



City of Santa Cruz 2026 Water Rate Study



August 18, 2026



BARTLE WELLS ASSOCIATES
INDEPENDENT PUBLIC FINANCE ADVISORS

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August 18, 2026

Heidi Luckenbach, Water Director
City of Santa Cruz Water Department
212 Locust Street
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Re: Cost of Service Water Rate Study

Bartle Wells Associates is pleased to submit the attached Cost of Service Water Rate Study. The study develops long-term financial projections for the Santa Cruz Water Department's cost of providing water service and calculates proposed rates designed to proportionally recover those costs. The recommended rates are intended to meet the Santa Cruz Water Department's funding needs, comply with legal requirements, and recover costs equitably from all customers.

Over the five-year planning period, the proposed rates incorporate modifications to the existing rate structure, which are designed to improve ratepayer equity, and align the rates with current demand levels and the projected cost of providing service.

We enjoyed working on this project and appreciate the assistance and input received from Santa Cruz Water Department staff throughout the rate study. Final recommendations were developed with input from the Santa Cruz Water Department's project team, the Water Commission, the City Attorney's Office, and the City's outside legal counsel, Colantuono, Highsmith & Whatley. Please contact us at any time if you have questions about the recommendations in this report or other matters related to water rates and finances.

Sincerely,

BARTLE WELLS ASSOCIATES

Erik Helgeson, MBA
Principal/President

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Glossary of Terms

Terms	Descriptions
AB 2257	Assembly bill 2257 – California legislation that modified Proposition 218 noticing requirements for water rate increases
Active Customer	A service receiving regular water service
AWWA	American Water Works Association
BWA	Bartle Wells Associates
CCF	Hundred Cubic Feet or 748 gallons
CIP	Capital Investment Program
City	City of Santa Cruz
COS	Cost of Service
FIP	Facilities Improvement Project
FY	Fiscal Year (July 1 – June 30)
GHWTP	Graham Hill Water Treatment Plant
HCP	Habitat Conservation Plan
IRF	Infrastructure Reinvestment Fee
M1 Manual	“Principles of Water Rates, Fees, and Charges: Manual of Water Supply Practices M1”, 6 th edition published by AWWA
MCU	Meter Cost Unit – a ratio reflecting the relative cost to service, maintain, and replace meters of different sizes, specific to SCWD’s meter inventory
MEU	Meter Equivalent Unit – a ratio of any given meter size relative to the baseline 5/8-inch meter, based on AWWA standard capacity guidelines
NCP	Newell Creek Pipeline replacement project
O&M	Operations and Maintenance
PAYGO	Pay-As-You-Go – capital funding sourced from available cash rather than debt financing
Proposition 218	Article XIII D, Section 6 of the California Constitution
SCWD	Santa Cruz Water Department
SDC	System Development Charge – a one-time fee charged to new or upsized connections to recover the cost of capacity-related infrastructure
Service	A connection to the City's water system, typically measured and billed through a water meter. The terms "service" and "connection" are used interchangeably in this report.
SFR	Single Family Residential
SRF	State Revolving Fund
WIFIA	Water Infrastructure Finance and Innovation Act

1 EXECUTIVE SUMMARY

1.1 Introduction

The Santa Cruz Water Department (SCWD) is a financially self-supporting enterprise of the City of Santa Cruz (City) that relies on revenues from water rates, fees, and charges (collectively referred to as “rate” or “rates” herein) to fund the cost of providing water service. As such, the SCWD’s rates need to be set at adequate levels to: (a) fund the cost of operating and maintaining the water system, (b) fund necessary capital improvements to keep the SCWD’s infrastructure in good operating condition, (c) protect and maintain the SCWD’s local water supply sources, including Loch Lomond Reservoir, the San Lorenzo River, North Coast streams, and the Beltz Groundwater System, and (d) meet its annual debt service requirements.

The SCWD has provided proactive financial stewardship by raising annual rates to keep revenues in line with the cost of providing water service and maintaining the system. Those rate increases have enabled the SCWD to maintain its financial health. However, the SCWD continues to proactively plan for a number of manageable financial challenges, discussed below, which drive the need for future rate revenue increases.

In 2025, the SCWD retained Bartle Wells Associates (BWA) to develop updated financial projections, and a cost-of-service based water rate study. Final recommendations incorporate input from SCWD staff and the Water Commission. The City Attorney’s Office and the City’s outside legal counsel, Colantuono, Highsmith & Whatley, provided guidance for compliance with the substantive provisions of Proposition 218 and other relevant regulations. The proposed rates are designed to fund the operating and capital needs of the SCWD’s water system, while proportionally and equitably recovering costs from all customers.

1.2 Financial Challenges

The SCWD maintains reserve funds but is experiencing increased financial pressures that will require immediate and long-term rate increases. These pressures include a significant capital investment program, rising operating costs, revenue volatility, and the need to maintain long-term revenue stability. These pressures are discussed below:

- **Capital Investment Program:** The SCWD takes a proactive approach to maintaining its water system, which requires continuous repair, replacement, and improvement projects. Beginning in 2014, the SCWD embarked on a sustained, multi-decade reinvestment in its water system. This represents one of the most significant capital programs in the SCWD’s history. The 2016 Cost of Service Analysis was foundational in planning and funding this effort, establishing the first series of rate increases needed to support major infrastructure investments over the long term.

The SCWD's 5-year Water Capital Investment Program (CIP) totals approximately \$287.1 million through FY 2031. Of this amount, approximately \$213.0 million is expected to be debt funded, with the remainder funded on a pay-as-you-go (PAYGO) basis. Key projects include the Newell Creek Pipeline Replacement (NCP) and the Facilities Improvement Project (FIP) at the Graham Hill Water Treatment Plant (GHWTP). The FIP represents an investment of approximately \$180 million, which is anticipated to be financed through a combination of WIFIA and low-interest SRF loans. Future improvements to the Beltz Groundwater System are also planned beyond the current study period. Over a 15-year period, the SCWD's capital commitments represent a cumulative investment of approximately \$1 billion, resulting in a generational reinvestment in the reliability, safety, and long-term water supply of the Santa Cruz water system.

- **Debt Service:** Projected debt service is expected to reach approximately \$21.7 million annually by FY 2031, driven by new debt issuances estimated to be \$213.0 million. The SCWD's policy is to maintain a minimum debt service coverage ratio of 1.5x annual debt service. This ratio is a financial metric that helps ensure the SCWD can meet its debt obligations and continue accessing favorable financing terms to support the water system's long-term reliability. The SCWD's existing debt covenants require that the SCWD maintain a debt service coverage of at least 1.2x annual debt service. The proposed rate increases are designed to ensure the SCWD maintains sufficient revenues to meet its debt service coverage obligations throughout the five-year study period.
- **Ongoing Cost Inflation:** In addition to the rate increases needed to fund capital projects, the cost to operate the water system increases every year. Annual rate increases are needed to keep revenues aligned with rising costs and prevent rates from falling below the cost of providing service. Some costs that have been increasing faster than general inflation include electricity, treatment chemicals, insurance, and citywide shared-services allocations. The SCWD's financial projections assume average annual operating cost inflation of 5.0% per year over the five-year study period.
- **Lower-Than-Projected Water Revenues:** Over the past five years, water sales revenues have been below projected levels due to a combination of factors including the impacts of COVID-19, wetter-than-normal weather conditions, and the continued effectiveness of customer conservation efforts. While conservation is a positive outcome for the SCWD's water supply, the SCWD's current rate structure recovers about 90% of rate revenue from volumetric rate components. Reduced water use directly reduces rate revenues, creating budget shortfalls relative to projections. The proposed rates will improve revenue stability by increasing the share of revenue recovered through fixed charges.

Updated financial projections indicate the need for water rate revenues to increase over the next five years, the period covered by this rate study. The proposed rates also incorporate modifications to the SCWD's water rate structure, designed to align rates with the current cost of providing service. Due to these modifications, impacts on customer water bills will vary based on customer class, water meter size, and water use when the proposed rates are implemented.

1.3 Water Rate Recommendations

The proposed water rates incorporate structural modifications designed to better align rates with the current projected cost of service, customer demand patterns, and industry-standard rate methodology. These modifications are intended to ensure equitable and proportional cost recovery, support revenue stability and sufficiency, and enable the SCWD to meet its financial obligations over the study period. Rate structure and customer class recommendations are described as follows:

- **Increase Fixed Revenue Recovery:** The proposed fixed, monthly, readiness-to-serve charges recover about 20% of the projected rate revenue, an increase from the 10% of rate revenue collected from the current readiness-to-serve charges. Fixed revenue recovery will remain below typical industry practice, where fixed-charge recovery is between 30% and 50%. This change will result in higher fixed monthly charges and lower volumetric rates compared with the existing structure. The change reflects the current cost of service and improves revenue stability.
- **Fixed Revenue Recovery Based on Meter Capacity:** The additional revenue recovered from fixed charges reflects system capacity costs, which are allocated to customers based on meter size using AWWA meter equivalent units reflecting flow capacity. Because larger meters represent greater potential demand on system capacity, customers with larger meters will see a proportionally greater increase in fixed charges than those with smaller meter sizes. This approach is consistent with industry-standard rate-setting practices.
- **Consolidation of Volumetric Rate Components:** The proposed rates consolidate three separate volumetric charges (the Quantity Charge, the Infrastructure Reinvestment Fee (IRF), and the Rate Stabilization Fee (RSF)) into a single unified volumetric rate. The IRF has historically provided dedicated funding for capital projects, while the RSF has supported the SCWD's Rate Stabilization Reserves, which helps mitigate revenue volatility from year to year. Consolidating these components into a single rate does not eliminate their underlying purposes. The SCWD will continue to fund capital investment and maintain reserve targets through its internal budgeting and reserve policies, even though these will no longer appear as separate charges on customer bills. This approach is consistent with industry-standard rate-setting practices and results in a simpler, easy-to-understand bill, while continuing to be based on the cost-of-service.
- **Two Landscape Irrigation Tiers:** The proposed landscape irrigation rate structure is reduced from three tiers to two tiers to align with the results of the cost-of-service analysis and current customer demand patterns. Customer usage data shows that landscape irrigation customers

predominantly adhere to their individual water budget allocations, especially during summer irrigation months, resulting in very little usage in the third tier.

- **Volumetric Drought Surcharges:** The proposed rates introduce volumetric drought surcharges, calculated as a percentage of the SCWD’s regular volumetric water rates and levied in addition to those rates during a declared water shortage. A surcharge percentage is identified for each drought stage in the SCWD’s 2025 Urban Water Management Plan (UWMP). This approach represents a shift from fixed monthly drought surcharges based on meter size to volumetric drought surcharges. Customers who reduce demand in accordance with the conservation target at a given drought stage will see their total bill remain almost unchanged.

The proposed rates for each customer class are presented in the following tables. The rates are designed to recover the required rate revenue identified in this study and reflect the cost of service, including the changes described above. Proposed rates will take effect on January 1 of each year beginning January 1, 2027, with the final proposed rate adjustment taking effect January 1, 2031.

The following table shows the existing and proposed volumetric rates. Due to the fixed, readiness-to-serve charges recovering a greater share of total rate revenue, the readiness-to-serve charges will increase, and volumetric rates will decrease on January 1, 2027. The separate Quantity Charge, Infrastructure Reinvestment Fee, and Rate Stabilization Fee will also be combined into a single unified volumetric rate. The effect on individual customer bills will vary by customer class, meter size, and water use.

Table 1: Existing and Proposed Volumetric Water Rates Per CCF

Volumetric Rates	Jul. 1, 2026	Jan. 1, 2027	Jan. 1, 2028	Jan. 1, 2029	Jan. 1, 2030	Jan. 1, 2031
<i>(\$ per CCF)¹</i>	<i>Existing</i>	<i>Proposed</i>	<i>Proposed</i>	<i>Proposed</i>	<i>Proposed</i>	<i>Proposed</i>
Residential²						
Tier 1 (0-5 CCF)	\$16.07	\$15.96	\$17.88	\$20.03	\$21.83	\$23.79
Tier 2 (6-9 CCF)	\$23.00	\$19.69	\$22.05	\$24.70	\$26.92	\$29.34
Tier 3 (>9 CCF)	\$29.98	\$26.91	\$30.14	\$33.76	\$36.79	\$40.11
Commercial						
Commercial ³	\$18.60	\$18.45	\$20.66	\$23.14	\$25.22	\$27.49
UCSC	\$19.67	\$18.50	\$20.72	\$23.21	\$25.30	\$27.57
Landscape Irrigation						
Tier 1 (≤100% of budget)	\$32.74	\$23.90	\$26.77	\$29.98	\$32.68	\$35.63
Tier 2 (101% - 150%)	\$45.17	\$32.43	\$36.32	\$40.68	\$44.34	\$48.33
Tier 3 (151% & above) ⁵	\$57.10	<i>Proposed Tier 2 rate applies to all use >100% of budget</i>				
North Coast Agriculture						
Maintain Reliability	\$11.00	\$6.13	\$6.87	\$7.69	\$8.38	\$9.14
Decrease Reliability	\$5.50	N/A	N/A	N/A	N/A	N/A
Elevation Surcharges⁶	Jul. 1, 2026	Jan. 1, 2027	Jan. 1, 2028	Jan. 1, 2029	Jan. 1, 2030	Jan. 1, 2031
<i>(\$ per CCF)¹</i>	<i>Existing</i>	<i>Proposed</i>	<i>Proposed</i>	<i>Proposed</i>	<i>Proposed</i>	<i>Proposed</i>
Lift Station Zone 1	\$0.32	\$0.36	\$0.37	\$0.39	\$0.41	\$0.43
Lift Station Zone 2	\$0.61	\$0.84	\$0.88	\$0.93	\$0.97	\$1.02
Lift Station Zone 3	\$1.10	\$1.35	\$1.41	\$1.49	\$1.56	\$1.64

¹ CCF = 100 Cubic Feet or approximately 748 gallons.

² Per dwelling unit, includes single-family and multi-family.

³ Includes industrial, golf, bulk, fire service leaks, and temporary.

⁴ Tiers based on percent of water budget for each customer.

⁵ Tiers 2 and 3 will be combined if the proposed rates are adopted.

⁶ As applicable

The following table shows the existing and proposed fixed rates. As a result of the cost-of-service analysis, the fixed rates now recover some system capacity costs based on the capacity of the meter size, resulting in larger meters having increased readiness-to-serve charges. The proposed monthly fixed charges include capacity costs related to each meter size. Because larger meters represent significantly greater potential demand on the system, fixed charges for larger meter sizes increase more substantially than for smaller, more common sizes. Monthly fire service charges were adjusted to reflect the current cost of service.

Table 2: Existing and Proposed Fixed Monthly Rates

Monthly Fixed Charges	Jul. 1, 2026	Jan. 1, 2027	Jan. 1, 2028	Jan. 1, 2029	Jan. 1, 2030	Jan. 1, 2031
<i>Meter Size</i>	<i>Existing</i>	<i>Proposed</i>	<i>Proposed</i>	<i>Proposed</i>	<i>Proposed</i>	<i>Proposed</i>
Monthly Meter Ready-to-Serve Charge (\$/water meter/month)						
5/8"	\$19.13	32.27	36.15	40.48	44.13	48.10
3/4"	19.48	44.30	49.61	55.57	60.57	66.02
1"	20.49	68.79	77.05	86.29	94.06	102.53
1 1/2"	21.86	128.48	143.90	161.16	175.67	191.48
2"	25.56	202.85	227.19	254.46	277.36	302.32
3"	53.00	458.85	513.91	575.58	627.38	683.84
4"	63.15	796.46	892.03	999.07	1,088.99	1,187.00
6"	86.84	1,603.52	1,795.94	2,011.45	2,192.48	2,389.80
8"	113.91	3,376.34	3,781.50	4,235.28	4,616.45	5,031.93
10"	144.39	5,037.77	5,642.30	6,319.38	6,888.12	7,508.06
Monthly Fire Service Ready-to-Serve Charge (\$/fire meter/month)						
5/8"	N/A	N/A	N/A	N/A	N/A	N/A
3/4"	3.67	9.27	10.38	11.62	12.67	13.81
1"	3.92	9.39	10.51	11.77	12.83	13.99
1 1/2"	4.87	9.82	10.99	12.31	13.42	14.63
2"	6.53	10.56	11.83	13.25	14.44	15.74
3"	8.97	13.22	14.81	16.59	18.08	19.71
4"	22.49	17.82	19.95	22.35	24.36	26.55
6"	58.83	34.30	38.42	43.03	46.90	51.13
8"	121.90	62.74	70.27	78.71	85.79	93.51
10"	215.74	105.52	118.18	132.37	144.28	157.26

2 BACKGROUND, OBJECTIVES, AND LEGAL REQUIREMENTS

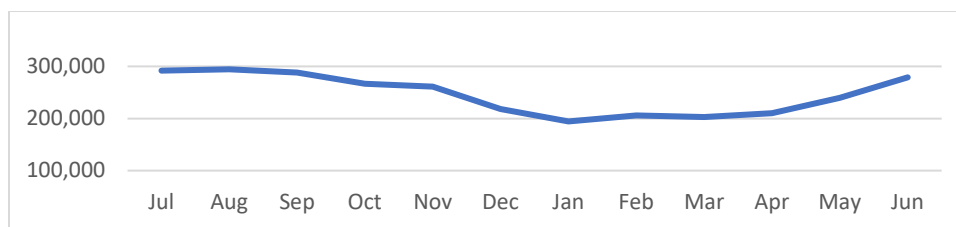
2.1 Background

The SCWD has provided safe and reliable drinking water since 1890. The SCWD serves approximately 100,000 people located in the City of Santa Cruz, the communities of Live Oak and North Coast, and parts of Capitola. Customers include homes, businesses, schools, and essential public services. The SCWD’s water system includes more than 300 miles of pipelines, pumps, tanks, and one reservoir supporting daily operations and long-term reliability.

The SCWD is entirely dependent on local water and does not receive water from outside Santa Cruz County. Approximately 95% of supply comes from local surface water sources, including the San Lorenzo River, Loch Lomond Reservoir, and North Coast sources (Liddell Spring, Laguna Creek, and Majors Creek), with the remaining 5% supplied by the Beltz Groundwater System drawn from the Santa Cruz Mid-County Groundwater Basin. Loch Lomond Reservoir, the SCWD’s only raw water reservoir, holds approximately 2.8 billion gallons when full, which is roughly a one-year supply for SCWD customers. All surface water is treated at the Graham Hill Water Treatment Plant, with the remainder produced by the Beltz groundwater treatment plants.

The SCWD’s water demands follow a seasonal pattern, with higher usage during warmer months largely due to landscape irrigation. These increased peak demands require the SCWD to maintain additional infrastructure, including larger storage tanks, pumps, and pipelines. SCWD’s water rates are designed to proportionally recover the cost of maintaining and operating peak infrastructure. The following figure shows the SCWD’s average monthly water demand from FY 2023 to FY 2025.

Figure 1: Average Water Demand by Month for FY 2023-2025 (CCF)



The SCWD operates as a self-supporting enterprise fund, relying on user rates, fees, and charges for service. Since the enterprise is funded by its customers, the SCWD must establish rates adequate to fund the cost of providing water services, including the costs for ongoing operations, debt service, and the capital improvements needed to keep the SCWD’s aging water infrastructure in a safe and reliable condition.

