,313
Projected Winter Usage (HCF)	329,261	333,632	338,476	343,395	348,399
Projected Summer Usage (HCF)	478,123	484,470	491,503	498,648	505,914

Non-Seasonal Rate	\$ 1.57	\$ 1.67	\$ 1.77	\$ 1.87	\$ 1.97	\$ 2.09
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Appendix I

OUTSIDE CITY SURCHARGE CALCULATION

Appendix I, Outside City Surcharge Calculation, presents a summary of all costs associated with providing service to customers with accounts outside of the City's standard service area boundaries and the calculation of the required surcharge to recover those costs. The costs summarized within the appendix include pipeline capital costs, other facility capital costs, water distribution costs, and energy costs.

The surcharge is calculated the overall percent increase in rates to be charged to customers residing outside of the City's standard service area boundaries. The calculation is based on the five-year sum of revenues without the surcharge and outside city costs to provide a surcharge that is stable of each year of the cost of service study period.

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

OUTSIDE CITY COSTS

Active Interconnections	Praed 1400 Zone	University City 1600 Zone	Homegardens 925 Zone	Highgrove Zones	University City 1650 Zone	Van Buren 1200 Zone	Victoria 1100 Zone	Heustis 1400 Zone	Total
Number of Services	333	115	1,601	949	73	238	740	727	4,776
Estimated Flows to Customers (gpm)¹	394	110	1020	444	10	83	536	5	2,601
Pipeline Associated Capital Costs²	\$13,289,826	\$2,923,399	\$33,423,551	\$22,402,394	\$1,431,786	\$7,694,388	\$16,394,627	\$12,203	\$97,572,175
Inside City Transmission	\$1,674,463	\$410,834	\$4,353,850	\$696,231	\$36,043	\$232,957	\$916,280	\$11,185	\$8,331,842
Outside City Distribution	\$11,615,364	\$2,512,565	\$29,069,701	\$21,706,162	\$1,395,743	\$7,461,431	\$15,478,348	\$1,018	\$89,240,332
Facility Associated Capital Costs²	\$5,448,628	\$2,593,501	\$13,431	\$2,796,990	\$333,741	\$683,932	\$209,004	\$1,843	\$12,081,070
Inside City Pump/PRV & Reservoir Capital Cost	\$3,252,777	\$2,385,530	\$13,431	\$2,173,076	\$125,770	\$683,932	\$209,004	\$1,843	\$8,845,363
Outside City Pump/PRV Capital Cost	\$2,195,851	\$207,971	\$0	\$623,913	\$207,971	\$0	\$0	\$0	\$3,235,707
Total Capital Cost	\$18,738,454	\$5,516,901	\$33,436,982	\$25,199,383	\$1,765,527	\$8,378,320	\$16,603,631	\$14,047	\$109,653,245
<u>Total Capital Cost for Outside City Customers</u>	\$109,653,245								
Notes:									
1. Delivered flows to Customers obtained from 2013 Draft IWMP and Hydraulic Water Model									
2. Capital cost of water facilities is charged to Customer based on proportion of Customer flow rates. Unit costs obtained from 2013 IWMP construction costs with 50% Markup for Engineering, Contract Administration, & Contingency.									
O&M Costs (from RPU's FY 20-21 Financial Statement)									
	Operations		\$32,037,000						
	Maintenance		\$6,301,000						
	Production (AF)		72,215						
	Production (CCF)		31,456,773						
	O&M/AF		\$530.89						
	O&M/CCF		\$1.22						

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

OUTSIDE CITY COSTS

Amortized Capital Costs	Total	Applicable to Surcharge	Notes:	Applicable Capital Costs	Annual Cost Calculation
Number of Services	4,776				
Estimated Flows to Customers (gpm)¹	2601				
				Amortization	Annualized Cost
Pipeline Associated Capital Costs²	\$97,572,175				
Inside City Transmission	\$8,331,842	0%	Included in Base Rates	\$0	(Years)
Outside City Distribution	\$89,240,332	100%	All for Outside City	\$89,240,332	(2022 Dollars)
			Total Pipeline Costs	\$89,240,332	50.00
Facility Associated Capital Costs²	\$12,081,070				
Inside City Pump/PRV & Reservoir Capital Cost	\$8,845,363	0%	Included in Base Rates	\$0	
Outside City Pump/PRV Capital Cost	\$3,235,707	100%	All for Outside City	\$3,235,707	
			Total Facilities Costs	\$3,235,707	30.00
Total Capital Cost	\$109,653,245				
				Total Annualized Capital Costs	\$1,892,664
	FY Ending	Capital Escalation	Annual Capital Cost		
	2022		\$1,892,664		
	2023	2.85%	\$1,946,604		
	2024	2.85%	\$2,002,083		
	2025	2.85%	\$2,059,142		
	2026	2.85%	\$2,117,828		
	2027	2.85%	\$2,178,186		
	2028	2.85%	\$2,240,264		
	2029	2.85%	\$2,304,111		
	2030	2.85%	\$2,369,779		
	2031	2.85%	\$2,437,317		
	2032	2.85%	\$2,506,781		
	2033	2.85%	\$2,578,224		

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

OUTSIDE CITY COSTS

Estimated Energy Costs						
	Estimated Flows to Customers (gpm) ¹	Energy Required (kWh)				
Praed 1400 Zone	394	408,286				
University City 1600 Zone	110	164,869				
Homegardens 925 Zone	1020	-				
Highgrove Zones	444	226,504				
University City 1650 Zone	10	15,600				
Van Buren 1200 Zone	83	44,399				
Victoria 1100 Zone	536	148,896				
Heustis 1400 Zone	5	-				
Total	2601	1,008,553				
	1,000 CCF	Adjustment From 2013	Power Cost Escal	Cost per kWh	Adjusted Energy Required (kWh)	Calculated Energy Cost
RPU Total Water Sales						
2013 Total Sales	27,977		(Production Costs)		1,008,553	
FY 22/23	23,415	-16%	2.80%	\$ 0.0802	844,092	\$67,717
FY 23/24	23,415	-16%	2.80%	\$ 0.0825	844,092	\$69,613
FY 24/25	23,636	-16%	2.80%	\$ 0.0848	852,067	\$72,238
FY 25/26	23,862	-15%	2.80%	\$ 0.0872	860,227	\$74,972
FY 26/27	24,094	-14%	2.80%	\$ 0.0896	868,556	\$77,817
FY 27/28	24,330	-13%	2.80%	\$ 0.0921	877,074	\$80,781
FY 28/29	24,569	-12%	2.80%	\$ 0.0947	885,689	\$83,858
FY 29/30	24,808	-11%	2.80%	\$ 0.0973	894,305	\$87,045
FY 30/31	25,050	-10%	2.80%	\$ 0.1001	903,049	\$90,357
FY 31/32	25,296	-10%	2.80%	\$ 0.1029	911,910	\$93,798

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

OUTSIDE CITY SURCHARGE CALCULATION

Projected Outside City Costs Summary					
	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28
Capital Costs	\$2,002,083	\$2,059,142	\$2,117,828	\$2,178,186	\$2,240,264
Energy Costs	\$69,613	\$72,238	\$74,972	\$77,817	\$80,781
Total Outside City Costs	\$2,071,695	\$2,131,380	\$2,192,799	\$2,256,003	\$2,321,044

Surcharge Calculation		Detailed Calculations Below				
		FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28
Variable Revenue Without Surcharge	\$	2,069,251	\$ 2,284,698	\$ 2,462,428	\$ 2,638,968	\$ 2,888,601
Annual Fixed Revenue Without Surcharge		1,610,451	1,761,582	1,925,966	2,105,292	2,298,329
Total Revenue Without Surcharge	\$	3,679,702	\$ 4,046,280	\$ 4,388,394	\$ 4,744,260	\$ 5,186,930
Surcharge Costs to Collect		\$2,071,695	\$2,131,380	\$2,192,799	\$2,256,003	\$2,321,044
Required Percentage Surcharge		56%	53%	50%	48%	45%

Five Year Combined Surcharge Calculation

Total Revenue Without Surcharge	FY 2023/24 through FY 2027/28	\$	22,045,566
Surcharge Costs to Collect	FY 2023/24 through FY 2027/28	\$	10,972,922

Required Percentage Surcharge	50%
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Outside City Usage

Outside City Percent of Consumption

Month	FY 2019/20 and 2020/21 Avg
Landscape	8.7%
MFR	1.2%
SFR	6.7%
WA-4	4.0%
WA-6.1 and WA-6.2	2.0%
WA-12	2.4%

Source: Customer Data Analysis Summary.xlsx, 2015-2021 Billing Details tab

Projected Usage - Usage From Rate Design X Outside City Percent of Consumption

Landscape		Projected Usage - Usage From Rate Design X Outside City Percent of Consumption				
		FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28
Winter	Tier 1	29,480	29,159	29,583	30,013	30,450
Winter	Tier 2	-	-	-	-	-
Winter	Tier 3	-	-	-	-	-
Winter	Tier 4	-	-	-	-	-
Summer	Tier 1	36,867	38,149	38,702	39,265	39,837
Summer	Tier 2	-	-	-	-	-
Summer	Tier 3	-	-	-	-	-
Summer	Tier 4	-	-	-	-	-

MFR		Projected Usage - Usage From Rate Design X Outside City Percent of Consumption				
		FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28
Winter	Tier 1	1,299	1,308	1,317	1,327	1,336
Winter	Tier 2	1,118	1,125	1,133	1,141	1,150
Winter	Tier 3					
Winter	Tier 4					
Summer	Tier 1	963	969	976	983	990
Summer	Tier 2	1,188	1,196	1,204	1,213	1,222
Summer	Tier 3					
Summer	Tier 4					

SFR		Projected Usage - Usage From Rate Design X Outside City Percent of Consumption				
		FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28
Winter	Tier 1	189,763	191,057	192,392	193,764	195,176
Winter	Tier 2	202,445	203,825	205,250	206,713	208,220
Winter	Tier 3	52,026	52,381	52,747	53,123	53,510
Winter	Tier 4	-	-	-	-	-
Summer	Tier 1	142,790	143,763	144,768	145,800	146,863
Summer	Tier 2	226,640	228,185	229,779	231,418	233,105
Summer	Tier 3	83,980	84,552	85,143	85,750	86,376
Summer	Tier 4	-	-	-	-	-

WA-4		Projected Usage - Usage From Rate Design X Outside City Percent of Consumption				
		FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28
Winter	Tier 1	1,801	1,801	1,801	1,801	1,801
Winter	Tier 2	1,863	1,863	1,863	1,863	1,863
Winter	Tier 3	392	392	392	392	392
Winter	Tier 4					
Summer	Tier 1	1,533	1,533	1,533	1,533	1,533
Summer	Tier 2	2,760	2,760	2,760	2,760	2,760
Summer	Tier 3	636	636	636	636	636
Summer	Tier 4					
WA-6.1 and WA-6.2		Projected Usage - Usage From Rate Design X Outside City Percent of Consumption				
		FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28
Winter	Tier 1	74,645	110,006	110,323	110,621	110,882
Winter	Tier 2					
Winter	Tier 3					
Winter	Tier 4					
Summer	Tier 1	69,345	70,350	71,372	72,409	73,464
Summer	Tier 2					
Summer	Tier 3					
Summer	Tier 4					
WA 12						
Winter	Tier 1	2,602	2,606	6,791	6,435	15,191
Winter	Tier 2	2,776	2,806	8,280	7,983	19,428
Winter	Tier 3	713	732	2,495	2,431	6,092
Winter	Tier 4					
Summer	Tier 1	1,958	6,122	1,543	6,066	6,070
Summer	Tier 2	3,108	8,341	2,199	7,723	7,483
Summer	Tier 3	1,151	2,775	740	2,409	2,277
Summer	Tier 4					

Revenue Under Proposed Rates

Landscape Revenue Under Proposed Rates

		FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28
Winter	Tier 1	\$58,960	\$61,526	\$65,970	\$70,830	\$75,821
Winter	Tier 2					
Winter	Tier 3					
Winter	Tier 4					
Summer	Tier 1	\$90,692	\$99,187	\$106,045	\$113,869	\$121,902
Summer	Tier 2					
Summer	Tier 3					
Summer	Tier 4					

MFR Revenue Under Proposed Rates

		FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28
Winter	Tier 1	\$1,637	\$1,753	\$1,883	\$2,016	\$2,165
Winter	Tier 2	\$2,168	\$2,329	\$2,493	\$2,671	\$2,862
Winter	Tier 3					
Winter	Tier 4					
Summer	Tier 1	\$1,213	\$1,299	\$1,396	\$1,494	\$1,604
Summer	Tier 2	\$2,649	\$2,835	\$3,035	\$3,263	\$3,494
Summer	Tier 3					
Summer	Tier 4					

SFR Revenue Under Proposed Rates

		FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28
Winter	Tier 1	\$239,102	\$256,016	\$275,121	\$294,521	\$316,186
Winter	Tier 2	\$374,524	\$401,535	\$428,972	\$460,970	\$493,481
Winter	Tier 3	\$153,997	\$164,999	\$176,702	\$189,648	\$203,338
Winter	Tier 4					
Summer	Tier 1	\$179,915	\$192,642	\$207,018	\$221,615	\$237,917
Summer	Tier 2	\$419,284	\$449,524	\$480,239	\$516,061	\$552,458
Summer	Tier 3	\$320,804	\$344,128	\$368,670	\$395,309	\$424,104
Summer	Tier 4					

WA-4		Revenue Under Proposed Rates				
		FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28
Winter	Tier 1	\$2,521	\$2,702	\$2,882	\$3,098	\$3,314
Winter	Tier 2	\$3,987	\$4,285	\$4,602	\$4,937	\$5,272
Winter	Tier 3	\$1,619	\$1,737	\$1,862	\$1,999	\$2,140
Winter	Tier 4					
Summer	Tier 1	\$2,146	\$2,300	\$2,453	\$2,637	\$2,821
Summer	Tier 2	\$5,906	\$6,348	\$6,817	\$7,314	\$7,811
Summer	Tier 3	\$3,371	\$3,619	\$3,880	\$4,159	\$4,458
Summer	Tier 4					

WA-6.1 and WA-6.2		Revenue Under Proposed Rates				
		FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28
Winter	Tier 1	\$135,855	\$211,211	\$223,955	\$237,836	\$251,703
Winter	Tier 2					
Winter	Tier 3					
Winter	Tier 4					
Summer	Tier 1	\$136,611	\$146,329	\$157,018	\$168,713	\$180,722
Summer	Tier 2					
Summer	Tier 3					
Summer	Tier 4					

WA-12		Revenue Under Proposed Rates				
		FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28
Winter	Tier 1	\$3,643	\$3,909	\$10,866	\$11,068	\$27,952
Winter	Tier 2	\$5,940	\$6,454	\$20,451	\$21,155	\$54,982
Winter	Tier 3	\$2,946	\$3,242	\$11,854	\$12,397	\$33,261
Winter	Tier 4					
Summer	Tier 1	\$1,398	\$4,081	\$964	\$3,527	\$3,299
Summer	Tier 2	\$1,452	\$3,627	\$890	\$2,914	\$2,644
Summer	Tier 3	\$217	\$488	\$121	\$368	\$325
Summer	Tier 4					

Variable Revenue Under Proposed Rates - Without Surcharge						
		FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28
Landscape		\$ 66,347	\$ 67,308	\$ 68,285	\$ 69,278	\$ 70,287
MFR		7,667	8,215	8,807	9,444	10,125
SFR		1,687,625	1,808,845	1,936,721	2,078,124	2,227,484
WA-4		19,551	20,989	22,495	24,144	25,816
WA-6.1 and WA-6.2		272,465	357,540	380,973	406,549	432,425
WA-12		15,597	21,800	45,147	51,430	122,463
Total Variable Revenue Without Surcharge		\$ 2,069,251	\$ 2,284,698	\$ 2,462,428	\$ 2,638,968	\$ 2,888,601

Fixed Revenue Under Proposed Rates - Without Surcharge										
	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28				
Outside City Accounts										
Meter Size	Projected Outside City Accounts									
5/8"	240	243	246	249	252	255				
3/4"	2,870	2,880	2,890	2,900	2,910	2,920				
1"	711	716	721	726	731	736				
1.5"	83	86	89	92	95	98				
2"	31	33	35	37	39	41				
3"	2	3	4	5	6	7				
4"	3	4	5	6	7	8				
6"	-	-	-	-	-	-				
8"	2	3	4	5	6	7				
10"	-	-	-	-	-	-				
Total		3,968	3,994	4,020	4,046	4,072				
Proposed Rates										
Meter Size										
5/8"	\$	27.31	\$	29.19	\$	31.20	\$	33.36	\$	35.64
3/4"		27.31		29.19		31.20		33.36		35.64
1"		43.20		46.17		49.35		52.76		56.36
1.5"		82.55		88.23		94.30		100.82		107.70
2"		129.97		138.90		148.45		158.72		169.56
3"		240.69		257.22		274.91		293.91		313.99
4"		398.82		426.21		455.53		487.01		520.28
6"		872.98		932.94		997.11		1,066.02		1,138.84
8"		1,426.09		1,524.04		1,628.85		1,741.43		1,860.39
10"		2,216.28		2,368.50		2,531.39		2,706.35		2,891.22
Total Annual Fixed Revenue Without Surcharge	\$	1,610,451	\$	1,761,582	\$	1,925,966	\$	2,105,292	\$	2,298,329

Surcharge Calculation					
	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28
Variable Revenue Without Surcharge	\$ 2,069,251	\$ 2,284,698	\$ 2,462,428	\$ 2,638,968	\$ 2,888,601
Annual Fixed Revenue Without Surcharge	1,610,451	1,761,582	1,925,966	2,105,292	2,298,329
Sustainability Charge - Fixed	-	-	-	-	-
Sustainability Charge - Variable	-	-	-	-	-
Total Revenue Without Surcharge	\$ 3,679,702	\$ 4,046,280	\$ 4,388,394	\$ 4,744,260	\$ 5,186,930
Surcharge Costs to Collect	\$2,071,695	\$2,131,380	\$2,192,799	\$2,256,003	\$2,321,044
Required Percentage Surcharge	56%	53%	50%	48%	45%
Five Year Combined Surcharge Calculation					
	\$2,069,251	\$2,284,698	\$2,462,428	\$2,638,968	\$2,888,601

Total Revenue Without Surcharge	FY 2023/24 through FY 2027/28	\$ 22,045,566
Surcharge Costs to Collect	FY 2023/24 through FY 2027/28	\$10,972,922
Required Percentage Surcharge		50%

Appendix J

DEMAND REDUCTION RATES

Appendix J, Demand Reduction Rates, details the calculations used to determine the demand reduction rates for each level of demand reduction (15%, 20% and 30%). The calculations follow the same steps as those shown for each rate class in Appendix H, but the projected revenue requirements and demands are adjusted to reflect each level of overall demand reduction.

