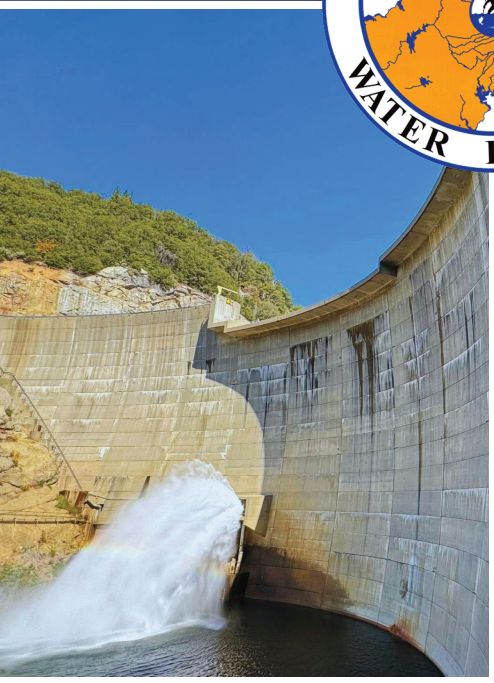
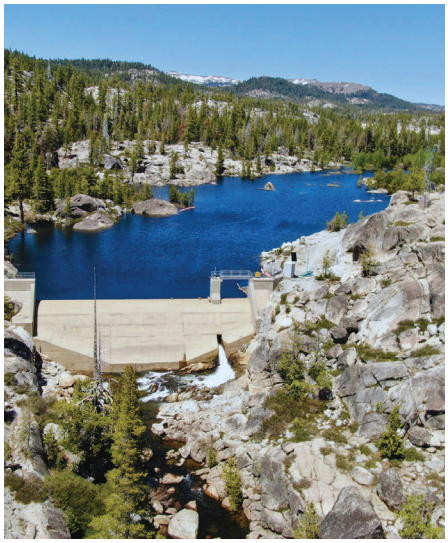


URBAN WATER MANAGEMENT PLAN

PUBLIC DRAFT

May 2026



Prepared by: Woodard & Curran

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ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
ACS	American Community Survey
Act	Urban Water Management Planning Act
AF	Acre-Foot
AFY	Acre-Feet per Yearapep
BMP / BMPs	Best Management Practice(s)
Board	Board of Directors (CCWD)
CalWEP	California Water Efficiency Partnership
CCWD	Calaveras County Water District
CII	Commercial, Industrial, and Institutional
CIMIS	California Irrigation Management Information System
CIP	Capital Improvement Plan
CNRA	California Natural Resources Agency
CPUD	Calaveras Public Utility District
CWC	California Water Code
DAC / DACs	Disadvantaged Community / Communities
DOF	California Department of Finance
DMM / DMMs	Demand Management Measure(s)appendix B
DRA	Drought Risk Assessment
DWR	California Department of Water Resources
EBMUD	East Bay Municipal Utility District
EPA	U.S. Environmental Protection Agency
Eto	Evapotranspiration
FERC	Federal Energy Regulatory Commission
Flood-MAR	Flood-Managed Aquifer Recharge
FY	Fiscal Year
GPCD	Gallons Per Capita per Day
GPSCD	Gallons Per Service Connection per Day
GPMD	Gallons Per Mile of Main per Day
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
IRWM / IRWMP	Integrated Regional Water Management (Plan)
JPA	Joint Powers Agreement
kWh	Kilowatt-hour
kWh/AF	Kilowatt-hours per Acre-Foot
MAC IRWM	Mokelumne-Amador-Calaveras Integrated Regional Water Management
MF	Multi-Family
MHI	Median Household Income
MW	Megawatt
NCPA	Northern California Power Agency
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
PG&E	Pacific Gas & Electric Company
R&R	Renovation and Replacement
SB	Senate Bill

SB X7-7	Water Conservation Act of 2009
SDAC	Severely Disadvantaged Community
SEWD	Stockton East Water District
SF	Single-Family
SGMA	Sustainable Groundwater Management Act
Subbasin	Eastern San Joaquin Groundwater Subbasin
SWRCB	State Water Resources Control Board
T-Stan IRWM	Tuolumne-Stanislaus Integrated Regional Water Management
UMRWA	Upper Mokelumne River Watershed Authority
USACE	U.S. Army Corps of Engineers
USBR	United States Bureau of Reclamation
UWMP	Urban Water Management Plan
UWPA	Utica Water and Power Authority
WDR	Waste Discharge Requirements
WSCP	Water Shortage Contingency Plan
WSDA	Water Supply and Demand Assessment
WWRF	Wastewater Reclamation Facility
WTP	Water Treatment Plant
WWTF	Wastewater Treatment Facility
WWTP	Wastewater Treatment Plant

1. INTRODUCTION AND EXECUTIVE SUMMARY

Water resource planning is an essential function of water suppliers. It is particularly critical in California as the state's water resources vary greatly with location and from year-to-year in the volume, nature, and timing of precipitation in key watersheds. Because of this high variability, California has faced, and continues to face, intense drought periods and times of water supply shortage. These conditions are also expected to worsen under the anticipated effects of global climate change. Prior to the adoption of the Urban Water Management Planning Act (Act) in 1983, there were no specific requirements for water suppliers in California to conduct long-term planning or to formally prepare for times of water supply shortages. While many suppliers had developed planning and guidance information prior to the Act, there were many who did not and were thus left vulnerable to supply disruptions resulting from drought or catastrophic events.

The Calaveras County Water District (CCWD/District) is a California Special District (local government) located in Calaveras County (County). CCWD acts as the primary County water supplier and maintains water resources management authority for several key watersheds of the Sierra Nevada Mountains. The District provides water service to approximately 14,000 municipal connections from six water treatment facilities each forming CCWD's independent service areas located throughout the County. The District also operates 13 wastewater treatment facilities, provides recycled water supplies, and actively manages a portion of the 'critically over-drafted' Eastern San Joaquin Groundwater Subbasin (Subbasin). CCWD is not immune to the variability inherent in California's water resources and must therefore prepare for times of water supply shortages or droughts. Owing to the District's complex water and wastewater services, vulnerable groundwater resources, and reliance on surface water diversion and storage rights, CCWD understands that water is a limited resource, and that proper resource planning and coordination are essential to protect local communities, economies, and environmental health. While protection of the District's water supplies and operations remains the priority, the District has remained committed to reducing the per capita demand of its water customers by promoting water conservation and water use efficient practices, where practicable. It also recognizes that, while several water supply and efficient use concepts area statewide concern, planning for these issues is best done at a local level.

This Urban Water Management Plan (UWMP/Plan) documents CCWD's best efforts to develop the local planning and coordination necessary to make informed decisions about long-term water supply availability, demand trends, and actions needed under water supply shortage conditions. This professional strategic plan shows the commitment of the District to ensure the availability of adequate future supplies by efficiently using its current supplies to protect both its customers and the water and natural resources of this County, in several planning scenarios and considering climate change impacts. By preparing this UWMP, the District also meets the necessary regulatory planning requirements pursuant to the Act.

Pursuant to the requirements of the California Water Code (CWC) §10630.5, this UWMP Executive Summary provides a simple lay person's description of the information needed to provide a general understanding of this Plan and includes a description of the District's reliable water supplies, anticipated challenges, and strategies for managing system reliability risks. Each of the chapters included in this Plan are summarized in the subsequent sections, with key findings highlighted.

1.1 PLAN PREPARATION

The Act has required that any urban water supplier providing water supplies for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre-feet (AF) of water annually, prepare and adopt a UWMP. The UWMP must report, describe, and evaluate water supplier deliveries and uses, water supply sources, efficient water uses, and demand management measures. In order to maintain consistency with changes to statewide water management priorities, updated CWC and Act materials, and the latest literature information, the UWMP must be regularly updated and reviewed every five years. The District, as an urban water supplier meeting these criteria, is required to maintain and update its UWMP. For the purposes of this document, "UWMP" and "Plan refers to this 2025 UWMP Update, unless otherwise specified. All volumetric units presented in the District's Plan are in acre-feet per year (AFY), and all annual data are based on CCWD's Fiscal Year (FY) calendar, unless otherwise specified (i.e., preceding July 1st through June 30th).

During preparation of this UWMP, the District notified several communities, interested parties, tribal representatives, and other water suppliers within the County that it would be updating the Plan. Additionally, the District noticed and held a public hearing to present the UWMP and provide a forum for collecting comments. To further provide opportunity for comment, the District formally held a 4-week public comment period and posted a draft of the Plan on the District's website (at https://ccwd.org/). More information on plan preparation can be found in **Chapter 2**.

1.2 DISTRICT OVERVIEW

The District serves six independent water supply service areas within the County from four different water sources: 1) Jenny Lind Service Area (Calaveras River), 2) Copper Cove/Copperopolis Service Areas (Stanislaus River), 3) Ebbetts Pass Service Area (Stanislaus River), 4) Sheep Ranch Service Area (San Antonio Creek, tributary to the Calaveras River), 5) Wallace Service Area (groundwater), and 6) West Point Service Area (Mokelumne River). These service areas are isolated from each other and do not generally share water supplies or infrastructure. This often presents unique challenges and requires more intensive planning to account for resource risks and vulnerabilities that may impact some areas but not others. Additionally, these service areas are located in rural mountain and foothill terrain, with elevations ranging from 1,000 feet to 6,000 feet. They also have low population densities and a relatively small rate-payer base, which can lead to management and financial challenges for the District. Note that each service area also varies in degree of permanent full-time and part-time residents, owing mostly to second homeowners and vacationers taking advantage of the County's proximity to outdoor and recreational activities.

CCWD's service population is projected to decrease over the planning horizon of the UWMP; 2050 population is projected to be about 26,854 people. Consistent with this declining population, District demands are also anticipated to decline over the planning horizon from current (2025) demands of roughly 6,700 AF to approximately 5,800 AF in 2050. However, actual District demands in the future may be different if seasonal residents become permanent residents or if primed agricultural areas in the County are developed. Additionally, many County residents currently live in fragmented rural areas outside of the District's service areas, some relying mainly on small private domestic systems and wells drilled in fractured bedrock while others rely on the same surface water sources as the District although provided by other water suppliers in the County.

The County has two distinct climate zones: 1) lower elevations along the Sierra Nevada Foothills, generally warmer and with less precipitation, and 2) higher elevations extending up the Sierra Nevada Mountains, notably towards Ebbetts Pass along the Highway 4 Corridor, generally cooler and with heavy winter month precipitation (especially snow). Service areas located along the elevation gradient often experience climates

between these zones. For reference, the long-term average lower elevation accumulated annual precipitation is around 19 inches, while higher elevation average is around 49 inches. CCWD monitors available data and coordinates with its regional partners to better understand and prepare for climate change impacts. The District has taken steps to assess risks and vulnerabilities to climate change and recognizes the potential impacts to its water supplies in the future. More information on these efforts, and about the District, is included in **Chapter 3.**

1.3 DISTRICT SUPPLIES AND WATER USE

The District provides water supplies to its customers from four watershed sources or their tributaries: A) Calaveras River, B) Stanislaus River, C) Mokelumne River, or D) groundwater from the portions of the Subbasin underlying the County. Because these sources and associated water systems are largely independent of one another with no interties within the County, the sections of this UWMP delineate the service areas by their corresponding water supply sources (labelled as sub-regions). This document includes discussion of specific conditions within each distinct sub-region, including individual supply and demand analysis tables for each sub-region. The sub-region configuration provided in the UWMP allows the District to better manage for unique service area risks and water supply conditions. District-wide tables, as required by the Act, are included in **Appendix A**.

1.3.1 Sub-Region A: Calaveras River

Sub-Region A includes the Jenny Lind Service Area (Jenny Lind) and Sheep Ranch Service Area (Sheep Ranch), both which receive water supplies from the Calaveras River Watershed. District supplies to Jenny Lind are based on a water supply contract with the U.S. Bureau of Reclamation for water from New Hogan Reservoir (New Hogan) on the Calaveras River. Sheep Ranch utilizes surface water diversion rights from San Antonio Creek, a tributary to the Calaveras River. These systems together delivered nearly 3,200 AF to customers in FY 2025 through 3,864 connections in Jenny Lind and 47 connections in Sheep Ranch. This sub-region is the second largest by population, serving a total of nearly 10,200 people in 2025. Water in this sub-region is almost entirely dedicated to residential use while some agricultural use is present. The District also owns a hydroelectric project at New Hogan, the New Hogan Power Project (New Hogan Project, FERC Project No. 2903), utilizing non-consumptive hydropower water rights to generate approximately 3.4 megawatts (MW) at New Hogan Dam.

1.3.2 Sub-Region B: Stanislaus River

Sub-Region B includes the Ebbetts Pass Service Area (Ebbetts Pass) and Copper Cove/Copperopolis Service Areas (Copper Cove/Copperopolis), both of which receive water supplies from the Stanislaus River Watershed. District supplies to both service areas rely on complex surface water diversion and storage rights, infrastructure, and operations on the Stanislaus River, the North Fork of the Stanislaus River, Highland Creek, and other tributaries. The District generally relies on water storage in its New Spicer Meadow Reservoir (New Spicer), located upstream of both service areas in neighboring Alpine and Tuolumne Counties. Much of the water rights and supplies serving this sub-region were developed as part of the District's North Fork Stanislaus Hydroelectric Development Project (North Fork Project, FERC Project No. 2409), capable of generating 253 MW along the North Fork of the Stanislaus River. The North Fork Project is currently operated by the Northern California Power Agency (NCPA) under agreement with CCWD, which sets several of the operational guidelines and water supplies made available for these service areas in conjunction with hydropower facility use. These systems together delivered nearly 3,250 AF in FY 2025 through 5,989connections in Ebbetts Pass and 2,754 connections in Copper Cove/Copperopolis. Ebbetts Pass serves

approximately 12,100 people centered around the communities of Arnold and Dorrington/Camp Connell, while Copper Cove/Copperopolis serves about 6,398 people. This sub-region saw the largest population growth over the past 5-years. Water in this sub-region is mostly used for residential and landscaping use.

1.3.3 Sub-Region C: Mokelumne River

Sub-Region C includes the West Point Service Area (West Point), which receives supplies from Bear Creek and the Middle Fork of the Mokelumne River (Middle Fork), both in the Upper Mokelumne River Watershed. This watershed has been largely altered from historical project developments by the Pacific Gas & Electric Company (PG&E) of several hydroelectric power facilities, and the East Bay Municipal Utility District (EBMUD) for their water supplies conveyed to the San Francisco Bay Area using their Mokelumne Aqueduct System. The District relies on Bear Creek water rights and a water purchase agreement with the Calaveras Public Utility District (CPUD), to Middle Fork supplies made available from CPUD's Schaads Reservoir, to serve around 1,200 people in West Point through roughly 570 connections. In FY 2025, 152 AF was delivered primarily for residential uses in this sub-region.

1.3.4 Sub-Region D: Groundwater

Sub-Region D includes the Wallace Service Area (Wallace), which is the District's sole groundwater- only service area. Wallace utilizes groundwater wells drawing from a critically over-drafted Subbasin, leading to the District's unique role in local and Subbasin-wide groundwater management under the Sustainable Groundwater Management Act (SGMA). In FY 2025, water deliveries to Wallace totaled 62 AF through about 110 connections, mostly for residential use in this area along the south shore of Camanche Reservoir. Depending on the outcomes and sustainability objectives formulated under SGMA, the District may look for alternative surface water supplies for this service area and surrounding groundwater users over time.

More detailed information on the District's water use and supply can be found in **Chapter 4** and **Chapter 6**, respectively.

1.4 SB X7-7 REPORTING

The Water Conservation Bill of 2009 (SB X7-7) introduced elements of the California "20x2020 Water Conservation Plan" into the UWMP development process, which was designed to monitor and reduce the statewide per capita urban water use by 20 percent over an established baseline by the year 2020. As noted in **Chapter 5**, the District met its 2020 Target of 192 GPCD in 2020. A more detailed discussion of SB X7-7 baselines and targets are included in the District's 2020 UWMP.

1.5 DEMAND MANAGEMENT MEASURES

The District views conservation as an integral part of its water resources stewardship responsibility. CCWD has implemented many Demand Management Measures (DMMs), such as leak detection and repair, 100-percent metered service, metered rates, public information programs, and water waste prohibitions. The District has worked to expand its water conservation program to achieve the largest practicable water savings. Due to the rural nature of the County and the diversity in climate, soils, elevation, and geography, a variety of DMM measures are utilized. Nevertheless, the District is exploring cost-effective options to meet DMM requirements. The District's water conservation efforts are discussed in more detail in **Chapter 9**.

1.6 SUPPLY RELIABILITY AND CONTINGENCY PLANNING

A number of factors could negatively impact the reliability of the District's water supplies going forward, including naturally-occurring limits on the amount of supply available, water quality issues, changing climatic conditions, or a combination of these in addition to changing regulations. To adequately plan for a potential future reduction in supply, the District compared historical supply to projected future demands to identify potential shortages or inadequacies. The analyses by sub-region help identify the potential occurrence and degree of shortage that could occur during a severe drought period of multiple years. As the District relies primarily on surface water, its water supplies are extremely susceptible to hydrologic changes and state-mandated water use curtailments. CCWD's priority remains protecting its water supplies and operations against these potential conditions. Several water supply projects, planning efforts, and regional coordination programs are outlined in this UWMP, which directly support this priority. Detailed information on supply reliability is included in **Chapter 7.**

The District's WSCP, appended to the UWMP, is an independent planning document that outlines how CCWD will prepare for and respond to water shortage conditions. Six Water Shortage Stages (Shortage Stages) were established based upon potential reduction in total District supply, meant to guide the District and public in knowing severity of water shortage conditions and what Shortage Response Actions may be needed. The Shortage Stages outlined in the WSCP are based on supply reductions of 10, 20, 30, 40, 50, and >50 percent for Stages 1 through 6, respectively (i.e., higher number more severe). Each stage outlines a number of communication and coordination efforts to reduce demand, including increasing levels of mandatory rationing. Note the CCWD Board of Directors has the authority to impose the WSCP-defined Shortage Stages, Shortage Response Actions, and communications and enforcement protocols on one or all service areas depending on the severity of water shortage condition(s). More information on the District's current water contingency planning can be found in **Chapter 8**.

1.7 PLAN ADOPTION, SUBMITTAL, AND IMPLEMENTATION

The District adopted its UWMP and WSCP on June 24, 2026 and will submit its Plan to the California Department of Water Resources (DWR) by July 1, 2026 for review of consistency with the Act, via the approved website. The District will submit a CD copy of the Plan to the California State Library and communities, interested parties, tribal representatives, and other water suppliers in the County no later than 30 days after June 24, 2026, the date of Plan adoption. A copy of the Plan will also be available on the District's website (at https://ccwd.org/water-resources/). More detailed information on these procedures can be found in **Chapter 10.**

1.8 PLAN ORGANIZATION

The District's UWMP is organized into the chapters as listed below.

Chapter 2: Plan Preparation

Chapter 3: System Description

Chapter 4: Water Use

Chapter 5: Baselines and Targets

Chapter 6: System Supplies

Chapter 7: Supply Reliability Assessment

Chapter 8: Water Shortage Contingency Planning Chapter 9: Demand Management Measures

Chapter 10: Plan Adoption, Submittal, and Implementation

Chapter 11: References

2. PLAN PREPARATION

2.1 BASIS FOR PREPARING A PLAN

The Urban Water Management Planning Act (Division 6 Part 2.6 of the California Water Code. §10610-10656), enacted in 1983, requires urban water suppliers in California to develop, adopt, and submit UWMP to the California DWR. The Act requires urban water suppliers to update their UWMP every five years to address changing state water use priorities and to maintain compliance with the Water Code. In this context, urban water suppliers are defined as agencies that "provide water for municipal purposes to more than 3,000 customers or supply more than 3,000 AF of water annually." The District, by combination of its service area populations and water supplies, fits this definition and is therefore required to prepare and submit an UWMP update following years ending in 0 and 5 (e.g., last updated in 2020, submitted to DWR in 2021, and now required in 2025 for 2026 submission).

The Act has been amended by California Legislature several times but has consistently required that UWMPs report, describe, and evaluate water deliveries and uses, water supply sources, efficient water uses, and DMMs. It also directs urban water suppliers in carrying out their long-term resource planning responsibilities to ensure adequate water supplies are available to meet existing and future (projected) demands over a 20-year planning horizon, considering various drought scenarios. To ensure compliance with these aspects and the Water Code, CCWD has utilized the DWR "Urban Water Management Plan Guidebook 2025" (Guidebook) in preparation of this 2025 UWMP Update. A few key legislative components related to this UWMP update cycle, covered by the Guidebook, are overviewed below:

- The Water Conservation Bill of 2009 (SB X7-7) introduced elements of the California "20x2020 Water Conservation Plan" into the UWMP development process, which was designed to monitor and reduce the statewide per capita urban water use by 20 percent over an established baseline by the year 2020. SB X7-7 requires urban water suppliers to report in their UWMPs base daily per capita water use (baseline), an urban water use target, an interim urban water use target, and compliance daily per capita water use. This will enable water agencies and DWR to track progress towards decreasing daily per capita urban water use throughout the state, based on targets established by CCWD in the 2015 UWMP update. Beginning in 2016, retail water suppliers must comply with the conservation requirements in SB X7-7 in order to be eligible for future state water planning and implementation grants and loans.

- California Senate Bill (SB) 606 and Assembly Bill (AB) 1668 from 2018 established new requirements for UWMPs which must now include a Water Shortage Contingency Plan (WSCP) and drought risk assessment methodology that compares available water supplies with projected water demands. Under these requirements, water suppliers must now plan for a dry period that lasts for 5 consecutive years, an increase from the previous requirement of 3 years.

CCWD is a California Special District operating as the primary (but not sole) urban retail water supplier in Calaveras County (County). As such, CCWD is the only water supplier which develops a UWMP in the County. The District owns and operates a set of public water systems in its water supply and wastewater service areas for the benefit of its ratepayers and the County. **Table 2-1** below provides an overview of these systems, covered under the UWMP.

TABLE 2-1: PUBLIC WATER SYSTEMS (DWR TABLE 2-1)

Public Water System Number	Public Water System Name	Number of Municipal Connections FY 2025	Volume of Water Supplied FY 2025 (AF)
CA0510004	Sheep Ranch Service Area (CCWD Sheep Ranch)	47	14
CA0510006	Jenny Lind Service Area (CCWD Jenny Lind)	3,864	1,954
CA0510005	West Point Service Area (CCWD West Point)	572	152
CA0510017	Copper Cove/ Copperopolis Service Areas (CCWD Copper Cove)	2,754	1,424
CA0510016	Ebbetts Pass Service Area (CCWD Ebbetts Pass Improvement District)	5,989	1,399
CA0510019	Wallace Service Area (Wallace Community Services District)	107	65
	Total	**13,333**	**4,908**

The District has prepared this UWMP update to comply with the requirements associated with the Act, the Water Code, and the DWR Guidebook, and to meet the following planning objectives:

- Ensure the efficient use of available water supplies;
- Determine existing baseline water consumption;
- Determine if water use targets continue to be met;
- Describe and evaluate the existing water system and historical and projected water use;
- Evaluate current and projected water supply reliability;
- Describe and evaluate DMMs;
- Provide a WSCP;
- Prepare a Drought Risk Assessment (DRA) using a hypothetical 5-year drought condition; and

- Establish a process for preparing annual Water Supply and Demand Assessments (WSDAs).

In an effort to verify that the District has met all the requirements put forth in the Guidebook, a contents 'checklist' is provided in **Appendix B**. This checklist indicates the page number that corresponds to each Water Code requirement related to urban water management planning for this UWMP update cycle.

2.2 REGIONAL PLANNING

CCWD's jurisdiction includes provisions for public water service, wastewater treatment and disposal, and water supply development and planning within the County. Under the water supply development and planning responsibilities, the District has committed to developing short- and long-term comprehensive management strategies for maintaining and protecting the District's water supplies at the lowest cost to its ratepayers. District staff accomplishes these strategies through carefully planned, proactive, flexible measures designed to preserve and protect the County's water resources. To that end, CCWD remains active in several resource planning efforts aimed at holistic watershed management and improving water supply reliability, often coordinating with other water suppliers, organizations, tribal governments, and other interested parties, both internal to and external of the County. Examples of these coordination efforts are provided below.

2.2.1 Integrated Regional Water Management Planning

The Regional Water Management Planning Act of 2002 (SB 1672) initiated the state's Integrated Regional Water Management (IRWM) Program, a collaborative effort to identify and implement water management solutions on a regional scale which increase regional self-reliance, reduce conflict, and manage water to concurrently achieve social, environmental, and economic objectives. Since its inception, DWR has provided several IRWM planning and implementation grants to California's regional IRWM groups – generally comprised of regional water suppliers, non-governmental organizations, and other stakeholders – which has resulted in many IRWM projects providing a wide range of benefits to and increasing collaboration in many California regions. In addition, more recent efforts have aimed at increased involvement of economically disadvantaged and underrepresented communities (including Tribes, collectively referred to as "Disadvantaged Communities" or "DACs") in the regional IRWM planning and decision-making process. CCWD has actively participated in two such IRWM groups for many years, broadly representing Mokelumne River, Calaveras River, and Stanislaus River users and stakeholders. Information regarding these two groups is provided below:

Mokelumne-Amador-Calaveras (MAC) IRWM

Since 2006, the District has participated in the Mokelumne-Amador-Calaveras (MAC) IRWM group focused on water resources planning and implementation activities in the broader Mokelumne River Watershed region. The MAC IRWM is under the governance of the Upper Mokelumne River Watershed Authority (UMRWA), a partnership including several water suppliers in the County and Amador County, as well as EBMUD, and other stakeholders and affiliates. Through the DWR IRWM Program, and owing to its involvement in the MAC IRWM, CCWD has been successful in securing grant funds for regional planning and implementation projects, receiving around $1.5 million in grant funds for the West Point Water Main and Tank Replacement Project through California Proposition 84 and $556,000 for the West Point Water Supply Reliability Project through California Proposition 1. The District's Board of Directors (Board) adopted the most recent MAC IRWM Plan update in December 2018 (Board Resolution No. 2018-73) – a required IRWM planning document outlining regional conditions, coordination, and needs - re-affirming CCWD's

involvement in this group (UMRWA 2018). In preparation for California Proposition 1 Round 2 IRWM funding, an Addendum to the 2018 Plan was adopted in January 2022 to reflect the Region's updated project list. More information on MAC IRWM and UMWRA efforts, including a copy of the latest IRWM Plan, is available at http://umrwa.org/.

Tuolumne-Stanislaus (T-Stan) IRWM

Since 2008, the District has participated in the Tuolumne-Stanislaus (T-Stan) IRWM Authority focused on water resources planning and implementation activities in the Tuolumne River Watershed (in Tuolumne County, south of Calaveras) and in the Stanislaus River Watershed. T-Stan IRWM governance is based on a Joint Powers Agreement (JPA), outlining the roles and responsibilities of the participating agencies, stakeholders, and non-governmental organizations, including, County water suppliers, Tuolumne Utilities District, and the Tuolumne Band of Me-Wuk Indians. Through the T-Stan IRWM, Calaveras County has received around $1.8 million in grant funds used for the District's Douglas Flat/Vallecito Recycled Water Pump Station and to support regional water conservation efforts, both under California Proposition 84. The Board adopted the most recent T-Stan IRWM Plan update in January 2021 (Board Resolution No. 2021-04) which re-affirmed CCWD's commitment to be involved in this IRWM group. An additional update to the plan is under development. More information on T-Stan IRWM efforts, including a copy of its latest IRWM Plan, is available at https://tstan-irwma.org/.

Coordination of information and activities between IRWM groups is one of DWR's IRWM planning requirements. With CCWD serving as a core member of both the MAC and T-Stan IRWM Regions, the District is in a unique position to share broader watershed management insights and to coordinate on County-focused project opportunities, where practicable. A recent example includes grant-funded joint DAC engagement by Mountain Counties area IRWM groups, including both MAC and T-Stan, under California Proposition 1 used to investigate DAC needs and opportunities to involve these communities in decision-making processes ("Disadvantaged Community Involvement", or "DACI", grant funds). However, the District's membership in multiple IRWM groups comes at a cost. Staffing commitments and financial requirements associated with the IRWMs for IRWM Plan update development, outreach, and engagement means that CCWD must look strategically at governance, cost sharing, and its potential return on investment to improve management and infrastructure to its ratepayers. Funding of and involvement in these IRWM programs remains an ongoing consideration, even though the District generally supports opportunities to engage with other parties to address complex regional water issues.

2.2.2 Sustainable Groundwater Management Planning

In 2014, California Legislature enacted SGMA in response to historic over-reliance by users on California's groundwater resources. A component of SGMA was the classification of groundwater subbasins by DWR, establishing the areas of greatest need to curb over-draft and other adverse conditions. SGMA required the formation of Groundwater Sustainability Agency(s) (GSAs), generally comprised of water suppliers, organizations, and interested parties sharing a groundwater subbasin, and required the GSA(s) develop a Groundwater Sustainability Plan (GSP) for the subbasin used to achieve long-term sustainable use conditions. GSA formation and GSP development and submittal deadlines varied with sub-basin classification, with the most "critically over-drafted" (worst classification) subbasins needing to submit their GSP to DWR by 2020 in order to achieve sustainable conditions by 2040.

The Eastern San Joaquin Groundwater Subbasin (Subbasin) underlying most of the upper San Joaquin Valley (i.e., mostly Stockton, Linden, northern Stanislaus County) was classified by DWR as being critically over-

drafted. This classification is mostly due to large, irrigated agriculture demands reliant on groundwater, and historic farming practices leading to groundwater quality issues. Portions of northwestern County, generally under the Wallace and Jenny Lind Service Areas, also reside over the Subbasin. As such, CCWD participates in SGMA-related efforts to curb over-draft in this Subbasin, having elected to form the Eastside San Joaquin Groundwater Sustainability Agency (Eastside GSA) with Calaveras County, Stanislaus County, and the Rock Creek Water District representing the easternmost portion of the Subbasin. The Eastside GSA maintains the responsibility for leading groundwater management in the applicable County and Stanislaus County areas. However, the Eastside GSA and other GSAs, representing their portions of the Subbasin, coordinate together in the Eastern San Joaquin Groundwater Authority (Authority) to satisfy the unified management requirements under SGMA. In January 2020, following GSA planning and coordination, the Authority submitted the sub-basin GSP to DWR for review. The Authority prepared and resubmitted a revised GSP in June 2022, which was approved by DWR in March 2023 with a list of eight Recommended Corrective Actions. In December 2024, the Authority accepted a 2024 GSP Amendment and 2025 Periodic Evaluation (R-24-04) and submitted both to DWR for review. Information on ongoing Authority and GSA groundwater management efforts, and regarding updates on the status of GSP review, are available online at http://www.esjgroundwater.org/.

As a member of the Eastside GSA, CCWD continues involvement in GSP implementation aimed towards the 2040 sustainability objectives, as well as fulfills Authority requirements for groundwater monitoring and annual reporting. More information about CCWD's involvement in the Eastern San Joaquin Groundwater Subbasin can be found at https://www.ccwd.org/sustainable-groundwater-management-act.

2.2.3 Watershed Resiliency Planning

In 2024, the Calaveras River Watershed was selected by DWR as one of five pilot watersheds in the state to participate in the Watershed Resilience Program. This Program is designed to advance planning for climate resilience at a watershed scale, a key component of the vision and framework described in the California Water Plan 2023. Led by Stockton East Water District (SEWD), this work involved setting resiliency goals, analyzing climate vulnerabilities and risks, identifying adaptation strategies, and setting performance indicators to track progress towards resiliency goals. Key climate hazards identified include extreme precipitation, drought, and wildfire, resulting in risks to water supply, water demand, groundwater basin conditions, surface water quality, flooding, and the economy. The technical work was supported by a robust outreach and engagement effort, bringing together the diverse perspectives, needs, and priorities of entities throughout the watershed in a Watershed Network.

As a watershed wide effort, CCWD worked closely with SEWD to represent upper watershed entities and support development of the Calaveras Watershed Resilience Plan which was published in March 2026. As a pilot program, this work will lay the foundation for future efforts within the Calaveras watershed and throughout the state of California, potentially including other watersheds overlapping CCWD's service areas. More information about the Calaveras work, including the final Plan, can be found at https://www.ccwd.org/calaveras-river-watershed-resiliency-plan.

2.3 INDIVIDUAL OR REGIONAL PLANNING AND COMPLIANCE

Although CCWD is the only agency in the County to develop an UWMP, it has opted to do so as an individual agency, as shown in **Table 2-2**. As such, this UWMP only addresses Water Code and Guidebook

requirements related to CCWD's service areas; however, several topics and materials likely apply to other water suppliers in the County (e.g., climate change considerations, outreach and coordination efforts).

TABLE 2-2: PLAN IDENTIFICATION (DWR TABLE 2-2)

Select Only One	Type of Plan
✓	Individual UWMP
	Regional UWMP

2.4 FISCAL OR CALENDAR YEAR AND UNITS OF MEASURE

As indicated in **Table 2-3**, all data reported in this UWMP is on a District Fiscal Year (FY) basis and all water volume units are presented in AF[1]. FY reporting matches CCWD's customer data collection and validation processes, thereby making supply and demand analyses more consistent and easier to develop. Temporal-based volumes and average volumes in this UWMP are typically expressed as an accumulated total AFY, unless otherwise noted, with applicable FY or average of FYs defined. Because this UWMP is structured by FY, all water use and planning data follows the District's FY calendar, which starts July 1 and ends the following June 30. For example, data presented for FY 2025 represents the period of time between July 1, 2024, and June 30, 2025.

TABLE 2-3: AGENCY IDENTIFICATION (DWR TABLE 2-3)

Type of Agency	
	Agency is a wholesaler
✓	Agency is a retailer
Fiscal or Calendar Year	
	UWMP Tables are in Calendar Years
✓	UWMP Tables are in Fiscal Years
If using fiscal years provide month and date that the fiscal year begins (mm/dd)	
07/01	
Units of Measure Used in UWMP	
Unit	Acre Feet (AF)

[1] Acre-foot (singular) or acre-feet (plural) is a volumetric unit frequently used to reference large-scale water resources, such as reservoirs, aqueducts, canals, and river flows. One acre-foot is equal to 325,853 gallons or 1,233 cubic meters.

It should also be noted that, because the District has several service areas which are largely independent of one another, many sections of this UWMP include multiple versions of the required Guidebook tables – generally consolidated for each service area by water source, as further described in **Chapter 3**. District-wide tables are included in **Appendix A**.

2.5 COORDINATION AND OUTREACH

CCWD has engaged with other water suppliers, organizations, tribal governments, and other interested parties throughout preparation of this UWMP update, to the extent practical. This includes other water suppliers which share a common water source and/or rely on the same watershed resources. Since the District does not receive water supplies from any wholesale supplier, CCWD did not notify or engage with any such agency (**Table 2-4**).

The District sent letters to several County-based entities notifying them of the intent to update the UWMP for the 2025 update cycle. CCWD also noticed and held a Public Hearing on the UWMP and provided a 4-week public comment period. Additional information regarding outreach and public participation is included in **Chapter 10**.

TABLE 2-4: WATER SUPPLIER INFORMATION EXCHANGE (DWR TABLE 2-4)

The retail supplier has informed the following wholesale supplier(s) of projected water use in accordance with CWC 10631.
N/A

3. SYSTEM DESCRIPTION

The District provides water supply and wastewater services throughout the County, including areas of the Sierra Nevada Foothills, portions of the Stanislaus National Forest, in the Upper Mokelumne River Watershed, and in small portions of the Eastern San Joaquin Groundwater Subbasin. Water services are provided to six geographically distinct 'service areas,' which are generally served by one of four different watershed sources, and/or their tributaries: A) Calaveras River, B) Stanislaus River, C) Mokelumne River, or D) groundwater from portions of the Eastern San Joaquin Groundwater Subbasin (Subbasin) underlying parts of the County. This chapter describes each service area based on its water supply source, including descriptions of the District's service areas, demographics, land use, climate, and the water supply infrastructure. Although the District's jurisdictional area encompasses the entire County, smaller water or wastewater providers also exist within the County to serve specific areas or purposes, and many properties are served by private wells and/or septic systems. The District serves about 65% of the County population, though the six service areas cover only about 3% of the County by area.

For this UWMP, the District has opted to describe and characterize its six water service areas based on their supply source, thus grouping them into four distinct sub- regions. Because these sub-regions have separate delivery infrastructure and no interties, available supply in one sub-region cannot necessarily be used to meet demands in another. Consequently, in addition to considering supplies and demands on a District-wide scale, the District must also consider more localized planning based on these four sub-regions. The following sections in this chapter are grouped by the following sub-regions: *Sub-Region A*: Calaveras River, *Sub-Region B*: Stanislaus River, *Sub-Region C*: Mokelumne River, and *Sub-Region D*: Groundwater.

As a service provider in a rural foothill region, CCWD faces different challenges than more urban water districts in the State. The District's customer base is more geographically dispersed, resulting in the need for significant pumping and distribution infrastructure that is designed for the varied topography of the Sierra Nevada foothills. The District also has a relatively small ratepayer base. A smaller rate payer base and a need for more geographically specific infrastructure results in CCWD, and similar rural water districts, maintaining more infrastructure per person than their urban counterparts. These maintenance costs can make up a large portion of the District's annual budget, creating financial constraints and resulting in significant trade-offs. The District is also situated in well-known wildland-urban interface (WUI) areas with higher vulnerability to wildfires, a significant concern for infrastructure and water quality.

3.1 DISTRICT HISTORY AND BACKGROUND

CCWD was organized in November 1946 under the laws of the State of California as a public agency for the purposes of developing and administering water supplies and wastewater services in the County and for managing the upper watersheds to improve County water resources. The District has procured and maintains several long-standing surface water diversion and storage rights which form the foundation of its supplies for the separate sub-regions. The District also owns two hydropower projects: the North Fork Stanislaus Hydroelectric Development Project (North Fork Project, FERC Project No. 2409), capable of generating 253 megawatts (MW) of power along the Stanislaus River; and the New Hogan Power Project (New Hogan Project, FERC Project No. 2903) on the Calaveras River, capable of generating 3.0 MW at New Hogan Dam. Both the North Fork Project and New Hogan Project are operated by external agencies under agreement with CCWD: NCPA and Modesto Irrigation District, respectively.

CCWD is a not-for-profit governmental agency also known as a nonmunicipal "Special District," conducting business in the performance of public services for the County, and is governed by a publicly elected five-

member Board of Directors (Board). The District's jurisdictional area includes the entire County, but it is administratively and fiscally independent from the Calaveras County government. CCWD is the largest public water purveyor in the County in terms of jurisdictional area and combined service areas, number of customers served, and amount of water delivered. As a Special District, CCWD's authority includes providing public water service, water supply development and planning, wastewater treatment and disposal, wastewater recycling, and watershed resource management.

As an organization, CCWD maintains broad general powers over the use of water within its boundaries, including: authority to acquire, control, distribute, store, spread, treat, purify, reclaim, process, and salvage water for beneficial use; providing wastewater service; selling treated or untreated water; acquiring or constructing hydroelectric facilities and selling the power and energy produced to public agencies or public utilities engaged in distributing power; contracting with the United States or other political subdivisions, public subdivisions, public utilities, or other persons; and, subject to Article XIIIA of the Constitution of the State of California, levying taxes and improvements. CCWD is also a member of the Eastside GSA and the Eastern San Joaquin Groundwater Authority (Authority). Through these memberships, CCWD actively participates in the groundwater sustainability planning activities that occur for the Subbasin, including the development of a GSP most recently amended in November 2024 – aimed at bringing the 'critically over-drafted' Subbasin into sustainable conditions by 2040 per SGMA.