2.2 Rate Study Objectives

In 2025, the SCWD retained BWA to develop a cost of service-based water rate study. The SCWD has historically adopted rate increases to keep revenues in line with the escalating costs of providing service. Key goals and objectives of this study include developing water rates that:

- Recover the costs of providing service, including operating, capital, and debt funding needs;
- Are proportionate, fair, and equitable to all customers;
- Are easy to understand and implement;
- Comply with the substantive and procedural legal requirements, especially the California Constitution, Article 13D, Section 6 (which was adopted by the voters as Proposition 218 in 1996);
- Support the long-term operational and financial stability of the SCWD.

2.3 Rate-Study Process

The general process used for this cost-of-service rate study is summarized in the following diagram.

Figure 2: Cost-of-Service Rate Study Process



Key elements of the study include:

- 1) **Project Initiation and Data Collection:** Review financial policies, collect financial and other relevant data, and review rate structures;
- 2) **Demand Analysis:** Analyze past water demands and customer characteristics and forecast future demands; and

- 3) **Rate Revenue Requirements:** Develop financial projections to evaluate annual revenue requirements from rates and the overall level of rate increases needed to fund the SCWD's 5-year Capital Investment Program, projected debt service obligations, operating cost inflation, and prudent reserve targets necessary to support long-term financial stability; and
- 4) **Cost Allocation:** Group the SCWD's costs in terms of the function they serve as a basis to proportionally allocate the revenue requirement from rates; and
- 5) **Rate Design:** Develop rate structures that proportionately recover costs between customer classes (i.e., residential and commercial), as well as from customers within their designated customer class; and
- 6) **Prop 218 Process:** Ensure compliance with the substantive and procedural requirements of Proposition 218.

2.4 Constitutional Requirements for Rates

The water rates proposed in this report are designed to comply with key articles of the California Constitution, Article 13D, as explained below.

2.4.1 Article 13D, Section 6

Proposition 218 was adopted by California voters in 1996 and added Articles 13C and 13D to the California Constitution. Article 13D, Section 6 governs property-related charges, which the California Supreme Court has ruled includes rates imposed for water delivered through pipes connected to property. Article 13D, Section 6 establishes both a) procedural requirements for imposing or increasing property-related charges, and b) substantive requirements for those charges. Article 13D requires voter approval for new or increased property-related charges but exempts rates for water, wastewater, and garbage service from this voting requirement if rates are adopted after a noticed protest hearing and meet the substantive requirements. This report recommends water rates designed to comply with the substantive requirements of Proposition 218.

The substantive requirements of Article 13D, Section 6 require property-related charges, such as the SCWD's water rates, to meet the following conditions:

- 1) Revenues derived from the fee or charge shall not exceed the costs required to provide the property-related service.
- 2) Revenues derived from the fee or charge shall not be used for any purpose other than that for which the fee or charge was imposed.
- 3) The amount of a fee or charge imposed upon any parcel or person as an incident of property ownership shall not exceed the proportional cost of the service attributable to the parcel.
- 4) No fee or charge may be imposed for a service unless that service is actually used by, or immediately available to the property in question.

- 5) No fee or charge may be imposed for general governmental services, such as police or fire services, where the service is available to the public at large in substantially the same manner as it is to property owners.

2.5 Article 10, Section 2

The SCWD's water rates are structured to promote the efficient and beneficial use of water, consistent with California's constitutional mandate to prevent waste and unreasonable use. Tiered volumetric rates, with breakpoints that reflect varying levels of water use, are a key tool for achieving this goal. By charging more for higher levels of use, the SCWD's rate structure encourages conservation by ensuring that customers who place greater demands on the water system pay the higher proportionate share of costs associated with serving those demands.

Article 10, Section 2 of the California Constitution states 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.

2.6 Statute of Limitations

Pursuant to California Government Code 53759, there is a 120-day statute of limitations for challenging any new, increased, or extended fees. This statute of limitations applies to the water rates proposed in this rate study and included in the Proposition 218 Notice.

2.7 Exhaustion of Administrative Remedies

Pursuant to California Government Code 53759.1, the SCWD has elected to impose an exhaustion of administrative remedies requirement for any person seeking to pursue judicial action or proceeding alleging noncompliance with Article 13D of the California Constitution for any new, increased, or extended fee. Additional details on the exhaustion of administrative remedies requirement are included in SCWD's Proposition 218 Notice to customers.

3 WATER DEMAND AND CUSTOMER CHARACTERISTICS

3.1 Metered Water Demand Projection

A three-year average of monthly water demand data from FY 2023 through FY 2025 was used as the basis for projecting customer demands in each customer class and rate tier. The three-year average was used to smooth year-to-year variability in demand and reflect current conservation demand patterns, as customers have become increasingly aware of the need to conserve water and as water has become more costly. The following table shows the projected annual water demand by customer class.

Table 3: Projected Annual Water Demand by Customer Class (CCF)

Customer Class	Demand (CCF)	Demand (%)
Residential	1,888,299	63.96%
Commercial	780,972	26.45%
UCSC	211,959	7.18%
Landscape Irrigation	67,980	2.30%
North Coast Agriculture	3,319	0.11%
Total	2,952,529	100%

3.2 Water and Private Fire Services

Each connection to the SCWD's water system (homes, business, etc.) allowing a property to receive water or private fire service from SCWD is considered one customer, or service. The following table shows the water and fire service connections by meter and service size.

Table 4: Count of Services by Meter Size

Water Meter/ Fire Service Size	Water Services	Fire Services	Total Services
5/8"	21,510	-	21,510
3/4"	850	7	857
1"	1,342	3	1,345
1.5"	461	2	463
2"	366	2,576	2,942
3"	45	3	48
4"	16	382	398
6"	13	252	265
8"	4	68	72
10"	2	10	12
Total	24,609	3,303	27,912

3.2.1 Water Meter Equivalent Units

A significant portion of the costs incurred to operate the water system are fixed (maintaining pipes, treatment facilities, staff, etc.). Some of the fixed costs, such as customer service costs, are reasonably recovered on a per-customer basis. However, other costs depend on how much capacity SCWD must reserve for each customer. The size of a customer's meter reflects the portion of the water system's capacity needed to service the customer, as a larger meter allows the customer to draw more water over a given period of time.

Fixed charges recovering capacity costs for each meter size are based on the capacity of each meter size relative to the capacity of the smallest meter size in the SCWD's system. In this study, the relative capacity of a meter size, referred to as a meter equivalent ratio (MEU), is calculated by dividing the maximum safe flow in gallons per minute (GPM) of a given meter size by the maximum safe flow GPM of a 5/8" meter. For example, a 5/8" meter has a maximum safe flow of 20 GPM, and a 1" meter has a maximum safe flow of 50 GPM; therefore, the meter equivalent ratio of a 1" meter is 2.5 MEUs. The sum of all MEUs reflects the total capacity demand on the SCWD's system.

The following table contains the number of water services at each meter size and calculations of meter equivalent units. Total meter equivalent units for each meter size are derived by multiplying the meter equivalent units by the number of services.

Table 5: Water Meter Equivalent Units

Meter Size	Water Services	Maximum Safe Capacity (GPM)	Meter Equivalent Units	Total Meter Equivalent Units
5/8"	21,510	20	1.00	21,510
3/4"	850	30	1.50	1,275
1"	1,342	50	2.50	3,355
1.5"	461	100	5.00	2,305
2"	366	160	8.00	2,928
3"	45	350	17.50	788
4"	16	630	31.50	504
6"	13	1,300	65.00	845
8"	4	2,800	140.00	560
10"	2	4,200	210.00	420
Total	24,609			34,490

3.2.2 Fire Service Equivalent Units

Similar to water meter equivalent units, private fire services are also converted to fire service equivalent units (FEU) based on fire service flow capacities. The fire service equivalent units are determined using the Hazen-Williams equation for flow through pressure conduits equivalent to a 2" fire service (the most common fire service size). The fire service equivalent units are

calculated by multiplying the diameter of the fire service (divided by 2") raised to the power of 2.63.

Table 6: Fire Service Equivalent Units

Fire Service Size	Fire Services	Fire Equivalent Units	Total Fire Equivalent Units
3/4"	7	0.08	0.5
1"	3	0.16	0.5
1.5"	2	0.47	0.9
2"	2,576	1.00	2,576.0
3"	3	2.90	8.7
4"	382	6.19	2,364.7
6"	252	17.98	4,531.4
8"	68	38.32	2,605.7
10"	10	68.91	689.1
Total	3,303		12,778

3.3 Meter Cost Units

Meter Cost Unit (MCU) ratios are used to reflect the costs associated with servicing, maintaining, and purchasing meters of varied sizes and are not a measure of equivalent capacity like MEUs and FEUs. Fire services have small meters to indicate if there is water flowing through the fire service line while not impeding flow. The fire meter sizes, not the fire service sizes, are used to calculate MCUs. The MCU ratios used in this study are summarized in the following table.

Table 7: Water Meter Cost Units

Meter Size	Water Services	Fire Services	Meter Cost Units	Water Meter Cost Units	Fire Meter Cost Units	Total Meter Cost Units
5/8"	21,510	3,283	1.00	21,510	3,283	24,793
3/4"	850	18	1.10	935	20	955
1"	1,342	1	1.40	1,879	1	1,880
1.5"	461	-	1.80	830	-	830
2"	366	-	2.90	1,061	-	1,061
3"	45	-	11.00	495	-	495
4"	16	-	14.00	224	-	224
6"	13	-	21.00	273	-	273
8"	4	-	29.00	116	-	116
10"	2	1	38.00	76	38	114
Total	24,609	3,303		27,399	3,342	30,741

4 FINANCIAL PLAN AND REVENUE REQUIREMENT

4.1 Water Financial Overview

The City of Santa Cruz Water Department operates as a self-supporting enterprise fund that relies primarily on revenues from water rates to fund the cost of providing service. Water rate revenues account for the majority of the projected total annual revenue, with the remaining revenues coming from interest earnings, system development charges (SDCs) from new or upsized connections, and other miscellaneous revenues. As such, water rates must be set at adequate levels to fund the costs of operating and maintaining the water system, meet debt obligations and financial metrics, and fund necessary capital improvements to keep the water system in good operating condition.

Working closely with SCWD staff, BWA developed long-term cash-flow projections to determine the water utility's annual revenue requirements and to project required water rate revenue increases. The financial projections incorporate the latest information available from the SCWD's budget, annual reports, capital spending projections, and metered water demand data as well as a number of reasonable assumptions developed with input from the SCWD.

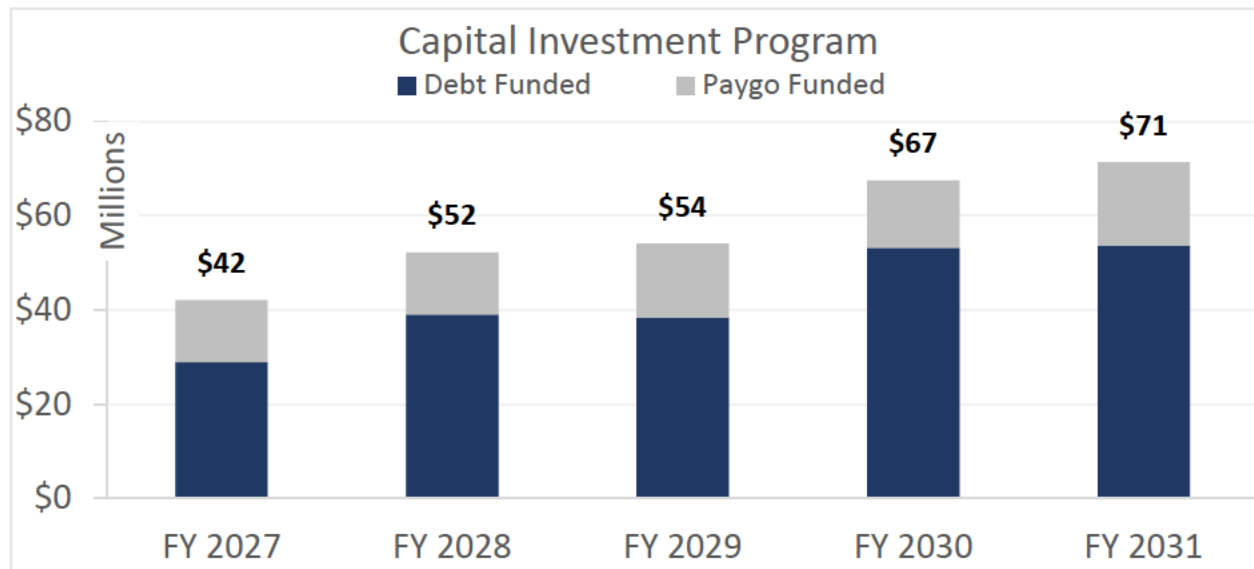
4.2 Rate Increase Drivers

The SCWD is facing a number of manageable financial challenges that will drive the need for rate increases in upcoming years. Key drivers of future rate increases are summarized below.

Capital Investment Program

The SCWD's water system requires substantial ongoing investment to maintain safe and dependable service and ensure reliable water supplies in the future. As part of a broader, multi-decade capital commitment of \$1 billion spanning 15 years, the SCWD's current 5-year Water CIP totals approximately \$287.1 million through FY 2031. Key projects include the Facilities Improvement Project (FIP) and the Newell Creek Pipeline replacement (NCP). The FIP involves improvements to the Graham Hill Water Treatment Plant; a \$180 million investment anticipated to be financed through a combination of WIFIA and low-interest SRF loans. Approximately \$213.0 million of the CIP is anticipated to be debt funded, with the remaining amount funded on a pay-as-you-go (PAYGO) basis. Projected capital spending is shown in the following figure and in detail in Appendix C.

Figure 3: Projected 5-Year Water Capital Investment Program



Debt Service Coverage

Projected debt service is expected to reach approximately \$21.7 million annually by FY 2031, driven by new debt issuances estimated to be \$213.0 million. The SCWD’s policy is to maintain a minimum debt service coverage ratio of 1.5x annual debt service. This ratio is a financial metric that helps ensure the SCWD can meet its debt obligations and continue accessing favorable financing terms to support the water system’s long-term reliability. The SCWD’s existing debt covenants require that the SCWD maintain a debt service coverage of at least 1.2x annual debt service. The proposed rate increases are designed to ensure the SCWD maintains sufficient revenues to meet its debt service coverage obligations throughout the five-year study period.

Ongoing Cost Inflation

The SCWD faces annual cost inflation due to increases in a range of expenses including staffing, utilities, insurance, supplies, and other operating expenses. Annual rate increases are needed to keep revenues aligned with cost inflation and prevent rates from falling below the cost of providing service. For the purpose of this study, average annual operating cost inflation is projected at 5.0% per year. The projected inflation is intended to be slightly conservative, to ensure revenues are sufficient while not unrealistically driving larger rate increases. While future inflation cannot be known with certainty, the inflation projection is within the range of inflation volatility over the last five years.

Lower-Than-Projected Water Revenues

Water sales revenues have fallen below projected levels in recent years, driven by factors such as wetter-than-normal weather, lingering effects of COVID-19 on demand patterns, and the continued success of customer conservation efforts. While conservation supports the SCWD’s

long-term water supply goals, it also creates revenue variability under a rate structure that currently recovers about 90% of rate revenue through volumetric charges. A large share of the SCWD's ongoing costs, including staffing, debt service, and infrastructure maintenance, do not vary with demand and are considered fixed costs. Due to the large amount of fixed costs, the SCWD's expenses are mostly unchanged when water demands decline, creating a revenue deficit. The proposed rate structure addresses this by increasing the share of revenue recovered through fixed charges, improving revenue stability going forward.

4.3 Financial Plan Assumptions

Financial plan assumptions are based on input from SCWD staff, historical escalations, and conservative projections for future escalations to reasonably ensure that the rates adopted by the SCWD will provide sufficient revenues to meet its revenue requirements.

REVENUE ASSUMPTIONS

- Proposed rates are projected to be effective January 1, 2027, for the next five years, with rate adjustments planned to become effective on January 1 of each of the following years through FY 2031.
- Projected water rate revenues are based on the three-year average volume of water sales from FY 2023 through FY 2025 and recommended water rates derived in this study. Water demand is projected to remain stable over the study period, as water conservation efforts and water use efficiency have offset modest population growth within the SCWD's substantially built-out service area.
- System Development Charges (SDCs) are one-time fees charged to new or upsized connections to recover the cost of capacity-related infrastructure. SDCs are projected at approximately \$1 million annually over the study period, based on recent collection trends. SDC revenues offset a portion of capital costs but are not included in the water revenue requirement. SDC revenues are projected conservatively low because they are variable, susceptible to economic downturns, and not used for operating costs. After the rate study, the SCWD will be performing a capacity charge study to update its System Development Charges.
- Interest earnings are projected based on the annual beginning fund balance multiplied by the projected interest rate. The interest rate projections are based on recent and anticipated interest rates.

EXPENSE ASSUMPTIONS

- Operating and maintenance expenses are based on the SCWD's most recent adopted budget for FY 2027 and are projected to increase at an average annual inflation rate of 5.0% per year over the five-year study period.
- Capital investment assumptions are based on the SCWD's 5-year Water Capital Investment Program, which totals approximately \$287.1 million through FY 2031. Approximately \$213.0 million is anticipated to be debt funded, with the remaining amount funded on a pay-as-you-go (PAYGO) basis. A key project driving capital expenditures and future debt service is the Graham Hill Water Treatment Plant upgrade, anticipated to be financed through a combination of WIFIA and low-interest SRF loans, and an additional debt issuance projected in FY 2030.
- Debt service projections are based on outstanding debt schedules and projected issuance of new debt to fund a portion of the SCWD's Water Capital Investment Program.

4.4 Cash Flow Projections and Recommended Rate Revenue Increases

Long-term cash flow projections were developed based on the key financial drivers and the assumptions described in Sections 4.2 and 4.3. The projections were used to determine the water utility's annual revenue requirements over the five-year study period. Detailed financial projections, metered water demand data, capital funding projections, and other financial assumptions developed with input from SCWD staff are shown in Appendices A and B. Without rate increases, SCWD's projected revenues would be insufficient to cover rising operating costs, debt service obligations, and planned capital investments.

The proposed rate increases are designed to fund the SCWD's cost of providing service, maintain balanced budgets, meet the SCWD's 1.5x debt service coverage requirement, and maintain reserve fund balances at or above minimum targets throughout the study period. The projections indicate the need for rate revenue increases in each of the next five fiscal years, beginning January 1, 2027. Bill impacts will vary by customer class, meter size, and water use, reflecting the updated cost of service analysis and the proposed modifications to the rate structure.

Detailed, long-term, cash-flow projections described above are shown in the following table.