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

DEMAND REDUCTION RATE CALCULATIONS FOR 15% REDUCTION

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

UNIFORM FIXED RATES

DEMAND REDUCTION RATES FOR 15% REDUCTION

Appendix J

Demand Reduction Rates

Fixed

	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28
Number of Accounts		66,694	66,879	67,064	67,250	67,436	67,623
Number of MEUs		95,061	95,337	95,661	95,987	96,290	96,594
Customer Revenue to Recover			\$ 2,894,502	\$ 3,103,816	\$ 3,328,561	\$ 3,569,842	\$ 3,825,746
Capacity Revenue to Recover			27,374,025	29,353,805	31,479,087	33,761,189	36,181,405
Monthly Component Charge per Account			\$ 3.61	\$ 3.86	\$ 4.12	\$ 4.41	\$ 4.71
Monthly Component Charge per MEU			23.93	25.57	27.33	29.22	31.21

METER SIZE	METER EQUIVALENTS	MONTHLY FIXED CHARGES							
0.625	1.00	\$ 23.08	\$ 26.00	\$ 27.53	\$ 29.43	\$ 31.45	\$ 33.63	\$ 35.93	
0.75	1.00	23.08	26.00	27.53	29.43	31.45	33.63	35.93	
1	1.67	36.63	41.26	43.57	46.56	49.76	53.21	56.84	
1.5	3.33	70.22	79.08	83.28	89.01	95.13	101.71	108.66	
2	5.33	110.68	124.64	131.14	140.15	149.79	160.15	171.09	
3	10.00	205.16	231.03	242.88	259.57	277.42	296.60	316.86	
4	16.67	340.10	382.97	402.48	430.12	459.71	491.48	525.06	
6	36.67	744.72	838.59	881.02	941.54	1,006.29	1,075.85	1,149.35	
8	60.00	1,216.71	1,370.06	1,439.25	1,538.11	1,643.89	1,757.52	1,877.58	
10	93.33	1,891.02	2,129.34	2,236.75	2,390.39	2,554.78	2,731.37	2,917.95	
12	133.33	2,700.26	3,040.57	3,193.85	3,413.23	3,647.95	3,900.10	4,166.53	

METER SIZE	METER EQUIVALENTS	FY 21/22 REVENUE	FY 22/23 REVENUE	FY 23/24 REVENUE	FY 24/25 REVENUE	FY 25/26 REVENUE	FY 26/27 REVENUE	FY 27/28 REVENUE
0.625	1	\$ 1,760,671	\$ 1,989,403	\$ 2,111,706	\$ 2,263,023	\$ 2,424,326	\$ 2,598,789	\$ 2,783,399
0.75	1	13,048,066	14,746,035	15,653,088	16,775,248	17,971,507	19,265,424	20,634,650
1	1.67	4,226,060	4,793,098	5,077,293	5,442,423	5,834,394	6,258,324	6,706,095
1.5	3.33	1,039,449	1,201,335	1,273,605	1,369,977	1,473,582	1,585,869	1,705,382
2	5.33	2,000,372	2,315,867	2,453,734	2,639,953	2,840,521	3,057,898	3,289,292
3	10	630,918	724,900	762,634	817,961	877,336	940,012	1,006,388
4	16.67	534,583	613,882	645,559	693,108	744,230	797,755	854,505
6	36.67	634,610	728,395	765,490	821,946	882,612	945,988	1,013,150
8	60	1,036,637	1,189,315	1,249,378	1,341,377	1,440,234	1,543,318	1,652,527
10	93.33	226,922	260,342	273,474	293,612	315,250	337,814	361,718
12	133.33	-	-	-	-	-	-	-
Total Calculated Revenues*		\$ 25,138,288	\$ 28,562,572	\$ 30,265,961	\$ 32,458,627	\$ 34,803,991	\$ 37,331,192	\$ 40,007,106

*Note: Total calculated revenues vary slightly from the sum of allocated Customer and Capacity revenue requirements due to rounding of rates to the nearest \$0.01.

RIVERSIDE PUBLIC UTILITIES

Appendix J

2023 RPU Water Rate Model

Demand Reduction Rates

VARIABLE RATES - TIER (SFR)

DEMAND REDUCTION RATES FOR 15% REDUCTION

SFR

	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28
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WA1A - SFR - 15% Reduction

REVENUE TO RECOVER

Base Revenue to Recover	\$ 5,958,273	\$ 6,391,139	\$ 6,856,021	\$ 7,355,081	\$ 7,883,706
Max Day Revenue to Recover	7,012,605	7,520,685	8,066,314	8,652,033	9,272,933
Max Hour Revenue to Recover	1,688,347	1,810,998	1,942,720	2,084,127	2,233,913
Supply 1 Revenue to Recover	2,581,061	2,770,125	2,973,205	3,191,245	3,421,661
Supply 2 Revenue to Recover	2,555,407	2,742,322	2,943,087	3,158,637	3,386,515
Supply 3 Revenue to Recover	3,382,677	3,629,890	3,895,416	4,180,493	4,481,947
Supply 4 Revenue to Recover	1,003,661	1,076,963	1,155,695	1,240,222	1,329,622
Supply Sustainability Revenue to Recover	752,056	806,440	864,834	927,524	994,014
Total Allocated Costs	\$ 24,934,086	\$ 26,748,562	\$ 28,697,293	\$ 30,789,362	\$ 33,004,311

REVENUE TO RECOVER - BY TIER

Base

Use per Tier

Tier 1	36.9%	\$ 2,200,971	\$ 2,360,871	\$ 2,532,597	\$ 2,716,948	\$ 2,912,221
Tier 2	48.1%	2,867,069	3,075,361	3,299,057	3,539,201	3,793,570
Tier 3	14.9%	890,233	954,908	1,024,367	1,098,932	1,177,915

Max Day

Max Day Extra Capacity per Tier

Tier 1	14.7%	\$ 1,027,418	\$ 1,101,857	\$ 1,181,797	\$ 1,267,611	\$ 1,358,579
Tier 2	55.5%	3,895,195	4,177,411	4,480,485	4,805,826	5,150,708
Tier 3	29.8%	2,089,992	2,241,416	2,404,032	2,578,596	2,763,645

Max Hour

Max Hour Extra Capacity per Tier

Tier 1	35.3%	\$ 596,717	\$ 640,066	\$ 686,621	\$ 736,599	\$ 789,538
Tier 2	48.7%	821,399	881,070	945,154	1,013,950	1,086,823
Tier 3	16.0%	270,231	289,862	310,945	333,578	357,553

Supply 1

SFR Supply 1 Allocation by Tier

Tier 1	88.5%	\$ 2,284,002	\$ 2,451,306	\$ 2,631,013	\$ 2,823,959	\$ 3,027,856
Tier 2	11.5%	297,059	318,819	342,192	367,286	393,805
Tier 3	0.0%	-	-	-	-	-

Supply 2

SFR Supply 2 Allocation by Tier

Tier 1	0.0%	\$ -	\$ -	\$ -	\$ -	\$ -
Tier 2	100.0%	2,555,407	2,742,322	2,943,087	3,158,637	3,386,515
Tier 3	0.0%	-	-	-	-	-

Supply 3

SFR Supply 3 Allocation by Tier

Tier 1	0.0%	\$ -	\$ -	\$ -	\$ -	\$ -
Tier 2	32.6%	1,101,799	1,182,321	1,268,808	1,361,662	1,459,851
Tier 3	67.4%	2,280,878	2,447,569	2,626,609	2,818,830	3,022,096

Supply 4

SFR Supply 4 Allocation by Tier

Tier 1	0.0%	\$ -	\$ -	\$ -	\$ -	\$ -
Tier 2	0.0%	-	-	-	-	-
Tier 3	100.0%	1,003,661	1,076,963	1,155,695	1,240,222	1,329,622

Supply Sustainability

All to Tier 3

Tier 1	0.0%	\$ -	\$ -	\$ -	\$ -	\$ -
Tier 2	0.0%	-	-	-	-	-
Tier 3	100.0%	752,056	806,440	864,834	927,524	994,014

PROJECTED USAGE (HFC)

Annual	12,839,589	12,927,101	13,017,449	13,110,249	13,205,833
Tier 1	4,742,911	4,775,238	4,808,612	4,842,893	4,878,201
Tier 2	6,178,298	6,220,408	6,263,883	6,308,537	6,354,532

RIVERSIDE PUBLIC UTILITIES

Appendix J

2023 RPU Water Rate Model

Demand Reduction Rates

VARIABLE RATES - TIER (SFR)

DEMAND REDUCTION RATES FOR 15% REDUCTION

SFR

	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28
Tier 3		1,918,379	1,931,455	1,944,954	1,958,819	1,973,100
Winter						
Tier 1		2,706,429	2,724,876	2,743,920	2,763,481	2,783,629
Tier 2		2,939,228	2,959,261	2,979,943	3,001,187	3,023,068
Tier 3		763,328	768,531	773,902	779,419	785,102
Summer						
Tier 1		2,036,482	2,050,362	2,064,692	2,079,411	2,094,572
Tier 2		3,239,070	3,261,147	3,283,940	3,307,350	3,331,464
Tier 3		1,155,051	1,162,924	1,171,052	1,179,400	1,187,999

SUPPLY TIER USAGE (HCF)

	Tier Usage (HCF)	Supply 1 (HCF)	Supply 2 (HCF)	Supply 3 (HCF)	Supply 4 (HCF)	
		5,359,778	4,042,171	4,664,340	1,007,655	15,073,945
					Resilient Supply	2,234,356
Tier 1	4,742,911	4,742,911	-			
Tier 2	6,178,298	616,867	4,042,171	1,519,260	-	
Tier 3	1,918,379			3,145,080	1,007,655	
	12,839,589	5,359,778	4,042,171	4,664,340	1,007,655	15,073,945
Tier 1		88.5%	0.0%	0.0%	0.0%	
Tier 2		11.5%	100.0%	32.6%	0.0%	
Tier 3		0.0%	0.0%	67.4%	100.0%	

RIVERSIDE PUBLIC UTILITIES

Appendix J

2023 RPU Water Rate Model

Demand Reduction Rates

VARIABLE RATES - TIER (SFR)

DEMAND REDUCTION RATES FOR 15% REDUCTION

SFR

	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28
Winter						
Base Rate						
Tier 1	\$ 1,255,931	\$ 1,347,175	\$ 1,445,166	\$ 1,550,362	\$ 1,661,789	
Tier 2	\$ 1,363,963	\$ 1,463,054	\$ 1,569,474	\$ 1,683,719	\$ 1,804,731	
Tier 3	\$ 354,226	\$ 379,961	\$ 407,598	\$ 437,268	\$ 468,695	
Max Day Rate						
Tier 1	\$ 586,272	\$ 628,748	\$ 674,364	\$ 723,332	\$ 775,241	
Tier 2	\$ 1,853,078	\$ 1,987,337	\$ 2,131,520	\$ 2,286,296	\$ 2,450,368	
Tier 3	472,893	507,155	543,949	583,447	625,318	
Max Hour Rate						
Tier 1	\$ 340,502	\$ 365,238	\$ 391,804	\$ 420,323	\$ 450,531	
Tier 2	\$ 390,767	\$ 419,155	\$ 449,642	\$ 482,371	\$ 517,039	
Tier 3	61,144	65,586	70,356	75,477	80,902	
Supply 1 Rate						
Tier 1	\$ 1,303,311	\$ 1,398,780	\$ 1,501,325	\$ 1,611,425	\$ 1,727,774	
Tier 2	\$ 141,321	\$ 151,673	\$ 162,792	\$ 174,731	\$ 187,347	
Tier 3	\$ -	\$ -	\$ -	\$ -	\$ -	
Supply 2 Rate						
Tier 1	\$ -	\$ -	\$ -	\$ -	\$ -	
Tier 2	\$ 1,215,695	\$ 1,304,616	\$ 1,400,127	\$ 1,502,672	\$ 1,611,081	
Tier 3	\$ -	\$ -	\$ -	\$ -	\$ -	
Supply 3 Rate						
Tier 1	\$ -	\$ -	\$ -	\$ -	\$ -	
Tier 2	\$ 524,164	\$ 562,470	\$ 603,615	\$ 647,789	\$ 694,501	
Tier 3	\$ 907,567	\$ 973,894	\$ 1,045,134	\$ 1,121,620	\$ 1,202,500	
Supply 4 Rate						
Tier 1	\$ -	\$ -	\$ -	\$ -	\$ -	
Tier 2	\$ -	\$ -	\$ -	\$ -	\$ -	
Tier 3	\$ 399,359	\$ 428,526	\$ 459,854	\$ 493,488	\$ 529,060	
Supply Sustainability Rate						
Tier 1	\$ -	\$ -	\$ -	\$ -	\$ -	
Tier 2	\$ -	\$ -	\$ -	\$ -	\$ -	
Tier 3	\$ 299,245	\$ 320,885	\$ 344,120	\$ 369,064	\$ 395,521	
Combined Winter Revenue Requirements by Tier						
Tier 1	\$ 3,486,016	\$ 3,739,941	\$ 4,012,659	\$ 4,305,441	\$ 4,615,335	
Tier 2	\$ 5,488,988	\$ 5,888,307	\$ 6,317,170	\$ 6,777,577	\$ 7,265,067	
Tier 3	\$ 2,494,434	\$ 2,676,007	\$ 2,871,012	\$ 3,080,364	\$ 3,301,996	
Tier 1 Winter Rate	\$ 1.30	\$ 1.29	\$ 1.37	\$ 1.46	\$ 1.56	\$ 1.66
Tier 2 Winter Rate	\$ 1.64	\$ 1.87	\$ 1.99	\$ 2.12	\$ 2.26	\$ 2.40
Tier 3 Winter Rate	\$ 3.01	\$ 3.27	\$ 3.48	\$ 3.71	\$ 3.95	\$ 4.21

RIVERSIDE PUBLIC UTILITIES

Appendix J

2023 RPU Water Rate Model

Demand Reduction Rates

VARIABLE RATES - TIER (SFR)

DEMAND REDUCTION RATES FOR 15% REDUCTION

SFR

	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28						
Summer												
Base Rate												
Tier 1	\$	945,039	\$	1,013,696	\$	1,087,431	\$	1,166,586	\$	1,250,431		
Tier 2		1,503,106		1,612,306		1,729,583		1,855,482		1,988,839		
Tier 3		536,007		574,948		616,769		661,664		709,219		
Max Day Rate												
Tier 1	\$	441,146	\$	473,109	\$	507,433	\$	544,279	\$	583,338		
Tier 2		2,042,117		2,190,074		2,348,965		2,519,530		2,700,341		
Tier 3		1,617,098		1,734,261		1,860,083		1,995,149		2,138,328		
Max Hour Rate												
Tier 1	\$	256,215	\$	274,828	\$	294,817	\$	316,276	\$	339,007		
Tier 2		430,631		461,915		495,512		531,579		569,784		
Tier 3		209,087		224,276		240,589		258,101		276,651		
Supply 1 Rate												
Tier 1	\$	980,690	\$	1,052,527	\$	1,129,688	\$	1,212,534	\$	1,300,082		
Tier 2		155,738		167,146		179,399		192,556		206,459		
Tier 3		-		-		-		-		-		
Supply 2 Rate												
Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-		
Tier 2		1,339,712		1,437,705		1,542,960		1,655,965		1,775,434		
Tier 3		-		-		-		-		-		
Supply 3 Rate												
Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-		
Tier 2		577,636		619,850		665,193		713,873		765,350		
Tier 3		1,373,310		1,473,675		1,581,475		1,697,211		1,819,597		
Supply 4 Rate												
Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-		
Tier 2		-		-		-		-		-		
Tier 3		604,301		648,437		695,841		746,735		800,562		
Supply Sustainability Rate												
Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-		
Tier 2		-		-		-		-		-		
Tier 3		452,811		485,556		520,715		558,460		598,493		
Combined Summer Revenue Requirements by Tier												
Tier 1	\$	2,623,091	\$	2,814,159	\$	3,019,369	\$	3,239,675	\$	3,472,859		
Tier 2	\$	6,048,941	\$	6,488,996	\$	6,961,613	\$	7,468,984	\$	8,006,207		
Tier 3	\$	4,792,615	\$	5,141,153	\$	5,515,471	\$	5,917,319	\$	6,342,850		
Tier 1 Summer Rate	\$	1.30	\$	1.29	\$	1.37	\$	1.46	\$	1.56	\$	1.66
Tier 2 Summer Rate	\$	1.64	\$	1.87	\$	1.99	\$	2.12	\$	2.26	\$	2.40
Tier 3 Summer Rate	\$	3.66	\$	4.15	\$	4.42	\$	4.71	\$	5.02	\$	5.34

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

VARIABLE RATES - TIER (MFR)

DEMAND REDUCTION RATES FOR 15% REDUCTION

Appendix J

Demand Reduction Rates

MFR

	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28
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WA1B - MFR - 15% Reduction

REVENUE TO RECOVER

Base Revenue to Recover	\$	162,984	\$	174,825	\$	187,542	\$	201,193	\$	215,653
Max Day Revenue to Recover		144,612		155,089		166,341		178,420		191,224
Max Hour Revenue to Recover		45,368		48,664		52,204		56,003		60,028
Supply 1 Revenue to Recover		80,755		86,670		93,024		99,846		107,055
Supply 2 Revenue to Recover		79,952		85,800		92,082		98,825		105,955
Supply 3 Revenue to Recover		61,828		66,347		71,200		76,410		81,920
Supply 4 Revenue to Recover		18,345		19,685		21,124		22,669		24,303
Supply Sustainability Revenue to Recover		15,509		16,630		17,834		19,127		20,498
Total Allocated Costs	\$	609,353	\$	653,710	\$	701,350	\$	752,494	\$	806,637

REVENUE TO RECOVER - BY TIER

Base Rate

Use per Tier

Tier 1	52.1%	\$	84,956	\$	91,128	\$	97,757	\$	104,873	\$	112,410
Tier 2	47.9%		78,028		83,697		89,785		96,320		103,243

Max Day Rate

Max Day Extra Capacity per Tier

Tier 1	25.8%	\$	37,352	\$	40,058	\$	42,964	\$	46,084	\$	49,391
Tier 2	74.2%		107,260		115,031		123,377		132,336		141,833

Max Hour Rate

Max Hour Extra Capacity per Tier

Tier 1	50.7%	\$	22,989	\$	24,659	\$	26,452	\$	28,378	\$	30,417
Tier 2	49.3%		22,380		24,005		25,751		27,626		29,611

Supply 1 Rate

SFR Supply 1 Allocation by Tier

Tier 1	100.0%	\$	80,755	\$	86,670	\$	93,024	\$	99,846	\$	107,055
Tier 2	0.0%		-		-		-		-		-

Supply 2 Rate

SFR Supply 2 Allocation by Tier

Tier 1	11.1%	\$	8,910	\$	9,561	\$	10,261	\$	11,013	\$	11,808
Tier 2	88.9%		71,042		76,239		81,820		87,812		94,148

Supply 3 Rate

SFR Supply 3 Allocation by Tier

Tier 1	0.0%	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2	100.0%		61,828		66,347		71,200		76,410		81,920