CCWD has approximately 60 full-time employees across multiple departments. As shown in the high-level organizational chart in **Figure 3-1**, CCWD's guiding departments (programs) span Customer Service, Finance, Engineering, Operations, Water Resources, Human Resources, and External Affairs. Ultimately, the Board is responsible for establishing policy, engaging in strategic long-term planning, and supervising implementation of those plans executed through the General Manager. The Board members each represent one of five geographical divisions within the County. Typically, the Board holds public regular meetings on the second and fourth Wednesdays of each month. Four committees provide input to the Board, meeting regularly to discuss technical issues related to engineering, finance, external relations, and legal affairs (federal, state-wide, and within the County). Maintaining engagement on issues at state-wide, regional, and local levels in order to uphold the District's mission is critical. District Board members and staff participate in partnerships with the following organizations (list not exhaustive):

County & Local (Administrative):

- Calaveras County Local Agency Formation Commission (Calaveras LAFCO)
- Calaveras County Parks and Recreation Committee
- Calaveras Public Power Authority (CPPA)
- Highway 4 Corridor Working Group
- The Ebbetts Pass Property Owners Coalition (EPPOC)
- The Calaveras County Resource Conservation District

Regional:

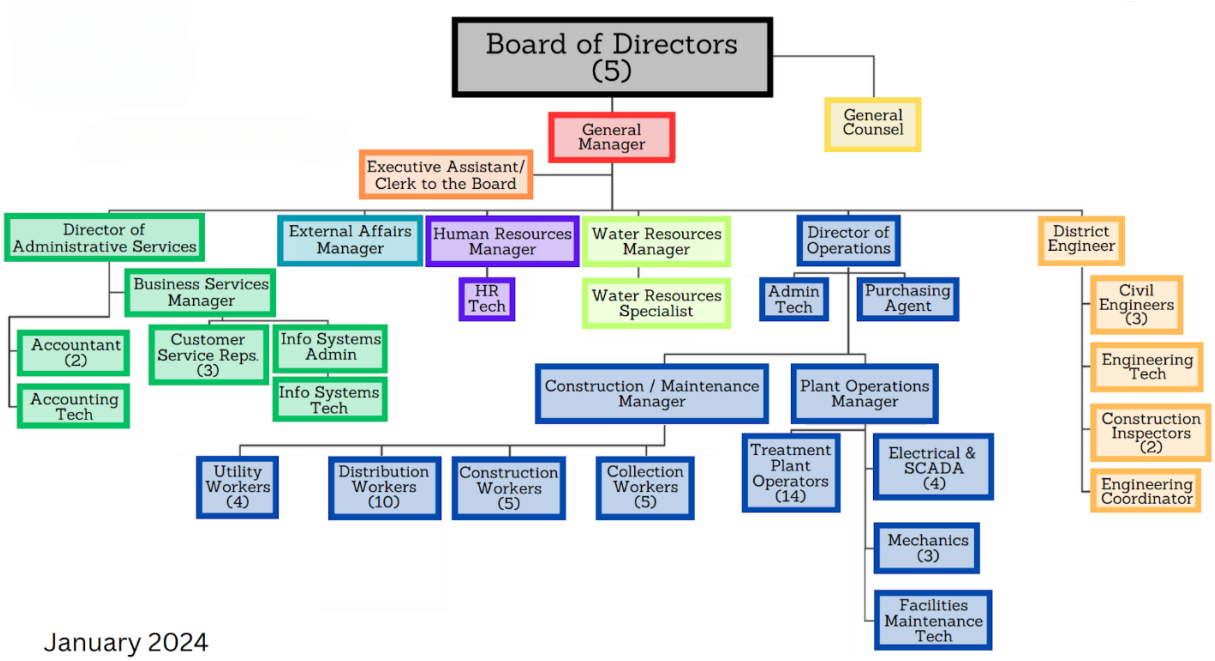
- Mountain Counties Water Resources Association
- Calaveras-Amador-Mokelumne River Authority (CAMRA)

- Upper Mokelumne River Watershed Authority (UMRWA)
- Mokelumne-Amador-Calaveras Integrated Regional Water Management Group
- Tuolumne-Stanislaus Integrated Regional Water Management Authority

Statewide:

- Association of California Water Agencies (ACWA), Region 3

FIGURE 3-1: CCWD ORGANIZATIONAL CHART



3.2 GENERAL SYSTEM DESCRIPTION

While the District's jurisdictional area aligns with the County boundary, the District does not provide water and/or wastewater services to all communities in the County (i.e., service areas do not line up directly with entire jurisdictional area). Large sections of the more rural areas of the county are served by private wells or other small community water systems, and several other smaller public or private agencies exist within the County to serve select towns and developed areas. In 2025, the District provided water service to around 13,000 municipal, residential, and commercial customer connections for the following service areas:

Sub-Region A: Calaveras River

1. Jenny Lind Service Area (Jenny Lind)
2. Sheep Ranch Service Area (Sheep Ranch)

Sub-Region B: Stanislaus River

3. Ebbetts Pass Service Area (Ebbetts Pass)

4. Copper Cove/Copperopolis Service Areas (Copper Cove/Copperopolis)

Sub-Region C: Mokelumne River

5. West Point Service Area (West Point)

Sub-Region D: Groundwater

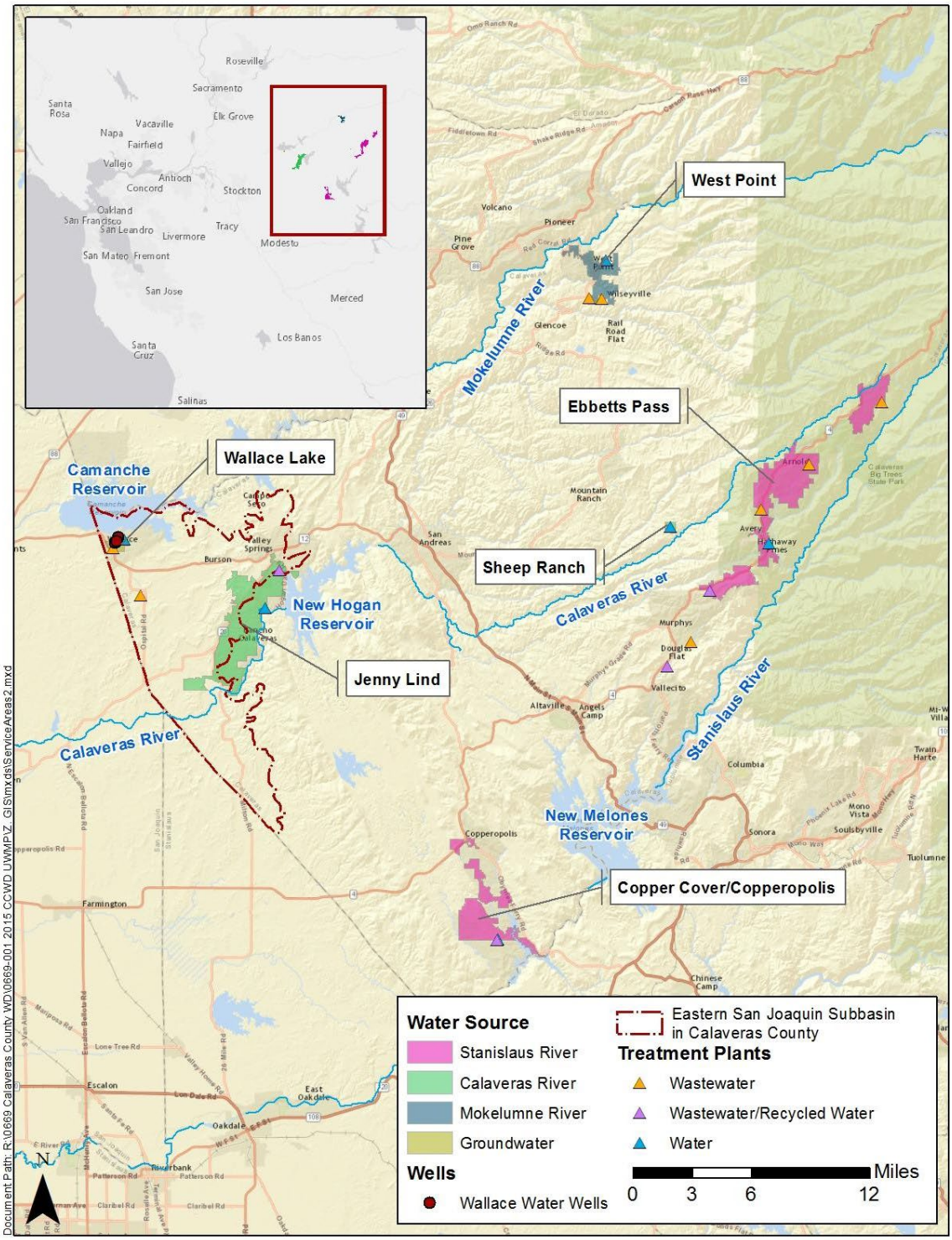
6. Wallace Service Area (Wallace)

Figure 3-2 shows the location of CCWD's six service areas, color-coded by sub-region. These sub- regions are not associated with any specific service area or sub-agency, but instead represent resource-based planning sub-regions to assist CCWD in better managing resources through the District's two existing IRWM planning efforts discussed in **Chapter 2**. In addition to providing treated water in the service areas, CCWD also provides wastewater service to about 5,000 customers in 12 independent wastewater collection service areas, with a portion of these areas falling into five of CCWD's six water system service areas. The system supporting each of the four supply sources is summarized in the following sections and shown in **Table 3-1.**

TABLE 3-1: WATER SYSTEM SUMMARY

Sub-Region	Name	Water Source	Number of (2025) Connections
A: Calaveras	Jenny Lind Service Area	Calaveras River	3,864
	Sheep Ranch Service Area	Big Trees Creek via San Antonio Creek (Calaveras River Tributaries)	47
B: Stanislaus	Ebbetts Pass Service Area	Stanislaus River and Tributaries	5,989
	Copper Cove/Copperopolis Service Areas	Stanislaus River and Tributaries	2,754
C: Mokelumne	West Point Service Area	Bear Creek and Middle Fork Mokelumne River (Mokelumne River Tributaries)	6572
D: Groundwater	Wallace Service Area	Groundwater	107

FIGURE 3-2: CCWD SERVICE AREAS BY SUB REGION



The County covers a mostly rural area with a population density of roughly 0.07 persons per acre, meaning almost 15 acres for every person in the County on average. It consists of a number of small, historic communities established primarily during the mid- to late-19th Century Gold Rush period, separated by large landholdings of agricultural land (primarily used for grazing) and timberland, interspersed with rural residential homes on larger acreage lots of 5 to 20 acres or more. There are several active and inactive mines in the County along with recreational resources of several reservoirs, Stanislaus National Forest and Mokelumne Wilderness lands, and Calaveras Big Trees State Park. Approximately 25 percent of the land in the County is publicly owned, most under the U.S. Forest Service. There are approximately 519,000 acres of vacant, privately held land in the unincorporated parts of the County, which the County General Plan (General Plan) divides into the following land use designations: Natural Resource, Rural Transition, Residential Lands, Mixed Use Lands, Commercial Lands, Industrial Lands, Other, and Overlay (including Mineral Resource Zones). Currently, much of these lands are wild and undeveloped, dominated by deciduous forest, barren lands, and shrublands.

Within CCWD's service areas, small communities of relatively higher density residential, commercial, and industrial uses are typical. Areas around these existing communities have been designated to provide for future expansion of commercial, industrial, and residential uses to take advantage of existing infrastructure. More information specific to current and projected land uses within each sub- region is included in the following sections.

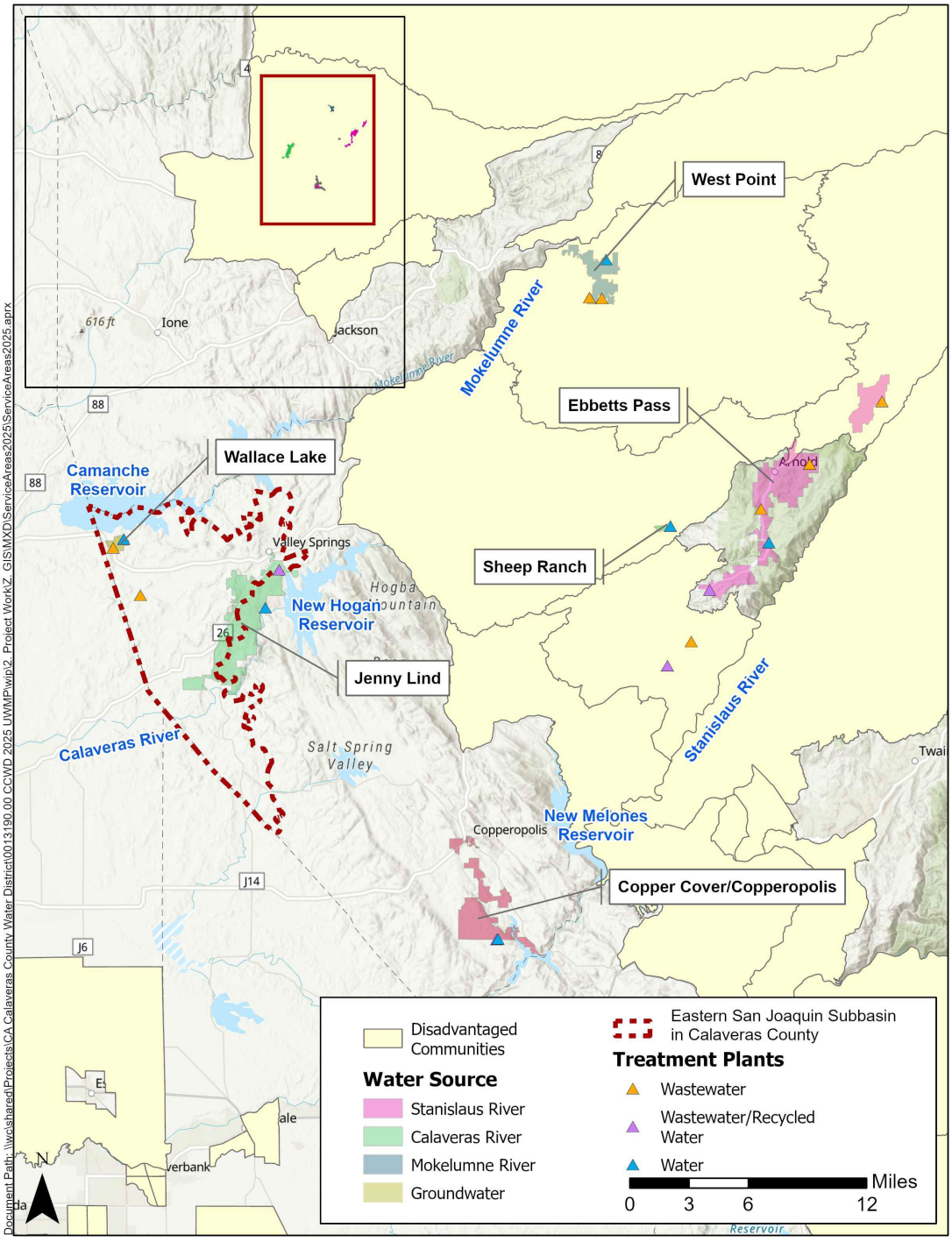
3.2.1 Disadvantaged Communities

Several economically disadvantaged and underrepresented communities (including Tribes, collectively referred to as "Disadvantaged Communities" or "DACs") exist within the County and in the neighboring Counties. A DAC is defined by the State as a community with an annual median household income (MHI) that is less than 80 percent of the statewide MHI (per Public Resources Code §75005[g]). Additionally, a "severely disadvantaged community" (SDAC) includes those communities with an MHI that is less than 60 percent of the statewide MHI. The U.S. Census Bureau's American Community Survey (ACS) includes MHI data for these areas of the County, compiled for the 5-year period from 2019-2023. MHI data organized by county are also available from the California DWR and are regularly updated (under DWR DAC Involvement Program). Per these data, a community with an MHI of $62,938 or less is considered a DAC and $47,203 or less considered an SDAC. The latest U.S. Census collects and compiles data for multiple census geographies including Place, Block Group, and Tract[1].

Figure 3-3 shows the Census- designated areas within CCWD's boundary which qualify as DACs. There are areas within CCWD's Jenny Lind and Ebbetts Pass service areas that are DACs, while the West Point and Sheep Ranch service areas are entirely within DAC areas. Based on the ACS 2020 census place data, the cities or communities within Calaveras County that are considered DACs include Arnold, West Point, Dorrington, Murphys, and Angels Camp. SDACs in the County include Rail Road Flat, Vallecito, and San Andreas.

[1] A census tract is a region defined for the purpose of taking a census and usually coincides with city boundaries, towns, or other administrative areas. The U.S. defines census tracts as "relatively homogeneous units with respect to population characteristics, economic status, and living conditions, census tracts average about 4,000 inhabitants." Census tracts are subdivided into block groups which generally contain between 600 and 3,000 people with an optimum size of 1,500 people. Census places are designated each decennial census to provide data for settled concentrations of population that are identifiable by name.

FIGURE 3-3: DISADVANTAGE COMMUNITIES



In partnership with the Calaveras County Resource Connection Food Bank, the District offers a Customer Assistance Program (CAP) to provide financial assistance to a limited number of low-income water and wastewater customers. For the latest information on DACs and SDACs located in the County, as well as others located state-wide, visit: https://gis.water.ca.gov/app/dacs/.

3.2.2 Sub-Region A: Calaveras River

The Calaveras River sub-region includes the Jenny Lind and Sheep Ranch Service Areas, as detailed below.

Jenny Lind

Jenny Lind, CCWD's second largest potable water service area by area, serves roughly 8,000 acres in the western part of the County near New Hogan Reservoir (New Hogan), located between the Calaveras and Mokelumne Rivers. A map of the system is shown in **Figure 3-2**. Jenny Lind provides treated potable water and recycled water to retail customers mostly in Valley Springs, along with supplies of raw water to agricultural customers and the La Contenta Golf Course along the lower Calaveras River riparian corridor below New Hogan. In 2025, Jenny Lind served more than 4,000 water connections. This area is geographically unique in that it represents the transition from the Central Valley floor to the Sierra Nevada foothills, is located in proximity to significant surface water reservoirs (including New Hogan, Camanche, and Pardee Reservoirs), and overlies a portion of the Eastern San Joaquin Groundwater Basin. Jenny Lind also benefits from transportation linkages to the Highway 99 corridor via State Routes 12 and 26. The District and the County's General Plan anticipate this area could see measurable growth in the near-term planning horizon, owing to available low-density land and relatively low real estate prices in proximity to Sierra Nevada Mountain recreational attractions. However, current community plan policies prohibit multi-family residential development and additional commercial zoning in the area so growth would be limited to single-family residential.

Jenny Lind service area was formed on September 6, 1967, to provide water and wastewater services to the previously unserved area (reliant mostly on individual water supplies prior to formation). For this mostly residential area, lot sizes and neighbor proximity varies greatly, with some in Valley Springs supplied with both treated water and wastewater services by CCWD and others by the Valley Springs Public Utility District (VSPUD). However, many residential lots served by CCWD's potable water supply system in the Rancho Calaveras area less than 1 acre in size are on individual septic systems.

Agricultural crops grown in and around this area are predominantly citrus (to the west) and deciduous fruit and nut orchards (southwest). Projected land uses identified for this area in the General Plan include new residential developments (likely one-to-five acre lots) and/or low-density residential areas (one-to-six dwelling units per acre), surrounded by resource production, rural transition, and resource management areas, as well as a small number of industrial uses. The District anticipates that these areas could remain reliant on privately held water rights to the Calaveras River, although the transition to residential could increase demands for CCWD treated supplies.

CCWD does not hold consumptive surface water rights to the Calaveras River to supply this service area. Jenny Lind receives surface water from New Hogan through a non-Central Valley Water Project (CVP) contract with the United States Bureau of Reclamation (USBR), in coordination with Stockton East Water District (SEWD) who also relies on the reservoir for water supply. CCWD's diversion point is an infiltration gallery along the Calaveras River, approximately one mile downstream of New Hogan Dam. The Jenny Lind Water Treatment Plant (WTP) serves the area with an existing capacity of 6 million gallons per day (mgd).

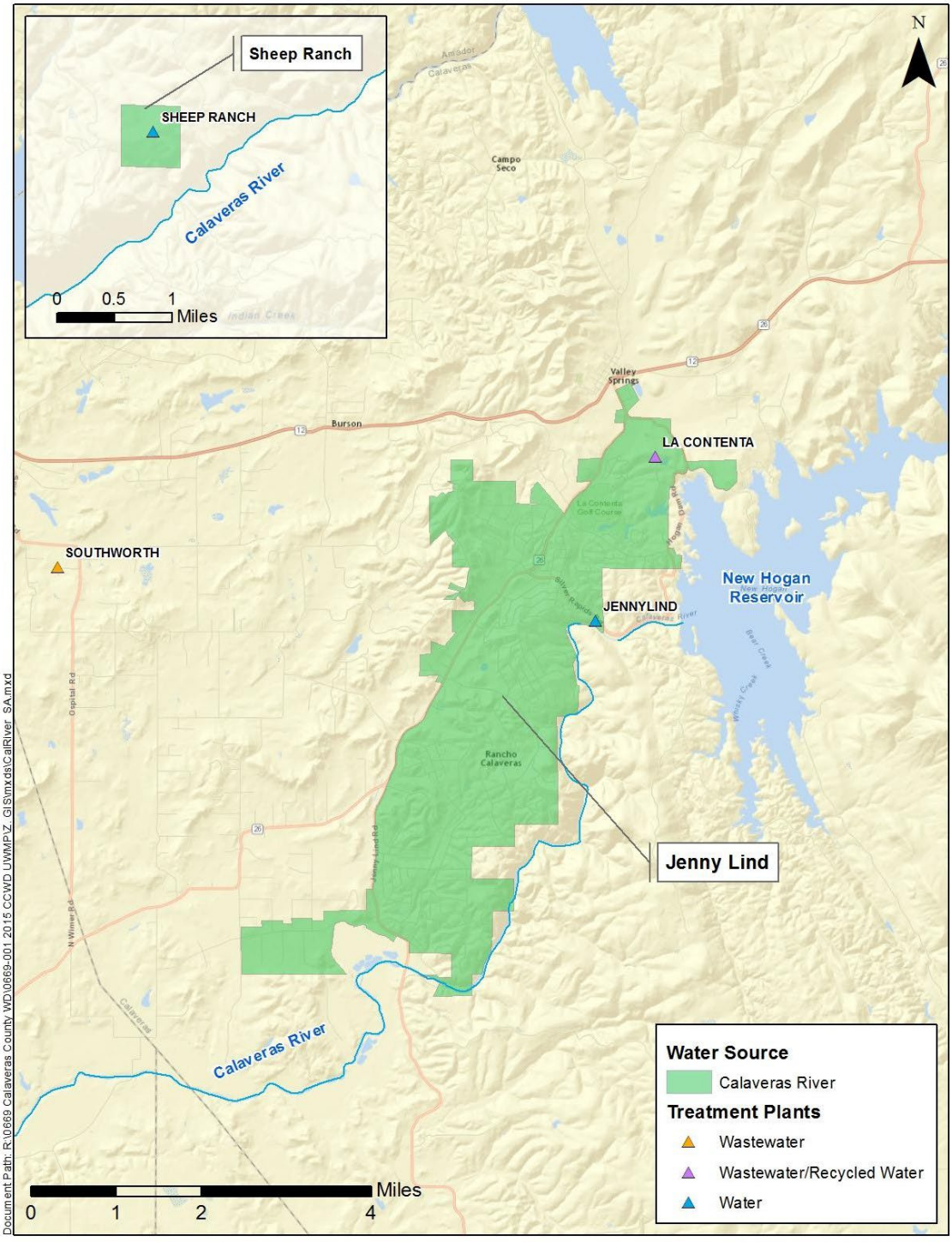
The distribution system is divided into 15 pressure zones and contains two clearwells, five storage tanks, six booster pumping stations, and 22 pressure-reducing valves. The District is currently constructing a transmission line between two tanks in the system to provide operational flexibility. The new transmission line will include five new pressure zones and associated pressure reducing valves. The system hydraulic grade line varies from 485 to 918 feet.

Sheep Ranch

The CCWD service area of Sheep Ranch is served by the Calaveras River Watershed from the San Antonio Creek tributary upstream of New Hogan but downstream of White Pines Lake (White Pines). Sheep Ranch was formed on March 2, 1960 in response to historical water supply reliability issues in this very remote part of the County. The service area is approximately 175 acres in size and serves 48 connections in the rural community of Sheep Ranch, as shown in **Figure 3-4**, located nearest CCWD's Ebbetts Pass Service Area. Possible land uses identified in the General Plan include rural residential areas (one-to-five acre lots), a town center, rural transition areas (five-to-ten acre lots), and a small commercial zone, surrounded by resource production, working lands, and resource management areas. However, according to the General Plan, Sheep Ranch prioritizes its low-density community and does not seek further development of the area nor expansion to its current water service.

Given the small customer base in this isolated area, the District often faces management and funding challenges for developments and improvements of the service area's aging infrastructure. Sheep Ranch receives its water supply from District diversion claims to Big Trees Creek, originating from upstream of White Pines near Arnold, California. Water flows in San Antonio Creek for about 8 miles from White Pines, where water is then diverted and pumped to the Sheep Ranch WTP, with a capacity of 20,000 gallons per day. Water is stored in one 90,000-gallon storage tank prior to distribution to the service area.

FIGURE 3-4: SUB-REGION A: CALAVERAS RIVER INFRASTRUCTURE



3.2.3 Sub-Region B: Stanislaus River

The Stanislaus River sub-region includes the Ebbetts Pass and Copper Cove/Copperopolis service areas, as detailed below.

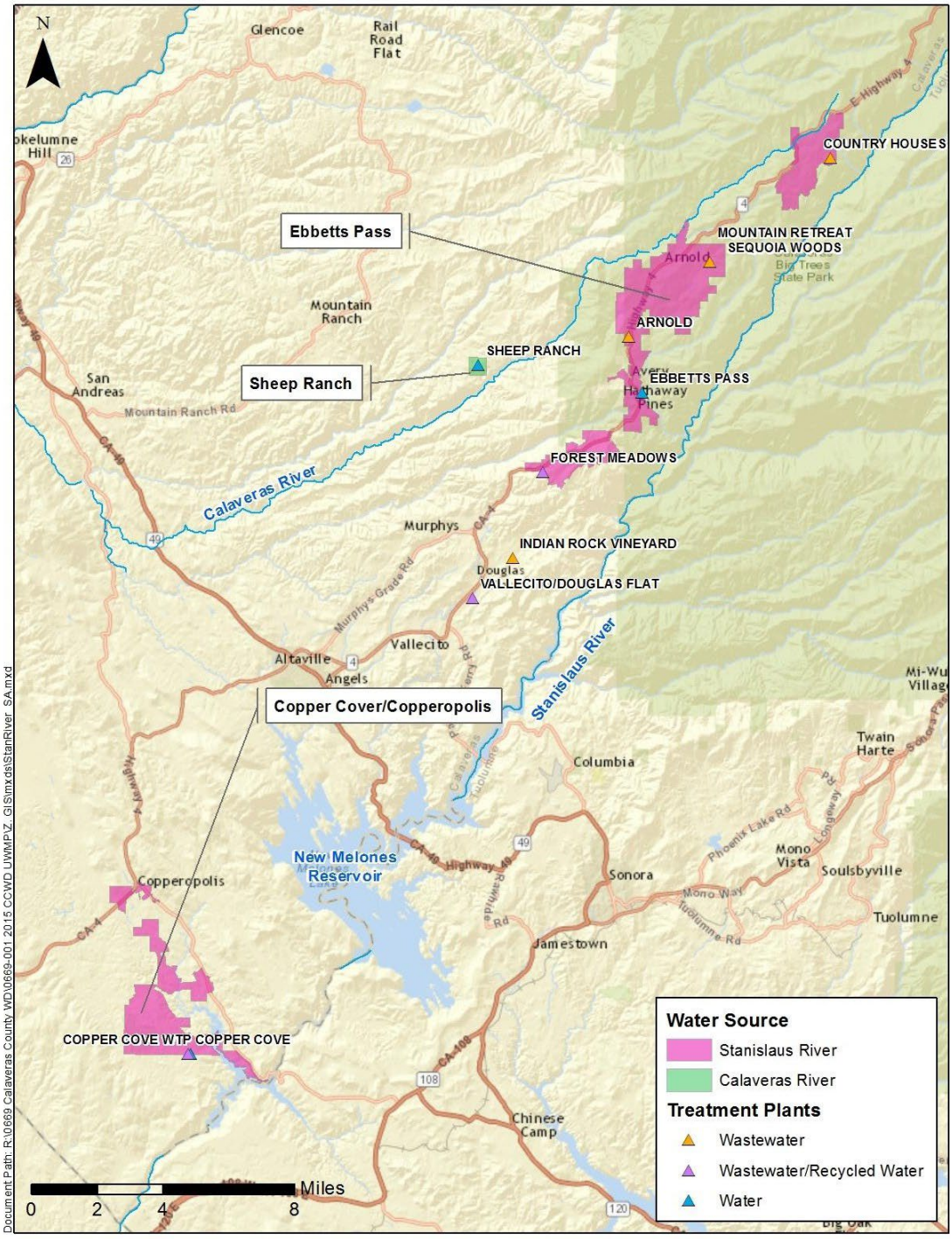
Ebbetts Pass

The Ebbetts Pass service area, the largest of the District's service areas by land area, covers nearly 8,500 acres in the northeastern part of the County along the Highway 4 Corridor covering Arnold, Dorrington, and Camp Connell. This service area occupies the North Fork Stanislaus River drainage, which is a tributary to the Stanislaus River and New Melones Reservoir (New Melones), as shown in **Figure 3-5**. Ebbetts Pass was formed on January 28, 1964, to provide water and wastewater services (annexed infrastructure from previous water suppliers), and it has since expanded to include the Forest Meadows subdivision near Murphys and homeowners' associations in other locations. The system also includes two wholesale connections in addition to around 6,250 retail connections (as of 2025). Notably, the Ebbetts Pass area has historically been an outdoor recreation and second-home destination for many people from the San Francisco Bay Area and Sacramento Region, with 2020 U.S. Census estimates projecting that around 35 percent of homes are permanent full-time residences.

Ebbetts Pass is served treated surface water from the District's consumptive water diversion and storage rights on the North Fork Stanislaus River. Owing to the area's location along the North Fork Project, Ebbetts Pass receives its surface water through the Collierville "Tunnel Tap." The Tunnel Tap is a direct diversion out of the Collierville Tunnel, a rock-drilled tunnel from McKays Point Reservoir (McKays) extending under the Highway 4 Corridor towards the North Fork Project's largest generation facility, the Collierville Powerhouse, a roughly 2,200-foot elevation decrease to New Melones. NCPA operates the Collierville Tunnel and Powerhouse, as well as McKays and the upstream New Spicer Meadow Reservoir for hydropower operations. However, per agreements with CCWD, the Tunnel Tap diverts a portion of water to serve Ebbetts Pass and for use by the Utica Water and Power Authority (UWPA), where water is provided to Murphys and Angels Camp along with small amounts of hydroelectric power and some County agricultural uses. CCWD retains the water rights and agreements with NCPA to serve up to 9,000 AF per year from the Tunnel Tap, which includes the water utilized in Ebbetts Pass.

The Hunters WTP serves Ebbetts Pass and has a production capacity of 4 mgd. The Ebbetts Pass distribution system contains 13 storage tanks, 9 pumping stations, over 100 pressure reducing valves, and 65 pressure zones, with the system hydraulic grade line varying from fewer than 3,000 feet in elevation (Forest Meadows) to more than 5,355 feet (Dorrington and Camp Connell). Given the diverse landscapes, recreational features (e.g., Calaveras Big Trees State Park), and varying climate of this service area, growth projections and populations remain difficult to accurately assess. Projected land uses identified in the General Plan for this area include some additional rural residential areas (one-to-five acre lots) and low-density residential areas (one-to-six dwelling units per acre), surrounded by resource management and resource production land use areas.

FIGURE 3-5: SUB-REGION B: STANISLAUS RIVER INFRASTRUCTURE



Copper Cove/Copperopolis

The Copper Cove/Copperopolis service areas cover the southwest area of the County neighboring Stanislaus County, an area that transitions from the Central Valley floor to the foothills of the Sierra Nevada. These service areas are bordered by significant river and reservoir systems, including some Calaveras River tributaries (San Antonio and San Domingo Creeks) and the Salt Spring Valley Reservoir sourced by Rock Creek to the north, and the Stanislaus River with New Melones and Tulloch Reservoir (Lake Tulloch) to the southeast. Portions of this part of the County also overlie part of the Subbasin, although the service areas do not rely on groundwater sources due to water quality and level variability concerns.

The Copperopolis Improvement District, formed on April 4, 1952, and the Copper Cove Improvement District, formed on July 2, 1969, to serve populations in historic Copperopolis and for new developments taking advantage of lake access to Lake Tulloch. These two systems have since been connected and now function as a single system known as the Copper Cove/Copperopolis service area. Copper Cove/Copperopolis is approximately 4,000 acres in size and serves the communities of Copperopolis and Copper Cove, Conner Estates, Copper Meadows, Saddle Creek and Lake Tulloch communities, as shown in **Figure 3-5**. The service areas consist mostly of relatively new housing developments with accompanying recreational land uses such as Saddle Creek Golf Course (Saddle Creek), now called The Golf Club at Copper Valley, and open space.

While many planned housing developments remain on file with the County in this area, meaningful progress in construction has yet to materialize. As anticipated connections increase, District capital improvement planning will need to focus on addressing wastewater disposal, recycled water opportunities, and the infrastructure necessary to maintain supply and water quality to preserve a sustainable growth potential. The surrounding areas are primarily a mix of wild, undeveloped lands and agricultural lands that produce pasture crops and could transition to more permanent crops (e.g., vineyards), similar to other regions of California. Projected land uses for this area identified in the General Plan include new rural residential areas (one-to-five acres per lot), surrounded by rural transition areas, working lands, and resource production land use areas potentially expanding upon the Town Square and surrounding Lake Tulloch.

These service areas receive water from the District's consumptive water diversion and storage rights, diverted directly from Lake Tulloch. The Copper Cove WTP currently serves these areas and has a 4 mgd production capacity. The distribution system is divided into 10 pressure zones using one clearwell, five storage tanks, four (including the clearwell) booster pumping stations, and 12 pressure-regulating valves. Owing to the elevation changes surrounding Lake Tulloch towards the Town Center and Salt Spring Valley, the system hydraulic grade line varies from 775 feet to 1,267 feet.

3.2.4 Sub-Region C: Mokelumne River

The Mokelumne River sub-region only includes the West Point service area, as detailed below.

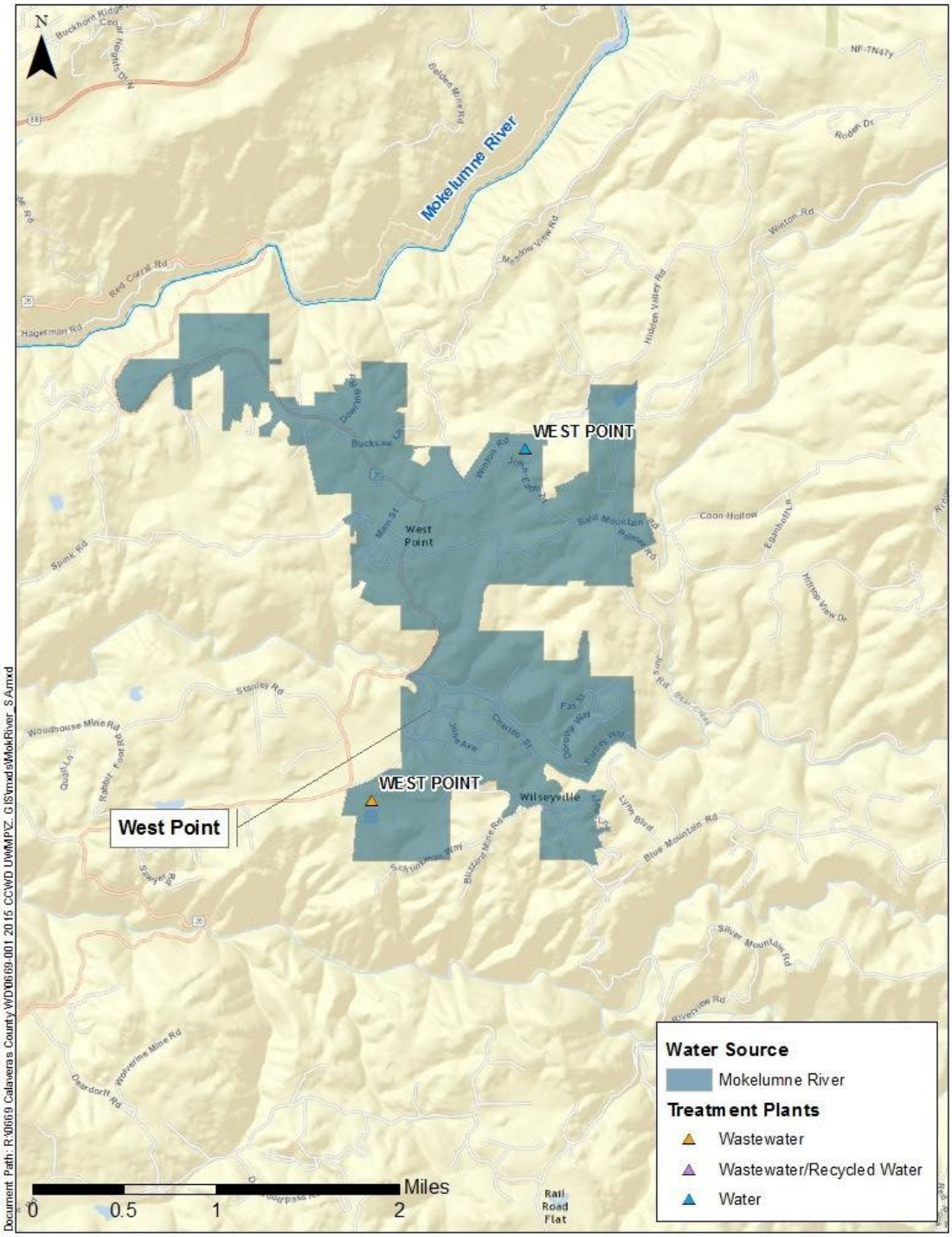
West Point covers approximately 2,000 acres in the north-central part of the County, nestled along the Mokelumne River Valley. The town of West Point is a remote, mostly rural area on the western slope of the Sierra Nevada in the middle and southern tributary watersheds of the Upper Mokelumne River Watershed, not far from the confluence of the North, Middle, and South Forks of the river. West Point serves the communities of West Point, Wilseyville, and Bummerville, as shown in **Figure 3-6.** Customers within this service area receive treated water from the Middle Fork of the Mokelumne River (Middle Fork) and its tributaries. All wastewater customers are connected to CCWD through Septic Tank Effluent Pumping

systems, where effluent from a property owner's independent septic system is pumped and diverted to a force main and treated at one or more wastewater treatment plants. As with other areas within the County, some residents rely on fractured bedrock wells for their domestic supply, though the quality and quantity of these sources are largely unreliable.

The West Point Improvement District was formed on May 25, 1954, and the Wilseyville Improvement District was formed on May 16, 1974, annexed from prior water suppliers and now functioning as a single system known as the West Point Service Area. As of 2025, there are a little over 600 retail connections. Communities in the Mokelumne River sub-region are supportive of County General Plan policies that place limitations on smaller parcels; larger parcels could benefit from raw water supplies to support hobby orchards or vineyards. Projected land uses identified in the Calaveras County General Plan for this area predominately include rural residential (1- to-5- acre lots) and low-density residential (1 to 6 dwelling units per acre), as well as a historic center in West Point.

The water supply for West Point is diverted primarily from Bear Creek (a Middle Fork tributary) under CCWD's consumptive water rights, and also from a Middle Fork pump station under agreement with CPUD under their pre-1914 senior water rights using Schaads Reservoir. Both the Bear Creek and Middle Fork supplies can be diverted to the Bummerville Regulating Reservoir prior to treatment at the West Point Water Treatment Plant and distribution throughout the service area. The existing West Point WTP capacity is 1 mgd. The distribution system is divided into two tank service zones and contains two clearwells, one storage tank, and four pumping stations. The system hydraulic grade line varies from 2,910 to 3,230 feet.

FIGURE 3-6: SUB-REGION C: MOKELUMNE RIVER INFRASTRUCTURE



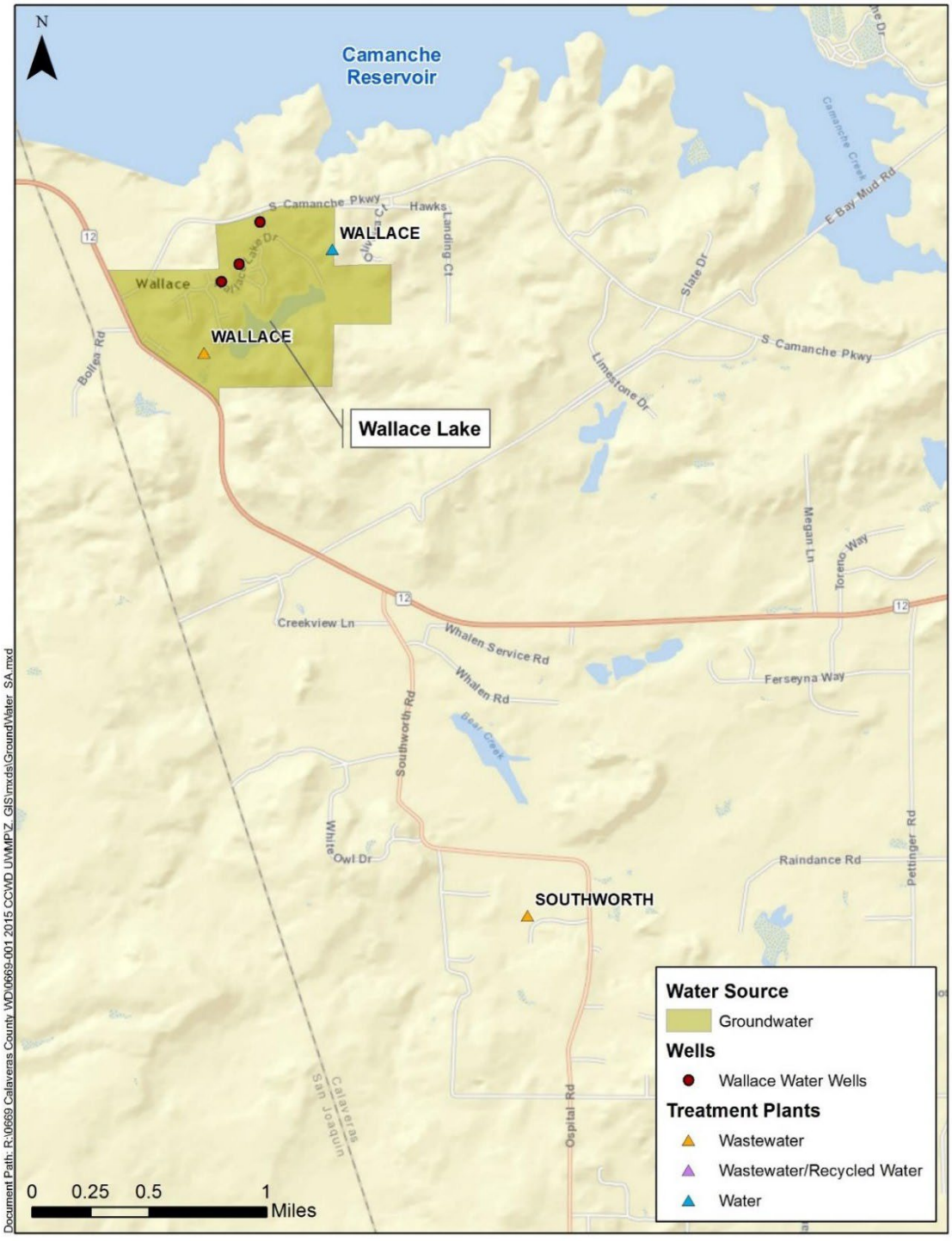
3.2.5 Sub-Region D: Groundwater

Wallace is the only service area that relies on groundwater as its primary supply. Wallace was served by the District for many years under an operating contract with the Wallace Community Service District (WCSD) to provide wastewater treatment; however, CCWD was not responsible for providing water supplies to Wallace as WCSD previously owned the existing groundwater wells. In late-2013, the Wallace groundwater wells and WCSD were effectively annexed by CCWD and is now referred to as the Wallace service area. Wallace is located in the western area of the County along State Route 12 and borders the south shore of Camanche Reservoir. Wallace receives its water supply from two 200 gallon per minute wells that serve groundwater from the Eastern San Joaquin Subbasin.

Groundwater from these wells is high in iron and manganese, which causes water treatment challenges. The Wallace WTP has a capacity of 273,000 gpd, and treated water is stored in a 224,000- gallon clearwell and then pumped to a 60,000-gallon elevated storage tank using three booster pumps. Wallace has roughly 110 connections and covers around 380 acres (**Figure 3-7**) and has some large subdivisions that remain undeveloped. Similar to the District's other service areas, the system hydraulic grade line varies from 250 to 438 feet, and elevation varies from 328 to 338 feet, often causing challenges for groundwater pumping and distribution in this area.

Projected land uses for this area in the General Plan include low-density residential (one-to-six dwelling units per acre), parks and recreation, and public/institutional uses, surrounded by working lands and resource production land uses, consistent with the community development concepts listed above.

FIGURE 3-7: SUB-REGION D: GROUNDWATER



3.4 CLIMATE

The County is situated in a transitional zone between the San Joaquin Valley (Central Valley) and the Sierra Nevada with elevations ranging from 200 feet above mean sea level (MSL) near the valley floor to approximately 10,000 feet near the crest above Ebbetts Pass. As a result, the climate and seasonal weather conditions vary greatly between the District's service areas. Below is a generalized overview of the climate for the service areas:

Jenny Lind and Wallace: Sierra Nevada Foothills towards San Joaquin Valley floor.

Hot, dry summers and temperate winters in the western foothills, with temperatures ranging from the mid-50's to the mid-90's in degrees Fahrenheit (°F), occasionally exceeding 100oF during the summer. Average January low for Valley Springs is around 41 °F, and the average July high is around 94 oF. Usual precipitation during winter months, typically October through following April, is mostly in the form of rain or generally overcast conditions.

Copperopolis/Copper Cove (and Angels Camp area): Sierra Nevada Foothills.

Hot, dry summers and temperate winters in the western foothills, with temperatures ranging from the mid-50's to the low-90's °F, occasionally exceeding 100°F during the summer. Average January low for Angels Camp is around 32 °F, and the average July high is around 92 °F. Usual precipitation during winter months, typically October through following April, is mostly in the form of rain or generally overcast conditions.

Ebbetts Pass: Sierra Nevada Mountains along Highway 4 Corridor.

Mild, dry summers and cold, wet winters in the mountainous eastern portion of the County, with temperatures ranging from the high-20's to the low-80's °F, rarely exceeding the mid-90's during the summer. Average January low for Arnold is around 29 °F, and the average July high is around 80 °F. Usual precipitation during winter months, typically October through following April, is mostly as rain in the lower parts of Arnold and Forest Meadows and accumulated snow in upper parts of Arnold and Dorrington/Camp Connell.

West Point: Lower Sierra Nevada Mountains along Mokelumne River Watershed.

Mild, dry summers and moderately wet winters in the mountainous northern portion of the County, with temperatures ranging from the low-30's to the low-90's °F, sometimes exceeding the mid-90's during the summer. Average January low for West Point is around 32 °F, and the average July high is around 95 °F. Usual precipitation during winter months, typically October through following April, is mostly as rain with some snow during particularly cold temperature spells.