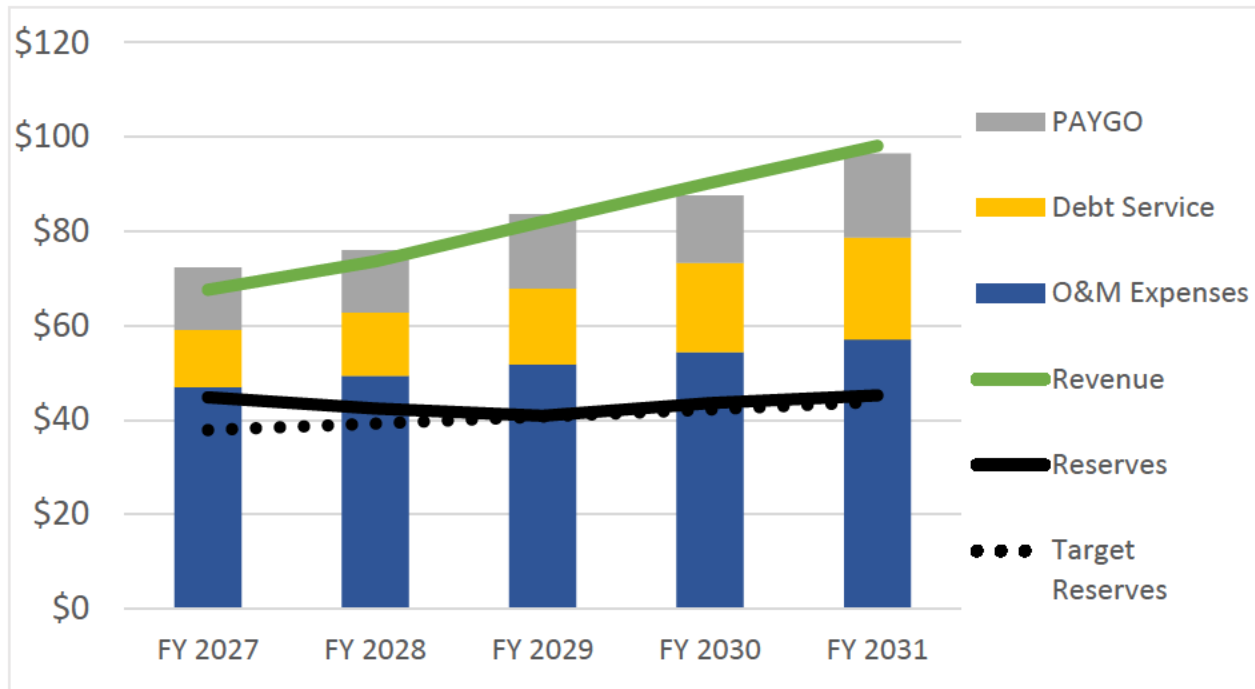
Table 8: Detailed Water Financial Projections

Projected Long Range Financial Plan

REVENUES	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031
	<i>Projected</i>	<i>Projected</i>	<i>Projected</i>	<i>Projected</i>	<i>Projected</i>
Revenues from Rates and Charges					
Rate Revenue	\$62,582,177	\$68,854,152	\$77,116,650	\$85,251,129	\$92,923,731
System Development Charges	\$1,300,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000
Other Revenue	<u>\$3,714,933</u>	<u>\$3,790,777</u>	<u>\$3,896,613</u>	<u>\$4,016,572</u>	<u>\$4,185,666</u>
TOTAL REVENUES	\$67,597,110	\$73,644,929	\$82,013,263	\$90,267,701	\$98,109,398
EXPENSES	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031
	<i>Projected</i>	<i>Projected</i>	<i>Projected</i>	<i>Projected</i>	<i>Projected</i>
Operating Expenses					
Administration	\$10,362,035	\$10,880,137	\$11,424,144	\$11,995,351	\$12,595,118
Engineering	\$4,988,705	\$5,238,140	\$5,500,047	\$5,775,050	\$6,063,802
Customer Services	\$3,820,756	\$4,011,794	\$4,212,383	\$4,423,003	\$4,644,153
Customer Assistance	\$395,934	\$415,731	\$436,517	\$458,343	\$481,260
Resources	\$3,246,452	\$3,408,775	\$3,579,213	\$3,758,174	\$3,946,083
Production	\$10,979,720	\$11,528,706	\$12,105,142	\$12,710,399	\$13,345,919
Quality	\$2,726,894	\$2,863,239	\$3,006,401	\$3,156,721	\$3,314,557
Distribution	\$6,582,216	\$6,911,327	\$7,256,893	\$7,619,738	\$8,000,725
Recreation	\$1,703,649	\$1,788,831	\$1,878,273	\$1,972,187	\$2,070,796
Operations	\$732,865	\$769,508	\$807,984	\$848,383	\$890,802
Meter Operations	<u>\$1,419,057</u>	<u>\$1,490,010</u>	<u>\$1,564,510</u>	<u>\$1,642,736</u>	<u>\$1,724,873</u>
Subtotal Operating Expenses	\$46,958,283	\$49,306,198	\$51,771,507	\$54,360,083	\$57,078,087
Non-Operating Expenses					
Existing Debt Service	\$12,155,531	\$13,470,781	\$16,093,928	\$17,186,675	\$18,252,070
New Debt Service	\$0	\$0	\$0	\$1,708,251	\$3,416,501
Paygo Funded Capital	<u>\$13,192,999</u>	<u>\$13,193,255</u>	<u>\$15,706,261</u>	<u>\$14,335,222</u>	<u>\$17,711,634</u>
Subtotal Non-Operating Expense	\$25,348,530	\$26,664,036	\$31,800,189	\$33,230,148	\$39,380,205
TOTAL EXPENSES	\$72,306,814	\$75,970,233	\$83,571,696	\$87,590,230	\$96,458,292
NET CASH CHANGE	(\$4,709,704)	(\$2,325,304)	(\$1,558,433)	\$2,677,471	\$1,651,106
RESERVE BALANCES	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031
	<i>Projected</i>	<i>Projected</i>	<i>Projected</i>	<i>Projected</i>	<i>Projected</i>
Total Reserve Balances					
Beginning Balance	\$49,470,291	\$44,760,587	\$42,435,283	\$40,876,850	\$43,554,321
Ending Balance	\$44,760,587	\$42,435,283	\$40,876,850	\$43,554,321	\$45,205,427
Target Reserve Fund Balances					
Operations and Maintenance	\$11,578,755	\$12,157,693	\$12,765,577	\$13,403,856	\$14,074,049
Rate Stabilization	\$10,000,000	\$10,000,000	\$10,000,000	\$10,000,000	\$10,000,000
90-Day Operating	\$11,578,755	\$12,157,693	\$12,765,577	\$13,403,856	\$14,074,049
Emergency	<u>\$4,695,828</u>	<u>\$4,930,620</u>	<u>\$5,177,151</u>	<u>\$5,436,008</u>	<u>\$5,707,809</u>
Total Reserve Target	\$37,853,338	\$39,246,005	\$40,708,305	\$42,243,720	\$43,855,906

The following figure visually depicts cash flows from revenues with proposed increases alongside total annual expenses over the five-year study period. Projected expenses are summarized into key categories. The figure also compares fund reserves at the end of each fiscal year to annual fund reserve targets.

Figure 4: Projected Revenues and Expenses (\$ Millions)



5 COST OF SERVICE ANALYSIS

The American Water Works Association (AWWA) is the largest association of water professionals in the world. AWWA publishes the M1 Manual, titled "Principles of Water Rates, Fees, and Charges," which is widely recognized as the preeminent resource for setting water rates. The manual is consistently revised by leading professionals in the industry to incorporate the latest industry's best practices and meet regulatory requirements.

The AWWA M1 Manual outlines two methods for deriving water rates, the base-extra capacity method, and the commodity demand method. Both methods recognize that the cost of serving a customer depends not only on the total volume of water used, but also on peak-demand requirements.

Similar to the previous cost of service study, the proposed rates presented within this rate study are developed using a base-extra capacity method. The base-extra capacity method was chosen because it ensures that customers with higher levels of water use, who place more demand on the water system, pay a proportionate share of the costs associated with providing that additional capacity. It also encourages conservation by ensuring that those who use more water pay for the additional infrastructure, maintenance, and other costs required to meet their annual needs over the long term. By allocating the incremental costs of providing extra-capacity in the system to those customers whose use necessitates it, the base-extra capacity method ensures that rates for average and below-average users do not include costs for capital investments and water supplies that they do not require. This method also provides an incentive for customers to conserve water, as they can reduce their bills by reducing their usage, while ensuring that the water system can continue to provide reliable service to all customers.

In using the base-extra capacity method, costs are typically separated into four components: (1) Base (average demand), (2) Extra Capacity (peak demand), (3) Customer (fixed costs), and (4) Fire. As noted in the AWWA M1 Manual, in detailed rate studies such as this one, some of these elements may be broken down further into two or more components.

In this study, Extra Capacity was split into four components: (1) Base (demand up to minimum month demand, distinct from the base-extra component reflecting average demand noted immediately above), (2) Base to Average (minimum month to average month demand), (3) Average to Peak (average month to the peak demand threshold), and (4) Peak (demand greater than the peak demand threshold). The threshold for Peak demand for each customer class is calculated by multiplying the average month demand for that class by the system peaking factor. The system peaking factor is calculated by dividing the whole system's maximum month demand by the system's average month demand. These Extra Capacity subcomponents are used to proportionally allocate the incremental costs of providing extra capacity in the system equitably

to those users who benefit from that capacity and whose use necessitates it. This cost allocation method ensures that customers with higher peak demands pay for their proportional cost of maintaining and operating the infrastructure sized to meet their demands. This is described in more detail in Section 5.1.

Based on SCWD's expenditures and system characteristics, the Customer component was separated into three components: (1) Customer, recovered on a per service connection basis regardless of meter size or water use; (2) Capacity, recovered per Meter Equivalent Unit (MEU), which reflects the relative flow capacity of each meter size compared to the baseline 5/8-inch meter; and (3) Meter Cost, recovered per Meter Cost Unit (MCU), which reflects the relative cost to service and maintain meters of different sizes. This separation of the Customer component better allocates 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. A MEU is a ratio of any given meter size relative to the baseline 5/8-inch meter, developed by comparing the potential flow capacity of each meter size with the baseline, as described in Section 3.2.

In this study, the Fire component reflects the incremental portion of system capacity necessary to serve private fire services, which provide specific properties with firefighting capacity above and beyond general firefighting infrastructure. These costs are recovered on a per fire service equivalent basis (FEU). A FEU is a ratio of any given fire service size relative to the common 2" fire service, developed by comparing the potential flow capacity of fire service with the baseline, as described in Section 3.2.2. The study does not separately identify or allocate the cost to provide general public fire protection capacity because providing such capacity is a baseline requirement no different from the environmental, water quality, or public safety regulations that apply regardless of which customers benefit most directly. Just as a water utility cannot choose to ignore drinking water standards, it cannot design and maintain a system that ignores the fire flow requirements imposed by the Fire Code and other applicable law (See Fire Code, § 507.). That capacity is therefore properly treated as a shared cost for all customers.

Table 9: Summary of Functional Cost Components

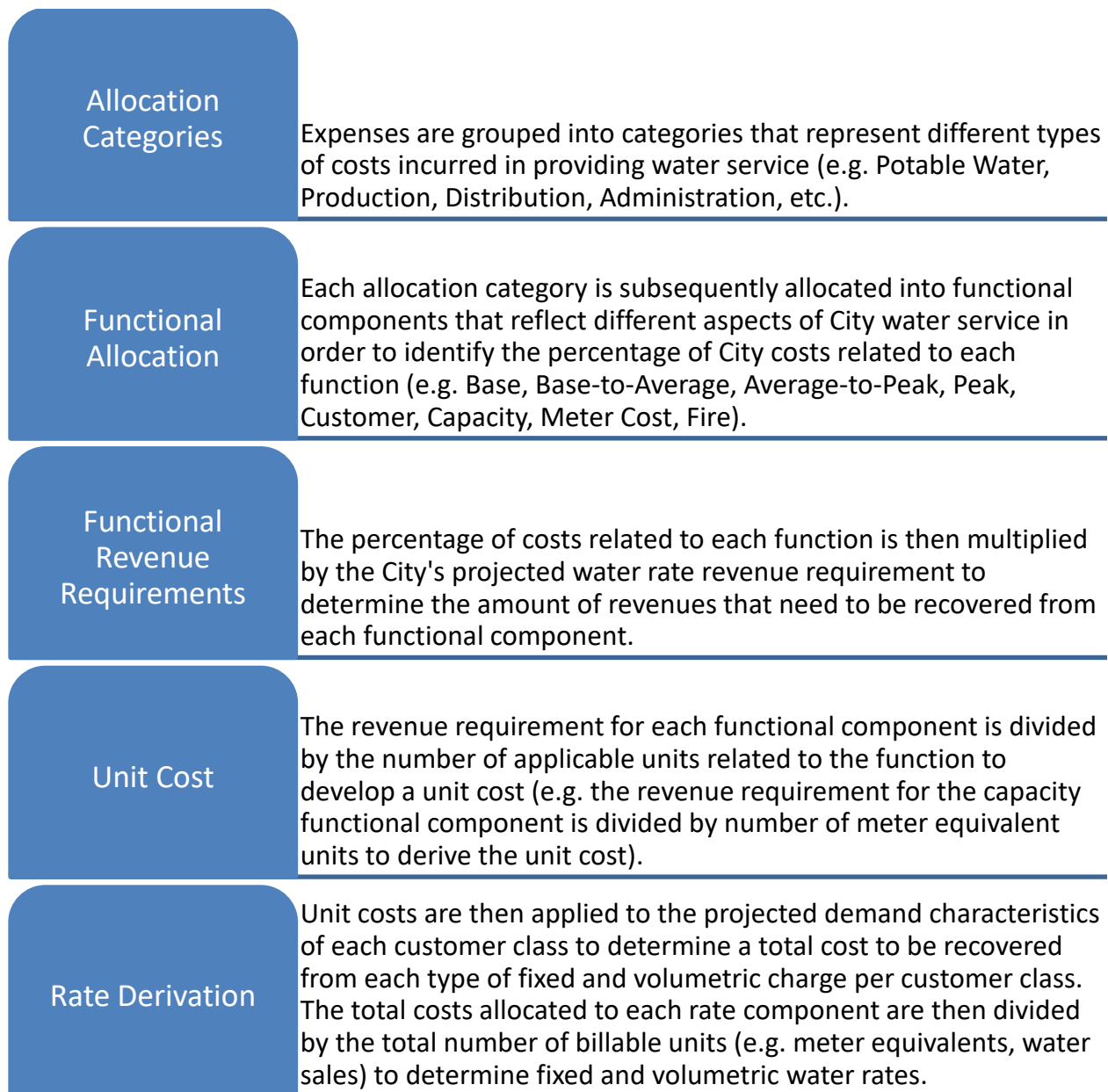
Cost Category	Functional Component	Allocation Basis	Description
Base	All Raw Water	Raw water demand	All raw water demand
	All Potable Water	Potable water demand	All potable water demand
Extra Capacity	Base	Potable demand up to minimum month	Incremental capacity up to the minimum month level of use
	Base-to-Average	Minimum month to average month demand	Incremental capacity between minimum and average use
	Average-to-Peak	Average month to the peak threshold	Incremental capacity between average use and peak threshold
	Peak	Demand above the peak threshold	Peak demand threshold = average demand x system peaking factor (system peaking factor = max month demand ÷ average month demand)
Customer	Customer	Number of services	Recovered per service, regardless of meter size or use
	Capacity	Meter Equivalent Units (MEU)	Recovered per MEU, based on meter size
	Meter	Meter Cost Units (MCU)	Recovered per MCU, based on relevant meter servicing cost
Fire	Fire	Fire Equivalent Units (FEU)	FEU is based on the ratio of a fire service flow's capacity to a 2" fire service's capacity

The tiered volumetric rates are structured to reflect the cost differences associated with serving customers at varying levels of use within a given class. The tiered rates are designed to have the rate in each tier reflect the extra capacity costs associated with the actual water demand in each tier. The tier break points used in this study are based on customer water demand data. This approach ensures that each tier break reflects a meaningful cost-of-service distinction rather than an arbitrary division of use, consistent with the requirements of Proposition 218.

The proposed rates are developed based on a detailed cost allocation that reflects the SCWD's costs of providing service, based on analysis of operations, water system design, and input from SCWD staff.

The following chart shows the general process for deriving water rates that reflect SCWD's cost of service to each customer class and volumetric tier.

Figure 5: Cost of Service Analysis Process



5.1 Extra Capacity Components

Extra Capacity Components are used to proportionally allocate the incremental costs of providing extra capacity in the system to serve those customers who utilize the extra capacity. Each Extra Capacity Component reflects a layer of capacity utilization. This cost allocation method ensures that customers with higher peak demands pay the proportional cost of maintaining and operating the infrastructure sized to meet their demands. Said differently, this method ensures that rates for users with average and below-average water use do not include costs for capital investments and system capacity that are not necessitated by their level of use.

In order to proportionally allocate costs and derive unit rates for each Extra Capacity Component, the volume of projected water demand in each Extra Capacity Component needs to be identified. This is accomplished by applying the following definitions to the projected water usage for each customer class in each month.

Extra Capacity Component Definitions

Base is the volume of water delivered in the lowest demand (minimum) month of the year. It reflects the minimum level of demand the SCWD can expect to serve continuously and forms the foundation upon which all other demand components are built. This component reflects the portion of system capacity required to serve customers with base demands.

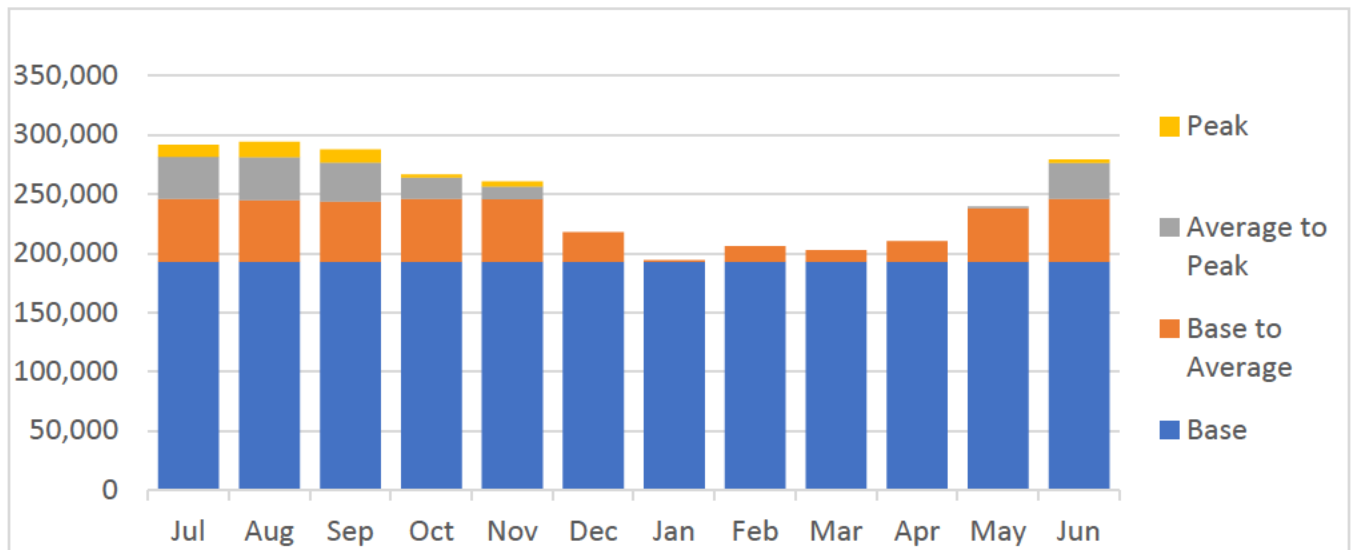
Base to Average is the volume of water delivered above the minimum month threshold up to the average monthly demand. This component captures the capacity below the system average and reflects the portion of system capacity required to serve customers with less than average demands.

