



RESOLUTION NO. 2023-51  
RESOLUTION NO. PFA-01  
ORDINANCE NO. 2023-01

## **AGENDA**

### **OUR MISSION**

Protect, enhance, and develop Calaveras County's water resources and watersheds to provide safe, reliable, and cost-effective services to our communities.

2021-2026 Strategic Plan, Adopted April 28, 2021, and can be viewed at this [link](#)

Special Board Meeting  
Wednesday, September 13, 2023  
5:30 p.m.

[Calaveras County Water District](#)  
120 Toma Court  
San Andreas, California 95249

**Board Chambers are open to the public and the following alternative is available to members of the public who wish to participate in the meeting virtually:**

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### Microsoft Teams meeting

**Join on your computer or mobile app**

[Click here to join the meeting](#)

**Or call in (audio only)**

[+1 323-647-8603,,992667616#](#) United States

Phone Conference ID: 992 667 616#

In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please contact the Administration Office at 209-754-3028. Notification in advance of the meeting will enable CCWD to make reasonable arrangements to ensure accessibility to this meeting. Any documents that are made available to the Board before or at the meeting, not privileged or otherwise protected from disclosure, and related to agenda items, will be made available at CCWD for review by the public.

### **ORDER OF BUSINESS**

#### **CALL TO ORDER / PLEDGE OF ALLEGIANCE**

#### **1. ROLL CALL**

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#### **BOARD OF DIRECTORS**

Scott Ratterman, President  
Cindy Secada, Director

Russ Thomas, Vice President  
Bertha Underhill, Director

Jeff Davidson, Director

2. **PUBLIC COMMENT**

At this time, members of the public may address the Board on any non-agendized item. The public is encouraged to work through staff to place items on the agenda for Board consideration. No action can be taken on matters not listed on the agenda. Comments are limited to three minutes per person.

3. **PUBLIC HEARING**

**PROPOSED WATER AND WASTEWATER RATE ADJUSTMENTS**

- Presentation
- Open Public Hearing
- Receive Public Comments/Questions
  - Limit one comment per person and 3 minutes per comment
- Close Public Hearing
- Board of Directors Discussion/Action Regarding Adoption of Proposed Water and Wastewater Rates

**ORD 2023-\_\_\_\_\_**

4. **REPORTS**

4a\* General Manager's Report  
(Michael Minkler)

5. **BOARD REPORTS / INFORMATION / FUTURE AGENDA ITEMS**

6. **NEXT BOARD MEETINGS**

- Wednesday, September 27, 2023, 1:00 p.m., Regular Board Meeting
- Wednesday, October 11, 2023, 1:00 p.m., Regular Board Meeting

7. **ADJOURNMENT**

# Agenda Item

DATE: September 13, 2023  
TO: Michael Minkler, General Manager  
FROM: Jeffrey Meyer, Director of Administrative Services  
SUBJECT: Public Hearing – Proposed Water and Wastewater Rate Adjustments

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## RECOMMENDED ACTION:

Motion \_\_\_\_\_ / \_\_\_\_\_ adopting Ordinance 2023-01 approving the District’s proposed Water and Wastewater Rate Plan.

## SUMMARY:

As an independent Special District, the Calaveras County Water District (“District”) must collect funds necessary to support its operations and infrastructure. Per District policy, the District must review its water and wastewater rates for adequacy and propose adjustments if required. A detailed discussion of the process and the outcomes is included below. The bottom line is that despite cost control efforts that have resulted in a very tight budget, cost increases over the last few years have driven the District’s costs beyond current revenues. In particular, construction costs for the critical infrastructure that our communities depend on have increased far beyond other inflation rates.

Failure is not an option when it comes to water and sewer service, so when expenses go up, the District must raise revenue to cover costs. In CCWD’s case, system failures could lead to interruptions in services, which have public health and safety implications. Since our primary source of revenue comes via water and wastewater rates, the District must evaluate current rates and the need for increases in order to cover costs.

CCWD’s staff and Board are made up of dedicated, local staff, including many who pay the District’s water and sewer rates. We understand the financial hardships many are facing due to rising costs of everything, from utilities, insurance, food, and gas, to everyday household materials and supplies. However, we cannot sacrifice the water and wastewater systems that serve our communities. We are committed to working with local partners and other public agencies to find ways to provide assistance to those in need.

## Proposition 218

Proposition 218 is an amendment to the California Constitution that was adopted by ballot proposition in 1996. Among other things, it sets forth the process that water districts must follow before raising water and sewer rates. Rates can only be increased

at a properly noticed public hearing, which necessitates a written notice that is mailed to affected property owners at least 45 days prior to the public hearing. In this case, notice of the September 13<sup>th</sup> rate hearing was mailed on July 27<sup>th</sup>, which was 48 days in advance of the hearing.

Prop 218 also established a protest process that can prevent a proposed rate increase from going into effect if a majority of the affected property owners submit written protests against the rate increases. Some water agencies allow tenants to be the customer who is ultimately liable for rates, but for CCWD it is always the landowner who is responsible for the bill. This is true even if a rental agreement passes the bill on to a tenant or when CCWD provides a courtesy copy of the bill to a tenant. If a bill goes unpaid, the landowner is liable to CCWD, which is why only the landowner is eligible to protest under Prop 218.

Other key requirements of Prop 218 include:

- Calculation of rates: Rates must be calculated based on the actual cost of delivering the service and cannot exceed that amount.
- Restricted revenue: Rate revenue can only be used to provide the services for which the rate is imposed.
- Fair allocation: Rates must be allocated proportionately among property owners, regardless of the income level of the property owner.

### **Public Outreach**

In addition to the Prop 218 minimum notice requirements, since October 2022 the District has held fourteen publicly noticed Finance Committee and Board Meetings to address the rate setting process and the funding requirements for the District's water and wastewater services. The District also held three town hall meetings earlier this year where rate increases were discussed and three additional community meetings after the Prop 2018 notice of the proposed rate increase was mailed. This is in addition to numerous social media and webpage posts about the rate study process, notification on billing statements, and countless other interactions with community groups and customers.

Despite CCWD's outreach efforts, CCWD has heard from many customers that they were surprised by the timing and the magnitude of the proposed rate increases. The District has received many constructive suggestions on ways to improve outreach efforts and keep customers informed. CCWD has limited resources dedicated to public outreach, but as a non-profit public agency, transparency is among our highest priorities and we recognize the important role that public outreach plays in transparency. The District is committed to continue to improve our public outreach efforts and we welcome feedback and participation from our customers and partners.

### **Cost of Service Study**

The District hired IB Consulting to assist with developing a complete cost of service study for both water and wastewater operations (attached) and calculate the revenue requirements for each system. It is standard practice in the water industry to use expert consultants for this effort to conduct a thorough review of the District's finances and to

ensure best practices are used for financial modeling and rate setting. The cost of service study determines the revenue required to provide sufficient funding for the District's operations and maintenance, debt service, capital improvement programs, and meet the District's financial reserves requirements. The cost of service study also included a financial analysis and a rate design analysis for both water and wastewater systems.

The cost of service study identified funding deficiencies in the District's water and wastewater operations. Over several months in open, public meetings, the Board of Directors reviewed the requirements and various rate design proposals and provided feedback. On July 12, 2023, after multiple iterations that included additional budget cuts and reductions in the capital improvement program, the Board directed staff to move forward with the proposed five-year water and wastewater rate model and issue the 45-day notice for a public hearing to consider adoption of the proposed rates. The Board retains discretion to adopt rates that are lower than the proposed rate increases at the rate hearing.

The public hearing was initially set for September 13<sup>th</sup> at 1 p.m. After receiving feedback from the public that this hearing should be held in the evening to allow for greater participation, the District changed the time of the hearing to 5:30 p.m. and mailed an update to all property owners regarding the new time. The update also included notice of a new 120-day statute of limitations that applies to rate increases.

### **Reduced Rate Increase Alternative**

The Board of Directors held a special meeting on September 6, 2023, to discuss options that may result in a decrease of the proposed water and wastewater increases. After reviewing the key components of the five-year water and wastewater financial models, staff reiterated that the Operating Budget has already been reduced to ensure a very tight budget and lean staffing levels, and that further cuts could risk the District's ability to provide critical services or jeopardize the District's ability to recruit and retain the highly-skilled workforce that our communities depend on. Furthermore, the first-year proposed water rate increase is critical not only to fund operations but also to meet the District's debt service coverage ratio, which has important financial implications.

In reviewing the Capital Improvement Program (CIP) component, there are two important considerations. First, the CIP was already reduced to only the most critical projects prior to developing the proposed rate increases and many projects of concern were removed. Second, many of the remaining projects are funded in whole or in part by grants, loans, or reserves, so cutting those projects does not translate to a reduction in rates and could lead to even higher costs if the District loses grant funds for failure to provide the required local funding match.

Staff revisited the CIP and identified five potential CIP projects (three water projects totaling \$5.1 million and two wastewater projects totaling \$1.8 million) in years four and five of the rate study that could be deferred, not eliminated, until after the five-year rate plan. In evaluating this alternative with the Board, staff presented the potential cost savings as well as the risks associated with deferring the projects, including additional

overtime, potential inability to meet water and wastewater demand requirements, the risk of run-to-failure, and the risk of increased costs due to construction inflation factors.

IB Consulting provided the Board of Directors with adjusted rate numbers for both water and wastewater if the identified projects were deferred (attached). The proposed and adjusted annual water and wastewater rate increases are listed below:

	<b>Proposed Water Base and Consumptive Rate Increases</b>				
	Oct 16, 2023	Jul 16, 2024	July 16, 2025	Jul 16, 2026	July 16, 2027
Proposed	22%	18%	16%	16%	15%
Adjusted	22%	12%	13%	13%	13%

Removing the identified projects would also decrease the tiered consumption rates to:

Tier 1 15 hcf	<b>Proposed Water Consumptive Rate Increases</b>				
	Oct 16, 2023	Jul 16, 2024	Jul 16, 2025	Jul 16, 2026	Jul 16, 2027
Proposed	\$2.07	\$2.45	\$2.85	\$3.31	\$3.81
Adjusted	\$2.07	\$2.32	\$2.63	\$2.98	\$3.37

If the maximum rate increases are implemented each year, by the fifth year of the rate schedule a bi-monthly water bill under the proposed rates, including 187 gallons per day of water use, would be \$305.57 (\$152.79 per month or \$5.10 per day). Under the alternative reduced rate, the bi-monthly bill amount would be \$270.41 (\$135.21 per month or \$4.51 per day). The current bi-monthly bill amount is \$138.15 (\$68.96 per month or \$2.30 per day).

For wastewater, the reduced rate alternative would result in the following rate increases as compared to the proposed rate increase:

	<b>Proposed Wastewater Rate Increases</b>				
	Oct 16, 2023	Jul 16, 2024	Jul 16, 2025	Jul 16, 2026	Jul 16, 2027
Proposed	\$239.39	\$272.90	\$311.09	\$354.64	\$365.26
Adjusted	\$235.21	\$263.44	\$295.06	\$330.47	\$347.00

## **FINANCIAL CONSIDERATIONS:**

Water and wastewater rates are used to fund the District’s operations and maintenance, debt service, and capital outlay, and must also be sufficient to meet the District’s financial reserves requirements. The proposed water and wastewater rate increases will meet those obligations and provide funding for the District’s Capital Improvement Program (CIP).

Once a rate schedule is adopted, the Board has the option to reevaluate the District’s financial circumstances each year and implement rate increases that are lower than the maximum authorized amount. CCWD will continue its cost control efforts and will aggressively seek other sources of funding to mitigate rate increases to the extent possible.

working with our partners to advocate for improved assistance for low-income customers.

- Attachment: Ordinance 2023-01, Ordinance of Calaveras County Water District Modifying Rates for Water and Wastewater Services*
- *Calaveras County Water District 2023 Water and Wastewater Cost-of-Service Study*
  - *Calaveras County Water District September 6, 2023, Alternative Rate Adjustments*

**ORDINANCE NO. 2023-01**

**AN ORDINANCE OF CALAVERAS COUNTY WATER DISTRICT  
MODIFYING RATES FOR  
WATER AND WASTEWATER SERVICES**

**WHEREAS**, the Board of Directors of the Calaveras County Water District (District) has responsibility for establishing rates for the provision of District services and corresponding implementation policies; and

**WHEREAS**, the District has prepared financial and policy information in respect to the provision of water and wastewater services over the next five years for review by the Board of Directors and the public, and caused to be prepared the *2023 Cost-of-Service Study* dated July 2023 that recommended adjustments to water and wastewater rate schedules; and

**WHEREAS**, the Board of Directors held fourteen public meetings starting in October 2022 on the need to increase water and wastewater rates, including Board of Director meetings on October 12, 2022; and March 8, May 3, May 24, July 12, July 26, August 8, August 23, and September 6, 2023, regarding the Water and Wastewater financial and rate issues; and

**WHEREAS**, the Board of Directors has received considerable community input during the public meetings and town hall community meetings and has considered this input in formulating the proposed rates; and

**WHEREAS**, the District has, in accordance with Article XIID, Section 6 of the California State Constitution, provided written notices containing detailed descriptions of proposed water and wastewater rate changes for property owners who receive water and/or wastewater services from the District; and

**WHEREAS**, the Notice of Proposed Water and Wastewater Rate Increase, mailed July 27, 2023, included notification of a Public Hearing on September 13, 2023, to consider rate increases, said date having been established by Board action at its meeting on July 12, 2023; and

**WHEREAS**, the officially noticed Public Hearing was held Wednesday, September 13, 2023, and all members of the public present were given an opportunity to comment on the proposed Ordinance; and

**WHEREAS**, written protests received in accordance with the procedures outlined in Article XIID, Section 6 numbered less than half of the property owners served; and

**WHEREAS**, the Board of Directors finds that it is now necessary to modify existing rates relative to the provision of water and wastewater services.

**NOW, THEREFORE, BE IT ORDAINED** by the Board of Directors of the Calaveras County Water District as follows:



**Section 1. Purpose.** The purpose of this Ordinance is to increase water and wastewater rates as necessitated by the cost of providing and maintaining water and wastewater services, including, but not limited to, operations and maintenance, debt service, the capital improvement program, and meeting financial reserve requirements.

**Section 2. Findings.** The Board of Directors finds and determines as follows:

- The water and wastewater service rates implemented by this ordinance, in conjunction with other estimated revenue sources, have been fixed in an amount sufficient to pay the operating and maintenance expenses of the District's water and wastewater systems, pay the principal and interest on existing debt, provide sufficient revenues for reserve requirements, and continue funding the District's Capital Improvement Program.
- The increased water and wastewater rates are reasonably related to, and do not exceed, the District's cost of providing water and wastewater services.
- The revenues derived from the water rates do not exceed the funds required to provide water service and are not used for any other purpose than in the provision of water services.
- The revenues derived from the wastewater rates do not exceed the funds required to provide wastewater services and are not used for any other purpose than in the provision of wastewater services.
- The amount of the water and wastewater rates imposed on each water and wastewater service customer does not exceed the proportional cost of the water and/or wastewater service actually delivered or made available to every identified parcel of real property and/or customer within the District's service boundary.
- Every property subject to the rates established by this Ordinance actually uses the underlying service or the service is immediately available for that property's use.
- The District has, in accordance with Article XIID of the California State Constitution, provided written notices containing detailed descriptions of proposed water and wastewater rate changes to District property owners who receive service from the District and written protests presented to the District for the proposed rates did not exceed fifty percent (50%) of the property owners.
- The District conducted a duly noticed Public Hearing on September 13, 2023, concerning the proposed rate increases at which time the public had the opportunity to speak to the Board of Directors regarding the proposed increases and the Board of Directors considered the testimony received prior to making a final decision to implement the rate increases.

**Section 3. Water and Wastewater Rate Schedule.** The water and wastewater rates are established in accordance with the provisions of EXHIBIT 1 attached hereto and incorporated herein. The rates shown replace monthly water and wastewater charges established and adjusted by previous actions of the Board of Directors.

**Section 4. Effect on Existing Policies.** Any provision of any ordinance, resolution, fee, charge and/or other policy of the District in conflict with this Ordinance 2023-01 is hereby modified to the extent, and only to the extent, necessary to conform with the requirements provided herein. If any existing fees, charges and/or regulations in effect on the date of adoption of this ordinance are not in conflict herewith, said existing fees, charges and/or regulations shall remain in effect without modification.

**Section 5. Effective Date.** Consistent with Water Code Section 31105, this Ordinance shall become effective October 16, 2023.

**Section 6. Rates.**

The District's water and wastewater rates will be implemented as set forth in this Section.

1.1) **Bi-Monthly Water Rates - EXHIBIT 1, Schedule A** attached hereto shall be the basis for minimum water charges to customers receiving service.

1.1.1) **Base Rates - EXHIBIT 1, Table 1 of Schedule A** represents the bi-monthly water base rates charged for the sale of potable water through various meter sizes within the District service area.

1.1.1.1) **Effective Date** - The bi-monthly water base rates shown in **EXHIBIT 1, Table 1 of Schedule A** shall become effective October 16, 2023, and then July 16 of each year thereafter as shown. The first base rate increase shall occur on October 16, 2023.

1.1.2) **Consumptive Rates - EXHIBIT 1, Table 2 of Schedule A** represents the bi-monthly tiered consumptive rates in cubic feet (**cf**) applied to the average Residential meters, and the consumptive rates in cubic feet (**cf**) applied to the average Non-Residential and Irrigation/Landscape/Other meters. The usage charge is shown in dollars per hundred cubic feet (**\$/100 cf**).

1.1.2.1) **Effective Date** - The bi-monthly tiered rates shown in **EXHIBIT 1, Table 2 of Schedule A** shall become effective October 16, 2023, and then July 16 of each year thereafter as shown. The first tiered rate increase shall occur on October 16, 2023.

1.1.3) **Water Shortage Rates - EXHIBIT 1, Table 3 of Schedule A** represents the tiered consumptive rates applied to average bi-monthly water usage in cubic feet (**cf**) for Residential, Non-Residential and Irrigation/Landscape/Other meters. The usage charge is shown in dollars per hundred cubic feet (**\$/100 cf**).

1.1.3.1) **Effective Date** - The bi-monthly water shortage rates shown in **EXHIBIT 1, Table 3 of Schedule A** shall become effective October 16, 2023, and July 16 of each year thereafter as shown. The first tiered rate increase shall occur on October 16, 2023.

1.2.1) **Bi-Monthly Residential Wastewater Rates - EXHIBIT 1, Table 1 of Schedule B** attached hereto represents the bi-monthly wastewater flat rate charged for residential sanitary sewer service within the District service area.

1.2.1.1) **Table 1 in EXHIBIT 1, Schedule B** represents the charge for a standard single family residential connection (also referred to in Board policy documents as a single family dwelling equivalent ("SFDE") or equivalent single-family unit ("ESFU")).

1.2.1.2) **Effective Date** - The residential bi-monthly wastewater rates shown in **EXHIBIT 1, Table 1 of Schedule B** shall become effective October 16, 2023, and July 16 of each year thereafter as shown. The first rate increase shall occur on October 16, 2023.

1.2.2) **Bi-Monthly Non-Residential Wastewater Rates - EXHIBIT 1, Table 2 of Schedule B** attached hereto represents the bi-monthly wastewater flat rate charged for non-residential sanitary sewer service within the District service area.

1.2.2.1) **Table 2 in EXHIBIT 1, Schedule B** represents the charge for a standard single family residential connection (also referred to in Board policy documents as a single family dwelling equivalent ("SFDE") or equivalent single-family unit ("ESFU")).

1.2.2.2) **Effective Date** - The non-residential bi-monthly wastewater rates shown in **EXHIBIT 1, Table 2 of Schedule B** shall become effective October 16, 2023, and July 16 of each year thereafter as shown. The first rate increase shall occur on October 16, 2023.

1.3) **Future Rate Adjustments** - Within six months of July 16, 2028, the District will undertake a water and wastewater rate review.

**PASSED AND ADOPTED** this 13<sup>th</sup> day of September 2023, after a noticed Public Hearing by the following vote:

**AYES:**  
**NOES:**  
**ABSTAIN:**  
**ABSENT:**

CALAVERAS COUNTY WATER DISTRICT

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Scott Ratterman, President  
Board of Directors

ATTEST:

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Rebecca Hitchcock  
Clerk to the Board

# EXHIBIT 1

## Schedule A Monthly Water Rates

The bi-monthly water rate by meter size shall be effective as indicated in Table 1. The base rate charge does not include any water or consumptive use.

**Table 1**

### Bi-Monthly Water Base Rate Charges by Meter Size

Meter Size	Bi-Monthly Water Base Rate Charge				
	Oct 16, 2023	Jul 16, 2024	Jul 16, 2025	Jul 16, 2026	Jul 16, 2027
5/8"	\$136.03	\$160.52	\$186.21	\$216.01	\$248.42
3/4"	\$191.20	\$225.62	\$261.72	\$303.60	\$349.14
1"	\$301.54	\$355.82	\$412.76	\$478.81	\$550.64
1 1/2"	\$577.39	\$681.33	\$790.35	\$916.81	\$1,054.34
2"	\$908.41	\$1,071.93	\$1,243.44	\$1,442.40	\$1,658.76
3"	\$1,791.13	\$2,113.54	\$2,451.71	\$2,843.99	\$3,270.59

In addition to the above bi-monthly base rate charges, the bi-monthly water usage rate charges indicated in Table 2 shall apply for each 100 cubic feet (cf) of water used, based on customer type.

**Table 2**

### Bi-Monthly Water Tiered and Consumption Rate Charges (\$/100 cf)

Bi-Monthly Tiered Rates per 100 cf - Residential					
Water Use (cf)	Oct 16, 2023	Jul 16, 2024	Jul 16, 2025	Jul 16, 2026	Jul 16, 2027
0 – 1,500	\$2.07	\$2.45	\$2.85	\$3.31	\$3.81
1,501 – 3,000	\$2.25	\$2.66	\$3.09	\$3.59	\$4.13
over 3,000	\$2.49	\$2.94	\$3.42	\$3.97	\$4.57

<b>Bi-Monthly Tiered Rates per 100 cf - Non-Residential</b>					
Water Use (cf)	Oct 16, 2023	Jul 16, 2024	Jul 16, 2025	Jul 16, 2026	Jul 16, 2027
All Levels	\$2.29	\$2.71	\$3.15	\$3.66	\$4.21

<b>Bi-Monthly Tiered Rates per 100 cf - Irrigation / Landscape</b>					
Water Use (cf)	Oct 16, 2023	Jul 16, 2024	Jul 16, 2025	Jul 16, 2026	Jul 16, 2027
All Levels	\$2.27	\$2.68	\$3.11	\$3.61	\$4.16

**Table 3**

**Bi-Monthly Water Shortage Rate Charges (\$/100 cf)**

Only if implemented by the Calaveras County Water District Board of Directors, the bi-monthly water shortage rate charges will be in addition to the water base rate charges indicated in Table 1 and the water usage rate charges indicated in Table 2 and shall apply for each 100 cubic feet (cf) of water used.