Supply 4 Rate

SFR Supply 4 Allocation by Tier

Tier 1	0.0%	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2	100.0%		18,345		19,685		21,124		22,669		24,303

Supply Sustainability

All to Tier 3

Tier 1	0.0%	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2	100.0%		15,509		16,630		17,834		19,127		20,498

RIVERSIDE PUBLIC UTILITIES

Appendix J

2023 RPU Water Rate Model

Demand Reduction Rates

VARIABLE RATES - TIER (MFR)

DEMAND REDUCTION RATES FOR 15% REDUCTION

MFR

PROJECTED USAGE (HFC)

	350,198	352,585	355,049	357,580	360,187
Annual					
Tier 1	182,542	183,787	185,071	186,390	187,749
Tier 2	167,656	168,798	169,978	171,190	172,438
Winter					
Tier 1	104,853	105,567	106,305	107,063	107,844
Tier 2	81,273	81,827	82,399	82,987	83,592
Summer					
Tier 1	77,690	78,219	78,766	79,327	79,906
Tier 2	86,382	86,971	87,579	88,203	88,846

SUPPLY TIER USAGE (HCF)

	Tier Usage (HCF)	Supply 1 (HCF)	Supply 2 (HCF)	Supply 3 (HCF)	Supply 4 (HCF)	
		168,390	126,994	73,894	15,881	385,160
					Resilient Supply	34,962
Tier 1	182,542	168,390	14,152			
Tier 2	167,656	-	112,842	73,894	15,881	
	350,198	168,390	126,994	73,894	15,881	385,160
Tier 1		100.0%	11.1%	0.0%	0.0%	
Tier 2		0.0%	88.9%	100.0%	100.0%	

RIVERSIDE PUBLIC UTILITIES

Appendix J

2023 RPU Water Rate Model

Demand Reduction Rates

VARIABLE RATES - TIER (MFR)

DEMAND REDUCTION RATES FOR 15% REDUCTION

MFR

Winter

Base Rate

Tier 1	\$	48,799	\$	52,344	\$	56,152	\$	60,239	\$	64,569
Tier 2		37,825		40,573		43,524		46,693		50,049

Max Day Rate

Seasonality Factor

Tier 1	\$	21,455	\$	23,009	\$	24,679	\$	26,471	\$	28,370
Tier 2		41,549		44,559		47,792		51,262		54,941

1.00

Max Hour Rate

Seasonality Factor

Tier 1	\$	13,205	\$	14,164	\$	15,194	\$	16,300	\$	17,472
Tier 2		8,669		9,299		9,975		10,701		11,470

1.00

Supply 1 Rate

Tier 1	\$	46,386	\$	49,783	\$	53,433	\$	57,352	\$	61,493
Tier 2		-		-		-		-		-

Supply 2 Rate

Tier 1	\$	5,118	\$	5,492	\$	5,894	\$	6,326	\$	6,782
Tier 2		34,439		36,958		39,663		42,569		45,640

Supply 3 Rate

Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2		29,972		32,162		34,515		37,041		39,712

Supply 4 Rate

Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2		8,893		9,542		10,240		10,989		11,781

Supply Sustainability

Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2		7,518		8,062		8,645		9,272		9,937

Winter Revenue Requirement By Tier

Tier 1	\$	134,962	\$	144,793	\$	155,352	\$	166,687	\$	178,686
Tier 2	\$	168,864	\$	181,155	\$	194,355	\$	208,527	\$	223,530

Tier 1 Winter Rate	\$	1.30	\$	1.29	\$	1.37	\$	1.46	\$	1.56	\$	1.66
Tier 2 Winter Rate	\$	1.87	\$	2.08	\$	2.21	\$	2.36	\$	2.51	\$	2.67

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

VARIABLE RATES - TIER (MFR)

DEMAND REDUCTION RATES FOR 15% REDUCTION

Appendix J

Demand Reduction Rates

MFR

Summer

Base Rate

Tier 1	\$	36,157	\$	38,784	\$	41,605	\$	44,633	\$	47,842
Tier 2		40,203		43,124		46,260		49,628		53,194

Max Day Rate

Seasonality Factor

Tier 1	\$	15,897	\$	17,049	\$	18,285	\$	19,613	\$	21,021
Tier 2		65,711		70,472		75,585		81,073		86,892

1.49

Max Hour Rate

Seasonality Factor

Tier 1	\$	9,784	\$	10,495	\$	11,258	\$	12,077	\$	12,945
Tier 2		13,711		14,707		15,776		16,925		18,141

1.49

Supply 1 Rate

Tier 1	\$	34,369	\$	36,886	\$	39,591	\$	42,494	\$	45,562
Tier 2		-		-		-		-		-

Supply 2 Rate

Tier 1	\$	3,792	\$	4,069	\$	4,367	\$	4,687	\$	5,025
Tier 2		36,603		39,281		42,157		45,244		48,508

Supply 3 Rate

Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2		31,856		34,184		36,685		39,369		42,208

Supply 4 Rate

Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2		9,452		10,142		10,884		11,680		12,522

Supply Sustainability

Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2		7,991		8,568		9,189		9,855		10,561

Summer Revenue Requirement By Tier

Tier 1	\$	99,999	\$	107,283	\$	115,107	\$	123,505	\$	132,396
Tier 2	\$	205,527	\$	220,478	\$	236,536	\$	253,774	\$	272,026

Tier 1 Summer Rate	\$	1.30	\$	1.29	\$	1.37	\$	1.46	\$	1.56	\$	1.66
Tier 2 Summer Rate	\$	2.12	\$	2.38	\$	2.54	\$	2.70	\$	2.88	\$	3.06

RIVERSIDE PUBLIC UTILITIES

Appendix J

2023 RPU Water Rate Model

DEMAND REDUCTION RATES

VARIABLE RATES - TIER (WA4)

DEMAND REDUCTION RATES FOR 15% REDUCTION

WA4: Riverside Water Company

	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28
WA4 - Riverside Irrigators - 15% Reduction						
REVENUE TO RECOVER						
Base Revenue to Recover	\$ 3,918	\$ 4,202	\$ 4,508	\$ 4,836	\$ 5,184	
Max Day Revenue to Recover	6,576	7,052	7,564	8,113	8,696	
Max Hour Revenue to Recover	1,144	1,227	1,316	1,412	1,514	
Supply 1 Revenue to Recover	1,410	1,514	1,625	1,744	1,870	
Supply 2 Revenue to Recover	1,396	1,498	1,608	1,726	1,850	
Supply 3 Revenue to Recover	3,195	3,428	3,679	3,949	4,233	
Supply 4 Revenue to Recover	948	1,017	1,092	1,171	1,256	
Supply Sustainability Revenue To Recover	705	756	811	870	932	
Total Allocated Costs	\$ 19,293	\$ 20,696	\$ 22,203	\$ 23,821	\$ 25,535	

REVENUE TO RECOVER - BY TIER						
Base Rate						
	<u>Use per Tier</u>					
Tier 1	37.3%	\$ 1,461	\$ 1,567	\$ 1,681	\$ 1,804	\$ 1,933
Tier 2	51.5%	2,016	2,162	2,319	2,488	2,667
Tier 3	11.3%	441	473	507	544	584
Max Day Rate						
	<u>Max Day Extra Capacity per Tier</u>					
Tier 1	16.7%	\$ 1,099	\$ 1,178	\$ 1,264	\$ 1,356	\$ 1,453
Tier 2	60.6%	3,988	4,277	4,587	4,920	5,273
Tier 3	22.6%	1,489	1,597	1,713	1,838	1,969
Max Hour Rate						
	<u>Max Hour Extra Capacity per Tier</u>					
Tier 1	35.2%	\$ 402	\$ 432	\$ 463	\$ 497	\$ 532
Tier 2	52.4%	599	643	690	740	793
Tier 3	12.4%	142	153	164	176	188
Supply 1 Rate						
	<u>SFR Supply 1 Allocation by Tier</u>					
Tier 1	100.0%	\$ 1,410	\$ 1,514	\$ 1,625	\$ 1,744	\$ 1,870
Tier 2	0.0%	-	-	-	-	-
Tier 3	0.0%	-	-	-	-	-
Supply 2 Rate						
	<u>SFR Supply 2 Allocation by Tier</u>					
Tier 1	10.7%	\$ 149	\$ 160	\$ 172	\$ 184	\$ 198
Tier 2	89.3%	1,247	1,338	1,436	1,542	1,653
Tier 3	0.0%	-	-	-	-	-
Supply 3 Rate						
	<u>SFR Supply 3 Allocation by Tier</u>					
Tier 1	0.0%	\$ -	\$ -	\$ -	\$ -	\$ -
Tier 2	54.3%	1,736	1,863	1,999	2,145	2,300
Tier 3	45.7%	1,459	1,566	1,680	1,803	1,933
Supply 4 Rate						
	<u>SFR Supply 4 Allocation by Tier</u>					
Tier 1	0.0%	\$ -	\$ -	\$ -	\$ -	\$ -
Tier 2	0.0%	-	-	-	-	-
Tier 3	100.0%	948	1,017	1,092	1,171	1,256
Supply Sustainability						
	<u>All to Tier 3</u>					
Tier 1	0.0%	\$ -	\$ -	\$ -	\$ -	\$ -
Tier 2	0.0%	-	-	-	-	-
Tier 3	100.0%	705	756	811	870	932

RIVERSIDE PUBLIC UTILITIES

Appendix J

2023 RPU Water Rate Model

DEMAND REDUCTION RATES

VARIABLE RATES - TIER (WA4)

DEMAND REDUCTION RATES FOR 15% REDUCTION

WA4: Riverside Water Company

PROJECTED USAGE (HFC)

	8,486	8,486	8,486	8,486	8,486
Annual					
Tier 1	3,165	3,165	3,165	3,165	3,165
Tier 2	4,366	4,366	4,366	4,366	4,366
Tier 3	955	955	955	955	955
Winter					
Tier 1	1,756	1,756	1,756	1,756	1,756
Tier 2	1,760	1,760	1,760	1,760	1,760
Tier 3	368	368	368	368	368
Summer					
Tier 1	1,409	1,409	1,409	1,409	1,409
Tier 2	2,607	2,607	2,607	2,607	2,607
Tier 3	587	587	587	587	587

SUPPLY TIER USAGE (HCF)

	Tier Usage (HCF)	Supply 1 (HCF)	Supply 2 (HCF)	Supply 3 (HCF)	Supply 4 (HCF)	
		2,929	2,209	4,406	952	10,495
					Resilient Supply	2,008
Tier 1	3,165	2,929	236			
Tier 2	4,366		1,973	2,394	-	
Tier 3	955			2,012	952	
	8,486	2,929	2,209	4,406	952	10,495
Tier 1		100.0%	10.7%	0.0%	0.0%	
Tier 2		0.0%	89.3%	54.3%	0.0%	
Tier 3		0.0%	0.0%	45.7%	100.0%	

RIVERSIDE PUBLIC UTILITIES

Appendix J

2023 RPU Water Rate Model

DEMAND REDUCTION RATES

VARIABLE RATES - TIER (WA4)

DEMAND REDUCTION RATES FOR 15% REDUCTION

WA4: Riverside Water Company

Winter

Base Rate

Tier 1	\$	811	\$	870	\$	933	\$	1,001	\$	1,073
Tier 2		813		872		935		1,003		1,075
Tier 3		170		182		195		210		225

Max Day Rate

Tier 1	\$	610	\$	654	\$	701	\$	752	\$	806
Tier 2		1,607		1,724		1,849		1,983		2,126
Tier 3		322		345		371		397		426

Max Hour Rate

Tier 1	\$	223	\$	240	\$	257	\$	276	\$	295
Tier 2		242		259		278		298		320
Tier 3		31		33		35		38		41

Supply 1 Rate

Tier 1	\$	783	\$	840	\$	901	\$	968	\$	1,037
Tier 2		-		-		-		-		-
Tier 3		-		-		-		-		-

Supply 2 Rate

Tier 1	\$	83	\$	89	\$	95	\$	102	\$	110
Tier 2		503		539		579		621		666
Tier 3		-		-		-		-		-

Supply 3 Rate

Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2		700		751		806		865		927
Tier 3		562		603		647		695		745

Supply 4 Rate

Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2		-		-		-		-		-
Tier 3		365		392		420		451		484

Supply Sustainability Rate

Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2		-		-		-		-		-
Tier 3		272		291		312		335		359

Winter Revenue Requirement By Tier

Tier 1	\$	2,509	\$	2,692	\$	2,888	\$	3,098	\$	3,321
Tier 2	\$	3,864	\$	4,145	\$	4,447	\$	4,771	\$	5,114
Tier 3	\$	1,722	\$	1,847	\$	1,982	\$	2,126	\$	2,279

Tier 1 Winter Rate	\$	1.32	\$	1.43	\$	1.53	\$	1.64	\$	1.76	\$	1.89
Tier 2 Winter Rate	\$	1.54	\$	2.20	\$	2.36	\$	2.53	\$	2.71	\$	2.91
Tier 3 Winter Rate	\$	2.46	\$	4.68	\$	5.02	\$	5.38	\$	5.78	\$	6.19

RIVERSIDE PUBLIC UTILITIES

Appendix J

2023 RPU Water Rate Model

DEMAND REDUCTION RATES

VARIABLE RATES - TIER (WA4)

DEMAND REDUCTION RATES FOR 15% REDUCTION

WA4: Riverside Water Company

Summer

Base Rate

Tier 1	\$	650	\$	698	\$	748	\$	803	\$	861
Tier 2		1,204		1,291		1,385		1,486		1,592
Tier 3		271		291		312		335		359

Max Day Rate

Tier 1	\$	489	\$	525	\$	563	\$	604	\$	647
Tier 2		2,381		2,553		2,739		2,938		3,148
Tier 3		1,167		1,252		1,343		1,440		1,543

Max Hour Rate

Tier 1	\$	179	\$	192	\$	206	\$	221	\$	237
Tier 2		358		384		412		442		474
Tier 3		111		120		128		138		147

Supply 1 Rate

Tier 1	\$	628	\$	674	\$	723	\$	776	\$	832
Tier 2		-		-		-		-		-
Tier 3		-		-		-		-		-

Supply 2 Rate

Tier 1	\$	66	\$	71	\$	77	\$	82	\$	88
Tier 2		745		799		858		920		987
Tier 3		-		-		-		-		-

Supply 3 Rate

Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2		1,036		1,112		1,194		1,281		1,373
Tier 3		897		962		1,032		1,108		1,188

Supply 4 Rate

Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2		-		-		-		-		-
Tier 3		582		625		671		720		772

Supply Sustainability Rate

Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2		-		-		-		-		-
Tier 3		433		465		498		534		573

Summer Revenue Requirement By Tier

Tier 1	\$	2,013	\$	2,160	\$	2,317	\$	2,486	\$	2,665
Tier 2	\$	5,723	\$	6,140	\$	6,587	\$	7,066	\$	7,574
Tier 3	\$	3,462	\$	3,714	\$	3,984	\$	4,274	\$	4,582

Tier 1 Summer Rate	\$1.32	\$	1.43	\$	1.53	\$	1.64	\$	1.76	\$	1.89
Tier 2 Summer Rate	\$1.58	\$	2.20	\$	2.36	\$	2.53	\$	2.71	\$	2.91
Tier 3 Summer Rate	\$3.17	\$	5.90	\$	6.33	\$	6.79	\$	7.28	\$	7.81

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

VARIABLE RATES - NO TIER (Comm/Ind, Landscape, WA2, WA7)

Appendix J

Demand Reduction Rates

Non-Tiered Rates

DEMAND REDUCTION RATES FOR 15% REDUCTION

	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28
WA6 - Commercial/Industrial						
REVENUE TO RECOVER						
Base Revenue to Recover	\$ 3,302,529	\$ 3,542,456	\$ 3,800,129	\$ 4,076,746	\$ 4,369,750	
Max Day Revenue to Recover	3,239,569	3,474,283	3,726,344	3,996,925	4,283,758	
Max Hour Revenue to Recover	924,633	991,803	1,063,942	1,141,384	1,223,415	
Supply 1 Revenue to Recover	1,046,446	1,123,099	1,205,434	1,293,834	1,387,252	
Supply 2 Revenue to Recover	1,036,045	1,111,826	1,193,223	1,280,614	1,373,003	
Supply 3 Revenue to Recover	2,944,055	3,159,212	3,390,308	3,638,420	3,900,786	
Supply 4 Revenue to Recover	873,519	937,316	1,005,839	1,079,406	1,157,214	
Supply Sustainability Revenue to Recover	347,422	372,546	399,522	428,483	459,198	
Total Allocated Costs	\$ 13,714,217	\$ 14,712,542	\$ 15,784,741	\$ 16,935,811	\$ 18,154,376	
PROJECTED USAGE (HFC)						
Projected Annual Usage (HCF)	6,850,847	6,950,124	7,051,024	7,153,509	7,257,748	
Projected Winter Usage (HCF)	3,584,395	3,636,337	3,689,128	3,742,749	3,797,287	
Projected Summer Usage (HCF)	3,266,452	3,313,787	3,361,896	3,410,760	3,460,461	
Winter						
Base Revenue to Recover	\$1,727,898.32	\$1,853,429.34	\$1,988,244.78	\$2,132,972.32	\$2,286,273.11	
Max Day Revenue to Recover	1,482,483.45	1,589,892.84	1,705,240.35	1,829,063.13	1,960,322.65	
Max Hour Revenue to Recover	423,128.13	453,866.57	486,878.42	522,317.41	559,856.24	
Supply 1 Revenue to Recover	547,505.20	587,610.35	630,688.49	676,940.10	725,816.78	
Supply 2 Revenue to Recover	542,063.47	581,712.58	624,299.71	670,023.07	718,361.36	
Supply 3 Revenue to Recover	1,540,343.01	1,652,914.17	1,773,824.93	1,903,638.06	2,040,908.78	
Supply 4 Revenue to Recover	457,029.06	490,408.12	526,259.55	564,750.23	605,459.60	
Supply Sustainability Revenue to Recover	181,773.06	194,917.88	209,031.72	224,184.04	240,254.66	
Winter Rate	\$ 1.58	\$ 1.93	\$ 2.04	\$ 2.15	\$ 2.28	\$ 2.41
Summer						
Base Revenue to Recover	\$1,574,630.44	\$1,689,026.80	\$1,811,883.97	\$1,943,773.43	\$2,083,476.82	
Max Day Revenue to Recover	1,757,085.20	1,884,390.34	2,021,103.91	2,167,861.97	2,323,435.56	
Max Hour Revenue to Recover	501,504.54	537,936.74	577,063.46	619,066.69	663,559.09	
Supply 1 Revenue to Recover	498,940.45	535,488.25	574,745.31	616,894.17	661,435.61	
Supply 2 Revenue to Recover	493,981.40	530,113.62	568,923.23	610,590.69	654,641.50	
Supply 3 Revenue to Recover	1,403,711.64	1,506,297.69	1,616,483.55	1,734,781.57	1,859,876.72	
Supply 4 Revenue to Recover	416,489.71	446,908.03	479,579.41	514,655.76	551,754.31	
Supply Sustainability Revenue to Recover	165,649.44	177,628.31	190,490.24	204,298.47	218,943.66	
Summer Rate	\$ 1.84	\$ 2.09	\$ 2.21	\$ 2.33	\$ 2.47	\$ 2.61