Average to Peak is the projected volume of water delivered above the average monthly demand up to the Peak threshold. The Peak threshold is calculated by multiplying the average monthly demand for a customer class by the system peaking factor. As its name suggests, the system peaking factor is based on systemwide consumption, and it is calculated by dividing the projected maximum month demand of the water system by the projected average monthly demand of the water system. The Peak threshold captures how each class proportionately contributes to overall system peaking: the demand of customer classes with relatively stable consumption over the course of the year (i.e., residential) stays below the Peak threshold, while those whose consumption is relatively volatile (i.e., landscape irrigation) exceed the Peak threshold in their high demand months (See Appendix A). This component reflects the portion of system capacity required to serve customers with greater than average demands.

Peak is the projected volume of water delivered in the maximum month above the Peak threshold. This component reflects the portion of system capacity required to serve customers with peak demands.

Applying the Extra Capacity Component definitions to the projected demand for each customer class in each month results in a total volume in each Extra Capacity Component by month. The following figure shows the projected monthly water demand by Extra Capacity Component, illustrating how demand is distributed across Extra Capacity Components throughout the year.

Figure 6: Projected Monthly Demand by Extra Capacity Components (CCF)



The following table shows the thresholds for each Extra Capacity Component based on the descriptions above, the projected total use by Extra Capacity Component, and the projected maximum month utilization in each Extra Capacity Component. Maximum month utilization reflects the maximum month of each Extra Capacity Component and does not necessarily occur in the system's maximum use month. The percentages in the table below are used for cost allocation. The calculation of the monthly use in each Extra Capacity Component by customer class is shown in Appendix A.

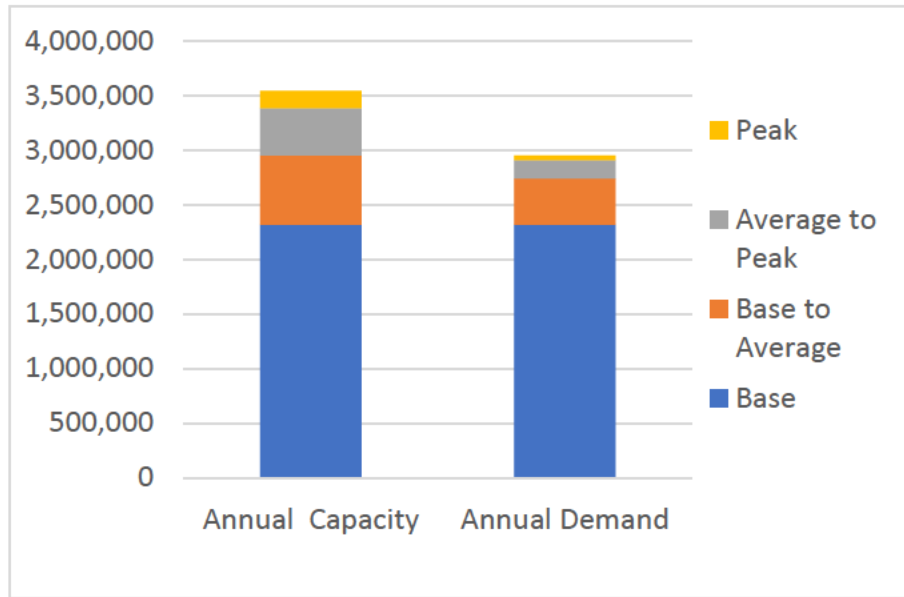
Table 10: Extra Capacity Component Demand (CCF)

Extra Capacity Component Demand	Max Month	Annual Capacity	Annual Capacity	Annual Potable	Annual Potable
Base	192,913	2,314,956	65.4%	2,314,956	78.5%
Base to Average	52,855	634,254	17.9%	424,839	14.4%
Average to Peak	36,310	435,721	12.3%	165,498	5.6%
Peak	<u>13,088</u>	<u>157,060</u>	<u>4.4%</u>	<u>43,917</u>	<u>1.5%</u>
Total	295,166	3,541,991	100%	2,949,210	100%

Extra capacity costs are allocated based on the maximum month utilization of each component. The maximum month utilization reflects the total utilized capacity of the water system. The total utilized capacity is available every month of the year. Therefore, the annual capacity is the maximum month utilization multiplied by twelve (months). For purposes of cost allocation, utilized capacity is used in lieu of actual system capacity because the cost of the entire system must be recovered from the existing customers. Additionally, this allows the cost of each Extra Capacity Component to be recovered proportionally, relative to the Base component cost. Actual annual water demand is lower than annual capacity because demand varies throughout the year.

The following figure compares the annual capacity of each Extra Capacity Component to the projected annual water use in each Extra Capacity Component, illustrating the annual volume of water demand in each component relative to the annual capacity of each component.

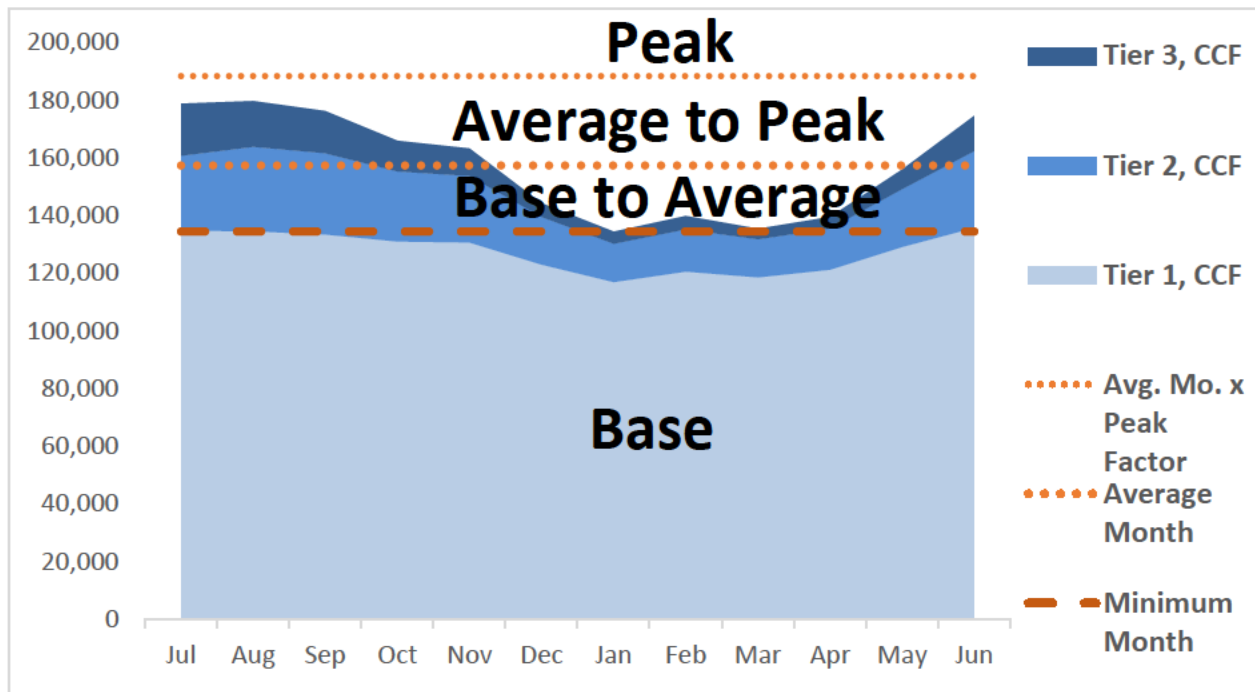
Figure 7: Extra Capacity Component Annual Capacity and Demand (CCF)



Extra Capacity Component Utilization by Tier

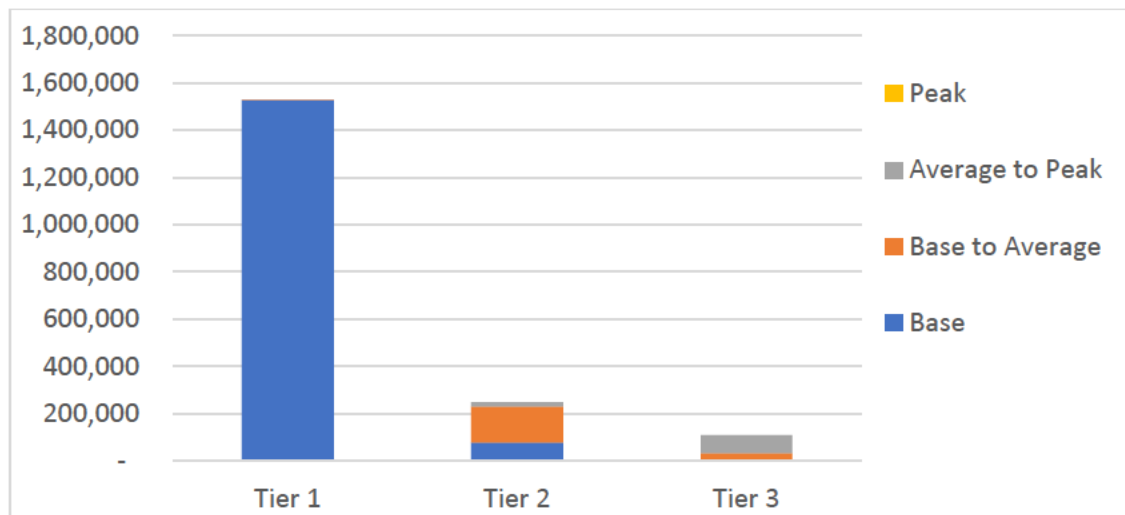
In order to develop tiered rates that reflect the underlying proportional costs of service, the volume of water by Extra Capacity Component in each tier must be identified. This ensures that the costs allocated to each tier reflect the blended cost from the volume of each component used in each tier. The projected volume of use is based on the three-year average of monthly usage from FY 2023-2025. The following figures show the water use components that comprise each tier for the residential customer class. It should be noted that residential demand is relatively flat and the class has no Peak water use. The calculation of the monthly use in each Extra Capacity Component by customer class and tier is shown in Appendix A.

Figure 8: Residential Tier Demand by Extra Capacity Component



The following figure shows the total volume of each Extra Capacity Component by residential tier.

Figure 9: Extra Capacity Component by Residential Tier (CCF)



5.2 Offsetting Revenue and Expense Allocation Components

The first step in the cost-of-service analysis is to develop allocation components where revenues and expenses related to the same purpose are grouped together. BWA worked with SCWD staff to analyze SCWD's budget on a line-by-line basis and to assign each expenditure and revenue to the appropriate allocation component. The following contains descriptions of the allocation components and an explanation of how they are allocated to functional components:

- **General** expenses and revenues are not tied to a specific function, such as Customer, Capacity, or All Potable Demand, but are more reasonably recovered based on result of the amounts directly tied to functions.
- **Administration** expenses and revenues are related to citywide overhead costs and SCWD's own administrative functions. These amounts are allocated based on meter capacity and total water demand.
- **Customer Services** costs are related to the SCWD's billing and customer service activities. The magnitude of the cost is driven by the number of services, not water use or system capacity. Customer Services costs are allocated on a per-service basis, regardless of the size of the meter serving a property or actual water use.
- **Meter Operations** expenses are related to servicing, maintenance, and replacement of meters. These costs are recovered through Meter Cost Unit (MCU) allocations reflecting the relative cost of service for meters of different sizes, as described in Section 3.2.2.
- **Production** expenses are related to the raw water system and water treatment operations. Raw Water operation costs are recovered on a per unit, volumetric basis while potable operating costs are allocated to Extra Capacity Components based on peak month demands.
- **Distribution** expenses are related to maintaining and operating the SCWD's potable water distribution system. These costs are recovered through Extra Capacity Components based on peak month use.
- **All Volume** expenses are costs that are recovered across all units of water sold, both potable and raw water. These costs benefit all customers regardless of customer class.
- **Potable Water** costs are specifically related to the delivery of potable water, such as the cost of chemicals, and are recovered per unit of potable water sold.
- **Engineering, Pay-As-You-Go (PAYGO), Existing Debt, and New Debt** expenses are related to water system infrastructure and are allocated based on the depreciated replacement value of the water system's assets. The allocation of assets is shown in Appendix A.

The following table shows the five-year projected expenses and offsetting revenues for FY 2027 in each allocation category. The five-year average amounts are used to determine the total functional allocation amount and then identify each function's portion, or percentage share, of that amount. The percentage share of each function will then be applied to the existing rate revenue requirement to identify the revenue requirement for each function. This approach

ensures the cost-of-service analysis remains revenue-neutral relative to existing rates. The proposed rate increases are calculated separately in Section 4.4 and are applied to the cost-of-service rates in the rate derivation in Section 6.

The allocation amount for each allocation category is the net of expenses less offsetting revenues. Offsetting revenues consist of interest revenue, special read fees, system development fees, and other non-rate revenues that offset specific allocation categories. Detailed line-item revenues and expenses are shown in Appendix B and functional allocations are shown in Appendix D.

Table 11: Allocation Categories and Amounts for Functional Allocation

Allocation Category	Allocation Basis	<i>Projected 5-Yr. Avg. Amount</i>		
		Allocation Expenses	Offsetting Revenues	Allocation Amount
General	Non-Functional	\$437,557	\$1,215,198	-\$777,641
Administration	Capacity & All Demand	\$12,261,265	\$0	\$12,261,265
Customer Services	Customer Service	\$4,222,418	\$2,334,391	\$1,888,026
Meters	Meters	\$1,568,237	\$0	\$1,568,237
Production	Potable Peak + Raw	\$8,782,129	\$0	\$8,782,129
Distribution	Potable Peak	\$7,274,180	\$0	\$7,274,180
All Volume	All Demand	\$8,122,790	\$371,322	\$7,751,467
Potable Water	Potable Demand	\$3,713,107	\$0	\$3,713,107
Engineering	Infrastructure	\$5,513,149	\$0	\$5,513,149
Paygo	Infrastructure	\$14,827,874	\$1,060,000	\$13,767,874
Existing Debt	Infrastructure	\$15,431,797	\$0	\$15,431,797
New Debt	Infrastructure	\$1,024,950	\$0	\$1,024,950
Functional Allocation (5-yr. Avg. \$)		\$83,179,453	\$4,980,912	\$78,198,541
Functional Allocation %				

Functional Allocation of Existing Rate Revenue Requirement

Functional Allocation %

Rate Revenue Requirement at Existing Rates	\$61,013,326
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5.3 Allocations Between Fixed Capacity and Variable Water Usage Functions

Water utilities have employed a wide range of approaches or perspectives for allocating and recovering their costs for providing service, often through a combination of fixed and variable charges. The percentage of revenues derived from the fixed and variable charges should be proportional to each system's expenditures and must not exceed the cost of providing service.

Many of SCWD's costs are fixed costs that do not vary by the volume of water delivered, such as staff costs and the costs for maintaining infrastructure. Some of these costs are related to the number of customers, but the majority of the fixed costs are related to the total capacity of the water system. Fixed costs related to system capacity can reasonably be apportioned by meter size or water use. For example, the fixed cost of salaries related to water production can reasonably be recovered from usage-based charges, since these costs are incurred to meet customer demand. Alternatively, these costs can reasonably be recovered from a fixed charge based on meter size, which reflects the customer's proportional share of water production capacity. Likewise, debt service payments may be fixed annual costs, but it is reasonable to recover some of these costs from usage-based rates as the costs are incurred to fund infrastructure that will improve the water delivery system. While there is no single correct approach, BWA believes that costs should be allocated within a reasonable range that reflects both a) underlying cost causation, to the extent such causation can reasonably be determined or estimated, and b) the policy preferences of the agency in cases where a range of reasonable approaches can be justified.

5.4 Functional Cost Allocation

The next step in the cost-of-service analysis is to allocate the net expenses (expenses less offsetting revenues) in each allocation category to SCWD's functions. Each function uniquely drives system costs and is most reasonably recovered by a specific allocation unit. An example of this is costs allocated to the customer function are most reasonably recovered on a per customer basis. Just as there is no single correct approach for fixed and variable cost allocation, there is no single correct approach for functional cost allocation. Functional cost allocations should be within a reasonable range that reflects the considerations described in the previous section. This process is intended to proportionately allocate costs to each functional component to determine the revenue requirement for each function. The allocations to each function were based on input from SCWD staff and BWA analysis of customer and metered water demand data. A description of the allocations for each allocation category is included in Section 5.2. Supporting calculations for the allocations are included in Appendix D.

SCWD's costs are allocated to ten functional components, each recovered through either a fixed or variable rate structure. The four fixed cost functions: Customer, Capacity, Meter, and Fire, recover costs through fixed charges. The six variable cost functions: Base, Base-to-Average, Average-to-Peak, Peak, All Potable and All Raw are recovered through volumetric rates.

5.5 Allocation to Fixed Cost Functional Components

The following section describes the functions where the revenue requirement is recovered from fixed units.

Fixed Cost Functions

- **Customer** function costs are related to the number of services and are reasonably recovered on a per service basis regardless of meter size or water use. This function includes both water and private fire services since both are billed a flat customer charge unrelated to meter size.
- **Capacity** function costs are related to the size of the SCWD’s water system and are reasonably recovered per meter equivalent unit (MEU). MEU ratios are based on standard AWWA capacity guidelines reflecting the maximum safe flow of each meter size relative to the baseline 5/8-inch meter, as described in Section 3.2. This function benefits all water services.
- **Meter** function costs are related to the cost of servicing, maintaining, and replacing meters of different sizes and are reasonably recovered per Meter Cost Unit (MCU). MCU ratios are specific to SCWD’s meter inventory and operations and are periodically verified with SCWD operations staff, as described in Section 3.2.2. This function benefits all water services.
- **Fire** function costs reflect the portion of the SCWD’s water system benefiting private fire services and are reasonably recovered per fire service equivalent unit (FEU). This function benefits only private fire services.

The following table shows a breakdown of the water utility’s allocation to fixed cost functions as described in Section 5.2.

Table 12: Allocation to Fixed Cost Functional Components

		<u>Projected 5-Yr. Avg. Amount</u>				
Allocation Category	Allocation Basis	Allocation Amount	Customer	Capacity	Meter	Fire
General	Non-Functional	-\$777,641	100.00%	50.00%	100.00%	
Administration	Capacity & All Demand	\$12,261,265				
Customer Services	Customer Service	\$1,888,026				
Meters	Meters	\$1,568,237				
Production	Potable Peak + Raw	\$8,782,129				
Distribution	Potable Peak	\$7,274,180				
All Volume	All Demand	\$7,751,467				
Potable Water	Potable Demand	\$3,713,107	0.01%	15.30%	1.15%	0.73%
Engineering	Infrastructure	\$5,513,149				
Paygo	Infrastructure	\$13,767,874				
Existing Debt	Infrastructure	\$15,431,797				
New Debt	Infrastructure	\$1,024,950	0.01%	15.30%	1.15%	0.73%
Functional Allocation (5-yr. Avg. \$)		\$78,198,541	\$1,893,051	\$11,597,854	\$1,979,604	\$259,375
Functional Allocation %			2.40%	14.69%	2.51%	0.33%
Functional Allocation of Existing Rate Revenue Requirement						
Functional Allocation %			2.40%	14.69%	2.51%	0.33%
Rate Revenue Requirement at Existing Rates		\$61,013,326	\$1,462,483	\$8,959,963	\$1,529,350	\$200,381

A description of the allocations for each allocation category is included in Section 5.2. Supporting calculations for the allocations are included in Appendix D. The Functional Allocation dollars are calculated by taking the sum of the products of the allocation percentages in each functional component multiplied by the allocation amounts. The Functional Allocation percentage is calculated by dividing the Functional Allocation dollars for each functional component by the total Functional Allocation dollars. The Functional Allocation percentage for each functional component is then multiplied by the total revenue requirement. The revenue requirement was identified in Section 4.4.