<b>Bi-Monthly Water Shortage Rate Charges per 100 cf - All</b>					
Stage / Target	Oct 16, 2023	Jul 16, 2024	Jul 16, 2025	Jul 16, 2026	Jul 16, 2027
1 - 10%	\$0.17	\$0.17	\$0.17	\$0.17	\$0.17
2 - 13%	\$0.24	\$0.24	\$0.24	\$0.24	\$0.24
3 - 21%	\$0.39	\$0.39	\$0.39	\$0.39	\$0.39
4 - 38%	\$0.88	\$0.88	\$0.88	\$0.88	\$0.88
5 - 50%	\$1.41	\$1.41	\$1.41	\$1.41	\$1.41

**Schedule B**  
**Bi-Monthly Wastewater Rate Charges**

The following bi-monthly residential and non-residential wastewater rates represents the charge for a standard single family residential connection (also referred to in Board policy documents as a single-family dwelling equivalent (“SFDE”) or equivalent single-family unit (“ESFU”), and shall be effective as indicated below:

**Table 1**

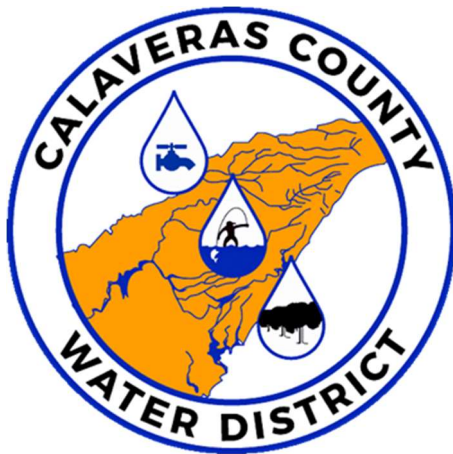
<b>Bi-Monthly Residential Wastewater Rate Charges</b>				
<b>Oct 16, 2023</b>	<b>Jul 16, 2024</b>	<b>Jul 16, 2025</b>	<b>Jul 16, 2026</b>	<b>Jul 16, 2027</b>
\$239.39	\$272.90	\$311.09	\$354.64	\$365.26

**Table 2**

<b>Bi-Monthly Non-Residential Wastewater Rate Charges</b>				
<b>Oct 16, 2023</b>	<b>Jul 16, 2024</b>	<b>Jul 16, 2025</b>	<b>Jul 16, 2026</b>	<b>Jul 16, 2027</b>
\$239.39	\$272.90	\$311.09	\$354.64	\$365.26

Public Hearing  
September 13, 2023

*Calaveras County Water District  
2023 Cost-of-Service Study*



IB Consulting, LLC

31938 Temecula Parkway, Suite A #350

Temecula, CA. 92592

# Calaveras County Water District – 2023 Cost-of-Service Study

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## Executive Summary

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The Calaveras County Water District (District) is a local public agency that provides water and wastewater services to customers in portions of Calaveras County in the Central Sierra Nevada foothills in the northeastern part of the State. CCWD boundaries encompass approximately 1,037 square miles of land, ranging from the San Joaquin Valley at its western edge to the Sierra Nevada Mountains in the east. The District must collect sufficient revenues from its customers to pay the costs to (1) prudently operate and maintain each of its two utilities (2) build, renew, replace, and upgrade its infrastructure, and (3) ensure a prudent reserve of funds.

The District collects rate revenues designed to ensure that each customer pays their fair share of their total use of the District's systems. This Cost-of-Service Study is intended to (1) establish the total projected cost for each system over a five-year period (the financial plan); and (2) allocate those costs among customers in a way that ensures that each customer pays its fair share of those costs in compliance with California Constitution Article XIII D, section 6, also known as Proposition 218 (the rate structure).

The District's most recent 5-year rate schedule was adopted in May 2018, with rate schedules from Fiscal Year 2018-19 (FY 2019) through FY 2023. The District selected IB Consulting to conduct a comprehensive cost-of-service analysis to establish rates for the District's water and wastewater systems for the 5-year period from FY 2024 through FY 2028 (Rate Setting Period). That analysis is set forth below.

## Water Utility Summary

### Financial Plan

Updating the water utility's long-term financial plan and performing a comprehensive cost-of-service analysis is a prudent business practice to ensure the District can fully fund its revenue needs through FY 2028 and beyond. The first step in reviewing and updating water rates is to thoroughly check the financial health of the District's water utility. Based on a financial review of the water utility at current rates, the District is projected to end FY 2024 with an operating deficit of -\$2.2M, which will grow to approximately -\$5.1M by FY 2028. In addition, the District's outstanding debt obligations require debt service coverage equal to 125% of the annual debt payments, which would not be satisfied in FY 2024 without any rate adjustments. Separate from operating expenses, the water utility has significant capital projects over the next five years totaling \$55.3M, which does not encompass all capital projects. Through multiple reviews by District staff, non-critical projects that were originally scheduled during the Rate Setting Period have been removed.

The District has an existing loan with \$18.6M of available funding remaining to support the planned capital projects, with the balance of funding coming from reserves. However, without rate increases, reserves would be depleted by FY 2026. The proposed financial plan generates an additional \$42M in rate revenue, phased in over the Rate Setting Period. In addition, a new debt issuance is proposed to occur in FY 2025, providing additional proceeds of \$16.5M to cover the capital expenses through FY 2027 and a portion of FY 2028. The new debt issue and related proceeds will allow rate revenue to increase more slowly over time and fund a majority of capital on a Pay-As-You-Go (PAYGO) basis by FY 2028.

The total proposed debt issue, covering both water and wastewater utilities, is expected to equal \$22.5M, with \$16.5M for the water utility and \$6M for the wastewater utility. The debt financing assumes a 20-year term at a 5% annual interest rate, with a 2% issuance cost.

# Calaveras County Water District – 2023 Cost-of-Service Study

## Rate Structure

The District's water rate structure has both fixed and variable components. The fixed component includes a base fixed charge and a separate R&R charge that goes directly to the District's capital needs. Both fixed charges vary by meter size and are charged to all customers.

Variable rates differ by customer class due to variations in their use of the system and, therefore the costs to serve those customer classes. Single-Family customers are currently subject to a four-tiered rate structure, charged in Hundred Cubic Feet<sup>1</sup> (HCF) increments. All other customer classes pay their proportionate share of costs through uniform rates per HCF.

The detailed cost-of-service analysis within this report includes adjustments to the existing rate structure. The proposed fixed charges will still recover a majority of the District's revenue requirements (75% fixed cost recovery); however, the R&R component will no longer be a separate dedicated charge. This will allow the District to use those funds for capital, debt payments related to capital, and to satisfy the debt service coverage requirements. Residential tiers will reduce from four tiers to a three-tiered rate structure reflecting water usage characteristics throughout the year (Tier 1 = winter average [15 hcf], Tier 2 = summer average [30 hcf], and Tier 3 = greater than Tier 2).

Due to the broad spectrum of possible commercial uses within the Non-Residential category, the Non-Residential rate structure will maintain a uniform rate to ensure equity between accounts within the customer class. Similarly, Irrigation will also maintain a uniform rate as tiered rates would require additional data related to the amount of irrigable area served by each meter.

By adopting the proposed financial plan and approving rates through FY 2028, the water utility will generate positive net income above operating expenses, cover its system reinvestments and exceed its minimum reserve requirement by FY 2028.

The proposed rates have been incorporated into a Proposition 218 Notice and mailed to each customer. A Public Hearing is scheduled for September 13, 2023, on the proposed rates identified in Table 1 and Table 2. If there is no majority protest, and the Board of Directors approves this Cost-of-Service study and the proposed rates, then the proposed rates for FY 2024 will go into effect on October 1, 2023, with subsequent adjustments occurring each July 1st thereafter.

*Table 1: Proposed Bi-Monthly Water Fixed Charges*

Total Fixed Meter Charges (\$/Bi-Month)					
Meter Size	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
5/8"	\$136.03	\$160.52	\$186.21	\$216.01	\$248.42
3/4"	\$191.20	\$225.62	\$261.72	\$303.60	\$349.14
1"	\$301.54	\$355.82	\$412.76	\$478.81	\$550.64
1 1/2"	\$577.39	\$681.33	\$790.35	\$916.81	\$1,054.34
2"	\$908.41	\$1,071.93	\$1,243.44	\$1,442.40	\$1,658.76
3"	\$1,791.13	\$2,113.54	\$2,451.71	\$2,843.99	\$3,270.59
4"	\$2,784.19	\$3,285.35	\$3,811.01	\$4,420.78	\$5,083.90
6"	\$5,542.69	\$6,540.38	\$7,586.85	\$8,800.75	\$10,120.87
8"	\$8,852.89	\$10,446.42	\$12,117.85	\$14,056.71	\$16,165.22

<sup>1</sup> 1 HCF = 748 gallons

# Calaveras County Water District – 2023 Cost-of-Service Study

Table 2: Proposed Variable Water Rates

Variable Rates (\$/HCF)						
Customer Class	Tier Definitions (HCF)	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Residential						
Tier 1	0 - 15	\$2.07	\$2.45	\$2.85	\$3.31	\$3.81
Tier 2	16 - 30	\$2.25	\$2.66	\$3.09	\$3.59	\$4.13
Tier 3	>30	\$2.49	\$2.94	\$3.42	\$3.97	\$4.57
Non-Residential	Uniform	\$2.29	\$2.71	\$3.15	\$3.66	\$4.21
Irrigation	Uniform	\$2.27	\$2.68	\$3.11	\$3.61	\$4.16

## Wastewater Utility Summary

Based on a financial review of the wastewater utility at current rates, the District will cover operating expenses and generate positive net income through FY 2027, with a projected deficit in FY 2028. However, net annual operating income alone cannot cover the capital spending needs for system reinvestment. Therefore, additional rate revenue is needed to fund system reinvestment and build up reserves to satisfy the utility's minimum reserve requirements. The proposed financial plan and recommended adjustments would generate an additional \$16M over the Rate Setting Period, and the proposed FY 2025 debt issuance would provide \$6M in new money to fund capital costs in FY 2025 and a portion in FY 2026. The proposed financial plan would leverage debt to fund capital in the short-term while rate revenue increases through a phase-in approach to cover the capital spending needs on a PAYGO by FY 2027.

The District's existing wastewater rate structure consists of flat monthly fixed charges to residential customers for each dwelling unit. Commercial customers are also charged a monthly fixed charge per Equivalent Dwelling Unit (EDU).

The proposed wastewater rates derived within this report include a slight restructuring of commercial wastewater rates, where the rate per EDU will be equivalent to the Residential rate. The assignment of EDUs to each commercial account will remain the same. The recommended wastewater rates are included within the Proposition 218 Notice, and a Public Hearing is scheduled for September 13, 2023, on the proposed rates identified in Table 3. If there is not a majority protest, proposed rates for FY 2024 will go into effect on October 1, 2023, with subsequent adjustments occurring each July 1st thereafter.

Table 3: Proposed Wastewater Rates

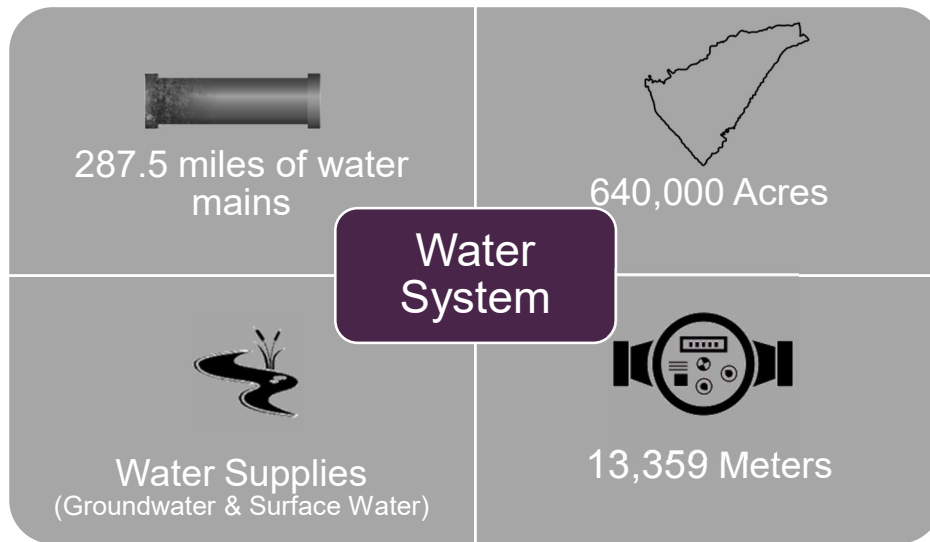
Total Fixed Charges (\$/Bi-Month/EDU)					
Customer Class	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Residential	\$239.39	\$272.90	\$311.09	\$354.64	\$365.26
Non-Residential	\$239.39	\$272.90	\$311.09	\$354.64	\$365.26

## Water Utility

### Water System

The District provides water from groundwater wells and the Mokelumne, Calaveras, and Stanislaus rivers to six service areas ranging in elevation from 200 feet to over 8,000 feet. The District water facilities also include 287.5 miles of water mains, 18 pump stations, six treatment facilities, and 27 treated water storage tanks with approximately 13,359 service connections.

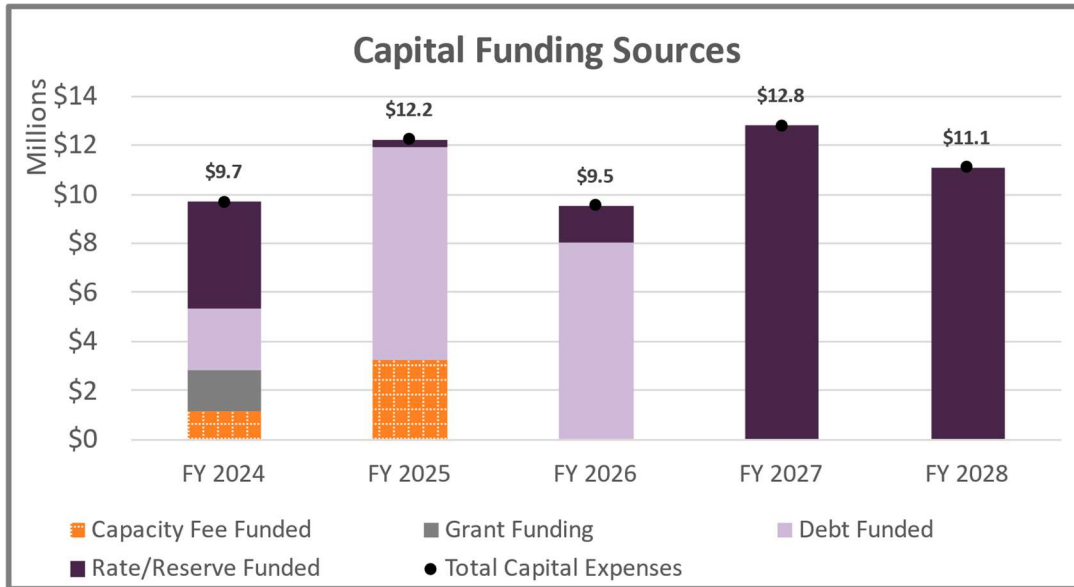
Figure 1: District Water System



The District developed a detailed Capital Improvement Plan (CIP) through FY 2028 that continues a contribution to system reinvestment that outpaces the annual depreciation of capital assets and totals approximately \$55.3M over the Rate Setting Period. The District plans to fund these capital projects through grants, capacity fee receipts, debt proceeds, and rates/reserves. Figure 2 shows the District's CIP through FY 2028 with existing funding sources.

# Calaveras County Water District – 2023 Cost-of-Service Study

Figure 2: Water Capital Improvement Plan



## Customers

The District serves 13,359 water meters, with over 95% of accounts classified as residential. Table 4 provides a summary of accounts by meter size.

Table 4: Water Meters by Meter Size

Meter Size	Residential	Non-Residential	Irrigation	Total
5/8"	12,767	385	79	13,231
3/4"	2	1	0	3
1"	8	56	15	79
1 1/2"	1	16	6	23
2"	0	16	5	21
3"	0	2	0	2
<b>Total</b>	<b>12,778</b>	<b>476</b>	<b>105</b>	<b>13,359</b>

The existing rate structure consists of a base bi-monthly fixed meter charge, an R&R fixed charge for capital spending, and variable rates that vary by customer class, with Residential subject to a four-tiered rate structure. Current bi-monthly fixed charges are identified in Table 5 and Table 6, followed by variable rates shown in Table 7.

# Calaveras County Water District – 2023 Cost-of-Service Study

Table 5: FY 2023 Bi-Monthly Base Fixed Water Charges

Base Fixed Meter Charges (\$/Bi-Month)	
Meter Size	Existing
5/8"	\$85.79
3/4"	\$128.69
1"	\$214.49
1 1/2"	\$428.95
2"	\$686.33
3"	\$1,372.66
4"	\$2,144.79
6"	\$4,289.50
8"	\$6,172.00

Table 6: FY 2023 Bi-Monthly R&R Fixed Water Charges

R&R Fixed Meter Charges (\$/Bi-Month)	
Meter Size	Existing
5/8"	\$34.56
3/4"	\$51.84
1"	\$86.40
1 1/2"	\$172.82
2"	\$276.50
3"	\$553.00
4"	\$864.06
6"	\$1,728.00
8"	\$3,456.00



# Calaveras County Water District – 2023 Cost-of-Service Study

Table 7: FY 2023 Variable Water Rates

Variable Rates (\$/HCF)	
Customer	Existing
Residential	
Tier 1	\$1.17
Tier 2	\$1.22
Tier 3	\$1.68
Tier 4	\$1.90
Non-Residential	\$1.57
Irrigation	\$1.91

## Financial Plan Overview – Water Utility

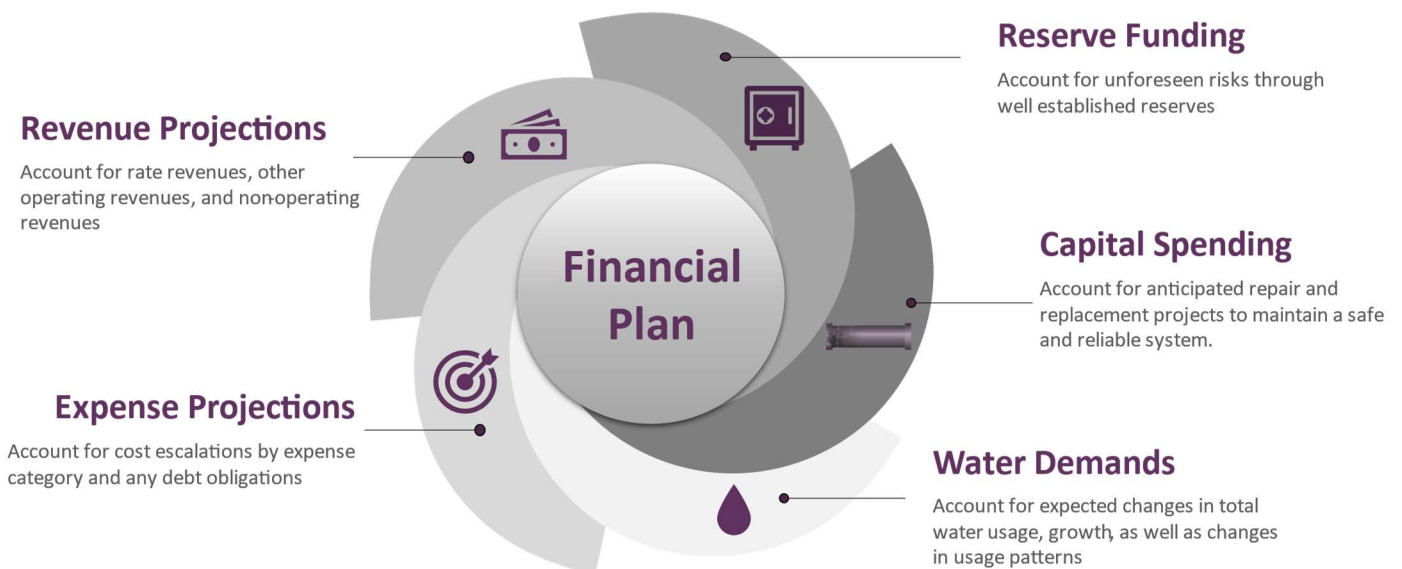
### Financial Planning

Financial planning incorporates numerous considerations, including projecting revenues and forecasting expected costs using various inflationary adjustments. Utilities also need to account for changes in water demand driven by variations in weather, changes to water supplies and water availability, state mandates, growth, and economic factors. In addition, system maintenance and reinvestment, reserves, and debt service requirements all influence the revenues needed in future years. Therefore, a comprehensive financial plan reviews the following:

- 1) Historical water sales and consumption patterns to determine an appropriate usage level for projecting future water demands.
- 2) Operational costs that may change over the planning period because of inflation, unique circumstances of the agency, new expenditures added to meet strategic goals, state mandates, or changes in operations.
- 3) Multi-year system improvement needs and scheduling based on priority. This review also considers available funding sources to complete projects, such as PAYGO, grants, loans, and debt financing.
- 4) Reserve funding to meet adopted reserve policies. The goal is to generate adequate cash on hand to mitigate financial risks related to operating cashflow needs, unexpected increases in expenses, shortages in system reinvestment, and mitigating potential system failures.

Figure 3 illustrates the key elements when developing a long-term financial plan.

Figure 3: Financial Plan Key Elements



# Calaveras County Water District – 2023 Cost-of-Service Study

## Financial Planning Assumptions

Developing a long-term financial plan requires an understanding of the District’s financial position by evaluating existing revenue streams, ongoing expenses, how those expenses will change over time, existing debt requirements, and reserve policies. With these considerations, certain assumptions are required for projecting revenues, expenses, and expected ending fund balances. Through discussions with staff and their understanding of historical budget data and future obligations, Table 8 identifies assumptions for forecasting revenues. Table 9 details the number of accounts by meter size, and Table 10 identifies projected usage by customer class and tier. For forecasting revenues, our analysis assumes no growth in accounts as a conservative assumption, so projected revenues do not rely on development to occur.