The combination of hot and dry weather results in higher water demands during the summer months (May through September) in most service areas. For the purposes of reporting climate data, the District's service areas are grouped based on elevation. The Jenny Lind, Copper Cove/Copperopolis, and Wallace service areas are at lower elevations with effectively similar climates, while the other three systems are higher in elevation. Climate data for the lower elevation service areas are presented in **Table 3-2**, and data for the higher elevation service areas are presented in **Table 3-3**. For each area, the nearest weather station with the longest period of record data was selected. There are no evapotranspiration (ETo) data stations near any of the service areas. Instead, ETo values are provided per the zone summaries presented on the California Irrigation Management Information System (CIMIS) Reference Evapotranspiration map.

TABLE 3-2: CLIMATE DATA FOR LOWER ELEVATION SERVICE AREAS (JENNY LIND, COPPER COVE/COPPEROPOLIS, AND WALLACE)

Month	Average precipitation (in.)	Average monthly ETo	Average maximum temperature (ºF)	Average minimum temperature (ºF)
January	5.2	1.24	58	38
February	4.4	1.96	61	40
March	5.4	3.41	64	43
April	2.5	5.10	71	46
May	1.1	6.82	80	52
June	0.2	7.80	90	60
July	0.0	8.06	98	67
August	0.0	7.13	96	65
September	0.3	5.40	91	60
October	1.2	3.72	79	52
November	2.9	1.80	67	44
December	5.5	0.93	58	39
Annual	28.7	53.4	76	51

NOTES: Data obtained from NOAA, New Melones Dam HQ (USC00046174), 2005 - 2025; ETo based on Zone 12 as shown on CIMIS Reference Evapotranspiration map provide at http://www.cimis.water.ca.gov/Content/pdf/CimisRefEvapZones.pdf;
(2) ETo = evapotranspiration

TABLE 3-3: CLIMATE DATA FOR HIGHER ELEVATION SERVICE AREAS (EBBETTS PASS, SHEEP RANCH, AND WEST POINT)

Month	Average precipitation (in.)	Average monthly ETo	Average maximum temperature (ºF)	Average minimum temperature (ºF)
January	10.0	1.55	45	30
February	9.3	2.24	48	31
March	8.6	3.10	47	31
April	5.0	4.50	55	35
May	2.9	5.89	62	41
June	0.3	7.20	74	50
July	0.0	8.06	82	57
August	0.0	7.44	80	56
September	0.6	5.70	73	50
October	2.9	3.72	64	43
November	4.2	2.10	53	35
December	9.5	1.55	44	29
Annual	53.3	53.1	61	41

NOTES: Data obtained from the NOAA, Calaveras Big Trees (041277), 2005 to 2025; ETo based on Zone 11 as shown on CIMIS Reference Evapotranspiration map provide at http://wwwcimis.water.ca.gov/Content/pdf/CimisRefEvapZones.pdf;
(2) ETo = evapotranspiration

3.4.1 Climate Change

Climate change refers to the long-term change in the statistical distribution of weather patterns in precipitation, temperature, wind, and severe weather events over a period of time from decades to centuries with respect to 'historically-expected' weather conditions. Climate change can occur from both natural and anthropogenic causes; however, studies have shown that the high levels of greenhouse gas emissions since the late 19th century have accelerated the rate of climate change. The potential impacts of climate change are far reaching, and the progression of these changes on environmental conditions has differed around the world.

Advances in climatology, modeling, and other related sciences have significantly improved our understanding of how climate change is likely to impact a particular region over time. Generally, it is understood that climate change is going to result in temperature increases and changes in precipitation

patterns. CCWD's surface water supplies are largely dictated by changes in the volume, nature, and timing of precipitation in its watersheds; primarily the Calaveras, Stanislaus, and Mokelumne Rivers. Accordingly, any adverse effects from climate change on the timing and/or quantity of runoff in these watersheds would aggravate the ability of the District to utilize its water infrastructure to provide water supplies which are adequate to meet current and future demands.

There are several recent climate change studies relevant to the District's service areas. DWR's Watershed Studies[1] cover both the Calaveras and Stanislaus watersheds and the Calaveras Watershed Resilience Plan[2] covers the Calaveras watershed. While findings from these efforts are specific to the applicable watershed, they could be assumed to also represent potential climate change impacts to the Mokelumne watershed as well given their relatively close proximity and similar geography. There are also a number of other more general scientific analyses and reports that can be used to infer changes to the County's watersheds under possible climate change scenarios. The impacts of these changes to the District's water resources could include the following:

- More winter season rain reaching into higher elevations as opposed to snow accumulation (e.g., upper elevation areas of Ebbetts Pass with rain rather than snow during winter months), with sporadic and highly unpredictable snow accumulation in lower elevations during certain infrequent years.
- More frequent and intense precipitation events leading to more erratic base flows in rivers and tributaries owing to more winter rain flowing towards lower elevations, as opposed to current late-season snowpack melt, requiring downstream reservoirs to provide more flood capture spacing to prevent flooding and infrastructure strain, thereby decreasing water supply storage.
- Higher temperatures in summer and fall months combined with drier conditions leading to more intense droughts, wildfire risks and vulnerabilities, and drought conditions, requiring more concerted conservation efforts in the service areas and potentially leading to more frequent water diversion curtailments.
    - This could also lead to more sediment loading (e.g., ash, dead vegetation, landscape erosion) in upper watersheds being washed to downstream areas and storage reservoirs in the future, also adversely impacting water supply storage.
    - District water treatment infrastructure would likely need to be adapted to account for increased demands under a greater number of high temperature months, inferring from current summer month annual high patterns.
- Increase in the severity of the phenomenon known as "precipitation whiplash," which consists of rapid and extreme shifts between droughts and wet conditions during a relatively short period. This phenomenon has the potential to heighten the impacts of all climate hazards, particularly flooding and drought.

Regardless of the actual, specific impacts of climate change, CCWD anticipates that climate change will dramatically change the conditions of the County's watersheds in the coming century. The District is actively looking for ways to adapt to climate change in its daily operations and is committed to partnering with

[1] https://water.ca.gov/Programs/All-Programs/Flood-MAR/Watershed-Studies
[2] https://www.ccwd.org/calaveras-river-watershed-resiliency-plan

other entities as appropriate to engage in regional planning and implementation efforts related to climate resiliency. As a recent example, CCWD worked closely with SEWD to support the development of the Calaveras Watershed Resilience Plan and represent upper watershed perspectives (discussed more in Section 2.2.3).

A few of CCWD's primary references for climate change literature are listed below:

- California Department of Water Resources. "San Joaquin Basin Flood-MAR Watershed Studies: Calaveras Watershed Study Area Report." December 2025.
- California Department of Water Resources. "San Joaquin Basin Flood-MAR Watershed Studies: Stanislaus Watershed Study Area Report." December 2025.
- Stockton East Water District. "Calaveras Watershed Resilience Plan." March 2026.
- California Department of Public Health, UC Davis, "Climate Change and Health Profile Report: Calaveras County." February 2017.
- California Department of Forestry & Fire Protection, California Natural Resources Agency, and California Environmental Protection Agency (Forest Climate Action Team). "California Forest Carbon Plan: Managing Our Forest Landscapes in a Changing Climate." May 2018.
- California Department of Water Resources. "Climate Action Plan, Phase 2: Climate Change Analysis." September 2018. DWR Climate Change Program.
- California Department of Water Resources. "Climate Action Plan, Phase 3: Climate Change Vulnerability Assessment." February 2019. DWR Climate Change Program.
- U.S. Department of the Interior, Bureau of Reclamation. "Water Reliability in the West – 2021
- SECURE Water Act Report." January 2021. Reclamation Water Resources and Planning Office.

3.5 SERVICE AREA POPULATION AND DEMOGRAPHICS

Table 3-4 shows the 2025 service area total population, as well as the estimated population in five-year increments from 2030 through 2050. The 2025 population was estimated by multiplying the number of residential connections (i.e., single- and multi-family connections) by the average number of persons per household for all 2020 U.S. Census block groups that intersect the service area. **Table 3-5** summarizes the block groups and individual persons per household values.

To estimate future population, the District used the California Department of Finance (DOF) Report P-2A, which projects the total population of Calaveras County in single-year increments through 2070. **Table 3-6** presents the County-wide percent change at each 5-year increment. These negative percent changes indicate a DOF projected decrease in overall population. Because the District does not serve the entire County, the County-wide percent change at each 5-year timestep was applied to the District's service area population.

TABLE 3-4: POPULATION – CURRENT AND PROJECTED (DWR TABLE 3-1)

Service Area	2025	2030	2035	2040	2045	2050

Jenny Lind	10,092	9,886	9,704	9,501	9,261	9,007
Sheep Ranch	99	97	95	93	91	89
Sub-Region A	10,191	9,983	9,799	9,595	9,352	9,096
Ebbetts Pass	12,060	11,813	11,596	11,354	11,067	10,764
Copper Cove	6,398	6,268	6,152	6,024	5,872	5,711
Sub-Region B	18,458	18,081	17,748	17,378	16,938	16,475
Sub-Region C (West Point)	1,170	1,146	1,125	1,102	1,074	1,045
Sub-Region D (Wallace)	268	262	257	252	246	239
TOTAL	30,088	29,472	28,930	28,326	27,610	26,854
NOTES: These projections are derived from 2020 U.S. Census and Department of Finance data and are not reflective of projections that are included in the General Plan.						

TABLE 3-5: U.S. CENSUS BLOCK GROUP ANALYSIS (2020 CENSUS)

Block Group	Persons per Household	Value Used for Analysis
Jenny Lind		
Block Group 1, Census Tract 2.20	2.64	**2.68**
Block Group 2, Census Tract 2.20	2.74	
Block Group 3, Census Tract 2.20	2.64	
Block Group 2, Census Tract 2.21	2.60	
Block Group 3, Census Tract 2.21	2.64	
Block Group 1, Census Tract 2.22	2.76	
Block Group 2, Census Tract 2.22	2.77	
Sheep Ranch		
Block Group 2, Census Tract 3.02	2.20	**2.20**
Ebbetts Pass		
Block Group 1, Census Tract 5.01	2.22	**2.10**
Block Group 2, Census Tract 5.01	2.26	
Block Group 1, Census Tract 5.04	1.78	
Block Group 2, Census Tract 5.04	2.06	
Block Group 1, Census Tract 5.05	2.12	
Block Group 2, Census Tract 5.05	2.16	
Block Group 1, Census Tract 5.06	2.11	
Copper Cove/ Copperopolis		
Block Group 1, Census Tract 1.23	2.36	**2.41**
Block Group 2, Census Tract 1.23	2.32	
Block Group 1, Census Tract 1.24	2.53	
West Point		
Block Group 1, Census Tract 4.00	2.03	**2.25**
Block Group 2, Census Tract 4.00	2.42	
Block Group 3, Census Tract 4.00	2.28	
Wallace		
Block Group 1, Census Tract 2.21	2.65	**2.65**

TABLE 3-6: DOF POPULATION PROJECTIONS FOR CALAVERAS COUNTY

	2025	2030	2035	2040	2045	2050
Projected Population	44,246	43,341	42,544	41,656	40,603	39,491
Percent Change Over the 5-Year Interval		-2%	-2%	-2%	-3%	-3%

The District's population typically fluctuates seasonally due to second homeowners and vacationers in the area. The District conducted an analysis to estimate seasonal population in its service areas using guidelines from DWR and historical billing data. Seasonal occupancy varies by service area. In Subregion A, an estimated 35% of the population is considered seasonal with estimated occupancy between 10% and 30% of the year. Subregion B has the highest observed seasonal impacts, likely due to its close proximity to outdoor and recreation activities. Detailed analysis for the Copper Cove/Copperopolis service area was not available at the time of this UWMP but patterns are expected to be similar to Ebbetts Pass. In Ebbetts Pass, an estimated 68% of the population is considered seasonal with estimated occupancy about 15% of the year. In Subregion C, 27% of the population is considered seasonal with estimated occupancy about 10% of the year. Subregion D is the least impacted by seasonal fluctuation; only 15% of the population is considered seasonal, and estimated occupancy is about 40% of the year.

Table 3-7 summarizes the initial estimates of seasonal population by service area. These estimates are considered extremely preliminary and may be re-evaluated as the District continues investigations of seasonal residency patterns. Therefore, these impacts are not included in the overall population tables presented above.

TABLE 3-7: PRELIMINARY SEASONAL POPULATION ESTIMATES

Service Area	Estimated Seasonal Population (Percent of Total Population)	Estimated Annual Occupancy Days for Seasonal Residences
Jenny Lind	35%	88
Sheep Ranch	33%	47
Ebbetts Pass	68%	56
West Point	27%	31
Wallace	15%	136

4. WATER USE

The District's past, current and projected water demands are presented in this chapter. Water demands are provided by water use sector. California Department of Water Resources (DWR) Urban Water Use Efficiency standards define the water use sectors referenced in this UWMP, which include residential, commercial, industrial, institutional, and other use. Per requirements of the Water Management Planning Act (Act), demands are projected to 2050 in 5-year increments by water use sector.

4.1 CURRENT WATER USES BY SECTOR

This section quantifies current water uses by sector. **Table 4-1** on the next page shows current District-wide water use by use type. Based on guidance provided in the 2025 UWMP Guidebook, the District has elected to use the designated use type "Other" to report three distinct water sectors: total residential water use, which represents both single family (SF) and multi-family (MF) residential sectors; combined commercial, institutional, industrial (CII) and governmental use; and unbilled authorized consumption including water used for line flushing, emergency services, and other unbilled uses. Distribution System Water Losses are reported on separate lines as real losses and apparent losses, which includes unauthorized consumption, for added clarity.

TABLE 4-1: DISTRICT-WIDE DEMANDS FOR POTABLE AND RAW WATER – ACTUAL (DWR TABLE 4-1)

Use Type	Additional Description (as needed)	2025 Actual Water Use	
		Level of Treatment	Volume (AF)
Other	Combined SF and MF Residential Use	Potable	2,901
Other	Combined CII and governmental use	Potable	258
Landscape	--	Potable	182
Landscape	Recycled and raw water for golf course irrigation	Non-Potable	800
Agricultural Irrigation	--	Non-Potable	1,116
Sales/Transfers/Exchanges to other agencies	--	Potable	79
Other	Unbilled Authorized Consumption	Potable	48
Distribution System Water Loss[1]	Real Losses	Potable	1,264
Distribution System Water Loss[1]	Apparent Losses	Potable	54
		Subtotal Potable	4,786
		Subtotal Non-Potable	1,916
		Total	6,702

NOTES: (1) Real losses calculated using the AWWA Water Loss Audit worksheet including water physically lost in the conveyance of water supplies. Apparent losses are reported separately for clarity (see **Section 4.3**).

As described in **Chapter 3**, the District's water connections can be separated into four distinct sub- regions designated by water supply source (see **Figure 3-2**). The following sections further discuss current water demands by sub-region.

4.1.2 Sub-Region A: Calaveras River

Calaveras River and tributary water supplies are utilized in the Jenny Lind Service Area (Jenny Lind) and Sheep Ranch Service Area (Sheep Ranch). **Table 4-2** shows the current water use for Sub-Region A; **Appendix C** includes the information for these service areas separately.

TABLE 4-2: SUB-REGION A DEMANDS FOR POTABLE AND RAW WATER – ACTUAL (DWR TABLE 4-1)

Use Type	Additional Description (as needed)	2025 Actual Water Use	
		Level of Treatment	Volume (AF)
Other	Combined SF and MF Residential Use	Potable	1,311
Other	Combined CII and governmental use	Potable	58
Landscape	--	Potable	15
Landscape	Recycled and raw water for golf course irrigation	Non-Potable	227
Agricultural Irrigation	--	Non-Potable	1,116
Other	Unbilled Authorized Consumption	Potable	26
Distribution System Water Loss[1]	Real Losses	Potable	444
Distribution System Water Loss[1]	Apparent Losses	Potable	22
		Subtotal Potable	1,878
		Subtotal Non-Potable	1,343
		Total	3,219
*NOTES: (1) Real losses calculated using the AWWA Water Loss Audit worksheet including water physically lost in the conveyance of water supplies. Apparent losses including unauthorized consumption are reported separately for clarity (see **Section 4.3**).*			

Jenny Lind

Jenny Lind currently has 3,864 customer connections. Customer sectors in Jenny Lind include residential (single- and multi-family), commercial, institutional/governmental, landscape, agricultural irrigation, and emergency water uses. Total annual water demands in this area were 3,185 AF for FY 2025 (i.e., July 2024 through June 2025). Of the potable water supplied, which excludes agricultural uses and golf course irrigation, and excluding water losses, 93 percent was used to meet residential demands, 4 percent met CII water demands, and 1 percent met potable landscape irrigation demands. The remaining 2 percent is accounted for with unbilled authorized demands. Jenny Lind underwent extensive system flushing that required approximately 21 AF of potable water in FY 2025. The flushing demands were higher than is typical

due to the construction activities associated with adding approximately 20,000 linear feet of new transmission main to the distribution system.

Within the Jenny Lind Service Area, raw water from the Calaveras River is supplied to one local golf course and ten agricultural customers, as described below:

- The La Contenta Golf Course (La Contenta) diverts raw water directly from New Hogan Reservoir (New Hogan) to supplement its recycled water irrigation supply. In FY 2025, La Contenta used a total of 227 AF of non-potable water for landscape and golf course irrigation purposes, including 92 AF of raw water from New Hogan and 135 AF of recycled water. La Contenta's recycled water and New Hogan utilization are further discussed in **Chapter 6.**
- CCWD serves some agricultural customers in the Camanche/Valley Springs area along the Lower Calaveras River between New Hogan and the Calaveras/San Joaquin County line. These customers divert raw water from the Calaveras River under a combination of riparian rights and by purchase from the District's New Hogan water supplies. Agricultural usage for these parcels tends to fluctuate on an annual basis depending upon users' needs and the water supply outlook (i.e., planned crop type, end of water year storage levels) but has remained relatively static for the preceding 5 years. The District currently estimates annual usage based on landowner surveys to collect acreage, planned or established crop type (mostly orchard), and land use data. In FY 2025, these customers were estimated to use 1,116 AF of raw water for irrigation purposes.

Sheep Ranch

The Sheep Ranch Service Area currently has 45 single-family residential connections and 2 CII connections. In FY 2025, the total annual water demands for Sheep Ranch were 14 AF. Additionally, some raw water is diverted from San Antonio Creek under the District's water rights (listed in **Section 6.4.1**) for the Rite of Passage Youth Facility under a water supply agreement. Since this facility's use is effectively a separate diversion prior to the District's treatment and distribution system, it has not been included in this analysis.

4.1.4 Sub-Region B: Stanislaus River

Stanislaus River water is supplied to the Ebbetts Pass Service Area (Ebbetts Pass) and Copper Cove/Copperopolis Service Areas (Copper Cove/Copperopolis). **Table 4-3** below shows the current water use for Sub-Region B; **Appendix C** includes the information for Ebbetts Pass and Copper Cove/Copperopolis separately.

TABLE 4-3: SUB-REGION B DEMANDS FOR POTABLE AND RAW WATER – ACTUAL (DWR TABLE 4-1)

Use Type	Additional Description (as needed)	2025 Actual Water Use	
		Level of Treatment	Volume (AF)
Other	Combined SF and MF Residential Use	Potable	1,454
Other	Combined CII and governmental use	Potable	182
Landscape	--	Potable	167
Landscape	Recycled and raw water for golf course irrigation	Non-Potable	573
Sales/Transfers/Exchanges to Other Agencies	--	Potable	79
Other	Unbilled Authorized Consumption	Potable	21
Distribution System Water Loss[1]	Real Losses	Potable	768
Distribution System Water Loss[1]	Apparent Losses	Potable	29
		Subtotal Potable	2,700
		Subtotal Non-Potable	573
		Total	3,272
*NOTES: (1) Real losses calculated using the AWWA Water Loss Audit worksheet including water physically lost in the conveyance of water supplies. Apparent losses including unauthorized consumption are reported separately for clarity (see **Section 4.3**). (2) Volumes reported are rounded. This creates a discrepancy between the sum of the rounded values shown here (3,273 AF) and the sum of the exact values (3,272.1 AF). To minimize rounding error, the total was calculated using exact water use values and subsequently rounded to 3,272 AF.*			

Ebbetts Pass

Ebbetts Pass currently has 5,989 customer connections, including residential (single- and multi- family), commercial, institutional/governmental, landscape, emergency, and wholesale potable water connections. This is the only District service area with treated wholesale water customers, owing to more recent housing block and community developments opting to operate their water systems under homeowners' associations (and forming wholesale agreements with the District for supplies). Total water demands in Ebbetts Pass in

FY 2025 were 1,880 AF, including the wholesale customers. Of the potable retail demand (not including losses) in 2025, residential users accounted for 73 percent of total demand. CII customers accounted for 16 percent. Potable landscape demand accounted for 1.5 percent. The wholesale water demands, accounting for around 13 percent of the total treated water supplies, are associated with two private water systems: the Snowshoe Springs Association located in Dorrington, and Blue Lake Springs Mutual Water Company located in Arnold. The remaining 1.5 percent was for water associated with authorized unbilled activities including distribution system flushing and fire flow for emergency services. The Ebbetts Pass distribution system implemented additional flushing to address a haloacetic acid (HAA5 LRAA) exceedance that occurred in 2020. In 2025, this flushing required 12 AF of potable water. The Compliance Order was lifted on May 1, 2025, so this demand is not expected to be as significant in the future.

Copper Cove/Copperopolis

Copper Cove/Copperopolis currently has 2,754 customer connections. The customer classes within this area include single family residential, commercial, institutional/governmental, emergency, and landscape. Total demands in Copper Cove/Copperopolis were 1,365 AF in FY 2025. Of the total potable demand, 80 percent is for residential use, 15 percent is for landscape use, and 4 percent is for CII use. Unbilled authorized potable water demand accounts for the remaining 0.7 percent and includes system flushing and fire flow for emergency services.

In addition to potable water, this service area also supplies non-potable water to two golf courses: the Golf Club at Copper Valley (formerly known as Saddle Creek), which receives a mixture of recycled water and raw water from Lake Tulloch, and Forest Meadows Golf Course, which receives recycled water only. These supplies are described further in **Chapter 6**. In FY 2025, these golf courses received a total of 573 AF of non-potable water for irrigation, 220 AF of which was raw water from Lake Tulloch.

4.1.6 Sub-Region C: Mokelumne River

The Middle Fork of the Mokelumne River and its tributary, Bear Creek, provide water for the West Point Service Area (West Point), which currently has 572 customer connections. This area includes single-family residential, commercial, institutional/governmental, and landscape connections that are all metered and all receive treated surface water. Total water demands for West Point were 146 AF in FY 2025. Single-family residential water demand accounts for 86 percent of the total water use, CII users account for 13 percent, and unbilled authorized uses including flushing and emergency services account for just over 0.1 percent of total use. There are no multi-family residential connections in West Point. The current water use by customer type is shown in **Table 4-4**.

TABLE 4-4: SUB-REGION C DEMANDS FOR POTABLE AND RAW WATER – ACTUAL (DWR TABLE 4-1)

Use Type	Additional Description (as needed)	2025 Actual Water Use	
		Level of Treatment	Volume (AF)
Single Family		Potable	96
Other	Combined CII and governmental use	Potable	15
Landscape	--	Potable	0
Other	Unbilled Authorized Consumption	Potable	1
Distribution System Water Losses[1]	Real Losses	Potable	33
Distribution System Water Losses[1]	Apparent Losses	Potable	2
		Subtotal Potable	146
		Subtotal Non-Potable	0
		Total	146
NOTES: (1) Real losses calculated using the AWWA Water Loss Audit worksheet including water physically lost in the conveyance of water supplies. Apparent losses including unauthorized consumption are reported separately for clarity. (see **Section 4.3**).			

4.1.8 Sub-Region D: Groundwater

This is the only District area served primarily by groundwater supply, as described in **Section 3.2.5**, which includes the Wallace Service Area (Wallace). The District has provided water supplies to Wallace since its annexation in 2013. In FY 2025, Wallace served 107 customer connections: 101 single-family residential and 6 commercial connections. All water use is metered. In FY 2025, as shown in **Table 4-5**, single-family residential demand accounted for about 93 percent (41 AF) of total demand and CII connections used the remaining 7 percent (3 AF). There are no multi-family residential connections in Wallace. Total demand was 62 AF in FY 2025.

TABLE 4-5: SUB-REGION D DEMANDS FOR POTABLE AND RAW WATER – ACTUAL (DWR TABLE 4-1)

Use Type	Additional Description (as needed)	2025 Actual Water Use	
		Level of Treatment	Volume (AF)
Single Family		Potable	41
Other	Combined CII and governmental use	Potable	3
Other	Unbilled Authorized Consumption	Potable	0.1
Distribution System Water Losses[1]	Real Losses	Potable	18
Distribution System Water Losses[1]	Apparent Losses	Potable	0.7
		Subtotal Potable	62
		Subtotal Non-Potable	0
		Total	62

NOTES: (1) Real losses calculated using the AWWA Water Loss Audit worksheet including water physically lost in the conveyance of water supplies. Apparent losses including unauthorized consumption are reported separately for clarity (see Section 4.3). (2) Volumes reported are rounded. This creates a discrepancy between the sum of the rounded values shown here (62.8 AF) and the sum of the exact values (62.322 AF). To minimize rounding error, the total was calculated using exact water use values and subsequently rounded to 62 AF.

4.2 WATER USE PROJECTIONS

Reviewing water use trends and forecasting future service area demands is critical to the District's planning and water supply management objectives. As part of the 2020 UWMP, the District compared three separate approaches to project future water uses to better prepare for changes to water demands. The three approaches yielded similar results and the District opted to select a population-based methodology. For this 2025 UWMP, the District has opted to continue using a population-based methodology for its demand projections. Within CCWD's service areas, private wells, septic systems, smaller water and wastewater providers, and seasonal population changes all complicate water use analysis, but blanket population-based projections used in the District's previous UWMPs have shown to be reasonable estimates for water planning purposes.

The California Department of Finance (DOF) provides state-wide and county population projection data. To project demands in CCWD's service areas, DOF population percent growth rates for Calaveras County (also used in **Section 3.4** to project population) were applied to the baseline FY 2025 volume of water use for each service area and for all customer classes (apart from agriculture and non-potable landscape).

This blanket growth rate was used to project demands for each 5-year period through 2050. District-wide demands for 2050 were projected to be 5,841 AFY. Landscape irrigation demand for golf course irrigation is projected to be stable through 2050, as this use is not tied to area population and additional expansion is not anticipated. Agricultural demands were projected as described below and are discussed in more detail for each sub-region below.

Agricultural Demands

The District recognizes the potential for increased agricultural water demand in the future. In addition to potential new agricultural developments, water demand may increase due to the conversion of demands from low value crops or irrigated pasture lands to more high value and intensely irrigated permanent crops, including vineyards and orchards. This trend would be consistent with many other parts of California. Furthermore, possible constraints on groundwater reliance for agricultural areas overlying the critically over-drafted Eastern San Joaquin Subbasin may contribute to increased surface water demand.

In 2011, CCWD investigated the potential for new agricultural developments around the County, focused on areas with promising land potential (e.g., having adequate soil and irrigable). This analysis reviewed agricultural demands at a maximum build-out scenario, assumed to be the year 2100 (Provost & Pritchard, 2011). Many of the potential lands fell outside of current CCWD service areas but realistically could fall into Sub-Regions A or B depending on District use of water rights to supply these demands – likely Calaveras River water used in areas around Valley Springs, or Stanislaus River water used in the Highway 4 Corridor.

That analysis was supplemented by a CCWD review of current and future agricultural water demands for the Highway 4 Corridor Region in southeastern Calaveras County, located outside of the prior study area (CCWD 2020). This preliminary study anticipates a maximum of approximately 2,510 AF/year of agricultural demands in the Highway 4 Corridor Region by 2030 that could potentially be served in whole or in part by CCWD in Sub-Region B in the future, though are not necessarily within current District service areas.

However, the agricultural water demands anticipated in these studies have not aligned with actual use. Instead, agricultural water use has remained relatively unchanged since 2015. Therefore, to better represent observed trends, agricultural water demands have been assumed to remain constant through 2050 using FY 2025 demands as a baseline.

Unbilled Authorized Consumption

Over the last five years, the District used several different methods to calculate its unbilled authorized consumption for AWWA reporting, leading to noticeable variation in the historic reported volumes. Unbilled authorized consumption volumes for fiscal years 2023-2024 and 2024-2025 were calculated using the same method, but the previous year(s) were not. Additionally, several service areas required additional flushing in recent years, which are discussed under Section 4.1. For projection calculations, the average unbilled authorized consumption from fiscal years 2023-24 and 2024-25 was used as a base volume and scaled according to anticipated population changes.

Water Loss Projections

The real loss component of distribution system water losses for each service area was calculated by multiplying the projected number of connections by a unit real loss factor of either gallons per service connection per day (GPSCD) or, for West Point, gallons per mile of main per day (GPMD). Municipal connections were projected in the same manner as population (see **Section 3.4**); wholesale, agricultural, and non-potable landscape (golf course) connections were assumed to remain constant through the projection period. For West Point, the total miles of service main (19.5 miles as of 2025) were also assumed to remain constant.

Unit real loss factors vary by service area and are based on the District's potential adjusted 2028 Real Loss Standards, shown later in **Table 4-15**. These adjusted standards have not yet been reviewed and approved by the State Water Resources Control Board (SWRCB). The District anticipates that the currently approved standards will be increased from their current values once recalculated using a more realistic Infrastructure Condition Factor and after accounting for higher average pressures than were used in the calculations from the pre-2020 baseline period. For most systems, the District's current (FY 2024 – 2025) calculated water losses are higher than the projected standards. For water demand projection purposes, the District conservatively estimates reaching these unit loss standards in the year 2040. Unit real loss factors for 2030 and 2035 were linearly interpolated between the actual unit real losses calculated in the FY 2024 – 2025 AWWA Water Loss Audit and these 2040 real loss standards. After 2040, real loss unit factors were assumed to remain constant. Note that the actual FY 2024-2025 unit real losses for Ebbetts Pass are lower than the adjusted standard; therefore, the unit factor for Ebbetts Pass was projected to remain constant at the FY 2024-2025 rate. Note further that a constant unit real loss does not indicate a constant total real loss volume because the number of connections is projected to change.

Sheep Ranch and Wallace service areas do not have calculated water loss standards because they have less than 200 connections each and thus do not fall under the definitions of the water loss regulation. For projection purposes, these two service areas were assumed to have 2040 unit real loss factors equal to 75% of the current (FY 2024 – 2025) unit real loss factor. This assumption is conservatively based on the largest percent reduction in unit real loss factors observed for the other four service areas.

For all applicable service areas, the unit apparent loss factors in FY 2024-2024 are below the existing 2028 Apparent Water Loss Standards. Therefore for all service areas, the unit apparent loss factors were projected to remain the same as FY 2024 – 2025, with changes in total apparent losses as they scale with changes in number of connections.

For more information on water loss and the water loss standards, see **Section 4.3**. **Table 4-6** shows District-wide projected demand by customer sector. The sub-sections that follow further discuss projected demand by sub-region.

TABLE 4-6: DISTRICT-WIDE USE FOR POTABLE AND NON-POTABLE WATER - PROJECTED (AFY) (DWR TABLE 4-2)

Use Type	Description	Level of Treatment When Delivered	Projected Water Use (AF)				
			2030	2035	2040	2045	2050
Other	Combined Residential – Single and Multi-Family	Potable	2,844	2,792	2,734	2,665	2,592
Other	Combined CII	Potable	253	249	243	237	231
Landscape		Potable	178	175	171	167	163
Landscape		Non-potable	800	800	800	800	800
Agricultural		Non-potable	1,116	1,116	1,116	1,116	1,116
Sales/Transfers/ Exchanges to other agencies		Potable	77	75	74	72	70
Other	Unbilled Authorized Consumption	Potable	37	36	35	35	34
Distribution System Water Losses		Potable	1,318	1,156	1,003	857	836
		Subtotal Potable	4,706	4,483	4,261	4,033	3,925
		Subtotal Non-Potable	1,916	1,916	1,916	1,916	1,916
		Total	6,622	6,399	6,177	5,949	5,841

NOTES: (1) As a user of the Subbasin, CCWD may be required to participate in some form of groundwater recharge program as part of SGMA compliance; however, future demands associated with such activities are currently unknown; (2) Landscape non-potable uses include recycled water demands for golf course irrigation, discussed further in Chapter 6 (3) Losses were calculated by applying service area specific estimated volume loss per connection to the projected number of connections. See Section 4.3; (4) California Department of Finance data indicates that, between 2025 and 2050, Calaveras County will experience an 11% decrease in population.

4.2.1 Sub-Region A: Calaveras River

Projected demands for Sub-Region A are shown in **Table 4-7**, which includes demands for potable and non-potable water supplies. Assumptions for the applicable service areas are discussed below; individual demands associated with these areas are included in **Appendix D**.

There is a potential for increased agricultural production of orchard nut crops in this sub-region, particularly along the Highway 26 corridor between Valley Springs and the San Joaquin-Calaveras County line. These potential demands may eventually need to be met with District surface water supplies but are not anticipated in the near future and therefore are not included in the projections.

Jenny Lind

According to the District's agricultural demands studies, there exists some of the greatest potential for agricultural developments in and around the Valley Springs area. Approximately 3,400 acres were recognized for the potential of agricultural irrigation water demands, possibly needing surface water in the future. However, recent analysis suggests that agricultural water demands will remain relatively stable and limited to current agricultural customers through 2050.

Sheep Ranch

An October 2014 compliance order from the State Water Resources Control Board's (SWRCB) Division of Drinking Water prevents the District from adding customers or providing "will serve" letters in Sheep Ranch until a reliable alternate source of water is identified and integrated into the area's supply portfolio. As such, projected growth in demands in this area is limited to demands from existing homes. These residential demands are assumed to decrease in alignment with projected population decreases.

TABLE 4-7: SUB-REGION A USE FOR POTABLE AND NON-POTABLE WATER - PROJECTED (AFY) (DWR TABLE 4-2)

Use Type	Description	Level of Treatment When Delivered	Projected Water Use (AF)				
			2030	2035	2040	2045	2050
Other	Combined Residential – Single and Multi-Family	Potable	1,285	1,262	1,236	1,205	1,172
Other	Combined CII	Potable	57	56	55	53	52
Landscape		Potable	15	14	14	14	13
Landscape		Non-potable	227	227	227	227	227
Agricultural		Non-potable	1,116	1,116	1,116	1,116	1,116
Other	Unbilled Authorized Consumption	Potable	16	15	15	15	14
Distribution System Water Losses		Potable	466	401	338	277	270
		Subtotal Potable	1,839	1,749	1,658	1,564	1,522
		Subtotal Non-Potable	1,343	1,343	1,343	1,343	1,343
		Total	3,182	3,092	3,001	2,907	2,865

NOTES: (1) As a user of the Subbasin, CCWD may be required to participate in some form of groundwater recharge program as part of SGMA compliance; however, future demands associated with such activities are currently unknown; (2) Landscape non-potable uses include recycled water demands for golf course irrigation, discussed further in Chapter 6 (3) Losses were calculated by applying an estimated volume loss per connection to the projected number of connections. See Section 4.3; (4) California Department of Finance data indicates that, between 2025 and 2050, Calaveras County may experience an 11% decrease in population.

4.2.3 Sub-Region B: Stanislaus River

Projected demand for Sub-Region B is shown in **Table 4-8** and includes demand for potable and raw water supplies. Assumptions for the applicable service areas are discussed below; individual demands associated with these areas are included in **Appendix D**.

There are several open rangeland areas northwest of Copperopolis which are not currently served by the District within this sub-region, in the Salt Springs Valley (around Salt Springs Valley Reservoir), including the communities of Felix and Carmen City. These areas are mostly reliant on private landowner groundwater wells for water supplies but are generally understood to not use much water beyond pasture irrigation. Additionally, there are several relatively more populated areas along the Highway 4 Corridor currently served by other in-County suppliers with the potential for changes in occupancy trends (part versus full-time) or primed for new developments. These potential demands are described below. Given the uncertainty of the supply and conditions of existing infrastructure in these areas, the District may need to serve these needs or provide wholesale water to the other suppliers in the future. CCWD recognizes that there remains a lot of investigatory and regulatory work with County, the other water suppliers, and landowners in order to prepare these areas for conversion to a District-managed water supply system in the future. Some of this demand information is provided below and in **Table 4-8.**

Ebbetts Pass

Projected wholesale water use in Ebbetts Pass, as shown in the tables below under sales/transfers/exchanges, was determined as discussed in **Section 4.1.2.** It remains possible that wholesale water demands will increase with the transition from second homes to more full-time occupancy in these homeowner association areas, however, most of the build-out in these areas has already been completed (there are few open lots remaining in these communities).

According to agricultural trends data and the aforementioned District studies, the County recognizes several lands available for vineyard and orchard (almond and walnut) development in this sub- region, primarily in the Murphys to Angels Camp areas, but anticipates agricultural water demand to remain steady with current levels through 2050.

Per Order 97-05, CCWD reserves the right to serve water supplies to communities along the Highway 4 Corridor, outside of its and other water supplier service areas. The District does not anticipate needing to serve additional water to new or expanded customers in this area within the 2050 planning horizon. Beyond 2050, these supplies and their verified demands would need to be developed in coordination with the other water suppliers, primarily UWPA and UPUD, in the areas outside of CCWD's current service area.

Copper Cove/Copperopolis

The Copper Cove/Copperopolis area has some of the greatest potential in the County for outward expansion of residential areas, given large open spaces surrounding key areas (e.g., Copperopolis Town Square) and the proximity to recreational opportunities including Lake Tulloch and upper areas of the Highway 4 Corridor. CCWD anticipates that new and expanded housing developments will continue to be a factor in this area's water usage well into the future. Prior UWMP updates also estimated that with housing developments would come five new golf courses, likely receiving both recycled water and raw water from the Copper Cove/Copperopolis system. Development of these golf courses has stalled and it is currently expected that, if any golf courses are constructed, they will be served primarily with recycled water per

District policy (as described in **Section 6.9**). Therefore, large raw water landscape growth for golf courses is not reflected in the demand projections.

TABLE 4-8: SUB-REGION B USE FOR POTABLE AND NON-POTABLE WATER - PROJECTED (AFY) (DWR TABLE 4-2)

Use Type	Description	Level of Treatment When Delivered	Projected Water Use (AF)				
			2030	2035	2040	2045	2050
Other	Combined Residential – Single and Multi-Family	Potable	1,424	1,398	1,369	1,334	1,298
Other	Combined CII	Potable	179	175	172	167	163
Landscape		Potable	164	161	157	153	149
Landscape		Non-potable	573	573	573	573	573
Agricultural		Non-potable	0	0	0	0	0
Sales/Transfers/Exchanges		Potable	77	75	74	72	70
Other	Unbilled Authorized Consumption	Potable	20	20	20	20	19
Distribution System Water Losses		Potable	798	708	623	539	526
		Subtotal Potable	2,661	2,538	2,415	2,286	2,225
		Subtotal Non-Potable	573	573	573	573	573
		Total	3,234	3,111	2,988	2,859	2,798

NOTES: (1) As a user of the Subbasin, CCWD may be required to participate in some form of groundwater recharge program as part of SGMA compliance; however, future demands associated with such activities are currently unknown; (2) Landscape non-potable uses include recycled water demands for golf course irrigation, discussed further in Chapter 6 (3) Losses were calculated by applying an estimated volume loss per connection to the projected number of connections. See Section 4.3; (4) California Department of Finance data indicates that, between 2025 and 2050, Calaveras County may experience an 11% decrease in population.

4.2.4 Sub-Region C: Mokelumne River

As this area is more remote and along the Mokelumne River Canyon, there is less residential and commercial growth expected than in the southern and western sides of the County. However, given the limited access to existing infrastructure and topography within the District's current delivery system and the smaller parcel size of the currently designated agricultural use categories, the District does not anticipate any agricultural demand in this area through 2050. Future studies may assess the agricultural irrigation potential within this sub-region to better understand and plan for future demands associated with agriculture.

A long term planning goal of the District is to transition the northwestern part of the County, which is currently served with groundwater, to surface water supplies from the Mokelumne watershed or develop a

conjunctive use program in the area. CCWD has explored potential opportunities to develop a conjunctive use program in the area (i.e., Camanche Area Regional Water Supply Plan Feasibility Study and Conceptual Design (CARWSP)). CARWSP explored the use of CCWD Mokelumne River water rights in areas including Wallace and Camanche Area South Shore (CASS), potentially in coordination with EBMUD. Later analysis by the District also investigated the long- term water needs of the Mokelumne River sub-region in the County, identifying opportunities in Burson and Valley Springs to convert landowners from groundwater reliance to more-reliable District surface water supplies. The District anticipates continued collaboration with the communities on the Comanche South Shore and EBMUD to evaluate the feasibility of conveying surface water supplies to this area of the County. **Table 4-9** shows demands for potable and raw water within Sub-Region C.

TABLE 4-9: SUB-REGION C DEMANDS FOR POTABLE AND RAW WATER - PROJECTED (AFY) (DWR TABLE 4-2)

Use Type	Description	Level of Treatment When Delivered	Projected Water Use (AF)				
			2030	2035	2040	2045	2050
Other	Combined Residential – Single and Multi-Family	Potable	94	92	90	88	86
Other	Combined CII	Potable	15	14	14	14	13
Landscape		Potable	0.1	0.1	0.1	0.1	0.1
Other	Unbilled Authorized Consumption	Potable	0.4	0.4	0.4	0.4	0.4
Distribution System Water Losses		Potable	35	32	29	26	26
		Subtotal Potable	144	139	134	129	126
		Subtotal Non-Potable	0	0	0	0	0
		Total	144	139	134	129	126

NOTES: (1) As a user of the Subbasin, CCWD may be required to participate in some form of groundwater recharge program as part of SGMA compliance; however, future demands associated with such activities are currently unknown; (2) Losses were calculated by applying an estimated volume loss per connection to the projected number of connections. See Section 4.3; (3) California Department of Finance data indicates that, between 2025 and 2050, Calaveras County may experience an 11% decrease in population.

4.2.6 Sub-Region D: Groundwater

CCWD pumps groundwater for municipal use in Wallace from the Subbasin. As noted previously, this Subbasin has been categorized by DWR under SGMA as critically over-drafted due to historic overreliance on groundwater resources and other regional conditions. Approximately 70 square-miles of the Subbasin lies under the northwesternmost portion of Calaveras County. The District has served many administrative and planning functions over that portion of the Subbasin over time, as discussed in **Section 6.3.4**. CCWD has remained active in these roles under SGMA leading the Eastside San Joaquin Groundwater Sustainability Agency (Eastside GSA) to maintain authority over Calaveras and Stanislaus County portions of the Subbasin. As such, the District acknowledges its role in continuing to support effective groundwater management to the benefit of the entire Subbasin, and to investigate in-County conjunctive use opportunities which help support that objective.

The District may fulfill its role in achieving the sustainability objectives required under SGMA, as defined in the Subbasin GSP, by using its permitted rights to help address over-draft, where practicable. Although not required in the current GSP, approved in 2023, CCWD may in the future be required to participate in some form of groundwater recharge or other conjunctive management program to achieve long-term sustainability of the Subbasin, which would increase future water demands. Any future demands associated with these efforts are currently unknown, and as such, the groundwater recharge line-items are not defined in CCWD's UWMP projected demands tables. The District may modify the status of these efforts as they progress for the purposes of SGMA compliance.

Table 4-10 below shows the projected demand for raw and potable water in Sub-Region D; this includes potable, raw, and recycled water demand. There may be a possibility in the future of procuring water rights to serve surface water to Wallace, though the timeline is unclear. For the planning horizon of this UWMP, it is assumed that Wallace will continue to use groundwater.