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

VARIABLE RATES - NO TIER (Comm/Ind, Landscape, WA2, WA7)

Appendix J

Demand Reduction Rates

Non-Tiered Rates

DEMAND REDUCTION RATES FOR 15% REDUCTION

WA11 - Landscape

Base Revenue to Recover	\$ 340,730	\$ 365,484	\$ 392,069	\$ 420,608	\$ 450,838
Max Day Revenue to Recover	553,078	593,150	636,184	682,379	731,349
Max Hour Revenue to Recover	99,175	106,380	114,118	122,424	131,222
Supply 1 Revenue to Recover	92,651	99,438	106,728	114,555	122,826
Supply 2 Revenue to Recover	91,730	98,440	105,647	113,384	121,564
Supply 3 Revenue to Recover	350,059	375,642	403,120	432,621	463,818
Supply 4 Revenue to Recover	103,865	111,450	119,598	128,345	137,597
Supply Sustainability Revenue to Recover	59,314	63,603	68,209	73,153	78,397
	\$ 1,690,602	\$ 1,813,587	\$ 1,945,671	\$ 2,087,469	\$ 2,237,610

Projected Annual Usage (HCF)	697,508	707,616	717,889	728,323	738,936
Projected Winter Usage (HCF)	316,599	321,187	325,850	330,586	335,404
Projected Summer Usage (HCF)	380,909	386,429	392,039	397,737	403,532

Winter

Base Revenue to Recover	\$ 154,657.40	\$ 165,893.25	\$ 177,960.12	\$ 190,914.02	\$ 204,635.87
Max Day Revenue to Recover	178,043.27	190,943.01	204,796.12	219,666.85	235,431.56
Max Hour Revenue to Recover	36,053.36	38,672.48	41,485.32	44,504.95	47,703.52
Supply 1 Revenue to Recover	42,054.36	45,134.89	48,443.78	51,996.38	55,750.77
Supply 2 Revenue to Recover	41,636.37	44,681.87	47,953.05	51,465.07	55,178.11
Supply 3 Revenue to Recover	158,891.81	170,503.99	182,976.44	196,367.02	210,527.49
Supply 4 Revenue to Recover	47,144.16	50,587.35	54,285.57	58,255.99	62,455.46
Supply Sustainability Revenue to Recover	26,922.65	28,869.56	30,959.99	33,204.20	35,584.53
Winter Rate	\$ 1.67	\$ 2.16	\$ 2.29	\$ 2.42	\$ 2.56

Summer

Base Revenue to Recover	\$ 186,072.52	\$ 199,590.56	\$ 214,108.39	\$ 229,693.75	\$ 246,201.84
Max Day Revenue to Recover	375,035.04	402,207.15	431,387.40	462,711.83	495,916.96
Max Hour Revenue to Recover	63,121.96	67,707.50	72,632.19	77,918.95	83,518.98
Supply 1 Revenue to Recover	50,596.74	54,302.98	58,283.95	62,558.23	67,074.96
Supply 2 Revenue to Recover	50,093.85	53,757.94	57,693.54	61,919.00	66,385.98
Supply 3 Revenue to Recover	191,167.05	205,137.86	220,143.65	236,254.39	253,290.18
Supply 4 Revenue to Recover	56,720.42	60,862.97	65,312.36	70,089.33	75,141.51
Supply Sustainability Revenue to Recover	32,391.37	34,733.73	37,248.76	39,948.86	42,812.52
Summer Rate	\$ 2.14	\$ 2.64	\$ 2.79	\$ 2.95	\$ 3.12

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

VARIABLE RATES - NO TIER (Comm/Ind, Landscape, WA2, WA7)

Appendix J

Demand Reduction Rates

Non-Tiered Rates

DEMAND REDUCTION RATES FOR 15% REDUCTION

WA2 - Flat Rate

Base Revenue to Recover	\$ 19,356	\$ 20,762	\$ 22,273	\$ 23,894	\$ 25,611
Max Day Revenue to Recover	60,891	65,302	70,040	75,126	80,517
Max Hour Revenue to Recover	6,143	6,589	7,068	7,583	8,128
Supply 1 Revenue to Recover	3,708	3,980	4,272	4,585	4,916
Supply 2 Revenue to Recover	3,671	3,940	4,228	4,538	4,865
Supply 3 Revenue to Recover	25,644	27,518	29,531	31,692	33,978
Supply 4 Revenue to Recover	7,609	8,164	8,761	9,402	10,080
Supply Sustainability Revenue to Recover	6,530	7,002	7,509	8,054	8,631
	\$ 133,552	\$ 143,258	\$ 153,683	\$ 164,873	\$ 176,726

Projected Annual Usage (HCF)	42,174	42,174	42,174	42,174	42,174
Projected Winter Usage (HCF)	17,045	17,045	17,045	17,045	17,045
Projected Summer Usage (HCF)	25,129	25,129	25,129	25,129	25,129
	\$ 3.17	\$ 3.40	\$ 3.64	\$ 3.91	\$ 4.19

WA7 & 10 - Interruptable

Base Revenue to Recover	\$ 362,045	\$ 388,348	\$ 416,595	\$ 446,920	\$ 479,041
Max Day Revenue to Recover	331,670	355,700	381,507	409,209	438,575
Max Hour Revenue to Recover	108,047	115,896	124,326	133,376	142,961
Supply 1 Revenue to Recover	90,590	97,226	104,354	112,007	120,094
Supply 2 Revenue to Recover	89,690	96,250	103,297	110,862	118,860
Supply 3 Revenue to Recover	346,215	371,517	398,694	427,871	458,725
Supply 4 Revenue to Recover	-	-	-	-	-
Supply Sustainability Revenue to Recover	-	-	-	-	-
	\$ 1,328,258	\$ 1,424,939	\$ 1,528,773	\$ 1,640,245	\$ 1,758,257

Projected Annual Usage (HCF)	746,727	756,566	767,550	778,706	790,053
Projected Winter Usage (HCF)	305,164	309,185	313,674	318,233	322,871
Projected Summer Usage (HCF)	441,563	447,381	453,876	460,473	467,182
	\$ 1.78	\$ 1.88	\$ 1.99	\$ 2.11	\$ 2.23

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

DEMAND REDUCTION RATE CALCULATIONS FOR 20% REDUCTION

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

UNIFORM FIXED RATES

DEMAND REDUCTION RATES FOR 20% REDUCTION

Appendix J

Demand Reduction Rates

Fixed

	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28
Number of Accounts		66,694	66,879	67,064	67,250	67,436	67,623
Number of MEUs		95,061	95,337	95,661	95,987	96,290	96,594
Customer Revenue to Recover			\$ 2,894,502	\$ 3,103,816	\$ 3,328,561	\$ 3,569,842	\$ 3,825,746
Capacity Revenue to Recover			27,625,234	29,623,000	31,767,575	34,070,835	36,513,289
Monthly Component Charge per Account			\$ 3.61	\$ 3.86	\$ 4.12	\$ 4.41	\$ 4.71
Monthly Component Charge per MEU			24.15	25.81	27.58	29.49	31.50

METER SIZE	METER EQUIVALENTS	MONTHLY FIXED CHARGES							
0.625	1.00	\$ 23.08	\$ 26.00	\$ 27.75	\$ 29.66	\$ 31.70	\$ 33.90	\$ 36.22	
0.75	1.00	23.08	26.00	27.75	29.66	31.70	33.90	36.22	
1	1.67	36.63	41.26	43.93	46.95	50.18	53.65	57.32	
1.5	3.33	70.22	79.08	84.02	89.79	95.97	102.60	109.61	
2	5.33	110.68	124.64	132.31	141.40	151.13	161.57	172.61	
3	10.00	205.16	231.03	245.08	261.91	279.92	299.28	319.72	
4	16.67	340.10	382.97	406.14	434.03	463.88	495.95	529.83	
6	36.67	744.72	838.59	889.08	950.14	1,015.48	1,085.68	1,159.84	
8	60.00	1,216.71	1,370.06	1,452.42	1,552.18	1,658.92	1,773.60	1,894.76	
10	93.33	1,891.02	2,129.34	2,257.24	2,412.28	2,578.15	2,756.38	2,944.67	
12	133.33	2,700.26	3,040.57	3,223.12	3,444.50	3,681.35	3,935.83	4,204.70	

METER SIZE	METER EQUIVALENTS	FY 21/22 REVENUE	FY 22/23 REVENUE	FY 23/24 REVENUE	FY 24/25 REVENUE	FY 25/26 REVENUE	FY 26/27 REVENUE	FY 27/28 REVENUE
0.625	1	\$ 1,760,671	\$ 1,989,403	\$ 2,128,581	\$ 2,280,708	\$ 2,443,597	\$ 2,619,653	\$ 2,805,864
0.75	1	13,048,066	14,746,035	15,778,177	16,906,349	18,114,365	19,420,097	20,801,198
1	1.67	4,226,060	4,793,098	5,119,244	5,488,010	5,883,640	6,310,075	6,762,727
1.5	3.33	1,039,449	1,201,335	1,284,922	1,381,983	1,486,594	1,599,746	1,720,292
2	5.33	2,000,372	2,315,867	2,475,625	2,663,499	2,865,932	3,085,012	3,318,515
3	10	630,918	724,900	769,542	825,335	885,242	948,506	1,015,471
4	16.67	534,583	613,882	651,430	699,409	750,981	805,011	862,268
6	36.67	634,610	728,395	772,493	829,454	890,673	954,631	1,022,397
8	60	1,036,637	1,189,315	1,260,810	1,353,647	1,453,402	1,557,438	1,667,648
10	93.33	226,922	260,342	275,980	296,301	318,134	340,907	365,030
12	133.33	-	-	-	-	-	-	-
Total Calculated Revenues*		\$ 25,138,288	\$ 28,562,572	\$ 30,516,804	\$ 32,724,694	\$ 35,092,558	\$ 37,641,077	\$ 40,341,409

*Note: Total calculated revenues vary slightly from the sum of allocated Customer and Capacity revenue requirements due to rounding of rates to the nearest \$0.01.

RIVERSIDE PUBLIC UTILITIES

Appendix J

2023 RPU Water Rate Model

Demand Reduction Rates

VARIABLE RATES - TIER (SFR)

DEMAND REDUCTION RATES FOR 20% REDUCTION

SFR

	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28
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WA1A - SFR - 20% Reduction

REVENUE TO RECOVER

Base Revenue to Recover	\$ 5,884,065	\$ 6,313,630	\$ 6,775,013	\$ 7,270,292	\$ 7,794,221
Max Day Revenue to Recover	6,951,528	7,456,257	7,998,313	8,580,141	9,196,584
Max Hour Revenue to Recover	1,667,442	1,789,160	1,919,894	2,060,232	2,208,692
Supply 1 Revenue to Recover	2,519,445	2,706,481	2,907,435	3,123,211	3,350,391
Supply 2 Revenue to Recover	2,499,544	2,684,556	2,883,322	3,096,740	3,321,624
Supply 3 Revenue to Recover	3,312,771	3,557,546	3,820,510	4,102,850	4,400,506
Supply 4 Revenue to Recover	983,815	1,056,413	1,134,403	1,218,137	1,306,447
Supply Sustainability Revenue to Recover	752,056	806,440	864,834	927,524	994,014
Total Allocated Costs	\$ 24,570,666	\$ 26,370,482	\$ 28,303,723	\$ 30,379,126	\$ 32,572,479

REVENUE TO RECOVER - BY TIER

Base	Use per Tier					
Tier 1	36.8%	\$ 2,166,569	\$ 2,324,739	\$ 2,494,625	\$ 2,676,992	\$ 2,869,907
Tier 2	48.5%	2,852,016	3,060,227	3,283,860	3,523,922	3,777,872
Tier 3	14.7%	865,480	928,664	996,528	1,069,378	1,146,442
Max Day	Max Day Extra Capacity per Tier					
Tier 1	15.5%	\$ 1,079,038	\$ 1,157,383	\$ 1,241,523	\$ 1,331,836	\$ 1,427,522
Tier 2	56.3%	3,911,693	4,195,709	4,500,729	4,828,129	5,175,008
Tier 3	28.2%	1,960,797	2,103,165	2,256,061	2,420,175	2,594,054
Max Hour	Max Hour Extra Capacity per Tier					
Tier 1	35.3%	\$ 588,554	\$ 631,517	\$ 677,662	\$ 727,197	\$ 779,599
Tier 2	49.0%	817,520	877,196	941,293	1,010,098	1,082,886
Tier 3	15.7%	261,368	280,447	300,939	322,937	346,208
Supply 1	SFR Supply 1 Allocation by Tier					
Tier 1	83.8%	\$ 2,112,136	\$ 2,268,935	\$ 2,437,401	\$ 2,618,294	\$ 2,808,747
Tier 2	16.2%	407,309	437,546	470,033	504,917	541,644
Tier 3	0.0%	-	-	-	-	-
Supply 2	SFR Supply 2 Allocation by Tier					
Tier 1	0.0%	-	-	-	-	-
Tier 2	100.0%	\$ 2,499,544	\$ 2,684,556	\$ 2,883,322	\$ 3,096,740	\$ 3,321,624
Tier 3	0.0%	-	-	-	-	-
Supply 3	SFR Supply 3 Allocation by Tier					
Tier 1	0.0%	-	-	-	-	-
Tier 2	21.6%	714,622	767,424	824,150	885,055	949,265
Tier 3	78.4%	\$ 2,598,149	\$ 2,790,122	\$ 2,996,361	\$ 3,217,795	\$ 3,451,241
Supply 4	SFR Supply 4 Allocation by Tier					
Tier 1	0.0%	\$ -	\$ -	\$ -	\$ -	\$ -
Tier 2	0.0%	-	-	-	-	-
Tier 3	100.0%	983,815	1,056,413	1,134,403	1,218,137	1,306,447
Supply Sustainability	All to Tier 3					
Tier 1	0.0%	-	-	-	-	-
Tier 2	0.0%	\$ -	\$ -	\$ -	\$ -	\$ -
Tier 3	100.0%	752,056	806,440	864,834	927,524	994,014

PROJECTED USAGE (HFC)

Annual	12,203,060	12,286,235	12,372,103	12,460,303	12,551,148
Tier 1	4,493,284	4,523,910	4,555,528	4,588,004	4,621,454
Tier 2	5,914,843	5,955,158	5,996,778	6,039,529	6,083,562

RIVERSIDE PUBLIC UTILITIES

Appendix J

2023 RPU Water Rate Model

Demand Reduction Rates

VARIABLE RATES - TIER (SFR)

DEMAND REDUCTION RATES FOR 20% REDUCTION

SFR

	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28
Tier 3		1,794,933	1,807,167	1,819,797	1,832,770	1,846,133
Winter						
Tier 1		2,563,986	2,581,461	2,599,503	2,618,035	2,637,122
Tier 2		2,839,194	2,858,545	2,878,524	2,899,044	2,920,181
Tier 3		745,602	750,684	755,931	761,320	766,870
Summer						
Tier 1		1,929,299	1,942,449	1,956,024	1,969,969	1,984,331
Tier 2		3,075,649	3,096,613	3,118,255	3,140,485	3,163,381
Tier 3		1,049,331	1,056,483	1,063,867	1,071,451	1,079,263

SUPPLY TIER USAGE (HCF)

	Tier Usage (HCF)	Supply 1 (HCF)	Supply 2 (HCF)	Supply 3 (HCF)	Supply 4 (HCF)	
		5,359,778	4,042,171	4,664,340	1,007,655	15,073,945
					Resilient Supply	2,870,884
Tier 1	4,493,284	4,493,284				
Tier 2	5,914,843	866,494	4,042,171	1,006,178	-	
Tier 3	1,794,933			3,658,162	1,007,655	
	12,203,060	5,359,778	4,042,171	4,664,340	1,007,655	15,073,945
Tier 1		83.8%	0.0%	0.0%	0.0%	
Tier 2		16.2%	100.0%	21.6%	0.0%	
Tier 3		0.0%	0.0%	78.4%	100.0%	

RIVERSIDE PUBLIC UTILITIES

Appendix J

2023 RPU Water Rate Model

Demand Reduction Rates

VARIABLE RATES - TIER (SFR)

DEMAND REDUCTION RATES FOR 20% REDUCTION

SFR

	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28
Winter						
Base Rate						
Tier 1	\$ 1,236,301	\$ 1,326,557	\$ 1,423,498	\$ 1,527,562	\$ 1,637,644	
Tier 2	\$ 1,369,001	\$ 1,468,944	\$ 1,576,291	\$ 1,691,524	\$ 1,813,423	
Tier 3	\$ 359,514	\$ 385,760	\$ 413,951	\$ 444,212	\$ 476,224	
Max Day Rate						
Tier 1	\$ 615,727	\$ 660,433	\$ 708,445	\$ 759,981	\$ 814,582	
Tier 2	\$ 1,877,658	\$ 2,013,989	\$ 2,160,403	\$ 2,317,558	\$ 2,484,065	
Tier 3	469,039	503,095	539,669	578,927	620,520	
Max Hour Rate						
Tier 1	\$ 335,844	\$ 360,360	\$ 386,691	\$ 414,957	\$ 444,859	
Tier 2	\$ 392,419	\$ 421,064	\$ 451,832	\$ 484,859	\$ 519,798	
Tier 3	62,521	67,085	71,987	77,249	82,816	
Supply 1 Rate						
Tier 1	\$ 1,205,240	\$ 1,294,714	\$ 1,390,845	\$ 1,494,067	\$ 1,602,744	
Tier 2	\$ 195,513	\$ 210,027	\$ 225,622	\$ 242,366	\$ 259,996	
Tier 3	\$ -	\$ -	\$ -	\$ -	\$ -	
Supply 2 Rate						
Tier 1	\$ -	\$ -	\$ -	\$ -	\$ -	
Tier 2	\$ 1,199,811	\$ 1,288,618	\$ 1,384,028	\$ 1,486,471	\$ 1,594,418	
Tier 3	\$ -	\$ -	\$ -	\$ -	\$ -	
Supply 3 Rate						
Tier 1	\$ -	\$ -	\$ -	\$ -	\$ -	
Tier 2	\$ 343,027	\$ 368,372	\$ 395,601	\$ 424,837	\$ 455,658	
Tier 3	\$ 1,079,252	\$ 1,158,996	\$ 1,244,667	\$ 1,336,649	\$ 1,433,620	
Supply 4 Rate						
Tier 1	\$ -	\$ -	\$ -	\$ -	\$ -	
Tier 2	\$ -	\$ -	\$ -	\$ -	\$ -	
Tier 3	\$ 408,670	\$ 438,826	\$ 471,223	\$ 506,006	\$ 542,688	
Supply Sustainability Rate						
Tier 1	\$ -	\$ -	\$ -	\$ -	\$ -	
Tier 2	\$ -	\$ -	\$ -	\$ -	\$ -	
Tier 3	\$ 312,398	\$ 334,989	\$ 359,246	\$ 385,287	\$ 412,906	
Combined Winter Revenue Requirements by Tier						
Tier 1	\$ 3,393,113	\$ 3,642,064	\$ 3,909,480	\$ 4,196,567	\$ 4,499,829	
Tier 2	\$ 5,377,429	\$ 5,771,015	\$ 6,193,777	\$ 6,647,615	\$ 7,127,357	
Tier 3	\$ 2,691,395	\$ 2,888,752	\$ 3,100,743	\$ 3,328,330	\$ 3,568,774	
Tier 1 Winter Rate	\$ 1.30	\$ 1.32	\$ 1.41	\$ 1.50	\$ 1.60	\$ 1.71
Tier 2 Winter Rate	\$ 1.64	\$ 1.89	\$ 2.02	\$ 2.15	\$ 2.29	\$ 2.44
Tier 3 Winter Rate	\$ 3.01	\$ 3.61	\$ 3.85	\$ 4.10	\$ 4.37	\$ 4.65