5.6 Fixed Cost Functional Component Unit Costs

The following table describes the allocation units used to derive the unit cost by functional component. Fixed allocation units are services and MEUs shown in Section 3.2.

Table 13: Fixed Allocation Units

Functional Component	Allocation Units	Allocation Units	Unit of Measure	Description
Customer	Number of Services Connections	27,912	#	Total number of active SCWD service connections
Water Capacity	Meter Equivalent Units	34,490	MEU	Total AWWA standard meter equivalent units for active SCWD water customers
Meter	Meter Cost Units	30,741	MCU	Total SCWD-specific meter cost units reflecting the relative cost to service meters of each size
Fire	Fire Equivalent Units	12,778	FEU	Total AWWA standard fire service equivalent units for active SCWD water customers

The following table shows the allocation units and total revenue requirement by functional component. The allocation units used for each functional component are the units related to the service provided by the functional component. The revenue requirement divided by the allocation units for each functional component provides each functional component's unit rate.

Table 14: Fixed Annual Unit Costs by Functional Component

Allocation Units	Customer	Capacity	Meter	Fire
<i>Allocation Unit of Measure</i>	<i>#</i>	<i>MEU</i>	<i>MCU</i>	<i>FEU</i>
Allocation Units	27,912	34,490	30,741	12,778
Revenue Requirement	<u>\$1,462,483</u>	<u>\$8,959,963</u>	<u>\$1,529,350</u>	<u>\$200,381</u>
Annual Unit Cost	\$52.40	\$259.79	\$49.75	\$15.68

5.7 Function Allocation to Volumetric Cost Components

The following section describes the functional components where the revenue requirement is recovered from variable CCF units (100 cubic feet or 748 gallons). The definitions of the functional components are as follows:

- **Base, Base-to-Average, Average-to-Peak, and Peak** functions reflect the Extra Capacity Components described in Section 5.1 and are allocated costs related to potable water system capacity sized to meet peak demands. Costs are allocated to the Extra Capacity Components based on the portion of use in each component during the maximum month reflecting the maximum utilization of capacity.
- **Raw Water Demand** function is allocated costs related to the North Coast Agriculture customer's portion of raw water costs and excludes costs related to providing treated water. Raw water costs are recovered per unit of water demand because the raw water system is generally not sized to meet peak demand.

- **Potable Water Demand** function is allocated costs related to the potable customer classes' portion of raw water costs and potable costs most reasonably recovered on a per unit basis such as the cost of chemicals.
- **As All Other** function is allocated costs that are related to supporting the water system as a whole and do not drive specific functional costs. The costs are allocated based on the proportional allocation of functional costs.

The following table shows a breakdown of the water utility's allocation to variable cost functional components as described in Section 5.2.

Table 15: Cost Allocation to Volumetric Extra Capacity Functions

<i>Projected 5-Yr. Avg. Amount</i>						
Allocation Category	Allocation Basis	Allocation Amount	Base	Base to Average	Average to Peak	Peak
General	Non-Functional	-\$777,641				
Administration	Capacity & All Demand	\$12,261,265				
Customer Services	Customer Service	\$1,888,026				
Meters	Meters	\$1,568,237				
Production	Potable Peak + Raw	\$8,782,129	46.35%	12.70%	8.72%	3.14%
Distribution	Potable Peak	\$7,274,180	65.36%	17.91%	12.30%	4.43%
All Volume	All Demand	\$7,751,467				
Potable Water	Potable Demand	\$3,713,107				
Engineering	Infrastructure	\$5,513,149	44.12%	12.09%	8.31%	2.99%
Paygo	Infrastructure	\$13,767,874	44.12%	12.09%	8.31%	2.99%
Existing Debt	Infrastructure	\$15,431,797	44.12%	12.09%	8.31%	2.99%
New Debt	Infrastructure	\$1,024,950	44.12%	12.09%	8.31%	2.99%
Functional Allocation (5-yr. Avg. \$)		\$78,198,541	\$24,593,555	\$6,738,167	\$4,628,994	\$1,668,574
Functional Allocation %			31.14%	8.53%	5.86%	2.11%

Functional Allocation of Existing Rate Revenue Requirement

Functional Allocation %		31.14%	8.53%	5.86%	2.11%
Rate Revenue Requirement at Existing Rates	\$61,013,326	\$18,999,837	\$5,205,595	\$3,576,146	\$1,289,062

Table 16: Cost Allocation to Volumetric Demand Functions and Non-Functional Allocation

<i>Projected 5-Yr. Avg. Amount</i>						
Allocation Category	Allocation Basis	Allocation Amount	All Raw Water	All Potable Water	Functional Allocation Total	As All Other
General	Non-Functional	-\$777,641			0.00%	100.00%
Administration	Capacity & All Demand	\$12,261,265	0.06%	49.94%	100.00%	
Customer Services	Customer Service	\$1,888,026			100.00%	
Meters	Meters	\$1,568,237			100.00%	
Production	Potable Peak + Raw	\$8,782,129	0.03%	29.06%	100.00%	
Distribution	Potable Peak	\$7,274,180			100.00%	
All Volume	All Demand	\$7,751,467	0.11%	99.89%	100.00%	
Potable Water	Potable Demand	\$3,713,107		100.00%	100.00%	
Engineering	Infrastructure	\$5,513,149	0.02%	15.28%	100.00%	
Paygo	Infrastructure	\$13,767,874	0.02%	15.28%	100.00%	
Existing Debt	Infrastructure	\$15,431,797	0.02%	15.28%	100.00%	
New Debt	Infrastructure	\$1,024,950	0.02%	15.28%	100.00%	
Functional Allocation (5-yr. Avg. \$)		\$78,198,541	\$24,625	\$25,592,383	\$78,976,182	-\$777,641
Functional Allocation %			0.03%	32.41%	100%	
Functional Allocation of Existing Rate Revenue Requirement						
Functional Allocation %			0.03%	32.41%	100%	
Rate Revenue Requirement at Existing Rates		\$61,013,326	\$19,024	\$19,771,485	\$61,013,326	

A description of the allocations for each allocation category is included in Section 5.2. Supporting calculations for the allocations are included in Appendix D. The functional allocation dollars are calculated by taking the sum of the products of the allocation percentages in each function multiplied by the allocation amounts. The functional allocation percentage is calculated by dividing the functional allocation dollars for each function by the total functional allocation dollars. The functional allocation percentage for each functional component is then multiplied by the revenue requirement. The revenue requirement was identified in Section 4.4.

5.8 Volumetric Unit Costs by Function

The following table describes the volumetric units used to derive the unit cost by function.

Table 17: Volumetric Allocation Units (FY 2027)

Functional Component	Allocation Units (CCF)	Description
Base	2,314,956	Projected minimum month water units sold by SCWD
Base to Average	424,839	Projected minimum to average month water units sold by SCWD
Average to Peak	165,498	Projected average month to peak water units sold by SCWD
Peak	43,917	Projected above-peak water units sold by SCWD
Potable Demand	2,949,210	Projected potable water units sold by SCWD
Raw Demand	3,319	Projected raw water units sold by SCWD

The following table shows the allocation units and total revenue requirement by function. The allocation units used for each function are the units related to the service provided by the function. The revenue requirement divided by the allocation units for each function provide each function's unit cost.

Table 18: Volumetric Unit Costs by Function

Functional Component	Revenue Requirement (\$)	Allocation Units (CCF)	Unit Cost (\$/CCF)
Base	\$18,999,837	2,314,956	\$8.21
Base-to-Average	\$5,205,595	424,839	\$12.25
Average-to-Peak	\$3,576,146	165,498	\$21.61
Peak	\$1,289,062	43,917	\$29.35
Potable Demand	\$19,771,485	2,949,210	\$6.70
Raw Demand	\$19,024	3,319	\$5.73

6 WATER RATE DERIVATION

6.1 Rate Structure Recommendations

The proposed rates incorporate some modifications to the SCWD's water rate structure designed to align rates with the current cost of providing service and reflect policy input provided by SCWD staff. Due to these modifications, impacts on water bills will vary based on customer class and water use when the proposed rates are implemented.

The proposed water rate structure remains relatively consistent with the SCWD's existing rate structure but incorporates the following modifications:

- **Increase Fixed Revenue Recovery:** The proposed fixed monthly service charges recover an average of 20% of projected rate revenue across all customers while the current fixed monthly service charges recover only an average of 10% of projected revenue across all customers. Fixed revenue recovery will remain below typical industry practice, where fixed-charge recovery is typically between 30% and 50%. This change reflects the current cost-of-service and improves revenue stability. This change will result in higher fixed monthly charges and lower volumetric rates compared to the existing structure.
- **Fixed Revenue Recovery Based on Meter Capacity:** The additional revenue recovered from fixed charges reflects system capacity costs, which are allocated to customers based on meter size using AWWA-standard meter equivalent units. Because larger meters represent greater potential demand on system capacity, customers with larger meters will see a proportionally greater increase in fixed charges than those with smaller meter sizes. This approach is consistent with industry-standard rate-setting practices.
- **Consolidation of Volumetric Rate Components:** The proposed rates consolidate three separate volumetric charges (the Quantity Charge, the Infrastructure Reinvestment Fee (IRF), and the Rate Stabilization Fee (RSF)) into a single unified volumetric rate. The IRF has historically provided dedicated funding for capital projects, while the RSF supported the SCWD's Rate Stabilization Reserves, which helps mitigate revenue volatility from year to year. Consolidating these components into a single rate does not eliminate their underlying purposes. The SCWD will continue to fund capital investment and maintain reserve targets through its internal budgeting and reserve policies, even though these will no longer appear as separate charges on customer bills. This approach is consistent with industry-standard rate-setting practices and results in a simpler, easy-to-understand bill, while continuing to recover the full cost of providing service in a proportional and equitable manner consistent with the cost-of-service analysis.
- **Moving from Three to Two Landscape Irrigation Tiers:** The proposed landscape irrigation rate structure is reduced from three tiers to two tiers to align with the results of the cost-of-

service analysis and current customer demands. Customer usage data shows that landscape irrigation customers predominantly adhere to their individual water budget allocations, especially during summer irrigation months, resulting in very little usage in the third tier.

- **Volumetric Drought Surcharges:** The proposed rates introduce volumetric drought surcharges, calculated as a percentage of the SCWD’s regular volumetric water rates and levied in addition to those rates during a declared water shortage. A surcharge percentage is identified for each drought stage in the SCWD’s 2025 Urban Water Management Plan (UWMP). This approach represents a shift from fixed monthly drought surcharges based on meter size to volumetric drought surcharges. Customers who reduce demand in accordance with the conservation target at a given drought stage will see their total bill remain almost unchanged.

6.2 Potable Unit Cost

Potable volumetric rates are determined by the amount of each class’s projected demand by the Extra Capacity Component. The total unit cost for each Extra Capacity Component is the sum of the potable water unit rate, which applies to every unit of potable water, and the Extra Capacity Component unit rate. The unit rates in the table below are used to calculate all the potable rates in the following sections.

Table 19: Potable Water Unit Cost by Extra Capacity Component

Total Demand Category Unit Cost	All Potable Water	Base	Base to Average	Average to Peak	Peak
<i>Allocation Unit of Measure</i>	<i>CCF</i>	<i>CCF</i>	<i>CCF</i>	<i>CCF</i>	<i>CCF</i>
Allocation Units	2,949,210	2,314,956	424,839	165,498	43,917
Revenue Requirement	\$19,771,485	\$18,999,837	\$5,205,595	\$3,576,146	\$1,289,062
Unit Cost (\$/CCF)	\$6.70	\$8.21	\$12.25	\$21.61	\$29.35
Potable Water Unit Cost (\$/CCF)		\$6.70	\$6.70	\$6.70	\$6.70
Total Demand Category Unit Cost (\$/CCF)		\$14.91	\$18.96	\$28.31	\$36.06

This study calculates the revenue requirement from volumetric rates for each class in the same way: It multiplies the unit rates in Table 19 by that class’s projected share of consumption in each Extra Capacity Component. After applying this uniform method to distribute costs among classes, however, the study takes two different approaches to allocate those costs among customers within each class. It applies tiered rates for residential and landscape irrigation customers, but it recommends uniform rates for commercial customers and UCSC.

This reflects different consumption patterns within each class, and thus the ability or inability to capture proportionate costs of service through tiered rates. When all customers within a class have relatively uniform needs and consumption patterns (as is the case for residential and landscape irrigation), the utility can calculate logical uniform tiers where increasing consumption

requires it to provide proportionately higher capacity, and thus to incur proportionately higher costs. However, when consumption is relatively varied within a class (as is the case for commercial customers and UCSC), it is difficult to pinpoint uniform breakpoints more precise than those already provided by the Extra Capacity Components at the system and inter-class levels.

6.3 Residential Rate Derivation

The recommended residential rate structure consists of three tiers. The amount of water allocated to each tier is applied to each monthly billing period. The tier breaks reflect reasonable increments of water demand within each tier given a number of factors, including the functional cost allocation and type of use.

- **Tier 1: 0 to 5 CCF** – The Tier 1 breakpoint reflects indoor, domestic use and consists almost entirely of Base water. Based on the American Community Survey, 75% of households in Santa Cruz County have three or fewer members and the average household has 2.51 members. Indoor use in Santa Cruz is estimated to be 44 gallons per day. 5 CCF reflects a household size between 2 and 3 people.
- **Tier 2: >5 to 9 CCF** – 90% of residential water bills do not exceed the Tier 2 breakpoint which is set to reflect average use per bill in the maximum use month. The majority of use in Tier 2 is Base to Average.
- **Tier 3: >9 CCF** – Tier 3 captures the top 10% of residential water bills and reflects use in excess of the average use per bill in the maximum use month. The majority of use in Tier 2 is Average to Peak.

These tier breaks facilitate the proportional allocation of costs within the residential customer class and reflect current consumption patterns. Rates and tier breakpoints are applied to each dwelling unit, to both single-family and multi-family residential customers.

Residential Rate Revenue Requirement

The revenue requirement for each tier is calculated by multiplying the Extra Capacity Component unit cost, found in Table 19, by the projected tier use in each Extra Capacity Component, shown in the table below and Appendix A (i.e., Extra Capacity Component Unit Cost x Projected Units of Demand = Revenue Requirement). The total revenue requirement for each of these tiers is the sum of the revenue requirements for each Extra Capacity Component.

Table 20: Residential Rate Revenue Requirements

Residential COS Rate Derivation	Base	Base to Average	Average to Peak	Peak	Total
Unit Cost (\$/CCF)	\$14.91	\$18.96	\$28.31	\$36.06	
Portion of Demand by Tier (%)					
Tier 1	99.9%	0.1%	0.0%	0.0%	100.0%
Tier 2	31.5%	60.8%	7.7%	0.0%	100.0%
Tier 3	6.4%	24.6%	69.0%	0.0%	100.0%
Projected Units of Demand by Tier (CCF)					
Tier 1	1,528,109	1,638	-	-	1,529,747
Tier 2	78,637	151,594	19,214	-	249,445
Tier 3	6,990	26,848	75,269	-	109,107
Revenue Requirement by Tier (\$)					
Tier 1	\$22,786,279	\$31,052	\$0	\$0	\$22,817,331
Tier 2	\$1,172,590	\$2,873,781	\$544,004	\$0	\$4,590,375
Tier 3	\$104,231	\$508,963	\$2,131,032	\$0	\$2,744,226

Residential Rates

The rate per CCF for each residential tier is calculated by dividing the total revenue requirement from the prior table by the projected demand for each residential tier from the previous table.

Table 21: Residential Tiered Unit Rates

Residential Tier Rate Derivation	Revenue Requirement	Projected Demand	COS Rates
	\$	CCF	\$ per CCF
Tier 1	\$22,817,331	1,529,747	\$14.92
Tier 2	\$4,590,375	249,445	\$18.40
Tier 3	\$2,744,226	109,107	\$25.15

6.4 Commercial Rate Derivation

Unlike residential customers who are billed based on inclining block tiers, commercial customers are billed a single uniform volumetric rate. Commercial customers in SCWD's service area place varied demands on the water system depending on the nature of their operations. A uniform rate is appropriate for this class because it reflects the class's cost-of-service and can be reasonably applied to all customers in this class.

Commercial Rate Revenue Requirement

The revenue requirement for the commercial class is calculated by multiplying the Extra Capacity Component total unit cost, found in Table 19, by the projected commercial class use in each Extra

Capacity Component, shown in the table below and Appendix A (i.e., Extra Capacity Component Unit Cost × Projected Units of Demand = Revenue Requirement). The total revenue requirement is the sum of the revenue requirements for each Extra Capacity Component.

Table 22: Commercial Rate Revenue Requirements

Commercial COS Rate Derivation	Base	Base to Average	Average to Peak	Peak	Total
Unit Cost (\$/CCF)	\$14.91	\$18.96	\$28.31	\$36.06	
Projected Units of Demand by Tier (CCF)					
All Water Demand	555,816	146,882	55,236	23,039	780,972
Revenue Requirement by Tier (\$)					
All Water Demand	\$8,288,007	\$2,784,446	\$1,563,852	\$830,683	\$13,466,989

Commercial Volumetric Rates

The rate per CCF for the commercial customer class is calculated by dividing the total revenue requirement from the prior table by the projected demand for the commercial class from the previous table.

Table 23: Commercial Tiered Unit Rates

Commercial COS Rate Derivation	Revenue Requirement	Projected Demand	COS Rate
	\$	CCF	\$ per CCF
All Water Demand	\$13,466,989	780,972	\$17.24

6.5 UCSC Rate Derivation

The University of California, Santa Cruz (UCSC) is billed a single uniform volumetric rate. UCSC is a large institutional customer that places unique demands on the SCWD's water system. A uniform rate is appropriate for this class as the cost-of-service analysis does not identify meaningful cost distinctions between levels of use that would justify a tiered rate structure.

UCSC Rate Revenue Requirement

The revenue requirement for UCSC is calculated by multiplying the Extra Capacity Component total unit cost, found in Table 19, by the projected UCSC class use in each Extra Capacity Component, shown in the table below and Appendix A (i.e., Extra Component Unit Cost × Projected Units of Demand = Revenue Requirement). The total revenue requirement is the sum of the revenue requirements for each Extra Capacity Component.

Table 24: UCSC Rate Revenue Requirements

UCSC COS Rate Derivation	Base	Base to Average	Average to Peak	Peak	Total
Unit Cost (\$/CCF)	\$14.91	\$18.96	\$28.31	\$36.06	
Projected Units of Demand by Tier (CCF)					
All Water Demand	132,924	64,112	9,264	5,659	211,959
Revenue Requirement by Tier (\$)					
All Water Demand	\$1,982,086	\$1,215,375	\$262,293	\$204,037	\$3,663,791

UCSC Volumetric Rates

The unit rate for UCSC is calculated by dividing the total revenue requirement from the prior table by the projected demand for the UCSC tier from the previous table.