*Table 8: Assumptions for Forecasting Revenues*

Key Assumptions	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Revenue Escalation</b>					
Non-Inflated	0.0%	0.0%	0.0%	0.0%	0.0%
Non-Rate Revenues	0.0%	0.0%	0.0%	0.0%	0.0%
Reserve Interest	1.5%	1.5%	1.5%	1.5%	1.5%
<b>Account Growth</b>					
Residential	0.0%	0.0%	0.0%	0.0%	0.0%
Non-Residential	0.0%	0.0%	0.0%	0.0%	0.0%
Irrigation	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Water Sales</b>					
Customer Usage (HCF)	1,628,790	1,628,790	1,628,790	1,628,790	1,628,790
Customer Usage (AF)	3,739	3,739	3,739	3,739	3,739

*Table 9: Accounts by Meter Size – FY 2024 through FY 2028*

Customer Accounts	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>All Meters</b>					
<b>Meter Size</b>					
5/8"	13,231	13,231	13,231	13,231	13,231
3/4"	3	3	3	3	3
1"	79	79	79	79	79
1 1/2"	23	23	23	23	23
2"	21	21	21	21	21
3"	2	2	2	2	2
4"	0	0	0	0	0
6"	0	0	0	0	0
8"	0	0	0	0	0
<b>Total All Meters</b>	<b>13,359</b>	<b>13,359</b>	<b>13,359</b>	<b>13,359</b>	<b>13,359</b>

# Calaveras County Water District – 2023 Cost-of-Service Study

Table 10: Projected Consumption (HCF) – FY 2024 through FY 2028

Consumption by Customer Class	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Residential</b>					
Tier 1	444,543	444,543	444,543	444,543	444,543
Tier 2	673,122	673,122	673,122	673,122	673,122
Tier 3	159,501	159,501	159,501	159,501	159,501
Tier 4	87,561	87,561	87,561	87,561	87,561
Subtotal Residential Consumption (HCF)	1,364,727	1,364,727	1,364,727	1,364,727	1,364,727
<b>Non-Residential</b>	144,435	144,435	144,435	144,435	144,435
<b>Irrigation</b>	119,628	119,628	119,628	119,628	119,628
<b>Total Consumption by Customer Class (HCF)</b>	<b>1,628,790</b>	<b>1,628,790</b>	<b>1,628,790</b>	<b>1,628,790</b>	<b>1,628,790</b>

Table 11 identifies assumptions used for forecasting increases in expenses over the Rate Setting Period.

Table 11: Assumptions for Forecasting Expense Requirements<sup>2</sup>

Key Assumptions	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Expenditure Escalation</b>					
Benefits	3.0%	3.0%	3.0%	3.0%	3.0%
Capital Construction	7.2%	3.9%	3.9%	3.9%	3.9%
Energy Costs	5.0%	5.0%	5.0%	5.0%	5.0%
General Costs	5.6%	3.5%	3.5%	3.5%	3.5%
Non-Inflated	0.0%	0.0%	0.0%	0.0%	0.0%
Retirement	5.0%	5.0%	5.0%	5.0%	5.0%
Salaries	5.0%	5.0%	5.0%	5.0%	5.0%
Purchased Water	5.0%	5.0%	5.0%	5.0%	5.0%
Treatment	5.0%	5.0%	5.0%	5.0%	5.0%

## Current Financial Position

### Revenues

Based on the forecasting assumptions, fixed revenues were calculated using account data by meter size (Table 9) and existing fixed charges (Table 5 and Table 6). Variable revenues were calculated using existing variable rates (Table 7) and projected total water sales by customer class (Table 10). Table 12 shows the calculated rate revenues through the Rate Setting Period. Table 13 summarizes calculated rate revenues from Table 12 and other operating and non-rate revenues available through the Rate Setting Period with projections rounded to the nearest thousands.

<sup>2</sup> Capital Construction inflation and General Costs for FY 2024 were increased to 7.2% and 5.6%, respectively, to account for recent increases due to inflation. Outer years reduce to 3.9% and 3.5%, reflecting the 5-year average of the Engineering News-Record – Construction Cost index and the San Francisco Area Consumer Price Index, respectively.

# Calaveras County Water District – 2023 Cost-of-Service Study

Table 12: Water Calculated Rate Revenues

Fixed Revenues	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Base Fixed Charge</b>					
Residential	\$6,586,099	\$6,586,099	\$6,586,099	\$6,586,099	\$6,586,099
Non-Residential	\$394,554	\$394,554	\$394,554	\$394,554	\$394,554
Irrigation	\$96,001	\$96,001	\$96,001	\$96,001	\$96,001
<b>Total Base Fixed Charge</b>	<b>\$7,076,654</b>	<b>\$7,076,654</b>	<b>\$7,076,654</b>	<b>\$7,076,654</b>	<b>\$7,076,654</b>
<b>R&amp;R Fixed Charges</b>					
Residential	\$2,653,171	\$2,653,171	\$2,653,171	\$2,653,171	\$2,653,171
Non-Residential	\$158,946	\$158,946	\$158,946	\$158,946	\$158,946
Irrigation	\$38,674	\$38,674	\$38,674	\$38,674	\$38,674
<b>Total R&amp;R Fixed Charges</b>	<b>\$2,850,791</b>	<b>\$2,850,791</b>	<b>\$2,850,791</b>	<b>\$2,850,791</b>	<b>\$2,850,791</b>
Variable Revenues	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Residential</b>					
Tier 1	\$520,115	\$520,115	\$520,115	\$520,115	\$520,115
Tier 2	\$821,209	\$821,209	\$821,209	\$821,209	\$821,209
Tier 3	\$267,962	\$267,962	\$267,962	\$267,962	\$267,962
Tier 4	\$166,366	\$166,366	\$166,366	\$166,366	\$166,366
Residential Variable Revenue	\$1,775,652	\$1,775,652	\$1,775,652	\$1,775,652	\$1,775,652
<b>Non-Residential</b>					
	\$226,763	\$226,763	\$226,763	\$226,763	\$226,763
<b>Irrigation</b>					
	\$228,489	\$228,489	\$228,489	\$228,489	\$228,489
<b>Total Variable Rate Revenue</b>	<b>\$2,230,904</b>	<b>\$2,230,904</b>	<b>\$2,230,904</b>	<b>\$2,230,904</b>	<b>\$2,230,904</b>
<b>Total Rate Revenue</b>	<b>\$12,158,349</b>	<b>\$12,158,349</b>	<b>\$12,158,349</b>	<b>\$12,158,349</b>	<b>\$12,158,349</b>

# Calaveras County Water District – 2023 Cost-of-Service Study

Table 13: Water Projected Revenues

Revenue Summary	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Rate Revenues</b>					
Base Fixed Charge	\$7,077,000	\$7,077,000	\$7,077,000	\$7,077,000	\$7,077,000
R&R Fixed Charges	\$2,851,000	\$2,851,000	\$2,851,000	\$2,851,000	\$2,851,000
Variable Revenues	\$2,231,000	\$2,231,000	\$2,231,000	\$2,231,000	\$2,231,000
<b>Subtotal Rate Revenues</b>	<b>\$12,159,000</b>	<b>\$12,159,000</b>	<b>\$12,159,000</b>	<b>\$12,159,000</b>	<b>\$12,159,000</b>
<b>Operating Revenues</b>					
Water Sales - Fire Hydrant	\$170,000	\$170,000	\$170,000	\$170,000	\$170,000
Account Establishment Fees	\$47,000	\$47,000	\$47,000	\$47,000	\$47,000
Delinquent Account Charge	\$55,000	\$55,000	\$55,000	\$55,000	\$55,000
Backflow Certification Testing	\$4,000	\$4,000	\$4,000	\$4,000	\$4,000
Install Water Meter	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000
Repair Labor/Materials	\$18,000	\$18,000	\$18,000	\$18,000	\$18,000
Reimbursable Expense	\$33,000	\$33,000	\$33,000	\$33,000	\$33,000
Other Operating Revenue	\$26,000	\$26,000	\$26,000	\$26,000	\$26,000
<b>Subtotal Operating Revenues</b>	<b>\$383,000</b>	<b>\$383,000</b>	<b>\$383,000</b>	<b>\$383,000</b>	<b>\$383,000</b>
<b>Other Revenues</b>					
Rental Revenue	\$61,000	\$61,000	\$61,000	\$61,000	\$61,000
Interest Income/CCWD Investments	\$103,000	\$44,000	\$44,000	\$44,000	\$44,000
Property Taxes	\$3,036,000	\$3,036,000	\$3,036,000	\$3,036,000	\$3,036,000
Standby Fees	\$96,000	\$96,000	\$96,000	\$96,000	\$96,000
Power Sales - North Fork	\$453,000	\$453,000	\$453,000	\$453,000	\$453,000
Power Sales - New Hogan	\$58,000	\$58,000	\$58,000	\$58,000	\$58,000
Other Non-Operating Revenue	\$522,000	\$522,000	\$522,000	\$522,000	\$522,000
<b>Subtotal Other Revenues</b>	<b>\$4,329,000</b>	<b>\$4,270,000</b>	<b>\$4,270,000</b>	<b>\$4,270,000</b>	<b>\$4,270,000</b>
<b>Total Revenues</b>	<b>\$16,871,000</b>	<b>\$16,812,000</b>	<b>\$16,812,000</b>	<b>\$16,812,000</b>	<b>\$16,812,000</b>

# Calaveras County Water District – 2023 Cost-of-Service Study

## Expenses

The FY 2023 budget was used as the baseline expenses of the utility and adjusted in subsequent years based on the escalation factors shown in Table 11. Table 14 provides projected Operational & Maintenance (O&M) costs through the Rate Setting Period, with future projections (except for debt) rounded to the nearest thousands. Each O&M expense category includes detailed line-item expenditures that were discussed with staff to determine the appropriate escalation factor for forecasting how costs will increase over time.

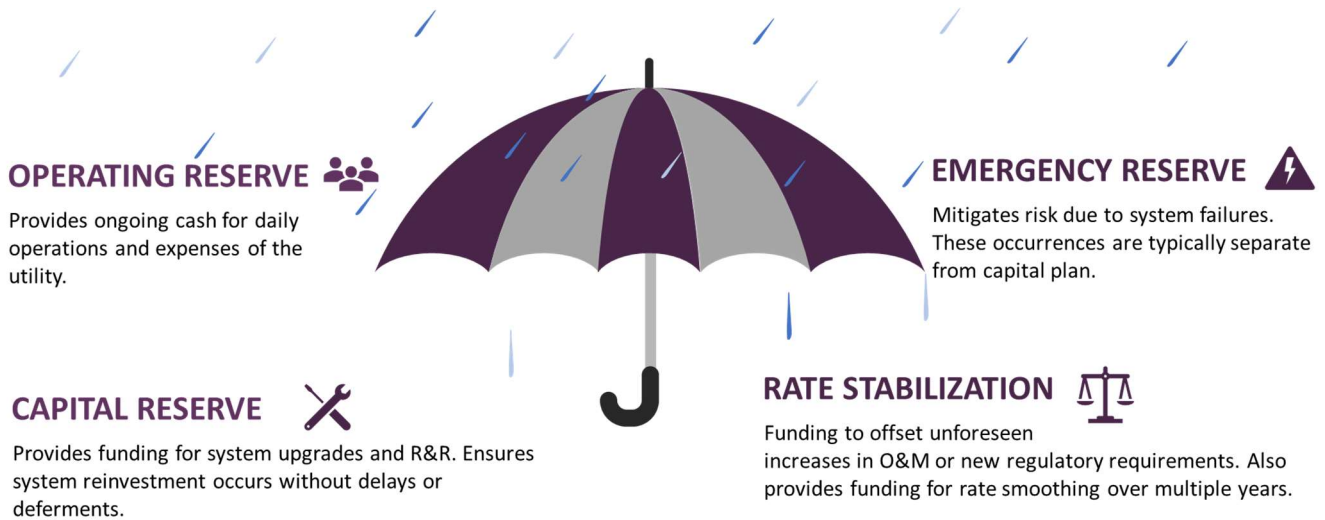
*Table 14: Projected O&M Expenses*

O&M Expenses	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Operating Expenses</b>					
Non-Departmental (50)	\$1,069,000	\$1,118,000	\$1,169,000	\$1,223,000	\$1,279,000
Utility Services (54)	\$8,290,000	\$8,624,000	\$8,999,000	\$9,443,000	\$9,855,000
Utility Services (54) - Power & Chemicals	\$1,978,000	\$2,077,000	\$2,180,000	\$2,289,000	\$2,404,000
General Management (56)	\$1,008,000	\$1,055,000	\$1,103,000	\$1,155,000	\$1,208,000
Board of Directors (57)	\$134,000	\$143,000	\$148,000	\$153,000	\$158,000
Engineering/Technical Services (58)	\$1,223,000	\$1,279,000	\$1,338,000	\$1,399,000	\$1,463,000
Administrative Services (59)	\$1,551,000	\$1,482,000	\$1,548,000	\$1,616,000	\$1,688,000
Water Resources (60)	\$1,713,000	\$1,781,000	\$1,851,000	\$1,925,000	\$2,002,000
<b>Subtotal Operating Expenses</b>	<b>\$16,966,000</b>	<b>\$17,559,000</b>	<b>\$18,336,000</b>	<b>\$19,203,000</b>	<b>\$20,057,000</b>
<b>Debt Service</b>					
Series 2016 Water Revenue Bonds	\$101,144	\$101,134	\$101,099	\$101,138	\$101,051
Series 2019 Taxable Revenue Refunding Loan	\$322,031	\$314,513	\$306,994	\$298,806	\$290,640
Series 2021 Water Revenue COP	\$172,703	\$173,145	\$172,553	\$172,943	\$173,298
2022 Water CIP Loan	\$1,316,542	\$1,317,227	\$1,317,236	\$1,316,569	\$1,317,226
2020 VacCon Loan (VacCon Truck #1)	\$91,306	\$22,826	\$0	\$0	\$0
2020 VacCon Loan (VacCon Truck #2)	\$90,472	\$90,479	\$45,236	\$0	\$0
SEWD (New Hogan)	\$55,751	\$55,752	\$0	\$0	\$0
New/Proposed Debt	\$0	\$0	\$0	\$0	\$0
<b>Subtotal Debt Service</b>	<b>\$2,149,949</b>	<b>\$2,075,076</b>	<b>\$1,943,118</b>	<b>\$1,889,456</b>	<b>\$1,882,215</b>
<b>Total Expenses</b>	<b>\$19,115,949</b>	<b>\$19,634,076</b>	<b>\$20,279,118</b>	<b>\$21,092,456</b>	<b>\$21,939,215</b>

# Calaveras County Water District – 2023 Cost-of-Service Study

## Reserves

Figure 4: Water Utility Reserves



Established reserves include Operating, Capital, Rate Stabilization, and Emergency. These reserves help mitigate risks to the utility by ensuring sufficient cash is on hand for daily operations and cover funding for annual system improvements. In addition, these reserves help smooth rates and mitigate rate spikes due to emergencies or above-average system costs. Table 15 summarizes the minimum reserve requirements and ideal targets of each reserve.

Table 15: Reserve Requirements and Targets

Reserve	Minimum Requirement	Reserve Target
Operating	90 days of operating expenses	120 days of operating expenses
Capital	1 Year of Depreciation average	Two years of CIP costs based on 5-year average
Rate Stabilization	10% of Operating Revenues	N/A
Emergency	3% of System Assets	5% of System Assets

As of July 1, 2022, the reserve balance equaled approximately \$17.5M.

## Financial Outlook at Existing Rates

Calculating revenue using existing rates and projecting expenses helps determine the current financial health of the utility. Revenues from current rates will not cover operating expenses. In addition, capital spending towards repair & replacement would require using reserves as the primary funding source once the remaining debt proceeds are expended, which is not sustainable. Table 16 forecasts existing revenues and expenses through the Rate Setting Period. Table 17 identifies reserve transfers and reserve activity, with projected FY 2024 starting reserve balances shown for each reserve.



# Calaveras County Water District – 2023 Cost-of-Service Study

Table 16: Water Financial Plan at Existing Rates

Revenue		FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Rate Revenues</b>						
Base Fixed Charge		\$7,077,000	\$7,077,000	\$7,077,000	\$7,077,000	\$7,077,000
R&R Fixed Charges	<b>Table 12</b>	\$2,851,000	\$2,851,000	\$2,851,000	\$2,851,000	\$2,851,000
Variable Revenues		\$2,231,000	\$2,231,000	\$2,231,000	\$2,231,000	\$2,231,000
<b>Total Rate Revenues</b>		<b>\$12,159,000</b>	<b>\$12,159,000</b>	<b>\$12,159,000</b>	<b>\$12,159,000</b>	<b>\$12,159,000</b>
<b>Projected Rate Revenues</b>		<b>\$12,159,000</b>	<b>\$12,159,000</b>	<b>\$12,159,000</b>	<b>\$12,159,000</b>	<b>\$12,159,000</b>
<b>Operating Revenues</b>						
Water Sales - Fire Hydrant		\$170,000	\$170,000	\$170,000	\$170,000	\$170,000
Account Establishment Fees		\$47,000	\$47,000	\$47,000	\$47,000	\$47,000
Delinquent Account Charge		\$55,000	\$55,000	\$55,000	\$55,000	\$55,000
Backflow Certification Testing	<b>Table 13</b>	\$4,000	\$4,000	\$4,000	\$4,000	\$4,000
Install Water Meter		\$30,000	\$30,000	\$30,000	\$30,000	\$30,000
Repair Labor/Materials		\$18,000	\$18,000	\$18,000	\$18,000	\$18,000
Reimbursable Expense		\$33,000	\$33,000	\$33,000	\$33,000	\$33,000
Other Operating Revenue		\$26,000	\$26,000	\$26,000	\$26,000	\$26,000
<b>Subtotal Operating Revenues</b>		<b>\$383,000</b>	<b>\$383,000</b>	<b>\$383,000</b>	<b>\$383,000</b>	<b>\$383,000</b>
<b>Other Revenues</b>						
Rental Revenue		\$61,000	\$61,000	\$61,000	\$61,000	\$61,000
Interest Income/CCWD Investments		\$103,000	\$44,000	\$44,000	\$44,000	\$44,000
Property Taxes		\$3,036,000	\$3,036,000	\$3,036,000	\$3,036,000	\$3,036,000
Standby Fees	<b>Table 13</b>	\$96,000	\$96,000	\$96,000	\$96,000	\$96,000
Power Sales - North Fork		\$453,000	\$453,000	\$453,000	\$453,000	\$453,000
Power Sales - New Hogan		\$58,000	\$58,000	\$58,000	\$58,000	\$58,000
Other Non-Operating Revenue		\$522,000	\$522,000	\$522,000	\$522,000	\$522,000
<b>Subtotal Other Revenues</b>		<b>\$4,329,000</b>	<b>\$4,270,000</b>	<b>\$4,270,000</b>	<b>\$4,270,000</b>	<b>\$4,270,000</b>
<b>Total Revenues</b>		<b>\$16,871,000</b>	<b>\$16,812,000</b>	<b>\$16,812,000</b>	<b>\$16,812,000</b>	<b>\$16,812,000</b>
<b>O&amp;M Expenses</b>						
		FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Operating Expenses</b>						
Non-Departmental (50)		\$1,069,000	\$1,118,000	\$1,169,000	\$1,223,000	\$1,279,000
Utility Services (54)		\$8,290,000	\$8,624,000	\$8,999,000	\$9,443,000	\$9,855,000
Utility Services (54) - Power & Chemicals		\$1,978,000	\$2,077,000	\$2,180,000	\$2,289,000	\$2,404,000
General Management (56)		\$1,008,000	\$1,055,000	\$1,103,000	\$1,155,000	\$1,208,000
Board of Directors (57)	<b>Table 14</b>	\$134,000	\$143,000	\$148,000	\$153,000	\$158,000
Engineering/Technical Services (58)		\$1,223,000	\$1,279,000	\$1,338,000	\$1,399,000	\$1,463,000
Administrative Services (59)		\$1,551,000	\$1,482,000	\$1,548,000	\$1,616,000	\$1,688,000
Water Resources (60)		\$1,713,000	\$1,781,000	\$1,851,000	\$1,925,000	\$2,002,000
<b>Subtotal Operating Expenses</b>		<b>\$16,966,000</b>	<b>\$17,559,000</b>	<b>\$18,336,000</b>	<b>\$19,203,000</b>	<b>\$20,057,000</b>
<b>Debt Service</b>						
Series 2016 Water Revenue Bonds		\$101,144	\$101,134	\$101,099	\$101,138	\$101,051
Series 2019 Taxable Revenue Refunding Loan		\$322,031	\$314,513	\$306,994	\$298,806	\$290,640
Series 2021 Water Revenue COP		\$172,703	\$173,145	\$172,553	\$172,943	\$173,298
2022 Water CIP Loan	<b>Table 14</b>	\$1,316,542	\$1,317,227	\$1,317,236	\$1,316,569	\$1,317,226
2020 VacCon Loan (VacCon Truck #1)		\$91,306	\$22,826	\$0	\$0	\$0
2020 VacCon Loan (VacCon Truck #2)		\$90,472	\$90,479	\$45,236	\$0	\$0
SEWD (New Hogan)		\$55,751	\$55,752	\$0	\$0	\$0
New/Proposed Debt		\$0	\$0	\$0	\$0	\$0
<b>Subtotal Debt Service</b>		<b>\$2,149,949</b>	<b>\$2,075,076</b>	<b>\$1,943,118</b>	<b>\$1,889,456</b>	<b>\$1,882,215</b>
<b>Total Expenses</b>		<b>\$19,115,949</b>	<b>\$19,634,076</b>	<b>\$20,279,118</b>	<b>\$21,092,456</b>	<b>\$21,939,215</b>
<b>Net Cashflow</b>		<b>(\$2,244,949)</b>	<b>(\$2,822,076)</b>	<b>(\$3,467,118)</b>	<b>(\$4,280,456)</b>	<b>(\$5,127,215)</b>