RIVERSIDE PUBLIC UTILITIES

Appendix J

2023 RPU Water Rate Model

Demand Reduction Rates

VARIABLE RATES - TIER (SFR)

DEMAND REDUCTION RATES FOR 20% REDUCTION

SFR

	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28						
Summer												
Base Rate												
Tier 1	\$	930,268	\$	998,183	\$	1,071,126	\$	1,149,430	\$	1,232,263		
Tier 2		1,483,015		1,591,282		1,707,569		1,832,399		1,964,449		
Tier 3		505,966		542,904		582,578		625,166		670,219		
Max Day Rate												
Tier 1	\$	463,311	\$	496,950	\$	533,077	\$	571,856	\$	612,941		
Tier 2		2,034,034		2,181,720		2,340,327		2,510,571		2,690,944		
Tier 3		1,491,758		1,600,070		1,716,392		1,841,248		1,973,534		
Max Hour Rate												
Tier 1	\$	252,710	\$	271,157	\$	290,970	\$	312,239	\$	334,739		
Tier 2		425,101		456,132		489,461		525,239		563,088		
Tier 3		198,846		213,362		228,952		245,687		263,392		
Supply 1 Rate												
Tier 1	\$	906,896	\$	974,222	\$	1,046,556	\$	1,124,227	\$	1,206,002		
Tier 2		211,796		227,519		244,412		262,551		281,649		
Tier 3		-		-		-		-		-		
Supply 2 Rate												
Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-		
Tier 2		1,299,734		1,395,938		1,499,294		1,610,269		1,727,205		
Tier 3		-		-		-		-		-		
Supply 3 Rate												
Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-		
Tier 2		371,595		399,051		428,548		460,218		493,607		
Tier 3		1,518,897		1,631,126		1,751,695		1,881,146		2,017,621		
Supply 4 Rate												
Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-		
Tier 2		-		-		-		-		-		
Tier 3		575,146		617,586		663,180		712,132		763,759		
Supply Sustainability Rate												
Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-		
Tier 2		-		-		-		-		-		
Tier 3		439,657		471,451		505,588		542,237		581,108		
Combined Summer Revenue Requirements by Tier												
Tier 1	\$	2,553,185	\$	2,740,511	\$	2,941,730	\$	3,157,752	\$	3,385,945		
Tier 2	\$	5,825,274	\$	6,251,642	\$	6,709,611	\$	7,201,248	\$	7,720,942		
Tier 3	\$	4,730,270	\$	5,076,498	\$	5,448,384	\$	5,847,618	\$	6,269,632		
Tier 1 Summer Rate	\$	1.30	\$	1.32	\$	1.41	\$	1.50	\$	1.60	\$	1.71
Tier 2 Summer Rate	\$	1.64	\$	1.89	\$	2.02	\$	2.15	\$	2.29	\$	2.44
Tier 3 Summer Rate	\$	3.66	\$	4.51	\$	4.81	\$	5.12	\$	5.46	\$	5.81

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

VARIABLE RATES - TIER (MFR)

DEMAND REDUCTION RATES FOR 20% REDUCTION

Appendix J

Demand Reduction Rates

MFR

	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28
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WA1B - MFR - 20% Reduction

REVENUE TO RECOVER

Base Revenue to Recover	\$	160,954	\$	172,705	\$	185,326	\$	198,874	\$	213,205
Max Day Revenue to Recover		143,352		153,761		164,939		176,937		189,649
Max Hour Revenue to Recover		44,807		48,077		51,590		55,361		59,351
Supply 1 Revenue to Recover		78,827		84,679		90,966		97,717		104,825
Supply 2 Revenue to Recover		78,204		83,993		90,212		96,889		103,925
Supply 3 Revenue to Recover		60,550		65,024		69,831		74,991		80,432
Supply 4 Revenue to Recover		17,982		19,309		20,734		22,265		23,879
Supply Sustainability Revenue to Recover		15,509		16,630		17,834		19,127		20,498
Total Allocated Costs	\$	600,185	\$	644,178	\$	691,432	\$	742,162	\$	795,764

REVENUE TO RECOVER - BY TIER

Base Rate

Use per Tier

Tier 1	55.0%	\$	88,559	\$	95,025	\$	101,969	\$	109,423	\$	117,308
Tier 2	45.0%		72,395		77,680		83,357		89,451		95,897

Max Day Rate

Max Day Extra Capacity per Tier

Tier 1	28.8%	\$	41,353	\$	44,356	\$	47,580	\$	51,041	\$	54,708
Tier 2	71.2%		101,999		109,405		117,359		125,896		134,941

Max Hour Rate

Max Hour Extra Capacity per Tier

Tier 1	53.6%	\$	24,001	\$	25,753	\$	27,634	\$	29,654	\$	31,791
Tier 2	46.4%		20,806		22,325		23,956		25,707		27,559

Supply 1 Rate

SFR Supply 1 Allocation by Tier

Tier 1	100.0%	\$	78,827	\$	84,679	\$	90,966	\$	97,717	\$	104,825
Tier 2	0.0%		-		-		-		-		-

Supply 2 Rate

SFR Supply 2 Allocation by Tier

Tier 1	10.5%	\$	8,242	\$	8,852	\$	9,507	\$	10,211	\$	10,952
Tier 2	89.5%		69,963		75,141		80,705		86,678		92,973

Supply 3 Rate

SFR Supply 3 Allocation by Tier

Tier 1	0.0%	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2	100.0%		60,550		65,024		69,831		74,991		80,432

Supply 4 Rate

SFR Supply 4 Allocation by Tier

Tier 1	0.0%	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2	100.0%		17,982		19,309		20,734		22,265		23,879

Supply Sustainability

All to Tier 3

Tier 1	0.0%	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2	100.0%		15,509		16,630		17,834		19,127		20,498

RIVERSIDE PUBLIC UTILITIES

Appendix J

2023 RPU Water Rate Model

Demand Reduction Rates

VARIABLE RATES - TIER (MFR)

DEMAND REDUCTION RATES FOR 20% REDUCTION

MFR

PROJECTED USAGE (HFC)

	331,767	334,028	336,362	338,760	341,230
Annual					
Tier 1	182,542	183,787	185,071	186,390	187,749
Tier 2	149,224	150,241	151,291	152,370	153,481
Winter					
Tier 1	104,853	105,567	106,305	107,063	107,844
Tier 2	72,338	72,832	73,341	73,863	74,402
Summer					
Tier 1	77,690	78,219	78,766	79,327	79,906
Tier 2	76,886	77,410	77,951	78,506	79,079

SUPPLY TIER USAGE (HCF)

	Tier Usage (HCF)	Supply 1 (HCF)	Supply 2 (HCF)	Supply 3 (HCF)	Supply 4 (HCF)	
		169,159	126,994	73,894	15,881	385,929
					Resilient Supply	54,162
Tier 1	182,542	169,159	13,383			
Tier 2	149,224	-	113,611	73,894	15,881	
	331,767	169,159	126,994	73,894	15,881	385,929
Tier 1		100.0%	10.5%	0.0%	0.0%	
Tier 2		0.0%	89.5%	100.0%	100.0%	

RIVERSIDE PUBLIC UTILITIES

Appendix J

2023 RPU Water Rate Model

Demand Reduction Rates

VARIABLE RATES - TIER (MFR)

DEMAND REDUCTION RATES FOR 20% REDUCTION

MFR

Winter

Base Rate

Tier 1	\$	50,869	\$	54,582	\$	58,571	\$	62,853	\$	67,382
Tier 2		35,094		37,657		40,409		43,362		46,487

Max Day Rate

Seasonality Factor

Tier 1	\$	23,753	\$	25,478	\$	27,330	\$	29,318	\$	31,425
Tier 2		39,511		42,380		45,461		48,768		52,271

1.00

Max Hour Rate

Seasonality Factor

Tier 1	\$	13,786	\$	14,792	\$	15,873	\$	17,034	\$	18,261
Tier 2		8,059		8,648		9,280		9,958		10,676

1.00

Supply 1 Rate

Tier 1	\$	45,278	\$	48,639	\$	52,251	\$	56,129	\$	60,212
Tier 2		-		-		-		-		-

Supply 2 Rate

Tier 1	\$	4,734	\$	5,084	\$	5,461	\$	5,865	\$	6,291
Tier 2		33,915		36,426		39,123		42,018		45,070

Supply 3 Rate

Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2		29,352		31,522		33,852		36,353		38,991

Supply 4 Rate

Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2		8,717		9,360		10,051		10,793		11,576

Supply Sustainability

Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2		7,518		8,062		8,646		9,272		9,937

Winter Revenue Requirement By Tier

Tier 1	\$	138,421	\$	148,576	\$	159,486	\$	171,198	\$	183,571
Tier 2	\$	162,167	\$	174,054	\$	186,820	\$	200,524	\$	215,007

Tier 1 Winter Rate	\$	1.30	\$	1.32	\$	1.41	\$	1.50	\$	1.60	\$	1.70
Tier 2 Winter Rate	\$	1.87	\$	2.24	\$	2.39	\$	2.55	\$	2.71	\$	2.89

RIVERSIDE PUBLIC UTILITIES

Appendix J

2023 RPU Water Rate Model

Demand Reduction Rates

VARIABLE RATES - TIER (MFR)

DEMAND REDUCTION RATES FOR 20% REDUCTION

MFR

Summer

Base Rate

Tier 1	\$	37,691	\$	40,442	\$	43,398	\$	46,570	\$	49,926
Tier 2		37,301		40,024		42,949		46,088		49,410

Max Day Rate

Seasonality Factor

Tier 1	\$	17,600	\$	18,878	\$	20,250	\$	21,723	\$	23,284
Tier 2		62,489		67,025		71,898		77,128		82,670

1.49

Max Hour Rate

Seasonality Factor

Tier 1	\$	10,215	\$	10,960	\$	11,761	\$	12,621	\$	13,530
Tier 2		12,746		13,677		14,676		15,749		16,884

1.49

Supply 1 Rate

Tier 1	\$	33,549	\$	36,039	\$	38,715	\$	41,588	\$	44,613
Tier 2		-		-		-		-		-

Supply 2 Rate

Tier 1	\$	3,508	\$	3,767	\$	4,046	\$	4,346	\$	4,661
Tier 2		36,047		38,716		41,582		44,660		47,903

Supply 3 Rate

Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2		31,198		33,503		35,979		38,638		41,442

Supply 4 Rate

Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2		9,265		9,949		10,683		11,472		12,303

Supply Sustainability

Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2		7,991		8,569		9,189		9,855		10,561

Summer Revenue Requirement By Tier

Tier 1	\$	102,562	\$	110,086	\$	118,170	\$	126,847	\$	136,015
Tier 2	\$	197,037	\$	211,462	\$	226,957	\$	243,589	\$	261,173

Tier 1 Summer Rate	\$	1.30	\$	1.32	\$	1.41	\$	1.50	\$	1.60	\$	1.70
Tier 2 Summer Rate	\$	2.12	\$	2.56	\$	2.73	\$	2.91	\$	3.10	\$	3.30

RIVERSIDE PUBLIC UTILITIES

Appendix J

2023 RPU Water Rate Model

DEMAND REDUCTION RATES

VARIABLE RATES - TIER (WA4)

DEMAND REDUCTION RATES FOR 20% REDUCTION

WA4: Riverside Water Company

	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28
WA4 - Riverside Irrigators - 20% Reduction						
REVENUE TO RECOVER						
Base Revenue to Recover	\$ 3,869	\$ 4,151	\$ 4,455	\$ 4,780	\$ 5,125	
Max Day Revenue to Recover	6,519	6,992	7,500	8,046	8,624	
Max Hour Revenue to Recover	1,130	1,212	1,301	1,396	1,497	
Supply 1 Revenue to Recover	1,377	1,479	1,589	1,707	1,831	
Supply 2 Revenue to Recover	1,366	1,467	1,576	1,692	1,815	
Supply 3 Revenue to Recover	3,129	3,360	3,609	3,875	4,156	
Supply 4 Revenue to Recover	929	998	1,071	1,151	1,234	
Supply Sustainability Revenue To Recover	705	756	811	870	932	
Total Allocated Costs	\$ 19,024	\$ 20,416	\$ 21,911	\$ 23,517	\$ 25,214	

REVENUE TO RECOVER - BY TIER						
Base Rate						
	<u>Use per Tier</u>					
Tier 1	37.5%	\$ 1,451	\$ 1,557	\$ 1,671	\$ 1,793	1,922
Tier 2	51.5%	1,991	2,136	2,292	2,460	2,637
Tier 3	11.0%	427	459	492	528	566
Max Day Rate						
	<u>Max Day Extra Capacity per Tier</u>					
Tier 1	18.8%	\$ 1,226	\$ 1,315	\$ 1,411	\$ 1,513	1,622
Tier 2	59.7%	3,891	4,174	4,477	4,803	5,148
Tier 3	21.5%	1,401	1,503	1,612	1,730	1,854
Max Hour Rate						
	<u>Max Hour Extra Capacity per Tier</u>					
Tier 1	35.5%	\$ 401	\$ 431	\$ 462	\$ 496	532
Tier 2	52.3%	591	634	681	731	783
Tier 3	12.2%	137	147	158	170	182
Supply 1 Rate						
	<u>SFR Supply 1 Allocation by Tier</u>					
Tier 1	100.0%	\$ 1,377	\$ 1,479	\$ 1,589	\$ 1,707	1,831
Tier 2	0.0%	-	-	-	-	-
Tier 3	0.0%	-	-	-	-	-
Supply 2 Rate						
	<u>SFR Supply 2 Allocation by Tier</u>					
Tier 1	0.0%	\$ -	\$ -	\$ -	\$ -	-
Tier 2	100.0%	1,366	1,467	1,576	1,692	1,815
Tier 3	0.0%	-	-	-	-	-
Supply 3 Rate						
	<u>SFR Supply 3 Allocation by Tier</u>					
Tier 1	0.0%	\$ -	\$ -	\$ -	\$ -	-
Tier 2	43.1%	1,350	1,450	1,557	1,672	1,793
Tier 3	56.9%	1,779	1,910	2,052	2,203	2,363
Supply 4 Rate						
	<u>SFR Supply 4 Allocation by Tier</u>					
Tier 1	0.0%	\$ -	\$ -	\$ -	\$ -	-
Tier 2	0.0%	-	-	-	-	-
Tier 3	100.0%	929	998	1,071	1,151	1,234
Supply Sustainability						
	<u>All to Tier 3</u>					
Tier 1	0.0%	\$ -	\$ -	\$ -	\$ -	-
Tier 2	0.0%	-	-	-	-	-
Tier 3	100.0%	705	756	811	870	932

RIVERSIDE PUBLIC UTILITIES

Appendix J

2023 RPU Water Rate Model

DEMAND REDUCTION RATES

VARIABLE RATES - TIER (WA4)

DEMAND REDUCTION RATES FOR 20% REDUCTION

WA4: Riverside Water Company

PROJECTED USAGE (HCF)

	7,987	7,987	7,987	7,987	7,987
Annual					
Tier 1	2,995	2,995	2,995	2,995	2,995
Tier 2	4,109	4,109	4,109	4,109	4,109
Tier 3	882	882	882	882	882
Winter					
Tier 1	1,710	1,710	1,710	1,710	1,710
Tier 2	1,656	1,656	1,656	1,656	1,656
Tier 3	344	344	344	344	344
Summer					
Tier 1	1,285	1,285	1,285	1,285	1,285
Tier 2	2,453	2,453	2,453	2,453	2,453
Tier 3	538	538	538	538	538

SUPPLY TIER USAGE (HCF)

	Tier Usage (HCF)	Supply 1 (HCF)	Supply 2 (HCF)	Supply 3 (HCF)	Supply 4 (HCF)	
		2,929	2,209	4,406	952	10,495
					Resilient Supply	2,508
Tier 1	2,995	2,929				
Tier 2	4,109	-	2,209	1,901	-	
Tier 3	882			2,505	952	
	7,987	2,929	2,209	4,406	952	10,495
Tier 1		100.0%	0.0%	0.0%	0.0%	
Tier 2		0.0%	100.0%	43.1%	0.0%	
Tier 3		0.0%	0.0%	56.9%	100.0%	

RIVERSIDE PUBLIC UTILITIES

Appendix J

2023 RPU Water Rate Model

DEMAND REDUCTION RATES

VARIABLE RATES - TIER (WA4)

DEMAND REDUCTION RATES FOR 20% REDUCTION

WA4: Riverside Water Company

Winter

Base Rate

Tier 1	\$	828	\$	889	\$	954	\$	1,023	\$	1,097
Tier 2		802		861		924		991		1,063
Tier 3		167		179		192		206		221

Max Day Rate

Tier 1	\$	700	\$	751	\$	805	\$	864	\$	926
Tier 2		1,568		1,682		1,804		1,935		2,074
Tier 3		308		330		354		380		407

Max Hour Rate

Tier 1	\$	229	\$	246	\$	264	\$	283	\$	303
Tier 2		238		256		274		294		316
Tier 3		30		32		35		37		40

Supply 1 Rate

Tier 1	\$	786	\$	844	\$	907	\$	974	\$	1,045
Tier 2		-		-		-		-		-
Tier 3		-		-		-		-		-

Supply 2 Rate

Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2		550		591		635		682		731
Tier 3		-		-		-		-		-

Supply 3 Rate

Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2		544		584		627		674		723
Tier 3		693		745		800		859		921

Supply 4 Rate

Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2		-		-		-		-		-
Tier 3		362		389		418		449		481

Supply Sustainability Rate

Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2		-		-		-		-		-
Tier 3		275		295		316		339		363

Winter Revenue Requirement By Tier

Tier 1	\$	2,543	\$	2,730	\$	2,930	\$	3,145	\$	3,372
Tier 2	\$	3,703	\$	3,974	\$	4,264	\$	4,577	\$	4,907
Tier 3	\$	1,835	\$	1,970	\$	2,114	\$	2,270	\$	2,434