Table 25: UCSC Tiered Unit Rates

UCSC Tier Rate Derivation	Revenue Requirement	Projected Demand	COS Rate
	\$	CCF	\$ per CCF
All Water Demand	\$3,663,791	211,959	\$17.29

6.6 Landscape Irrigation Rate Derivation

The recommended landscape irrigation rate structure consists of two tiers based on each customer's individual water budget allocation. Water budgets are set to reflect efficient irrigation of a customer's irrigable area throughout the year. A two-tier budget-based rate structure reflects the cost associated with serving customers at varying levels of use relative to their individual water budgets.

- **Tier 1: At or below 100% of water budget** — Tier 1 captures use at or below each customer's water budget allocation, reflecting efficient irrigation use. The majority of Tier 1 demand is Base to Average. 92.5% of landscape irrigation demand is projected to occur in Tier 1.
- **Tier 2: Above 100% of water budget** — Tier 2 captures use above each customer's water budget allocation, reflecting inefficient irrigation use. The majority of Tier 2 demand is Peak.

Landscape Irrigation Tiered Rate Revenue Requirement

The revenue requirement for an Extra Component is calculated by multiplying the Extra Capacity Component total unit cost, found in Table 19, by the projected tier use in each Extra Capacity

Component, shown in the table below and Appendix A, (i.e., Extra Capacity Component Unit Cost x Projected Units of Demand = Revenue Requirement). The total revenue requirement for each of these tiers is the sum of the revenue requirements for each Extra Capacity Component.

Table 26: Landscape Irrigation Tiered Rate Revenue Requirements

Landscape Irrigation COS Rate Derivation	Base	Base to Average	Average to Peak	Peak	Total
Projected Demand (CCF)	12,480	33,766	6,515	15,220	67,980
Unit Cost (\$/CCF)	\$14.91	\$18.96	\$28.31	\$36.06	
Portion of Demand by Tier (%)					
Tier 1	19.8%	51.4%	9.8%	19.1%	100.0%
Tier 2	1.2%	29.0%	6.8%	63.0%	100.0%
Projected Units of Demand by Tier (CCF)					
Tier 1	12,416	32,279	6,169	11,990	62,854
Tier 2	64	1,487	347	3,229	5,126
Revenue Requirement by Tier (\$)					
Tier 1	\$185,145	\$611,913	\$174,647	\$432,324	\$1,404,029
Tier 2	\$949	\$28,183	\$9,815	\$116,438	\$155,385

Landscape Irrigation Tiered Volumetric Rates

The unit rate for each landscape irrigation tier is calculated by dividing the total revenue requirement from the prior table by the projected demand for each landscape irrigation tier from the previous table.

Table 27: Landscape Irrigation Tier Unit Rates

Landscape Irrigation Tier Rate Derivation	Revenue Requirement	Projected Demand	COS Rate
	\$	CCF	\$ per CCF
Tier 1	\$1,404,029	62,854	\$22.34
Tier 2	\$155,385	5,126	\$30.31

6.7 North Coast Agricultural Water Rate Derivation

The recommended North Coast Agricultural rate is calculated by dividing the raw water revenue requirement by the projected North Coast Agricultural water demand. Raw water costs exclude treatment and potable distribution costs and are recovered on a per unit, volumetric basis, as the raw water system is not sized to meet peak demand in the same manner as the potable water system.

North Coast Agricultural Rate Derivation

The recommended raw water rate for North Coast Agricultural customers is calculated by dividing the total raw water system revenue requirement by the projected raw water demand. The North Coast Agriculture rate excludes treatment and distribution costs, reflecting that North Coast Agriculture customers receive raw (non-potable) water service.

Table 28: Raw Water Rate Derivation

Raw Water COS Rate Derivation	Total Revenue Requirement	Projected Demand (CCF)	COS Rate (\$/CCF)
All Water Demand	\$19,024	3,319	\$5.73

6.8 Elevation Surcharge

The SCWD applies elevation surcharges to customers served by pump stations, which require additional electricity to pump water to higher elevations. These surcharges recover the incremental cost of electricity for pumping water to customers in elevation zones and are applied in addition to the standard volumetric rate per CCF of water used.

The elevation surcharge for each zone is calculated by dividing the total electricity costs attributable to each elevation zone by the projected volume of water pumped in each zone. This results in a rate that proportionally recovers the additional cost of serving customers at higher elevations. Higher zones incur greater pumping costs due to the additional energy required to deliver water against a greater elevation head, resulting in higher surcharges for customers in those zones. SCWD's service area includes three elevation zones. The elevation surcharge derivation is shown in detail in Appendix D, and the proposed elevation surcharges by zone are shown in the table below.

Table 29: Elevation Surcharge Rate Derivation

Elevation Zone	FY 24-25 CCF Pumped	Electricity Cost	Unit Cost per Zone (\$ per CCF)	Total Unit Cost (\$ per CCF)
Elevation Zone 1	684,269	\$231,935.65	\$0.34	\$0.34
Elevation Zone 2	276,258	\$127,698.19	\$0.46	\$0.80
Elevation Zone 3	181,698	\$87,606.24	\$0.48	\$1.28

Electricity charges are not projected to increase at the same rate as the overall rate revenue increases but rather based on projected inflation because these costs reflect the cost of electricity and not the overall cost of service. As shown in the table below, the Jan. 1, 2027, rate

for each elevation zone is escalated annually by the projected inflation rate to determine the surcharge for each subsequent year of the study period.

Table 30: Elevation Surcharge Rate Schedule

Elevation Zone	COS Rate (\$ per CCF)	Jan. 1, 2027	Jan. 1, 2028	Jan. 1, 2029	Jan. 1, 2030	Jan. 1, 2031
<i>Projected Inflation</i>		5.0%	5.0%	5.0%	5.0%	5.0%
Elevation Zone 1	\$0.34	\$0.36	\$0.37	\$0.39	\$0.41	\$0.43
Elevation Zone 2	\$0.80	\$0.84	\$0.88	\$0.93	\$0.97	\$1.02
Elevation Zone 3	\$1.28	\$1.35	\$1.41	\$1.49	\$1.56	\$1.64

6.9 Monthly Fixed Charge Derivations

Proposed fixed charges are designed to recover the capacity and per customer costs to serve each active service connection. Fixed charges are assessed monthly and consist of three functional cost components: Customer, Capacity (MEU), and Meter Cost (MCU), as described in Section 5.5. Unit costs for each component were calculated in Section 5.6.

Monthly Ready-to-Serve Charge

The monthly water service charge applies to all active water service connections. It recovers the Customer function revenue requirement on a per meter basis, the Capacity function revenue requirement on a per MEU basis, and the Meter Cost function revenue requirement on a per MCU basis. The Customer unit cost is the same for all meter sizes. The unit costs per MEU and per MCU vary by meter size based on meter capacity ratios and meter cost ratios respectively, as described in Section 3.2.

Table 31: Monthly Ready-to-Serve Charge Derivation

Allocation Units	Customer	Capacity	Meter
<i>Unit of Measure</i>	<i>#</i>	<i>MEU</i>	<i>MCU</i>
Allocation Units	27,912	34,490	30,741
Revenue Requirement	<u>\$1,462,483</u>	<u>\$8,959,963</u>	<u>\$1,529,350</u>
Unit Cost	\$52.40	\$259.79	\$49.75

Ready-to-Serve Charge Derivation	Customer Component	Meter Equivalent Units	Capacity Component	Meter Cost Units	Meter Cost Component	Annual Fixed COS Charges	Monthly Fixed COS Charges
<i>Meter Size</i>	\$	MEU	\$	MCU	\$	\$	\$
5/8"	52.40	1.00	259.79	1.00	49.75	361.93	30.16
3/4"	52.40	1.50	389.68	1.10	54.72	496.80	41.40
1"	52.40	2.50	649.47	1.40	69.65	771.52	64.29
1.5"	52.40	5.00	1,298.94	1.80	89.55	1,440.89	120.07
2"	52.40	8.00	2,078.31	2.90	144.27	2,274.97	189.58
3"	52.40	17.50	4,546.29	11.00	547.24	5,145.93	428.83
4"	52.40	31.50	8,183.33	14.00	696.49	8,932.21	744.35
6"	52.40	65.00	16,886.23	21.00	1,044.73	17,983.36	1,498.61
8"	52.40	140.00	36,370.34	29.00	1,442.73	37,865.46	3,155.46
10"	52.40	210.00	54,555.51	38.00	1,890.47	56,498.37	4,708.20

Monthly Private Fire Service Charge

The monthly fire service charge applies to active private fire service connections. This charge recovers customer and meter costs on a per service basis and the cost of private fire capacity on a per FEU basis. Unit costs were calculated in Section 5.6. Meter costs are recovered on a per service basis and not on a MCU because private fire services have “tattle” meters that are only intended to indicate flow but not measure it precisely. Fire meters are typically smaller than the service line and do not impede the flow.

Table 32: Monthly Private Fire Service Charge Derivation

Per Fire Service Revenue Requirement	Customer	Meter	Total
Unit Cost	\$52.40	\$49.75	
Fire Units	<u>3,303.00</u>	<u>3,342.20</u>	
Per Fire Service Revenue Requirement	\$173,065	\$166,272	\$339,337

Allocation Units	Per Fire Service	Fire
Unit of Measure	#	FEU
Allocation Units	3,303	12,778
Revenue Requirement	<u>\$339,337</u>	<u>\$200,381</u>
Unit Cost	\$102.74	\$15.68

Ready-to-Serve Charge Derivation	Customer Component	Fire Equivalent Units	Capacity Component	Annual Fixed COS Charges	Monthly Fixed COS Charges
Meter Size	\$	MEU	\$	\$	\$
3/4"	102.74	0.08	1.19	103.92	8.66
1"	102.74	0.16	2.53	105.27	8.77
1.5"	102.74	0.47	7.36	110.09	9.17
2"	102.74	1.00	15.68	118.42	9.87
3"	102.74	2.90	45.55	148.29	12.36
4"	102.74	6.19	97.08	199.81	16.65
6"	102.74	17.98	281.99	384.73	32.06
8"	102.74	38.32	600.93	703.67	58.64
10"	102.74	68.91	1,080.69	1,183.42	98.62

6.10 Proposed Water Rates

The proposed rates shown in the following tables reflect the application of the recommended 7.0 percent revenue increase, for the first year, to the recalculated cost-of-service rates and are proposed for implementation beginning January 1, 2027. The cost-of-service analysis resulted in a greater portion of revenue being recovered from the fixed charges, causing volumetric charges on January 1, 2027, to be lower while fixed charges increased.

Table 33: Existing and Proposed Volumetric Water Rates

Volumetric Rates	Jul. 1, 2026	COS Rates	Jan. 1, 2027	Jan. 1, 2028	Jan. 1, 2029	Jan. 1, 2030	Jan. 1, 2031
(\$ per CCF) ¹	Existing		Proposed	Proposed	Proposed	Proposed	Proposed
Residential²							
Tier 1 (0-5 CCF)	\$16.07	\$14.92	\$15.96	\$17.88	\$20.03	\$21.83	\$23.79
Tier 2 (6-9 CCF)	\$23.00	\$18.40	\$19.69	\$22.05	\$24.70	\$26.92	\$29.34
Tier 3 (>9 CCF)	\$29.98	\$25.15	\$26.91	\$30.14	\$33.76	\$36.79	\$40.11
Commercial							
Commercial ³	\$18.60	\$17.24	\$18.45	\$20.66	\$23.14	\$25.22	\$27.49
UCSC	\$19.67	\$17.29	\$18.50	\$20.72	\$23.21	\$25.30	\$27.57
Landscape Irrigation							
Tier 1 (≤100% of budget)	\$32.74	\$22.34	\$23.90	\$26.77	\$29.98	\$32.68	\$35.63
Tier 2 (101% - 150%)	\$45.17	\$30.31	\$32.43	\$36.32	\$40.68	\$44.34	\$48.33
Tier 3 (151% & above) ⁵	\$57.10	\$30.31	<i>Proposed Tier 2 rate applies to all use >100% of budget</i>				
North Coast Agriculture							
Maintain Reliability	\$11.00	\$5.73	\$6.13	\$6.87	\$7.69	\$8.38	\$9.14
Decrease Reliability	\$5.50		N/A	N/A	N/A	N/A	N/A
Elevation Surcharges⁶	Jul. 1, 2026	COS Rates	Jan. 1, 2027	Jan. 1, 2028	Jan. 1, 2029	Jan. 1, 2030	Jan. 1, 2031
(\$ per CCF) ¹	Existing	Existing	Proposed	Proposed	Proposed	Proposed	Proposed
Lift Station Zone 1	\$0.32	\$0.34	\$0.36	\$0.37	\$0.39	\$0.41	\$0.43
Lift Station Zone 2	\$0.61	\$0.80	\$0.84	\$0.88	\$0.93	\$0.97	\$1.02
Lift Station Zone 3	\$1.10	\$1.28	\$1.35	\$1.41	\$1.49	\$1.56	\$1.64

¹ CCF = 100 Cubic Feet or approximately 748 gallons.

² Per dwelling unit, includes single-family and multi-family.

³ Includes industrial, golf, bulk, fire service leaks, and temporary.

⁴ Tiers based on percent of water budget for each customer.

⁵ Tiers 2 and 3 will be combined if the proposed rates are adopted.

⁶ As applicable

Table 34: Existing and Proposed Fixed Monthly Service Charges

Monthly Fixed Charges	Jul. 1, 2026	COS Rates	Jan. 1, 2027	Jan. 1, 2028	Jan. 1, 2029	Jan. 1, 2030	Jan. 1, 2031
<i>Meter Size</i>	<i>Existing</i>	<i>Existing</i>	<i>Proposed</i>	<i>Proposed</i>	<i>Proposed</i>	<i>Proposed</i>	<i>Proposed</i>
Rate Revenue Increases	0.0%	0.0%	7.0%	12.0%	12.0%	9.0%	9.0%
Monthly Meter Ready-to-Serve Charge (\$/water meter/month)							
5/8"	\$19.13	\$30.16	32.27	36.15	40.48	44.13	48.10
3/4"	19.48	41.40	44.30	49.61	55.57	60.57	66.02
1"	20.49	64.29	68.79	77.05	86.29	94.06	102.53
1 1/2"	21.86	120.07	128.48	143.90	161.16	175.67	191.48
2"	25.56	189.58	202.85	227.19	254.46	277.36	302.32
3"	53.00	428.83	458.85	513.91	575.58	627.38	683.84
4"	63.15	744.35	796.46	892.03	999.07	1,088.99	1,187.00
6"	86.84	1,498.61	1,603.52	1,795.94	2,011.45	2,192.48	2,389.80
8"	113.91	3,155.46	3,376.34	3,781.50	4,235.28	4,616.45	5,031.93
10"	144.39	4,708.20	5,037.77	5,642.30	6,319.38	6,888.12	7,508.06
Monthly Fire Service Ready-to-Serve Charge (\$/fire meter/month)							
5/8"	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3/4"	3.67	8.66	9.27	10.38	11.62	12.67	13.81
1"	3.92	8.77	9.39	10.51	11.77	12.83	13.99
1 1/2"	4.87	9.17	9.82	10.99	12.31	13.42	14.63
2"	6.53	9.87	10.56	11.83	13.25	14.44	15.74
3"	8.97	12.36	13.22	14.81	16.59	18.08	19.71
4"	22.49	16.65	17.82	19.95	22.35	24.36	26.55
6"	58.83	32.06	34.30	38.42	43.03	46.90	51.13
8"	121.90	58.64	62.74	70.27	78.71	85.79	93.51
10"	215.74	98.62	105.52	118.18	132.37	144.28	157.26

7 DROUGHT SURCHARGES

The SCWD is proposing to authorize a series of drought surcharges that could be implemented to support financial stability and help ensure adequate funding for water utility operations during periods of water shortage and reduced water sales. As proposed, these surcharges would be temporary, calculated as a percentage of the SCWD’s regular volumetric water rates, and levied in addition to those rates during a declared water shortage. The proposed surcharges correspond with the Water Shortage Response Stages identified in the SCWD’s 2025 Urban Water Management Plan (UWMP).

Drought surcharges are designed to enable the SCWD to recover the volumetric revenue requirement identified in Section 5.7. The surcharges will help SCWD remain financially stable during periods of water shortage and reduced water sales. As described in this report, the SCWD’s rate structure reflects the proportional cost-of-service. The surcharges, applied as a percentage to each existing volumetric rate, maintain the proportional cost recovery. Customers who reduce demand in accordance with the conservation target at a given drought stage will have their total bill remain almost unchanged. The surcharges can be phased out as water use gradually rebounds after a shortage has ended.

Financial impacts during water shortages and periods of reduced water sales can include:

- A loss of volumetric water rate revenue due to a reduction in the volume of water sales.
- Reduced variable expenses due to reduced volumes of water production and treatment, such as reduced costs for electricity and treatment chemicals.

The derivation of the drought surcharges is shown in Appendix F. The following table shows the proposed drought surcharge at each Water Shortage Response Stage.

Table 35: Proposed Drought Surcharges

Drought Surcharge Derivation by Drought Stage	Baseline	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
Target Water Use Reduction	0%	10%	20%	30%	40%	50%
Proposed Drought Surcharge		10.0%	23.0%	40.0%	63.0%	94.0%

During a declared Water Shortage Response Stage, a customer’s volumetric rate is calculated by adding the applicable drought surcharge to their existing volumetric rate, as follows:

$$\begin{aligned} & \text{Volumetric Rate} + (\text{Volumetric Rate} \times \text{Drought Surcharge Percentage}) \\ & = \text{Total Volumetric Rate During Declared Water Shortage} \end{aligned}$$

For example, under a Stage 2 water shortage, which carries a 23 percent drought surcharge, a Tier 1 residential customer paying the proposed Tier 1 volumetric rate of \$15.96 per CCF would pay:

$$\$15.96 + (\$15.96 \times 0.23) = \$19.63 \text{ per CCF}$$

The total volumetric rate paid by customers at each Water Shortage Response Stage, inclusive of the applicable drought surcharge, is summarized in the table below.