# Calaveras County Water District – 2023 Cost-of-Service Study

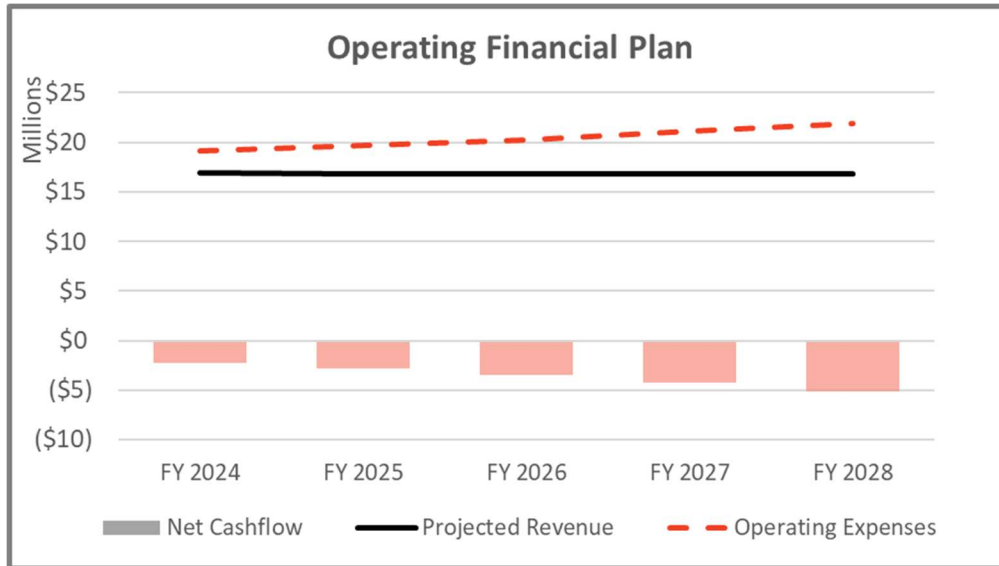
Table 17: Water – Transfers and Reserve Activity at Existing Rates

Operating Fund	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Beginning Balance	\$1,521,662	(\$723,287)	(\$3,545,363)	(\$7,012,481)	(\$11,292,937)
Transfers (Net Cashflow)	(\$2,244,949)	(\$2,822,076)	(\$3,467,118)	(\$4,280,456)	(\$5,127,215)
<b>Ending Balance</b>	<b>(\$723,287)</b>	<b>(\$3,545,363)</b>	<b>(\$7,012,481)</b>	<b>(\$11,292,937)</b>	<b>(\$16,420,152)</b>
Capital Reserve	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Beginning Balance	\$5,418,037	\$1,148,102	\$836,807	(\$708,104)	(\$13,506,954)
<u>Plus:</u>					
New Debt Proceeds	\$0	\$0	\$0	\$0	\$0
<u>Sources &amp; Uses</u>					
Water CIP Loan Proceeds	\$2,000,000	\$8,613,557	\$8,000,000	\$0	\$0
USDA RD AMI/AMR Reimbursements	\$517,901	\$0	\$0	\$0	\$0
Grant Funding	\$1,700,000	\$0	\$0	\$0	\$0
Capacity Fee Revenue	\$1,150,000	\$3,272,553	\$0	\$0	\$0
<u>Less:</u>					
CIP	(\$9,686,715)	(\$12,212,181)	(\$9,544,910)	(\$12,798,851)	(\$11,085,240)
Subtotal Capital Reserve	\$1,099,223	\$822,031	(\$708,104)	(\$13,506,954)	(\$24,592,194)
Interest Earnings	\$48,879	\$14,776	\$0	\$0	\$0
<b>Ending Balance</b>	<b>\$1,148,102</b>	<b>\$836,807</b>	<b>(\$708,104)</b>	<b>(\$13,506,954)</b>	<b>(\$24,592,194)</b>
Rate Stabilization Reserve	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Beginning Balance	\$0	\$0	\$0	\$0	\$0
Direct transfers to/(from) Rate Stabilization Reserve	\$0	\$0	\$0	\$0	\$0
<b>Ending Balance</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
Emergency Reserve	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Beginning Balance	\$2,920,000	\$2,920,000	\$2,920,000	\$2,920,000	\$2,920,000
Direct transfers to/(from) Emergency Reserve	\$0	\$0	\$0	\$0	\$0
<b>Ending Balance</b>	<b>\$2,920,000</b>	<b>\$2,920,000</b>	<b>\$2,920,000</b>	<b>\$2,920,000</b>	<b>\$2,920,000</b>
<b>Ending Unrestricted Reserve Balance</b>	<b>\$3,344,815</b>	<b>\$211,443</b>	<b>(\$4,800,585)</b>	<b>(\$21,879,892)</b>	<b>(\$38,092,347)</b>

Figure 5 illustrates the operating position of the utility, where O&M expenses are identified with the dashed red trendline, and the horizontal black trendline shows total revenues at existing rates. The bars represent the net operating income, with grey bars reflecting positive net income for capital spending and reserve funding and red bars reflecting an operating deficit absorbed by reserves.

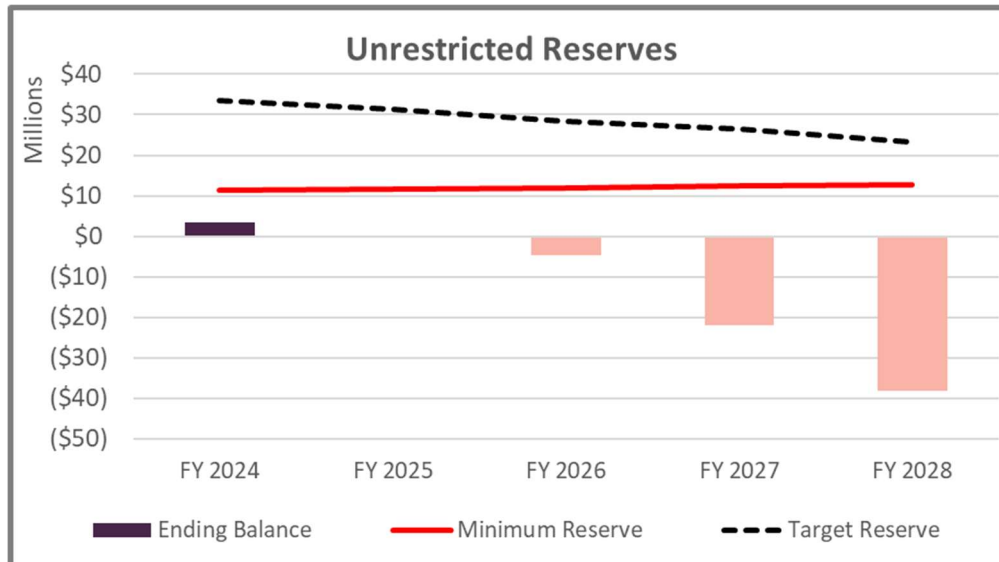
# Calaveras County Water District – 2023 Cost-of-Service Study

Figure 5: Current Operating Financial Position



With capital spending of \$55.3M over the Rate Setting Period, as shown in Figure 2, reserves would be depleted and no capital funding would be available by FY 2026. Figure 6 reflects the projected ending balances of undesignated reserves after funding operating and capital projects. Unrestricted reserves include Operating, Capital, Rate Stabilization, and Emergency reserves.

Figure 6: Projected Ending Reserves at Existing Rates



## Proposed Financial Plan – Water Utility

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From our review of the utility's financial outlook at existing rates, a proposed financial plan is developed to fund the multi-year revenue requirements. The proposed financial plan generates approximately \$42M in additional revenue over the Rate Setting Period. The additional revenue generates positive net operating income starting in FY 2025 to go towards capital spending and satisfy reserve requirements. Table 18 forecasts projected revenues, **with annual revenue adjustments** and expenses through FY 2028, including \$16.5M in proposed debt. Table 19 identifies the projected FY 2024 total starting reserve balances, activity within each reserve (including net income transfer from Table 18, transfers between reserves, use of capacity fees, and annual CIP), and projected ending balances for each fiscal year of the Rate Setting Period.

# Calaveras County Water District – 2023 Cost-of-Service Study

Table 18: Proposed Water Financial Plan

Revenue			FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Rate Revenues</b>							
Base Fixed Charge			\$7,077,000	\$7,077,000	\$7,077,000	\$7,077,000	\$7,077,000
R&R Fixed Charges	<b>Table 12</b>		\$2,851,000	\$2,851,000	\$2,851,000	\$2,851,000	\$2,851,000
Variable Revenues			\$2,231,000	\$2,231,000	\$2,231,000	\$2,231,000	\$2,231,000
<b>Total Rate Revenues</b>			<b>\$12,159,000</b>	<b>\$12,159,000</b>	<b>\$12,159,000</b>	<b>\$12,159,000</b>	<b>\$12,159,000</b>
Additional Revenue (from revenue adjustments):							
<b>Fiscal Year</b>	<b>Revenue Adjustment</b>	<b>Effective Month</b>					
FY 2024	22.0%	October	\$2,229,000	\$2,674,000	\$2,674,000	\$2,674,000	\$2,674,000
FY 2025	18.0%	July		\$2,669,000	\$2,669,000	\$2,669,000	\$2,669,000
FY 2026	16.0%	July			\$2,800,000	\$2,800,000	\$2,800,000
FY 2027	16.0%	July				\$3,248,000	\$3,248,000
FY 2028	15.0%	July					\$3,532,000
<b>Total Additional Revenue</b>			<b>\$2,229,000</b>	<b>\$5,343,000</b>	<b>\$8,143,000</b>	<b>\$11,391,000</b>	<b>\$14,923,000</b>
<b>Projected Rate Revenues (including revenue adjustments)</b>			<b>\$14,388,000</b>	<b>\$17,502,000</b>	<b>\$20,302,000</b>	<b>\$23,550,000</b>	<b>\$27,082,000</b>
<b>Operating Revenues</b>							
Water Sales - Fire Hydrant			\$170,000	\$170,000	\$170,000	\$170,000	\$170,000
Account Establishment Fees			\$47,000	\$47,000	\$47,000	\$47,000	\$47,000
Delinquent Account Charge			\$55,000	\$55,000	\$55,000	\$55,000	\$55,000
Backflow Certification Testing	<b>Table 13</b>		\$4,000	\$4,000	\$4,000	\$4,000	\$4,000
Install Water Meter			\$30,000	\$30,000	\$30,000	\$30,000	\$30,000
Repair Labor/Materials			\$18,000	\$18,000	\$18,000	\$18,000	\$18,000
Reimbursable Expense			\$33,000	\$33,000	\$33,000	\$33,000	\$33,000
Other Operating Revenue			\$26,000	\$26,000	\$26,000	\$26,000	\$26,000
<b>Subtotal Operating Revenues</b>			<b>\$383,000</b>	<b>\$383,000</b>	<b>\$383,000</b>	<b>\$383,000</b>	<b>\$383,000</b>
<b>Other Revenues</b>							
Rental Revenue			\$61,000	\$61,000	\$61,000	\$61,000	\$61,000
Interest Income/CCWD Investments			\$103,000	\$67,000	\$75,000	\$104,000	\$125,000
Property Taxes			\$3,036,000	\$3,036,000	\$3,036,000	\$3,036,000	\$3,036,000
Standby Fees	<b>Table 13</b>		\$96,000	\$96,000	\$96,000	\$96,000	\$96,000
Power Sales - North Fork			\$453,000	\$453,000	\$453,000	\$453,000	\$453,000
Power Sales - New Hogan			\$58,000	\$58,000	\$58,000	\$58,000	\$58,000
Other Non-Operating Revenue			\$522,000	\$522,000	\$522,000	\$522,000	\$522,000
<b>Subtotal Other Revenues</b>			<b>\$4,329,000</b>	<b>\$4,293,000</b>	<b>\$4,301,000</b>	<b>\$4,330,000</b>	<b>\$4,351,000</b>
<b>Total Revenues</b>			<b>\$19,100,000</b>	<b>\$22,178,000</b>	<b>\$24,986,000</b>	<b>\$28,263,000</b>	<b>\$31,816,000</b>
<b>O&amp;M Expenses</b>			<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
<b>Operating Expenses</b>							
Non-Departmental (50)			\$1,069,000	\$1,118,000	\$1,169,000	\$1,223,000	\$1,279,000
Utility Services (54)			\$8,290,000	\$8,624,000	\$8,999,000	\$9,443,000	\$9,855,000
Utility Services (54) - Power & Chemicals			\$1,978,000	\$2,077,000	\$2,180,000	\$2,289,000	\$2,404,000
General Management (56)			\$1,008,000	\$1,055,000	\$1,103,000	\$1,155,000	\$1,208,000
Board of Directors (57)	<b>Table 14</b>		\$134,000	\$143,000	\$148,000	\$153,000	\$158,000
Engineering/Technical Services (58)			\$1,223,000	\$1,279,000	\$1,338,000	\$1,399,000	\$1,463,000
Administrative Services (59)			\$1,551,000	\$1,482,000	\$1,548,000	\$1,616,000	\$1,688,000
Water Resources (60)			\$1,713,000	\$1,781,000	\$1,851,000	\$1,925,000	\$2,002,000
<b>Subtotal Operating Expenses</b>			<b>\$16,966,000</b>	<b>\$17,559,000</b>	<b>\$18,336,000</b>	<b>\$19,203,000</b>	<b>\$20,057,000</b>
<b>Debt Service</b>							
Series 2016 Water Revenue Bonds			\$101,144	\$101,134	\$101,099	\$101,138	\$101,051
Series 2019 Taxable Revenue Refunding Loan			\$322,031	\$314,513	\$306,994	\$298,806	\$290,640
Series 2021 Water Revenue COP			\$172,703	\$173,145	\$172,553	\$172,943	\$173,298
2022 Water CIP Loan	<b>Table 14</b>		\$1,316,542	\$1,317,227	\$1,317,236	\$1,316,569	\$1,317,226
2020 VacCon Loan (VacCon Truck #1)			\$91,306	\$22,826	\$0	\$0	\$0
2020 VacCon Loan (VacCon Truck #2)			\$90,472	\$90,479	\$45,236	\$0	\$0
SEWD (New Hogan)			\$55,751	\$55,752	\$0	\$0	\$0
New/Proposed Debt			\$0	\$1,351,023	\$1,351,023	\$1,351,023	\$1,351,023
<b>Subtotal Debt Service</b>			<b>\$2,149,949</b>	<b>\$3,426,099</b>	<b>\$3,294,141</b>	<b>\$3,240,479</b>	<b>\$3,233,238</b>
<b>Total Expenses</b>			<b>\$19,115,949</b>	<b>\$20,985,099</b>	<b>\$21,630,141</b>	<b>\$22,443,479</b>	<b>\$23,290,238</b>
<b>Net Cashflow</b>			<b>(\$15,949)</b>	<b>\$1,192,901</b>	<b>\$3,355,859</b>	<b>\$5,819,521</b>	<b>\$8,525,762</b>

# Calaveras County Water District – 2023 Cost-of-Service Study

Table 19: Water – Transfers and Reserves Activity through FY 2028

Operating Fund	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Beginning Balance	\$1,521,662	\$1,505,713	\$2,698,613	\$5,333,459	\$5,534,009
Transfers (Net Cashflow)	(\$15,949)	\$1,192,901	\$3,355,859	\$5,819,521	\$8,525,762
<b>Sources &amp; Uses</b>					
Transfers from/(to) Capital Reserve	\$0	\$0	(\$721,013)	(\$5,618,972)	(\$8,316,972)
<b>Ending Balance</b>	<b>\$1,505,713</b>	<b>\$2,698,613</b>	<b>\$5,333,459</b>	<b>\$5,534,009</b>	<b>\$5,742,798</b>
Capital Reserve	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Beginning Balance	\$5,418,037	\$1,148,102	\$17,460,557	\$16,892,388	\$9,912,046
<u>Plus:</u>					
Transfers from/(to) Operating Fund	\$0	\$0	\$721,013	\$5,618,972	\$8,316,972
New Debt Proceeds	\$0	\$16,500,000	\$0	\$0	\$0
<b>Sources &amp; Uses</b>					
Water CIP Loan Proceeds	\$2,000,000	\$8,613,557	\$8,000,000	\$0	\$0
USDA RD AMI/AMR Reimbursements	\$517,901	\$0	\$0	\$0	\$0
Grant Funding	\$1,700,000	\$0	\$0	\$0	\$0
Capacity Fee Revenue	\$1,150,000	\$3,272,553	\$0	\$0	\$0
<u>Less:</u>					
CIP	(\$9,686,715)	(\$12,212,181)	(\$9,544,910)	(\$12,798,851)	(\$11,085,240)
Subtotal Capital Reserve	\$1,099,223	\$17,322,031	\$16,636,659	\$9,712,509	\$7,143,778
Interest Earnings	\$48,879	\$138,526	\$255,729	\$199,537	\$127,919
<b>Ending Balance</b>	<b>\$1,148,102</b>	<b>\$17,460,557</b>	<b>\$16,892,388</b>	<b>\$9,912,046</b>	<b>\$7,271,697</b>
Rate Stabilization Reserve	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Beginning Balance	\$0	\$0	\$0	\$0	\$0
Direct transfers to/(from) Rate Stabilization Reserve	\$0	\$0	\$0	\$0	\$0
<b>Ending Balance</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
Emergency Reserve	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Beginning Balance	\$2,920,000	\$2,920,000	\$2,920,000	\$2,920,000	\$2,920,000
Direct transfers to/(from) Emergency Reserve	\$0	\$0	\$0	\$0	\$0
<b>Ending Balance</b>	<b>\$2,920,000</b>	<b>\$2,920,000</b>	<b>\$2,920,000</b>	<b>\$2,920,000</b>	<b>\$2,920,000</b>
<b>Ending Unrestricted Reserve Balance</b>	<b>\$5,573,815</b>	<b>\$23,079,170</b>	<b>\$25,145,848</b>	<b>\$18,366,055</b>	<b>\$15,934,495</b>

# Calaveras County Water District – 2023 Cost-of-Service Study

The operating position based on the proposed financial plan is identified in Figure 7, including debt service coverage. To meet the debt coverage requirement in FY 2024, the District plans to buy down the principal with the available balance within the Rate Stabilization Reserve at the end of FY 2023, equal to \$520,000. Through this buy down and increasing rates, the District is projected to achieve a debt coverage ratio of 131%.

Figure 7: Water – Proposed Operating Position

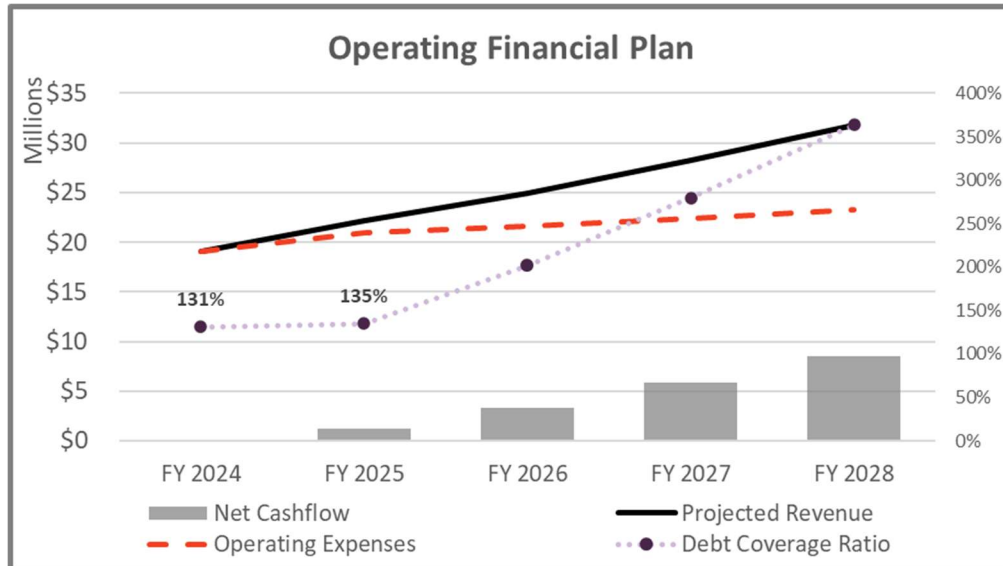
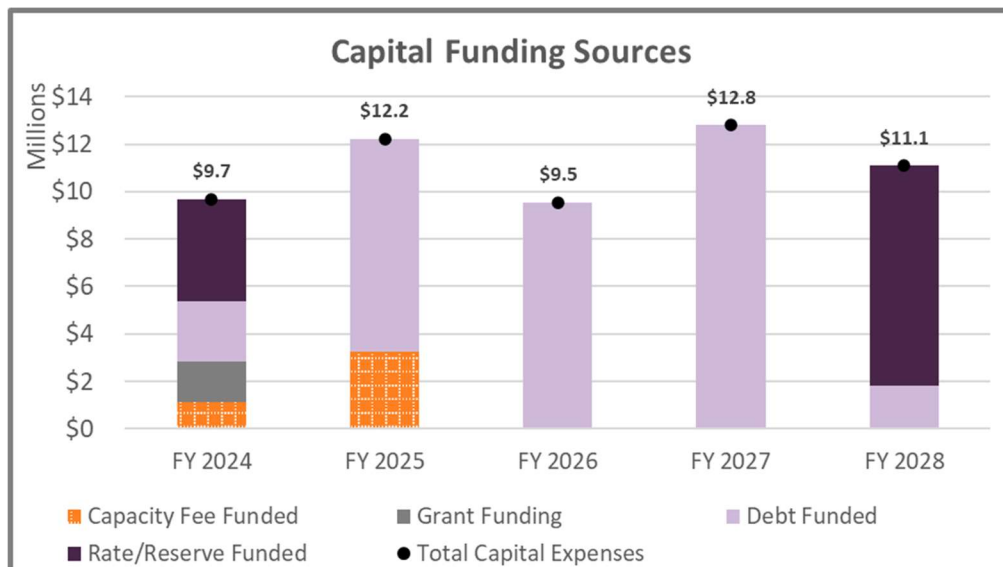


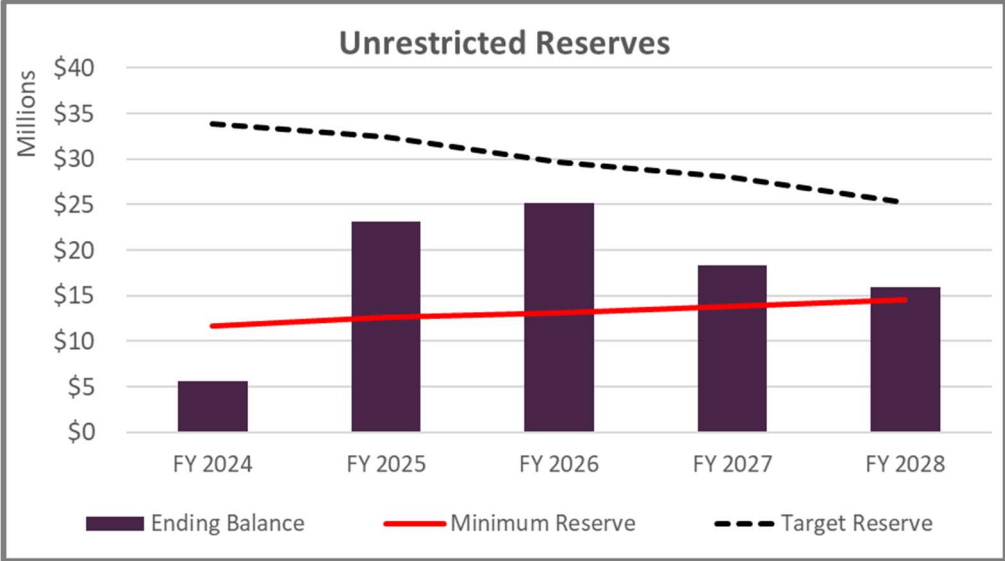
Figure 8 and Figure 9 shows the capital plan with funding sources, including \$16.5M in new debt proceeds, and projected ending reserve balances, respectively.