TABLE 4-10: SUB-REGION D DEMANDS FOR POTABLE AND RAW WATER - PROJECTED (AFY) (DWR TABLE 4-2)

Use Type	Description	Level of Treatment When Delivered	Projected Water Use (AF)				
			2030	2035	2040	2045	2050
Other	Combined Residential – Single and Multi-Family	Potable	40	39	39	38	37
Other	Combined CII	Potable	3	3	3	3	3
Other	Unbilled Authorized Consumption	Potable	0.1	0.1	0.1	0.1	0.1
Distribution System Water Losses		Potable	19	16	13	13	13
		Subtotal Potable	62	58	54	54	52
		Subtotal Non-Potable	0	0	0	0	0
		Total	**62**	**58**	**54**	**54**	**52**

NOTES: (1) As a user of the Subbasin, CCWD may be required to participate in some form of groundwater recharge program as part of SGMA compliance; however, future demands associated with such activities are currently unknown; (2) Losses were calculated by applying an estimated volume loss per connection to the projected number of connections. See Section 4.3; (3) California Department of Finance data indicates that, between 2025 and 2050, Calaveras County may experience an 11% decrease in population.

4.3 DISTRIBUTION SYSTEM WATER LOSSES

This section quantifies distribution system water losses for each of the District's sub-regions. Distribution system water losses include both real losses and apparent losses. Real losses typically refer to the water physically lost in the conveyance of water supplies from the raw water intake (water treatment plants) or storage facilities, to the point of metered customer consumption downstream, typically due to system leaks and other inefficiencies. Apparent losses are "non-physical" losses that represent water consumed by customers but not paid for, including meter inaccuracies, unauthorized theft, or data handling errors. Water loss auditing also attempts to capture other non-metered uses, such as flows used in wildfire or fire suppression, distribution system flushing activities, or construction activities, which are collectively considered "authorized" and thus not technically a distribution system water loss.

Distribution system water losses were calculated using the AWWA Water Loss Audit worksheet, as required by CCWD for its annual Water Loss Audit submissions to DWR. The full water loss reporting analysis can be downloaded using the links provided in **Table 4-12**. District-wide losses in FY 2025 were roughly 1,300 AFY, as shown in **Table 4-11** below; this represents just over 19 percent of total District consumptive demand. Distribution water losses for each sub-region are included in the water demand tables presented in this chapter.

The annual Water Loss Audit submissions are evaluated for each public water system and are available online through the water use efficiency data portal at https://wuedata.water.ca.gov/awwa_plans. **Table 4-12** summarizes the submission status of and provides links for the Water Loss Audit reports for each public water system for the five years preceding this UWMP.

TABLE 4-11: ALL SUB-REGIONS 12 MONTH WATER LOSS AUDIT REPORTING

Sub-Region	Reporting Period Start Date	Volume of Water Loss* (AF)
A (Calaveras)	07/2023	467
B (Stanislaus)		797
C (Mokelumne)		35
D (Groundwater)		19
	Total	**1,318**
NOTES: The volume of water loss represents both real and apparent losses in fiscal year 2025 and was calculated using the AWWA worksheet.		

TABLE 4-12: WATER LOSS AUDIT REPORTING (DWR TABLE 4-5)

Public Water System Name	Public Water System ID #	Reporting Period	Submitted to DWR Water Loss Audit Program (yes/no)	WUEdata Link
Sheep Ranch Service Area (CCWD Sheep Ranch)	CA0510004	2020	Yes	AWWA-WAS5_CCWD-SheepRanch_FY21Audits.xls
		2021	Yes	AWWA-WAS5_CCWD-SheepRanch_FY22AuditsFinal.xls
		2022	Yes	FWAS v6.0_FY 22-23_Sheep Ranch_L1Validated.xlsx
		2023	Yes	FWAS v6.0 Sheep Ranch FY 23-24.xlsx
		2024	Yes	FWAS_V6.1 Sheep Ranch FY 24-25.xlsx
Jenny Lind Service Area (CCWD Jenny Lind)	CA0510006	2020	Yes	AWWA-WAS5_CCWD-JennyLind_FY21Audits.xls
		2021	Yes	AWWA-WAS5_CCWD-JennyLind_FY22AuditsFinal.xls
		2022	Yes	FWAS v6.0_FY 22-23_Jenny Lind_L1Validated.xlsx
		2023	Yes	FWAS v6.0 Jenny Lind FY 23-24.xlsx
		2024	Yes	FWAS_V6.1 Jenny Lind FY 24-25.xlsx
West Point Service Area	CA0510005	2020	Yes	AWWA-WAS5_CCWD-WestPoint_FY21Audits.xls

Public Water System Name	Public Water System ID #	Reporting Period	Submitted to DWR Water Loss Audit Program (yes/no)	WUEdata Link
(CCWD West Point)		2021	Yes	AWWA-WAS5_CCWD-WestPoint_FY22AuditsFinal.xls
		2022	Yes	FWAS v6.0_FY 22-23_West Point_L1Validated.xlsx
		2023	Yes	FWAS v6.0 West Point FY 23-24.xlsx
		2024	Yes	FWAS_V6.1 West Point 24-25(1).xlsx
Copper Cove/Copperopolis Service Areas (CCWD Copper Cove)	CA0510017	2020	Yes	AWWA-WAS5_CCWD-CopperCove_FY21Audits.xls
		2021	Yes	AWWA-WAS5_CCWD-CopperCove_FY22AuditsFinal.xls
		2022	Yes	FWAS v6.0_FY 22-23_Copper Cove_L1Validated.xlsx
		2023	Yes	FWAS v6.0 Copper Cove FY 23-24.xlsx
		2024	Yes	FWAS_V6.1 Copper Cove FY 24-25.xlsx
Ebbetts Pass Service Area (CCWD Ebbetts Pass Improvement District)	CA0510016	2020	Yes	AWWA-WAS5_CCWD-EbbettsPass_FY21Audits.xls
		2021	Yes	AWWA-WAS5_CCWD-EbbettsPass_FY22AuditsFinal.xls
		2022	Yes	FWAS v6.0_FY 22-23_Ebbetts Pass_L1Validated.xlsx
		2023	Yes	FWAS v6.0 Ebbetts Pass FY 23-24.xlsx
		2024	Yes	FWAS_V6.1 Ebbetts Pass FY 24-25.xlsx
Wallace Service Area (Wallace Community Services District)	CA0510019	2020	Yes	AWWA-WAS5_CCWD-Wallace_FY21Audits.xls
		2021	Yes	AWWA-WAS5_CCWD-Wallace_FY22AuditsFinal.xls
		2022	Yes	FWAS v6.0_FY 22-23_Wallace_L1Validated.xlsx
		2023	Yes	FWAS v6.0 Wallace FY 23-24.xlsx
		2024	Yes	FWAS_V6.1 Wallace FY 24-25.xlsx
NOTES: The 2024 Audit for West Point Service area is listed under an incorrect PWS (CA051005).				

2028 Water Loss Standards

Water Code Section 10631(d)(3)(C) requires retail suppliers to provide data demonstrating progress towards their State Water Board Water Loss Performance Standard (water loss standard) for each applicable public water system. Compliance with the water loss standard does not begin until 2028. These water loss standards are in units of either gallons per service connection per day (GPSCD) or gallons per mile of main per day (GPMD) and are composed of a real and apparent water loss standard. Water loss standards do not apply to public water systems with fewer than 200 connections, such as Wallace and Sheep Ranch.

The District is in the process of reviewing its calculated Water Loss Performance Standards as these original calculations may not accurately represent the system. This includes updating the average operating pressure to match the FY 2024-2025 system pressure and adjusting the infrastructure condition factor (ICF). The ICF is used to calculate the minimum amount of background leakage occurring in the distribution system and has a default value of 1.0, equivalent to a distribution system in new or near-new condition. Adjustments to the ICF are frequently approved to better represent aging infrastructure with higher background leakage. Systems similar to CCWD have adjusted ICF values that generally range from two to four but can be higher. Pending these adjustments, the 2028 water loss standards for the District could be adjusted significantly from the current values.

Table 4-13 and **Table 4-14** show the progress of each applicable public water system towards the currently approved real and apparent water loss standards, respectively. **Table 4-15** presents a set of potential adjusted 2028 Real Water Loss Standards per Unit per Day, which were calculated using the FY 2024-2025 system pressure and a sample assumed ICF of 2.5.

TABLE 4-13: PROGRESS TOWARDS 2028 WATER REAL LOSS STANDARDS (DWR TABLE 4-6)

Public Water System ID #	Public Water System Name	State Water Board Standard		Most Recent AWWA Water Loss Audit		Real Water Loss Per Unit Per Day
		2028 Real Water Loss Standard per Unit per Day[1]	Units for Real Water Loss	Number of Units[2] (Connections or Miles)	Volume of Total Real Loss[2] (AF)	
CA0510006	Jenny Lind Service Area (CCWD Jenny Lind)	21.9	GPSCD	3,864	437	101
CA0510016	Ebbetts Pass Service Area (CCWD Ebbetts Pass Improvement District)	22.2	GPSCD	5,989	391	58
CA0510017	Copper Cove/ Copperopolis Service Areas (CCWD Copper Cove)	24.9	GPSCD	2,754	377	122
CA0510005	West Point Service Area (CCWD West Point)	612.9	GPMD	19.5	33	1,511
The State Water Board's calculated Water Loss Standards are available online at 2028 Water Loss Standards.						

NOTES:
(1) CCWD is currently in the process of reviewing their water loss standards for reasonable adjustments; with reasonable adjustments, these values are anticipated to be significantly higher.
(2) Units of measure for water loss must be consistent with units reported in DWR Submittal Table 2-3.
(3) Sheep Ranch Service Area and Wallace Service Area have fewer than 200 connections; therefore the State Water Board did not calculate a Water Loss Standard for these systems, and they are excluded from this table.

TABLE 4-14: PROGRESS TOWARDS 2028 WATER APPARENT LOSS STANDARDS (DWR TABLE 4-6)

Public Water System ID #	Public Water System Name	Did the Water Board calculate a Water Loss Standard for this Public Water System?	State Water Board Standard		Most Recent AWWA Water Loss Audit		Apparent Water Loss Per Unit Per Day
			2028 Apparent Water Loss Standard per Unit per Day[1]	Units for Apparent Water Loss	Number of Connections	Volume of Total Apparent Loss[2] (AF)	
CA0510006	Jenny Lind Service Area (CCWD Jenny Lind)	Yes	7.4	GPSCD	3,864	22.3	5.1
CA0510016	Ebbetts Pass Service Area (CCWD Ebbetts Pass Improvement District)	Yes	3.3	GPSCD	5,989	13.6	2.0
CA0510017	Copper Cove/ Copperopolis Service Areas (CCWD Copper Cove)	Yes	8.1	GPSCD	2,754	15.5	5.0
CA0510005	West Point Service Area (CCWD West Point)	Yes	4.4	GPSCD	573	1.8	2.8
CA0510004	Sheep Ranch Service Area (CCWD Sheep Ranch)	No[3]	-	-	-	-	-
CA0510019	Wallace Service Area (Wallace Community Services District)	No[3]	-	-	-	-	-
The State Water Board's calculated Water Loss Standards are available online at 2028 Water Loss Standards.							

NOTES:
(1) CCWD is currently in the process of reviewing their water loss standards for reasonable adjustments; with reasonable adjustments, these values are anticipated to be significantly higher.
(2) Units of measure for water loss must be consistent with units reported in DWR Submittal Table 2-3.
(3) Sheep Ranch Service Area (CA0510004) and Wallace Service Area (CA0510019) have fewer than 200 connections; therefore the State Water Board did not calculate a Water Loss Standard for these systems, and their water losses are excluded from this table per DWR direction.

TABLE 4-15: POTENTIAL ADJUSTED 2028 WATER REAL LOSS STANDARDS

Public Water System ID #	Public Water System Name	Adjusted Real Loss Standard [1]	Units for Real Loss Standard
CA0510006	Jenny Lind Service Area (CCWD Jenny Lind)	61.6	GPSCD
CA0510016	Ebbetts Pass Service Area (CCWD Ebbetts Pass Improvement District)	71.2	GPSCD
CA0510017	Copper Cove/ Copperopolis Service Areas (CCWD Copper Cove)	49.3	GPSCD
CA0510005	West Point Service Area (CCWD West Point)	1,135	GPMD

NOTE: (1) These Adjusted Real Loss Standards are the basis of the real loss component of the distribution system water loss projections presented in this UWMP. However, they are a preliminary estimate and may not represent final values to be reviewed and approved by the SWRCB.

4.4 ESTIMATING FUTURE WATER SAVINGS

As indicated in **Table 4-17**, future water savings were not explicitly included in projections. However, because demand projections are based on an increase to existing demands, which include passive savings, passive savings are implicitly included in the demand projections presented throughout this UWMP.

4.5 WATER USE FOR LOWER INCOME HOUSEHOLDS

California Senate Bill (SB) 1087 and Government Code §65589.7 requires water supply agencies and wastewater collection and treatment districts to prioritize service connections and projects that help meet a community's fair housing laws. In this context, fair housing refers to the equitable treatment of CCWD's water and wastewater customers regardless of factors including protected class status and income level. As described in **Section 3.2.1**, several economically disadvantaged and underrepresented communities (including Tribes, collectively referred to as DACs) exist within the County and in the neighboring counties. A DAC is defined by the State as a community with an annual Median Household Income (MHI) that is less than 80 percent of the state-wide MHI, adjusted for family size (per California Public Resources Code §75005[g]). CCWD's service areas contain several recognized low-density DAC areas. The District often attempts to engage with these communities to better understand local conditions and water supply needs, especially during water shortage conditions.

According to data provided by the California Employment Development Department (EDD), in December 2025, the state-wide unemployment rate was 5.5 percent while Calaveras County had a 6.2 percent unemployment rate. The boom-and-bust cycle of mining, timber harvesting, and tourism has left many rural communities in the County perennially disadvantaged with MHI well below the state threshold. CCWD serves many of these communities, including West Point, Sheep Ranch, and portions of Ebbetts Pass.

In September 2019, Calaveras County adopted an updated Housing Element that estimated low- income housing needs through 2027. The total required new housing units in unincorporated areas of the County

are estimated at 1,096, of which 446 are to be affordable to lower-income households. Based on the population summary presented in **Section 3.4**, CCWD serves approximately 68 percent of the total population in the County. Using that ratio, CCWD would serve 303 new low-income households. Average District-wide water use per residential account is approximately 0.23 AF/connection/year, though this value varies across its service areas. Given this approximation of per-connection water use, the total demand for these low-income households is estimated to be 69 AFY in 2030, or 2.5 percent of total residential demand. Assuming this percentage of residential demand stays constant in the future, low-income household water demand will decrease to 61 AFY in 2050, as shown in **Table 4-16**.

TABLE 4-16: LOW-INCOME HOUSEHOLD WATER DEMAND (AFY)

	2025	2030	2035	2040	2045	2050
Low-Income Housing Water Demand (AFY)	69	70	69	67	66	64

As indicated in **Table 4-17**, low-income household demand is included in the demand projections presented in this chapter.

TABLE 4-17: INCLUSION IN WATER USE PROJECTIONS (DWR TABLE 4-3)

Component	Included?
Are Future Water Savings Included in Projections?	No
If "Yes" to above, state the section or page number where citations of the codes, ordinances, etc. utilized in the demand projections are found	N/A
Are Lower Income Residential Demands Included In Projections?	Yes
OPTIONAL: If the method for accounting Lower Income Residential Demands has been included, provide page number where this accounting can be found.	Section 4.5, page 4-24

CCWD will continue to monitor and engage with these customers. CCWD plans to engage with the Calaveras County Planning Commission and other in-County water suppliers to further support water supply related to lower income households.

4.6 CLIMATE CHANGE CONSIDERATIONS

As noted in the overview of climate change in **Section 3.3.2**, several climate change studies have described future conditions that are generally drier and warmer in the Sierra Nevada region, which could mean increases to indoor water demands for cooling needs and dramatic increases to outdoor water demands to account for higher landscape and crop evapotranspiration (ETo). Combined with a decrease in evening

cooling periods it seems likely that demands would generally trend upward as climate change conditions worsen.

California's Fourth Climate Change Assessment (California Natural Resources Agency, 2018) identifies the following specific impacts associated with climate change that would impact California, and likely ripple across the higher and lower elevation areas of the County:

- Increased average daily high temperatures of 4.4°F – 5.8°F by 2040 to 2069 based on a range of global greenhouse gas emissions scenarios.
- Increasing variability in California watershed precipitation, especially in the Sierra Nevada.
- More frequent and more intense droughts and heat waves, especially during summer months.

In the District's 2023 Local Hazard Mitigation Plan (LHMP), attached to the District's WSCP (**Appendix E)**, CCWD discusses the probable effects of climate change on each applicable hazard of concern. In general, District water demands vary with precipitation and temperature. Changes in precipitation and temperature due to climate change will likely result in increased evaporation leading to drier soils, increased ETo, and a longer growing season. Because the District's service area includes large portions of forested and agricultural areas, including grazing and wine grapes, climate change could have significant impacts on future projected agricultural demands – requiring more water to fulfill current production levels and plant needs. These impacts would likely include higher water use in the summer months and, as a result of potentially longer growing seasons, higher demands in months that are currently considered to be months with low irrigation demand. A study from 2016 by the Pacific Institute indicated that trending warmer temperatures could increase California's landscape water demand by 10 to 15 percent by the year 2050 (Climate Change Technical Committee (CCTC), 2007; Lutz, van Wagtendonk, & Franklin, 2010; and others). These effects, when combined, would result in higher annual agricultural and landscape irrigation demands.

In 2025, the District participated in the development of the Calaveras Watershed Resiliency Plan which was published in March 2026 (SEWD, 2026). This Plan involved the preparation of a climate change risk and vulnerability assessment which considered how climate change would impact resources in the Calaveras Watershed. Results showed that the most probable climate conditions for 2050 include a 2°C increase in average annual temperature. While average annual precipitation is expected to stay the same, extreme precipitations events are expected to be 114% of normal. These impacts are anticipated to result in an increase in ETo of 0.7 inches (+3.2%) and increase total water demand by 21,300 AFY (+3.8%). While these results are specific to the broader Calaveras Watershed, it can be assumed that the overall trend of increasing ETo and water demand would also be seen in the District's service areas.

The District has been successful in reducing demands with conservation measures, including implementation of various stages of various Demand Management Measures (DMMs, see **Chapter 9**). However, as demand hardens in the future, and because the District is heavily dependent on precipitation-driven supplies, the region may become more vulnerable to shortages. To account for a conservative estimate of the impact of climate change on water demands within the current planning horizon, a range of 10 to 15 percent increased outdoor water demands by 2050 has been applied assuming a linear trend, starting from zero percent in 2025 (see **Table 4-18** below). Outdoor water demands are assumed to include outdoor residential water use, potable landscape demands, raw water landscape demands, and agricultural demands. Climate change impacts on supply are further addressed in **Section 6.11**.

TABLE 4-18: PROJECTED TOTAL DEMANDS WITH CLIMATE CHANGE CONSIDERATIONS

	2030	2035	2040	2045	2050
2025 UWMP Projections (From Table 4-3)	6,375	6,294	6,203	6,094	5,980
10% increase in Landscape Demand by 2050	6,503	6,546	6,575	6,582	6,578
15% increase in Landscape Demand by 2050	6,698	6,939	7,167	7,372	7,565

NOTE: Outdoor demand is assumed to account for 48 percent of residential demand for all years, which is consistent with the results of an indoor-outdoor demand analysis for 2020 use. Total water demand includes recycled water demands, which are not assumed to be impacted by climate change.

5. BASELINES AND TARGETS

The Water Conservation Act of 2009 (SB X7-7) introduced elements of the California "20x2020 Water Conservation Plan" into the UWMP development process, which was designed to monitor and reduce the statewide per capita urban water use by 20 percent over an established baseline by the year 2020. SB X7-7 requires urban water suppliers to report in their UWMPs base daily per capita water use (baseline), an urban water use target, an interim urban water use target, and compliance daily per capita water use.

The California DWR developed methodologies and procedures for urban water suppliers to demonstrate compliance with SB X7-7 in their "Urban Water Management Plan Guidebook 2020" (2020 Guidebook). The District calculated its per capita baseline water use using a method similar in concept to the 'persons-per-connection' method described in the 2020 Guidebook. The District's 2020 demand target was determined using the 20 percent reduction criteria. These methods are described in detail in Chapter 5 of the District's 2020 UWMP.

Per the 2025 Guidebook, this chapter establishes the District's compliance with its 2020 Per Capita Demand Target.

5.1 COMPLIANCE WITH RETAIL SUPPLIER 2020 PER CAPITA DEMAND TARGET

The District met its 2020 Target of 192 GPCD in 2020, as shown in **Table 5-1**. The District's 2020 per capita demand was initially calculated to be 196 GPCD but, using the allowable economic adjustment, it was adjusted to 192 GPCD due to substantial economic changes in the District's service area. The SB X7-7 Verification Form and Compliance Form were attached to the District's 2020 UWMP.

TABLE 5-1: SB X7-7 2020 TARGET PROGRESS (DWR TABLE 5-1)

Was Supplier part of a merger or consolidation since 2020	Regional Alliance Target or Individual Target?	2020 Target	Actual 2020 GPCD	Did Supplier Achieve Targeted Reduction for 2020?	Only for suppliers that did not meet the Target in 2020	
					Actual 2025 GPCD	Did Supplier meet the 2020 Target in 2025?
No	Individual Target	192	192	Yes	NA	NA

6. SYSTEM SUPPLIES

Chapter 3 provides an overview of CCWD's service areas and water supply systems. Most of the District's water supplies originate from the District's surface water rights or agreements with other water suppliers. These surface water supplies are largely dictated by changes in the volume, nature, and timing of precipitation in its watersheds; primarily the Calaveras, Stanislaus, and Mokelumne Rivers. Only one of CCWD's service area relies on groundwater supplies, overlying eastern portions of the critically over-drafted Eastern San Joaquin Groundwater Subbasin (Subbasin). Given the annual variability and future uncertainties of these water supplies, taking measurable steps to improve their reliability to CCWD is vital to County-wide resources.

This UWMP has generally been divided into four sub-regions, capturing CCWD's service areas by water supply source, as described in **Section 3.2**. Some parts of the County are served by private wells, small community water systems, or other public or private agencies that serve towns and developed areas not covered by the District. As these systems are not part of CCWD's water supply system, they are not addressed in this UWMP.

6.1 WATER SUPPLY RELIABILITY

The Water Supply & Demand Assessment (WSDA) Procedures guidebook, included as Appendix C of the Water Shortage Contingency Plan (**Appendix E** of this UWMP), contains CCWD's latest definition of "water supply reliability" used to guide District planning and analyses. That definition is also provided below, current as of this UWMP update:

The measure of consistency by which available water supply resources will be greater than or equal to the demands for those water supplies over a defined time period(s).

CCWD was founded in 1946 to develop and secure adequate water supply sources to meet the County's anticipated needs. To this end, the District maintains, protects, and enhances its water resources and legal diversion and storage rights, and uses water supply reliability metrics to ensure the District is consistently able to fulfill its water supply obligations. In simple terms, water supply reliability is a measure of the District's ability to meet its demands with its available supplies. CCWD strives to make sure it can consistently supply 100 percent of its service areas' annual demands regardless of hydrologic condition (i.e., wet, dry).

This chapter describes the District's current and projected water supplies, including source, quantities, constraints, and water quality. Each source and associated tables are assessed by sub- region, consistent with how CCWD's reviews and manages its water resources. District-wide aggregated tables are provided in **Appendix A**, for reference.

6.2 PURCHASED WATER

CCWD maintains an agreement to purchase water supplies for one sub-region, as discussed below. In this context, purchased water supplies are those originating under a different agency's water rights and supplies, transferred to CCWD under a contractual agreement.

6.2.1 Sub-Region C - Mokelumne River

CCWD may purchase secondary water supplies from the Middle Fork Mokelumne River under an agreement with CPUD. These supplies originate from CPUD's water rights related to storage in and diversion from their Schaads Reservoir, located upstream of CCWD's West Point Service Area (West Point). This agreement allows for CCWD's purchase of up to 200 AFY for use in West Point, subject to Schaads Reservoir operations and coordination between CCWD and CPUD. CCWD maintains a pumping plant on the Middle Fork Mokelumne River used to convey any purchased water to West Point treatment facilities and/or the District's Bummerville Regulating Reservoir. CCWD has historically utilized this imported water supply during periods of curtailment or when water quality constraints impact District primary Bear Creek supplies for this service area, or to augment Bear Creek supplies during dry hydrologic conditions. As discussed in **Chapter 7**, projected demands for West Point are expected to exceed the water supplies available through the District's Bear Creek right. The District will look to maintain this CPUD agreement to ensure adequate supplies are available to West Point (e.g., if Bear Creek source experiences outage issue, then CCWD can utilize CPUD water).

6.3 GROUNDWATER

Owing to the County's variation in elevation from the relatively lower western portions, near the valley floor, to the upper elevation eastern portions towards Ebbetts Pass, there is significant variability in the accessibility and reliability of groundwater. For the majority of the County, groundwater can be reached through wells in fractured bedrock – not overlying defined groundwater subbasins. The lower elevations overlie the transitional areas towards the typical alluvial groundwater subbasins found in much of the Central Valley.

These groundwater resources, while important to local domestic and private well users, are only a small portion of CCWD's water supply portfolio and only served to Sub-Region D, as described below. While groundwater does not necessarily impact the District's broader water supply reliability objectives, beyond supplies needed for the Wallace Service Area (Wallace), CCWD must consider the many private well owners and other groundwater dependent water suppliers located in the County who may be impacted by groundwater issues (e.g., Valley Springs Public Utilities District and the Blue Lake Springs Mutual Water Company).

6.3.1 Sub-Region D – Groundwater

As suggested by the sub-region name, Sub-Region D contains the only CCWD service area utilizing groundwater in its water supply portfolio. A description of the groundwater resources for this sub- region is provided below:

Subbasin Description

This sub-region constitutes CCWD's portion of the San Joaquin Valley Groundwater Basin: Eastern San Joaquin Subbasin (Subbasin, per California Department of Water Resources (DWR) Bulletin 118, Groundwater Basin Number 5-22.01). The Subbasin is defined by the areal extent of unconsolidated to semi-consolidated sedimentary deposits generally bounded by the Mokelumne River on the north and northwest, San Joaquin River on the west, Stanislaus River on the south, and consolidated bedrock on the east. It is drained by the San Joaquin River and several of its major tributaries namely, the Calaveras, Stanislaus, and Mokelumne Rivers originating in watersheds including a majority of the County. DWR Bulletin 118 estimates

the total groundwater storage capacity of the Subbasin from a depth of 20 feet to the base of the groundwater basin to be about 42,400,000 AF; however, much of this volume is unusable at depths below practical well access and given severe water quality issues. Given historical over-reliance on groundwater supplies in the Subbasin, mainly to support large agricultural developments located west of the County, among other groundwater issues (e.g., water quality, land subsidence), DWR designated this Subbasin as critically over-drafted and in need of significant groundwater management to bring into long-term sustainable conditions. For CCWD, Wallace and parts of Jenny Lind Service Area (Jenny Lind) overlie the Subbasin as illustrated in **Figure 6-1**. More information on the hydrogeology of this subbasin can be found in the DWR Bulletin 118, Update 2003 under Basin Report 5_022_01 located at: https://data.cnra.ca.gov/dataset/bulletin-118-update-2003-basin-reports.

Groundwater Management

In 2015, the California Legislature passed SGMA, which tasked local agencies with managing their groundwater resources to improve existing conditions and to ensure long-term sustainable use.

DWR's initial review and prioritization of the state's groundwater basins under SGMA reaffirmed the earlier DWR Bulletin 118 status of the local Subbasin as critically over-drafted and in need of significant changes to groundwater management. Per SGMA, the Subbasin must therefore achieve sustainable conditions by 2040, as defined by the local managing agency(s).

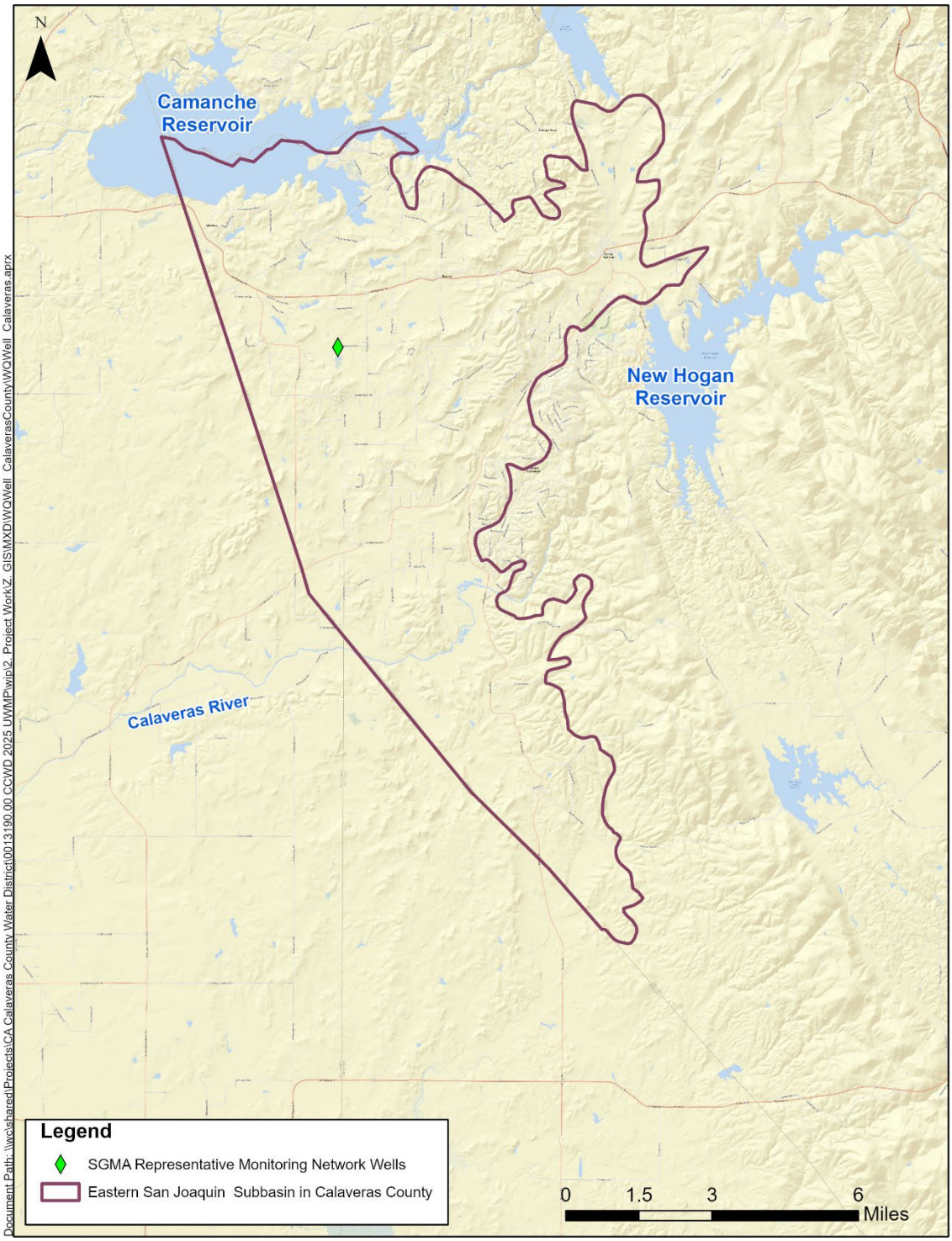
CCWD is a member of the Eastside San Joaquin Groundwater Sustainability Agency (Eastside GSA) and the Eastern San Joaquin Groundwater Authority (Authority), to manage the local Subbasin and broader coordinated Subbasin issues, respectively. Through these memberships, CCWD actively participated in the development of a GSP that was first published in January 2020 per the requirements of SGMA. The GSP was later revised and resubmitted to DWR in 2022 and approved in 2023. The GSP was most recently amended in 2024 to address remaining recommended corrective actions from DWR. CCWD actively participates in the ongoing implementation of the GSP.

The Eastside GSA is a partnership between CCWD, Stanislaus County, Calaveras County, and Rock Creek Water District to cover the areas of the Subbasin underlying parts of Calaveras and Stanislaus Counties.[1] The Authority is a separate legal entity comprised of the Eastside GSA members and 16 other GSAs, each managing their localized portions of the Subbasin in coordination to achieve Subbasin-wide sustainability targets.[2] The Eastside GSA and Authority look to benefit participants by facilitating cost sharing of technical studies (GSP development), seeking grant opportunities, ensure consistency between regional groundwater sustainability goals, and to leverage local technical expertise. More information on the Authority and its members can be found at: https://www.esjgroundwater.org/.

[1] A copy of the Eastside GSA MOU can be found at: https://ccwd.org/wp-content/uploads/2013/12/Eastside- GSA-JPA-Agreement.pdf.

[2] A copy of the Authority JPA between its members can be found at: http://www.esjgroundwater.org/Portals/0/assets/docs/Resources/Fully%20Executed%20Eastern%20San%20Joaquin%20Groundwater%20Authority%20JPA_02082017.pdf

FIGURE 6-1: EASTERN SAN JOAQUIN GROUNDWATER SUBBASIN IN CALAVERAS COUNTY



Overdraft Conditions

As noted above, historical use of groundwater from the Subbasin, primarily from agricultural irrigation demands but also from some domestic and municipal users, has resulted in a chronic decline of available groundwater in some areas of the Subbasin. DWR designated the Subbasin as critically over-drafted and under its highest priority ranking in DWR Bulletin 118 and reaffirmed this designation under SGMA.

Although CCWD is not a major user of groundwater in this Subbasin, to help achieve sustainable conditions the District is currently investigating opportunities to convert County groundwater users to surface water. This includes CCWD's customers in Wallace, and other groundwater-only or private landowners who may be interested in utilizing CCWD's more reliable surface water supplies.

The Authority's GSP provides strategies for how to reduce over-draft conditions in the Subbasin and identified projects for potential development that either replace groundwater use (offsets) or supplement groundwater supplies (recharge) to meet current and future water demands. The latest GSP analysis indicates that groundwater pumping offsets and/or recharge on the order of 95,000 AFY across the Subbasin may be required to achieve sustainability. The GSAs have committed to adopting a Demand Management Program (DM Program) by December 31, 2027 that is anticipated to define timelines for phased implementation of recharge, demand reduction, or demand offsets through a pro-rata basis to each GSA in relation to their contribution to the identified basin overdraft at the time the program is implemented.

Historical Groundwater Pumping

Table 6-1 below shows historical groundwater pumping from the Subbasin by CCWD. While the District has historically been able to fulfill its Wallace demands with groundwater, given the changes needed to Subbasin management under SGMA as contemplated by the GSP, this supply could become less reliable in terms of quality and quantity in the future. The District is investigating opportunities to supplement its groundwater use with local surface water, thereby offsetting CCWD's current reliance on a critically over-drafted Subbasin.

TABLE 6-1: GROUNDWATER VOLUME PUMPED (AFY) (DWR TABLE 6-1)

Groundwater Type	Potable or Non-Potable	Location or Basin Name	2021	2022	2023	2024	2025
Alluvial Basin	Potable	Eastern San Joaquin Groundwater Subbasin	68.8	69.5	68.6	63.8	65.0
		Total	68.8	69.5	68.6	63.8	65.0

6.5 SURFACE WATER

The District obtains the vast majority of its water supplies from three watersheds that drain along the western slope of the Sierra Nevada towards the San Joaquin Valley: 1) the Calaveras River Watershed, 2) the Stanislaus River Watershed, and 3) the Mokelumne River Watershed, serving Sub-Regions A, B, and C as summarized in **Table 6-2**. CCWD maintains various water storage and diversion rights to these systems, including both pre- 1914 water rights, and post-1914 appropriative water storage and diversion rights administered by the SWRCB. CCWD monitors annual variability of these rivers using climate data and the Calaveras County Water Resources Data Packet (Data Packet) information tool, described in **Section 3.3.1**. No surface water is used in Sub-Region D.

TABLE 6-2: CCWD SERVICE AREA SURFACE WATER SOURCE

Service Area	Sub- Region	Supply River Watershed
Jenny Lind Service Area	A	Calaveras River
Sheep Ranch Service Area	A	Calaveras River
Copper Cove/Copperopolis Service Areas	B	Stanislaus River
Ebbetts Pass Service Area	B	Stanislaus River
West Point Service Area	C	Mokelumne River

Each surface water supply source is discussed in the sub-sections below. Many factors beyond hydrologic variability, such as regulatory constraints on water rights use, contract limitations, and infrastructure restrictions can limit actual supply availability and reliability. The District actively collaborates with stakeholders to evaluate opportunities to improve water supply reliability, identify opportunities for environmental benefits, support conjunctive use efforts, and provide drought protection within its service areas.

6.5.1 Sub-Region A - Calaveras River

The Calaveras River Watershed is located entirely within the County boundary. The headwaters effectively originate in County mid-level elevations, in a band across the County from West Point to just north of Arnold, and comprised of tributaries including Big Trees Creek, Calaveritas Creek, Esperanza Creek, Jesus Maria Creek, Murray Creek, San Antonio Creek, and the North and South Forks of the Calaveras River. The Calaveras River is a unique river for the Sierra Nevada Foothills region since the watershed originates at lower elevations, it generally contains little snowpack runoff; therefore, the river flow is mostly rain-dependent, which gives it an annual runoff pattern much different than other snowpack-based rivers in the region. The watershed above New Hogan Reservoir (New Hogan) is approximately 400 square miles in area,

which ranges from elevations of approximately 5,000 feet above mean sea level (MSL) at the top of the Summit Level Ridge, down to near sea level at its confluence with the Lower San Joaquin River near Stockton.

The primary water storage feature on the Calaveras River is New Hogan, built in 1963 by the U.S. Army Corps of Engineers (USACE) primarily for flood control and by the Stockton East Water District (SEWD), on behalf of itself and CCWD, for water conservation. New Hogan's capacity is 317,000 AF and the ground elevation is 550 feet MSL. The Upper Calaveras River flows from the tributaries into New Hogan, and water released from the reservoir flows westerly in the Lower Calaveras River, out of the County and into the San Joaquin Valley. The U.S. Bureau of Reclamation (Reclamation) holds the water rights to New Hogan water supply while SEWD acts as the water master which includes CCWD's water supplies for the Jenny Lind Service Area and select irrigators. The District owns a hydropower project at New Hogan, the New Hogan Power Project (New Hogan Project, FERC Project No. 2903), capable of generating 3.4 megawatts (MW) at New Hogan Dam; however, this project is currently operated by Modesto Irrigation District (MID) using CCWD's hydropower water rights on the Calaveras River.

The District also owns and maintains White Pines Lake on San Antonio and Big Trees Creeks, near Arnold along the Highway 4 Corridor. White Pines has a storage capacity around 250 AF, used to supplement downstream San Antonio Creek flows and for recreation at the lake. Recreational benefits are actively managed by the White Pines Park Committee, while the District manages operational releases and dam infrastructure.

Calaveras River Rights and Permits

The District owns and reports on the following water rights for this sub-region:

- SWRCB Permit 015626 (granted 2/24/1966) for non-consumptive recreational storage on San Antonio Creek for Blagen Mill Pond, upstream of White Pines, tributary to the Calaveras River.
- SWRCB Permit 018458 (granted 1/15/1979) for non-consumptive hydropower diversion on the Calaveras River for the New Hogan Project.

Additionally, the District maintains the following diversion and use claims:

- Statement 000249 (pre-1914 claim) for consumptive municipal diversion and use on Big Trees Creek for the Sheep Ranch Service Area (Sheep Ranch), diverted on San Antonio Creek tributary to the Calaveras River.
- Statement 022712 (riparian claim) for non-consumptive hydropower diversion on the Calaveras River for the New Hogan Project.

The District also obtains surface water from the Calaveras River at New Hogan pursuant to agreements with the SEWD, East San Joaquin Water Conservation District (ESJWCD), and Reclamation (Contract No. 14-06-200-5057A, executed August 25, 1970), and separately with SEWD and ESJWCD regarding operations of inter-related facilities (also executed August 25, 1970, per CCWD Resolution No. 1254). These agreements allocate 43.50 percent of the New Hogan Project "conservation storage" yield to CCWD, typically estimated at 30,928 AFY based on average long-term estimated yield, plus 350 AFY to satisfy in-County downstream riparian demands along the Lower Calaveras River, for a total of 31,278 AFY made available. Reclamation holds the SWRCB Permit 014434 (granted 7/22/1964) for consumptive use storage in New Hogan on behalf

of CCWD, SEWD, and ESJWCD. Note this agreement is not a Reclamation Central Valley Project (CVP) contract, and as such CCWD is not a CVP contractor agency.

The in-County riparian agricultural users located downstream of New Hogan divert water pursuant to their settlement rights with USACE following construction of New Hogan, and they pay the District for total water diverted. CCWD also delivers raw water from New Hogan and recycled water from its La Contenta Wastewater Treatment Plant to the La Contenta Golf Course for irrigation.

6.5.2 Sub-Region B - Stanislaus River

The Stanislaus River Watershed is located along the County's southern boundary, with its headwaters originating in the higher elevations of Alpine, Tuolumne, and Calaveras Counties. The North Fork of the Stanislaus River, and in the Upper Stanislaus River following its confluence with the Middle and South Forks near Arnold, forms the Calaveras-Tuolumne County boundary. There are several tributary creeks and streams which form the Stanislaus River headwaters in the higher elevations of. Ebbetts and Sonora Passes. Since the river originates in higher elevations, it consists primarily of snowpack runoff during late-winter and spring months and is therefore highly variable depending on the hydrologic year type. The roughly 1,075 square-mile Stanislaus River Watershed ranges in elevation from 10,000 feet MSL in the Sierra Nevada Mountains to approximately 25 feet MSL elevation at its confluence with the Lower San Joaquin River near Modesto.

The Stanislaus River Watershed has been dramatically altered over the 20th century, with several reservoirs, diversions, and hydropower facilities having been developed to benefit municipal and agricultural demands in the Mountain Counties and Central Valley. The primary water storage feature on the Stanislaus River is New Melones Reservoir (New Melones), completed in 1978 by USACE for flood control and Reclamation for hydropower and water supply storage. New Melones' capacity is 2,400,000 AF, and the ground elevation is 1,086 feet MSL. The Upper Stanislaus River flows from the tributaries into New Melones, and water released from the reservoir flows westerly in the Lower Stanislaus River, out of the County and into the San Joaquin Valley. Reclamation manages water supply and hydropower operations from New Melones to benefit the CVP and in accordance with various agreements with downstream users. CCWD does not have a storage allocation nor does it receive water supply directly from New Melones. Other key water storage facilities on the Stanislaus River not owned or operated by CCWD include the following:

- Lake Alpine, Union and Utica Reservoirs, owned and operated by NCPA, a roughly 4,200 AF reservoir and two adjacent 5,700 AF combined reservoirs, respectively, located upstream of CCWD's Ebbetts Pass Service Area diversions. These reservoirs are used by NCPA for hydropower, environmental in-stream requirements, and recreational purposes benefitting the North Fork Stanislaus Hydroelectric Development Project (North Fork Project, FERC Project No. 2409) downstream.
- Lake Tulloch (Tulloch), a 67,000 AF reservoir owned by the Tri-Dam Project, located immediately downstream of New Melones and operated in conjunction mostly to satisfy San Joaquin Valley consumptive and for hydropower and local recreational uses. CCWD maintains water supply intake facilities at Tulloch to meet water supply demands in Copper Cove/Copperopolis; however, the District does not have a storage allocation in Tulloch – these Copper Cove/Copperopolis water supplies originate upstream of New Melones and Tulloch but are rediverted at this point.
    - The Saddle Creek Golf Course (Saddle Creek), now called The Golf Club at Copper Valley, located near Copperopolis, diverts some raw water supplies via Tulloch for irrigation purposes from CCWD's water made available under its North Fork Stanislaus River water rights. Saddle

Creek pays CCWD for this Tulloch use as a component of their primary water supply coming from CCWD's Copper Cove WWTP – CCWD maintains a Title 22 permit to deliver recycled water to Saddle Creek.