Tier 1 Winter Rate	\$	1.32	\$	1.49	\$	1.60	\$	1.71	\$	1.84	\$	1.97
Tier 2 Winter Rate	\$	1.54	\$	2.24	\$	2.40	\$	2.58	\$	2.76	\$	2.96
Tier 3 Winter Rate	\$	2.46	\$	5.34	\$	5.73	\$	6.15	\$	6.60	\$	7.07

RIVERSIDE PUBLIC UTILITIES

Appendix J

2023 RPU Water Rate Model

DEMAND REDUCTION RATES

VARIABLE RATES - TIER (WA4)

DEMAND REDUCTION RATES FOR 20% REDUCTION

WA4: Riverside Water Company

Summer

Base Rate

Tier 1	\$	622	\$	668	\$	717	\$	769	\$	825
Tier 2		1,188		1,275		1,368		1,468		1,574
Tier 3		261		280		300		322		345

Max Day Rate

Tier 1	\$	526	\$	564	\$	605	\$	649	\$	696
Tier 2		2,323		2,491		2,672		2,867		3,073
Tier 3		1,094		1,173		1,258		1,350		1,447

Max Hour Rate

Tier 1	\$	172	\$	185	\$	198	\$	213	\$	228
Tier 2		353		379		406		436		467
Tier 3		107		115		123		132		142

Supply 1 Rate

Tier 1	\$	591	\$	634	\$	682	\$	732	\$	785
Tier 2		-		-		-		-		-
Tier 3		-		-		-		-		-

Supply 2 Rate

Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2		815		876		940		1,010		1,083
Tier 3		-		-		-		-		-

Supply 3 Rate

Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2		806		865		929		998		1,070
Tier 3		1,085		1,165		1,251		1,343		1,441

Supply 4 Rate

Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2		-		-		-		-		-
Tier 3		567		608		653		701		752

Supply Sustainability Rate

Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2		-		-		-		-		-
Tier 3		430		461		494		530		568

Summer Revenue Requirement By Tier

Tier 1	\$	1,911	\$	2,051	\$	2,202	\$	2,363	\$	2,534
Tier 2	\$	5,485	\$	5,886	\$	6,317	\$	6,779	\$	7,268
Tier 3	\$	3,542	\$	3,802	\$	4,080	\$	4,379	\$	4,695

Tier 1 Summer Rate	\$1.32	\$	1.49	\$	1.60	\$	1.71	\$	1.84	\$	1.97
Tier 2 Summer Rate	\$1.58	\$	2.24	\$	2.40	\$	2.58	\$	2.76	\$	2.96
Tier 3 Summer Rate	\$3.17	\$	6.58	\$	7.07	\$	7.58	\$	8.14	\$	8.73

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

VARIABLE RATES - NO TIER (Comm/Ind, Landscape, WA2, WA7)

Appendix J

Demand Reduction Rates

Non-Tiered Rates

DEMAND REDUCTION RATES FOR 20% REDUCTION

	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28
WA6 - Commercial/Industrial						
REVENUE TO RECOVER						
Base Revenue to Recover	\$ 3,261,397	\$ 3,499,495	\$ 3,755,228	\$ 4,029,750	\$ 4,320,151	
Max Day Revenue to Recover	3,211,353	3,444,520	3,694,930	3,963,713	4,248,488	
Max Hour Revenue to Recover	913,184	979,844	1,051,441	1,128,298	1,209,603	
Supply 1 Revenue to Recover	1,021,465	1,097,295	1,178,768	1,266,251	1,358,357	
Supply 2 Revenue to Recover	1,013,396	1,088,406	1,168,992	1,255,519	1,346,694	
Supply 3 Revenue to Recover	2,883,213	3,096,248	3,325,115	3,570,845	3,829,905	
Supply 4 Revenue to Recover	856,247	919,430	987,308	1,060,185	1,137,044	
Supply Sustainability Revenue to Recover	347,422	372,546	399,522	428,483	459,198	
Total Allocated Costs	\$ 13,507,677	\$ 14,497,784	\$ 15,561,304	\$ 16,703,042	\$ 17,909,439	
PROJECTED USAGE (HFC)						
Projected Annual Usage (HCF)	6,343,958	6,435,890	6,529,324	6,624,226	6,720,753	
Projected Winter Usage (HCF)	3,354,509	3,403,120	3,452,526	3,502,707	3,553,748	
Projected Summer Usage (HCF)	2,989,449	3,032,770	3,076,798	3,121,519	3,167,005	
Winter						
Base Revenue to Recover	\$1,724,536.06	\$1,850,435.71	\$1,985,660.80	\$2,130,819.87	\$2,284,376.22	
Max Day Revenue to Recover	1,487,387.18	1,595,381.79	1,711,363.50	1,835,854.23	1,967,752.05	
Max Hour Revenue to Recover	422,955.02	453,829.55	486,990.90	522,588.29	560,246.10	
Supply 1 Revenue to Recover	540,122.09	580,219.25	623,300.06	669,558.31	718,261.63	
Supply 2 Revenue to Recover	535,855.86	575,518.85	618,130.80	663,883.42	712,094.45	
Supply 3 Revenue to Recover	1,524,563.01	1,637,210.31	1,758,229.03	1,888,163.62	2,025,147.55	
Supply 4 Revenue to Recover	452,759.51	486,169.30	522,061.07	560,596.28	601,237.16	
Supply Sustainability Revenue to Recover	183,707.37	196,992.09	211,256.18	226,569.67	242,811.36	
Winter Rate	\$ 1.58	\$ 2.05	\$ 2.17	\$ 2.29	\$ 2.43	\$ 2.56
Summer						
Base Revenue to Recover	\$1,536,860.64	\$1,649,058.92	\$1,769,567.19	\$1,898,929.72	\$2,035,774.72	
Max Day Revenue to Recover	1,723,966.22	1,849,137.95	1,983,566.53	2,127,859.06	2,280,735.76	
Max Hour Revenue to Recover	490,228.89	526,014.18	564,449.84	605,709.43	649,356.87	
Supply 1 Revenue to Recover	481,342.43	517,075.91	555,468.16	596,692.47	640,095.47	
Supply 2 Revenue to Recover	477,540.49	512,887.04	550,861.45	591,635.16	634,599.44	
Supply 3 Revenue to Recover	1,358,649.98	1,459,038.13	1,566,886.16	1,682,680.95	1,804,757.10	
Supply 4 Revenue to Recover	403,487.23	433,261.11	465,246.70	499,588.42	535,806.41	
Supply Sustainability Revenue to Recover	163,715.12	175,554.10	188,265.79	201,912.84	216,386.96	
Summer Rate	\$ 1.84	\$ 2.22	\$ 2.35	\$ 2.48	\$ 2.63	\$ 2.78

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

VARIABLE RATES - NO TIER (Comm/Ind, Landscape, WA2, WA7)

Appendix J

Demand Reduction Rates

Non-Tiered Rates

DEMAND REDUCTION RATES FOR 20% REDUCTION

WA11 - Landscape

Base Revenue to Recover	\$ 336,486	\$ 361,051	\$ 387,436	\$ 415,759	\$ 445,720
Max Day Revenue to Recover	548,261	588,069	630,820	676,709	725,327
Max Hour Revenue to Recover	97,947	105,097	112,777	121,020	129,741
Supply 1 Revenue to Recover	90,439	97,153	104,367	112,112	120,267
Supply 2 Revenue to Recover	89,725	96,366	103,501	111,162	119,235
Supply 3 Revenue to Recover	342,825	368,155	395,368	424,586	455,390
Supply 4 Revenue to Recover	101,811	109,324	117,395	126,060	135,199
Supply Sustainability Revenue to Recover	59,314	63,603	68,209	73,153	78,397
	\$ 1,666,809	\$ 1,788,819	\$ 1,919,873	\$ 2,060,562	\$ 2,209,276

Projected Annual Usage (HCF)	635,900	645,115	654,481	663,993	673,669
Projected Winter Usage (HCF)	295,899	300,187	304,545	308,971	313,474
Projected Summer Usage (HCF)	340,001	344,928	349,936	355,022	360,195

Winter

Base Revenue to Recover	\$ 156,574.80	\$ 168,005.56	\$ 180,282.93	\$ 193,462.01	\$ 207,404.21
Max Day Revenue to Recover	182,041.42	195,258.93	209,453.89	224,689.92	240,833.56
Max Hour Revenue to Recover	35,606.95	38,206.15	40,997.87	43,994.69	47,164.95
Supply 1 Revenue to Recover	42,083.49	45,207.66	48,564.28	52,168.41	55,963.24
Supply 2 Revenue to Recover	41,751.09	44,841.43	48,161.52	51,726.25	55,482.72
Supply 3 Revenue to Recover	159,524.18	171,311.17	183,974.05	197,569.61	211,903.52
Supply 4 Revenue to Recover	47,374.94	50,870.82	54,626.38	58,658.47	62,911.10
Supply Sustainability Revenue to Recover	27,600.18	29,596.08	31,739.11	34,039.76	36,479.99
Winter Rate	\$ 1.58	\$ 2.34	\$ 2.48	\$ 2.62	\$ 2.77

Summer

Base Revenue to Recover	\$ 179,911.43	\$ 193,045.80	\$ 207,153.06	\$ 222,297.05	\$ 238,316.26
Max Day Revenue to Recover	366,219.82	392,809.84	421,366.41	452,018.64	484,493.39
Max Hour Revenue to Recover	62,340.39	66,891.06	71,778.78	77,025.58	82,576.05
Supply 1 Revenue to Recover	48,355.81	51,945.60	55,802.51	59,943.98	64,304.14
Supply 2 Revenue to Recover	47,973.86	51,524.78	55,339.71	59,435.92	63,752.01
Supply 3 Revenue to Recover	183,300.40	196,844.10	211,394.32	227,016.88	243,486.16
Supply 4 Revenue to Recover	54,435.93	58,452.82	62,768.13	67,401.37	72,287.54
Supply Sustainability Revenue to Recover	31,713.84	34,007.20	36,469.64	39,113.31	41,917.06
Summer Rate	\$ 1.84	\$ 2.87	\$ 3.03	\$ 3.21	\$ 3.39

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

VARIABLE RATES - NO TIER (Comm/Ind, Landscape, WA2, WA7)

Appendix J

Demand Reduction Rates

Non-Tiered Rates

DEMAND REDUCTION RATES FOR 20% REDUCTION

WA2 - Flat Rate

Base Revenue to Recover	\$ 19,115	\$ 20,511	\$ 22,009	\$ 23,618	\$ 25,320
Max Day Revenue to Recover	60,360	64,743	69,450	74,502	79,854
Max Hour Revenue to Recover	6,067	6,510	6,985	7,496	8,036
Supply 1 Revenue to Recover	3,620	3,888	4,177	4,487	4,813
Supply 2 Revenue to Recover	3,591	3,857	4,142	4,449	4,772
Supply 3 Revenue to Recover	25,114	26,970	28,963	31,104	33,360
Supply 4 Revenue to Recover	7,458	8,009	8,600	9,235	9,904
Supply Sustainability Revenue to Recover	6,530	7,002	7,509	8,054	8,631
	\$ 131,855	\$ 141,489	\$ 151,836	\$ 162,944	\$ 174,692

Projected Annual Usage (HCF)	39,955	39,955	39,955	39,955	39,955
Projected Winter Usage (HCF)	16,148	16,148	16,148	16,148	16,148
Projected Summer Usage (HCF)	23,807	23,807	23,807	23,807	23,807
	\$ 3.30	\$ 3.54	\$ 3.80	\$ 4.08	\$ 4.37

WA7 & 10 - Interruptable

Base Revenue to Recover	\$ 357,536	\$ 383,638	\$ 411,673	\$ 441,768	\$ 473,604
Max Day Revenue to Recover	328,781	352,653	378,291	405,809	434,964
Max Hour Revenue to Recover	106,709	114,499	122,865	131,846	141,347
Supply 1 Revenue to Recover	88,428	94,993	102,046	109,619	117,593
Supply 2 Revenue to Recover	87,729	94,223	101,199	108,690	116,583
Supply 3 Revenue to Recover	339,060	364,113	391,027	419,924	450,389
Supply 4 Revenue to Recover	-	-	-	-	-
Supply Sustainability Revenue to Recover	-	-	-	-	-
	\$ 1,308,244	\$ 1,404,118	\$ 1,507,101	\$ 1,617,656	\$ 1,734,480

Projected Annual Usage (HCF)	686,070	695,030	705,120	715,369	725,793
Projected Winter Usage (HCF)	281,068	284,739	288,872	293,071	297,342
Projected Summer Usage (HCF)	405,002	410,291	416,248	422,298	428,451
	\$ 1.91	\$ 2.02	\$ 2.14	\$ 2.26	\$ 2.39

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

DEMAND REDUCTION RATE CALCULATIONS FOR 30% REDUCTION

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

UNIFORM FIXED RATES

DEMAND REDUCTION RATES FOR 30% REDUCTION

Appendix J

Demand Reduction Rates

Fixed

	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28
Number of Accounts		66,694	66,879	67,064	67,250	67,436	67,623
Number of MEUs		95,061	95,337	95,661	95,987	96,290	96,594
Customer Revenue to Recover			\$ 2,894,502	\$ 3,103,816	\$ 3,328,561	\$ 3,569,842	\$ 3,825,746
Capacity Revenue to Recover			28,186,521	30,224,618	32,411,864	34,762,601	37,254,572
Monthly Component Charge per Account			\$ 3.61	\$ 3.86	\$ 4.12	\$ 4.41	\$ 4.71
Monthly Component Charge per MEU			24.64	26.33	28.14	30.09	32.14

METER SIZE	METER EQUIVALENTS	MONTHLY FIXED CHARGES							
0.625	1.00	\$ 23.08	\$ 26.00	\$ 28.24	\$ 30.19	\$ 32.26	\$ 34.50	\$ 36.85	
0.75	1.00	23.08	26.00	28.24	30.19	32.26	34.50	36.85	
1	1.67	36.63	41.26	44.75	47.83	51.12	54.65	58.39	
1.5	3.33	70.22	79.08	85.65	91.53	97.83	104.59	111.74	
2	5.33	110.68	124.64	134.92	144.19	154.11	164.76	176.02	
3	10.00	205.16	231.03	249.98	267.15	285.52	305.26	326.12	
4	16.67	340.10	382.97	414.32	442.77	473.21	505.93	540.49	
6	36.67	744.72	838.59	907.07	969.36	1,035.99	1,107.63	1,183.30	
8	60.00	1,216.71	1,370.06	1,481.86	1,583.63	1,692.48	1,809.52	1,933.13	
10	93.33	1,891.02	2,129.34	2,303.03	2,461.19	2,630.36	2,812.25	3,004.36	
12	133.33	2,700.26	3,040.57	3,288.54	3,514.37	3,755.92	4,015.66	4,289.97	

METER SIZE	METER EQUIVALENTS	FY 21/22 REVENUE	FY 22/23 REVENUE	FY 23/24 REVENUE	FY 24/25 REVENUE	FY 25/26 REVENUE	FY 26/27 REVENUE	FY 27/28 REVENUE
0.625	1	\$ 1,760,671	\$ 1,989,403	\$ 2,166,167	\$ 2,321,463	\$ 2,486,765	\$ 2,666,019	\$ 2,854,668
0.75	1	13,048,066	14,746,035	16,056,782	17,208,451	18,434,366	19,763,816	21,163,008
1	1.67	4,226,060	4,793,098	5,214,800	5,590,874	5,993,855	6,427,691	6,888,967
1.5	3.33	1,039,449	1,201,335	1,309,850	1,408,764	1,515,406	1,630,775	1,753,722
2	5.33	2,000,372	2,315,867	2,524,460	2,716,053	2,922,442	3,145,921	3,384,074
3	10	630,918	724,900	784,928	841,847	902,952	967,458	1,035,799
4	16.67	534,583	613,882	664,550	713,492	766,085	821,210	879,616
6	36.67	634,610	728,395	788,124	846,233	908,662	973,932	1,043,076
8	60	1,036,637	1,189,315	1,286,366	1,381,075	1,482,804	1,588,980	1,701,419
10	93.33	226,922	260,342	281,578	302,308	324,576	347,817	372,429
12	133.33	-	-	-	-	-	-	-
Total Calculated Revenues*		\$ 25,138,288	\$ 28,562,572	\$ 31,077,606	\$ 33,330,559	\$ 35,737,913	\$ 38,333,619	\$ 41,076,779

*Note: Total calculated revenues vary slightly from the sum of allocated Customer and Capacity revenue requirements due to rounding of rates to the nearest \$0.01.