Figure 8: Water – Capital Improvement Plan with Funding Sources



# Calaveras County Water District – 2023 Cost-of-Service Study

Figure 9: Water – Proposed Ending Reserves





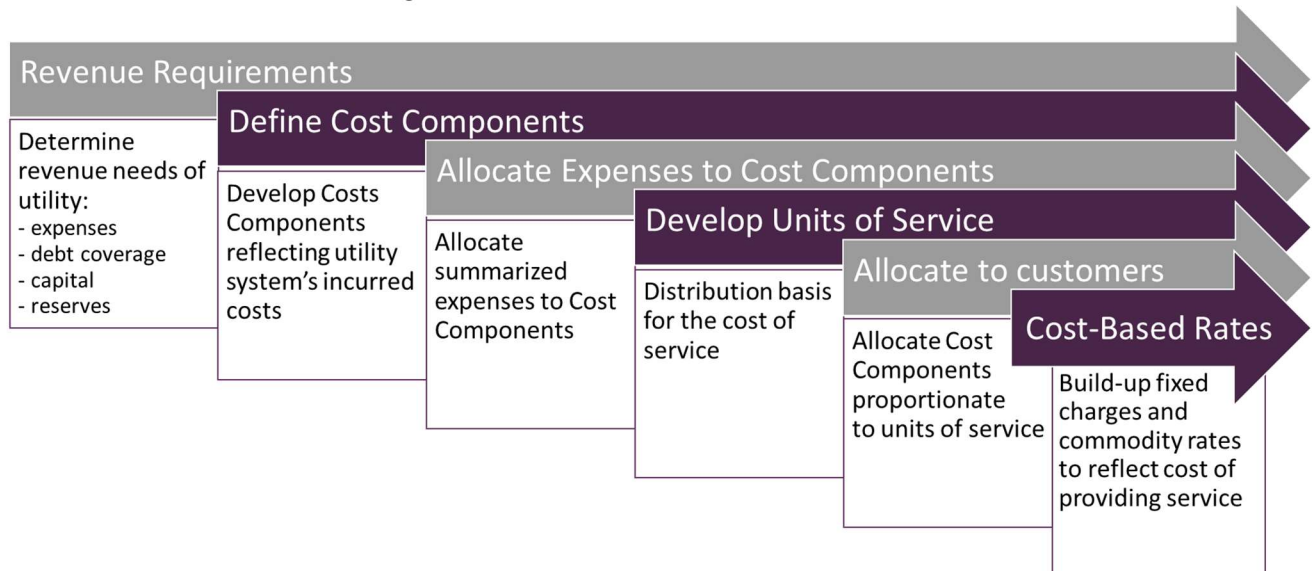
## Cost-of-Service Analysis – Water Utility

### Cost-of-Service Process

The next step in developing rates is to perform a cost-of-service analysis. This step develops proposed water rates that are cost-based and equitable. Meeting the requirements of Proposition 218 is of paramount importance in developing utility rates. Proposition 218 does not provide a particular methodology for establishing cost-based rates. This study and analysis herein allocate costs proportionately to each parcel served by the District and derives water rates that adhere to the cost-of-service provisions of Proposition 218.

Understanding how costs are incurred is important to determine the most appropriate way to recover them. The following graphic summarizes the cost-of-service process. This process allocates costs incurred to customer classes and tiers based on their proportional share. As a result, the proposed rates are cost-based and reflect the costs incurred to deliver water service to all customers.

Figure 10: Cost-of-Service Process



### Revenue Requirements

With FY 2024 as the first year of the proposed rate schedule, revenue requirements are determined for FY 2024 and used for the cost-of-service. Revenue requirements include O&M expenses, available offsets from other operating and non-operating revenues, annual net income, and any mid-year adjustments if rates are implemented after the start of the fiscal year. The proposed revenue adjustments and corresponding rates collectively accumulate the necessary funding over the Rate Setting Period to fund total revenue requirements, including capital, while meeting minimum reserve requirements by FY 2028. The results of the financial plan analysis are summarized in Table 20 and represent the revenue required from rates over the Rate Setting Period.

# Calaveras County Water District – 2023 Cost-of-Service Study

Table 20: Water Revenue Requirements

	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Revenue Requirements	Total	Total	Total	Total	Total
<b>Operating Expenses</b>					
Non-Departmental (50)	\$1,069,000	\$1,118,000	\$1,169,000	\$1,223,000	\$1,279,000
Utility Services (54)	\$8,290,000	\$8,624,000	\$8,999,000	\$9,443,000	\$9,855,000
Utility Services (54) - Power & Chemicals	\$1,978,000	\$2,077,000	\$2,180,000	\$2,289,000	\$2,404,000
General Management (56)	\$1,008,000	\$1,055,000	\$1,103,000	\$1,155,000	\$1,208,000
Board of Directors (57)	\$134,000	\$143,000	\$148,000	\$153,000	\$158,000
Engineering/Technical Services (58)	\$1,223,000	\$1,279,000	\$1,338,000	\$1,399,000	\$1,463,000
Administrative Services (59)	\$1,551,000	\$1,482,000	\$1,548,000	\$1,616,000	\$1,688,000
Water Resources (60)	\$1,713,000	\$1,781,000	\$1,851,000	\$1,925,000	\$2,002,000
<b>Total Operating Expenses</b>	<b>\$16,966,000</b>	<b>\$17,559,000</b>	<b>\$18,336,000</b>	<b>\$19,203,000</b>	<b>\$20,057,000</b>
<b>Debt Service</b>					
Series 2016 Water Revenue Bonds	\$101,144	\$101,134	\$101,099	\$101,138	\$101,051
Series 2019 Taxable Revenue Refunding Loan	\$322,031	\$314,513	\$306,994	\$298,806	\$290,640
Series 2021 Water Revenue COP	\$172,703	\$173,145	\$172,553	\$172,943	\$173,298
2022 Water CIP Loan	\$1,316,542	\$1,317,227	\$1,317,236	\$1,316,569	\$1,317,226
2020 VacCon Loan (VacCon Truck #1)	\$91,306	\$22,826	\$0	\$0	\$0
2020 VacCon Loan (VacCon Truck #2)	\$90,472	\$90,479	\$45,236	\$0	\$0
SEWD (New Hogan)	\$55,751	\$55,752	\$0	\$0	\$0
New/Proposed Debt	\$0	\$1,351,023	\$1,351,023	\$1,351,023	\$1,351,023
<b>Total Debt Service</b>	<b>\$2,149,949</b>	<b>\$3,426,099</b>	<b>\$3,294,141</b>	<b>\$3,240,479</b>	<b>\$3,233,238</b>
<b>Other Funding</b>					
<i>Revenue Offsets</i>					
Operating Revenues	(\$383,000)	(\$383,000)	(\$383,000)	(\$383,000)	(\$383,000)
Other Revenues	(\$4,329,000)	(\$4,293,000)	(\$4,301,000)	(\$4,330,000)	(\$4,351,000)
<b>Subtotal Revenue Offsets</b>	<b>(\$4,712,000)</b>	<b>(\$4,676,000)</b>	<b>(\$4,684,000)</b>	<b>(\$4,713,000)</b>	<b>(\$4,734,000)</b>
<i>Adjustments</i>					
Reserve Funding	(\$15,949)	\$1,192,901	\$3,355,859	\$5,819,521	\$8,525,762
Adjustment for Mid-Year Increase	\$445,800	\$0	\$0	\$0	\$0
<b>Subtotal Adjustments</b>	<b>\$429,851</b>	<b>\$1,192,901</b>	<b>\$3,355,859</b>	<b>\$5,819,521</b>	<b>\$8,525,762</b>
<b>Total Other Funding</b>	<b>(\$4,282,149.00)</b>	<b>(\$3,483,099)</b>	<b>(\$1,328,141)</b>	<b>\$1,106,521</b>	<b>\$3,791,762</b>
<b>Revenue Requirement from Rates</b>	<b>\$14,833,800</b>	<b>\$17,502,000</b>	<b>\$20,302,000</b>	<b>\$23,550,000</b>	<b>\$27,082,000</b>

# Calaveras County Water District – 2023 Cost-of-Service Study

## Define Cost Components

The utility incurs costs to accommodate total water demand throughout the year, including water supply costs, treatment, operating expenses, and pumping, to name a few. Therefore, to determine the most appropriate way to recover the utility's expenses, cost components are identified to allocate expenses based on how they are incurred. The cost components shown in Figure 11 reflect the cost components used for this study.

Figure 11: Cost Components



*Account Services* – Fixed expenses that do not necessarily fluctuate based on usage or meter size.

*Meter Capacity* – O&M expenses, including executive staff, legal, professional services, and a portion of capital and reserves.

*Delivery* – Operating and capital expenses of the water system associated with conveying water to customers throughout the year. These costs tend to vary with the total water used.

*Peaking* – Expenses incurred to meet customer peak demands in excess of average day usage.

## Allocate Expenses to Cost Components

When allocating expenses to the defined cost components, it is essential to have a sound basis on why an expense was allocated to a certain fixed cost component versus a variable cost component or split between fixed and variable. The distribution of expenses to the cost components should be straightforward to ensure the method of apportionment is **understandable** and easily **correlates to how expenses are incurred**. A description of each expense category is identified on the next page.

# Calaveras County Water District – 2023 Cost-of-Service Study

## O&M Expense Categories:

*Non-Departmental:* General expenses associated with the District as a whole, including office supplies, insurance, financial services, legal, professional services, and other miscellaneous expenses.

*Utility Services:* Costs associated with the daily operation of the water system and related facilities, including capital outlay, lab testing, fuel, tools, and vehicles.

*Utility Services – Power & Chemicals:* Costs associated with the pumping and treatment of water from the District's water sources, including energy and chemicals.

*General Management:* Personnel costs of the District.

*Board of Directors:* Board of Directors stipends, benefits, training, supplies, and travel expenses.

*Engineering/Technical Services:* Costs associated with Engineering and Information Technology, such as personnel, supplies, training, computers, software, hardware, and contract services.

*Administrative Services:* Administrative expenses associated with the District as a whole, including executive staff, IT, maintenance contracts, accounting, and professional services, and other miscellaneous expenses.

*Water Resources:* Costs associated with overseeing water supplies, such as, personnel and maintenance of reservoirs, pump stations, dams, and wells.

# Calaveras County Water District – 2023 Cost-of-Service Study

Table 21 summarizes the percent allocation of O&M revenue requirements to the cost components, and Table 22 uses the percent allocations in Table 21 to allocate expenses in dollars to each cost component.

*Table 21: O&M Expense Allocation to Cost Components (%)*

Operating Expenses	Methodology / Allocation Basis	Account Services	Meter Capacity	Delivery	Peaking	Total
Non-Departmental (50)	Specific	100.0%	0.0%	0.0%	0.0%	100.0%
Utility Services (54)	Specific	0.0%	100.0%	0.0%	0.0%	100.0%
Utility Services (54) - Power & Chemicals	Specific	0.0%	0.0%	0.0%	100.0%	100.0%
General Management (56)	Specific	0.0%	100.0%	0.0%	0.0%	100.0%
Board of Directors (57)	Specific	100.0%	0.0%	0.0%	0.0%	100.0%
Engineering/Technical Services (58)	Specific	0.0%	0.0%	100.0%	0.0%	100.0%
Administrative Services (59)	Specific	100.0%	0.0%	0.0%	0.0%	100.0%
Water Resources (60)	Specific	0.0%	0.0%	100.0%	0.0%	100.0%

*Table 22: O&M Expense Allocation to Cost Components (\$)*

Operating Expenses	Methodology / Allocation Basis	Account Services	Meter Capacity	Delivery	Peaking	Total
Non-Departmental (50)	Specific	\$1,069,000	\$0	\$0	\$0	\$1,069,000
Utility Services (54)	Specific	\$0	\$8,290,000	\$0	\$0	\$8,290,000
Utility Services (54) - Power & Chemicals	Specific	\$0	\$0	\$0	\$1,978,000	\$1,978,000
General Management (56)	Specific	\$0	\$1,008,000	\$0	\$0	\$1,008,000
Board of Directors (57)	Specific	\$134,000	\$0	\$0	\$0	\$134,000
Engineering/Technical Services (58)	Specific	\$0	\$0	\$1,223,000	\$0	\$1,223,000
Administrative Services (59)	Specific	\$1,551,000	\$0	\$0	\$0	\$1,551,000
Water Resources (60)	Specific	\$0	\$0	\$1,713,000	\$0	\$1,713,000
<b>Total Allocation</b>		<b>\$2,754,000</b>	<b>\$9,298,000</b>	<b>\$2,936,000</b>	<b>\$1,978,000</b>	<b>\$16,966,000</b>
<b>O&amp;M Allocation (%)</b>		<b>16.2%</b>	<b>54.8%</b>	<b>17.3%</b>	<b>11.7%</b>	<b>100.0%</b>

# Calaveras County Water District – 2023 Cost-of-Service Study

The District's debt was allocated to Meter Capacity because the debt is used for capital improvements of the water system, and Meter Capacity is a fixed cost recovery component that reflects the demand each meter places on the water system. Table 23 identifies the percent allocation of the debt expense to the cost components, and Table 24 reflects the debt expense in dollars. Once any of the debts retire, the savings will go toward capital spending

*Table 23: Water Debt Allocation to Cost Components (%)*

Debt Service	Methodology / Allocation Basis	Account Services	Meter Capacity	Delivery	Peaking	Total
Series 2016 Water Revenue Bonds	Specific	0.0%	100.0%	0.0%	0.0%	100.0%
Series 2019 Taxable Revenue Refunding Loan	Specific	0.0%	100.0%	0.0%	0.0%	100.0%
Series 2021 Water Revenue COP	Specific	0.0%	100.0%	0.0%	0.0%	100.0%
2022 Water CIP Loan	Specific	0.0%	100.0%	0.0%	0.0%	100.0%
2020 VacCon Loan (VacCon Truck #1)	Specific	0.0%	100.0%	0.0%	0.0%	100.0%
2020 VacCon Loan (VacCon Truck #2)	Specific	0.0%	100.0%	0.0%	0.0%	100.0%
SEWD (New Hogan)	Specific	0.0%	100.0%	0.0%	0.0%	100.0%

*Table 24: Water Debt Allocation to Cost Components (\$)*

Debt Service	Methodology / Allocation Basis	Account Services	Meter Capacity	Delivery	Peaking	Total
Series 2016 Water Revenue Bonds	Specific	\$0	\$101,144	\$0	\$0	\$101,144
Series 2019 Taxable Revenue Refunding Loan	Specific	\$0	\$322,031	\$0	\$0	\$322,031
Series 2021 Water Revenue COP	Specific	\$0	\$172,703	\$0	\$0	\$172,703
2022 Water CIP Loan	Specific	\$0	\$1,316,542	\$0	\$0	\$1,316,542
2020 VacCon Loan (VacCon Truck #1)	Specific	\$0	\$91,306	\$0	\$0	\$91,306
2020 VacCon Loan (VacCon Truck #2)	Specific	\$0	\$90,472	\$0	\$0	\$90,472
SEWD (New Hogan)	Specific	\$0	\$55,751	\$0	\$0	\$55,751
<b>Total Allocation</b>		<b>\$0</b>	<b>\$2,149,949</b>	<b>\$0</b>	<b>\$0</b>	<b>\$2,149,949</b>

# Calaveras County Water District – 2023 Cost-of-Service Study

Other Funding includes other operating and non-operating revenues, reserve funding, and mid-year adjustment when proposed rates are implemented after the start of the fiscal year. The mid-year adjustment annualizes the proposed revenue adjustment to account for the time elapsed before new rates take effect to connect to the annual units of service used for deriving rates. All items under "Other Funding" are allocated based on O&M percentages derived in Table 22 to allocate revenue offsets and reserve funding proportionately to the cost components. Table 25 summarizes the percent allocation to the cost components, and Table 26 uses the percent allocations in Table 25 to allocate expenses in dollars to each cost component. Table 27 summarizes the revenue requirement derived in Table 20 by cost component.

Table 25: Other Funding to Cost Components (%)

Other Funding	Methodology / Allocation Basis	Account Services	Meter Capacity	Delivery	Peaking	Total
<i>Revenue Offsets</i>						
Operating Revenues	O&M Allocation	16.2%	54.8%	17.3%	11.7%	100.0%
Other Revenues	O&M Allocation	16.2%	54.8%	17.3%	11.7%	100.0%
<i>Adjustments</i>						
Reserve Funding	O&M Allocation	16.2%	54.8%	17.3%	11.7%	100.0%
Adjustment for Mid-Year Increase	O&M Allocation	16.2%	54.8%	17.3%	11.7%	100.0%

Table 26: Other Funding Allocation to Cost Components (\$)

Other Funding	Methodology / Allocation Basis	Account Services	Meter Capacity	Delivery	Peaking	Total
<i>Revenue Offsets</i>						
Operating Revenues	O&M Allocation	(\$62,170)	(\$209,898)	(\$66,279)	(\$44,652)	(\$383,000)
Other Revenues	O&M Allocation	(\$702,703)	(\$2,372,453)	(\$749,142)	(\$504,701)	(\$4,329,000)
<i>Adjustments</i>						
Reserve Funding	O&M Allocation	(\$2,589)	(\$8,741)	(\$2,760)	(\$1,859)	(\$15,949)
Adjustment for Mid-Year Increase	O&M Allocation	\$72,364	\$244,315	\$77,147	\$51,974	\$445,800
<b>Total Allocation</b>		<b>(\$695,098)</b>	<b>(\$2,346,777)</b>	<b>(\$741,034)</b>	<b>(\$499,239)</b>	<b>(\$4,282,149)</b>

Table 27: FY 2024 Water Cost-of-Service Requirements by Cost Component

Revenue Requirement	Account Services	Meter Capacity	Delivery	Peaking	Total
Operating	\$2,754,000	\$9,298,000	\$2,936,000	\$1,978,000	\$16,966,000
Debt Service	\$0	\$2,149,949	\$0	\$0	\$2,149,949
Other Funding	(\$695,098)	(\$2,346,777)	(\$741,034)	(\$499,239)	(\$4,282,149)
<b>COS Requirement</b>	<b>\$2,058,902</b>	<b>\$9,101,172</b>	<b>\$2,194,966</b>	<b>\$1,478,761</b>	<b>\$14,833,800</b>

## Rate Design – Water Utility

### Develop Units of Service

Unit rates for each cost component are derived by spreading the corresponding revenue requirements over appropriate units of service (distribution basis). This approach provides a clear connection between costs incurred and the proportionate share attributable to each customer class, corresponding tier, and customer account. When designing rates, the most critical component is connecting costs to the proposed rates, resulting in a cost-based rate structure that complies with Proposition 218. The previous section summarized costs by expense category and then allocated to cost components based on how each cost is incurred. The next step in designing rates is to allocate each cost component to customers in relation to their use of the system and facilities. The method of apportionment considers each customer's share of system costs and is reflected by the units of service used to equitably distribute the cost components to each customer account. The distribution basis varies by cost component and includes total accounts, Meter Equivalents (MEs), which reflect demand placed on the system based on meter size, total water sales, and usage by tier.

In Table 28, each meter size was assigned an equivalency factor using the flow characteristics of a 5/8" meter. Based on the District's meter inventory, the safe maximum operating flow capacity for these meter types, as identified in the AWWA M1 Manual, 6<sup>th</sup> Edition, Table B-2, was used for determining meter equivalencies. The safe maximum operating flow capacity for each meter was divided by the 5/8" meters' safe operating flow capacity of 20 gpm to determine the equivalent meter ratio. In other words; the calculations convert all larger-sized meters to an equivalent number of 5/8" meters based on the safe operating flow capacity of 20 gpm. The Capacity Ratio represents the potential flow through each meter size compared to the flow through the base 5/8" meter to establish parity between meter sizes. Total MEs are determined by multiplying the number of meters by the Capacity Ratio and then multiplying the result by the billing periods in a year (6 billing periods)<sup>3</sup>. Table 28 summarizes the units of service related to Total Annual Bills and Annual MEs.

*Table 28: Accounts and Meter Equivalents*

Meter Size	AWWA Capacity (gpm) [A]	Capacity Ratio [B] = A ÷ 20	Number of Accounts [C]	Meter Equivalents [D] = B x C
5/8"	20	1.00	13,231	13,231
3/4"	30	1.50	3	5
1"	50	2.50	79	198
1 1/2"	100	5.00	23	115
2"	160	8.00	21	168
3"	320	16.00	2	32
Total			13,359	13,748
Annual Units (Total x 6 bills)			80,154	82,488

<sup>3</sup> The District bills customers on a bi-monthly basis; therefore, there are 6 billing periods during the fiscal year.



# Calaveras County Water District – 2023 Cost-of-Service Study

Total usage by customer class and tier must be known to derive the units of service for allocating variable costs. Table 29 provides the projected usage for FY 2024 from Table 8 and the peak bi-monthly usage by customer class.

*Table 29: Projected Usage by Customer Class (HCF)*

Customer Class / Tier	All Usage (HCF)	Peak Bi-Monthly Usage (HCF)
Residential	1,364,727	328,781
Non-Residential	144,435	36,040
Irrigation	119,628	29,250
<b>Total</b>	<b>1,628,790</b>	<b>394,072</b>

Table 30 provides the projected usage for FY 2024 and the peak bi-monthly usage, broken out by customer class and proposed tiers for Residential.