- Salt Springs Valley Reservoir (SSV), a 10,900 AF reservoir located in the County along Rock Creek, northwest of Copper Cove/Copperopolis. SSV is used to support agricultural demands in the downstream Rock Creek Irrigation District in Stanislaus County, and for local recreational uses. Rock Creek is tributary to the Stanislaus River, but this confluence is located in the San Joaquin Valley outside of the County.

The District owns the North Fork Stanislaus Hydroelectric Development Project (North Fork Project, FERC Project No. 2409), capable of generating 253 MW of power along the North Fork of the Stanislaus River, although project facilities are currently operated by NCPA. This project was conceptualized by CCWD in the 1940s to provide water storage facilities, with hydropower facilities added as a component of the project to provide revenue to fund water development. Construction began in 1985 and facilities were placed on-line in 1990. Key features of this project include the New Spicer Reservoir, two diversion dams and the Collierville Tunnel extending parallel to the Stanislaus River, the McKay's Point Reservoir (McKays), and the Collierville Powerhouse at the Stanislaus River entrance to New Melones. CCWD holds the current Federal Regulatory Energy Commission (FERC) license, set to expire January 2033. Build-out of the North Fork Project combines water usage and hydropower generation in an environmentally-sound manner, while also providing recreation and water supply in local facilities.

The District's 190,000 AF New Spicer Reservoir is the primary storage component of CCWD's water supplies for this sub-region. NCPA manages the releases from New Spicer for North Fork Project inflows and hydropower at New Spicer Dam, but they are required to make this water available to CCWD for its local municipal demands under various agreements. CCWD also owns the 1,928 AF McKays Reservoir located at the intake of the Collierville Tunnel from the Stanislaus River. McKays Reservoir is used to manage flows into the tunnel for hydropower generation at the downstream Collierville Powerhouse. CCWD's Ebbetts Pass service area receives its surface water through the Collierville Tunnel Tap, a direct diversion from the Collierville Tunnel to CCWD's Hunters Water Treatment Plant. The Tunnel Tap also diverts water for the Utica Water & Power Authority (UWPA), which delivers water to Murphys and Angels Camp for residential, agricultural, and hydroelectric uses.

CCWD North Fork Stanislaus River Rights and Permits

The District owns and reports on the following water rights for this sub-region:

- SWRCB Permit 014769 (granted 1/25/1949) for consumptive diversion on the North Fork Stanislaus River at McKays, for Ebbetts Pass.

- SWRCB Permit 014770 (granted 5/13/1949) for consumptive municipal storage on the North Fork Stanislaus River for Ebbetts Pass, subject to completion of certain project works as defined in the permit.

- SWRCB Permit 015013 (granted 3/18/1966) for consumptive storage on Highland Creek in New Spicer, and storage on the North Fork Stanislaus River in McKays, both for Ebbetts Pass and Copper Cove/Copperopolis.

- SWRCB Permit 015015 (granted 1/25/1949) for consumptive diversion on the North Fork Stanislaus River at McKays and Tulloch for Ebbetts Pass and Copper Cove/Copperopolis.
- SWRCB Permit 015016 (granted 1/25/1949) for non-consumptive hydropower storage on Highland Creek in New Spicer, and diversion and storage on the North Fork Stanislaus River in McKays, both for the North Fork Project.
- SWRCB Permit 015017 (granted 1/25/1949) for consumptive municipal diversion and use on the North Fork Stanislaus River for Ebbetts Pass.
- SWRCB Permit 015018 (granted 5/13/1949) for consumptive municipal storage on Highland Creek in New Spicer for Ebbetts Pass and Copper Cove/Copperopolis, tributary to the Stanislaus River.
- SWRCB Permit 015019 (granted 5/13/1949) for non-consumptive hydropower storage on Highland Creek in New Spicer for the North Fork Project, tributary to the Stanislaus River.
- SWRCB Permit 015020 (granted 5/13/1949) for non-consumptive hydropower storage on both Highland Creek and the North Fork Stanislaus River for the North Fork Project.
- SWRCB Permit 015021 (granted 5/20/1959) for non-consumptive hydropower diversion and storage on both Beaver Creek and the North Fork Stanislaus River for the North Fork Project.
- SWRCB Permit 015023 (granted 12/23/1959) non-consumptive hydropower diversion on Beaver Creek, and diversion and storage on the North Fork Stanislaus River, both for the North Fork Project.
- SWRCB Permit 015024 (granted 12/23/1959) for consumptive storage on both Highland Creek and the North Fork Stanislaus River for Ebbetts Pass and Copper Cove/Copperopolis.
- SWRCB Permit 001303 (granted 8/4/1915), shared water right holder with NCPA, for non-consumptive hydropower storage on Highland Creek in New Spicer for the North Fork Project, tributary to the Stanislaus River.

Pursuant to the terms and conditions of these water right permits, and contractual arrangements with NCPA, the District can divert up to 8,000 AFY to supply Ebbetts Pass from the Collierville Tunnel Tap, and up to 6,000 AFY from Tulloch for Copper Cove/Copperopolis. Some or all of the diversion and storage amounts on these rights can be increased if CCWD files a change petition with the SWRCB and demonstrates the need for increased supplies within its service areas.

Additionally, the District maintains the following diversion and use claims:

- Statement 000998 (pre-1914 claim) owned by both NCPA and UWPA for both consumptive and non-consumptive hydropower diversion and use on Mill Creek, Beaver Creek, and the North Fork Stanislaus River, subject to a beneficial use reservation by CCWD to utilize flows downstream of Collierville PH and UWPA's Angels Camp facilities.
- Statements 000999, 001000, and 001001 (pre-1914 claim) owned by UWPA for both consumptive and non-consumptive hydropower diversion and use on Angels Creek, tributary to the Stanislaus River, subject to a beneficial use reservation by CCWD to utilize flows downstream UWPA Angels Camp facilities.

- Statement 010401 (pre-1914 claim) owned by UWPA for both consumptive and non- consumptive hydropower diversion and use on Mill Creek, tributary to the Stanislaus River, subject to a beneficial use reservation by CCWD to utilize flows downstream UWPA Angels Camp facilities.

The District entered into a series of agreements with the NCPA as it was developing the North Fork Project in the 1980s, related to utilization of the underlying hydropower water rights, power purchasing arrangements, and the development of project facilities. During this time, CCWD and NCPA worked with FERC, USACE, U.S. Fish & Wildlife Service, U.S. Forest Service, Reclamation, California Department of Fish and Wildlife, DWR, and various other federal, state and county agencies to create a multipurpose project recognizing several environmental, recreational, and operational considerations for the Stanislaus River Watershed.

6.5.3 Sub-Region C - Mokelumne River

The Mokelumne River Watershed is located along the County's northern boundary, with its headwaters originating in the higher elevations of Calaveras, Alpine, and Amador Counties. The North Fork of the Mokelumne River, and in the Upper Mokelumne River following its confluence with the Middle and South Forks near Mokelumne Hill, forms the Calaveras-Amador County boundary. There are several tributary creeks and streams which form the Mokelumne River, mostly forming around the Highland Lakes, and Upper and Lower Blue Lakes, in the higher elevations of Ebbetts and Carson Passes. Since the river originates in higher elevations, it consists primarily of snowpack runoff during late-winter and spring months and is therefore highly variable depending on the hydrologic year type. The roughly 2,143 square-mile Mokelumne River Watershed ranges in elevation from 10,000 feet MSL in the Sierra Nevada Mountains to less than 20 feet MSL elevation at its confluence directly with the Sacramento-San Joaquin River Delta (Bay Delta) region along with the Cosumnes River to the north.

The Mokelumne River Watershed has also been dramatically altered over the 20th century, with several reservoirs, diversions, and hydropower facilities having been developed mostly to benefit water supplies for EBMUD and Amador Water Agency (AWA), and for power generation by PG&E. The primary water storage features on the Mokelumne River are Pardee and Camanche Reservoirs, constructed in 1929 and 1963, respectively, as the major storage components of EBMUD's Mokelumne Aqueduct System, which conveys water to their service areas in the San Francisco Bay Area. Pardee Reservoir is operated for water supply and Camanche Reservoir is generally operated for water supply, flood control, and instream requirements. The Upper Mokelumne River flows from the tributaries into Pardee Reservoir, and water released from the reservoir flows into Camanche Reservoir immediately downstream, the westerly in the Lower Mokelumne River, out of the County and into the San Joaquin Valley towards the Bay Delta. CCWD does not have a storage allocation nor receives water supply directly from any of EBMUD's facilities. Given the size of these reservoirs in the watershed the District coordinates with EBMUD frequently regarding Mokelumne River Watershed issues. Other key water storage facilities on the Mokelumne River not owned or operated by CCWD include the following:

- Salt Springs Reservoir (Salt Springs) owned and operated by PG&E; a 142,000 AF reservoir located on the North Fork of Mokelumne River upstream of West Point in the Mokelumne Wilderness area. Salt Springs is a storage component of PG&E's Mokelumne River Hydroelectric Project (Mokelumne Project, FERC Project No. 137), operated with the Bear River Reservoir on the Bear River tributary via a diversion tunnel, for non-consumptive hydropower generation. Other PG&E Mokelumne Project facilities include several tributary storage reservoirs and powerhouses, and the Tiger Creek Conduit

and Electra Tunnels extending parallel to the North Fork of Mokelumne River, all operated to support hydropower generation in the Upper Mokelumne River.

- Schaads Reservoir (Schaads) is a roughly 1,700 AF reservoir owned and operated by the CPUD on the Middle Fork of Mokelumne River. Schaads is used to support their municipal consumptive water demands in parts of the County not covered by the District, as well as for some hydropower generation at Schaads Dam. CCWD receives some water supplies for West Point through a water purchase agreement with CPUD using Schaads, as discussed in **Section 6.6.1**.

A concrete box diversion facility on Bear Creek (Bear Creek Diversion), a tributary to the Middle Fork Mokelumne River, is CCWD's primary supply source for West Point. The Bear Creek Diversion is located approximately one mile northeast of the community of Bummerville (near West Point). From there, a roughly two-mile diversion pipeline delivers raw water to the roughly 150 AF Bummerville Regulating Reservoir (Bummerville Reservoir). CCWD owns and operates the Bummerville Reservoir for inflows to the West Point Water Treatment Plant.

The District also owns and maintains Wilson Lake on Bear Creek, upstream of the Bear Creek Diversion. Wilson Lake has a nominal capacity of around 25 AF, but it is generally not operated for water supply benefits to the downstream Bear Creek Diversion to West Point. .

Mokelumne River Rights and Permits

The District owns and reports on the following water rights for this sub-region:

- SWRCB Permit 015452 (granted 7/13/1965) for consumptive diversion and storage on Bear Creek, using the Bummerville Reservoir for use in West Point, a tributary to the Middle Fork Mokelumne River.

The State of California maintains a special type of post-1914 appropriate water right on the Mokelumne River, intended to secure a priority date for future developments in Calaveras and Amador Counties (per California Water Code §10500 et seq., called "State Filed Applications"). Given these State Filed Applications, CCWD has the opportunity to secure additional permitted surface water right(s) which would be critical to future in-County developments along the Mokelumne River, subject to review and assignment by the SWRCB. The District is refining its sub-region supply projections and is investigating opportunities to improve supply reliability via projects which could look to utilize these State Filed Applications in the future.

In 2018, California Legislature designated some 37 miles of the Mokelumne River as "Wild & Scenic", located just downstream of Salt Springs to an in-stream location near Highway 49 and Mokelumne Hill. This designation was made after a study was conducted by the California Natural Resources Agency (CNRA) finding that it was free-flowing and possessed extraordinary scenic and recreational values. It protects this stretch of river from future developments which could impact the river's natural flow and values. CCWD, AWA, and EBMUD generally supported this designation after special language was incorporated in the state designation to ensure it did not affect existing water rights and facilities, and that future additional rights to water could still be acquired (e.g., State Filed Applications). CCWD recognizes the extraordinary value of the Mokelumne River and actively coordinates with regional partners, stakeholders, and interested parties to balance water supply needs with adequate river protections. For instance, the District participates in the Upper Mokelumne River Watershed Authority (UMRWA), an organization which focuses on many of these issues and overall watershed health.

6.6 STORMWATER

Stormwater runoff is comprised of precipitation, including rain, sleet, and melting snow, that generally runs off pervious and impervious surfaces in an uncontrolled manner. There can be significant rainfall within the County, but it is highly variable with hydrologic year type and location (elevation), and very seasonal, with most precipitation occurring in higher elevations between November and May and very little occurring from late spring to fall. **Section 3.3** further describes the County's climate conditions specific to the CCWD service areas.

Over the last 5-10 years, there has been a statewide emphasis on "Flood-Managed Aquifer Recharge" (Flood-MAR) efforts that investigate opportunities to use stormwater runoff in conjunctive use and recharge to manage groundwater resources. Flood-MAR can be implemented at multiple scales, from individual landowners diverting stormwater with existing infrastructure, to using extensive detention/recharge areas and modernizing stormwater capture operations. The variability of CCWD's land conditions and elevations between its service areas makes potential Flood-MAR projects difficult without significant infrastructure developments. Additionally, there are several water rights questions and difficulties related to other water supplier operations in the County, and projects in lands currently under the U.S. Forest Service or U.S. Bureau of Land Management. CCWD will continue to monitor statewide Flood-MAR efforts to investigate opportunities which may benefit County water supply reliability and/or decrease stormwater runoff damage vulnerabilities – note however, that as an agency CCWD does not have stormwater management responsibilities or jurisdiction separate of water supply and wastewater considerations.

Currently, stormwater capture is not considered an active component of CCWD's water supply portfolio. To the extent stormwater flows contribute to the surface waters utilized by the District it is largely incidental and beyond the scope of this UWMP to delineate.

6.7 WASTEWATER

The District maintains 12 wastewater service areas (referred to as "wastewater areas") located throughout the County, which do not necessarily coincide with the six water service areas referenced throughout this UWMP. More information on the general configuration of the District is provided in **Section 3.2.** Since all of the wastewater areas are geographically independent from each other, they are presented in this section as separate systems categorized under the four aforementioned sub-regions corresponding to their locations, as follows:

Sub-Region A: Calaveras River

1. La Contenta Wastewater Treatment Plant (WWTP) (La Contenta Wastewater Area); some customer overlap with Jenny Lind.

Sub-Region B: Stanislaus River

2. Copper Cove WWTP and Reclamation Plant (Copper Cove Wastewater Area); mostly customer overlap with Copper Cove/Copperopolis.
3. Forest Meadows WWTP (Forest Meadows Wastewater Area); some customer overlap with Ebbetts Pass.
4. Arnold WWTP (Arnold Wastewater Area); some customer overlap with Ebbetts Pass.

5. Douglas Flat/Vallecito Wastewater Treatment Facility (WWTF) (Douglas Flat/Vallecito Wastewater Area); no overlapping or nearby CCWD water service area.

6. Mountain Retreat/Sequoia Woods WWTP (Mountain Retreat Wastewater Area); some customer overlap with Ebbetts Pass, mostly in the Blue Lake Springs Mutual Water Company (BLSMWC) service area, a wholesale customer of CCWD.

7. Indian Rock Vineyard WWTP (Indian Rock Wastewater Area); no overlapping or nearby CCWD water service area.

8. Country Houses WWTP (Country Houses Wastewater Area); some customer overlap with Ebbetts Pass near Dorrington and Camp Connell.

Sub-Region C: Mokelumne River

9. West Point WWTP (West Point Wastewater Area); some customer overlap with West Point.

10. Wilseyville Camp WWTP (Wilseyville Wastewater Area); some customer overlap with West Point.

Sub-Region D: Groundwater

11. Wallace Lake Estates WWTP (Wallace Lake Wastewater Area); some customer overlap with Wallace Service Area.

12. Southworth WWTP (Southworth Wastewater Area); no overlapping or nearby CCWD water service area.

In total, these 12 wastewater treatment facilities serve approximately 5,013 connections (as of 2025). A few of the wastewater areas are relatively small and contain less than 30 total customers, relying on CCWD operations staff who primarily work at larger facilities nearby.

The entirety of CCWD's wastewater collection and transport systems consists of over 125 miles of 6- to 10-inch diameter lines, 44 pump stations, and supplemental facilities for emergency power generation and odor control. WWTP effluent produced by these treatment facilities is generally disposed of by two principal means: 1) subsurface infiltration galleries (known as "leach fields"), and/or 2) spray irrigation disposal (in "spray fields"). Prior to use in leach fields or spray fields, wastewater is typically collected in storage ponds with additional outdoor treatment processes. All leach field, spray field, and storage pond infrastructure are heavily regulated and monitored by SWRCB to ensure no cross-contamination with nearby raw water supplies or environmental resources.

Four of the WWTPs contain facilities which treat wastewater to sufficient standards for recycled water use, primarily for nearby golf course and landscape irrigation. No recycled water is used in CCWD's service areas to supply drinking water to customers. The District is investigating opportunities to expand its use of recycled water for additional landscape and agricultural irrigation, as allowed under permitting. The following sections describe wastewater efforts for each sub-region and wastewater area.

6.7.1 Sub-Region A – Calaveras River

Figure 6-2 shows the boundaries of the wastewater areas in this sub-region and the location of the WWTP. **Table 6-3** shows a summary of the wastewater collected and treated in Sub- Region A as well as the

responsible agencies. Wastewater treatment and disposal volumes for the service area are shown in **Table 6-4.**

FIGURE 6-2: SUB-REGION A – WASTEWATER SERVICE AREA AND FACILITIES

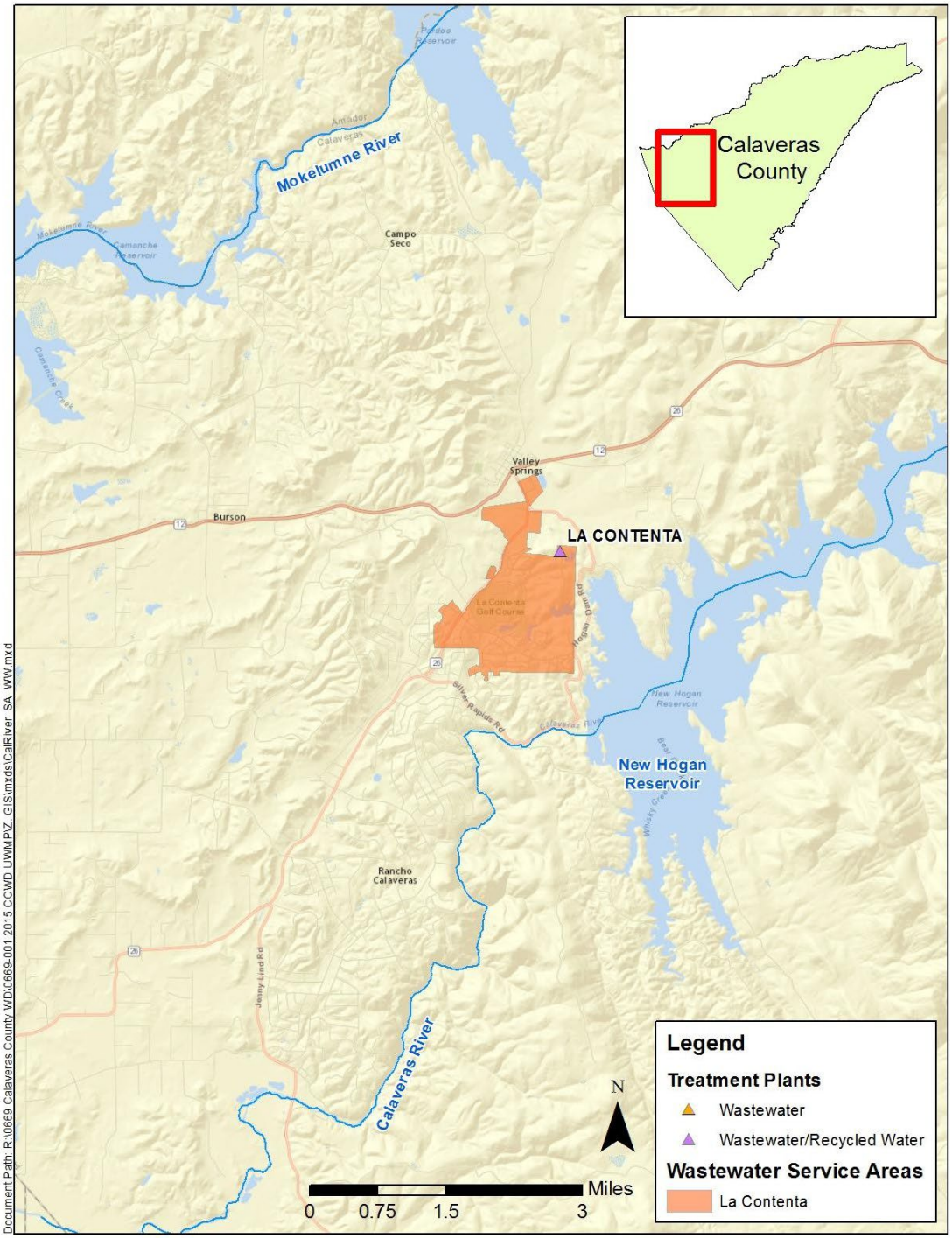


TABLE 6-3: SUB-REGION A WASTEWATER COLLECTED WITHIN SERVICE AREA IN 2025 (DWR TABLE 6-2)

Wastewater Collection			Recipient of Collected Wastewater	
Name of Wastewater Collection Agency	Wastewater Volume Metered or Estimated?	Volume of Wastewater Collected from UWMP Service Area 2025 (AFY)	Name of WWTP and Place ID Number	Is WWTP Located Within UWMP Area?
CCWD	Metered	193	La Contenta WWT & RF, Place ID 235798	Yes
Total Wastewater Collected from Service Area in 2025		193		

TABLE 6-4: SUB-REGION A WASTEWATER TREATMENT AND DISCHARGE WITHIN SERVICE AREA IN 2025 (AFY) (DWR TABLE 6-3)

WWTP Name and Place ID Number	Does This Plant Treat Wastewater Generated Outside the UWMP Service Area?	2025 Volume of Wastewater Received from UWMP Service Area	Total 2025 Volume of Water Treated	2025 Outcomes of Treated Wastewater										
				Water Recycled Within UWMP Service Area		Water Recycled Outside of UWMP Service Area		Effluent Discharge that is not a Permitted Recycled Water Use		Required Discharge for Instream Flow		Delivered to Another Entity for Additional Treatment		
				Treatment Level	Volume	Treatment Level	Volume	Treatment Level	Volume	Treatment Level	Volume	Treatment Level	Volume	Name of other entity
La Contenta WWT & RF, Place ID 235798[1]	No	193	193	Tertiary	135	N/A	0	Tertiary	58	N/A	0	N/A	0	N/A
TOTAL		**193**	**193**		**135**		**0**		**58**		**0**		**0**	

La Contenta Wastewater Area

The La Contenta Wastewater Area is located in the northernmost portion of Jenny Lind Service Area. The Assessment District 604 (AD604) that established this area was formed in 1991 and generally includes the areas directly adjacent to the east and north sides of the La Contenta Golf Course and surrounding neighborhood developments in Valley Springs. The system currently serves 1,046 connections and contains approximately 30 miles of pipeline. The remaining portion of the wastewater generated in the Jenny Lind service area is served by private septic systems.

This WWTP consists of extended aeration activated sludge, clarification, sand filtration, and disinfection to Title 22 tertiary treatment standards. In 2008, CCWD added an ultraviolet (UV) system to replace chlorine for disinfection purposes. The treated effluent is stored in ponds and currently permitted for land disposal only. The District does provide recycled water as the primary supply for golf course landscape irrigation at the La Contenta Golf Course. When needed, the District may also deliver raw water to the golf course from New Hogan, as described in **Section 6.4.1**.

6.7.2 Sub-Region B – Stanislaus River

Figure 6-3 shows the boundaries of the wastewater areas in this sub-region and the locations of the WWTPs. **Table 6-5** shows a summary of the wastewater collected and treated in Sub-Region B, as well as the responsible agencies. Wastewater treatment and disposal volumes within each service area are shown in **Table 6-6**.

Copper Cove Wastewater Area

This area's system consists of two separate WWTP facilities, co-located on the same site, effectively acting as a combined services facility. The combined system serves 1,969 connections and contains roughly 25 miles of pipeline.

The first WWTP includes primary aeration ponds. In 2000, CCWD constructed the tertiary treatment reclamation plant adjacent to the existing WWTP. The District has since added a UV system to this facility to replace chlorine additives for disinfection purposes. The reclamation plant takes secondary treated effluent and provides tertiary treated recycled water to The Golf Club at Copper Valley, located nearby. The District can also send tertiary treated wastewater to an on-site spray field, if necessary. All recycled water is regularly monitored to verify compliance with Title 22 restrictions to ensure suitability for golf course irrigation. When needed, this golf course may also draw on raw water intake from Tulloch, as described in **Section 6.4.2.**

FIGURE 6-3: SUB-REGION B – WASTEWATER SERVICE AREAS AND FACILITIES

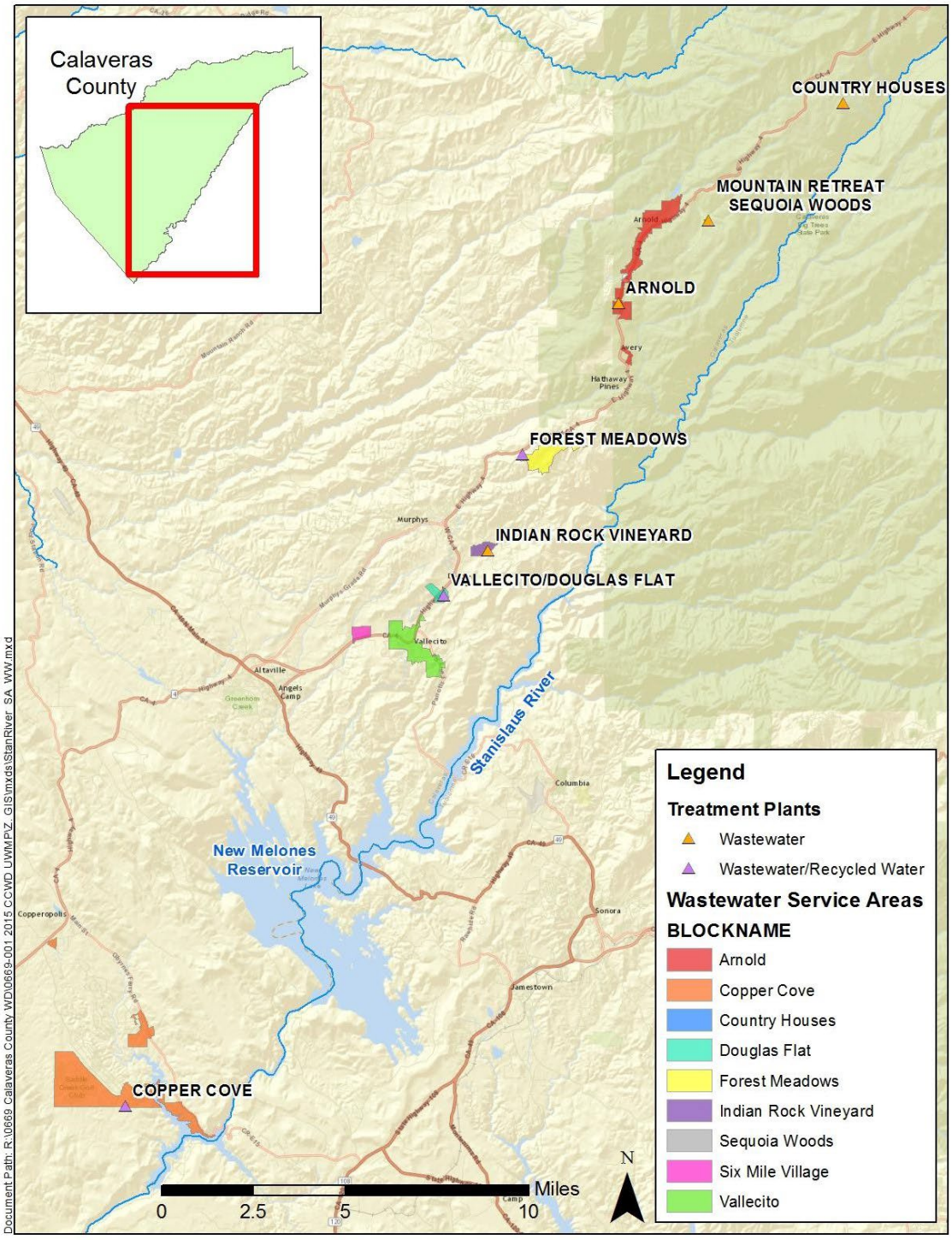


TABLE 6-5: SUB-REGION B WASTEWATER COLLECTED WITHIN SERVICE AREA IN 2025 (DWR TABLE 6-2)

Wastewater Collection			Recipient of Collected Wastewater	
Name of Wastewater Collection Agency	**Wastewater Volume Metered or Estimated?**	**Volume of Wastewater Collected from UWMP Service Area 2025 (AFY)**	**Name of WWTP and Place ID Number**	**Is WWTP Located Within UWMP Area?**
CCWD	Metered	219	Copper Cove Wastewater Reclamation Facility (WWRF), Place ID 255003	Yes
CCWD	Metered	9	Angels City WWTP, Place ID 205793	No
CCWD	Metered	74	Forest Meadows WWT & RP, Place ID 224889	Yes
CCWD	Metered	40	Douglas Flat/Vallecito WWTP, Place ID 220618	Yes
CCWD	Metered	66	Arnold WWTP, Place ID 206381	Yes
Total Wastewater Collected from Service Area in 2025		**408**		
NOTES: (1) City of Angels Camp collects wastewater from Six Mile Village along Highway 4 Corridor.				

TABLE 6-6: SUB-REGION B WASTEWATER TREATMENT AND DISCHARGE WITHIN SERVICE AREA IN 2025 (AFY) (DWR TABLE 6-3)

WWTP Name and Place ID Number	Does This Plant Treat Wastewater Generated Outside the UWMP Service Area?	2025 Volume of Wastewater Received from UWMP Service Area	Total 2025 Volume of Water Treated	2025 Outcomes of Treated Wastewater										
				Water Recycled Within UWMP Service Area		Water Recycled Outside of UWMP Service Area		Effluent Discharge that is not a Permitted Recycled Water Use		Required Discharge for Instream Flow		Delivered to Another Entity for Additional Treatment		
				Treatment Level	Volume	Treatment Level	Volume	Treatment Level	Volume	Treatment Level	Volume	Treatment Level	Volume	Name of other entity
Copper Cove WWRF, Place ID 255003	No	219	219	Tertiary	295	N/A	0	Secondary, Disinfected	0	N/A	0	N/A	0	N/A
Forest Meadows WWT & RP, Place ID 224889	No	74	74	Tertiary	58	N/A	0	Tertiary	20	N/A	0	N/A	0	N/A
Douglas Flat/Vallecito WWTP, Place ID 220618	No	40	40	Tertiary	0	N/A	0	Tertiary	40	N/A	0	N/A	0	N/A
Arnold WWTP, Place ID 206381	No	66	66	N/A	0	N/A	0	Secondary Disinfected	73	N/A	0	N/A	0	N/A
TOTAL		**399**	**399**		**353**		**0**		**133**		**0**		**0**	

NOTES: (1) Copper Cove WWTP discharges to "Pond 6," which acts as a forebay and source for the Copper Cover Wastewater Reclamation Plant's recycled water production; sprayfields are used only in emergencies (2) More water is recycled within service area (353 AFY) than is treated (293 AFY) due to carryover storage from the previous year in Pond 6 and/or stormwater that is not measured through the flow meter. (3) Wastewater collected at smaller treatment plants within the Subregion, which are not recognized in the DWR provided submittal table, are not included here and are reported separately. See Tables 6-8 and 6-9. This includes the flows collected from Six Mile Village and ultimately sent to Angels Camp WWTP for treatment.

Forest Meadows Wastewater Area

The Forest Meadows Wastewater Area is in the southwestern most part of the Ebbetts Pass service area, serving the Forest Meadows Community located along Highway 4 between Murphys and Arnold. The Forest Meadows WWTP uses a complete mix secondary aeration pond, a sludge settling pond, deep-bed sand filtration, and UV disinfection to treat wastewater. This wastewater area contains approximately 11.3 miles of pipeline and serves 608 connections. In 1999, CCWD upgraded the WWTP to tertiary treatment processes to provide recycled water to the community's Forest Meadows Golf Course for irrigation. This applied irrigation use is the primary method of effluent disposal from the WWTP. The District also utilizes a back-up leach field when needed. If the Forest Meadows community development continues and wastewater flows increase, the District may utilize its National Pollutant Discharge Elimination System (NPDES) permit to integrate seasonal surface water discharges in addition to its current effluent disposal methods.

Arnold Wastewater Area

The Arnold Wastewater Area serves the communities of Arnold and Avery, both located in the Ebbetts Pass service area. The Arnold WWTP utilizes chlorine disinfected secondary treatment and consists of an extended oxidation ditch (racetrack), clarification, chlorination, and sand filtration processes. Effluent disposal is located on-site leach field and spray field (pasture). This WWTP relies on approximately 16 miles of pipeline and serves 636 connections.

Douglas Flat/Vallecito Wastewater Area

The Douglas Flat/Vallecito Wastewater Area serves the communities of Douglas Flat and Vallecito, located along Highway 4 between Murphys and Angels Camp, and outside of CCWD's water service areas. This WWTP utilizes membrane biological reactors, a UV disinfection system, and a belt press for sludge dewatering, and was upgraded from secondary to tertiary treatment processes in 2012. The WWTP effluent is collected in storage ponds and applied in adjacent spray fields (pastures). This system currently serves 255 connections with approximately 10.6 miles of pipeline. Customer water supplies in this wastewater area generally come from UWPA or UPUD Stanislaus River water supplies, or from private groundwater wells.

Other Systems

The District operates a small collection system downstream of the Douglas Flat and Vallecito communities called Six Mile Village. Wastewater from Six Mile Village is pumped to Angels Camp and treated at the City of Angel Camp's WWTP under an agreement between CCWD and the City of Angels Camp. The District intends to continue this operation, although future regionalization studies may recommend a change to this arrangement. The District also maintains smaller WWTPs in Sub-Region B, which are wastewater collection and on-site leach field systems built to service specific residential communities, including:

- Mountain Retreat/Sequoia Woods Wastewater Area (23 connections), for portions of BLSMWC service area in Ebbetts Pass.
- Indian Rock Wastewater Area (21 connections), includes secondary treatment processes via recirculating bed sand filtration, located along Highway 4 near Murphys.
- Country Houses Wastewater Area (25 condos), in Ebbetts Pass.

Table 6-7 and **Table 6-8** shows a summary of wastewater collected at these smaller WWTP.

TABLE 6-7: SUB-REGION B WASTEWATER COLLECTED WITHIN SERVICE AREA IN 2025 BY SMALL PLANTS (DWR TABLE 6-2)

Wastewater Collection			Recipient of Collected Wastewater	
Name of Wastewater Collection Agency	Wastewater Volume Metered or Estimated?	Volume of Wastewater Collected from UWMP Service Area 2025 (AFY)	Name of WWTP and Place ID Number	Is WWTP Located Within UWMP Area?
CCWD	Metered	3	Indian Rock Vineyards Subdivision WWTF, Place ID 232360	Yes
CCWD	Metered	4	Sequoia Woods Mountain Retreat WWTF, Place ID 256316	No
CCWD		N/A	Country Houses WWTP, Place ID 209539	Yes
CCWD	Metered	9	Six Mile Village WWTP, WDID 5SSO11500	Yes
Total Wastewater Collected from Service Area in 2025, Small Plants only		16		
Total Wastewater Collected from Service Area in 2025, All Plants		16		

NOTES: (1) Flow from Six Mile Village WWTP is sent to Angels City WWTP for treatment and is also included in Table 6-6. (2) No flow is recorded at Country Houses WWTP.

TABLE 6-8: SUB-REGION B WASTEWATER TREATMENT AND DISCHARGE WITHIN SERVICE AREA IN 2025 BY SMALL PLANTS (AFY) (DWR TABLE 6-3)

WWTP Name and Place ID Number	Does This Plant Treat Wastewater Generated Outside the UWMP Service Area?	2025 Volume of Wastewater Received from UWMP Service Area	Total 2025 Volume of Water Treated	2025 Outcomes of Treated Wastewater										
				Water Recycled Within UWMP Service Area		Water Recycled Outside of UWMP Service Area		Effluent Discharge that is not a Permitted Recycled Water Use		Required Discharge for Instream Flow		Delivered to Another Entity for Additional Treatment		
				Treatment Level	Volume	Treatment Level	Volume	Treatment Level	Volume	Treatment Level	Volume	Treatment Level	Volume	Name of other entity
Indian Rock Vineyards Subdivision WWTF, Place ID 232360	No	3	3	N/A	0	N/A	0	Primary	3	N/A	0	N/A	0	N/A
Sequoia Woods Mountain Retreat WWTF, Place ID 236316	No	4	4	N/A	0	N/A	0	Primary	4	N/A	0	N/A	0	N/A
Six Mile Village WWTP	No	9	0	N/A	0	N/A	0	N/A	0	N/A	0	N/A	9	Angels City WWTP
TOTAL		**16**	**7**		**0**		**0**		**7**		**0**		**9**	

NOTES: These treatment plants are not recognized by the DWR provided submission tables. Country Houses WWTP is excluded from this table, as no flows are recorded. Indian Rock Vineyards Subdivision WWTF and Sequoia Woods Mountain Retreat WWTF are considered small domestic wastewater systems and rely on septic tanks and on-site leach fields.

6.7.3 Sub-Region C – Mokelumne River

Figure 6-4 shows the boundaries of the wastewater areas in this sub-region and the locations of the WWTPs. **Table 6-9** shows a summary of the wastewater collected and treated in Sub-Region C, as well as the responsible agencies. Wastewater treatment and disposal volumes within each service area are shown in **Table 6-10.**

West Point and Wilseyville Wastewater Areas

The West Point Wastewater Area serves a portion of the West Point water service area. It provides secondary treatment processes through a recirculation sand bed filter system, chlorine disinfection, storage in two ponds, and onsite disposal through 45 acres of spray fields. The West Point Wastewater Area system contains approximately 13 miles of pipeline in the collection system. The District also operates a smaller system in West Point, the Wilseyville Camp WWTP. The Wilseyville system provides secondary treatment processes via an aerated pond and 10-acre spray field disposal system. In 2020, the District was awarded grant funds from the SWRCB to combine the Wilseyville and West Point WWTPs into a single wastewater system, which are geographically situated near each other. As of this UWMP, the consolidation is complete. The new system is referred to as the West Point/Wilseyville Wastewater Area and serves a total of 198 connections.

FIGURE 6-4: SUB-REGION C – WASTEWATER SERVICE AREAS AND FACILITIES

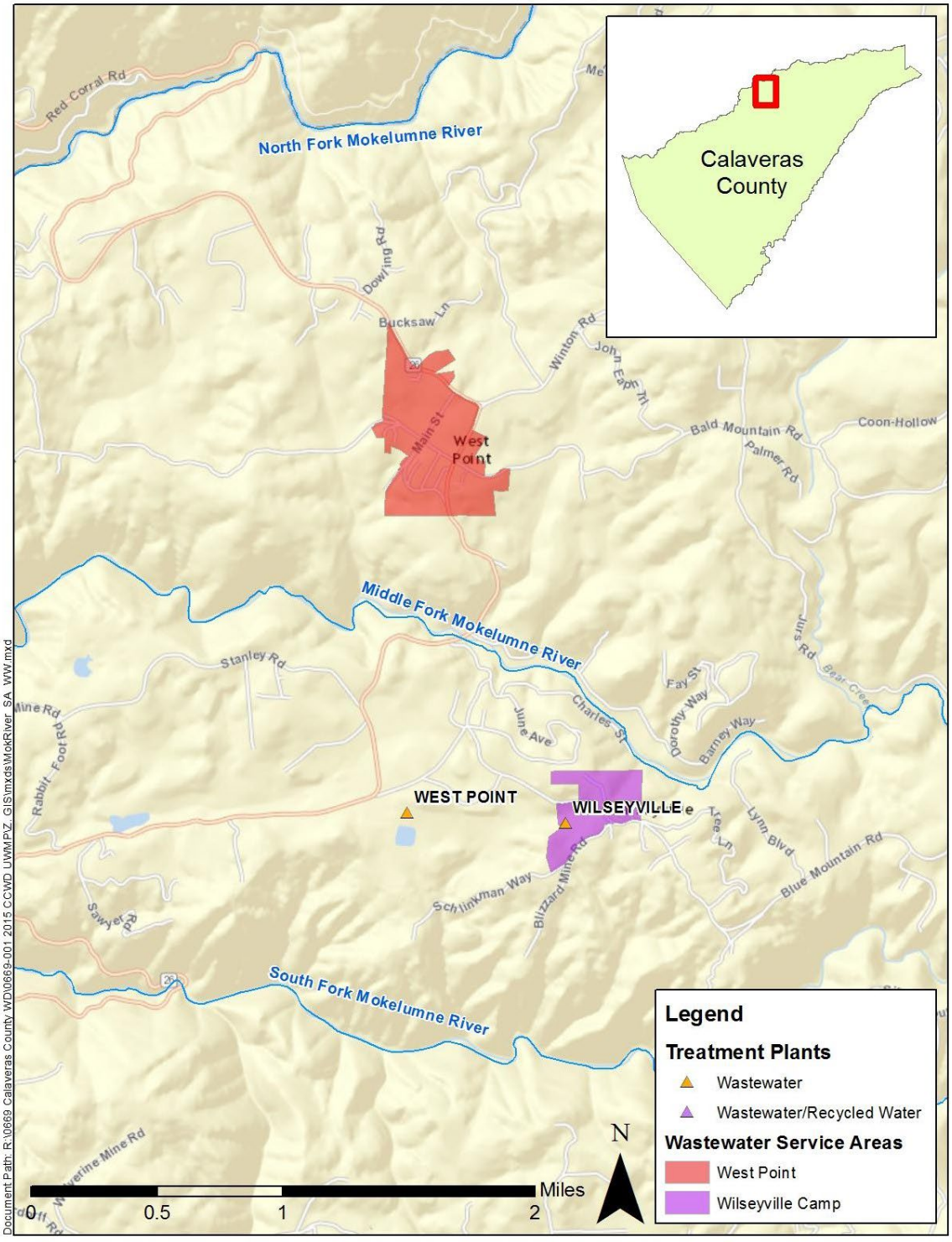


TABLE 6-9: SUB-REGION C WASTEWATER COLLECTED WITHIN SERVICE AREA IN 2025 (DWR TABLE 6-2)

Wastewater Collection			Recipient of Collected Wastewater	
Name of Wastewater Collection Agency	**Wastewater Volume Metered or Estimated?**	**Volume of Wastewater Collected from UWMP Service Area 2025 (AFY)**	**Name of WWTP and Place ID Number**	**Is WWTP Located Within UWMP Area?**
CCWD	Metered	14	West Point WWTF, Place ID 272109	Yes
CCWD	Metered	0.4	Wilseyville Wastewater Treatment Plant, Place ID 272716	Yes
Total Wastewater Collected from Service Area in 2025		**14**		
NOTES: (1) The District has consolidated the Wilseyville Camp and West Point service areas. The District is in the process of obtaining a new permit for the consolidated system. At the time of this report, the two plants are permitted separately and therefore volumes are reported separately.				