RIVERSIDE PUBLIC UTILITIES

Appendix J

2023 RPU Water Rate Model

Demand Reduction Rates

VARIABLE RATES - TIER (SFR)

DEMAND REDUCTION RATES FOR 30% REDUCTION

SFR

	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28
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WA1A - SFR - 30% Reduction

REVENUE TO RECOVER

Base Revenue to Recover	\$ 5,726,702	\$ 6,149,044	\$ 6,602,845	\$ 7,089,827	\$ 7,603,631
Max Day Revenue to Recover	6,817,749	7,315,026	7,849,233	8,422,392	9,029,021
Max Hour Revenue to Recover	1,623,092	1,742,768	1,871,359	2,009,351	2,154,952
Supply 1 Revenue to Recover	2,393,569	2,576,297	2,772,762	2,983,711	3,204,148
Supply 2 Revenue to Recover	2,384,987	2,565,939	2,760,471	2,969,325	3,187,944
Supply 3 Revenue to Recover	3,169,040	3,408,603	3,666,128	3,942,596	4,232,282
Supply 4 Revenue to Recover	942,925	1,014,011	1,090,424	1,172,454	1,258,470
Supply Sustainability Revenue to Recover	752,056	806,440	864,834	927,524	994,014
Total Allocated Costs	\$ 23,810,119	\$ 25,578,128	\$ 27,478,057	\$ 29,517,180	\$ 31,664,461

REVENUE TO RECOVER - BY TIER

Base	Use per Tier					
Tier 1	41.1%	\$ 2,354,226	\$ 2,527,849	\$ 2,714,405	\$ 2,914,602	\$ 3,125,825
Tier 2	46.2%	2,644,852	2,839,908	3,049,495	3,274,405	3,511,703
Tier 3	12.7%	727,624	781,286	838,945	900,820	966,103
Max Day	Max Day Extra Capacity per Tier					
Tier 1	22.7%	\$ 1,546,890	\$ 1,659,718	\$ 1,780,925	\$ 1,910,970	\$ 2,048,609
Tier 2	57.2%	3,897,160	4,181,414	4,486,778	4,814,407	5,161,168
Tier 3	20.1%	1,373,698	1,473,894	1,581,530	1,697,015	1,819,244
Max Hour	Max Hour Extra Capacity per Tier					
Tier 1	39.8%	\$ 646,604	\$ 694,281	\$ 745,508	\$ 800,481	\$ 858,486
Tier 2	46.9%	761,919	818,099	878,462	943,239	1,011,588
Tier 3	13.2%	214,568	230,389	247,388	265,630	284,878
Supply 1	SFR Supply 1 Allocation by Tier					
Tier 1	83.8%	\$ 2,006,610	\$ 2,159,798	\$ 2,324,501	\$ 2,501,347	\$ 2,686,146
Tier 2	16.2%	386,959	416,500	448,261	482,365	518,002
Tier 3	0.0%	-	-	-	-	-
Supply 2	SFR Supply 2 Allocation by Tier					
Tier 1	0.0%	\$ -	\$ -	\$ -	\$ -	\$ -
Tier 2	100.0%	2,384,987	2,565,939	2,760,471	2,969,325	3,187,944
Tier 3	0.0%	-	-	-	-	-
Supply 3	SFR Supply 3 Allocation by Tier					
Tier 1	0.0%	\$ -	\$ -	\$ -	\$ -	\$ -
Tier 2	3.0%	94,649	101,804	109,495	117,753	126,405
Tier 3	97.0%	3,074,391	3,306,799	3,556,633	3,824,843	4,105,877
Supply 4	SFR Supply 4 Allocation by Tier					
Tier 1	0.0%	\$ -	\$ -	\$ -	\$ -	\$ -
Tier 2	0.0%	-	-	-	-	-
Tier 3	100.0%	942,925	1,014,011	1,090,424	1,172,454	1,258,470
Supply Sustainability	All to Tier 3					
Tier 1	0.0%	\$ -	\$ -	\$ -	\$ -	\$ -
Tier 2	0.0%	-	-	-	-	-
Tier 3	100.0%	752,056	806,440	864,834	927,524	994,014

PROJECTED USAGE (HFC)

Annual	10,930,004	11,004,501	11,081,412	11,160,410	11,241,779
Tier 1	4,493,284	4,523,910	4,555,528	4,588,004	4,621,454
Tier 2	5,047,973	5,082,380	5,117,901	5,154,386	5,191,965

RIVERSIDE PUBLIC UTILITIES

Appendix J

2023 RPU Water Rate Model

Demand Reduction Rates

VARIABLE RATES - TIER (SFR)

DEMAND REDUCTION RATES FOR 30% REDUCTION

SFR

	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28
Tier 3		1,388,746	1,398,212	1,407,984	1,418,021	1,428,360
Winter						
Tier 1		2,563,986	2,581,461	2,599,503	2,618,035	2,637,122
Tier 2		2,510,043	2,527,151	2,544,813	2,562,955	2,581,641
Tier 3		687,277	691,961	696,797	701,765	706,881
Summer						
Tier 1		1,929,299	1,942,449	1,956,024	1,969,969	1,984,331
Tier 2		2,537,931	2,555,229	2,573,087	2,591,431	2,610,324
Tier 3		701,470	706,251	711,187	716,257	721,479

SUPPLY TIER USAGE (HCF)

	Tier Usage (HCF)	Supply 1 (HCF)	Supply 2 (HCF)	Supply 3 (HCF)	Supply 4 (HCF)	
		5,359,778	4,042,171	4,664,340	1,007,655	15,073,945
					Resilient Supply	4,143,941
Tier 1	4,493,284	4,493,284				
Tier 2	5,047,973	866,494	4,042,171	139,309	-	
Tier 3	1,388,746			4,525,032	1,007,655	
	10,930,004	5,359,778	4,042,171	4,664,340	1,007,655	15,073,945
Tier 1		83.8%	0.0%	0.0%	0.0%	
Tier 2		16.2%	100.0%	3.0%	0.0%	
Tier 3		0.0%	0.0%	97.0%	100.0%	

RIVERSIDE PUBLIC UTILITIES

Appendix J

2023 RPU Water Rate Model

Demand Reduction Rates

VARIABLE RATES - TIER (SFR)

DEMAND REDUCTION RATES FOR 30% REDUCTION

SFR

	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28
Winter						
Base Rate						
Tier 1	\$ 1,343,383	\$ 1,442,457	\$ 1,548,911	\$ 1,663,148	\$ 1,783,677	
Tier 2	\$ 1,315,120	\$ 1,412,110	\$ 1,516,324	\$ 1,628,158	\$ 1,746,151	
Tier 3	\$ 360,094	\$ 386,651	\$ 415,186	\$ 445,807	\$ 478,115	
Max Day Rate						
Tier 1	\$ 882,696	\$ 947,079	\$ 1,016,243	\$ 1,090,450	\$ 1,168,990	
Tier 2	\$ 1,937,815	\$ 2,079,157	\$ 2,230,995	\$ 2,393,905	\$ 2,566,327	
Tier 3	415,449	445,751	478,304	513,230	550,196	
Max Hour Rate						
Tier 1	\$ 368,969	\$ 396,175	\$ 425,406	\$ 456,776	\$ 489,874	
Tier 2	\$ 378,855	\$ 406,789	\$ 436,804	\$ 469,014	\$ 503,000	
Tier 3	64,892	69,677	74,818	80,335	86,156	
Supply 1 Rate						
Tier 1	\$ 1,145,024	\$ 1,232,437	\$ 1,326,421	\$ 1,427,334	\$ 1,532,785	
Tier 2	\$ 192,410	\$ 207,099	\$ 222,892	\$ 239,850	\$ 257,570	
Tier 3	\$ -	\$ -	\$ -	\$ -	\$ -	
Supply 2 Rate						
Tier 1	\$ -	\$ -	\$ -	\$ -	\$ -	
Tier 2	\$ 1,185,906	\$ 1,275,881	\$ 1,372,610	\$ 1,476,460	\$ 1,585,166	
Tier 3	\$ -	\$ -	\$ -	\$ -	\$ -	
Supply 3 Rate						
Tier 1	\$ -	\$ -	\$ -	\$ -	\$ -	
Tier 2	\$ 47,063	\$ 50,621	\$ 54,445	\$ 58,551	\$ 62,853	
Tier 3	\$ 1,521,486	\$ 1,636,502	\$ 1,760,142	\$ 1,892,878	\$ 2,031,957	
Supply 4 Rate						
Tier 1	\$ -	\$ -	\$ -	\$ -	\$ -	
Tier 2	\$ -	\$ -	\$ -	\$ -	\$ -	
Tier 3	\$ 466,644	\$ 501,824	\$ 539,640	\$ 580,236	\$ 622,804	
Supply Sustainability Rate						
Tier 1	\$ -	\$ -	\$ -	\$ -	\$ -	
Tier 2	\$ -	\$ -	\$ -	\$ -	\$ -	
Tier 3	\$ 372,185	\$ 399,099	\$ 427,998	\$ 459,023	\$ 491,928	
Combined Winter Revenue Requirements by Tier						
Tier 1	\$ 3,740,073	\$ 4,018,147	\$ 4,316,980	\$ 4,637,707	\$ 4,975,326	
Tier 2	\$ 5,057,170	\$ 5,431,658	\$ 5,834,071	\$ 6,265,938	\$ 6,721,067	
Tier 3	\$ 3,200,751	\$ 3,439,503	\$ 3,696,086	\$ 3,971,509	\$ 4,261,156	
Tier 1 Winter Rate	\$ 1.30	\$ 1.46	\$ 1.56	\$ 1.66	\$ 1.77	\$ 1.89
Tier 2 Winter Rate	\$ 1.64	\$ 2.01	\$ 2.15	\$ 2.29	\$ 2.44	\$ 2.60
Tier 3 Winter Rate	\$ 3.01	\$ 4.66	\$ 4.97	\$ 5.30	\$ 5.66	\$ 6.03

RIVERSIDE PUBLIC UTILITIES

Appendix J

2023 RPU Water Rate Model

Demand Reduction Rates

VARIABLE RATES - TIER (SFR)

DEMAND REDUCTION RATES FOR 30% REDUCTION

SFR

	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28
Summer						
Base Rate						
Tier 1	\$ 1,010,843	\$ 1,085,393	\$ 1,165,494	\$ 1,251,454	\$ 1,342,147	
Tier 2	1,329,732	1,427,799	1,533,171	1,646,247	1,765,552	
Tier 3	367,530	394,636	423,760	455,014	487,989	
Max Day Rate						
Tier 1	\$ 664,194	\$ 712,640	\$ 764,683	\$ 820,521	\$ 879,619	
Tier 2	1,959,346	2,102,257	2,255,782	2,420,502	2,594,840	
Tier 3	958,249	1,028,143	1,103,227	1,183,785	1,269,048	
Max Hour Rate						
Tier 1	\$ 277,635	\$ 298,106	\$ 320,102	\$ 343,706	\$ 368,611	
Tier 2	383,064	411,309	441,658	474,225	508,588	
Tier 3	149,676	160,712	172,570	185,295	198,722	
Supply 1 Rate						
Tier 1	\$ 861,586	\$ 927,361	\$ 998,080	\$ 1,074,013	\$ 1,153,361	
Tier 2	194,548	209,400	225,369	242,515	260,432	
Tier 3	-	-	-	-	-	
Supply 2 Rate						
Tier 1	\$ -	\$ -	\$ -	\$ -	\$ -	
Tier 2	1,199,082	1,290,057	1,387,861	1,492,865	1,602,778	
Tier 3	-	-	-	-	-	
Supply 3 Rate						
Tier 1	\$ -	\$ -	\$ -	\$ -	\$ -	
Tier 2	47,586	51,183	55,050	59,202	63,551	
Tier 3	1,552,907	1,670,298	1,796,491	1,931,967	2,073,920	
Supply 4 Rate						
Tier 1	\$ -	\$ -	\$ -	\$ -	\$ -	
Tier 2	-	-	-	-	-	
Tier 3	476,281	512,187	550,784	592,218	635,666	
Supply Sustainability Rate						
Tier 1	\$ -	\$ -	\$ -	\$ -	\$ -	
Tier 2	-	-	-	-	-	
Tier 3	379,871	407,341	436,837	468,502	502,086	
Combined Summer Revenue Requirements by Tier						
Tier 1	\$ 2,814,258	\$ 3,023,499	\$ 3,248,358	\$ 3,489,694	\$ 3,743,738	
Tier 2	\$ 5,113,358	\$ 5,492,006	\$ 5,898,890	\$ 6,335,556	\$ 6,795,741	
Tier 3	\$ 3,884,514	\$ 4,173,317	\$ 4,483,669	\$ 4,816,781	\$ 5,167,432	
Tier 1 Summer Rate	\$ 1.30	\$ 1.46	\$ 1.56	\$ 1.66	\$ 1.77	\$ 1.89
Tier 2 Summer Rate	\$ 1.64	\$ 2.01	\$ 2.15	\$ 2.29	\$ 2.44	\$ 2.60
Tier 3 Summer Rate	\$ 3.66	\$ 5.54	\$ 5.91	\$ 6.30	\$ 6.72	\$ 7.16

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

VARIABLE RATES - TIER (MFR)

DEMAND REDUCTION RATES FOR 30% REDUCTION

Appendix J

Demand Reduction Rates

MFR

	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28
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WA1B - MFR - 30% Reduction

REVENUE TO RECOVER

Base Revenue to Recover	\$	156,650	\$	168,203	\$	180,616	\$	193,937	\$	207,992
Max Day Revenue to Recover		140,594		150,848		161,865		173,684		186,194
Max Hour Revenue to Recover		43,615		46,831		50,286		53,994		57,907
Supply 1 Revenue to Recover		74,889		80,606		86,752		93,353		100,249
Supply 2 Revenue to Recover		74,620		80,282		86,368		92,902		99,742
Supply 3 Revenue to Recover		57,923		62,302		67,009		72,062		77,357
Supply 4 Revenue to Recover		17,235		18,534		19,931		21,430		23,002
Supply Sustainability Revenue to Recover		15,509		16,630		17,834		19,127		20,498
Total Allocated Costs	\$	581,033	\$	624,235	\$	670,661	\$	720,490	\$	772,942

REVENUE TO RECOVER - BY TIER

Base Rate

	Use per Tier										
Tier 1	61.9%	\$	96,965	\$	104,116	\$	111,800	\$	120,045	\$	128,745
Tier 2	38.1%		59,685		64,087		68,817		73,892		79,247

Max Day Rate

	Max Day Extra Capacity per Tier										
Tier 1	37.9%	\$	53,350	\$	57,241	\$	61,422	\$	65,907	\$	70,654
Tier 2	62.1%		87,244		93,607		100,443		107,778		115,540

Max Hour Rate

	Max Hour Extra Capacity per Tier										
Tier 1	60.5%	\$	26,368	\$	28,313	\$	30,402	\$	32,644	\$	35,009
Tier 2	39.5%		17,246		18,518		19,884		21,351		22,898

Supply 1 Rate

	SFR Supply 1 Allocation by Tier										
Tier 1	100.0%	\$	74,889	\$	80,606	\$	86,752	\$	93,353	\$	100,249
Tier 2	0.0%		-		-		-		-		-

Supply 2 Rate

	SFR Supply 2 Allocation by Tier										
Tier 1	15.5%	\$	11,566	\$	12,443	\$	13,387	\$	14,399	\$	15,460
Tier 2	84.5%		63,054		67,838		72,981		78,503		84,283

Supply 3 Rate

	SFR Supply 3 Allocation by Tier										
Tier 1	0.0%	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2	100.0%		57,923		62,302		67,009		72,062		77,357

Supply 4 Rate

	SFR Supply 4 Allocation by Tier										
Tier 1	0.0%	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2	100.0%		17,235		18,534		19,931		21,430		23,002

Supply Sustainability

	All to Tier 3										
Tier 1	0.0%	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2	100.0%		15,509		16,630		17,834		19,127		20,498

RIVERSIDE PUBLIC UTILITIES

Appendix J

2023 RPU Water Rate Model

Demand Reduction Rates

VARIABLE RATES - TIER (MFR)

DEMAND REDUCTION RATES FOR 30% REDUCTION

MFR

PROJECTED USAGE (HFC)

	294,904	296,914	298,989	301,120	303,316
Annual					
Tier 1	182,542	183,787	185,071	186,390	187,749
Tier 2	112,361	113,127	113,918	114,730	115,566
Winter					
Tier 1	104,853	105,567	106,305	107,063	107,844
Tier 2	54,469	54,840	55,223	55,617	56,022
Summer					
Tier 1	77,690	78,219	78,766	79,327	79,906
Tier 2	57,893	58,287	58,694	59,113	59,544

SUPPLY TIER USAGE (HCF)

	Tier Usage (HCF)	Supply 1 (HCF)	Supply 2 (HCF)	Supply 3 (HCF)	Supply 4 (HCF)	
		167,343	98,064	82,750	17,467	365,623
						70,720
Tier 1	182,542	167,343	15,199			
Tier 2	112,361	-	82,864	82,750	17,467	
	294,904	167,343	98,064	82,750	17,467	365,623
Tier 1		100.0%	15.5%	0.0%	0.0%	
Tier 2		0.0%	84.5%	100.0%	100.0%	

RIVERSIDE PUBLIC UTILITIES

Appendix J

2023 RPU Water Rate Model

Demand Reduction Rates

VARIABLE RATES - TIER (MFR)

DEMAND REDUCTION RATES FOR 30% REDUCTION

MFR

Winter

Base Rate

Tier 1	\$	55,697	\$	59,804	\$	64,218	\$	68,954	\$	73,952
Tier 2		28,933		31,067		33,360		35,820		38,416

Max Day Rate

Seasonality Factor

Tier 1	\$	30,644	\$	32,879	\$	35,281	\$	37,857	\$	40,584
Tier 2		33,795		36,260		38,908		41,749		44,756

1.00

Max Hour Rate

Seasonality Factor

Tier 1	\$	15,146	\$	16,263	\$	17,463	\$	18,750	\$	20,109
Tier 2		6,681		7,173		7,703		8,270		8,870

1.00

Supply 1 Rate

Tier 1	\$	43,016	\$	46,300	\$	49,831	\$	53,622	\$	57,584
Tier 2		-		-		-		-		-

Supply 2 Rate

Tier 1	\$	6,643	\$	7,147	\$	7,689	\$	8,271	\$	8,880
Tier 2		30,567		32,886		35,379		38,056		40,857

Supply 3 Rate

Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2		28,079		30,202		32,483		34,933		37,500

Supply 4 Rate

Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2		8,355		8,985		9,662		10,388		11,151

Supply Sustainability

Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2		7,518		8,062		8,645		9,272		9,937

Winter Revenue Requirement By Tier

Tier 1	\$	151,147	\$	162,394	\$	174,481	\$	187,454	\$	201,108
Tier 2	\$	143,928	\$	154,634	\$	166,139	\$	178,489	\$	191,486

Tier 1 Winter Rate	\$	1.30	\$	1.44	\$	1.54	\$	1.64	\$	1.75	\$	1.86
Tier 2 Winter Rate	\$	1.87	\$	2.64	\$	2.82	\$	3.01	\$	3.21	\$	3.42

RIVERSIDE PUBLIC UTILITIES

Appendix J

2023 RPU Water Rate Model

Demand Reduction Rates

VARIABLE RATES - TIER (MFR)

DEMAND REDUCTION RATES FOR 30% REDUCTION

MFR

Summer

Base Rate

Tier 1	\$	41,268	\$	44,311	\$	47,582	\$	51,091	\$	54,794
Tier 2		30,752		33,020		35,456		38,072		40,831

Max Day Rate

Seasonality Factor

Tier 1	\$	22,706	\$	24,362	\$	26,141	\$	28,050	\$	30,070
Tier 2		53,449		57,347		61,535		66,028		70,784

1.49

Max Hour Rate

Seasonality Factor

Tier 1	\$	11,222	\$	12,050	\$	12,939	\$	13,893	\$	14,900
Tier 2		10,566		11,345		12,182		13,080		14,028

1.49

Supply 1 Rate

Tier 1	\$	31,873	\$	34,305	\$	36,922	\$	39,730	\$	42,666
Tier 2		-		-		-		-		-

Supply 2 Rate

Tier 1	\$	4,922	\$	5,296	\$	5,697	\$	6,128	\$	6,580
Tier 2		32,488		34,953		37,602		40,448		43,426

Supply 3 Rate

Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2		29,844		32,100		34,525		37,129		39,857

Supply 4 Rate

Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2		8,880		9,549		10,269		11,042		11,852

Supply Sustainability

Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2		7,991		8,568		9,189		9,855		10,561

Summer Revenue Requirement By Tier

Tier 1	\$	111,991	\$	120,324	\$	129,281	\$	138,892	\$	149,009
Tier 2	\$	173,970	\$	186,882	\$	200,758	\$	215,654	\$	231,339

Tier 1 Summer Rate	\$	1.30	\$	1.44	\$	1.54	\$	1.64	\$	1.75	\$	1.86
Tier 2 Summer Rate	\$	2.12	\$	3.01	\$	3.21	\$	3.42	\$	3.65	\$	3.89

RIVERSIDE PUBLIC UTILITIES

Appendix J

2023 RPU Water Rate Model

DEMAND REDUCTION RATES

VARIABLE RATES - TIER (WA4)