*Table 30: Projected Usage by Customer Class and Tier (HCF)*

Customer Class & Tier	Tier Definitions (HCF)	Projected Usage (HCF)	Peak Bi-Monthly Usage (HCF)
Residential			
Tier 1	0 - 15	588,538	112,243
Tier 2	16 - 30	276,121	65,556
Tier 3	>30	500,068	150,982
Non-Residential	Uniform	144,435	36,040
Irrigation	Uniform	119,628	29,250
<b>Total</b>		<b>1,628,790</b>	<b>394,072</b>

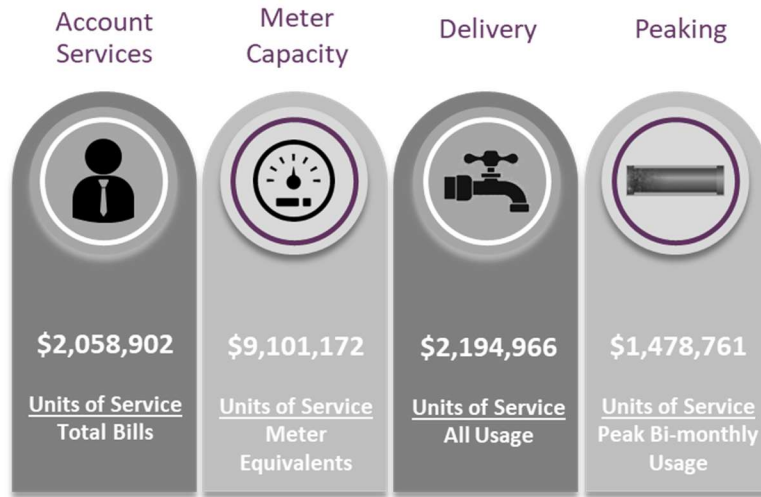
Table 30 identifies the tiered usage for Residential based on the revised tiered allotments. The Tier 1 allotment for the residential customer class is based on the lowest winter usage period, primarily comprised of indoor use, as outdoor watering needs are limited in the winter. Residential Tier 2 covers the maximum billing period usage per dwelling unit equal to 30 HCF, and Tier 3 captures all remaining usage over Tier 2.

The tiered usage characteristics will be used to further apportion the total variable costs allocated to the residential customer class to the corresponding tiers. Allocating variable costs to customer classes first, then to tiers, ensures each customer class is only recovering its proportionate share of costs. The proposed Non-Residential and Irrigation rate structure reflects a uniform rate that captures each customer class's proportional share of the revenue requirements over its corresponding usage. A uniform rate is recommended for Non-Residential to enhance equity between accounts within the customer class due to the broad spectrum of commercial uses that vary substantially with water needs that would not fit into one tiered rate structure applied to all. Irrigation is also structured as a uniform rate because the landscape areas would need to be known for structuring appropriate tiered rates.

# Calaveras County Water District – 2023 Cost-of-Service Study

With the units of service shown in Table 28 and Table 30, we can select the appropriate distribution basis for each cost component. Figure 12 identifies the total revenue requirements by cost component from Table 27 and the corresponding units of service.

Figure 12: Distribution Basis and Units of Service by Cost Component



Using the FY 2024 revenue requirements, the cost-of-service allocates expenses to customers based on the service demands that each places on the system (cost causation). This approach ensures that each customer proportionately shares in the financial obligation of the water utility. For the following unit rate computations for each cost component, unit rates were rounded up to the nearest penny.

## Fixed Cost Recovery

### Account Services

Each customer incurs Account Services costs regardless of the type of land use, meter size, or total amount of water used. These costs should be spread equally across all accounts. This is achieved by using the distribution basis of Total Bills. Total Bills are determined by multiplying the total accounts by the number of billing periods over the fiscal year (6 billing periods). Therefore, the revenue requirement for Account Services is apportioned based on the Total Bills (Table 28) to determine the bi-monthly unit cost-of-service shown in Table 31.

Table 31: FY 2024 Account Services Bi-Monthly Unit Rate

Account Services Component Unit Rate	
Revenue Requirement	\$2,058,902
÷ Total Bills	80,154
<b>Bi-Monthly Unit Rate</b>	<b>\$25.69</b>

# Calaveras County Water District – 2023 Cost-of-Service Study

## Meter Capacity

The Meter Capacity Component includes operational costs, debt, and a portion of system-wide operations capital and reserve funding. The revenue requirement for Meter Capacity is apportioned based on meter size. Larger-sized meters can generate a greater demand on the system from the amount of potential water flow that may pass through the meter in gpm. The revenue requirement for Meter Capacity is apportioned to meter size as represented by total annual MEs, as shown in Table 32.

*Table 32: FY 2024 Meter Capacity Bi-Monthly Unit Rate*

Meter Capacity Component Unit Rate	
Revenue Requirement	\$9,101,172
÷ Total ME's	82,488
<b>Bi-Monthly Unit Rate</b>	<b>\$110.34</b>

## Variable Cost Recovery

The remaining cost components are recovered through the variable rates. The proposed variable rate structure includes tiers for Residential and a uniform rate for Non-Residential and Irrigation.

## Delivery

Delivery costs are incurred based on the total volume of water produced and delivered to customers throughout the year. Therefore, the revenue requirement for Delivery is apportioned based on the projected total usage identified in Table 30 to determine the unit cost-of-service, irrespective of tier, as shown in Table 33.

*Table 33: FY 2024 Delivery Cost Unit Rate per HCF*

Delivery Component Unit Rate	
Revenue Requirement	\$2,194,966
÷ All Usage	1,628,790
<b>Unit Rate</b>	<b>\$1.35</b>

# Calaveras County Water District – 2023 Cost-of-Service Study

## Peaking

Peaking costs are incurred not only based on the total volume of water produced and delivered but also as a function of the peaking characteristics of tiers. Therefore, the revenue requirement for Peaking is first allocated to each customer class based on the peak bi-monthly usage in Table 29, and the results are shown in Table 34. Table 35 takes the Peaking cost allocated to Residential and further apportions the costs to the corresponding tiers using the peak bi-monthly usage in Table 30.

*Table 34: FY 2024 Peaking Allocation to Customer Classes*

Customer Class	Peak Bi-Monthly Usage	% Allocation	Revenue Requirement
Residential	328,781	83.4%	\$1,233,759
Non-Residential	36,040	9.1%	\$135,243
Irrigation	29,250	7.4%	\$109,760
<b>Total</b>	<b>394,072</b>	<b>100.0%</b>	<b>\$1,478,761</b>

*Table 35: FY 2024 Peaking Unit Rate by Customer Class and Tier*

Customer Class	Tier Allotments (HCF)	Projected Usage [A]	Peak Bi-Monthly Usage [B]	% Allocation [C] = B as a %	Revenue Requirement [D] = Table 49 x C	Unit Rate [E] = D ÷ A
Residential						
Tier 1	0 - 15	588,538	112,243	34.1%	\$421,195	<b>\$0.72</b>
Tier 2	16 - 30	276,121	65,556	19.9%	\$246,002	<b>\$0.90</b>
Tier 3	>30	500,068	150,982	45.9%	\$566,562	<b>\$1.14</b>
		1,364,727	328,781	100%	\$1,233,759	
Non-Residential	9,999,999	144,435	36,040	100.0%	\$135,243	<b>\$0.94</b>
Irrigation	9,999,999	119,628	29,250	100.0%	\$109,760	<b>\$0.92</b>
<b>Total</b>		<b>1,628,790</b>	<b>394,072</b>		<b>\$1,478,761</b>	

# Calaveras County Water District – 2023 Cost-of-Service Study

## FY 2024 Cost-of-Service Rates – Water Utility

### Proposed FY 2024 Bi-Monthly Fixed Charges

Table 36 reflects the combined charges of the District's proposed fixed charge of Account Services and Meter Capacity. Account Services are constant for all meter sizes. Meter Capacity is multiplied by the corresponding Capacity Ratios of each meter size to derive the FY 2024 fixed charges.

*Table 36: FY 2024 Bi-Monthly Fixed Charges by Meter Size*

Meter Size	Capacity Ratio [A]	Meters	Account Services [B] = \$25.69	Meter Capacity [C] = \$110.34 x A	FY 2024 Proposed Bi-Monthly Base [D] = B + C
5/8"	1.00	13,231	\$25.69	\$110.34	\$136.03
3/4"	1.50	3	\$25.69	\$165.51	\$191.20
1"	2.50	79	\$25.69	\$275.85	\$301.54
1 1/2"	5.00	23	\$25.69	\$551.70	\$577.39
2"	8.00	21	\$25.69	\$882.72	\$908.41
3"	16.00	2	\$25.69	\$1,765.44	\$1,791.13
4"	25.00	0	\$25.69	\$2,758.50	\$2,784.19
6"	50.00	0	\$25.69	\$5,517.00	\$5,542.69
8"	80.00	0	\$25.69	\$8,827.20	\$8,852.89

### Proposed FY 2024 Variable Rates

The proposed variable rates for FY 2024 are shown in Table 37 for each customer class and tier, reflecting the combined rate components of Delivery and Peaking.

*Table 37: FY 2024 Variable Rates by Customer Class and Tier (HCF)*

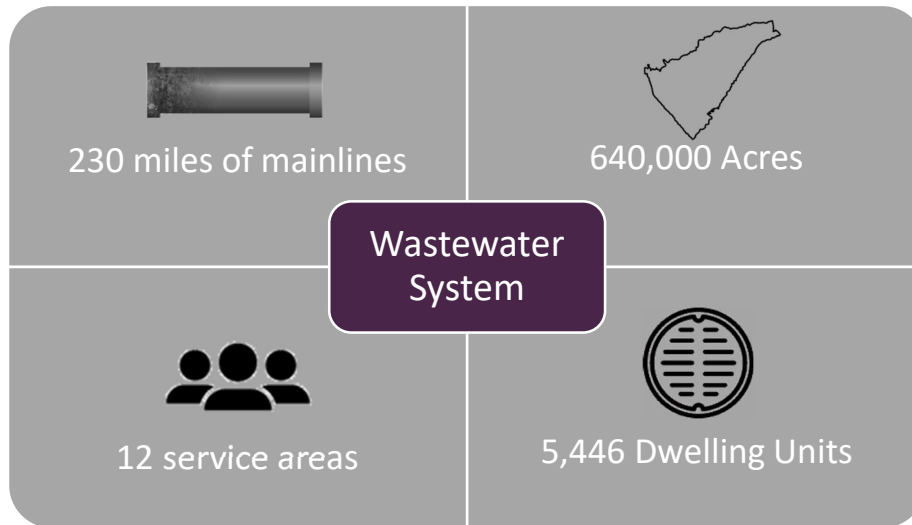
Customer Class & Tier	Tier Definitions (HCF)	Projected Usage (HCF)	Delivery [A]	Peaking [B]	FY 2024 Proposed Variable Rate [C] = A + B
Residential					
Tier 1	0 - 15	588,538	\$1.35	\$0.72	\$2.07
Tier 2	16 - 30	276,121	\$1.35	\$0.90	\$2.25
Tier 3	>30	500,068	\$1.35	\$1.14	\$2.49
Non-Residential	Uniform	144,435	\$1.35	\$0.94	\$2.29
Irrigation	Uniform	119,628	\$1.35	\$0.92	\$2.27

## Wastewater Utility

### Wastewater System

The District operates twelve wastewater treatment and disposal facilities and fourteen sewer collection systems. The wastewater collection system is comprised of 100 miles of gravity pipelines, 230 miles of force mains, and 45 lift stations.

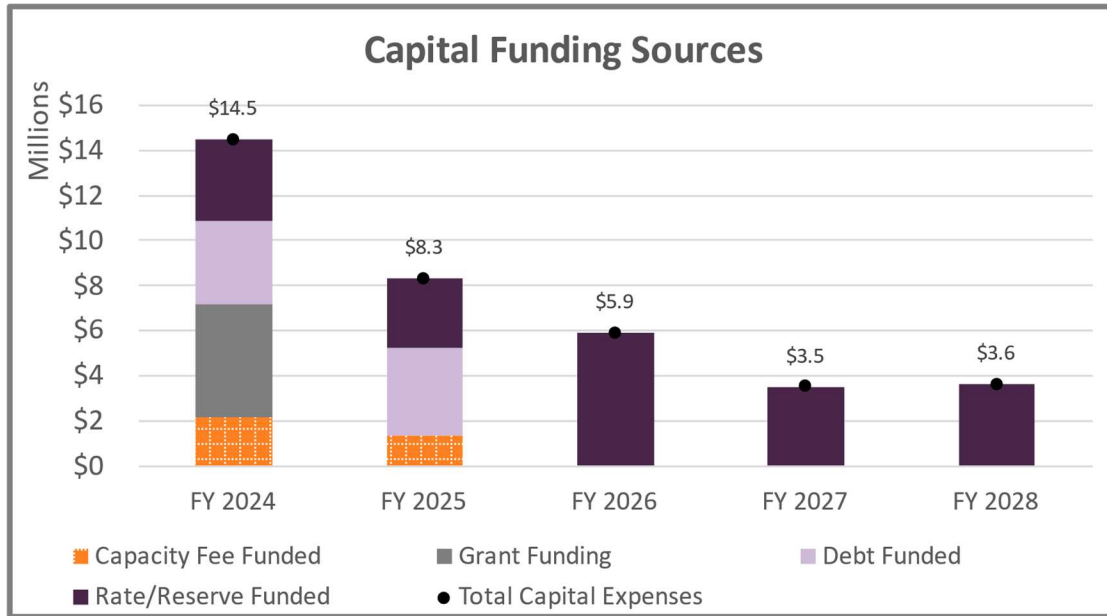
Figure 13: Wastewater System



The District developed a detailed CIP through FY 2028 that continues a contribution to system reinvestment that outpaces the annual depreciation of capital assets and totals approximately \$35.8M over the next five years. The District plans on funding these capital projects through a combination of grants, capacity fee receipts, debt proceeds, and rates/reserves. Figure 14 shows the District's CIP through FY 2028 with existing funding sources.

# Calaveras County Water District – 2023 Cost-of-Service Study

Figure 14: Wastewater Capital Improvement Plan



## Customers

At the start of FY 2023, the District had 5,446 equivalent dwelling units (EDUs), which includes residential and non-residential customers.

The existing wastewater rate structure consists of a base bi-monthly fixed charge per EDU and an R&R fixed charge per EDU for capital spending. The FY 2023 wastewater bi-monthly rates per EDU are identified in Table 38.

Table 38: Existing Wastewater Bi-Monthly Fixed Charges

Base Fixed Charges (\$/Bi-Month/EDU)	
Customer Class	Existing
Residential	\$173.31
Non-Residential	\$168.86

R&R Fixed Charges (\$/Bi-Month/EDU)	
Customer Class	Existing
Residential	\$37.32
Non-Residential	\$37.32

## Financial Plan Overview - Wastewater Utility

### Financial Planning Assumptions

Developing a long-term financial plan requires understanding the utility's financial position by evaluating existing revenue streams, ongoing expenses, how those expenses will change over time, new strategic objectives, and reserve policies. These considerations require certain assumptions for projecting revenues, expenses, and expected ending fund balances. Table 39 identifies assumptions used for forecasting revenues, and Table 40 identifies assumptions used for forecasting increases in expenses through the Rate Setting Period.

*Table 39: Wastewater Assumptions for Forecasting Revenues*

Key Assumptions	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Revenue Escalation</b>					
Non-Inflated	0.0%	0.0%	0.0%	0.0%	0.0%
Non-Rate Revenues	0.0%	0.0%	0.0%	0.0%	0.0%
Reserve Interest	1.5%	1.5%	1.5%	1.5%	1.5%
<b>Account Growth</b>					
Residential	0.0%	0.0%	0.0%	0.0%	0.0%
Non-Residential	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Customer EDU's</b>					
Residential	4,711	4,711	4,711	4,711	4,711
Non-Residential	735	735	735	735	735
<b>Total Customer EDU's</b>	<b>5,446</b>	<b>5,446</b>	<b>5,446</b>	<b>5,446</b>	<b>5,446</b>

*Table 40: Wastewater Assumptions for Forecasting Expense Requirements<sup>4</sup>*

Key Assumptions	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Expenditure Escalation</b>					
Benefits	3.0%	3.0%	3.0%	3.0%	3.0%
Capital Construction	7.2%	3.9%	3.9%	3.9%	3.9%
Energy Costs	5.0%	5.0%	5.0%	5.0%	5.0%
General Costs	5.6%	3.5%	3.5%	3.5%	3.5%
Non-Inflated	0.0%	0.0%	0.0%	0.0%	0.0%
Retirement	5.0%	5.0%	5.0%	5.0%	5.0%
Salaries	5.0%	5.0%	5.0%	5.0%	5.0%
Treatment	5.0%	5.0%	5.0%	5.0%	5.0%

<sup>4</sup> Capital Construction inflation and General Costs for FY 2024 were increased to 7.2% and 5.6%, respectively to account for recent annual increase due to inflation. Outer years reduce to 3.9% and 3.5%, reflecting the 5-year average of the Engineer's News Record – CCI index and the SF Consumer Price Index, respectively.



# Calaveras County Water District – 2023 Cost-of-Service Study

## Current Financial Position

### Revenues

Based on the forecasting assumptions, revenues were calculated using EDUs and existing wastewater rates (Table 38). Table 41 shows the calculated revenues for FY 2024 through the Rate Setting Period. Table 42 summarizes calculated rate revenues (rounded to thousands) and other non-rate revenues available through the Rate Setting Period.

*Table 41: Wastewater Calculated Rate Revenues*

<b>Fixed Revenues</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
<b>Base Fixed Charge</b>					
Residential	\$4,898,780	\$4,898,780	\$4,898,780	\$4,898,780	\$4,898,780
Non-Residential	\$744,673	\$744,673	\$744,673	\$744,673	\$744,673
<b>Total Base Fixed Charge</b>	<b>\$5,643,453</b>	<b>\$5,643,453</b>	<b>\$5,643,453</b>	<b>\$5,643,453</b>	<b>\$5,643,453</b>
<b>R&amp;R Fixed Charges</b>					
Residential	\$1,054,887	\$1,054,887	\$1,054,887	\$1,054,887	\$1,054,887
Non-Residential	\$164,581	\$164,581	\$164,581	\$164,581	\$164,581
<b>Total R&amp;R Fixed Charges</b>	<b>\$1,219,468</b>	<b>\$1,219,468</b>	<b>\$1,219,468</b>	<b>\$1,219,468</b>	<b>\$1,219,468</b>
<b>Total Rate Revenue</b>	<b>\$6,862,921</b>	<b>\$6,862,921</b>	<b>\$6,862,921</b>	<b>\$6,862,921</b>	<b>\$6,862,921</b>

# Calaveras County Water District – 2023 Cost-of-Service Study

Table 42: Wastewater Projected Revenues

Revenue Summary	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Rate Revenues</b>					
Base Fixed Charge	\$5,643,000	\$5,643,000	\$5,643,000	\$5,643,000	\$5,643,000
R&R Fixed Charges	\$1,219,000	\$1,219,000	\$1,219,000	\$1,219,000	\$1,219,000
<b>Subtotal Rate Revenues</b>	<b>\$6,862,000</b>	<b>\$6,862,000</b>	<b>\$6,862,000</b>	<b>\$6,862,000</b>	<b>\$6,862,000</b>
<b>Operating Revenues</b>					
Inspection Fees	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
Account Establishment Fees	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000
Delinquent Account Charge	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000
Repair Labor/Materials	\$32,000	\$32,000	\$32,000	\$32,000	\$32,000
Reimbursable Expense	\$45,000	\$45,000	\$45,000	\$45,000	\$45,000
Other Operating Revenue	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000
<b>Subtotal Operating Revenues</b>	<b>\$134,000</b>	<b>\$134,000</b>	<b>\$134,000</b>	<b>\$134,000</b>	<b>\$134,000</b>
<b>Other Revenues</b>					
Rental Revenue	\$22,000	\$22,000	\$22,000	\$22,000	\$22,000
Interest Income/CCWD Investme	\$19,000	\$19,000	\$19,000	\$19,000	\$19,000
Property Taxes	\$756,000	\$756,000	\$756,000	\$756,000	\$756,000
Standby Fees	\$35,000	\$35,000	\$35,000	\$35,000	\$35,000
Power Sales - North Fork	\$167,000	\$167,000	\$167,000	\$167,000	\$167,000
Power Sales - New Hogan	\$22,000	\$22,000	\$22,000	\$22,000	\$22,000
Other Non-Operating Revenue	\$193,000	\$193,000	\$193,000	\$193,000	\$193,000
<b>Subtotal Other Revenues</b>	<b>\$1,214,000</b>	<b>\$1,214,000</b>	<b>\$1,214,000</b>	<b>\$1,214,000</b>	<b>\$1,214,000</b>
<b>Total Revenues</b>	<b>\$8,210,000</b>	<b>\$8,210,000</b>	<b>\$8,210,000</b>	<b>\$8,210,000</b>	<b>\$8,210,000</b>

# Calaveras County Water District – 2023 Cost-of-Service Study

## Expenses

The FY 2023 budget was used as the utility's baseline expenses and adjusted over the Rate Setting Period based on the escalation factors shown in Table 40. Table 43 provides projected O&M expenses through the Rate Setting Period (rounded to thousands). Each expense category includes detailed line-item expenditures that were discussed with staff to determine the appropriate escalation factor to use for forecasting how costs will increase over time.

*Table 43: Wastewater Projected O&M Expenses*

O&M Expenses	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Operating Expenses</b>					
Non-Departmental (50)	\$396,000	\$414,000	\$433,000	\$453,000	\$473,000
Utility Services (54)	\$3,895,000	\$3,932,000	\$4,105,000	\$4,306,000	\$4,496,000
General Management (56)	\$360,000	\$377,000	\$395,000	\$413,000	\$432,000
Board of Directors (57)	\$51,000	\$53,000	\$55,000	\$57,000	\$59,000
Engineering/Technical Services (58)	\$453,000	\$473,000	\$495,000	\$518,000	\$541,000
Administrative Services (59)	\$574,000	\$562,000	\$587,000	\$613,000	\$640,000
Water Resources (60)	\$424,000	\$441,000	\$459,000	\$478,000	\$498,000
Treatment	\$378,000	\$395,000	\$413,000	\$431,000	\$450,000
<b>Subtotal Operating Expenses</b>	<b>\$6,153,000</b>	<b>\$6,252,000</b>	<b>\$6,529,000</b>	<b>\$6,838,000</b>	<b>\$7,139,000</b>
<b>Debt Service</b>					
Series 2019 Taxable Revenue Refunding Loan (Umpqua UAL)	\$158,612	\$154,909	\$151,206	\$147,173	\$143,151
2022 Sewer CIP Loan	\$753,168	\$752,920	\$753,256	\$753,144	\$753,584
2020 VacCon Loan (VacCon Truck #1)	\$33,771	\$8,443	\$0	\$0	\$0
2020 VacCon Loan (VacCon Truck #2)	\$33,462	\$33,465	\$16,731	\$0	\$0
SEWD (New Hogan)	\$20,620	\$20,621	\$0	\$0	\$0
New/Proposed Debt	\$0	\$0	\$0	\$0	\$0
<b>Subtotal Debt Service</b>	<b>\$999,634</b>	<b>\$970,357</b>	<b>\$921,193</b>	<b>\$900,317</b>	<b>\$896,735</b>
<b>Total Expenses</b>	<b>\$7,530,634</b>	<b>\$7,617,357</b>	<b>\$7,863,193</b>	<b>\$8,169,317</b>	<b>\$8,485,735</b>

# Calaveras County Water District – 2023 Cost-of-Service Study

## Reserves

The wastewater utility reserves include Operating, Capital, Rate Stabilization, and Emergency. Similar to the water utility, these reserves help mitigate risks to the utility by ensuring sufficient cash is on hand for daily operations and to fund annual system improvements, including unforeseen system failures. Table 44 summarizes the minimum reserve requirements and the ideal funding targets of each reserve.