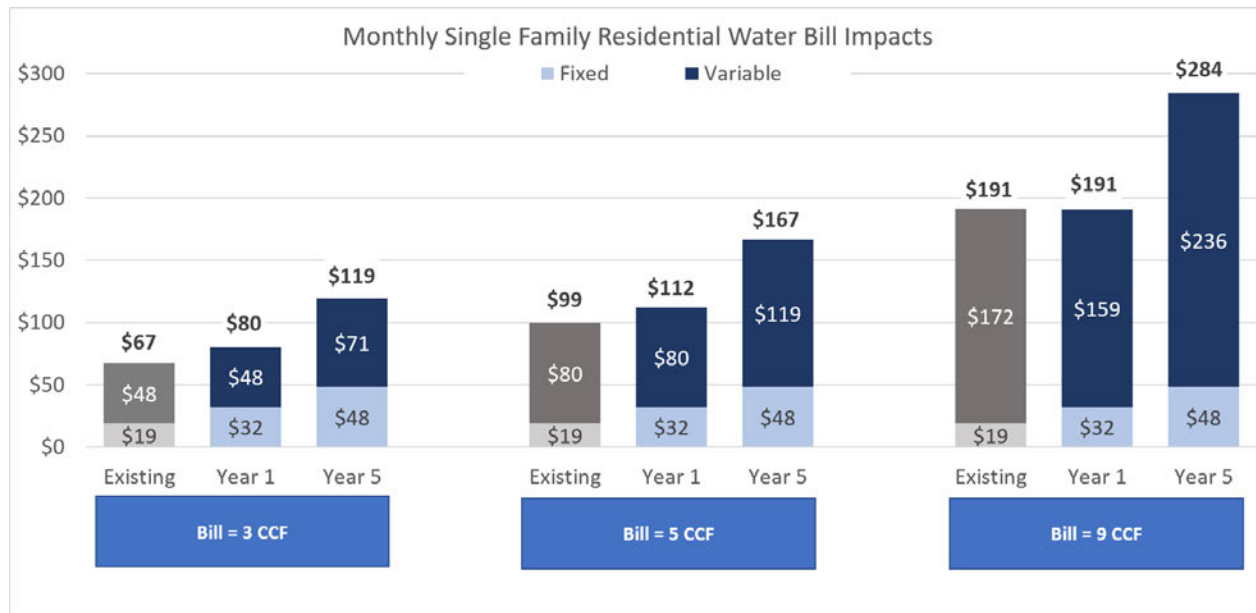
Table 36: January 1, 2027, Tier 1 Residential Drought Surcharge Example

Drought Stage	Surcharge %	Total Rate Factor	Jan. 1, 2027 Tier 1 Rate	Total Volumetric Rate w/ Surcharge per CCF
Stage 1	10%	110%	\$15.96	\$17.56
Stage 2	23%	123%	\$15.96	\$19.63
Stage 3	40%	140%	\$15.96	\$22.34
Stage 4	63%	163%	\$15.96	\$26.01
Stage 5	94%	194%	\$15.96	\$30.96

8 WATER RATE BILL IMPACTS

The following table shows the impacts of the proposed water rates on a range of single-family customers with different levels of consumption. The cost-of-service analysis resulted in more fixed cost recovery and less volumetric cost recovery. This caused fixed charges to increase while some volumetric rates were reduced.

Figure 10: Single Family Residential Bill Impacts



9 CONCLUSION

This 2026 Cost of Service Study evaluates the SCWD's projected financial needs and allocates the cost of providing water service in a manner that is proportional, equitable, and consistent. Based on updated financial projections, capital improvement funding requirements, and a comprehensive cost-of-service analysis, the SCWD requires annual water rate revenue adjustments beginning in 2027 to maintain long-term financial stability and continue providing safe and reliable water service.

APPENDIX A – Projected Demand Characteristics

Projected Water Demand

Projected Demand (CCF)		Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total
Potable Customer Classes														
Residential		178,790	179,730	176,287	165,915	163,325	144,337	134,478	139,839	135,470	139,524	156,020	174,585	1,888,299
Commercial		85,220	86,953	84,575	72,989	64,981	52,144	46,318	48,973	49,289	53,644	61,943	73,942	780,972
UCSC		18,119	16,686	15,662	18,224	24,078	17,141	11,077	15,666	16,675	15,812	18,952	23,867	211,959
Landscape Irrigation		9,347	10,819	11,257	9,272	8,430	4,007	2,230	1,429	1,040	1,130	2,419	6,600	67,980
Total Potable		291,475	294,188	287,781	266,400	260,815	217,630	194,103	205,906	202,474	210,111	239,334	278,994	2,949,210
Non-Potable Customer Class														
North Coast Agriculture		267	258	341	338	625	273	300	245	115	172	188	197	3,319
Total Non-Potable		267	258	341	338	625	273	300	245	115	172	188	197	3,319
Total Water Sales		291,743	294,446	288,122	266,738	261,440	217,903	194,403	206,151	202,590	210,282	239,522	279,191	2,952,529
Potable Water	Amount													
Average	245,768													
Max Month	294,188													
Peak Ratio	1.197													
Residential	Level	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total
Total		178,790	179,730	176,287	165,915	163,325	144,337	134,478	139,839	135,470	139,524	156,020	174,585	1,888,299
Base	134,478	134,478	134,478	134,478	134,478	134,478	134,478	134,478	134,478	134,478	134,478	134,478	134,478	1,613,736
Base to Average	157,358	22,880	22,880	22,880	22,880	22,880	9,859	0	5,361	992	5,046	21,542	22,880	180,080
Average to Peak	188,361	21,431	22,372	18,929	8,557	5,967	0	0	0	0	0	0	17,227	94,483
Peak		0	0	0	0	0	0	0	0	0	0	0	0	0
Commercial	Level	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total
Total		85,220	86,953	84,575	72,989	64,981	52,144	46,318	48,973	49,289	53,644	61,943	73,942	780,972
Base	46,318	46,318	46,318	46,318	46,318	46,318	46,318	46,318	46,318	46,318	46,318	46,318	46,318	555,816
Base to Average	65,081	18,763	18,763	18,763	18,763	18,663	5,826	0	2,655	2,971	7,326	15,625	18,763	146,882
Average to Peak	77,903	12,822	12,822	12,822	7,908	0	0	0	0	0	0	0	8,861	55,236
Peak		7,317	9,050	6,672	0	0	0	0	0	0	0	0	0	23,039
UCSC	Level	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total
Total		18,119	16,686	15,662	18,224	24,078	17,141	11,077	15,666	16,675	15,812	18,952	23,867	211,959
Base	11,077	11,077	11,077	11,077	11,077	11,077	11,077	11,077	11,077	11,077	11,077	11,077	11,077	132,924
Base to Average	17,663	6,586	5,609	4,585	6,586	6,586	6,064	0	4,589	5,598	4,735	6,586	6,586	64,112
Average to Peak	21,143	455	0	0	560	3,480	0	0	0	0	0	1,288	3,480	9,264
Peak		0	0	0	0	2,935	0	0	0	0	0	0	2,724	5,659
Landscape Irrigation	Level	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total
Total		9,347	10,819	11,257	9,272	8,430	4,007	2,230	1,429	1,040	1,130	2,419	6,600	67,980
Base	1,040	1,040	1,040	1,040	1,040	1,040	1,040	1,040	1,040	1,040	1,040	1,040	1,040	12,480
Base to Average	5,665	4,625	4,625	4,625	4,625	4,625	2,967	1,190	389	0	90	1,379	4,625	33,766
Average to Peak	6,781	1,116	1,116	1,116	1,116	1,116	0	0	0	0	0	0	935	6,515
Peak		2,566	4,038	4,476	2,491	1,649	0	0	0	0	0	0	0	15,220
Potable Total		Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total
Base		192,913	192,913	192,913	192,913	192,913	192,913	192,913	192,913	192,913	192,913	192,913	192,913	2,314,956
Base to Average		52,855	51,877	50,853	52,855	52,755	24,717	1,190	12,993	9,561	17,198	45,132	52,855	424,839
Average to Peak		35,825	36,310	32,867	18,142	10,563	0	0	0	0	0	1,288	30,502	165,498
Peak		9,883	13,088	11,147	2,491	4,584	0	0	0	0	0	0	2,724	43,917
Total		291,475	294,188	287,781	266,400	260,815	217,630	194,103	205,906	202,474	210,111	239,334	278,994	2,949,210

Projected Potable Water Demand by Tier

Residential	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total	% Total
Tier 1	134,788	134,559	133,490	130,956	130,675	123,032	116,934	120,590	118,551	121,280	129,168	135,725	1,529,747	81.0%
Tier 2	25,949	29,250	28,180	24,319	23,109	16,515	13,300	14,633	13,182	14,274	20,028	26,707	249,445	13.2%
Tier 3	18,053	15,921	14,618	10,640	9,541	4,790	4,244	4,615	3,737	3,970	6,824	12,153	109,107	5.8%
Total	178,790	179,730	176,287	165,915	163,325	144,337	134,478	139,839	135,470	139,524	156,020	174,585	1,888,299	100.0%

Base-Extra Categories	Level	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total	% Total
Base	134,478	134,478	134,478	134,478	134,478	134,478	134,478	134,478	134,478	134,478	134,478	134,478	134,478	1,613,736	85.5%
Base to Avg.	157,358	22,880	22,880	22,880	22,880	22,880	9,859	0	5,361	992	5,046	21,542	22,880	180,080	9.5%
Avg. to Peak	188,361	21,431	22,372	18,929	8,557	5,967	0	0	0	0	0	0	17,227	94,483	5.0%
Peak		0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Total		178,790	179,730	176,287	165,915	163,325	144,337	134,478	139,839	135,470	139,524	156,020	174,585	1,888,299	100.0%

Tier 1	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total	% Total
Base	134,478	134,478	133,490	130,956	130,675	123,032	116,934	120,590	118,551	121,280	129,168	134,478	1,528,109	99.9%
Base to Avg.	310	81	0	0	0	0	0	0	0	0	0	1,247	1,638	0.1%
Avg. to Peak	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Peak	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Total	134,788	134,559	133,490	130,956	130,675	123,032	116,934	120,590	118,551	121,280	129,168	135,725	1,529,747	100.0%

Tier 2	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total	% Total
Base	0	0	988	3,522	3,803	11,446	13,300	13,888	13,182	13,198	5,310	0	78,637	31.5%
Base to Avg.	22,570	22,799	22,880	20,797	19,306	5,069	0	745	0	1,076	14,718	21,634	151,594	60.8%
Avg. to Peak	3,378	6,451	4,311	0	0	0	0	0	0	0	0	5,074	19,214	7.7%
Peak	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Total	25,949	29,250	28,180	24,319	23,109	16,515	13,300	14,633	13,182	14,274	20,028	26,707	249,445	100.0%

Tier 3	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total	% Total
Base	0	0	0	0	0	0	4,244	0	2,746	0	0	0	6,990	6.4%
Base to Avg.	0	0	0	2,084	3,574	4,790	0	4,615	992	3,970	6,824	0	26,848	24.6%
Avg. to Peak	18,053	15,921	14,618	8,557	5,967	0	0	0	0	0	0	12,153	75,269	69.0%
Peak	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Total	18,053	15,921	14,618	10,640	9,541	4,790	4,244	4,615	3,737	3,970	6,824	12,153	109,107	100.0%



Commercial	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total	% Total
Tier 1	85,220	86,953	84,575	72,989	64,981	52,144	46,318	48,973	49,289	53,644	61,943	73,942	780,972	100.0%
														0.0%
														0.0%
Total	85,220	86,953	84,575	72,989	64,981	52,144	46,318	48,973	49,289	53,644	61,943	73,942	780,972	100.0%

Base-Extra Categories	Level	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total	% Total
Base	46,318	46,318	46,318	46,318	46,318	46,318	46,318	46,318	46,318	46,318	46,318	46,318	46,318	555,816	29.4%
Base to Avg.	65,081	18,763	18,763	18,763	18,763	18,663	5,826	0	2,655	2,971	7,326	15,625	18,763	146,882	7.8%
Avg. to Peak	77,903	12,822	12,822	12,822	7,908	0	0	0	0	0	0	0	8,861	55,236	2.9%
Peak		7,317	9,050	6,672	0	0	0	0	0	0	0	0	0	23,039	1.2%
Total		85,220	86,953	84,575	72,989	64,981	52,144	46,318	48,973	49,289	53,644	61,943	73,942	780,972	41.4%

Tier 1	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total	% Total
Base	46,318	46,318	46,318	46,318	46,318	46,318	46,318	46,318	46,318	46,318	46,318	46,318	555,816	71.2%
Base to Avg.	18,763	18,763	18,763	18,763	18,663	5,826	0	2,655	2,971	7,326	15,625	18,763	146,882	18.8%
Avg. to Peak	12,822	12,822	12,822	7,908	0	0	0	0	0	0	0	8,861	55,236	7.1%
Peak	7,317	9,050	6,672	0	0	0	0	0	0	0	0	0	23,039	2.9%
Total	85,220	86,953	84,575	72,989	64,981	52,144	46,318	48,973	49,289	53,644	61,943	73,942	780,972	100.0%

UCSC	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total	% Total
Tier 1	18,119	16,686	15,662	18,224	24,078	17,141	11,077	15,666	16,675	15,812	18,952	23,867	211,959	100.0%
														0.0%
														0.0%
Total	18,119	16,686	15,662	18,224	24,078	17,141	11,077	15,666	16,675	15,812	18,952	23,867	211,959	100.0%

Base-Extra Categories	Level	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total	% Total
Base	11,077	11,077	11,077	11,077	11,077	11,077	11,077	11,077	11,077	11,077	11,077	11,077	11,077	132,924	7.0%
Base to Avg.	17,663	6,586	5,609	4,585	6,586	6,586	6,064	0	4,589	5,598	4,735	6,586	6,586	64,112	3.4%
Avg. to Peak	21,143	455	0	0	560	3,480	0	0	0	0	0	1,288	3,480	9,264	0.5%
Peak		0	0	0	0	2,935	0	0	0	0	0	0	2,724	5,659	0.3%
Total		18,119	16,686	15,662	18,224	24,078	17,141	11,077	15,666	16,675	15,812	18,952	23,867	211,959	11.2%

Tier 1	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total	% Total
Base	11,077	11,077	11,077	11,077	11,077	11,077	11,077	11,077	11,077	11,077	11,077	11,077	132,924	62.7%
Base to Avg.	6,586	5,609	4,585	6,586	6,586	6,064	0	4,589	5,598	4,735	6,586	6,586	64,112	30.2%
Avg. to Peak	455	0	0	560	3,480	0	0	0	0	0	1,288	3,480	9,264	4.4%
Peak	0	0	0	0	2,935	0	0	0	0	0	0	2,724	5,659	2.7%
Total	18,119	16,686	15,662	18,224	24,078	17,141	11,077	15,666	16,675	15,812	18,952	23,867	211,959	100.0%

Appendix A – Projected Demand Characteristics



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City of Santa Cruz Water Rate Study

Landscape Irrigation	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total	% Total
Tier 1	8,988	10,289	10,599	8,535	7,485	3,367	1,707	1,192	976	1,105	2,358	6,253	62,854	92.5%
Tier 2	359	531	658	736	946	640	523	237	64	25	61	347	5,126	7.5%
Total	9,347	10,819	11,257	9,272	8,430	4,007	2,230	1,429	1,040	1,130	2,419	6,600	67,980	100.0%

Base-Extra Categories	Level	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total	% Total
Base	1,040	1,040	1,040	1,040	1,040	1,040	1,040	1,040	1,040	1,040	1,040	1,040	1,040	12,480	0.7%
Base to Avg.	5,665	4,625	4,625	4,625	4,625	4,625	2,967	1,190	389	0	90	1,379	4,625	33,766	1.8%
Avg. to Peak	6,781	1,116	1,116	1,116	1,116	1,116	0	0	0	0	0	0	935	6,515	0.3%
Peak	2,566	4,038	4,476	2,491	1,649	0	0	0	0	0	0	0	0	15,220	0.8%
Total	9,347	10,819	11,257	9,272	8,430	4,007	2,230	1,429	1,040	1,130	2,419	6,600	67,980	3.6%	

Tier 1	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total	% Total
Base	1,040	1,040	1,040	1,040	1,040	1,040	1,040	1,040	976	1,040	1,040	1,040	12,416	19.8%
Base to Avg.	4,625	4,625	4,625	4,625	4,625	2,327	667	152	0	65	1,318	4,625	32,279	51.4%
Avg. to Peak	1,116	1,116	1,116	1,116	1,116	0	0	0	0	0	0	588	6,169	9.8%
Peak	2,207	3,508	3,818	1,754	704	0	0	0	0	0	0	0	11,990	19.1%
Total	8,988	10,289	10,599	8,535	7,485	3,367	1,707	1,192	976	1,105	2,358	6,253	62,854	100.0%

Tier 2	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total	% Total
Base	0	0	0	0	0	0	0	0	64	0	0	0	64	1.2%
Base to Avg.	0	0	0	0	0	640	523	237	0	25	61	0	1,487	29.0%
Avg. to Peak	0	0	0	0	0	0	0	0	0	0	0	347	347	6.8%
Peak	359	531	658	736	946	0	0	0	0	0	0	0	3,229	63.0%
Total	359	531	658	736	946	640	523	237	64	25	61	347	5,126	100.0%

APPENDIX B – Projected Revenues and Expenses

Escalation Factors			FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031
Inflation			5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Interest			2.00%	1.00%	1.00%	1.00%	1.00%	1.00%

Revenue	Category	Escalation	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031
			<i>Estimated</i>	<i>Budgeted</i>	<i>Projected</i>	<i>Projected</i>	<i>Projected</i>	<i>Projected</i>
Rate Revenue								
Water Sales		Calculated						
Service Charges		Calculated						
Water Rate Revenue			\$56,883,144	\$62,582,177	\$68,854,152	\$77,116,650	\$85,251,129	\$92,923,731
System Development Charges	Paygo	Non-inflated	\$4,037,682	\$1,300,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000
Other Revenue								
Elevation Surcharge	All Volume	Inflation	\$320,000	\$336,000	\$352,800	\$370,440	\$388,962	\$408,410
Bulk Water Sales	General	Inflation	\$10,000	\$10,500	\$11,025	\$11,576	\$12,155	\$12,763
Licenses And Permits	General	Non-inflated	\$14,998	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000
Grants	Paygo	Non-inflated	\$0	\$0	\$0	\$0	\$0	\$0
Charges For Services	General	Non-inflated	\$388,781	\$291,400	\$291,400	\$291,400	\$291,400	\$291,400
Work Order Charges	Customer Services	Inflation	\$1,360,760	\$2,112,330	\$2,217,947	\$2,328,844	\$2,445,286	\$2,567,550
Miscellaneous Revenues	General	Non-inflated	\$280,600	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000
Loch Lomond Fees and Sales	General	Non-inflated	\$426,917	\$380,000	\$380,000	\$380,000	\$380,000	\$380,000
Transfers	General	Non-inflated	\$600,000	\$0	\$0	\$0	\$0	\$0
Interest Revenue	General	Calculated	\$1,691,977	\$494,703	\$447,606	\$424,353	\$408,769	\$435,543
Total Revenue			\$66,014,859	\$67,597,110	\$73,644,929	\$82,013,263	\$90,267,701	\$98,109,398

Expenses	Category	Escalation	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031
			<i>Estimated</i>	<i>Budgeted</i>	<i>Projected</i>	<i>Projected</i>	<i>Projected</i>	<i>Projected</i>
Administration	Administration	Inflation	\$9,753,481	\$10,362,035	\$10,880,137	\$11,424,144	\$11,995,351	\$12,595,118
Engineering	Engineering	Inflation	\$3,788,843	\$4,988,705	\$5,238,140	\$5,500,047	\$5,775,050	\$6,063,802
Customer Services	Customer Services	Inflation	\$3,717,524	\$3,820,756	\$4,011,794	\$4,212,383	\$4,423,003	\$4,644,153
Customer Assistance	General	Inflation	\$539,205	\$395,934	\$415,731	\$436,517	\$458,343	\$481,260
Resources	All Volume	Inflation	\$2,930,062	\$3,246,452	\$3,408,775	\$3,579,213	\$3,758,174	\$3,946,083
Production	Production	Inflation	\$6,910,470	\$7,946,720	\$8,344,056	\$8,761,259	\$9,199,322	\$9,659,288
Electricity	All Volume	Inflation	\$2,409,146	\$2,400,000	\$2,520,000	\$2,646,000	\$2,778,300	\$2,917,215
Chemicals	Potable Water	Inflation	\$575,000	\$633,000	\$664,650	\$697,883	\$732,777	\$769,415
Quality	Potable Water	Inflation	\$2,567,802	\$2,726,894	\$2,863,239	\$3,006,401	\$3,156,721	\$3,314,557
Distribution	Distribution	Inflation	\$6,481,393	\$6,582,216	\$6,911,327	\$7,256,893	\$7,619,738	\$8,000,725
Recreation	All Volume	Inflation	\$1,249,918	\$1,703,649	\$1,788,831	\$1,878,273	\$1,972,187	\$2,070,796
Operations	Administration	Inflation	\$657,521	\$732,865	\$769,508	\$807,984	\$848,383	\$890,802
Meter Operations	Meters	Inflation	\$883,528	\$1,419,057	\$1,490,010	\$1,564,510	\$1,642,736	\$1,724,873
Total Operating Expenses			\$42,463,893	\$46,958,283	\$49,306,198	\$51,771,507	\$54,360,083	\$57,078,087