DEMAND REDUCTION RATES FOR 30% REDUCTION

WA4: Riverside Water Company

	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28				
WA4 - Riverside Irrigators - 30% Reduction										
REVENUE TO RECOVER										
Base Revenue to Recover	\$	3,766	\$	4,043	\$	4,342	\$	4,662	\$	5,000
Max Day Revenue to Recover		6,393		6,860		7,360		7,898		8,467
Max Hour Revenue to Recover		1,100		1,181		1,268		1,362		1,460
Supply 1 Revenue to Recover		1,308		1,408		1,515		1,630		1,751
Supply 2 Revenue to Recover		1,303		1,402		1,508		1,623		1,742
Supply 3 Revenue to Recover		2,993		3,219		3,463		3,724		3,997
Supply 4 Revenue to Recover		891		958		1,030		1,107		1,189
Supply Sustainability Revenue To Recover		705		756		811		870		932
Total Allocated Costs	\$	18,459	\$	19,827	\$	21,297	\$	22,875	\$	24,538

REVENUE TO RECOVER - BY TIER											
Base Rate											
		<u>Use per Tier</u>									
Tier 1	38.0%	\$	1,431	\$	1,537	\$	1,650	\$	1,772	\$	1,900
Tier 2	51.5%		1,937		2,080		2,234		2,399		2,572
Tier 3	10.5%		397		426		458		491		527
Max Day Rate											
		<u>Max Day Extra Capacity per Tier</u>									
Tier 1	23.8%	\$	1,522	\$	1,633	\$	1,752	\$	1,880	\$	2,015
Tier 2	57.5%		3,673		3,941		4,229		4,538		4,865
Tier 3	18.7%		1,198		1,286		1,379		1,480		1,587
Max Hour Rate											
		<u>Max Hour Extra Capacity per Tier</u>									
Tier 1	36.3%	\$	399	\$	429	\$	461	\$	494	\$	530
Tier 2	52.2%		574		616		662		710		762
Tier 3	11.5%		127		136		146		157		168
Supply 1 Rate											
		<u>SFR Supply 1 Allocation by Tier</u>									
Tier 1	90.7%	\$	1,186	\$	1,277	\$	1,374	\$	1,479	\$	1,588
Tier 2	9.3%		122		131		141		152		163
Tier 3	0.0%		-		-		-		-		-
Supply 2 Rate											
		<u>SFR Supply 2 Allocation by Tier</u>									
Tier 1	0.0%	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2	100.0%		1,303		1,402		1,508		1,623		1,742
Tier 3	0.0%		-		-		-		-		-
Supply 3 Rate											
		<u>SFR Supply 3 Allocation by Tier</u>									
Tier 1	0.0%	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2	25.3%		757		815		876		942		1,011
Tier 3	74.7%		2,236		2,405		2,587		2,782		2,986
Supply 4 Rate											
		<u>SFR Supply 4 Allocation by Tier</u>									
Tier 1	0.0%	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2	0.0%		-		-		-		-		-
Tier 3	100.0%		891		958		1,030		1,107		1,189
Supply Sustainability											
		<u>All to Tier 3</u>									
Tier 1	0.0%	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2	0.0%		-		-		-		-		-
Tier 3	100.0%		705		756		811		870		932

RIVERSIDE PUBLIC UTILITIES

Appendix J

2023 RPU Water Rate Model

DEMAND REDUCTION RATES

VARIABLE RATES - TIER (WA4)

DEMAND REDUCTION RATES FOR 30% REDUCTION

WA4: Riverside Water Company

PROJECTED USAGE (HFC)

	6,989	6,989	6,989	6,989	6,989
Annual					
Tier 1	2,656	2,656	2,656	2,656	2,656
Tier 2	3,596	3,596	3,596	3,596	3,596
Tier 3	737	737	737	737	737
Winter					
Tier 1	1,618	1,618	1,618	1,618	1,618
Tier 2	1,449	1,449	1,449	1,449	1,449
Tier 3	296	296	296	296	296
Summer					
Tier 1	1,038	1,038	1,038	1,038	1,038
Tier 2	2,147	2,147	2,147	2,147	2,147
Tier 3	440	440	440	440	440

SUPPLY TIER USAGE (HCF)

	Tier Usage (HCF)	Supply 1 (HCF)	Supply 2 (HCF)	Supply 3 (HCF)	Supply 4 (HCF)	
		2,929	2,209	4,406	952	10,495
					Resilient Supply	3,506
Tier 1	2,656	2,656				
Tier 2	3,596	272	2,209	1,115	-	
Tier 3	737			3,291	952	
	6,989	2,929	2,209	4,406	952	10,495
Tier 1		90.7%	0.0%	0.0%	0.0%	
Tier 2		9.3%	100.0%	25.3%	0.0%	
Tier 3		0.0%	0.0%	74.7%	100.0%	

RIVERSIDE PUBLIC UTILITIES

Appendix J

2023 RPU Water Rate Model

DEMAND REDUCTION RATES

VARIABLE RATES - TIER (WA4)

DEMAND REDUCTION RATES FOR 30% REDUCTION

WA4: Riverside Water Company

Winter

Base Rate

Tier 1	\$	872	\$	936	\$	1,005	\$	1,079	\$	1,157
Tier 2		781		838		900		967		1,037
Tier 3		159		171		184		197		212

Max Day Rate

Tier 1	\$	927	\$	995	\$	1,067	\$	1,145	\$	1,228
Tier 2		1,480		1,588		1,704		1,829		1,960
Tier 3		274		294		315		338		363

Max Hour Rate

Tier 1	\$	243	\$	261	\$	281	\$	301	\$	323
Tier 2		231		248		267		286		307
Tier 3		29		31		33		36		38

Supply 1 Rate

Tier 1	\$	723	\$	778	\$	837	\$	901	\$	967
Tier 2		49		53		57		61		66
Tier 3		-		-		-		-		-

Supply 2 Rate

Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2		525		565		608		654		702
Tier 3		-		-		-		-		-

Supply 3 Rate

Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2		305		328		353		380		408
Tier 3		898		966		1,039		1,118		1,200

Supply 4 Rate

Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2		-		-		-		-		-
Tier 3		358		385		414		445		478

Supply Sustainability Rate

Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2		-		-		-		-		-
Tier 3		283		304		326		349		375

Winter Revenue Requirement By Tier

Tier 1	\$	2,765	\$	2,970	\$	3,190	\$	3,426	\$	3,675
Tier 2	\$	3,371	\$	3,621	\$	3,889	\$	4,176	\$	4,479
Tier 3	\$	2,002	\$	2,151	\$	2,311	\$	2,484	\$	2,665

Tier 1 Winter Rate	\$	1.32	\$	1.71	\$	1.84	\$	1.97	\$	2.12	\$	2.27
Tier 2 Winter Rate	\$	1.54	\$	2.33	\$	2.50	\$	2.68	\$	2.88	\$	3.09
Tier 3 Winter Rate	\$	2.46	\$	6.76	\$	7.27	\$	7.81	\$	8.39	\$	9.00

RIVERSIDE PUBLIC UTILITIES

Appendix J

2023 RPU Water Rate Model

DEMAND REDUCTION RATES

VARIABLE RATES - TIER (WA4)

DEMAND REDUCTION RATES FOR 30% REDUCTION

WA4: Riverside Water Company

Summer										
Base Rate										
Tier 1	\$	559	\$	601	\$	645	\$	692	\$	743
Tier 2		1,157		1,242		1,334		1,432		1,536
Tier 3		237		255		273		293		315
Max Day Rate										
Tier 1	\$	595	\$	638	\$	685	\$	735	\$	788
Tier 2		2,193		2,353		2,525		2,709		2,905
Tier 3		924		992		1,064		1,142		1,224
Max Hour Rate										
Tier 1	\$	156	\$	168	\$	180	\$	193	\$	207
Tier 2		343		368		395		424		455
Tier 3		98		105		113		121		130
Supply 1 Rate										
Tier 1	\$	464	\$	499	\$	537	\$	578	\$	621
Tier 2		73		78		84		91		97
Tier 3		-		-		-		-		-
Supply 2 Rate										
Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2		778		837		901		969		1,040
Tier 3		-		-		-		-		-
Supply 3 Rate										
Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2		452		486		523		563		604
Tier 3		1,335		1,436		1,545		1,661		1,784
Supply 4 Rate										
Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2		-		-		-		-		-
Tier 3		532		572		615		661		710
Supply Sustainability Rate										
Tier 1	\$	-	\$	-	\$	-	\$	-	\$	-
Tier 2		-		-		-		-		-
Tier 3		421		452		484		520		557
Summer Revenue Requirement By Tier										
Tier 1	\$	1,774	\$	1,905	\$	2,046	\$	2,198	\$	2,358
Tier 2	\$	4,996	\$	5,365	\$	5,762	\$	6,188	\$	6,637
Tier 3	\$	3,548	\$	3,811	\$	4,095	\$	4,399	\$	4,719
Tier 1 Summer Rate		\$1.32		\$ 1.71		\$ 1.84		\$ 1.97		\$ 2.12
Tier 2 Summer Rate		\$1.58		\$ 2.33		\$ 2.50		\$ 2.68		\$ 3.09
Tier 3 Summer Rate		\$3.17		\$ 8.06		\$ 8.66		\$ 9.31		\$ 10.73

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

VARIABLE RATES - NO TIER (Comm/Ind, Landscape, WA2, WA7)

Appendix J

Demand Reduction Rates

Non-Tiered Rates

DEMAND REDUCTION RATES FOR 30% REDUCTION

	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28
WA6 - Commercial/Industrial						
REVENUE TO RECOVER						
Base Revenue to Recover	\$ 3,174,174	\$ 3,408,268	\$ 3,659,800	\$ 3,929,722	\$ 4,214,511	
Max Day Revenue to Recover	3,149,552	3,379,276	3,626,061	3,890,839	4,171,080	
Max Hour Revenue to Recover	888,895	954,437	1,024,860	1,100,432	1,180,172	
Supply 1 Revenue to Recover	970,430	1,044,514	1,124,168	1,209,693	1,299,066	
Supply 2 Revenue to Recover	966,951	1,040,315	1,119,184	1,203,861	1,292,496	
Supply 3 Revenue to Recover	2,758,120	2,966,619	3,190,752	3,431,370	3,683,493	
Supply 4 Revenue to Recover	820,658	882,527	949,032	1,020,425	1,095,288	
Supply Sustainability Revenue to Recover	347,422	372,546	399,522	428,483	459,198	
Total Allocated Costs	\$ 13,076,204	\$ 14,048,503	\$ 15,093,378	\$ 16,214,825	\$ 17,395,303	
PROJECTED USAGE (HFC)						
Projected Annual Usage (HCF)	5,330,180	5,407,421	5,485,924	5,565,660	5,646,762	
Projected Winter Usage (HCF)	2,894,739	2,936,687	2,979,321	3,022,624	3,066,669	
Projected Summer Usage (HCF)	2,435,441	2,470,734	2,506,603	2,543,036	2,580,093	
Winter						
Base Revenue to Recover	\$1,723,845.42	\$1,850,978.10	\$1,987,581.07	\$2,134,171.17	\$2,288,835.86	
Max Day Revenue to Recover	1,503,915.22	1,613,608.57	1,731,448.55	1,857,880.23	1,991,695.23	
Max Hour Revenue to Recover	424,448.70	455,744.79	489,372.05	525,457.66	563,533.32	
Supply 1 Revenue to Recover	527,025.89	567,259.73	610,518.22	656,965.76	705,502.41	
Supply 2 Revenue to Recover	525,136.29	564,978.90	607,811.94	653,798.05	701,934.40	
Supply 3 Revenue to Recover	1,497,892.55	1,611,125.08	1,732,848.24	1,863,524.08	2,000,448.26	
Supply 4 Revenue to Recover	445,686.95	479,286.96	515,404.64	554,177.04	594,834.00	
Supply Sustainability Revenue to Recover	188,679.83	202,324.11	216,974.25	232,702.23	249,383.50	
Winter Rate	\$ 1.58	\$ 2.36	\$ 2.50	\$ 2.65	\$ 2.81	\$ 2.97
Summer						
Base Revenue to Recover	\$1,450,328.86	\$1,557,290.12	\$1,672,218.58	\$1,795,550.63	\$1,925,675.39	
Max Day Revenue to Recover	1,645,636.97	1,765,667.61	1,894,612.04	2,032,959.05	2,179,384.33	
Max Hour Revenue to Recover	464,446.70	498,692.08	535,488.15	574,974.58	616,638.36	
Supply 1 Revenue to Recover	443,404.53	477,254.69	513,649.44	552,727.59	593,563.15	
Supply 2 Revenue to Recover	441,814.74	475,335.75	511,372.56	550,062.49	590,561.27	
Supply 3 Revenue to Recover	1,260,227.15	1,355,493.71	1,457,903.31	1,567,846.05	1,683,045.10	
Supply 4 Revenue to Recover	374,971.35	403,240.24	433,627.21	466,247.95	500,454.06	
Supply Sustainability Revenue to Recover	158,742.66	170,222.08	182,547.71	195,780.28	209,814.82	
Summer Rate	\$ 1.84	\$ 2.56	\$ 2.71	\$ 2.87	\$ 3.04	\$ 3.22

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

VARIABLE RATES - NO TIER (Comm/Ind, Landscape, WA2, WA7)

Appendix J

Demand Reduction Rates

Non-Tiered Rates

DEMAND REDUCTION RATES FOR 30% REDUCTION

WA11 - Landscape

Base Revenue to Recover	\$ 327,487	\$ 351,639	\$ 377,590	\$ 405,439	\$ 434,821
Max Day Revenue to Recover	537,710	576,930	619,062	664,267	712,111
Max Hour Revenue to Recover	95,342	102,372	109,926	118,031	126,584
Supply 1 Revenue to Recover	85,921	92,480	99,533	107,105	115,018
Supply 2 Revenue to Recover	85,613	92,108	99,091	106,588	114,436
Supply 3 Revenue to Recover	327,951	352,742	379,392	408,002	437,981
Supply 4 Revenue to Recover	97,579	104,936	112,843	121,332	130,234
Supply Sustainability Revenue to Recover	59,314	63,603	68,209	73,153	78,397
	\$ 1,616,917	\$ 1,736,811	\$ 1,865,647	\$ 2,003,919	\$ 2,149,582

Projected Annual Usage (HCF)	512,685	520,114	527,665	535,334	543,135
Projected Winter Usage (HCF)	254,498	258,186	261,934	265,742	269,614
Projected Summer Usage (HCF)	258,187	261,928	265,731	269,592	273,521

Winter

Base Revenue to Recover	\$ 162,565.51	\$ 174,554.65	\$ 187,436.66	\$ 201,261.38	\$ 215,846.64
Max Day Revenue to Recover	193,687.82	207,815.17	222,991.38	239,275.41	256,508.97
Max Hour Revenue to Recover	34,659.89	37,215.49	39,961.44	42,908.15	46,017.36
Supply 1 Revenue to Recover	42,651.30	45,907.36	49,408.15	53,167.24	57,095.17
Supply 2 Revenue to Recover	42,498.38	45,722.78	49,189.13	52,910.89	56,806.42
Supply 3 Revenue to Recover	162,795.46	175,101.94	188,330.99	202,533.91	217,415.02
Supply 4 Revenue to Recover	48,438.60	52,090.36	56,015.68	60,229.78	64,648.43
Supply Sustainability Revenue to Recover	29,443.63	31,572.83	33,858.97	36,313.45	38,916.53
Winter Rate	\$ 1.58	\$ 2.82	\$ 2.98	\$ 3.16	\$ 3.34

Summer

Base Revenue to Recover	\$ 164,921.77	\$ 177,084.66	\$ 190,153.76	\$ 204,177.57	\$ 218,974.72
Max Day Revenue to Recover	344,022.34	369,114.84	396,071.12	424,991.67	455,602.38
Max Hour Revenue to Recover	60,682.28	65,156.61	69,964.20	75,123.28	80,566.86
Supply 1 Revenue to Recover	43,269.50	46,572.75	50,124.37	53,937.62	57,922.60
Supply 2 Revenue to Recover	43,114.36	46,385.49	49,902.18	53,677.54	57,629.66
Supply 3 Revenue to Recover	165,155.06	177,639.89	191,061.05	205,468.55	220,565.82
Supply 4 Revenue to Recover	49,140.68	52,845.36	56,827.68	61,102.48	65,585.33
Supply Sustainability Revenue to Recover	29,870.39	32,030.45	34,349.79	36,839.62	39,480.52
Summer Rate	\$ 1.84	\$ 3.49	\$ 3.69	\$ 3.91	\$ 4.14

RIVERSIDE PUBLIC UTILITIES

2023 RPU Water Rate Model

VARIABLE RATES - NO TIER (Comm/Ind, Landscape, WA2, WA7)

Appendix J

Demand Reduction Rates

Non-Tiered Rates

DEMAND REDUCTION RATES FOR 30% REDUCTION

WA2 - Flat Rate

Base Revenue to Recover	\$ 18,604	\$ 19,976	\$ 21,450	\$ 23,032	\$ 24,701
Max Day Revenue to Recover	59,199	63,517	68,155	73,132	78,399
Max Hour Revenue to Recover	5,905	6,341	6,809	7,311	7,840
Supply 1 Revenue to Recover	3,439	3,701	3,984	4,287	4,603
Supply 2 Revenue to Recover	3,426	3,686	3,966	4,266	4,580
Supply 3 Revenue to Recover	24,025	25,841	27,793	29,889	32,085
Supply 4 Revenue to Recover	7,148	7,687	8,267	8,888	9,540
Supply Sustainability Revenue to Recover	6,530	7,002	7,509	8,054	8,631
	\$ 128,276	\$ 137,751	\$ 147,932	\$ 158,858	\$ 170,381

Projected Annual Usage (HCF)	35,515	35,515	35,515	35,515	35,515
Projected Winter Usage (HCF)	14,354	14,354	14,354	14,354	14,354
Projected Summer Usage (HCF)	21,161	21,161	21,161	21,161	21,161
	\$ 3.61	\$ 3.88	\$ 4.17	\$ 4.47	\$ 4.80

WA7 & 10 - Interruptable

Base Revenue to Recover	\$ 347,974	\$ 373,637	\$ 401,212	\$ 430,802	\$ 462,023
Max Day Revenue to Recover	322,454	345,974	371,240	398,348	427,039
Max Hour Revenue to Recover	103,871	111,530	119,759	128,590	137,908
Supply 1 Revenue to Recover	84,010	90,423	97,319	104,723	112,460
Supply 2 Revenue to Recover	83,709	90,060	96,887	104,218	111,891
Supply 3 Revenue to Recover	324,349	348,869	375,226	403,522	433,172
Supply 4 Revenue to Recover	-	-	-	-	-
Supply Sustainability Revenue to Recover	-	-	-	-	-
	\$ 1,266,368	\$ 1,360,492	\$ 1,461,643	\$ 1,570,203	\$ 1,684,492

Projected Annual Usage (HCF)	564,756	571,958	580,262	588,696	597,274
Projected Winter Usage (HCF)	232,874	331,882	47,063	235,844	336,114
Projected Summer Usage (HCF)	331,882	240,076	533,199	352,852	261,160
	\$ 2.24	\$ 2.38	\$ 2.52	\$ 2.67	\$ 2.82