*Table 44: Wastewater Reserve Requirements and Targets*

Reserve	Minimum Requirement	Reserve Target
Operating	90 days of operating expenses	120 days of operating expenses
Capital	1 Year of Depreciation average	2 years of CIP costs based on 5-year average
Rate Stabilization	10% of Operating Revenues	N/A
Emergency	3% of System Assets	5% of System Assets

The reserve balance as of July 1, 2022, equaled approximately \$4.7M.

## Financial Outlook at Existing Rates

Calculating revenue using existing rates and projecting expenses helps determine the current financial health of the utility. Revenues from current rates will not cover operating expenses through the Rate Setting Period. Net operating income is limited and reduces annually as projected expenses increase and can only fund a limited amount of capital needs. Therefore, reserves would need to cover the remaining capital costs, which would not be sustainable long-term, as reserves would be depleted in FY 2025 due to the \$14.45M in capital costs. Table 46 forecasts existing revenues and expenses through the Rate Setting Period. Table 46 identifies reserve transfers and reserves activity, with projected FY 2024 starting reserve balances shown for each reserve.

# Calaveras County Water District – 2023 Cost-of-Service Study

Table 45: Wastewater Financial Plan at Existing Rates

Revenue		FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Rate Revenues</b>						
Base Fixed Charge	Table 41	\$5,643,000	\$5,643,000	\$5,643,000	\$5,643,000	\$5,643,000
R&R Fixed Charges		\$1,219,000	\$1,219,000	\$1,219,000	\$1,219,000	\$1,219,000
<b>Total Rate Revenues</b>		<b>\$6,862,000</b>	<b>\$6,862,000</b>	<b>\$6,862,000</b>	<b>\$6,862,000</b>	<b>\$6,862,000</b>
<b>Projected Rate Revenues</b>		<b>\$6,862,000</b>	<b>\$6,862,000</b>	<b>\$6,862,000</b>	<b>\$6,862,000</b>	<b>\$6,862,000</b>
<b>Operating Revenues</b>						
Inspection Fees		\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
Account Establishment Fees		\$3,000	\$3,000	\$3,000	\$3,000	\$3,000
Delinquent Account Charge	Table 42	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000
Repair Labor/Materials		\$32,000	\$32,000	\$32,000	\$32,000	\$32,000
Reimbursable Expense		\$45,000	\$45,000	\$45,000	\$45,000	\$45,000
Other Operating Revenue		\$9,000	\$9,000	\$9,000	\$9,000	\$9,000
<b>Subtotal Operating Revenues</b>		<b>\$134,000</b>	<b>\$134,000</b>	<b>\$134,000</b>	<b>\$134,000</b>	<b>\$134,000</b>
<b>Other Revenues</b>						
Rental Revenue		\$22,000	\$22,000	\$22,000	\$22,000	\$22,000
Interest Income/CCWD Investments		\$19,000	\$19,000	\$19,000	\$19,000	\$19,000
Property Taxes		\$756,000	\$756,000	\$756,000	\$756,000	\$756,000
Standby Fees	Table 42	\$35,000	\$35,000	\$35,000	\$35,000	\$35,000
Power Sales - North Fork		\$167,000	\$167,000	\$167,000	\$167,000	\$167,000
Power Sales - New Hogan		\$22,000	\$22,000	\$22,000	\$22,000	\$22,000
Other Non-Operating Revenue		\$193,000	\$193,000	\$193,000	\$193,000	\$193,000
<b>Subtotal Other Revenues</b>		<b>\$1,214,000</b>	<b>\$1,214,000</b>	<b>\$1,214,000</b>	<b>\$1,214,000</b>	<b>\$1,214,000</b>
<b>Total Revenues</b>		<b>\$8,210,000</b>	<b>\$8,210,000</b>	<b>\$8,210,000</b>	<b>\$8,210,000</b>	<b>\$8,210,000</b>
<b>O&amp;M Expenses</b>						
<b>Operating Expenses</b>						
Non-Departmental (50)		\$396,000	\$414,000	\$433,000	\$453,000	\$473,000
Utility Services (54)		\$3,895,000	\$3,932,000	\$4,105,000	\$4,306,000	\$4,496,000
General Management (56)		\$360,000	\$377,000	\$395,000	\$413,000	\$432,000
Board of Directors (57)		\$51,000	\$53,000	\$55,000	\$57,000	\$59,000
Engineering/Technical Services (58)	Table 43	\$453,000	\$473,000	\$495,000	\$518,000	\$541,000
Administrative Services (59)		\$574,000	\$562,000	\$587,000	\$613,000	\$640,000
Water Resources (60)		\$424,000	\$441,000	\$459,000	\$478,000	\$498,000
Treatment		\$378,000	\$395,000	\$413,000	\$431,000	\$450,000
<b>Subtotal Operating Expenses</b>		<b>\$6,153,000</b>	<b>\$6,252,000</b>	<b>\$6,529,000</b>	<b>\$6,838,000</b>	<b>\$7,139,000</b>
<b>Debt Service</b>						
Series 2019 Taxable Revenue Refunding Loan (Umpqua UAL)		\$158,612	\$154,909	\$151,206	\$147,173	\$143,151
2022 Sewer CIP Loan		\$753,168	\$752,920	\$753,256	\$753,144	\$753,584
2020 VacCon Loan (VacCon Truck #1)		\$33,771	\$8,443	\$0	\$0	\$0
2020 VacCon Loan (VacCon Truck #2)	Table 43	\$33,462	\$33,465	\$16,731	\$0	\$0
SEWD (New Hogan)		\$20,620	\$20,621	\$0	\$0	\$0
New/Proposed Debt		\$0	\$0	\$0	\$0	\$0
<b>Subtotal Debt Service</b>		<b>\$999,634</b>	<b>\$970,357</b>	<b>\$921,193</b>	<b>\$900,317</b>	<b>\$896,735</b>
<b>Total Expenses</b>		<b>\$7,530,634</b>	<b>\$7,617,357</b>	<b>\$7,863,193</b>	<b>\$8,169,317</b>	<b>\$8,485,735</b>
<b>Net Cashflow</b>		<b>\$679,366</b>	<b>\$592,643</b>	<b>\$346,807</b>	<b>\$40,683</b>	<b>(\$275,735)</b>

# Calaveras County Water District – 2023 Cost-of-Service Study

Table 46: Wastewater – Transfers and Reserve Activity at Existing Rates

Operating Fund	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Beginning Balance	(\$2,380,674)	(\$1,701,307)	(\$1,108,665)	(\$761,858)	(\$721,175)
Transfers (Net Cashflow )	\$679,366	\$592,643	\$346,807	\$40,683	(\$275,735)
<b>Ending Balance</b>	<b>(\$1,701,307)</b>	<b>(\$1,108,665)</b>	<b>(\$761,858)</b>	<b>(\$721,175)</b>	<b>(\$996,910)</b>
Capital Reserve	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Beginning Balance	\$6,355,846	\$2,872,490	(\$203,434)	(\$6,104,760)	(\$9,641,285)
<u>Plus:</u>					
New Debt Proceeds	\$0	\$0	\$0	\$0	\$0
<u>Sources &amp; Uses</u>					
Wastewater CIP Loan Proceeds	\$3,715,566	\$3,875,000	\$0	\$0	\$0
Grant Funding	\$5,000,000	\$0	\$0	\$0	\$0
Capacity Fee Revenue	\$2,185,238	\$1,360,723	\$0	\$0	\$0
<u>Less:</u>					
CIP	(\$14,452,857)	(\$8,311,647)	(\$5,901,326)	(\$3,536,525)	(\$3,617,289)
New/Proposed Debt	\$0	\$0	\$0	\$0	\$0
Subtotal Capital Reserve	\$2,803,793	(\$203,434)	(\$6,104,760)	(\$9,641,285)	(\$13,258,573)
Interest Earnings	\$68,697	\$0	\$0	\$0	\$0
<b>Ending Balance</b>	<b>\$2,872,490</b>	<b>(\$203,434)</b>	<b>(\$6,104,760)</b>	<b>(\$9,641,285)</b>	<b>(\$13,258,573)</b>
Rate Stabilization Reserve	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Beginning Balance	\$192,500	\$192,500	\$192,500	\$192,500	\$192,500
Direct transfers to/(from) Rate Stabilization Reserve	\$0	\$0	\$0	\$0	\$0
<b>Ending Balance</b>	<b>\$192,500</b>	<b>\$192,500</b>	<b>\$192,500</b>	<b>\$192,500</b>	<b>\$192,500</b>
Emergency Reserve	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Beginning Balance	\$1,080,000	\$1,080,000	\$1,080,000	\$1,080,000	\$1,080,000
Direct transfers to/(from) Emergency Reserve	\$0	\$0	\$0	\$0	\$0
<b>Ending Balance</b>	<b>\$1,080,000</b>	<b>\$1,080,000</b>	<b>\$1,080,000</b>	<b>\$1,080,000</b>	<b>\$1,080,000</b>
<b>Ending Unrestricted Reserve Balance</b>	<b>\$2,443,683</b>	<b>(\$39,599)</b>	<b>(\$5,594,118)</b>	<b>(\$9,089,959)</b>	<b>(\$12,982,983)</b>

Figure 15 illustrates the operating position of the utility, where O&M expenses are identified with the dashed red trendline, and the horizontal black trendline shows total revenues at existing rates. The bars represent the amount of net operating income available. Figure 16 reflects the projected ending balances of unrestricted reserves after funding operating and capital projects through the Rate Setting Period. Unrestricted reserves include the Operating, Capital, Rate Stabilization, and Emergency reserves.

# Calaveras County Water District – 2023 Cost-of-Service Study

Figure 15: Wastewater Current Operating Financial Position

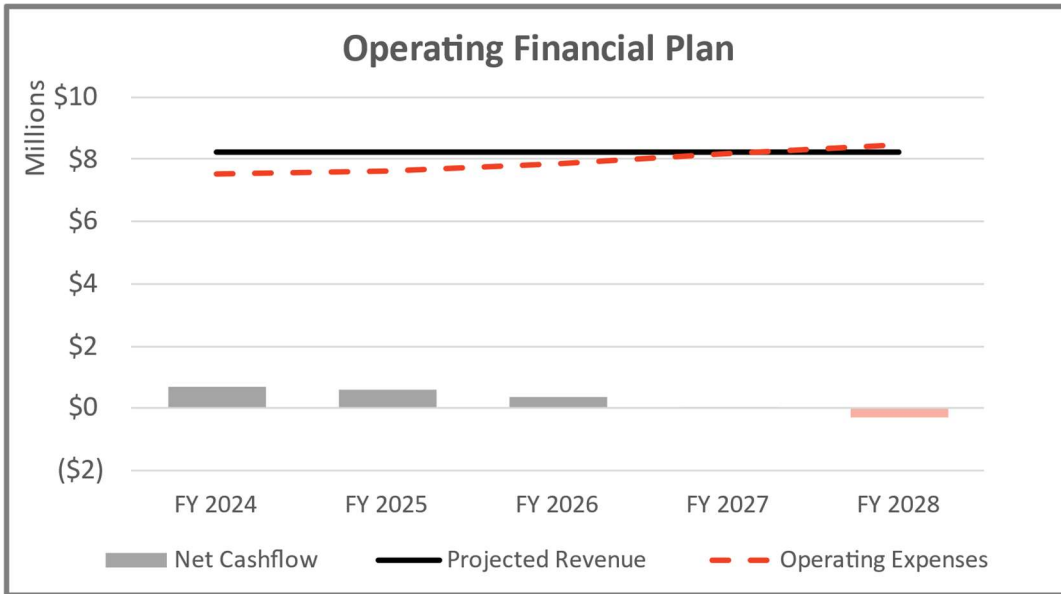
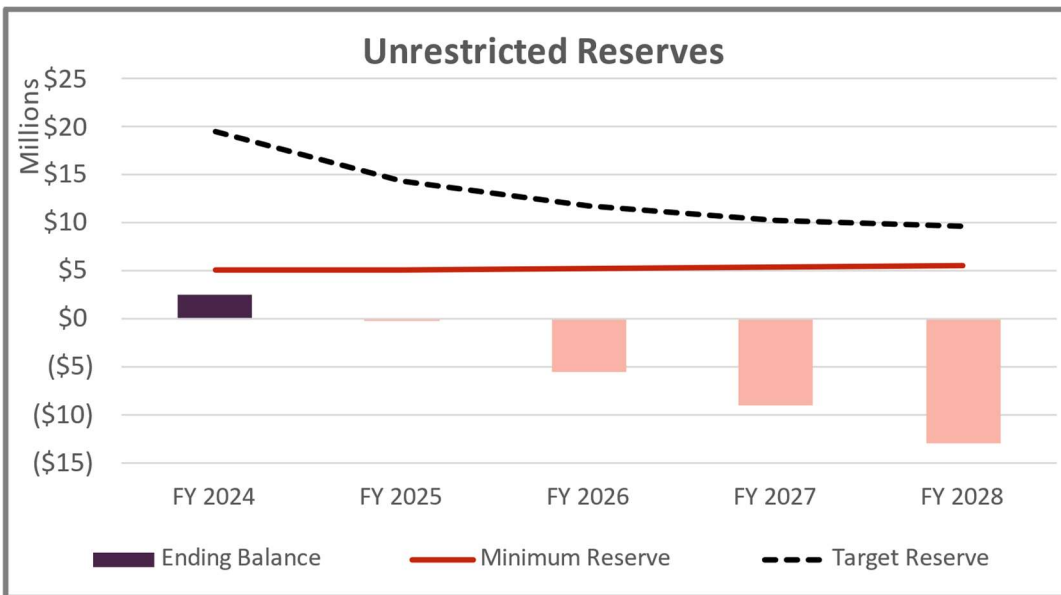


Figure 16: Wastewater Projected Ending Reserves at Existing Rates



## Proposed Financial Plan – Wastewater Utility

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From the financial outlook at existing rates, a proposed financial plan can be developed to adequately fund the multi-year revenue requirements, while meeting reserve requirements. The proposed financial plan generates approximately \$15.9M in additional revenue over the Rate Setting Period. The additional revenue generates positive net operating income each year to go towards capital spending and satisfy reserve requirements. Table 47 forecasts projected revenues, **with annual revenue adjustments**, and expenses through FY 2028, including \$6M in proposed debt. Table 48 identifies the projected FY 2024 total starting reserve balances, activity within each reserve (including net income transfer from Table 47, transfers between reserves, and annual CIP), and projected ending balances for each fiscal year of the Rate Setting Period.



# Calaveras County Water District – 2023 Cost-of-Service Study

Table 47: Proposed Wastewater Financial Plan

Revenue			FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Rate Revenues</b>							
Base Fixed Charge			\$5,643,000	\$5,643,000	\$5,643,000	\$5,643,000	\$5,643,000
R&R Fixed Charges	<b>Table 41</b>		\$1,219,000	\$1,219,000	\$1,219,000	\$1,219,000	\$1,219,000
<b>Total Rate Revenues</b>			<b>\$6,862,000</b>	<b>\$6,862,000</b>	<b>\$6,862,000</b>	<b>\$6,862,000</b>	<b>\$6,862,000</b>
Additional Revenue (from revenue adjustments):							
<b>Fiscal Year</b>	<b>Revenue Adjustment</b>	<b>Effective Month</b>					
FY 2024	14.0%	October	\$800,000	\$960,000	\$960,000	\$960,000	\$960,000
FY 2025	14.0%	July		\$1,095,000	\$1,095,000	\$1,095,000	\$1,095,000
FY 2026	14.0%	July			\$1,248,000	\$1,248,000	\$1,248,000
FY 2027	14.0%	July				\$1,423,000	\$1,423,000
FY 2028	3.0%	July					\$347,000
<b>Total Additional Revenue</b>			<b>\$800,000</b>	<b>\$2,055,000</b>	<b>\$3,303,000</b>	<b>\$4,726,000</b>	<b>\$5,073,000</b>
<b>Projected Rate Revenues (including revenue adjustments)</b>			<b>\$7,662,000</b>	<b>\$8,917,000</b>	<b>\$10,165,000</b>	<b>\$11,588,000</b>	<b>\$11,935,000</b>
<b>Operating Revenues</b>							
Inspection Fees			\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
Account Establishment Fees			\$3,000	\$3,000	\$3,000	\$3,000	\$3,000
Delinquent Account Charge	<b>Table 42</b>		\$40,000	\$40,000	\$40,000	\$40,000	\$40,000
Repair Labor/Materials			\$32,000	\$32,000	\$32,000	\$32,000	\$32,000
Reimbursable Expense			\$45,000	\$45,000	\$45,000	\$45,000	\$45,000
Other Operating Revenue			\$9,000	\$9,000	\$9,000	\$9,000	\$9,000
<b>Subtotal Operating Revenues</b>			<b>\$134,000</b>	<b>\$134,000</b>	<b>\$134,000</b>	<b>\$134,000</b>	<b>\$134,000</b>
<b>Other Revenues</b>							
Rental Revenue			\$22,000	\$22,000	\$22,000	\$22,000	\$22,000
Interest Income/CCWD Investments			\$19,000	\$19,000	\$22,000	\$44,000	\$51,000
Property Taxes			\$756,000	\$756,000	\$756,000	\$756,000	\$756,000
Standby Fees	<b>Table 42</b>		\$35,000	\$35,000	\$35,000	\$35,000	\$35,000
Power Sales - North Fork			\$167,000	\$167,000	\$167,000	\$167,000	\$167,000
Power Sales - New Hogan			\$22,000	\$22,000	\$22,000	\$22,000	\$22,000
Other Non-Operating Revenue			\$193,000	\$193,000	\$193,000	\$193,000	\$193,000
<b>Subtotal Other Revenues</b>			<b>\$1,214,000</b>	<b>\$1,214,000</b>	<b>\$1,217,000</b>	<b>\$1,239,000</b>	<b>\$1,246,000</b>
<b>Total Revenues</b>			<b>\$9,010,000</b>	<b>\$10,265,000</b>	<b>\$11,516,000</b>	<b>\$12,961,000</b>	<b>\$13,315,000</b>
<b>O&amp;M Expenses</b>							
<b>Operating Expenses</b>							
Non-Departmental (50)			\$396,000	\$414,000	\$433,000	\$453,000	\$473,000
Utility Services (54)			\$3,895,000	\$3,932,000	\$4,105,000	\$4,306,000	\$4,496,000
General Management (56)			\$360,000	\$377,000	\$395,000	\$413,000	\$432,000
Board of Directors (57)			\$51,000	\$53,000	\$55,000	\$57,000	\$59,000
Engineering/Technical Services (58)	<b>Table 43</b>		\$453,000	\$473,000	\$495,000	\$518,000	\$541,000
Administrative Services (59)			\$574,000	\$562,000	\$587,000	\$613,000	\$640,000
Water Resources (60)			\$424,000	\$441,000	\$459,000	\$478,000	\$498,000
Treatment			\$378,000	\$395,000	\$413,000	\$431,000	\$450,000
<b>Subtotal Operating Expenses</b>			<b>\$6,153,000</b>	<b>\$6,252,000</b>	<b>\$6,529,000</b>	<b>\$6,838,000</b>	<b>\$7,139,000</b>
<b>Debt Service</b>							
Series 2019 Taxable Revenue Refunding Loan (Umpqua UAL)			\$158,612	\$154,909	\$151,206	\$147,173	\$143,151
2022 Sewer CIP Loan			\$753,168	\$752,920	\$753,256	\$753,144	\$753,584
2020 VacCon Loan (VacCon Truck #1)	<b>Table 43</b>		\$33,771	\$8,443	\$0	\$0	\$0
2020 VacCon Loan (VacCon Truck #2)			\$33,462	\$33,465	\$16,731	\$0	\$0
SEWD (New Hogan)			\$20,620	\$20,621	\$0	\$0	\$0
New/Proposed Debt			\$0	\$501,694	\$501,694	\$501,694	\$501,694
<b>Subtotal Debt Service</b>			<b>\$999,634</b>	<b>\$1,472,051</b>	<b>\$1,422,887</b>	<b>\$1,402,011</b>	<b>\$1,398,429</b>
<b>Total Expenses</b>			<b>\$7,530,634</b>	<b>\$8,119,051</b>	<b>\$8,364,887</b>	<b>\$8,671,011</b>	<b>\$8,987,429</b>
<b>Net Cashflow</b>			<b>\$1,479,366</b>	<b>\$2,145,949</b>	<b>\$3,151,113</b>	<b>\$4,289,989</b>	<b>\$4,327,571</b>

# Calaveras County Water District – 2023 Cost-of-Service Study

Table 48: Wastewater – Unrestricted Reserves Activity through FY 2028

Operating Fund	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Beginning Balance	(\$2,380,674)	(\$901,307)	\$1,244,641	\$2,062,575	\$2,138,057
Transfers (Net Cashflow )	\$1,479,366	\$2,145,949	\$3,151,113	\$4,289,989	\$4,327,571
Sources & Uses					
Transfers from/(to) Capital Reserve	\$0	\$0	(\$2,333,180)	(\$4,214,507)	(\$4,249,551)
<b>Ending Balance</b>	<b>(\$901,307)</b>	<b>\$1,244,641</b>	<b>\$2,062,575</b>	<b>\$2,138,057</b>	<b>\$2,216,078</b>
Capital Reserve	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Beginning Balance	\$6,355,846	\$2,872,490	\$5,861,584	\$2,354,600	\$3,072,986
Plus:					
Transfers from/(to) Operating Fund	\$0	\$0	\$2,333,180	\$4,214,507	\$4,249,551
New Debt Proceeds	\$0	\$6,000,000	\$0	\$0	\$0
Sources & Uses					
Wastewater CIP Loan Proceeds	\$3,715,566	\$3,875,000	\$0	\$0	\$0
Grant Funding	\$5,000,000	\$0	\$0	\$0	\$0
Capacity Fee Revenue	\$2,185,238	\$1,360,723	\$0	\$0	\$0
Less:					
CIP	(\$14,452,857)	(\$8,311,647)	(\$5,901,326)	(\$3,536,525)	(\$3,617,289)
Subtotal Capital Reserve	\$2,803,793	\$5,796,566	\$2,293,437	\$3,032,582	\$3,705,248
Interest Earnings	\$68,697	\$65,018	\$61,163	\$40,404	\$50,837
<b>Ending Balance</b>	<b>\$2,872,490</b>	<b>\$5,861,584</b>	<b>\$2,354,600</b>	<b>\$3,072,986</b>	<b>\$3,756,084</b>
Rate Stabilization Reserve	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Beginning Balance	\$192,500	\$192,500	\$192,500	\$192,500	\$192,500
Direct transfers to/(from) Rate Stabilization Reserve	\$0	\$0	\$0	\$0	\$0
<b>Ending Balance</b>	<b>\$192,500</b>	<b>\$192,500</b>	<b>\$192,500</b>	<b>\$192,500</b>	<b>\$192,500</b>
Emergency Reserve	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Beginning Balance	\$1,080,000	\$1,080,000	\$1,080,000	\$1,080,000	\$1,080,000
Direct transfers to/(from) Emergency Reserve	\$0	\$0	\$0	\$0	\$0
<b>Ending Balance</b>	<b>\$1,080,000</b>	<b>\$1,080,000</b>	<b>\$1,080,000</b>	<b>\$1,080,000</b>	<b>\$1,080,000</b>
<b>Ending Unrestricted Reserve Balance</b>	<b>\$3,243,683</b>	<b>\$8,378,725</b>	<b>\$5,689,675</b>	<b>\$6,483,544</b>	<b>\$7,244,663</b>

# Calaveras County Water District – 2023 Cost-of-Service Study

The operating position based on the proposed financial plan is identified in Figure 17, including debt service coverage. Figure 18 shows the capital plan with funding sources. Figure 19 identifies the ending unrestricted reserve balances after funding capital expenses.