Existing Debt	Category	Escalation	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031
			<i>Estimated</i>	<i>Budgeted</i>	<i>Projected</i>	<i>Projected</i>	<i>Projected</i>	<i>Projected</i>
Series 2014	Existing Debt	Non-inflated	\$703,338	\$703,638	\$703,488	\$702,888	\$706,169	\$703,131
Ibank	Existing Debt	Non-inflated	\$1,366,204	\$1,363,905	\$1,361,532	\$1,359,082	\$1,356,552	\$1,353,940
Series 2019	Existing Debt	Non-inflated	\$1,375,250	\$1,379,000	\$1,376,500	\$1,378,000	\$1,378,250	\$1,377,250
Line of Credit	Existing Debt	Non-inflated	\$7,190,176	\$790,176	\$0	\$0	\$0	\$0
SRF NCD I/O	Existing Debt	Non-inflated	\$3,814,469	\$3,814,222	\$3,813,971	\$3,813,716	\$3,813,458	\$3,813,197
SRF Tanks	Existing Debt	Non-inflated	\$1,727,200	\$1,734,842	\$1,734,842	\$1,734,842	\$1,734,842	\$1,734,842
SRF NCP	Existing Debt	Non-inflated	\$235,500	\$593,000	\$1,270,000	\$1,451,000	\$1,635,500	\$1,940,000
WIFIA (1)	Existing Debt	Non-inflated	\$1,223,130	\$1,776,748	\$3,210,448	\$5,654,401	\$6,561,904	\$6,561,904
WIFIA (2)	Existing Debt	Non-inflated	\$0	\$0	\$0	\$0	\$0	\$767,806
Total Existing Debt			\$17,635,267	\$12,155,531	\$13,470,781	\$16,093,928	\$17,186,675	\$18,252,070

Capital Funding	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031
	<i>Budgeted</i>	<i>Projected</i>	<i>Projected</i>	<i>Projected</i>	<i>Projected</i>
Total CIP Expense	\$42,048,740	\$52,197,098	\$54,095,328	\$67,438,123	\$71,357,435
CIP Funding Sources					
Grant Funding	\$0	\$0	\$0	\$0	\$0
WIFIA/SRF Funding	\$28,855,741	\$39,003,843	\$38,389,067	\$30,102,901	\$24,645,801
Bond Funding	\$0	\$0	\$0	\$23,000,000	\$29,000,000
Cash Funding	\$13,192,999	\$13,193,255	\$15,706,261	\$14,335,222	\$17,711,634

APPENDIX C – Capital

CIP (Current Dollars)	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031
c700025 - Graham Hill WTP Facility Improvement Plan (WIFIA Loan)	\$15,039,004	\$17,041,615	\$16,558,913	\$16,118,147	\$15,335,201
c700025 - Graham Hill WTP Facility Improvement Plan (SRF loan)	\$3,407,942	\$17,737,192	\$17,234,787	\$4,851,312	\$0
c700025 Graham Hill WTP Facility Improvements Project (PayGo)	\$0	\$0	\$0	\$11,924,718	\$15,961,128
c701501 - Graham Hill WTP Concrete Tanks (PayGo)	\$59,667	\$59,667	\$0	\$0	\$0
c701505 - University Tank No. 4 Rehab/Replacement (Pay Go)	\$650,852	\$0	\$0	\$0	\$0
c701505 - University Tank No. 4 Rehab/Replacement (WIFIA Loan)	\$677,417	\$0	\$0	\$0	\$0
c701606 - Newell Creek Dam Inlet/Outlet Replacement (PayGo)	\$402,495	\$173,495	\$131,151		\$0
c701609 - ASR Planning	\$266,220	\$155,550	\$89,250	\$22,950	\$0
c701609/10 - ASR (WIFIA)	\$255,780	\$149,450	\$85,750	\$22,050	\$0
c701705 - Water Supply Augmentation (WIFIA)	\$2,573,297	\$2,860,725	\$3,734,679	\$9,071,115	\$9,310,600
c701705 - Water Supply Augmentation (PayGo)	\$2,678,330	\$2,977,489	\$3,887,115	\$9,441,364	
c701705 - Water Supply Augmentation (SRF)					\$9,690,625
c701806 - Riverbank Filtration Study	\$-	\$-	\$-	\$-	
c701901 - HDR Program Management Contract	\$2,157,010	\$2,067,587	\$1,438,643	\$1,252,357	\$1,295,821
c701903 - Tait Diversion Rehab/Replacement Project	\$0	\$41,367	\$243,586	\$427,242	\$453,545
c701906 - Felton Diversion					
c702002 - Brackney Landslide Area Pipeline Risk Reduction (PayGo)			\$633,222	\$1,701,444	
c702002 - Brackney Landslide Area Pipeline Risk Reduction (TBD)					\$638,736
c702101 - Beltz 8&12 Design and 12 Construction (PayGo)	\$110,989	\$19,600	\$19,600		
c702101 - Beltz 8&12 Design and 12 Construction (WIFIA)	\$115,519	\$20,400	\$20,400		
C702503 Beltz 8 Upgrades for ASR (PayGO)	\$2,111,624	\$142,392	\$41,922	\$41,922	
C702503 Beltz 8 Upgrades for ASR (WIFIA)	\$2,028,815	\$136,808	\$40,278	\$40,278	
C70xxxx-Beltz 9 Upgrades for ASR (PayGo)	\$366,811	\$1,100,823	\$743,414	\$0	
C70xxxx-Beltz 9 Upgrades for ASR (WIFIA)	\$352,427	\$1,057,653	\$714,260	\$0	
c702105 - Newell Creek Pipeline Felton/Graham Hill	\$4,405,540				
c702105 - Newell Creek Pipeline Felton/Graham Hill (PayGo)		\$132,408	\$40,628	\$40,628	\$20,914
c702205 - Intertie 1 - Santa Cruz-Scotts Valley	\$121,675	\$30,099	\$15,050		
c702305 - Beltz WTP Upgrades	\$611,155	\$1,480,727	\$1,563,227	\$7,157,152	\$7,005,126
c702305 - Beltz WTP Upgrades (Funding TBD)					\$6,730,416
c702901 - Coast Pump Station Rehab/Replacement		\$536,808	\$557,690	\$619,813	\$696,017
c702901 - Coast Pump Station Rehab/Replacement (TBD)					
c702801 - Newell Creek Pipeline Felton/Loch Lomond		\$0	\$0	\$0	\$949,306
c702801 - Newell Creek Pipeline Felton/Loch Lomond (TBD)					
c702603 - Pasatiempo Tanks Replacement	\$279,778	\$468,849	\$2,841,763	\$1,435,632	
c702303 - North Coast System Phase 4 & 5		\$500,000	\$0	\$0	\$0
c702602 - Photovoltaic Systems Improvements	\$70,000				
c700002 - Main Replacements - Engineering	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000
c700003 - Main Replacements - Outside Agency	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
c700004 - Main Replacements - Customer Initiated	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
c701507 - Mains Replacements- Distribution Section	\$750,000	\$750,000	\$750,000	\$750,000	\$750,000
c701907 - Facility & Infrastructure Improvements	\$420,000	\$420,000	\$420,000	\$420,000	\$420,000
e702301 - DR 4683 Felton Diversion Pipeline	\$36,394	\$36,394	\$0	\$0	\$0
c702202 - CMMS Software Replacement - Water Share	\$0	\$0	\$190,000	\$0	\$0
Ongoing Capital					
Total CIP (Current Dollars)	\$42,048,740	\$52,197,098	\$54,095,328	\$67,438,123	\$71,357,435

APPENDIX D – Functional Allocations

Assets for Infrastructure Allocation	Categorization	Total Replacement Cost	Customer	Capacity	Meter Cost	All Raw Water	All Potable Water	Base	Base to Average	Average to Peak	Peak	Fire	Functional Allocation Total	As All Other
General	General	\$28,698,098		50.00%		0.06%	49.94%						100.00%	
Treatment	Treated Water	\$166,870,413						65.36%	17.91%	12.30%	4.43%		100.00%	
Treated Water Transmission	Treated Water	\$31,200,602						65.36%	17.91%	12.30%	4.43%		100.00%	
Treated Water Distribution	Treated Water	\$491,676,912						65.36%	17.91%	12.30%	4.43%		100.00%	
Fire Laterals	Fire	\$7,997,194										100.00%	100.00%	
Treated Water Storage	Treated Water	\$44,872,975						65.36%	17.91%	12.30%	4.43%		100.00%	
Treated Water Elevation Pumping	Treated Water	\$9,294,850						65.36%	17.91%	12.30%	4.43%		100.00%	
Raw Water Transmission	Raw Water	\$149,922,450		50.00%		0.06%	49.94%						100.00%	
Raw Water Pumping	Raw Water	\$11,577,493		50.00%		0.06%	49.94%						100.00%	
Raw Water Storage	Raw Water	\$146,939,405		50.00%		0.06%	49.94%						100.00%	
Meters	Meters	\$12,683,526			100.00%								100.00%	
Customer Service	Customer Service	\$154,926	100.00%										100.00%	
Functional Allocation (\$)			\$154,926	\$168,568,723	\$12,683,526	\$189,511	\$168,379,213	\$486,204,577	\$133,210,825	\$91,513,329	\$32,987,023	\$7,997,194	\$1,101,888,845	
Functional Allocation (%)			0.01%	15.30%	1.15%	0.02%	15.28%	44.12%	12.09%	8.31%	2.99%	0.73%		

Production Allocation	Total Replacement Cost	Replacement Cost	All Raw Water	All Potable Water	Base	Base to Average	Average to Peak	Peak
Treated Water	\$751,912,946	70.91%			65.36%	17.91%	12.30%	4.43%
Raw Water	\$308,439,348	29.09%	0.11%	99.89%				
Functional Allocation Amounts (%)	\$1,060,352,294		0.03%	29.06%	46.35%	12.70%	8.72%	3.14%

Allocation Basis	Notes	Customer	Capacity	Meter Cost	Fire	Raw Water	Potable Water	Base to Average	Average to Peak	Peak	As All Other
General	Used for allocating non-functional costs.										100.00%
Customer Services	Used for allocating customer service related costs.	100.00%									
Meters	Used for allocating meter related costs.			100.00%							
All Demand	Used for allocating per volumetric unit costs benefitting all demand such as raw water system costs.					0.11%	99.89%				
Potable Demand	Used for allocating per volumetric unit costs benefitting only potable water.						100.00%				
Potable Peak	Used for allocating treated water system costs serving peak capacity. Allocation amounts reflect maximum month use in each Base-Extra Category.							65.36%	17.91%	12.30%	4.43%
Infrastructure	Used for allocating Infrastructure related costs based on the replacement cost of system assets.	0.01%	15.30%	1.15%	0.73%	0.02%	15.28%	44.12%	12.09%	8.31%	2.99%
Potable Peak + Raw	Used for allocating costs that benefit both treated and raw water operations. Allocation is based on portion of raw and treatments assets where the treated portion is allocated as Potable Peak allocations and the raw portion is allocated as All Demand.					0.03%	29.06%	46.35%	12.70%	8.72%	3.14%

APPENDIX E – Elevation Surcharge Costs

Pump Station	Lift Order	TOTAL FY 24-25 CCF pumped	Total KW Hrs	kW hrs per Unit	Cost per Unit Pumped	Total Cost	Suction PSI	Discharge PSI	Added PSI	Cost per PSI per CCF	Total Cost
Carbonera PS	1	141,685.83	132,505.00	0.94	0.43	\$60,687	73.00	162.00	89.00	\$0.00	\$0.43
Pasatiempo PS	1	88,409.09	Unmetered		0.77	\$67,882	13.00	179.00	166.00		\$0.00
Kite Hill HYDRO	2	2,923.80	2,924.00	1.00	0.46	\$1,339	8.00	56.00	48.00	\$0.01	\$0.46
Rolling Woods PS	2	33,057.49	26,904.00	0.81	0.37	\$12,322	42.00	122.00	80.00	\$0.00	\$0.37
SC Gardens PS	1	72,532.09	94,400.00	1.30	0.60	\$43,235	34.00	143.00	109.00	\$0.01	\$0.60
University #2 PS	1	381,641.71	131,291.00	0.34	0.16	\$60,131	14.00	92.00	78.00	\$0.00	\$0.16
Springtree Hydro	2	0.00	10,428.00	0.00	0.00	\$0	64.00	88.00	24.00	\$0.00	\$0.00
University #4 PS	2	240,276.74	248,989.00	1.04	0.47	\$114,037	10.00	148.00	138.00	\$0.00	\$0.47
University #6 PS	3	181,697.86	191,280.00	1.05	0.48	\$87,606	7.00	107.00	100.00	\$0.00	\$0.48
Total for Pasatiempo PS Cost Calculation									642.00		\$2.97
									Weighted AVG=	\$0.005	

Note 1: 1 Unit =748 gallons

Note 2: Cost per kWh averaged across entire utility all pumping electric use, so includes TOU and benefit of solar (\$0.458/kWh)

APPENDIX F – Drought Surcharge Derivation

The drought surcharge is derived by first identifying the volumetric rate revenue requirement at each Water Shortage Response Stage. The volumetric revenue requirement is equal to the baseline volumetric revenue requirement, reduced to reflect the reduction in marginal costs associated with producing less water. Next, the volumetric rate revenue from existing rates in each Water Shortage Response Stage is projected. Then, amount of revenue needed from the drought surcharges is calculated by subtracting the volumetric rate revenue from existing rates from the volumetric revenue requirement. This additional revenue needed from the drought surcharge is then divided by the projected volumetric revenue at existing rates under the applicable drought stage to calculate the drought surcharge percentage. To streamline the surcharge application and ensure the surcharge does not exceed the cost of service, the drought surcharge at each stage is the lowest calculated surcharge rounded to the nearest whole percentage. Finally, the drought surcharges are calculated by multiplying the drought surcharge percentage by each volumetric rate. Customers will pay the existing volumetric rates and the drought surcharge that corresponds with each Water Shortage Response Stage.

Drought Surcharge Derivation by Drought Stage

Drought Surcharge Derivation by Drought Stage				Baseline	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	
Target Water Use Reduction				0%	10%	20%	30%	40%	50%	
Marginal Costs			Marginal Costs ¹							
Reduction	Electricity	Chemicals								
Existing COS	\$2,409,146	\$575,000	\$2,984,146	\$0	\$298,415	\$596,829	\$895,244	\$1,193,658	\$1,492,073	
Jan. 1, 2027	\$2,400,000	\$633,000	\$3,033,000	\$0	\$303,300	\$606,600	\$909,900	\$1,213,200	\$1,516,500	
Jan. 1, 2028	\$2,520,000	\$664,650	\$3,184,650	\$0	\$318,465	\$636,930	\$955,395	\$1,273,860	\$1,592,325	
Jan. 1, 2029	\$2,646,000	\$697,883	\$3,343,883	\$0	\$334,388	\$668,777	\$1,003,165	\$1,337,553	\$1,671,941	
Jan. 1, 2030	\$2,778,300	\$732,777	\$3,511,077	\$0	\$351,108	\$702,215	\$1,053,323	\$1,404,431	\$1,755,538	
Jan. 1, 2031	\$2,917,215	\$769,415	\$3,686,630	\$0	\$368,663	\$737,326	\$1,105,989	\$1,474,652	\$1,843,315	
Volumetric Revenue Requirement										
Existing COS				\$48,861,149	\$48,562,734	\$48,264,320	\$47,965,905	\$47,667,490	\$47,369,076	
Jan. 1, 2027				\$52,281,429	\$51,978,129	\$51,674,829	\$51,371,529	\$51,068,229	\$50,764,929	
Jan. 1, 2028				\$58,555,201	\$58,236,736	\$57,918,271	\$57,599,806	\$57,281,341	\$56,962,876	
Jan. 1, 2029				\$65,581,825	\$65,247,437	\$64,913,048	\$64,578,660	\$64,244,272	\$63,909,884	
Jan. 1, 2030				\$71,484,189	\$71,133,081	\$70,781,974	\$70,430,866	\$70,079,758	\$69,728,651	
Jan. 1, 2031				\$77,917,766	\$77,549,103	\$77,180,440	\$76,811,777	\$76,443,114	\$76,074,451	
Volumetric Rate Revenue Without Surcharges			Rate Revenue Increases							
Existing COS				0.00%	\$48,861,149	\$43,975,034	\$39,088,919	\$34,202,804	\$29,316,689	\$24,430,574
Jan. 1, 2027				7.00%	\$52,281,429	\$47,053,286	\$41,825,143	\$36,597,000	\$31,368,858	\$26,140,715
Jan. 1, 2028				12.00%	\$58,555,201	\$52,699,681	\$46,844,161	\$40,988,641	\$35,133,120	\$29,277,600
Jan. 1, 2029				12.00%	\$65,581,825	\$59,023,642	\$52,465,460	\$45,907,277	\$39,349,095	\$32,790,912
Jan. 1, 2030				9.00%	\$71,484,189	\$64,335,770	\$57,187,351	\$50,038,932	\$42,890,513	\$35,742,095
Jan. 1, 2031				9.00%	\$77,917,766	\$70,125,989	\$62,334,213	\$54,542,436	\$46,750,660	\$38,958,883
Revenue Requirement for Drought Surcharges										
Existing COS				\$0	\$4,587,700	\$9,175,401	\$13,763,101	\$18,350,801	\$22,938,501	
Jan. 1, 2027				\$0	\$4,924,843	\$9,849,686	\$14,774,529	\$19,699,372	\$24,624,215	
Jan. 1, 2028				\$0	\$5,537,055	\$11,074,110	\$16,611,165	\$22,148,220	\$27,685,275	
Jan. 1, 2029				\$0	\$6,223,794	\$12,447,588	\$18,671,383	\$24,895,177	\$31,118,971	
Jan. 1, 2030				\$0	\$6,797,311	\$13,594,622	\$20,391,934	\$27,189,245	\$33,986,556	
Jan. 1, 2031				\$0	\$7,423,114	\$14,846,227	\$22,269,341	\$29,692,454	\$37,115,568	
Drought Surcharge										
Existing COS				0.0%	10.4%	23.5%	40.2%	62.6%	93.9%	
Jan. 1, 2027				0.0%	10.5%	23.5%	40.4%	62.8%	94.2%	
Jan. 1, 2028				0.0%	10.5%	23.6%	40.5%	63.0%	94.6%	
Jan. 1, 2029				0.0%	10.5%	23.7%	40.7%	63.3%	94.9%	
Jan. 1, 2030				0.0%	10.6%	23.8%	40.8%	63.4%	95.1%	
Jan. 1, 2031				0.0%	10.6%	23.8%	40.8%	63.5%	95.3%	
Rounded Drought Surcharge					10.0%	23.0%	40.0%	63.0%	94.0%	