TABLE 6-10: SUB-REGION C WASTEWATER TREATMENT AND DISCHARGE WITHIN SERVICE AREA IN 2025 (AFY) (DWR TABLE 6-3)

WWTP Name and Place ID Number	Does This Plant Treat Wastewater Generated Outside the UWMP Service Area?	2025 Volume of Wastewater Received from UWMP Service Area	Total 2025 Volume of Water Treated	2025 Outcomes of Treated Wastewater										
				Water Recycled Within UWMP Service Area		Water Recycled Outside of UWMP Service Area		Effluent Discharge that is not a Permitted Recycled Water Use		Required Discharge for Instream Flow		Delivered to Another Entity for Additional Treatment		
				Treatment Level	Volume	Treatment Level	Volume	Treatment Level	Volume	Treatment Level	Volume	Treatment Level	Volume	Name of other entity
West Point WWTF, Place ID 272109	No	14	14	N/A	0	N/A	0	Secondary, Disinfected	0	N/A	0	N/A	0	N/A
Wilseyville Wastewater Treatment Plant, Place ID 272716	No	0.4	0.4	N/A	0	N/A	0	Secondary, Undisinfected	0	N/A	0	N/A	0	N/A
TOTAL		**14**	**14**		**0**		**0**		**0**		**0**		**0**	

NOTES: (1) The District consolidated the Wilseyville Camp WWTP with the West Point WWTP. The treatment plants are currently permitted, and therefore reported here, as separate. The District is in the process of consolidating into a single permit.

6.7.4 Sub-Region D – Groundwater

Figure 6-5 shows the boundaries of the wastewater areas in this sub-region and the locations of the WWTPs. **Table 6-11** shows a summary of the wastewater collected and treated in Sub-Region D, as well as the responsible agencies. Wastewater treatment and disposal volumes within each service area are shown in **Table 6-12**.

Wallace Lake Wastewater Area

Wallace Lake Wastewater Area provides wastewater treatment services to 107 connections in the gated community of Wallace Lake Estates, part of the Wallace service area. Each lot in this community has a private sealed septic tank for solid treatment and effluent collection. Liquid effluent gravity flows or is pumped to the Wallace Lake WWTP which provides secondary and tertiary treatment processes through aerobic trickling filters, sedimentation, sand filtering, and disinfection. Treated effluent is stored in a pond and there is also a 12-acre spray field which is used as needed.

Southworth Wastewater Area

Southworth Wastewater Area provides wastewater treatment for 60 connections in the Southworth Ranch Estates subdivision, located southeast of Wallace towards Valley Springs. Each lot in this subdivision has a private sealed septic tank for solid treatment and effluent collection. Similar to Wallace Lake WWTP, liquid effluent gravity flows or is pumped to this WWTP. This small system provides secondary treatment processes via recirculating sand filters, a storage pond, and disposal to an on-site spray field.

FIGURE 6-5: SUB-REGION D – WASTEWATER SERVICE AREA AND FACILITIES

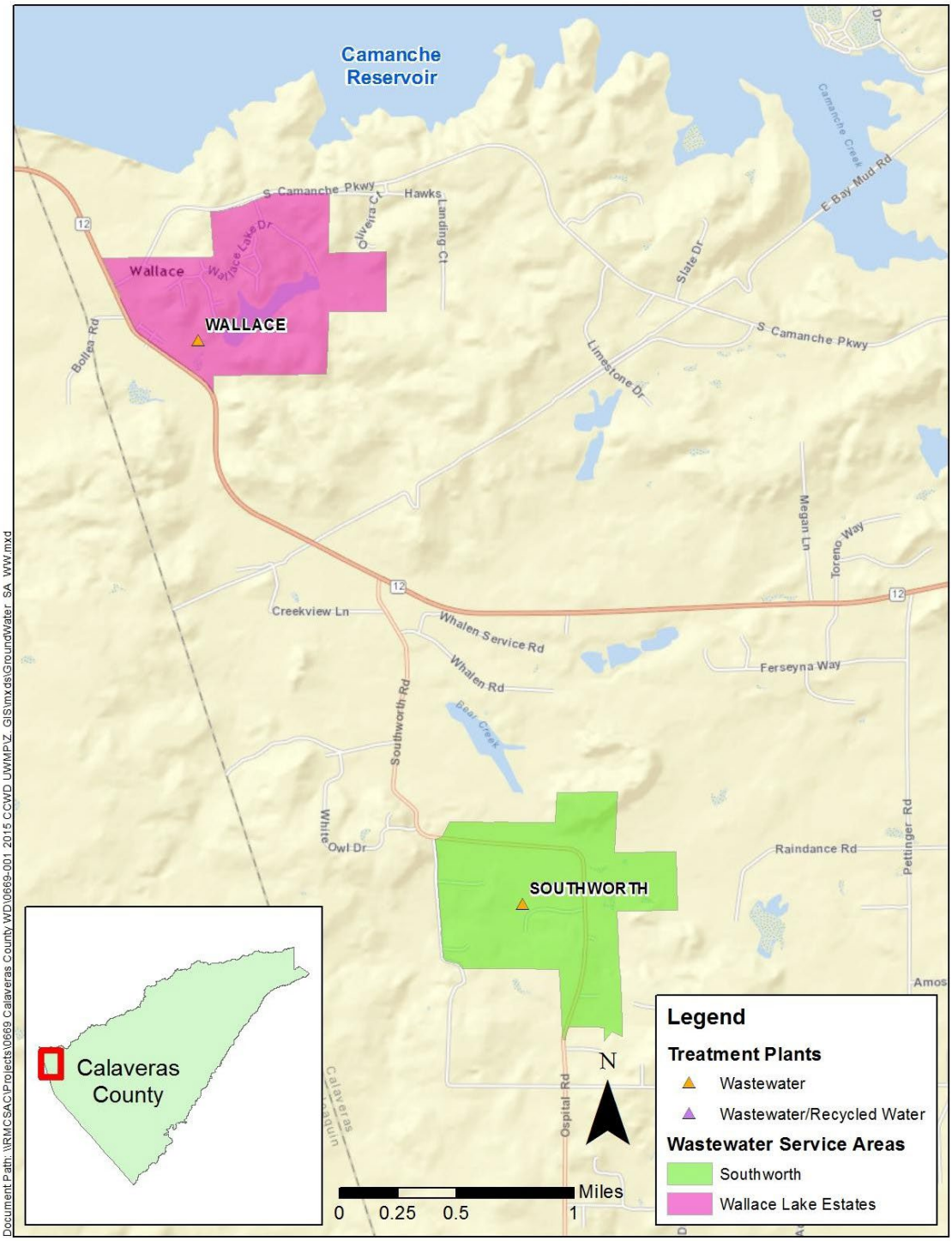


TABLE 6-11: SUB-REGION D WASTEWATER COLLECTED WITHIN SERVICE AREA IN 2025 (DWR TABLE 6-2)

Wastewater Collection			Recipient of Collected Wastewater	
Name of Wastewater Collection Agency	Wastewater Volume Metered or Estimated?	Volume of Wastewater Collected from UWMP Service Area 2025 (AFY)	Name of WWTP and Place ID Number	Is WWTP Located Within UWMP Area?
CCWD	Metered	23	Wallace Lake Estates WWTF, Place ID 271617	Yes
CCWD	Metered	11	Southworth Ranch Estates WWTF, Place ID 258004	Yes
Total Wastewater Collected from Service Area in 2025		**34**		

TABLE 6-12: SUB-REGION D WASTEWATER TREATMENT AND DISCHARGE WITHIN SERVICE AREA IN 2025 (AFY) (DWR TABLE 6-3)

WWTP Name and Place ID Number	Does This Plant Treat Wastewater Generated Outside the UWMP Service Area?	2025 Volume of Wastewater Received from UWMP Service Area	Total 2025 Volume of Water Treated	2025 Outcomes of Treated Wastewater										
				Water Recycled Within UWMP Service Area		Water Recycled Outside of UWMP Service Area		Effluent Discharge that is not a Permitted Recycled Water Use		Required Discharge for Instream Flow		Delivered to Another Entity for Additional Treatment		
				Treatment Level	Volume	Treatment Level	Volume	Treatment Level	Volume	Treatment Level	Volume	Treatment Level	Volume	Name of other entity
Wallace Lake Estates WWTF, Place ID 271617	No	23	23	N/A	0	N/A	0	Tertiary	23	N/A	0	N/A	0	N/A
Southworth Ranch Estates WWTF, Place ID 258004	No	11	11	N/A	0	N/A	0	Secondary, Undisinfected	11	N/A	0	N/A	0	N/A
TOTAL		**34**	**34**		**0**		**0**		**34**		**0**		**0**	

6.8 RECYCLED WATER

Recycled water from CCWD's wastewater treatment operations is also part of the District's water supply portfolio. Where practicable, the District utilizes recycled water to reduce potable water demands and provide for treated effluent wastewater treatment plant (WWTP) disposal. As a water supply, recycled water has the benefit of improving the overall water use efficiency of the District's system by directly offsetting the need for additional water supplies introduced to the system (i.e., more beneficial use for same water volume taken from sources). The U.S. Environmental Protection Agency (EPA) and SWRCB requires intensive monitoring and permitting related to Recycled Water use in order to protect the quality of drinking water sources, community drinking water, and environmental resources. CCWD takes these EPA and SWRCB regulations seriously and is active in collecting daily wastewater quality data and reporting recycled water usage. This section provides information on current recycled water uses and potential opportunities the District is reviewing to increase recycled water usage.

Recycled Water Coordination

The District engages with all appropriate regulatory and planning agencies in the development of its recycled water use planning efforts, as indicated in **Table 6-13**. Much of this coordination depends on the planned extent and purpose of use (i.e., volume of recycled water to be applied), as well as local community and environmental conditions. Generally speaking, the District coordinates closely with Calaveras County regarding development plans, land use designations, and water needs as new developments are proposed.

TABLE 6-13: ORGANIZATION PARTICIPATION IN RECYCLED WATER PLANNING

Participating Organizations	Role
Calaveras County	Coordinate land use planning with water and recycled water needs.
Calaveras County Farm Bureau Federation	Assist District in identifying potential recycled water demands and with public information efforts.
University of California, Cooperative Extension	Assist District in identifying potential recycled water demands and with public information efforts.
CalaverasGROWN[1]	Coordinate potential demands and public outreach with District.
NOTES: (1) CalaverasGROWN is a County-wide marketing, education, and outreach organization that assists local agricultural producers.	

The following sub-sections provide additional information on the District's current and near-term use of recycled water (post-wastewater treatment) in the sub-regions.

6.8.1 Sub-Region A – Calaveras River

La Contenta WWTP information is provided in **Section 6.6.1**. As noted, the La Contenta Golf Course uses the treated plant effluent as its primary irrigation supply source, per Title 22 permitting, and uses secondary raw water from New Hogan to meet its landscape irrigation needs. As local residential growth continues and effluent volumes exceed the irrigation demands of the existing golf course, the District intends to incorporate additional wastewater recycling programs in other areas, such as parks, landscape, and highway medians for irrigation purposes. Without these preferable alternatives, the District will dispose of additional effluent through dedicated land application including spray fields on a recently purchased parcel adjacent to the treated effluent storage pond.

6.8.2 Sub-Region B – Stanislaus River

Copper Cove WWTP information is provided in **Section 6.6.2**. As noted, Saddle Creek uses the treated plant effluent as its primary irrigation supply source, per Title 22 permitting, and uses secondary raw water from Tulloch to meet its landscape irrigation needs. It is anticipated that if the Copperopolis and Lake Tulloch areas grows as projected (see **Section 3.2.3**), the additional Title 22 wastewater generated from this WWTP will be delivered to the existing golf course or other local landscape irrigation uses. CCWD also maintains Waste Discharge Requirements to land-apply treated effluent through spray fields, as needed.

Forest Meadows WWTP information is also provided in **Section 6.6.2**. As noted, the Forest Meadows Golf course currently uses the treated plant effluent as its primary irrigation supply source. CCWD expects to continue utilizing recycled water in the Forest Meadows Community for some form of landscape irrigation application.

Douglas Flat/Vallecito WWTP information is also provided in **Section 6.6.2**. The District received grant funds to install the pumping facilities necessary to facilitate recycled water delivery for local landscape irrigation uses. That grant-funded project was completed in 2020 and is anticipated to serve recycled water supply to neighboring agricultural/landscape users by 2022, once appropriate permitting and agreements are finalized. No recycled water was supplied from Douglas Flat/Vallecito WWTP in 2025.

6.8.3 Sub-Region C – Mokelumne River

Sub-Region C does not have any recycled water users, nor are any recycled water uses planned in the near-term horizon for this sub-region.

6.8.4 Sub-Region D – Groundwater

Sub-Region D does not have any recycled water users, nor are any recycled water uses planned in the near-term horizon for this sub-region.

Recycled Water Beneficial Uses

The following sub-sections provide additional information on the District's future planned use of recycled water in the sub-regions. The current use of recycled water in the District's wastewater service areas is landscape irrigation applications. Planned future uses of recycled water include opportunities for irrigation in parks, landscapes, and highway medians as well as some limited agricultural irrigation. All projected values are based on water and wastewater system master planning documents, maintained by CCWD's Engineering

Department. As communities grow and change, and more wastewater is treated at the WWTPs, the District will continue to investigate opportunities to apply recycled water.

6.8.5 Sub-Region A – Calaveras River

Of the wastewater service areas, the La Contenta Wastewater Area has the greatest growth (outward expansion) potential within the County, leading to new wastewater demands. The District expects to increase the number of customer connections on the wastewater system, primarily through new housing construction, by about 140 percent, with about 500 AFY of wastewater expected at full buildout (La Contenta Wastewater Master Plan, 2018). This build-out is anticipated to occur after 2050 and therefore not reflected in this UWMP projection. CCWD may also explore opportunities to take on some wastewater effluent from Valley Springs Public Utilities District within the next decade.

Table 6-14 shows the current and projected recycled water direct beneficial uses within Sub-Region A. The only current recycled water consumer is the La Contenta Golf Course which received 135 AFY of recycled water in 2025.

TABLE 6-14: SUB-REGION A - CURRENT AND PROJECTED RECYCLED WATER DIRECT BENEFICIAL USES WITHIN SERVICE AREA (AFY) (DWR TABLE 6-4)

Name(s) of Facility/ies Producing (Treating) the Recycled Water	La Contenta WWT & RF, Place ID 235798
Name of Supplier Operating the Recycled Water Distribution System:	Calaveras County Water District
Volume of Supplemental Water Added in 2025:	0
Source of 2025 Supplemental Water:	N/A

Use Type	Potable or Non-Potable (after treatment if treated)	Additional Information (as needed)	2025	2030	2035	2040	2045	2050	Potential Recycled Water Use	
									Volume	Narrative page number (OPTIONAL)
Golf course irrigation	Non-Potable	Tertiary; Meet golf course irrigation demands	135	135	135	135	135	135	0	
		TOTAL	**135**	**135**	**135**	**135**	**135**	**135**	**0**	

NOTES: Future build-out and associated increased demands are anticipated to occur after 2050.

Table 6-15 shows a comparison of the projected 2025 recycled water use made in 2020 for Sub- Region A against the actual recycled water use in 2025.

TABLE 6-15: SUB-REGION A - 2020 UWMP RECYCLED WATER USE PROJECTION COMPARED TO 2025 ACTUAL (AFY) (DWR TABLE 6-5)

Use Type	2020 Projection for 2025	2025 Actual Use
Agricultural irrigation	10	0
Landscape irrigation (excludes golf courses)	52	0
Golf course irrigation	147	135
TOTAL	**209**	**135**

6.8.6 Sub-Region B – Stanislaus River

Table 6-16 below shows the current and projected recycled water uses within Sub-Region B, served by the Forest Meadows WWTP, Copper Cove WWTP and Reclamation Plant, and Douglas Flat/Vallecito WWTP. Many of these areas along the Highway 4 Corridor are likely to experience growth in occupancy of existing homes, especially the Copperopolis area, as described in **Section 3.2.3**. As opposed to Sub-Region A, and with the exception of Copperopolis, many of these areas are constrained from outward expansion by variable terrains and protected lands (e.g., U.S. Forest Service via Stanislaus National Forest lands).

CCWD expects to continue utilizing recycled water for the existing golf courses and landscape irrigation demands. There is also some potential to start replacing potable (treated) water with recycled water for landscape irrigation in community spaces and with conversion to dual-metered systems. The planned construction of new subdivisions in Copperopolis may present recycled water landscape opportunities. This recycled water use expansion is anticipated to occur after the 2050 planning horizon.

TABLE 6-16: SUB-REGION B - CURRENT AND PROJECTED RECYCLED WATER DIRECT BENEFICIAL USES WITHIN SERVICE AREA (AFY) (DWR TABLE 6-4)

Name(s) of Facility/ies Producing (Treating) the Recycled Water:	Copper Cove WWRF, Place ID 255003 and Forest Meadows WWT & RP, Place ID 224889 and Douglas Flat/Vallecito WWTP, Place ID 220618
Name of Supplier Operating the Recycled Water Distribution System:	Calaveras County Water District
Volume of Supplemental Water Added in 2025:	0
Source of 2025 Supplemental Water:	N/A

Use Type	Potable or Non-Potable (after treatment if treated)	Additional Information (as needed)	2025	2030	2035	2040	2045	2050	Potential Recycled Water Use	
									Volume	Narrative page number (OPTIONAL)
Golf course irrigation	Non-Potable	Tertiary; Meet golf course irrigation demands	353	353	353	353	353	353	0	
		TOTAL	**573**	**573**	**353**	**353**	**353**	**353**	**0**	

NOTES: Future build-out and associated increased demands are anticipated to occur after 2050.

Table 6-17 shows a comparison of the projected 2025 recycled water use made in 2020 for Sub-Region B against the actual recycled water use in 2025.

TABLE 6-17: SUB-REGION B - 2020 UWMP RECYCLED WATER USE PROJECTION COMPARED TO 2025 ACTUAL (AFY) (DWR TABLE 6-5)

Use Type	2020 Projection for 2025	2025 Actual Use
Agricultural irrigation	83	0
Landscape irrigation (excludes golf courses)	154	0
Golf course irrigation	120	353
TOTAL	**357**	**353**

6.8.7 Sub-Region C – Mokelumne River

Sub-Region C does not have any recycled water users, nor are any recycled water uses planned for this sub-region.

6.8.8 Sub-Region D – Groundwater

Sub-Region D does not beneficially reuse recycled water users, nor are any recycled water uses planned for this sub-region.

Actions to Encourage and Optimize Future Recycled Water Use

As stated in **Section 6.6.3,** the main use of recycled water in the District's service areas is for golf course landscape irrigation. District policy requires all in-County golf courses to be irrigated with recycled water, supplemented with raw water only when necessary. Along with public landscaped areas and potential agricultural applications, these uses define the demand and projected uses of District recycled water.

CCWD reaches out to existing and new golf courses, and recreational areas, to review potential water demands and to investigate recycled water opportunities. For instance, the Calaveras County Parks and Recreation Department (Calaveras P&R) evaluates new park and recreational needs as part of its general planning processes. CCWD coordinates with the Calaveras P&R during planning and permitting processes to review available water supplies.

Many of the District's wastewater treatment facilities are too small to feasibly develop recycled water systems. Nonetheless, the District will explore recycled water to increase beneficial reuse and expand into other areas of service where practicable. At the moment, there are no anticipated projects or programs to expand future recycled water use outside of existing demands as shown in **Table 6-18**.

TABLE 6-18: METHODS TO EXPAND FUTURE RECYCLED WATER USE (DWR TABLE 6-6)

Name of Action	Description	Planned Implementation Year	Expected Increase in Recycled Water Use
N/A	N/A	N/A	N/A
		TOTAL	**0**

6.9 DESALINATED WATER OPPORTUNITIES

There are currently no opportunities for the development of desalinated water within the District's service area as a supply source. The District is neither located near an ocean coastline nor views deep groundwater desalination in the Subbasin as an economically feasible option,

6.10 EXCHANGES AND TRANSFERS

The District currently relies on its surface water rights and agreements (see **Section 6.4**) to meet its service area demands, with the exception of groundwater use in Wallace.

To improve reliability, CCWD is constantly evaluating its surface water supplies and opportunities to engage with regional partners to assist with exchanges and transfers. In some locations, CCWD has utilized short-term water transfer and similar arrangements to address various water supply shortage contingencies in specific conditions (e.g., infrastructure outages impacting CCWD's water supplies). However, there are limited options for large volume transfer opportunities due to lack of storage within the County under CCWD control.

6.11 FUTURE WATER PROJECTS

Many water supply projects are under evaluation by CCWD and its in-County partners to increase supply reliability and protect existing water rights and agreements. As discussed in **Section 2.2.1**, there are a number of efforts – including IRWM, SGMA, and the Watershed Resilience Program – that provide an excellent forum to improve regional water resource management through coordination with other agencies, stakeholders, and interested parties. The District is also evaluating projects within the County to potentially establish connections between its watershed sources to improve supply reliability or expand service in areas where groundwater is impaired or unreliable. **Table 6-19** lists the current and planned water supply projects from the IRWMPs that CCWD is considering. For projects that are still in the early planning stages, projected supply volumes are listed as unknown.

TABLE 6-19: EXPECTED FUTURE WATER SUPPLY PROJECTS OR PROGRAMS (DWR TABLE 6-7)

☐	Check the box if there are no expected future water supply projects or programs that provide a quantifiable increase to the agency's water supply.
☐	Check the box if some or all of the supplier's future water supply projects or programs are not compatible with this table and are described in a narrative format.
N/A	Provide page location of narrative in the UWMP.

Name of Future Projects or Programs	Joint Project with other agencies?	Additional Description (as needed)	Potable or Non-Potable (after treatment if treated) (OPTIONAL)	Planned Implementation Year	Planned for Use in Year Type	Expected Increase in Water Supply to Supplier
Highway 4 Corridor Regional Water Supply Long-Term Water Supply Plan	City of Angels, Union PUD, Utica Water and Power Authority	Collaborative effort to evaluate future water needs and supplies for the Highway 4 corridor from Copperopolis to Camp Connel.	Potable	2026	All Year Types	Unknown
White Pines and Mill Pond Restoration Project	No	Restores storage capacity loss due to sedimentation in White Pines and re-establishes the Mill Pond as wetland.	Potable	2027	All Year Types	Unknown
Sheep Ranch Supply Resilience Project	No	Proposal for intertie from Ebbetts Pass distribution system to Sheep Ranch system to replace existing Sheep Ranch use of San Antonio supplies.	Potable	2028	All Year Types	15 AFY, with capacity up to 100 AFY for fire combat and future development (under existing water rights)

6.12 SUMMARY OF EXISTING AND PLANNED SOURCES OF WATER

The following sections summarize existing and planned sources of water for each of the District's sub-regions.

6.12.1 Sub-Region A – Calaveras River

Table 6-20 shows a summary of all actual water supplies in 2025 in Sub-Region A, served by the Calaveras River, while **Table 6-21** provides projections of supply through 2050.

TABLE 6-20: SUB-REGION A WATER SUPPLIES – ACTUAL (AFY) (DWR TABLE 6-8)

Water Supply	2025		
	Potable or Non-Potable (after treatment if needed)	Actual Volume	Total Entitlement (OPTIONAL)
Surface Water (not desalinated)[1]	Potable	8,437	
Recycled Water[2]	Non-Potable	135	
	TOTAL	**8,572**	

NOTES: (1) Actual available surface water in 2025 is based on sum of 7,700 AF minimum available supply from New Hogan, 362 AF from Big Trees Creek through White Pines rediverted along San Antonio Creek. Includes non-consumptive supplies of 350 AF of riparian rights at New Hogan and 25 AF at Blagen Mill Pond, for reference of total water available to CCWD (although these were not used to meet sub-region demands).
(2) Recycled water is based on 2025 recycled water production.

TABLE 6-21: SUB-REGION A WATER SUPPLIES – PROJECTED (AFY) (DWR TABLE 6-9)

Water Supply	Potable or Non-Potable (after treatment if treated)	Projected Water Supply				
		2030	2035	2040	2045	2050
		Reasonably Available Volume	Reasonably Available Volume	Reasonably Available Volume	Reasonably Available Volume	Reasonably Available Volume
Surface water (not desalinated)[1]	Potable	31,665	31,665	31,665	31,665	31,665
Recycled water[2]	Non-Potable	135	135	135	135	135
TOTAL		**31,800**	**31,800**	**31,800**	**31,800**	**31,800**

NOTES: (1) Surface water based on supply rights from New Hogan and Big Trees Creek. (2) Recycled water is based on projections of beneficial recycled water use from DWR Table 6-4.

6.12.3 Sub-Region B – Stanislaus River

Table 6-22 shows a summary of all actual water supplies in 2025 in Sub-Region B, served by the Stanislaus River, while **Table 6-23** provides projections of supply through 2050.

TABLE 6-22: SUB-REGION B WATER SUPPLIES – ACTUAL (AFY) (DWR TABLE 6-8)

Water Supply	2025		
	Potable or Non-Potable (after treatment if needed)	Actual Volume	Total Entitlement (OPTIONAL)
Surface Water (not desalinated)[1]	Potable	76,300	
Recycled Water[2]	Non-Potable	353	
	TOTAL	**76,653**	
NOTES: (1) Surface water is based on CCWD's storage rights in New Spicer Meadow Reservoir. (2) Recycled water is based on 2025 recycled water production.			

TABLE 6-23: SUB-REGION B WATER SUPPLIES – PROJECTED (AFY) (DWR TABLE 6-9)

Water Supply	Potable or Non-Potable (after treatment if treated)	Projected Water Supply				
		2030	2035	2040	2045	2050
		Reasonably Available Volume	Reasonably Available Volume	Reasonably Available Volume	Reasonably Available Volume	Reasonably Available Volume
Surface water (not desalinated)[1]	Potable	76,300	76,300	76,300	76,300	76,300
Recycled water[2]	Non-Potable	353	353	353	353	353
TOTAL		**76,653**	**76,653**	**76,653**	**76,653**	**76,653**
NOTES: (1) Surface water is based on CCWD's storage right in New Spicer Meadow Reservoir. (2) Recycled water is based on projections of beneficial recycled water use from DWR Table 6-4.						

6.12.4 Sub-Region C - Mokelumne River

Table 6-24 shows a summary of all actual water supplies in 2025 in Sub-Region C, served by the Mokelumne River, while **Table 6-25** provides projections of supply through 2050.

TABLE 6-24: SUB-REGION C WATER SUPPLIES – ACTUAL (AFY) (DWR TABLE 6-8)

Water Supply	2025		
	Potable or Non-Potable (after treatment if needed)	Actual Volume	Total Entitlement (OPTIONAL)
Surface Water (not desalinated)[1]	Potable	2,030	
TOTAL		**2,030**	
NOTES: (1) When CCWD's Bear Creek surface water right was curtailed by action of the SWRCB due to the unavailability of supplies in the San Joaquin River Basin during the drought in 2015, water supplies on the Middle Fork Mokelumne River from Schaads Reservoir were purchased from CPUD under an existing agreement.			

TABLE 6-25: SUB-REGION C WATER SUPPLIES – PROJECTED (AFY) (DWR TABLE 6-9)

Water Supply	Potable or Non-Potable (after treatment if treated)	Projected Water Supply				
		2030	2035	2040	2045	2050
		Reasonably Available Volume	Reasonably Available Volume	Reasonably Available Volume	Reasonably Available Volume	Reasonably Available Volume
Surface water (not desalinated)[1]	Potable	2,030	2,030	2,030	2,030	2,030
TOTAL		**2,030**	**2,030**	**2,030**	**2,030**	**2,030**
NOTES: (1) Surface water is based on CCWD's Bear Creek water right as well as purchase of Middle Fork Mokelumne River water from CPUD.						

6.12.6 Sub-Region D – Groundwater

Table 6-26 shows a summary of all actual water supplies in 2025 in Sub-Region D, served by local groundwater, while **Table 6-27** provides projections of supply through 2050.

TABLE 6-26: SUB-REGION D WATER SUPPLIES – ACTUAL (AFY) (DWR TABLE 6-8)

Water Supply	2025		
	Potable or Non-Potable (after treatment if needed)	Actual Volume	Total Entitlement (OPTIONAL)
Groundwater (not desalinated)	Potable	65	
TOTAL		**65**	
NOTES: (1) 65 AF was pumped from three existing groundwater wells in 2025.			

TABLE 6-27: SUB-REGION D WATER SUPPLIES – PROJECTED (AFY) (DWR TABLE 6-9)

Water Supply	Potable or Non-Potable (after treatment if treated)	Projected Water Supply				
		2030	2035	2040	2045	2050
		Reasonably Available Volume	Reasonably Available Volume	Reasonably Available Volume	Reasonably Available Volume	Reasonably Available Volume
Groundwater (not desalinated)	Potable	65	65	65	65	65
TOTAL		**65**	**65**	**65**	**65**	**65**
NOTES: (1) 65 AF is assumed to be reasonably available and is consistent with 2025 groundwater production.						

6.14 CLIMATE CHANGE IMPACTS TO SUPPLY

An overview of climate change and the potential impacts and implications for the District are provided in **Section 3.3.2**. As noted, specific climate change impacts on a particular region over time are difficult to predict. Rather, generalized effects on regional and statewide climates can be estimated, such as changes in the precipitation, temperature, and environmental (forest and vegetation) conditions that impact water supplies.

Several climate change studies have described future conditions that are likely to adversely impact the Sierra Nevada Mountain region and areas dependent on accumulated snowpack water supply. California's annual snowpack generally accumulates during the months from November through the end of March, with a corresponding melt period from April through July. As previously mentioned, the Stanislaus and Mokelumne Rivers are snow-fed river systems sensitive to precipitation and temperature changes. This snowmelt provides significant quantities of water to these streams, reservoirs, and the Subbasin for several months after the annual storm season has ended.

Under a changing climate, the length and timing of each year's period of snowpack accumulation and melting will likely fluctuate as precipitation and temperature conditions become much more variable. An increase in global average temperature trends is expected to impact snowpack accumulation and melt by increasing the frequency of liquid rain at higher elevations and shortening the length of the melt recession curve as a result of higher temperatures and less snowpack accumulation. Earlier and increased frequency of runoff events may result in greater reservoir spills, which leads to less reservoir carryover storage and reduced soil moisture storage base flow, thereby decreasing overall water supply reliability. These are the primary factors from climate change that are anticipated to impact the District's water supplies and ability to deliver water in a reliable manner.

CCWD will examine practical management measures as more information and scientific literature becomes available regarding climate changes. In the interim, the District maintains a comprehensive Water Shortage Contingency Plan to address water shortages, as discussed in **Chapter 8**. Additionally, the District is exploring opportunities to develop a programmatic response to anticipated climate change impacts to County watersheds. Anticipated climate change impacts to water supply and demands in the Calaveras, Stanislaus, and Mokelumne River Watersheds include:

- Increased water demand to fight the increase in wildfire scale and intensity, with resulting burned areas leading to more intense precipitation runoff with less forest and natural vegetation evapotranspiration;
- Increased demand for process cooling water for food processing industries with increased surface water temperatures;
- Increased domestic demands with increased landscape evapotranspiration;
- Increased agricultural demands due to longer growing season, increased temperatures and evapotranspiration, and more frequent/severe drought periods;
- Increased variability of water runoff and drainage issues resulting from larger and more intense liquid precipitation events; and

- Decreased water supply due to decreased snowpack in the Sierra Nevada Mountains and a shift in timing of seasonal runoff.

As a result of these climate change impacts, supply reliability is likely to be adversely affected. According to the California Water Resiliency Portfolio (DWR, 2020), rising winter temperatures are anticipated to reduce mountain snowpack in the Sierra Nevada and Cascade Mountain ranges by 65 percent on average by the end of the 21st century, reducing spring and summer stream flow, while warming temperatures will increase the severity of our natural drought cycle, which most greatly impacts areas that depend on surface water flows. For context, April 1 snowpack measurements taken by DWR during the 2013-2015 drought were 40 percent in 2013, 25 percent in 2014, and 5 percent in 2015, of long-term average accumulation by that date. The anticipated decrease in average snowpack threatens to increase the likelihood of these extremely low snowpack years.

A study completed by the El Dorado Irrigation District (EID) suggested that supply reliability would be reduced by around 10% as a result of climate change (EID, 2008). While El Dorado County is located roughly 80 miles north of Calaveras County, they are both a heavily snow and rain-fed system dependent on surface water rights. As such, climate change impacts in El Dorado County could likely be similar to CCWD. More work is needed to assess the County's risks and vulnerabilities to water supplies given potential climate change impacts.

6.15 ENERGY INTENSITY

The Urban Water Management Planning Act requires that urban water suppliers must include information in the UWMP that could be used to calculate the energy intensity of their water and wastewater services. Such information is limited to that which is readily obtainable by the supplier. Where full information cannot be obtained suppliers can provide the most information available. While the Act does not require a calculation of energy intensity, energy intensity is automatically calculated in the calculation tables provided by DWR's "Urban Water Management Plan Guidebook 2025" (Guidebook) if sufficient data are reported.

Based on the level of detail available for energy use data, CCWD selected Tables O1-B and O-2 from the Guidebook as the most appropriate option for estimating the energy usage of the water system. The overall energy use for each sub-region was estimated separately given the systems are independent and water cannot be transferred between them. Total energy usage in kilowatt-hours (kWh) was calculated based on billing data from the two power companies that supply power to CCWD: 1) PG&E, and 2) the Calaveras Public Power Agency (CPPA), an organization of in-County agencies formed to serve low-cost electrical energy from New Melones. Billing data from individual meters was assigned to the appropriate sub-region, and then further categorized by water or wastewater service. In cases where kWh usage was not directly reported on energy bills, the kWh was calculated using the total cost and the typical cost per kWh.

CCWD provides wastewater and recycled water services in portions of its service areas as described in **Section 6.6**. The overall volume of wastewater and recycled water were obtained from available wastewater and recycled water meter data. The available data did not include sufficient detail to distinguish recycled water and wastewater energy usage into individual water management processes (collection/conveyance, treatment, and discharge/distribution). For this analysis, all collection/conveyance processes were associated with wastewater. For Subregions A and B, which include some recycled water production, treatment and discharge processes were associated with recycled water. For Subregions C and D, which have no recycled water production, all processes were associated with wastewater.

The following sub-sections summarize total potable water supply energy intensity for each sub- region, as well as wastewater and recycled water energy intensity for each sub-region. The District- wide energy intensity is shown below in **Table 6-28** and **Table 6-29.**

TABLE 6-28: DISTRICT-WIDE ENERGY INTENSITY – TOTAL UTILITY APPROACH (DWR TABLE O-1B)

	Urban Water Supplier Operational Control		
	Sum of All Water Management Processes	**Non-Consequential Hydropower**	
Reporting Period Start Date: 7/1/2024 End Date: 6/30/2025	Total Utility	Hydropower	Net Utility
Volume of Water Entering Process (AF)	5,007	0	5,007
Energy Consumed (kWh)	5,872,560	0	5,872,560
Energy Intensity (kWh/AF)	**1,173**	**0**	**1,173**

TABLE 6-29: DISTRICT-WIDE ENERGY INTENSITY – WASTEWATER & RECYCLED WATER (DWR TABLE O-2)

	Urban Water Supplier Operational Control			
	Water Management Process			
Start Date for Reporting Period: 7/1/2024 End Date: 6/30/2025	Collection / Conveyance	Treatment	Discharge / Distribution	Total
Volume of Wastewater Entering Process (AF)	650	48	37	735
Wastewater Energy Consumed (kWh)	716,985	118,045	0	835,030
Wastewater Energy Intensity (kWh/AF)	**1,103**	**2,459**	**0**	**1,136**
Volume of Recycled Water Entering Process (AF)	NA	602	488	1,090
Recycled Water Energy Consumed (kWh)	NA	3,421,521	371,820	3,793,341
Recycled Water Energy Intensity (kWh/AF)	**NA**	**5,683**	**762**	**3,480**

NOTES: (1) The value "NA" refers to a lack of available data and/or information. (2) Available energy data did not include sufficient detail to distinguish wastewater from recycled water processes. Totals shown here associate all treatment and discharge/distribution processes within Sub-Regions A and B with recycled water. All other processes and Sub-Regions are associated with wastewater.

6.15.2 Sub-Region A – Calaveras River

The overall energy intensity of the Sub-Region A system is summarized in **Table 6-30**. This sub- region includes the Jenny Lind and Sheep Ranch Service Areas. In the Jenny Lind area, energy use includes treatment at the Jenny Lind Water Treatment Plant, as well as distribution. Distribution facilities include two clearwells, six storage tanks, eight booster pumping stations, and 16 pressure- reducing valves. In the Sheep Ranch service area, energy is consumed at the diversion point from San Antonio Creek (for pumping to the treatment plant), treatment at the Sheep Ranch Water Treatment Plant, and the distribution system which includes one storage tank.

TABLE 6-30: SUB-REGION A ENERGY INTENSITY – TOTAL UTILITY APPROACH (DWR TABLE O-1B)

	Urban Water Supplier Operational Control		
	Sum of All Water Management Processes	**Non-Consequential Hydropower**	
Reporting Period Start Date: 7/1/2024 End Date: 6/30/2025	Total Utility	Hydropower	Net Utility
Volume of Water Entering Process (AF)	1,967	0	1,967
Energy Consumed (kWh)	706,676	0	706,676
Energy Intensity (kWh/AF)	**359**	**0**	**359**

Energy intensity of the wastewater services in Sub-Region A is provided in **Table 6-31**. Wastewater energy use includes conveyance and treatment at the La Contenta WWTP. As described in **Section 6.6**, all treated effluent from the La Contenta WWTP is treated to Title 22 standards and applied to the La Contenta Golf Course. Because available data is not sufficiently detailed in order to separate wastewater and recycled water processes, volume and energy use have been reported as overall totals.

TABLE 6-31: SUB-REGION A ENERGY INTENSITY – WASTEWATER & RECYCLED WATER (DWR TABLE O-2)

	Urban Water Supplier Operational Control			
	Water Management Process			
Start Date for Reporting Period: 7/1/2024 End Date: 6/30/2025	Collection/Conveyance	Treatment	Discharge/Distribution	Total
Volume of Wastewater Entering Process (AF)	193	NA	NA	193
Wastewater Energy Consumed (kWh)	229,646	NA	NA	229,646
Wastewater Energy Intensity (kWh/AF)	**1,190**	**NA**	**NA**	**1,190**
Volume of Recycled Water Entering Process (AF)	NA	193	135	328
Recycled Water Energy Consumed (kWh)	NA	2,215,441	15,281	2,230,722
Recycled Water Energy Intensity (kWh/AF)	**NA**	**11,479**	**113**	**6,801**

NOTES: (1) The value "NA" refers to a lack of available data and/or information. (2) Available energy data did not include sufficient detail to distinguish wastewater from recycled water processes. All data for treatment and discharge/distribution processes have been reported as recycled water.

6.15.4 Sub-Region B – Stanislaus River

Table 6-32 summarizes energy intensity of the Sub-Region B system as a whole. This includes energy used in water treatment and distribution processes in the Ebbetts Pass and the Copper Cove/Copperopolis systems. Water for the Ebbetts Pass system is treated at the Hunters Water Treatment Plant, and the distribution system includes 17 storage tanks and 10 pumping stations. The Copper Cove/Copperopolis system includes the Copper Cove Water Treatment Plant, and the distribution system consists of one clearwell, four storage tanks, two booster pumping stations, and pressure reducing valves.

Table 6-33 summarizes the total energy intensity of wastewater processes. Sub-Region B includes five WWTPs (two plants at the Copper Cove Wastewater Treatment and Reclamation Plant, Forest Meadows WWTP, Arnold WWTP, and Douglas Flat/Vallecito WWTF). The sub-region also includes three smaller collection and leach field treatment systems. Energy use includes collection, treatment, and discharge from each of these systems.

Recycled water is produced from Copper Cove Wastewater Reclamation Plant and provided to the adjacent Saddle Creek Golf Course for irrigation. The Forest Meadows WWTP also produces recycled water which is delivered to the Forest Meadows Golf Course. The Douglas Flat/Vallecito WWTF also produces recycled water. Because the available data could not be distinguished between recycled water and wastewater treatment and discharge/distribution, these usages have been reported together as recycled water process totals.

TABLE 6-32: SUB-REGION B ENERGY INTENSITY – TOTAL UTILITY APPROACH (DWR TABLE O-1B)

	Urban Water Supplier Operational Control		
	Sum of All Water Management Processes	**Non-Consequential Hydropower**	
Reporting Period Start Date: 7/1/2024 End Date: 6/30/2025	Total Utility	Hydropower	Net Utility
Volume of Water Entering Process (AF)	2,823	0	2,823
Energy Consumed (kWh)	4,941,203	0	4,941,203
Energy Intensity (kWh/AF)	**1,751**	**0**	**1,751**

TABLE 6-33: SUB-REGION B ENERGY INTENSITY – WASTEWATER & RECYCLED WATER (DWR TABLE O-2)

	Urban Water Supplier Operational Control			
	Water Management Process			
Start Date for Reporting Period: 7/1/2024 End Date: 6/30/2025	Collection/ Conveyance	Treatment	Discharge/ Distribution	Total
Volume of Wastewater Entering Process (AF)	409	NA	NA	409
Wastewater Energy Consumed (kWh)	480,934	NA	NA	480,934
Wastewater Energy Intensity (kWh/AF)	**1,176**	**NA**	**NA**	**1,176**
Volume of Recycled Water Entering Process (AF)	NA	409	353	762
Recycled Water Energy Consumed (kWh)	NA	1,206,080	356,539	1,562,619
Recycled Water Energy Intensity (kWh/AF)	**NA**	**2,949**	**1,010**	**2,051**

NOTES: (1) The value "NA" refers to a lack of available data and/or information. (2) Available energy data did not include sufficient detail to distinguish wastewater from recycled water processes. All data for treatment and discharge/distribution processes have been reported as recycled water.

6.15.6 Sub-Region C – Mokelumne River

The overall energy intensity of water management in Sub-Region C is provided in **Table 6-34**. Energy use for potable water management in Sub-Region C includes treatment at the West Point water treatment plant, and distribution through two tank service zones, which include two clearwells, one storage tank, and two booster pumping stations.

TABLE 6-34: SUB-REGION C ENERGY INTENSITY – TOTAL UTILITY APPROACH (DWR TABLE O-1B)

	Urban Water Supplier Operational Control		
	Sum of All Water Management Processes	**Non-Consequential Hydropower**	
Reporting Period Start Date: 7/1/2024 End Date: 6/30/2025	Total Utility	Hydropower	Net Utility
Volume of Water Entering Process (AF)	152	0	152
Energy Consumed (kWh)	145,366	0	145,366
Energy Intensity (kWh/AF)	**955**	**0**	**955**

Table 6-35 summarizes energy intensity of wastewater processes. Energy use for wastewater services in Sub-Region C is attributable to the collection system, treatment at the West Point WWTP and the Wilseyville Camp WWTP, and disposal through spray field systems. There are no recycled water facilities in Sub-Region C.

TABLE 6-35: SUB-REGION C ENERGY INTENSITY – WASTEWATER & RECYCLED WATER (DWR TABLE O-2)

	Urban Water Supplier Operational Control			
	Water Management Process			
Start Date for Reporting Period: 7/1/2024 End Date: 6/30/2025	Collection/ Conveyance	Treatment	Discharge/ Distribution	Total
Volume of Wastewater Entering Process (AF)	14	14	14	42
Wastewater Energy Consumed (kWh)	2,155	63,560	0	65,715
Wastewater Energy Intensity (kWh/AF)	**154**	**4,540**	**0**	**1,565**
Volume of Recycled Water Entering Process (AF)	NA	NA	NA	NA
Recycled Water Energy Consumed (kWh)	NA	NA	NA	NA
Recycled Water Energy Intensity (kWh/AF)	**NA**	**NA**	**NA**	**NA**
NOTES: (1) The value "NA" refers to a lack of available data and/or information. (2) No recycled water is produced in Sub-Region C.				

6.15.8 Sub-Region D – Groundwater

Energy intensity of water management processes in Sub-Region D is shown in **Table 6-36.** Energy use associated with water supply is attributable to groundwater extraction from two wells, treatment at the Wallace Water Treatment Plant, and the distribution system. The distribution system includes a clearwell, storage tank, and three booster pumps.