Figure 17: Wastewater Proposed Operating Position

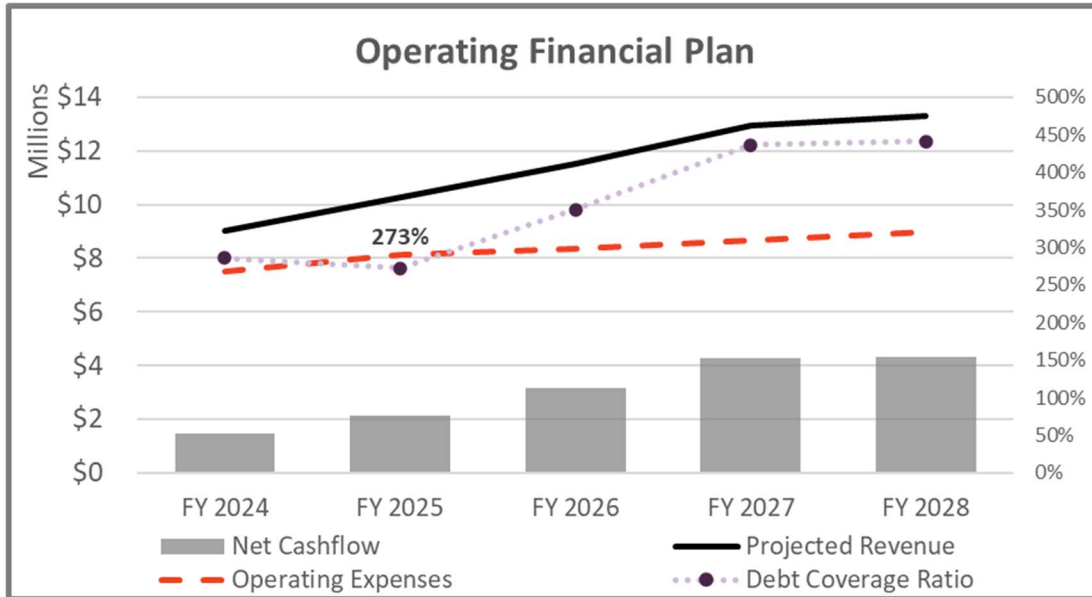
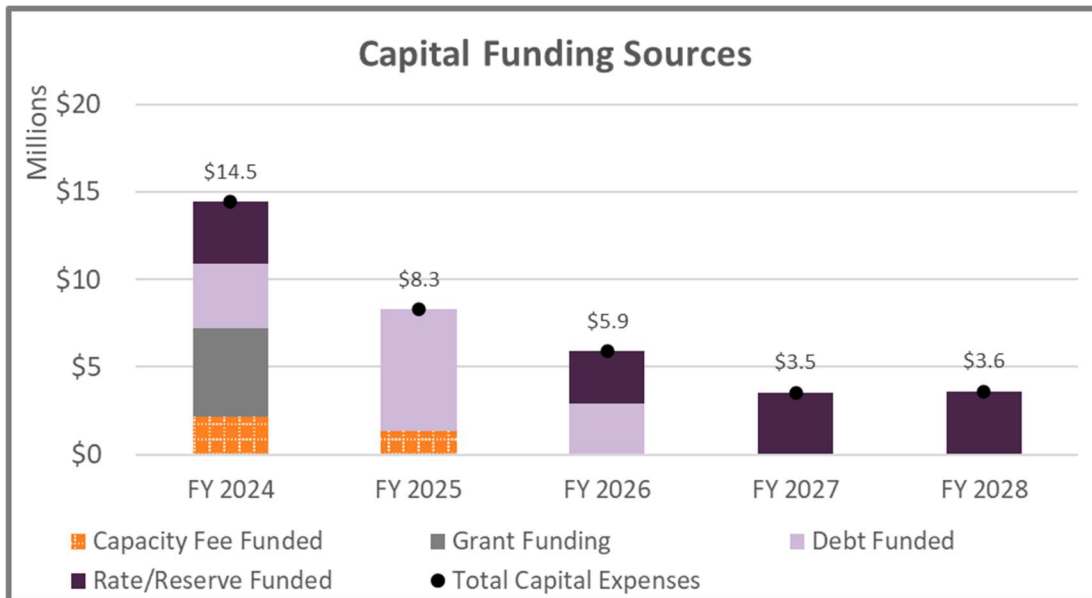
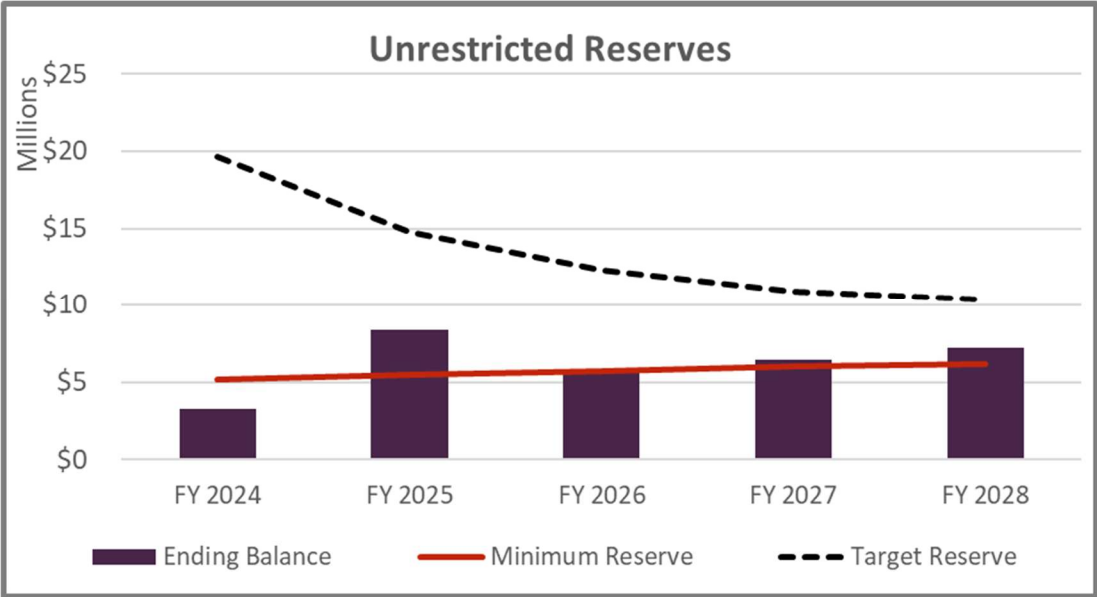


Figure 18: Wastewater Capital Improvement Plan with Funding Sources



# Calaveras County Water District – 2023 Cost-of-Service Study

Figure 19: Wastewater Proposed Ending Reserves



# Calaveras County Water District – 2023 Cost-of-Service Study

## Cost of Service Analysis – Wastewater Utility

### Revenue Requirements

Revenue requirements are determined for FY 2024 through FY 2028 and used for the cost-of-service. Revenue requirements include O&M expenses, available offsets from non-rate revenues, and annual net income for capital spending and reserve funding. The proposed revenue adjustments correspond to the proposed financial plan and set corresponding rates over the Rate Setting Period. The results of the financial plan analysis are summarized in Table 49 and represent the revenue required from rates over the Rate Setting Period.

Table 49: Wastewater Revenue Requirements

	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Revenue Requirements	Total	Total	Total	Total	Total
<b>Operating Expenses</b>					
Non-Departmental (50)	\$396,000	\$414,000	\$433,000	\$453,000	\$473,000
Utility Services (54)	\$3,895,000	\$3,932,000	\$4,105,000	\$4,306,000	\$4,496,000
General Management (56)	\$360,000	\$377,000	\$395,000	\$413,000	\$432,000
Board of Directors (57)	\$51,000	\$53,000	\$55,000	\$57,000	\$59,000
Engineering/Technical Services (58)	\$453,000	\$473,000	\$495,000	\$518,000	\$541,000
Administrative Services (59)	\$574,000	\$562,000	\$587,000	\$613,000	\$640,000
Water Resources (60)	\$424,000	\$441,000	\$459,000	\$478,000	\$498,000
Treatment	\$378,000	\$395,000	\$413,000	\$431,000	\$450,000
<b>Total Operating Expenses</b>	<b>\$6,531,000</b>	<b>\$6,647,000</b>	<b>\$6,942,000</b>	<b>\$7,269,000</b>	<b>\$7,589,000</b>
<b>Debt Service</b>					
Series 2019 Taxable Revenue Refunding Loan (Umpqua UAL)	\$158,612	\$154,909	\$151,206	\$147,173	\$143,151
2022 Sewer CIP Loan	\$753,168	\$752,920	\$753,256	\$753,144	\$753,584
2020 VacCon Loan (VacCon Truck #1)	\$33,771	\$8,443	\$0	\$0	\$0
2020 VacCon Loan (VacCon Truck #2)	\$33,462	\$33,465	\$16,731	\$0	\$0
SEWD (New Hogan)	\$20,620	\$20,621	\$0	\$0	\$0
New/Proposed Debt	\$0	\$501,694	\$501,694	\$501,694	\$501,694
<b>Total Debt Service</b>	<b>\$999,634</b>	<b>\$1,472,051</b>	<b>\$1,422,887</b>	<b>\$1,402,011</b>	<b>\$1,398,429</b>
<b>Other Funding</b>					
<i>Revenue Offsets</i>					
Operating Revenues	(\$134,000)	(\$134,000)	(\$134,000)	(\$134,000)	(\$134,000)
Other Revenues	(\$1,214,000)	(\$1,214,000)	(\$1,217,000)	(\$1,239,000)	(\$1,246,000)
<b>Subtotal Revenue Offsets</b>	<b>(\$1,348,000)</b>	<b>(\$1,348,000)</b>	<b>(\$1,351,000)</b>	<b>(\$1,373,000)</b>	<b>(\$1,380,000)</b>
<i>Adjustments</i>					
Reserve Funding	\$1,479,366	\$2,145,949	\$3,151,113	\$4,289,989	\$4,327,571
Adjustment for Mid-Year Increase	\$160,000	\$0	\$0	\$0	\$0
<b>Subtotal Adjustments</b>	<b>\$1,639,366</b>	<b>\$2,145,949</b>	<b>\$3,151,113</b>	<b>\$4,289,989</b>	<b>\$4,327,571</b>
<b>Revenue Requirement from Rates</b>	<b>\$7,822,000</b>	<b>\$8,917,000</b>	<b>\$10,165,000</b>	<b>\$11,588,000</b>	<b>\$11,935,000</b>

## Rate Design – Wastewater Utility

### Units of Service and Proposed Rates

Unit rates per EDU are derived by spreading the revenue requirements over total annual EDUs. This approach provides a clear connection between the costs incurred and the total customer demands served in EDUs, resulting in a cost-based rate structure in compliance with Proposition 218. The method of apportionment considers each customer's share of system costs and is reflected by the EDUs assigned to each account. Commercial accounts will be charged the same unit rate per EDU.

*Table 50: Proposed Wastewater Bi-Monthly Fixed Charge per EDU (FY 2024 – FY 2028)*

Proposed Charge	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Revenue Requirement	\$7,822,000	\$8,917,000	\$10,165,000	\$11,588,000	\$11,935,000
÷ Annual EDU's	32,676	32,676	32,676	32,676	32,676
<b>Unit Rate (\$/EDU/Month)</b>	<b>\$239.39</b>	<b>\$272.90</b>	<b>\$311.09</b>	<b>\$354.64</b>	<b>\$365.26</b>

## Cost-Based Rates – Water and Wastewater

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### Cost-of-Service and Rate Summary

The comprehensive cost-of-service analysis and rate development meet the requirements of Proposition 218 and identify the cost components that make up the proposed water and wastewater rates. Proposition 218 requires the following conditions:

1. An agency cannot collect revenue beyond what is necessary to provide service.  
*The long-term financial plans identify the District's revenue requirements for each utility, including operating expenses, capital improvement programs, debt, and reserves.*
2. Revenues derived by the charge shall not be used for any other purpose other than that for which the charge was imposed.  
*The District's water and wastewater utilities are analyzed as separate business enterprises to track revenues and expenses and do not fund services other than those necessary for the provision of water and wastewater, respectively.*
3. The amount of the fee may not exceed the proportional cost-of-service for the parcel.  
*The comprehensive cost-of-service analysis updated fixed charges, and variable rates reflect each customer's fair share of water and wastewater costs, respectively. Through this updated analysis, each customer will pay the proportional cost of providing service to that parcel.*
4. No charge may be imposed for a service unless that service is actually used or immediately available to the owner of a property.  
*Only properties that are actually receiving utility service or have service immediately available to them are required to pay the fixed and variable charges described in this study.*
5. A written notice of the proposed charge shall be mailed to the record owner of each parcel at least 45 days prior to the public hearing.  
*Notices were mailed to each affected parcel owner at least 45 days prior to the September 13, 2023, Public Hearing.*

The proposed water and wastewater 5-year rate schedules (FY 2024 through FY 2028) are shown in the following section. If a majority protest does not occur by or at the September 13th Public Hearing, the District Board may adopt the rates with an effective date of October 1, 2023, or soon thereafter.

# Calaveras County Water District – 2023 Cost-of-Service Study

## Rate Schedules – Water and Wastewater

### Water

Table 51 through Table 52 provide the five-year water rate schedule over the Rate Setting Period for Bi-Monthly fixed charges and variable rates, respectively. For FY 2025 through FY 2028, the revenue adjustments are applied across the board to the cost-of-service rates derived for FY 2024 as account growth and usage characteristics are projected to remain constant for financial planning.

*Table 51: Proposed Water Bi-Monthly Fixed Charge (FY 2024 – FY 2028)*

Total Fixed Meter Charges (\$/Bi-Month)					
Revenue Adjustment:		18.0%	16.0%	16.0%	15.0%
Meter Size	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
5/8"	\$136.03	\$160.52	\$186.21	\$216.01	\$248.42
3/4"	\$191.20	\$225.62	\$261.72	\$303.60	\$349.14
1"	\$301.54	\$355.82	\$412.76	\$478.81	\$550.64
1 1/2"	\$577.39	\$681.33	\$790.35	\$916.81	\$1,054.34
2"	\$908.41	\$1,071.93	\$1,243.44	\$1,442.40	\$1,658.76
3"	\$1,791.13	\$2,113.54	\$2,451.71	\$2,843.99	\$3,270.59
4"	\$2,784.19	\$3,285.35	\$3,811.01	\$4,420.78	\$5,083.90
6"	\$5,542.69	\$6,540.38	\$7,586.85	\$8,800.75	\$10,120.87
8"	\$8,852.89	\$10,446.42	\$12,117.85	\$14,056.71	\$16,165.22

*Table 52: Proposed Water Variable Charge (FY 2024 – FY 2028)*

Variable Rates (\$/HCF)					
Revenue Adjustment:		18.0%	16.0%	16.0%	15.0%
Customer Class	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Residential					
Tier 1	\$2.07	\$2.45	\$2.85	\$3.31	\$3.81
Tier 2	\$2.25	\$2.66	\$3.09	\$3.59	\$4.13
Tier 3	\$2.49	\$2.94	\$3.42	\$3.97	\$4.57
Non-Residential	\$2.29	\$2.71	\$3.15	\$3.66	\$4.21
Irrigation	\$2.27	\$2.68	\$3.11	\$3.61	\$4.16



# Calaveras County Water District – 2023 Cost-of-Service Study

## Wastewater

Table 53 provides the five-year wastewater rate schedule over the Rate Setting Period for bi-monthly fixed charges.

*Table 53: Proposed Wastewater Bi-Monthly Fixed Charge (FY 2024 – FY 2028)*

Total Fixed Charges (\$/Bi-Month/EDU)					
Customer Class	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Residential	\$239.39	\$272.90	\$311.09	\$354.64	\$365.26
Non-Residential	\$239.39	\$272.90	\$311.09	\$354.64	\$365.26

# Calaveras County Water District

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*September 6, 2023 Board Meeting*



# Water Enterprise

**Alternative Rates with Reduced Capital  
Improvement Projects**



Calaveras County  
Water District

# Alternative Five-Year Fixed Charge Schedule

## FY 2024 – FY 2028

Revenue Adjustment: COS 18.0% 16.0% 16.0% 15.0%

### Base Fixed Meter Charges (\$/Bi-Month)

Meter Size	Number	Existing	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
5/8"	13,231	\$85.79	\$136.03	\$160.52	\$186.21	\$216.01	\$248.42
3/4"	3	\$128.69	\$191.20	\$225.62	\$261.72	\$303.60	\$349.14
1"	79	\$214.49	\$301.54	\$355.82	\$412.76	\$478.81	\$550.64
1 1/2"	23	\$428.95	\$577.39	\$681.33	\$790.35	\$916.81	\$1,054.34
2"	21	\$686.33	\$908.41	\$1,071.93	\$1,243.44	\$1,442.40	\$1,658.76
3"	2	\$1,372.66	\$1,791.13	\$2,113.54	\$2,451.71	\$2,843.99	\$3,270.59

Revenue Adjustment: COS 12.0% 13.0% 13.0% 13.0%

### Base Fixed Meter Charges (\$/Bi-Month)

Meter Size	Number	Existing	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
5/8"	13,231	\$85.79	\$136.03	\$152.36	\$172.17	\$194.56	\$219.86
3/4"	3	\$128.69	\$191.20	\$214.15	\$241.99	\$273.45	\$309.00
1"	79	\$214.49	\$301.54	\$337.73	\$381.64	\$431.26	\$487.33
1 1/2"	23	\$428.95	\$577.39	\$646.68	\$730.75	\$825.75	\$933.10
2"	21	\$686.33	\$908.41	\$1,017.42	\$1,149.69	\$1,299.15	\$1,468.04
3"	2	\$1,372.66	\$1,791.13	\$2,006.07	\$2,266.86	\$2,561.56	\$2,894.57

COS = Cost-of-Service analysis, which includes the revenue adjustment and rate structure changes

# Alternative Five-Year Variable Rate Schedule

## FY 2024 – FY 2028

Revenue Adjustment:			COS	18.0%	16.0%	16.0%	15.0%
Variable Rates (\$/HCF)							
Customer Class	Tier Definitions (HCF)	Existing	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Residential							
Tier 1	0 - 15	\$1.17	\$2.07	\$2.45	\$2.85	\$3.31	\$3.81
Tier 2	15.01 - 30	\$1.22	\$2.25	\$2.66	\$3.09	\$3.59	\$4.13
Tier 3	>30	\$1.68	\$2.49	\$2.94	\$3.42	\$3.97	\$4.57
Tier 4		\$1.90	N/A	N/A	N/A	N/A	N/A

Revenue Adjustment:			COS	12.0%	13.0%	13.0%	13.0%
Variable Rates (\$/HCF)							
Customer Class	Tier Definitions (HCF)	Existing	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Residential							
Tier 1	0 - 15	\$1.17	\$2.07	\$2.32	\$2.63	\$2.98	\$3.37
Tier 2	15.01 - 30	\$1.22	\$2.25	\$2.52	\$2.85	\$3.23	\$3.65
Tier 3	>30	\$1.68	\$2.49	\$2.79	\$3.16	\$3.58	\$4.05
Tier 4		\$1.90	N/A	N/A	N/A	N/A	N/A

Note: Tiered allotments were adjusted, previous tiers (in HCF) were T1 = 10; T2 = 10.01 – 60; T3 = 60.01 – 120; T4 > 120

# Wastewater Enterprise

**Cost-of-Service and Alternative Rates**



Calaveras County  
Water District

# Alternative Five-Year EDU Charge Schedule

**FY 2024 – FY 2028**

	Revenue Adjustment	COS	14.0%	14.0%	14.0%	3.0%
<b>Base Fixed Charges (\$/Bi-Month/EDU)</b>						
<b>Customer Class</b>	<b>Existing</b>					
Residential	\$173.31	\$239.40	\$272.92	\$311.13	\$354.69	\$365.34
Non-Residential	\$168.86	\$239.40	\$272.92	\$311.13	\$354.69	\$365.34

*\*EDU = Equivalent Dwelling Unit*

	Revenue Adjustment	COS	12.0%	12.0%	12.0%	5.0%
<b>Base Fixed Charges (\$/Bi-Month/EDU)</b>						
<b>Customer Class</b>	<b>Existing</b>					
Residential	\$173.31	\$235.21	\$263.44	\$295.06	\$330.47	\$347.00
Non-Residential	\$168.86	\$235.21	\$263.44	\$295.06	\$330.47	\$347.00

COS = Cost-of-Service analysis, which includes the revenue adjustment and rate structure changes