TABLE 6-36: SUB-REGION D ENERGY INTENSITY – TOTAL UTILITY APPROACH (DWR TABLE O-1B)

	Urban Water Supplier Operational Control		
	Sum of All Water Management Processes	**Non-Consequential Hydropower**	
Reporting Period Start Date: 7/1/2024 End Date: 6/30/2025	Total Utility	Hydropower	Net Utility
Volume of Water Entering Process (AF)	65	0	65
Energy Consumed (kWh)	79,316	0	79,316
Energy Intensity (kWh/AF)	**1,221**	**0**	**1,221**

Energy intensity of wastewater in the sub-region is included in **Table 6-37.** Energy use associated with wastewater processes is attributable to wastewater collection systems (e.g., lift stations) and wastewater treatment at the Wallace WWTP and the Southworth WWTP, and disposal via spray fields. There is no recycled water produced in Sub-Region D.

TABLE 6-37: SUB-REGION D ENERGY INTENSITY – WASTEWATER & RECYCLED WATER (DWR TABLE O-2)

	Urban Water Supplier Operational Control			
	Water Management Process			
Start Date for Reporting Period: 7/1/2024 End Date: 6/30/2025	Collection/ Conveyance	Treatment	Discharge/ Distribution	Total
Volume of Wastewater Entering Process (AF)	34	34	23	91
Wastewater Energy Consumed (kWh)	4,251	54,485	0	58,736
Wastewater Energy Intensity (kWh/AF)	**125**	**1,603**	**0**	**645**
Volume of Recycled Water Entering Process (AF)	NA	NA	NA	NA
Recycled Water Energy Consumed (kWh)	NA	NA	NA	NA
Recycled Water Energy Intensity (kWh/AF)	**NA**	**NA**	**NA**	**NA**
NOTES: (1) The value "NA" refers to a lack of available data and/or information. (2) No recycled water is produced in Sub-Region C.				

7. SUPPLY RELIABILITY ASSESSMENT

This chapter reviews the reliability of CCWD's water supplies. In general, the District has remained in good standing regarding the availability and security of its water supplies: however, various constraints on supply availability could adversely impact this standing in the future (e.g., climate change and more frequent water shortage conditions).

7.1 CONSTRAINTS ON WATER SOURCES

Many factors could result in constraints on the District's water supply, including limits on the amount of supply available, potential water quality impacts, changing climatic conditions, or a combination of these. Note these factors are also likely to impact surface water, groundwater, and recycled water sources in different and potentially unrelated ways. **Table 7-1** lists the District's sources of water supply and the potential factors that could, generally, constrain the District's available water supply.

TABLE 7-1: FACTORS RESULTING IN INCONSISTENCY OF SUPPLY

Factors	Surface Water	Groundwater	Recycled Water
Limited Quantity (e.g., minimal snowpack, more liquid precipitation runoff)	Hydrologic variation could result in limited storage carryover, either by lack of inflow supply or increased required outflows to account for flood control. Additionally, this variation could lead to minimal flows in key water sources being inadequate for diversions.	Limited surface water supplies have historically caused users to depend more on groundwater. This dependency has caused over-draft (unsustainable) conditions and subsequent permanent lowering of groundwater levels, which has caused wells to go dry for periods of time.	Conservation during water shortage conditions and reduced inflow and infiltration from stormwater could theoretically lead to less wastewater intake, thereby decreasing recycled water availability.
Legal/ Regulatory (e.g., new legislation or SWRCB orders)	In certain dry conditions mandatory curtailments of water rights usage can create inconsistency and impact the reliability of these supplies. Additional legal issues include inconsistent supply availability due to delays in construction, approval of water rights applications/extensions, or required environmental analysis.	There are likely to be several constraints on groundwater use resulting from implementation of the SGMA. CCWD is not a large groundwater user but does overlie a critically over-drafted subbasin, meaning more stringent management to achieve sustainable conditions.	Once permitting for use is acquired there are several monitoring and management requirements to ensure continued use (e.g., Waste Discharge Requirements, Title 22). Additionally, there are often several constraints to obtaining these permits.

Factors	Surface Water	Groundwater	Recycled Water
Environmental (e.g., new legislation, outside legal challenges)	Future changes to instream flow requirements in key rivers and/or changing downstream flow requirements could decrease District surface water supplies by impacting CCWD's ability to divert water (e.g., Bay Delta Water Quality Control Plan Update).	Several questions remain regarding the environmental criteria of SGMA (e.g., requirements for hydro-connectivity of streams and groundwater tables). Depending on outcomes, this could require additional surface water releases and/or groundwater management steps to achieve, all which decreases supply.	Waste Discharge Requirements (WDRs) often set criteria for applications of treated wastewater (e.g., timing, weather conditions, and constraints on use). WDR changes for environmental conditions could further impact recycled water use opportunities.
Water Quality (e.g., changing in- stream quality conditions)	Variable flow of surface water sources can dramatically change the water quality composition from year to year. This can include higher naturally occurring levels of algae or manganese, increased nitrates from local runoff, nutrients, or other constituents, all which create long-term nuisance issues for water supply treatment. Additionally, wildfires and resulting forest biomass issues have caused several issues with water quality in the past.	Groundwater in CCWD's portion of the underlying subbasin has historically not had major water quality issues. However, over-draft conditions could eventually lead to high levels of iron and manganese, nitrates, nutrients, and other constituents associated with agricultural production, common to many other subbasin.	None beyond temporary wastewater treatment plant outages or issues leading to recycled water not meeting water quality requirements for use. This would be resolved by the District as any issues occur.
Climatic (Climate Change)	Climate change threatens the volume nature and timing of precipitation in key watersheds, which dictates the amount of surface water made available to CCWD. It is anticipated a warming climate would decrease average snowpack and induce more frequent and intense drought conditions impacting the reliability and availability of District surface water supplies.	Limited surface water supplies have historically caused users to depend more on groundwater. Climate change impacts threatens to increase landscape and irrigation demands, increasing this dependency. If possible, more runoff from liquid precipitation can be used for conjunctive management efforts	Few climate change impacts are anticipated for recycled water supplies. Changing urban water use under a warmer climate could theoretically after wastewater treatment operations and impact recycled water availability, but the potential impacts remain unclear.

More detailed discussions on the potential constraints on CCWD's water supplies, by sub-region, are included below:

7.1.1 Sub-Region A – Calaveras River

Although not as directly impacted by changes to snowpack hydrology as the other river sources, owing to the watershed originating in lower elevations, the Calaveras River can still be constrained by climate factors (more variable precipitation) and water quality issues (local constituent runoff and wildfires). See Section 6.4.1 for an overview of Calaveras River Watershed conditions. The following discusses the potential impacts of each factor to the District's water supplies from this source.

Calaveras River flows are mostly rain-dependent, which gives it an annual runoff pattern much different than other snowpack-based rivers in the region. Although flows are highly variable with hydrologic year type, the downstream New Hogan Reservoir (New Hogan) provides adequate capture and storage to ensure water supplies are available for the District's Jenny Lind Service Area. So long as agreements with the Stockton East Water District (SEWD), East San Joaquin Water Conservation District, and U.S. Bureau of Reclamation are maintained, there is little risk of curtailments or regulatory concerns impacting the District's Calaveras River water supplies. The tributary San Antonio Creek, used by the Sheep Ranch Service Area (Sheep Ranch), is also highly variable, but the upstream White Pines Lake (White Pines) provides some regulation of flows to this area. Several infrastructural (e.g., sediment buildup, dam conditions) and storage water rights issues, as well as local recreational constraints must be addressed at White Pines in order for the District to continue relying on this system.

Water quality on the Calaveras River is relatively good with routinely anticipated seasonal fluctuations; historical water quality issues and treatability have not impacted the ability to use this supply. The District regularly reviews water quality conditions, and potential threats to the use and treatment of watershed resources, as part of Calaveras River Watershed Sanitary Survey Updates (Calaveras WSS). The Calaveras WSS has been a combined effort from members of the Stanislaus/Calaveras River Group (SCRG), a consortium of water agencies reliant on this resource, including SEWD, Utica Water & Power Authority (UWPA), and other water suppliers. The latest survey was completed in June 2021, with the next 5-year update being prepared for mid-2026 release. . The Calaveras WSS has found that potential impacts to the Calaveras River are mostly naturally occurring, with water quality including increased sediments from runoff, manganese from runoff and low reservoir levels, nutrient loading, and coliform bacteria. Watershed activities that may impact water quality include cattle grazing, which may contribute to the elevated coliform levels, recreation along the river and reservoirs, and wastewater discharges; risk associated with these activities is considered moderate. However, these water quality impacts do not affect supply reliability as they can be mitigated through watershed programs, suitable treatment technology, and supply management. Some additional considerations were also provided, as follows:

- Water quality in this watershed could also be impacted by high levels of iron, manganese, nitrates, nutrients, and other constituents associated with agricultural production.
- The impacts to the Calaveras River Watershed from the 2015 Butte Fire were significant, with over 40% of the total watershed being burned. The Butte Fire was followed by elevated precipitation events, which likely worsened the contaminant loading to waterbodies in the area through increased runoff. Water quality impacts from wildfires include increased turbidity, coliform, E. coli, and total organic carbon levels. Following the Butte Fire, the District implemented a pre-treatment project with cooperation and funding assistance from the Federal Emergency Management Agency (FEMA) and

California Office of Emergency Services to mitigate wildfire-related water quality and biomass issues. The Calaveras River Watershed continues to have a high risk of water quality impacts from wildfires, with nine recorded fires occurring in the watershed during the 2016-2020 survey period. These fires patterns are expected to continue due to more frequent and longer dry periods in the area.

- The Calaveras River near Jenny Lind has had issues with algae atop gravel pack of streambed, especially in dry conditions which reduces intake to the water treatment plant. These issues have been difficult to resolve and often impact system processes, through no impacts on treated water have been observed.

As discussed in more detail in Chapter 6, climatic changes may impact availability of the District's supplies. As a result of the change in amount or timing of precipitation, the operational strategy of New Hogan, specifically related to increased flood control to deal with more liquid precipitation runoff and water storage operations, may be forced to change. To mitigate any potential shortages associated with climatic changes, such as drought, the District has developed a comprehensive Water Shortage Contingency Plan (WSCP), which is discussed in more detail in Chapter 8.

7.1.2 Sub-Region B – Stanislaus River

The Stanislaus River is largely influenced by the volume, nature, and timing of precipitation (snowpack) in the higher elevations of the watershed during the winter months. As discussed in **Section 6.4.2**, this watershed has been heavily developed for water storage and hydropower projects, meaning additional constraints given complex legal and institutional arrangements. This watershed is susceptible to climate change (more variable and liquid precipitation patterns) and water quality issues (local constituent runoff and wildfires). The following discusses the potential impacts of each factor to the District's water supplies from this source.

Although flows are highly variable with hydrologic year type, the District's New Spicer Meadow Reservoir (New Spicer) and downstream New Melones Reservoir (New Melones) provide adequate capture and storage to ensure water supplies are available to regional users. New Spicer releases are generally diverted into the Collierville Tunnel (Tunnel) by the NCPA for non-consumptive hydropower use in the North Fork Stanislaus Hydroelectric Project (North Fork Project). However, stored water supplies are ultimately made available for use in the District's Ebbetts Pass Service Area (Ebbetts Pass) via diversion from the Tunnel, and downstream of New Melones in the Copper Cove/Copperopolis Service Areas (Copper Cove/Copperopolis). There are risks of curtailments or regulatory concerns impacting the District's Stanislaus River water supplies, as imposed by the State Water Resources Control Board (SWRCB) in 2015 during the drought period. CCWD's storage in New Spicer was generally able to provide adequate supplies to meet Ebbetts Pass and Copper Cove/Copperopolis demands.

A series of agreements and water rights reservations dictate the water availability and operations of New Spicer and the North Fork Project by NCPA. SWRCB WR Order No. 97-05 (Order 97-05) and the existing agreement with NCPA limit diversions for consumptive use in Ebbetts Pass to no more than 8,000 AFY. Order 97-05 also authorized the diversion of up to 6,000 AFY from Lake Tulloch to meet the water supply needs of Copper Cove/Copperopolis. Additionally, the District maintains senior (pre-1914) water rights diversion and use reservations for consumptive use downstream of North Fork Project and UWPA hydropower facilities. The District may petition for a change of its permitted rights as necessary to provide sufficient supply to its service areas. The District's agreement with the NCPA related to the North Fork Project, water availability, and operations expires in 2032; at that time, CCWD will need to renegotiate the terms of the agreement. These

complex agreements have generally suited the District's water needs; however, renegotiations, amendments, and extensions could change supply conditions in the future.

Water quality on the Stanislaus River is relatively good; historically, the District has not experienced reliability impacts as a result of poor water quality, owing mostly to its high-elevation snowpack sources. The District regularly reviews water quality conditions, and potential threats to the use and treatment of watershed resources under the Stanislaus River WSS, which is developed in parallel with the aforementioned Calaveras WSS. The Stanislaus WSS has found that potential impacts to water quality include increased loading of sediment, nutrients, and coliform bacteria in runoff. Watershed activities that may impact water quality include cattle grazing, which may contribute to the elevated coliform levels, recreation along the river and reservoirs, pesticide use, mining, and wastewater discharges; risk associated with these activities is considered moderate. These water quality impacts, however, are not expected to affect supply reliability as they can be mitigated through watershed programs, treatment technology, and supply management. Similar to the Calaveras River Watershed, the remote and low-density nature of this heavily forested watershed means the region could also be impacted by water quality constituents as a result of both legal and illegal agricultural productions. Forest biomass from dry condition die-offs, and especially following wildfires, can also cause additional water quality and infrastructure problems for the District.

As discussed in more detail in **Chapter 6**, climatic changes may impact the reliability of the District's Stanislaus River water supply. Should climatic changes affect the timing and volume of flow in the Stanislaus River, the District will implement appropriate portions of its WSCP, included as **Appendix E,** to address potential water shortages.

7.1.3 Sub-Region C - Mokelumne River

The Mokelumne River is also largely influenced by the volume, nature, and timing of precipitation (snowpack) in the higher elevations of the watershed during the winter months. As discussed in **Section 6.4.3**, this watershed has been heavily developed for water storage and hydropower projects, with the major parties being EBMUD and PG&E, respectively. Most EBMUD and PG&E water rights are located on the North Fork of the Mokelumne River, forming the Amador-Calaveras County Line, whereas CCWD and CPUD has most of its facilities and use on the middle and south forks. While there are complex legal and institutional arrangements to ensure adequate operations for all parties, the neighboring Amador Water Agency, and downstream requirements, these are generally cooperative owing to these agencies' collective participation in groups such as the Upper Mokelumne River Watershed Authority (UMRWA). This watershed is susceptible to climate change (more variable and liquid precipitation patterns) and water quality issues (local constituent runoff and wildfires). The following discusses the potential impacts of each factor to the District's water supplies from this source.

The District relies on the tributary Bear Creek and a water purchase agreement with CPUD from the Middle Fork of Mokelumne River to provide supplies to the West Point Service Area (West Point). Although Bear Creek and middle fork flows are highly variable with hydrologic year type, West Point's relatively small amount of water demand has generally not had any issues with adequate supplies. The District has relied on its Bummerville Regulating Reservoir diverted from Bear Creek and access to Schaad's Reservoir supplies by purchase from CPUD to fulfill West Point demands.

The District's jurisdiction in Calaveras County (County) is considered a "County of Origin" for the purposes of obtaining State Filed Applications to surface water rights on the Mokelumne River. More on this topic is provided in **Section 6.4.3**. Given these State Filed Applications, CCWD has the opportunity to secure

additional surface water right(s) which would be critical to future in-County developments along the Mokelumne River, subject to review and assignment by the SWRCB. However, this necessary allocation of historic rights reserved to effectuate County growth and water supply stability is under threat by the California Legislature, who could remove the State Filed Applications status altogether. Additionally, the future availability of these rights is in question due to potential delays in construction or environmental review.

Water quality on the Mokelumne River is relatively good; historically, CCWD has not experienced any impacts on supply reliability due to poor water quality, owing mostly to its high-elevation snowpack sources and relatively small watershed demands. The District regularly reviews water quality conditions, and potential threats to the use and treatment of watershed resources in its Upper Mokelumne River Watershed Sanitary Survey (Upper Moke WSS). The Upper Moke WSS is a combined effort by CCWD and CPUD, reviewing watershed conditions upstream of EBMUD reservoir facilities around County diversions and uses – latest was from 2021, with next five-year update being prepared for mid-2026 release.

The Upper Moke WSS has found that there are legacy contaminants as a result of significant gold, silver, and other mining activities along the river dating back to the mid-1800s. As a result, many of the tributaries and the Mokelumne River are potentially vulnerable to contamination with mercury, copper, zinc, and other contaminants. While other potential impacts to the water quality include increased sediments and nutrients from runoff, these impacts are not expected to affect reliability as they can be mitigated through watershed programs, treatment technology, and supply management. While there is limited agriculture in the area currently, water quality could be impacted in the future by high levels of iron, manganese, nitrates, nutrients, and other constituents associated with both legal and illegal agricultural productions. Potential future septic system failures were identified as a substantial but not imminent threat to water quality. Similar to both the Calaveras and Stanislaus River Watersheds, the Mokelumne River Watershed is also vulnerable to increasingly frequent wildfires. Forest biomass from dry condition die-offs, and especially following wildfires, can also cause water quality and infrastructure problems for the District.

As discussed in more detail in **Chapter 6**, climatic changes may impact the reliability of the District's Mokelumne River water supply. Should climatic changes affect the timing and volume of flow in the Mokelumne River, the District will implement appropriate portions of its WSCP, included as **Appendix E**, to address potential water shortages.

7.1.4 Sub-Region D – Groundwater

Section 6.3 provides an overview of District groundwater consumption in this sub-region, including some of the hydrogeologic review and management efforts by the District. Historical over-use of groundwater from the Eastern San Joaquin Groundwater Subbasin (Subbasin) has resulted in a continuous decline of available groundwater levels and critical over-draft conditions in some areas of the Subbasin. CCWD recognizes that while the worst of these areas are mostly outside of the County to the west, largely due to historically large San Joaquin Valley agricultural demands, the District has an important role in assisting with groundwater management to help achieve sustainability conditions in the Subbasin by 2040 per SGMA guidelines. CCWD is a member of the Eastside San Joaquin Groundwater Sustainability Agency (Eastside GSA) and the Eastern San Joaquin Groundwater Authority (Authority), who manages the local Subbasin and broader coordinated Subbasin issues, respectively. CCWD and the Eastside GSA areas will be expected to continue with groundwater level monitoring, annual SGMA-required reporting, and enacting project and incentives to help achieve Subbasin-wide sustainability. The District anticipates this could mean converting its groundwater-only Wallace Improvement District (Wallace) and County private well owners to surface water sources, likely

the Mokelumne River given the proximity to this source. More work is needed to review and analyze the potential and timing of this conversion.

Surface water constraints have historically increased reliance on groundwater resources to fulfill demands. Given the required sustainability objective of SGMA, it is not clear if the District could be able to turn to groundwater supplies in the event of extreme surface water curtailments or unavailability. This could present opportunities for conjunctive use efforts such as groundwater recharge and storage programs in the County portion of the Subbasin, as a means of 'capturing' runoff for later use. Additional studies are needed to review and assess these opportunities.

7.2 RELIABILITY BY YEAR TYPE

CCWD's drought planning considers water supplies from each source during single dry and multiple dry years as defined below:

- Average Year: Typically, average year is defined as the year that most closely represents the average supply available. For much of its history, the District has not experienced water supply shortage conditions, either through curtailments or low flow conditions, owing to its plentiful water rights. As a result, the average year for some supplies is defined as the upper limit of the permit or contract rights for the particular water supply. This will be noted as appropriate in the following sections.
- Single Dry Year: Defined as the year that represents the lowest water supply available to CCWD, based on historical data.
- Multiple Dry Year: Defined as the period that represents the lowest water supply available to CCWD, based on historical data, applied for a consecutive 5-year period.
- The supply assumed for each year type by sub-region is discussed in further detail in the following sub-sections. District-wide tables are included in **Appendix A.**

7.2.1 Sub-Region A – Calaveras River

Table 7-2 shows the total water supply available in each year type to the District in this sub-region. The average year supply volume is assumed to be the upper limit of the District's New Hogan contractual water allocation combined with the upper limit of its tributary water rights, or 31,665 AFY made available. CCWD's Calaveras River supplies are subject to reductions; however, 7,700 AFY of this right is firm under its New Hogan contract with Reclamation and must be made available in every year type. The District's water rights used in Sheep Ranch are also related to a pre-1914 claim, meaning they are generally not subject to water rights curtailments. Taken together the District's available supply in this sub-region for any dry year is assumed to be 8,437 AFY.

TABLE 7-2: SUB-REGION A – BASIS OF WATER YEAR DATA (DWR TABLE 7-1)

Year Type	Base Year	Available Supplies if Year Type Repeats	
		☐	Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP.
		☑	Quantification of available supplies is provided in this table as either volume only, percent only, or both.
		Volume Available	% of Average Supply
Average Year[1]	2025	31,665	100%
Single-Dry Year[2]	2015	8,437	27%
Multiple-Dry Years 1st Year[2]	2011	8,437	27%
Multiple-Dry Years 2nd Year[2]	2012	8,437	27%
Multiple-Dry Years 3rd Year[2]	2013	8,437	27%
Multiple-Dry Years 4th Year[2]	2014	8,437	27%
Multiple-Dry Years 5th Year[2]	2015	8,437	27%

NOTES: (1) Average year supply is assumed to be the upper limit of the water right and includes supply from New Hogan (via Reclamation contract) and Big Trees Creek (a pre-1914 water diversion and use claim). (2) Available supplies in dry years reflects the amount of supply that CCWD is able to obtain under its New Hogan and Big Trees Creek in every year type.

7.2.2 Sub-Region B – Stanislaus River

Table 7-3 shows the total water supply in each year type to the District in this sub-region. The average year supply volumes are based on the District's storage water rights in New Spicer. This supply was assumed to be available in the first year of a multi-year drought, consistent with the conditions presented in the latest drought period. In subsequent, consecutive dry years, it was assumed that a segment of the District's permitted water rights would be curtailed (as they were in 2014 and 2015) and only water that the District had stored in New Spicer prior to the curtailment would be available to Ebbetts Pass and Copper

Cove/Copperopolis, with some of the pre-1914 reservation to post-North Fork Project and UWPA flows made available to Copper Cove/Copperopolis downstream, depending on in-stream flows. Supplies available during the second, third, fourth, and fifth consecutive dry years was assumed to be the water available in New Spicer reduced by the demands of the prior year, assumed to be equal to the 2025 demand, to represent the District's use of the stored water in times of curtailment. Thus, the District's available supply in this sub-region for the first dry year is assumed to be 76,300 AFY, trending downward over subsequent dry years.

TABLE 7-3: SUB-REGION B – BASIS OF WATER YEAR DATA (DWR TABLE 7-1)

Year Type	Base Year	Available Supplies if Year Type Repeats	
		☐	Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP.
		☑	Quantification of available supplies is provided in this table as either volume only, percent only, or both.
		Volume Available	% of Average Supply
Average Year[1]	2025	70,901	100%
Single-Dry Year[2]	2025	70,715	93%
Multiple-Dry Years 1st Year[3]	2025	76,300	100%
Multiple-Dry Years 2nd Year[3]	2025	70,901	96%
Multiple-Dry Years 3rd Year[3]	2025	68,201	93%
Multiple-Dry Years 4th Year[3]	2025	65,502	89%
Multiple-Dry Years 5th Year[3]	2025	70,901	86%

NOTES: (1) Average year is based on the District's storage right in New Spicer. (2) Single-dry year available supplies are assumed to be consistent with supplies available in the third year of a multi-year drought. (3) The District's ability to directly divert from the Stanislaus River was assumed to be curtailed in the second, third, fourth, and fifth years of a multi-dry year period; available supply was assumed to be the water available in New Spicer reduced by the demands from the prior year (assumed to be 2025 potable demand).

7.2.3 Sub-Region C - Mokelumne River

Table 7-4 shows the total water supply in each year type to the District in this sub-region. The average year supply volume is assumed to be the upper limit of the District's Bear Creek water rights and access to CPUD Schaads Reservoir middle fork water supplies. In 2014, the District received a notice from the SWRCB curtailing CCWD's water right from Bear Creek. During the period of curtailment (2014 and 2015), CCWD relied solely on its CPUD agreement for up to 200 AFY (supported by CPUD's pre-1914 water rights). The analysis below does not consider this possibility for additional water under that arrangement; however, the District is working with CPUD to develop additional projects that could help the District develop Mokelumne River supplies in the County. The District has not yet experienced five consecutive years of curtailment. For this supply planning exercise, the District has assumed that the supply available in the fourth and fifth years of a multiple- dry year scenario would be reduced in alignment with the curtailment pattern observed in the 2011-2015 drought. To be conservative, the District's available supply in this sub-region for any single dry year is assumed to be 200 AFY.

TABLE 7-4: SUB-REGION C – BASIS OF WATER YEAR DATA (DWR TABLE 7-1)

Year Type	Base Year	Available Supplies if Year Type Repeats	
		☐	Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP.
		☑	Quantification of available supplies is provided in this table as either volume only, percent only, or both.
		Volume Available	% of Average Supply
Average Year[1]	2025	2,030	100%
Single-Dry Year	2014	200	10%
Multiple-Dry Years 1st Year	2011	2,030	100%
Multiple-Dry Years 2nd Year	2012	2,030	100%
Multiple-Dry Years 3rd Year	2013	2,030	100%
Multiple-Dry Years 4th Year	2014	200	10%
Multiple-Dry Years 5th Year	2015	200	10%
NOTES: (1) Up to 200 AFY is available for purchase from the CPUD and CCWD's Bear Creek water right allows 1,830 AFY of diversion for a total average year supply of 2,030 AFY.			

7.2.4 Sub-Region D – Groundwater

Table 7-5 shows the total water supply in each year type to the District in this sub-region. Average year supply for the District's groundwater was assumed to be the amount of water supplied to the area in 2025, as historical supplies have been fairly consistent even throughout the last drought period. The supplies available in dry years represent the amount of groundwater supplied in 2015 – largely considered the worst year of the last drought. While it is expected that historical supplies of groundwater will be available in the future, the Subbasin is actively managed by the Eastside GSA and the Authority, likely leading to groundwater management and use changes going forward. CCWD is exploring options to supplement groundwater supplies with surface water to meet Wallace demands and improve water reliability for the area.

TABLE 7-5: SUB-REGION D – BASIS OF WATER YEAR DATA (DWR TABLE 7-1)

Year Type	Base Year	Available Supplies if Year Type Repeats	
		☐	Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP.
		☑	Quantification of available supplies is provided in this table as either volume only, percent only, or both.
		Volume Available	% of Average Supply
Average Year	2025	65	100%
Single-Dry Year	2015	45	69%
Multiple-Dry Years 1st Year[1]	2025	65	100%
Multiple-Dry Years 2nd Year[1]	2025	65	100%
Multiple-Dry Years 3rd Year[1]	2025	65	100%
Multiple-Dry Years 4th Year	2015	45	69%
Multiple-Dry Years 5th Year	2015	45	69%
NOTES: (1) 2025 is used as a base year in years 1-3 of a multiple-dry years period.			

7.3 SUPPLY AND DEMAND ASSESSMENT

This section compares projected water supplies in various hydrologic year types to projected water demands for each sub-region. The demands used for this analysis are presented in **Section 4.2**. For this assessment, non-potable recycled water supply is included in the supply portfolio for all year types and is held constant at current 2025 production volumes. The supply and demand assessment for each sub-region is presented in the following sections; District- wide tables are included in **Appendix A**. The tables provided below show that Sub-Regions A, B, and C generally have sufficient supply to meet demand in every year type through the planning horizon, while Sub-Region D does not have adequate supply to meet demand in a single-dry year and could be experience several issues in the third through fifth years of a multiple year drought. As mentioned above, CCWD recognizes this issue and is exploring options to supplement groundwater supplies

with surface water to meet Sub-Region D demands and improve water reliability for the area (e.g., potential consolidation of Sub-Regions C and D for combined use of Mokelumne River Watershed supplies).

It should be noted that actual CCWD demands could be higher than what is shown herein, potentially resulting in a supply deficit in some or all of the District's sub-regions. For instance, while the specific requirements resulting from SGMA are unknown at this time, CCWD overlies and actively utilizes the Subbasin in northwestern parts of the County. It is anticipated that CCWD could be required to participate in some form of groundwater recharge program to achieve long-term sustainability of the Subbasin, which could increase future demands of surface water for conjunctive use efforts – although this could lead to available groundwater resources in future years. The scope and extent of such efforts remains unclear and was not incorporated into this UWMP.

Furthermore, the demands represented in the following tables do not reflect projected build-out demands including outward expansion of municipal and residential areas (e.g., Jenny Lind and Copper Cove/Copperopolis areas) and the conversion of part-time to full-time residences (in Ebbetts Pass). This build-out is not expected to occur within the planning horizon of this UWMP. However, future build-out demands are expected to be higher than those presented herein, potentially resulting in reductions to the currently positive supply-demand difference.

An additional factor that could impact the supply and demand assessment provided in this section is climate change. While climate change may increase outdoor irrigation and agricultural demands due to increased temperatures and evapotranspiration rates, the more significant expected impact will likely be a decrease in the amount of surface water supply available to the District in all years, as explained above. This section assumes reduced availability of surface water supplies based on historic observed hydrology, reflecting experienced dry years and the latest drought period. Should climate change significantly impact supply availability in the future, the District and state could experience an unprecedented dry year and/or more intense drought period. The resulting supply shortfall in some sub-regions, particularly when coupled with groundwater recharge demand and build-out demands would presumably impact the District's ability to meet water demands with available supplies in ways not contemplated herein. The anticipated effects of climate change on District supplies and demands are further discussed in **Section 6.11** and **Section 4.6**, respectively.

7.3.1 Sub-Region A – Calaveras River

Table 7-6, Table 7-7 and **Table 7-8** present the supply and demand assessment for the District's Sub-Region A supply. As described above, the demands included in the following tables do not reflect potential groundwater recharge demands or build-out demand. As a result, the District's actual future demands on its Calaveras River supply could be higher than what is presented here.

TABLE 7-6: SUB-REGION A – NORMAL YEAR SUPPLY AND DEMAND COMPARISON (DWR TABLE 7-2)

	2030	2035	2040	2045	2050
Supply Totals	31,800	31,800	31,800	31,800	31,800
Demand Totals	3,182	3,092	3,001	2,907	2,865
Difference	28,618	28,708	28,799	28,893	28,935
NOTES: Recycled water is included in both supply and demand total.					

TABLE 7-7: SUB-REGION A – SINGLE-DRY YEAR SUPPLY AND DEMAND COMPARISON (DWR TABLE 7-3)

	2030	2035	2040	2045	2050
Supply Totals	8,572	8,572	8,572	8,572	8,572
Demand Totals	3,182	3,092	3,001	2,907	2,865
Difference	5,390	5,480	5,571	5,665	5,707
NOTES: Recycled water is included in both supply and demand total.					

TABLE 7-8: SUB-REGION A - MULTIPLE DRY YEAR SUPPLY AND DEMAND COMPARISON (DWR TABLE 7-4)

		2030	2035	2040	2045	2050
First Year	Supply Totals	8,572	8,572	8,572	8,572	8,572
	Demand Totals	3,182	3,092	3,001	2,907	2,865
	Difference	5,390	5,480	5,571	5,665	5,707
Second Year	Supply Totals	8,572	8,572	8,572	8,572	8,572
	Demand Totals	3,182	3,092	3,001	2,907	2,865
	Difference	5,390	5,480	5,571	5,665	5,707
Third Year	Supply Totals	8,572	8,572	8,572	8,572	8,572
	Demand Totals	3,182	3,092	3,001	2,907	2,865
	Difference	5,390	5,480	5,571	5,665	5,707
Fourth Year	Supply Totals	8,572	8,572	8,572	8,572	8,572
	Demand Totals	3,182	3,092	3,001	2,907	2,865
	Difference	5,390	5,480	5,571	5,665	5,707
Fifth Year	Supply Totals	8,572	8,572	8,572	8,572	8,572
	Demand Totals	3,182	3,092	3,001	2,907	2,865
	Difference	5,390	5,480	5,571	5,665	5,707
NOTES: Recycled water is included in both supply and demand total.						

7.3.2 Sub-Region B – Stanislaus River

Table 7-9, Table 7-10 and **Table 7-11** present the supply and demand assessment for the District's Sub-Region B supply. As described above, the demands included in the following tables do not reflect potential

groundwater recharge demands or build-out demand. As a result, the District's actual future demands on its Stanislaus River supply could be higher than what is presented here.

TABLE 7-9: SUB-REGION B – NORMAL YEAR SUPPLY AND DEMAND COMPARISON (DWR TABLE 7-2)

	2030	2035	2040	2045	2050
Supply Totals	76,653	76,653	76,653	76,653	76,653
Demand Totals	3,234	3,111	2,988	2,859	2,798
Difference	73,419	73,542	73,665	73,794	73,855
NOTES: Recycled water is included in both supply and demand total.					

TABLE 7-10: SUB-REGION B – SINGLE-DRY YEAR SUPPLY AND DEMAND COMPARISON (DWR TABLE 7-3)

	2030	2035	2040	2045	2050
Supply Totals	71,254	71,254	71,254	71,254	71,254
Demand Totals	3,234	3,111	2,988	2,859	2,798
Difference	68,019	68,143	68,266	68,395	68,456
NOTES: Recycled water is included in both supply and demand total.					

TABLE 7-11: SUB-REGION B - MULTIPLE DRY YEAR SUPPLY AND DEMAND COMPARISON (DWR TABLE 7-4)

		2030	2035	2040	2045	2050
First Year	Supply Totals	76,653	76,653	76,653	76,653	76,653
	Demand Totals	3,234	3,111	2,988	2,859	2,798
	Difference	73,419	73,542	73,665	73,794	73,855
Second Year	Supply Totals	73,953	73,953	73,953	73,953	73,953
	Demand Totals	3,234	3,111	2,988	2,859	2,798
	Difference	70,719	70,843	70,966	71,094	71,156
Third Year	Supply Totals	71,254	71,254	71,254	71,254	71,254
	Demand Totals	3,234	3,111	2,988	2,859	2,798
	Difference	68,019	68,143	68,266	68,395	68,456
Fourth Year	Supply Totals	68,554	68,554	68,554	68,554	68,554
	Demand Totals	3,234	3,111	2,988	2,859	2,798
	Difference	65,320	65,444	65,567	65,695	65,756
Fifth Year	Supply Totals	65,855	65,855	65,855	65,855	65,855
	Demand Totals	3,234	3,111	2,988	2,859	2,798
	Difference	62,620	62,744	62,867	62,996	63,057
NOTES: Recycled water is included in both supply and demand total.						

7.3.3 Sub-Region C – Mokelumne River

Table 7-12, Table 7-13 and **Table 7-14** present the supply and demand assessment for the District's Sub-Region C supply. As described above, the demands included in the following tables do not reflect potential groundwater recharge demands or build-out demand. As a result, the District's actual future demands on its Mokelumne River supply could be higher than what is presented here.

TABLE 7-12: SUB-REGION C - NORMAL YEAR SUPPLY AND DEMAND COMPARISON (DWR TABLE 7-2)

	2030	2035	2040	2045	2050
Supply Totals[1]	2,030	2,030	2,030	2,030	2,030
Demand Totals	144	139	134	129	126
Difference	1,886	1,891	1,896	1,901	1,904

NOTES: (1) Includes 200 AFY of Middle Fork Mokelumne River water available for purchase from CPUD, per contract.

TABLE 7-13: SUB-REGION C – SINGLE-DRY YEAR SUPPLY AND DEMAND COMPARISON (DWR TABLE 7-3)

	2030	2035	2040	2045	2050
Supply Totals[1]	200	200	200	200	200
Demand Totals	144	139	134	129	126
Difference	56	61	66	71	74

NOTES: (1) Includes 200 AFY of Middle Fork Mokelumne River water available for purchase from CPUD, per contract.

TABLE 7-14: SUB-REGION C - MULTIPLE DRY YEAR SUPPLY AND DEMAND COMPARISON (DWR TABLE 7-4)

		2030	2035	2040	2045	2050
First Year	Supply Totals	2,030	2,030	2,030	2,030	2,030
	Demand Totals	144	139	134	129	126
	Difference	1,886	1,891	1,896	1,901	1,904
Second Year	Supply Totals	2,030	2,030	2,030	2,030	2,030
	Demand Totals	144	139	134	129	126
	Difference	1,886	1,891	1,896	1,901	1,904
Third Year	Supply Totals	2,030	2,030	2,030	2,030	2,030
	Demand Totals	144	139	134	129	126
	Difference	1,886	1,891	1,896	1,901	1,904
Fourth Year	Supply Totals	200	200	200	200	200
	Demand Totals	144	139	134	129	126
	Difference	56	61	66	71	74
Fifth Year	Supply Totals	200	200	200	200	200
	Demand Totals	144	139	134	129	126
	Difference	56	61	66	71	74

NOTES: (1) Supply totals include 200 AFY of Middle Fork Mokelumne River water available for purchase from CPUD, per contract.

7.3.5 Sub-Region D – Groundwater

Table 7-15, Table 7-16, and **Table 7-17** present the supply and demand assessment for the District's Sub-Region D supply. As described above, the demands included in the following tables do not reflect build-out demand. As a result, the District's actual future demands in this sub-region could be higher than what is presented here. Currently, groundwater is the only source for Sub-Region D; however, the District is exploring options to increase supply reliability in the region by meeting a portion of demands with surface water.

TABLE 7-15: SUB-REGION D – NORMAL YEAR SUPPLY AND DEMAND COMPARISON (DWR TABLE 7-2)

	2030	2035	2040	2045	2050
Supply totals[1]	65	65	65	65	65
Demand totals	62	58	54	54	52
Difference	3	7	11	11	13
NOTES: (1) CCWD is exploring options to supplement groundwater supplies with surface water to meet Wallace Lake Estates demands and improve reliability.					

TABLE 7-16: SUB-REGION D – SINGLE-DRY YEAR SUPPLY AND DEMAND COMPARISON (DWR TABLE 7-3)

	2030	2035	2040	2045	2050
Supply totals	45	45	45	45	45
Demand totals	62	58	54	54	52
Difference[1]	-17	-13	-9	-9	-7
NOTES: (1) CCWD is exploring options to supplement groundwater supplies with surface water to meet Wallace Lake Estates demands and improve reliability. The District intends that the difference noted here will be met with surface water and increased conservation associated with implementation of its Water Shortage Contingency Plan, included as Appendix E.					

TABLE 7-17: SUB-REGION D - MULTIPLE DRY YEAR SUPPLY AND DEMAND COMPARISON (DWR TABLE 7-4)

		2030	2035	2040	2045	2050
First Year	Supply Totals	65	65	65	65	65
	Demand Totals	62	58	54	54	52
	Difference	3	7	11	11	13
Second Year	Supply Totals	65	65	65	65	65
	Demand Totals	62	58	54	54	52
	Difference	3	7	11	11	13
Third Year	Supply Totals	65	65	65	65	65
	Demand Totals	62	58	54	54	52
	Difference[1]	3	7	11	11	13
Fourth Year	Supply Totals	45	45	45	45	45
	Demand Totals	62	58	54	54	52
	Difference[1]	-17	-13	-9	-9	-7
Fifth Year	Supply Totals	45	45	45	45	45
	Demand Totals	62	58	54	54	52
	Difference[1]	-17	-13	-9	-9	-7

NOTES: (1) CCWD is exploring options to supplement groundwater supplies with surface water to meet Wallace Lake Estates demands and improve reliability. The District intends that the difference noted here will be met with surface water and increased conservation as a result of implementing the Water Shortage Contingency Plan, included as Appendix E.

7.5 DROUGHT RISK ASSESSMENT

Drought Risk Assessment (DRA) is a requirement per the Act, contained under California Water Code §10635(b). The DRA is intended to provide a description for the data, methodology, and basis for one or more supply shortage conditions that are necessary to conduct and assessment for a drought period lasting five consecutive water years. The District's DRA contained herein was developed in conjunction with the WSCP, provided in **Appendix E**, to evaluate the reliability of each supply source under a long-term drought. This analysis was also considered in the evaluation of future demand management measures and water supply projects.

The goal of this evaluation is to help identify undesired risks and allow for proactive steps to be taken prior to the next long-term drought. The DRA can be modified or updated on an interim cycle, as needed, to allow for the incorporation of new information as it becomes available or in the event of unforeseen circumstances.

7.5.1 Data and Methodology

Per Act requirements, the DRA is based on the five driest consecutive years on record. The historical period used in this analysis is the period from 2011 to 2015[1], corresponding with the lowest precipitation years for Calaveras County and some of the worst hydrology years of the latest state- wide drought period. As needed, this period has been modified for individual service areas to consider a scenario that corresponds to the lowest historical surface water supply based on historical curtailments and other restrictions (to reflect differences in watershed hydrology between sources). The DRA for all sub-regions use these 2011-2015 supply data, but for Sub-Regions B and C has been modified to account for hydrologic differences. For this analysis, non-potable recycled water supplies are held constant at current 2025 production volumes. Data used to calculate CCWD's projected supply capabilities under the scenario of five consecutive dry years are further discussed in Chapters 4 and 6. These data are detailed for each sub-region below in **Table 7-18** through **Table 7-21**, and District-wide tables are included in **Appendix A**. Projected demands were calculated by linearly interpolating from 2025 demands to the projected 2030 demands previously reported in this UWMP(see methodology outlined in Chapter 4).

7.5.2 Sub-Region A – Calaveras River

CCWD anticipates adequate available water supplies in Sub-Region A in all five years of a drought, owing to New Hogan agreements and senior water rights used for Sheep Ranch, and would generally have enough supply to meet increased demands. Based on the analysis shown in **Table 7-18**, CCWD is able to meet its water demands in all five years and, therefore, actions under the WSCP would not be required.

7.5.3 Sub-Region B – Stanislaus River

CCWD anticipates adequate available water supplies in Sub-Region B in all five years of a drought, owing to stored water supplies in New Spicer, and would have enough supply to meet increased demands. Based on

[1] Based on data obtained from the Western Region Climate Center, New Melones Dam HQ monitoring station (046174), from 1992 to 2025. Precipitation data are taken from the Calaveras Big Trees State Park monitoring station (041277), which is more representative of the higher elevation service areas (Ebbetts Pass, Sheep Ranch, and West Point), however, station data was not available for years 2011-2013, and therefore data collected from this station was not used to evaluate the five driest consecutive years on record.

the analysis shown in **Table 7-19**, CCWD is able to meet its water demands in all five years and therefore, actions under the WSCP would not be required.

7.5.4 Sub-Region C – Mokelumne River

CCWD anticipates adequate available water supplies in Sub-Region C in all five years of a drought, owing to District Bear Creek resources and CPUD Schaads Reservoir water availability, and would have enough supply to meet increased demands. Based on the analysis shown in **Table 7-20** CCWD is able to meet its water demands in all five years and therefore, actions under the WSCP would not be required.

TABLE 7-18: SUB-REGION A – FIVE-YEAR DROUGHT RISK ASSESSMENT TABLE TO ADDRESS WATER CODE SECTION 10635(B) (DWR TABLE 7-5)

2026		Total
Total Water Use	(AF)	3,213
Total Supplies	(AF)	8,572
Surplus/Shortfall w/o WSCP Action		5,359
2027		**Total**
Total Water Use	(AF)	3,205
Total Supplies	(AF)	8,572
Surplus/Shortfall w/o WSCP Action		5,367
2028		**Total**
Total Water Use	(AF)	3,198
Total Supplies	(AF)	8,572
Surplus/Shortfall w/o WSCP Action		5,374
2029		**Total**
Total Water Use	(AF)	3,190
Total Supplies	(AF)	8,572
Surplus/Shortfall w/o WSCP Action		5,382
2030		**Total**
Total Water Use	(AF)	3,182
Total Supplies	(AF)	8,572
Surplus/Shortfall w/o WSCP Action		5,390
NOTES: Recycled water is included in both supply and demand totals.		

TABLE 7-19: SUB-REGION B – FIVE-YEAR DROUGHT RISK ASSESSMENT TABLE TO ADDRESS WATER CODE SECTION 10635(B) (DWR TABLE 7-5)

2026		Total
Total Water Use	(AF)	3,264
Total Supplies	(AF)	76,653
Surplus/Shortfall w/o WSCP Action		73,389
2027		**Total**
Total Water Use	(AF)	3,257
Total Supplies	(AF)	73,953
Surplus/Shortfall w/o WSCP Action		70,696
2028		**Total**
Total Water Use	(AF)	3,249
Total Supplies	(AF)	71,254
Surplus/Shortfall w/o WSCP Action		68,005
2029		**Total**
Total Water Use	(AF)	3,241
Total Supplies	(AF)	68,554
Surplus/Shortfall w/o WSCP Action		65,313
2030		**Total**
Total Water Use	(AF)	3,234
Total Supplies	(AF)	65,855
Surplus/Shortfall w/o WSCP Action		62,621
NOTES: Recycled water is included in both supply and demand totals.		

TABLE 7-20: SUB-REGION C – FIVE-YEAR DROUGHT RISK ASSESSMENT TABLE TO ADDRESS WATER CODE SECTION 10635(B) (DWR TABLE 7-5)

2026		Total
Total Water Use	(AF)	146
Total Supplies	(AF)	2,030
Surplus/Shortfall w/o WSCP Action		1,884
2027		**Total**
Total Water Use	(AF)	145
Total Supplies	(AF)	2,030
Surplus/Shortfall w/o WSCP Action		1,885
2028		**Total**
Total Water Use	(AF)	145
Total Supplies	(AF)	2,030
Surplus/Shortfall w/o WSCP Action		1,885
2029		**Total**
Total Water Use	(AF)	144
Total Supplies	(AF)	200
Surplus/Shortfall w/o WSCP Action		56
2030		**Total**
Total Water Use	(AF)	144
Total Water Use	(AF)	200
Surplus/Shortfall w/o WSCP Action		56

7.5.6 Sub-Region D – Groundwater

CCWD anticipates a deficit of water supplies in Sub-Region D in the fourth and fifth years of a drought for this groundwater-dependent area. Based on the analysis shown in **Table 7-21,** CCWD would need to implement its WSCP to make up the deficit in those years. Note however that the District may look to apply any WSCP actions, conservation notices, and customer curtailments across all service areas at its discretion, as described in the WSCP and at the discretion of the CCWD Board of Directors.

TABLE 7-21: SUB-REGION D – FIVE-YEAR DROUGHT RISK ASSESSMENT TABLE TO ADDRESS WATER CODE SECTION 10635(B) (DWR TABLE 7-5)

2026		Total
Total Water Use	(AF)	62
Total Supplies	(AF)	65
Surplus/Shortfall w/o WSCP Action		3
OPTIONAL Planned WSCP Actions (use reduction and supply augmentation)		
WSCP - supply augmentation benefit	(AF)	0
WSCP - use reduction savings benefit	(AF)	0
Revised Surplus/(shortfall)		3
2027		**Total**
Total Water Use	(AF)	62
Total Supplies	(AF)	65
Surplus/Shortfall w/o WSCP Action		3
OPTIONAL Planned WSCP Actions (use reduction and supply augmentation)		
WSCP - supply augmentation benefit	(AF)	0
WSCP - use reduction savings benefit	(AF)	0
Revised Surplus/(shortfall)		3
2028		**Total**
Total Water Use	(AF)	62
Total Supplies	(AF)	65
Surplus/Shortfall w/o WSCP Action		3
OPTIONAL Planned WSCP Actions (use reduction and supply augmentation)		
WSCP - supply augmentation benefit	(AF)	0
WSCP - use reduction savings benefit	(AF)	0
Revised Surplus/(shortfall)		3
2029		**Total**
Total Water Use	(AF)	62
Total Supplies	(AF)	45
Surplus/Shortfall w/o WSCP Action		-17
OPTIONAL Planned WSCP Actions (use reduction and supply augmentation)		
WSCP - supply augmentation benefit	(AF)	0
WSCP - use reduction savings benefit	(AF)	17
Revised Surplus/(shortfall)		0

2030		Total
Total Water Use	(AF)	62
Total Supplies	(AF)	45
Surplus/Shortfall w/o WSCP Action		-17
OPTIONAL Planned WSCP Actions (use reduction and supply augmentation)		
WSCP - supply augmentation benefit	(AF)	0
WSCP - use reduction savings benefit	(AF)	17
Revised Surplus/(shortfall)		0

7.6 REGIONAL SUPPLY RELIABILITY

As described in **Section 2.2**, the District participates in several regional planning activities owing to its reliance on multiple key watersheds and a shared groundwater basin. CCWD has supported responsible water supply reliability projects in-County and through efforts such as the IRWM Program, UMRWA, and the Eastside GSA. Several projects through IRWM, funded by state grants, and other efforts have directly led to improved water supply reliability (e.g., Douglas Flat/Vallecito recycled water opportunities).

The District has investigated opportunities to use its water supplies to provide water to areas of the County not currently serviced by any water supplier, including tribes and areas classified as economically disadvantaged and underrepresented ("Disadvantaged Communities" or "DACs"), and those water users vulnerable to groundwater reliance concerns or other risks. Examples of future projects are listed in **Section 6.9**. There are several legal, institutional, and regulatory hurdles to making these supplies available, but the District is committed to using its water resources to the benefit of its customers and to Calaveras County.

CCWD is also evaluating conjunctive use, water transfer, and exchange opportunities to facilitate regional and inter-regional partnerships and improve broader water supply reliability. The District recognizes the interconnectedness of its watersheds to downstream users and key state water supply systems, such as the California State Water Project (SWP) and Central Valley Project (CVP). Where practicable and reasonable, CCWD anticipates pursuing these types of activities as allowed under its permitted water rights and per SGMA guidelines.

Much work still needs to be done to facilitate positive regional and inter-regional partnerships to improve system-wide water supply reliability, especially during dry years, achieve water conservation targets, and to establish the strategic use of water supplies for the most reasonable and beneficial purposes. As part of its water management efforts, CCWD maintains this UWMP and related analyses (supply reliability assessments, DRAs), has developed a detailed WSCP (included as **Appendix E**), and is continually preparing to manage its supplies and demands to ensure high quality and consistently reliable water supplies in its part of California.

8. WATER SHORTAGE CONTINGENCY PLANNING

The Urban Water Management Planning Act requires that each water supplier provide a Water Shortage Contingency Plan (WSCP) that outlines how the supplier will prepare for and respond to water shortages. The Calaveras County Water District's WSCP is included as **Appendix E.**

9. DEMAND MANAGEMENT MEASURES

The unpredictable year-to-year variability in the volume, nature, and timing of precipitation in California often results in significant challenges for water supply managers. Combined with the ever- increasing water demands from urban and agricultural users and given the need to recognize and avoid environmental impacts while preparing for more erratic conditions under climate change, California's water suppliers must take action to avoid potential vulnerabilities and adverse shortage conditions. In a coordinated effort by the California DWR, water utilities, environmental organizations, and other interested groups, a list of DMMs or Best Management Practices (BMPs) for conserving water were developed to better prepare for future uncertainties. These measures were conceptualized for California's agricultural and urban sectors, but the DMMs and BMPs explored in this document focus only on CCWD's urban water demands.

The following sections provide a comprehensive review of the DMMs in the context of Calaveras County (County) water demands and a description of the District's water conservation programs currently being implemented, along with consideration of programs planned for future implementation.

9.1 MEASURES OVERVIEW

The District continues to view water conservation as an integral part of its County-wide water resource stewardship responsibility. CCWD has implemented several DMMs such as:

- leak detection and repair system through a mobile maintenance management system
- 100-percent metered service with automatic meter reading (AMR) and advanced metering infrastructure (AMI)
- metered rates for multiple water use types
- public information initiatives and educational outreach programs
- water waste prohibitions.

The District has also worked to expand its water conservation program to achieve the largest water savings while ensuring water use equity in the diverse service areas. However, due to the rural nature of the County, diversity in climate, soils, elevation, and geography, and relatively small and dispersed rural population with a large fraction of low-income housing, the District is reaching a point where DMM affordability is decreasing. Nevertheless, the District remains committed to conservation by exploring cost-effective options to meet DMM requirements and the state's future water use objectives. The following sections generally describe CCWD's implementation of the DMMs.

9.1.1 Water Waste Prevention Ordinance

The California Constitution Article X, Section 2, requires that the water resources of the State be put "to beneficial use to the fullest extent of which they are capable, and that the waste or unreasonable use or unreasonable method of use of water be prevented." As such, the District is bound to pursue the most beneficial and reasonable use of its water rights and supplies in a manner that avoids either wasteful actions or uses or both. In recognition of this requirement, the District maintains a strict policy that prohibits wasting water by its customers or by users within the County outside of other supplier jurisdiction(s). Article II, Section 16 of the CCWD Board of Directors (Board) Policy is as follows:

Consumer's Negligence or Wasteful Use of Water
Where negligent or wasteful use of water exists on a customer's premises, seriously affecting the general service, the District may discontinue the service if such conditions are not corrected within 5 days after giving customer written notice of intent to do so.

In July 2010, the District passed Ordinance 2010-02, which updated the Board policy to comply with AB 1420 requirements. AB 1420 (2007) amended the Urban Water Management Planning Act so that the eligibility of an agency for any water management funding be conditioned on the implementation of the DMM's described in the California Water Code (CWC). The District's Ordinance 2010-02 is included in **Appendix F.**

9.1.2 Metering

All connections within the District are currently (volumetric use) metered and the District requires that all new connections be metered. In 2020 the District began the process to convert nearly all meters to an automatic meter reading (AMR) and advanced metering infrastructure (AMI). The conversion of District meters to radio read meters including all software integration was completed in February 2025. Less than 1 percent of the District meters are still manually read by qualified CCWD staff every other month for the District's bimonthly billing schedule. The manually read meters are generally non-residential water uses. The District requires dedicated outdoor irrigation meters for commercial and multi-family developments.

Advanced Metering Infrastructure (AMI)

The District completed converting over 13,200 analog meters throughout the District to an advanced fixed network, AMI system. The construction phase started in February 2021 and became fully operational – including software integration – in February 2025. The new AMI digital metering transmits end usage data to CCWD through a wireless network, allowing the District to monitor real-time data usage. In addition, the District utilizes the AMI system to facilitate the detection of potential leaks, broken infrastructure, system flow, and pressure issues. Customers can access their water usage data in real-time by accessing their personal water usage account portal. As a result, the accessibility of data allows customers to set water usage alerts and visualize their water usage habits to encourage water conservation practices. The new AMI system allows CCWD operations staff to avoid current geographic and climate variability issues which have prevented accurate manual meter reads in the past, most notably the inaccessibility to meters due to snow cover in winter months. For more information regarding the AMI system, visit: www.ccwd.org/your-meter.%20https://www.ccwd.org/advanced-metering-infrastructure-ami-project.

9.1.3 Conservation Pricing

CCWD bills its customers bimonthly using standardized, District-wide base rates plus volumetric charges. Since 2007, the District has maintained a tiered volumetric rate structure that reflects the increased cost of high water consumption. The base rate charge for all customers is determined by the size of a customer's meter (i.e., inflow pipe diameter, typically 1 inch or smaller). In addition, a water usage rate charge applies for each 100 cubic feet (cf) of water used, based on customer (sector) type. Residential customers who use more than 1,500 cf during a single billing period are charged higher rates based on the tiered rate structure. The current rates are discussed in **Section 9.2.3**, with the latest rate information available online at: https://www.ccwd.org/water-wastewater-rates.

9.1.4 Public Education and Outreach

The District's public education and outreach efforts are led by CCWD's External Affairs Department. News and other notices are made public on CCWD's website (at https://www.ccwd.org/news-announcements), which alerts local and regional news outlets, and direct mailers, automated phone calls, and other publicly posted materials at local points of interest are also provided, as needed. During emergencies, the District continuously notifies affected customers directly through automated Interactive Voice Response (IVR) phone messages, text messages and emails as new information is available. The District also maintains online social network profiles to inform customers of outages and other emergencies, as well as encourage public engagement, via the following social media outlets:

Facebook	https://www.facebook.com/calaveraswaterdistrict
Twitter	https://www.twitter.com/CCWDnews
YouTube	https://www.youtube.com/channel/UCpm_GPcwyWnYNqDZs_DKk-Q (used to post videos including Board meeting recordings)

Additional information regarding District public outreach and awareness campaigns related to water conservation promotion and the DMMs is provided below:

Public Outreach

The District maintains direct and continuous outreach efforts focused on educating the public on water conservation and water awareness. Community understanding of these topics are vital to protecting water supplies while meeting the District's growing water needs. As such, dissemination of educational materials to the public is an integral part of the District's commitment to efficient water use practices. CCWD regularly works with the public, other County agencies, and regional partners to educate the community about the importance of preserving water resources for all generations.

For instance, in January 2024 the District launched a customer portal that all metered water users can access, linked at https://www.ccwd.org/customer-portal. The CCWD customer portal is designed to provide water users with convenient and comprehensive access to billing information, water usage data, and account information. The District's website also features conservation tips, frequently asked water supply and use questions, general water efficiency information, and links to state and federal conservation efforts, e.g.,: https://www.ccwd.org/water-use-efficiency.

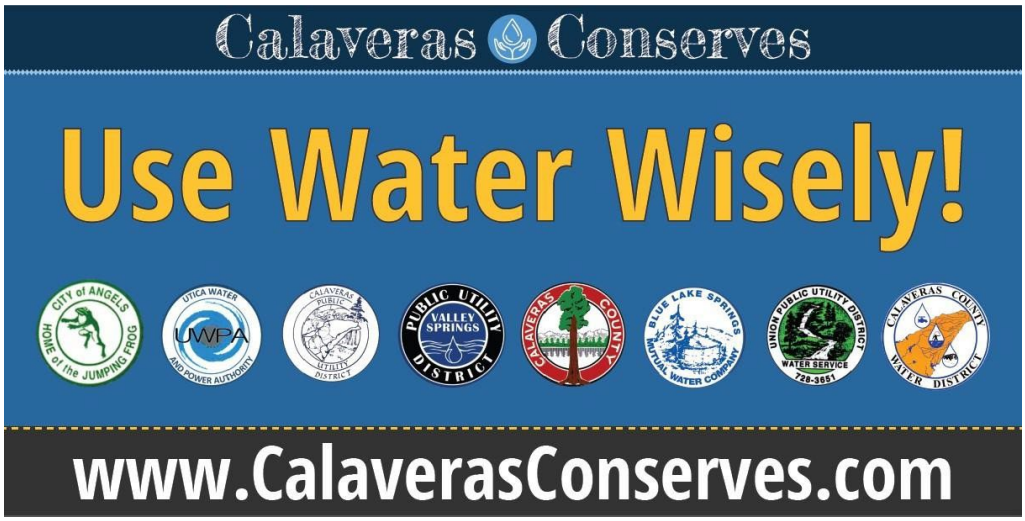
The District's customer service staff performs regular manual monthly analyses of customer water usage from metering data, comparing current usage data historical consumption. Customers showing unusually high usage in any given billing period are contacted to discuss excessive use and/or alerted to the possibility of a water leak. As a courtesy, if CCWD staff has reason to believe there is an active leak at a property, the customer's main shutoff valve can be turned off to prevent water waste and the customer is notified. CCWD's field service personnel routinely respond to customer complaints and unusual circumstances involving high water usage.

Calaveras Conserves

One of the District's most effective joint efforts during droughts is "Calaveras Conserves," a County-wide conservation-minded group (CC Group) which included every major water supplier in the County. Formed in 2015, the CC Group members have pooled funds to print hundreds of road signs reading "Use Water

Wisely" (see **Figure 9-1**), which have been placed in prominent locations along major roadways throughout the County. The CC Group also collaborated to create a website where county residents could find mandatory water conservation restrictions for every County water supplier in one convenient resource. Additionally, the group supported informational displays at local events, such as the annual Calaveras County Fair and Jumping Frog Jubilee, and guest lectures at local offices and schools. The CC Group effectively disbands after a drought but maintains the resources to meet again when the next drought occurs to jointly promote County water conservation practices.

FIGURE 9-1: CALAVERAS CONSERVES SIGN



School Education

The District's External Affairs Manager coordinates with the Calaveras County Superintendent of Schools to periodically arrange classroom presentations throughout the County for a range of grade levels and audiences. All schools within the County have an open invitation to ask CCWD to make in- class presentations, which usually consist of information about the water cycle, where County water comes from, drought conditions, watershed and environmental resources, and water conservation programs and efforts. The public can request staff presentation(s) by contacting the District at: https://www.ccwd.org/contact-us..

Each year, the District offers four scholarships to graduating high school seniors at two local high schools. These funds are intended to be used towards college tuition and fees. These scholarships are awarded to students who write the best essays addressing the topics of water resources in the County, drought and water conservation. Often times, the awardees have majored in Science, Technology, Engineering, and Mathematics (STEM) focused disciplines.

Stewardship Through Education

CCWD, via involvement in the Upper Mokelumne River Watershed Authority (UMRWA), has financially supported Stewardship Through Education, LLC. (STE) an organization focused on promoting "youth stewardship" of watersheds through coordinated programs and activities related to natural resources management. To date, STE has developed a network of industry professionals, education consultants, naturalists, and tribal specialists addressing key resource issues in the County and in neighboring Amador and Alpine Counties. More information about STE's "Stewards of Watershed", "Classroom Aquarium

Education", and "Watershed Alive!" outdoor K-12 education opportunities can be found at: https://www.steonline.org/.

9.1.5 Programs to Assess and Manage Distribution System Real Loss

District operations staff perform regular inspection and maintenance of water distribution systems in order to detect and repair leaks. The District also operates an online Mobile Maintenance Management System (Mobile MMS) that receives and manages requests and notices for services and repairs. The Mobile MMS system allows District water users or District staff to issue service requests, facilitate water quality complaints, and manage work orders.

Treated water data are also recorded on a daily basis at each of the Districts water treatment plants. CCWD is unique in that the service areas are effectively "closed systems" with no return flows to downstream users (i.e., District intakes water supplies at treatment plants, distributes to customers, then collects some wastewater applied to spray-fields rather than returned to source waterways). As such, these inspections and data are generally able to highlight dramatic changes which indicate potential issues and problem areas. The District also regularly compares production to sales records to identify water loss within the distribution system and assist in customer leak detection. Customers are immediately contacted if a leak or other water loss issue is suspected.

AWWA Water Audits

California Senate Bill (SB) 555 from 2015 requires all urban retail water suppliers to submit water loss audits to the state each year, using the American Water Works Association's (AWWA) Water Audit software (Software) to assess system losses via supply and customer water consumption data. This requirement only applies to suppliers who either serve more than 3,000 connections or produce more than 3,000 acre-feet of water each year (referred to as the "Criteria"). Since 2015, CCWD has taken this to mean individual service areas which meet the Criteria. As such, CCWD compiled Software analysis annually only for Ebbetts Pass and Jenny Lind, based on calendar year information. In 2019, AB 1414 clarified certain water audit reporting requirements and facilitated fiscal year reporting by the District, specifying that all service areas shall be reported given the combined connections and volumes meet the Criteria. These water audits have provided a reliable annual 'snapshot' of distribution system losses allowing the District to identify potential issues and areas of most need, while providing an AWWA reference score by which to compare District conditions.

9.1.6 Water Conservation Program Coordination and Staffing Support

The District relies on the External Affairs Manager and Water Resources Manager to lead assessment and engagement of water conservation programs in the service areas and County-wide, including the DMMs and efforts identified. A rough outline of staff responsibilities and duties for these positions are as follows:

External Affairs Manager:

- Managing and conducting public outreach.
- Administering and coordinating public meetings.
- Disseminating public information.
- Communicating with media including, print, radio and television.

- Coordinating and implementing public and school education programs.
- Distributing and tracking outreach supplies.
- Managing conservation information displayed on the website and social media.

Water Resources Manager:

- Reviewing Service area water demand estimates and trends.
- Assessing Service area conserved water data.
- Coordinate with Operations and Engineering Departments to prioritize water conservation in evaluating infrastructure repair and replacement projects.

Coordinated/Both:

- Establishing District conservation targets.
- Planning and management of the District's conservation program.
- Processing customer rebate and water audit requests.
- Following County, state, and federal regulatory issues related to water use efficiency.
- Completing other duties related to the District's commitment to water conservation.

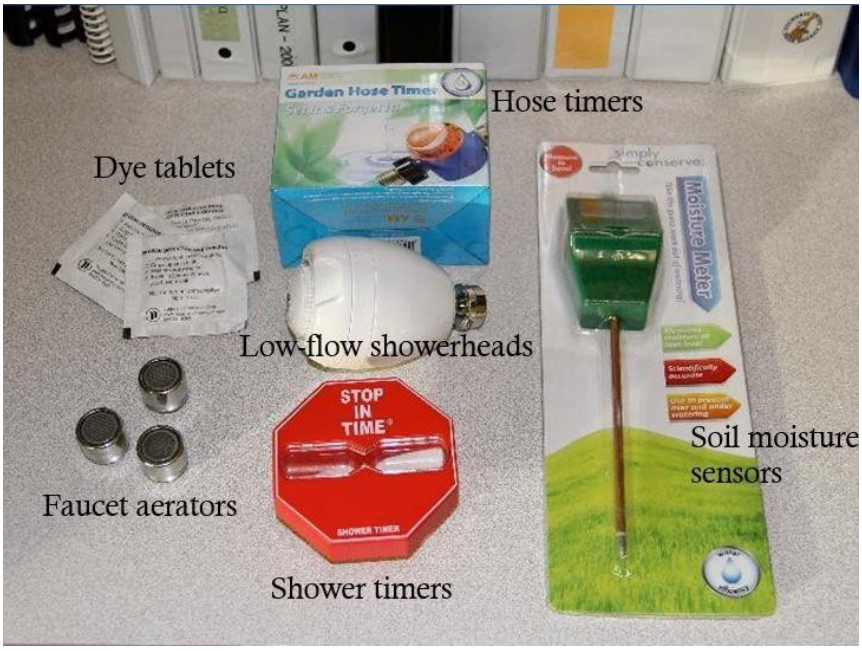
9.1.7 Other Demand Management Measures

This section identifies a number of other DMMs led by the District, as follows:

Conservation Supplies

The District provides customers with a wide variety of free conservation supplies. These supplies include toilet leak detection dye tablets, faucet aerators, five-minute shower timers, low-flow showerheads, automatic shut-off hose timers, and soil moisture sensors (see **Figure 9-2**). Customers are limited to one of each item per household, and supplies are distributed on a first- come, first-served basis. These supplies are also distributed at community meetings, school presentations, and are available at the District headquarters.

FIGURE 9-2: EXAMPLE CONSERVATION ITEMS PROVIDED TO CUSTOMERS BY THE DISTRICT



On-Site Water Audits

On a request-by-request basis, District staff will perform an on-site customer water audit free of charge to determine connection fees and estimate usage. During this on-site audit, CCWD's water usage review policy is explained to the customer, including that the policy provides incentives for the customer to reduce water usage as a means to minimize their water and wastewater bills. Commercial customers, particularly high demand water users such as laundromats and car washes, are encouraged to install water saving and water recycling equipment to reduce their water use.

9.2 IMPLEMENTATION OVER THE PAST 5 YEARS

The following sections describe the District's implementation of each of the DMMs over the past five years, since the 2020 UWMP Update.

9.2.1 Water Waste Prevention Ordinance

See **Section 9.1.1**; content is applicable to District management and operations within the last five years.

9.2.2 Metering

See **Section 9.1.2**; content is applicable to District efforts in last five years. Since the last UWMP, District operations staff have continued to replace, repair, and monitor customer meter readings to identify potential issues. The District also converted nearly all district meters (i.e., over 13,200 meters) from analog volumetric meters requiring CCWD staff to manually read to AMI radio telemetric meters. The meter data is transmitted to the District and processed through integrated software which facilitates the Districts bimonthly billing processes. Since the 2020 UWMP, the implementation of the AMI program has allowed the District to more accurately and easily evaluate volumetric water use trends. The AMI deployment also allows for more timely service and repair response.

9.2.3 Conservation Pricing

As discussed in **Section 9.1.3**, District customers are charged a bimonthly base rate charge by meter size. In addition, bimonthly water usage rate charges apply for each 100 cf of water used at a tiered volumetric rate. The Board voted on September 13, 2023 to approve a 5-year rate plan that includes water and wastewater rate increases for all residential, non-residential (i.e., commercial), and irrigation/landscape customers. Rates increase on July 16 of each year. Residences with larger meters are charged a base rate multiplier corresponding to the sizes of their meters. **Table 9-1**, below, shows the bimonthly base rate charges by meter size. In addition, customers are charged volumetrically based on a three-tiered structure. These tiers are summarized below in **Table 9-2.** Different rates apply for non-residential and irrigation/landscape customer types.

TABLE 9-1: BIMONTHLY BASE RATE CHARGES BY METER SIZE

Meter Size	Bimonthly Base Rate Charge		
	July 16, 2025	July 16, 2027	July 16, 2028
5/8" (standard residence)	$172.17	$184.34	$197.13
3/4"	$241.99	$258.93	$277.06
1"	$381.64	$408.36	$436.95
1.5"	$730.75	$781.91	$836.65
2"	$1,149.69	$1,230.17	$1,316.29
3"	$2,266.86	$2,425.55	$2,595.34

TABLE 9-2: BIMONTHLY TIERED WATER CONSUMPTION RATES – RESIDENTIAL

Volume (cf)	Rate (per 100 cf)		
	July 16, 2025	July 16, 2026	July 16, 2027
0 – 1,500	$2.63	$2.82	$3.02
1,501 – 3,000	$2.85	$3.05	$3.27
Over 3,000	$3.16	$3.39	$3.63

9.2.4 Public Education and Outreach

See **Section 9.1.4**; content is applicable to past District management and operations. Since 2020, the District has continued to develop online resources and outreach materials aimed at improving engagement with County stakeholders, the public, and other local agencies in or associated with the County.

In January 2024, the District developed and made available a customer portal. The customer portal allows District water users to track their water use trends, receive alerts and notifications when water use may be abnormally high, and review water costs relative to the tiered water rates. The District has also participated in a number of activities related to public education, including providing materials related to water use efficiency and making conservation a way of life as described **Section 9.1.4**.

Calaveras Conserves

The CC Group was most active during the last drought in California, through 2017, in promoting County conservation efforts and water use efficiency topics. The District was an active member of this effort and has maintained coordination with the participating agencies through other water supply and management efforts. As described above, the CC Group maintains the resources to help mitigate and respond to drought.

School Education

CCWD actively supported the STE program through UMRWA and has provided annual scholarships to local graduating high school seniors each year since 2015. In the past five years the number of annual scholarships was increased to four total, with additional funding from EBMUD.

9.2.5 Programs to Assess and Manage Distribution System Real Loss

Since 2020, the District has completed several distribution upgrades aimed at decreasing system losses and improving service area distribution efficiencies. **Section 9.1.5** details the District program for identifying and analyzing the extent of systems losses, which were used to justify the following projects:

- West Point Backup Water Filter Project - The project provides a redundant filter for the West Point Water system; this allows for consistent water supply and ability to provide regular maintenance to a treatment unit. The prepackage unit was purchased through a Proposition 1 Round 1 MAC Region IRWM Grant administered by DWR and UMRWA in the amount of $527,287 while the construction of facilities was funded by the District R&R. The project was completed in 2025.

- Jenny Lind Pretreatment Project - This project was funded 75% by the Hazard Mitigation Grant Program and 25% District funds with a completion cost of approximately $4 million. The project involved installation of a pretreatment filtration prepackage unit to handle high turbidity, organic conditions that were prevalent due to Butte Fire which eliminated soil cover in the watershed upstream water treatment facility. The project was completed in August 2019.

- Jenny Lind Clearwell 2 Rehab - The project included rehabilitation of a steel tank at the Jenny Lind Water Treatment Plant, one of two on site storage units which are integral for water being pumped to the distribution system and provides contact time for disinfection purposes. Construction cost for the project was $675,000 and funded through R&R funds. The project was completed in 2025.

- Kirby Gabor Service Line Replacement Project (Jenny Lind) - The project included replacing 85 service laterals in the lower half of the Jenny Lind Distribution System to address the highest frequency leak calls in the system. Total construction cost was $460,000 and the project was completed in September 2020.

- Copper Cove Tank B & Clearwell Replacement Project - The project included the demolition of existing redwood and steel tanks, construction of two new welded steel tanks at Water Treatment

Plant and B-Tank site, and the rehabilitation of the existing Clearwell and steel B-Tank. Total project cost was $6.92 million and the project was completed in November 2025.

- Ebbetts Pass Redwood Water Tanks Wildfire Hazard Mitigation Project - The project included demolition of existing redwood tanks at multiple sites and replacing them with Steel tanks while rehabilitating Larkspur steel tank. The project cost was approximately $4 million and funded through the Hazard Mitigation Grant Program which required 25% matching funds from the District. The project was completed in October 2023. Additional efforts related to the continued need to replace the remaining redwood tanks are ongoing and discussed further in Section 9.3.

- Big Trees Tank Replacement - The project included replacement of redwood tanks at the Big Trees and 60k tank sties in the Big Trees Park service area. The project was partially funded by the Hazard Mitigation Grant Program for wildfire protection of District facilities in high fire risk areas. The project was completed in March 2017 with an approximate cost of $2.1 million.

In addition to these projects, District operations staff routinely perform inspections and maintenance work on CCWD's distribution systems, in order to detect and repair leaks, and to continue District review of project needs.

AWWA Water Audits

The District has consistently developed and submitted Water Audits since 2015, pursuant to SB 555 requirements. As noted in **Section 9.1.5**, CCWD only submitted audits for Ebbetts Pass and Jenny Lind prior to 2020, however since this information has been critical towards improving District understanding of losses and monitoring in these service areas, many of the concepts from the water audits were applied to other service area analysis. It is worth noting that past water audit results have identified several issues and likely water losses in Ebbetts Pass, reaffirming the District's attention to infrastructure improvements in that service area as listed above.

9.2.6 Water Conservation Program Coordination and Staffing Support

CCWD's External Affairs Manager will continue to serve as the appointed conservation coordinator, while working closely with the Water Resources Program Manager and other staff. The District is committed to funding these positions and dedicating the appropriate level of resources to implement the water conservation program and DMMs.

9.2.7 Other Demand Management Measures

See **Section 9.1.7**; content is applicable to District efforts in last five years.

9.3 FUTURE PLANNED IMPLEMENTATION

The District will continue implementing the DMMs discussed in this chapter across the service areas to improve water supply reliability to better prepare for future drought conditions. Reducing conveyance and customer water loss has played a large role towards meeting this target; however, all of the District's DMMs work synergistically to reduce water use and improve operational efficiencies. Planned implementation of the DMMs beyond 2025 are described in the sections below.

9.3.1 Water Waste Prevention Ordinance

See **Section 9.1.1**; the District will continue to follow California constitutional requirements and will require strict adherence to Board policies regarding water waste in its service areas.

9.3.2 Metering

See **Section 9.1.2**; the District will continue to replace, repair, and monitor customer meters to identify potential issues. Following conversion of customer meters to AMI, the District will utilize the real-time, digital readings to improve detection of a combination of potential leaks, broken infrastructure, system flow and pressure issues, and to encourage water conservation using connection-level data. CCWD intends to continue to improve the AMI system by more seamlessly integrating the financial and customer management software with the real-time water use data.

9.3.3 Conservation Pricing

Consistent with prior year pricing structures, the District will likely continue implementing some form of conservation pricing based on a bimonthly base rate and water usage rate charges (see **Section 9.2.3**). The District will continually evaluate potential changes to the current rate structure based on demands, revenue, and operating expenses; via public Board review and financial auditing procedures, and with adherence to Proposition 218 local finance and governance rules.

9.3.4 Public Education and Outreach

See **Section 9.1.4**; the District will continue to maintain and expand upon its public outreach and internet resources. In addition, software tools, including collaborative project management platforms such as Smartsheet, graphic and mapping interfaces like ArcGIS Online, and other programming tools, may become an integral part of District engagement with the public for specific projects and programs over time. The potential for these tools to increase data and information availability also means County stakeholders will have more access to current water resources conditions, District planning tools, and other important water supply information. An example is development of the Calaveras County Water Resources Public Data Packets which collect current precipitation and reservoir level data around the County, made available to the public online as described in **Section 3.3.1**.

Public Outreach

The District also plans to continue offering ongoing public information programs in the future and will update, modify, and enhance these programs based on customer feedback, drought emergencies and other needs. Staff funding for this DMM comes from the Administrative Services budget, but specific outreach projects and efforts will likely rely on future grant funding.

School Education

The District will continue to arrange classroom presentations throughout the County, as time permits, and schools are able to host guest speakers. It is anticipated that requests for CCWD staff presentations will likely increase during drought periods, or following completion of construction projects, or with other notable County water-related events.

CCWD also plans to continue supporting the STE program and will continue offering four total annual scholarships to local graduating high school seniors, with a portion of funding coming from EBMUD. The District will continue to monitor and pursue opportunities to develop educational outreach programs and/or to support local water infrastructure tours aimed at local classrooms.

9.3.5 Programs to Assess and Manage Distribution System Real Loss

The District maintains a "Capital Renovation and Replacement Program" (Capital R&R) focused on replacing water distribution mains that have reached the end of their useful lives. The Capital R&R program, in conjunction with the District's Engineering Department via the CCWD Capital Improvement Plan (CIP), has relied on leak detection technology and failure rate data to prioritize projects that will make the biggest impact on water loss in the District's service areas. Several major infrastructure projects and upgrades have resulted from CIP-related analysis and Capital R&R, and the District intends to continue these programs going forward.

In particular, the Timber Trails Redwood Tank and Pump Station Replacement Project (Timber Trails Project), located within the Ebbetts Pass Service Area, is critically important for demand management. The Timber Trails Project will replace the deteriorating 80,000-gallon redwood potable water storage tank with a 120,000-gallon steel tank constructed of ignition-resistant materials, construction of a new efficient pump station, and the creation of defensible space around the new tank and pump station. This project will enhance water reliability through increased water storage, eliminate water loss from tank leakage, increase reliability, build long-term resilience to drought, and mitigate the extreme risk of destruction by wildfire.

More information on the District's CIP and related projects can be found at: https://www.ccwd.org/water-cip.The District has sought to obtain grant funds to support Capital R&R and CIP-identified needs and plans to continue identifying and applying for grants and loans, as available, to help fund pipeline and leak repairs in the service areas. The AWWA Water Audits described in **Section 9.1.5**, as confirmed by District operations and field staff, have been used by the District to identify service area issues and points of concern. The District will continue to rely on this data to gauge conditions and improvements to system losses over time, since Water Audits will continue to be submitted on an annual basis per state requirements.

9.3.6 Water Conservation Program Coordination and Staffing Support

The District recognizes the need to have staff focused on water conservation and other water use efficiency topics. **Section 9.1.6** outlines the roles and responsibilities of the External Affairs Manager and Water Resources Program Manager positions, focused on these and other topics. Proposed future District budgets will allocate specific funding for these positions aimed at advancing the District's water conservation goals, likely funded via the Administrative Services budget and future grant opportunities. These positions will ultimately help ensure the DMMs discussed in this chapter are implemented by CCWD.

9.3.7 Other Demand Management Measures

The District will continue offering a selection of conservation supply giveaways to its customers, as outlined in **Section 9.1.7**.

Low-Impact Development

In the coming years, the District hopes to increase County support of low-impact development techniques, including native plant and xeriscaping garden designs, graywater system development and use, and

stormwater recapture. These techniques, whether implemented by individual homeowners or incorporated as part of building/planning codes, help decrease potable water use and can contribute to long-term conservation within the District's service areas. CCWD anticipates further coordination with the County Department of Public Health to establish low-impact development guidelines prior to implementing these efforts. In addition, CCWD plans to seek additional funding through grant opportunities to educate and provide monetary support for the community to adopt low-impact development activities.

Coordinating with Other Agencies

County, regional, and state-wide coordination and partnerships provides numerous benefits to the District regarding knowledge of latest techniques and efforts, regulatory considerations, and how to effectively implement DMMs with customers. While it is impossible for District staff to participate in all relevant opportunities, CCWD has and will continue to reach out to potential (and prior) partners in the hopes of advancing water use efficiency concepts. As described in **Section 9.1.4**, joint efforts such as Calaveras Conserves provide excellent platforms for conveying information to the public and for making sure water supplies are working towards the same goals.

9.4 CALIFORNIA WATER EFFICIENCY PARTNERSHIP

CalWEP provides a network of experts for California water efficiency issues and efforts and essentially functions as the California chapter of the Alliance for Water Efficiency, a national organization. Notably, CalWEP has developed resources in response to the 2018 Water Conservation Legislation, otherwise known as the "Making Water Conservation a California Way of Life" standards. Through this work, CalWEP has coordinated with DWR, the SWRCB, and other statewide stakeholders to define and refine the standards for indoor and outdoor residential water use, commercial, industrial, and institutional users, and for decreased water loss targets, which taken together make the urban water use objective (UWUO).

As an urban retail water supplier, CCWD is required to calculate its UWUO and assess whether their actual water use met the UWUO. This information is reported in the Annual Water Use Report, submitted to the State Water Board by January 1 of each year beginning in 2024. The District's most recent report for FY2024-25 is included in **Appendix O**. While the District is not a member of CalWEP, there is still value in looking closely at CalWEP tools and guidance and analyzing how the DMMs can help shape District water use. CCWD also supports CalWEP's efforts to use water more wisely, eliminate water waste, and strengthen local drought resilience. More information on CalWEP can be found at: https://calwep.org/.

10. PLAN ADOPTION, SUBMITTAL, AND IMPLEMENTATION

This chapter summarizes the District's compliance with the State's notification, adoption, and submittal procedure for this UWMP, as defined under the Urban Water Management Planning Act.

10.1 INCLUSION OF ALL 2025 DATA

As defined in Section 2.4, CCWD conducts its UWMP reporting and analyses on a District Fiscal Year basis. As such, this UWMP includes water use and planning data for the entire FY 2025, representing the period of time between July 1, 2024 and June 30, 2025. Where needed to support additional analyses or review, and as specified, remaining calendar year 2025 data are provided in this UWMP.

10.2 NOTICE OF PUBLIC HEARING

10.2.1 Notice to Cities and Counties

California Water Code (CWC) §10621(b) stipulates that a water supplier must notify any city or county, within which or to whom that supplier provides water, that it is reviewing and considering changes to its UWMP. This notification must occur at least 60 days before a public hearing. CCWD held the public hearing for its UWMP and Water Shortage Contingency Plan (WSCP) on May 27, 2026. Notifications were sent to Calaveras County and the City of Angels Camp on February 24, 2026, well in advance of the 60-day requirement. The District also sent notifications to a number of other entities; all entities receiving notifications are listed in **Table 10-1**. Copies of the notice are provided in **Appendix H**.

10.2.2 Notice to the Public

California Government Code 6066 requires that the water supplier notify the public of the public hearing in a local newspaper once a week for two consecutive weeks. The notice must include the time and place of the hearing, as well as the location where the draft UWMP and WSCP are available for public review. CCWD noticed the public on May 8 and May 15, 2026 in The Valley Springs News newspaper which is published each Friday. A copy of these notices is provided in **Appendix I**.

In addition to these newspaper notices, CCWD also provided a notice on its website (https://ccwd.org/news/) and posted on its social media platforms to inform interested parties of the review schedule and invite them to review the Public Draft of the UWMP during the public comment period. The public comment period ran from May 1, 2026, when the Public Draft was posted, to the end date on May 31, 2026. Copies of the CCWD website notice are provided in **Appendix J**.

TABLE 10-1: NOTIFICATION TO CITIES AND COUNTIES (DWR TABLE 10-1)

Agency Name	60 Day Notice	Notice of Public Hearing
Blue Lake Springs Mutual Water Company	✓	✓
Calaveras Chamber of Commerce	✓	✓
Calaveras County Environmental Management Agency	✓	✓
Calaveras County Administrative Department	✓	✓
Calaveras County Planning Department	✓	✓
Calaveras County Public Works Department	✓	✓
Calaveras Planning Coalition	✓	✓
Calaveras Public Utilities District	✓	✓
Central Sierra Environmental Resource Center	✓	✓
City of Angels Camp Planning & Development	✓	✓
Foothill Conservancy	✓	✓
Mokelumne Hill Sanitary District	✓	✓
Murphys Sanitary District	✓	✓
San Andreas Sanitary District	✓	✓
Snowshoe Springs Homeowners Association	✓	✓
Union Public Utility District	✓	✓
Utica Water and Power Authority	✓	✓
Valley Springs Public Utility District	✓	✓

10.3 PUBLIC HEARING AND ADOPTION

CWC §10642 states that prior to adopting the UWMP, the water supplier must hold a public hearing. The purpose of the public hearing is to allow public input on the draft Plan, consider economic impacts of the UWMP, and adopt a method for determining the water supplier's water use target. CCWD held a Public Hearing on May 27, 2026. A copy of the hearing agenda is provided in **Appendix K**. The District also held a 4-week-long public comment period from May 1, 2026 to May 31, 2026. Comments received were addressed by the District in a response-to-comments matrix, which is included in **Appendix L**.

The District's 2025 UWMP was adopted by the CCWD Board of Directors (Board) during their June 24, 2026 public Regular Meeting. UWMP documents and meeting agenda materials were released beforehand, consistent with the Brown Act contained in §54950 et seq. of the California Government Code. The WSCP

was also adopted during this meeting. These documents were similarly reviewed via public hearing and made available prior to Board consideration. A copy of the Board Resolution adopting the 2025 UWMP and the WSCP is provided in **Appendix M**.

10.4 PLAN SUBMITTAL

CCWD will submit this UWMP and WSCP to the California Department of Water Resources (DWR) by July 1, 2026 for their review of consistency with the Act, via the approved website. No later than 30 days after the UWMP and WSCP are adopted by CCWD's Board of Directors, CCWD will submit a CD copy of these adopted documents to the California State Library.

10.5 PUBLIC AVAILABILITY

CWC §10645 requires that water suppliers, no later than 30 days after filing a copy with DWR, must make the approved UWMP and WSCP available for public review during normal business hours. CCWD will post a copy of the approved UWMP and WSCP (as an appendix to the UWMP) on CCWD's website at: https://ccwd.org/water-resources/.

10.6 AMENDING AN ADOPTED UWMP

Should CCWD amend any portion of the approved 2025 UWMP, the District will follow each of the steps for notification, public hearing, adoption, and submittal that are required for an updated Plan. However, the 60-day notification to cities and counties to whom CCWD supplies water will not be sent again; the notification sent with the original plan addresses the requirement.

11. REFERENCES

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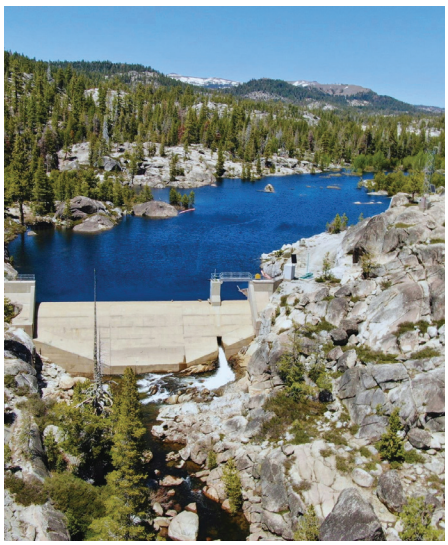

Appendix A

DWR Required Tables/District-Wide Tables

Appendix A includes the tables required by DWR for submission with the District's Urban Water Management Plan. These tables contain the aggregate data for all of the District's service areas.

Submittal Table 2-1 Retail: Public Water Systems			
Has there been a change in the number of affiliated Public			No
Public Water System Number	Public Water System Name	Number of Municipal Connections 2025	Volume of Water Supplied 2025 (AF)
Add additional rows as needed			
CA0510004	Sheep Ranch Service Area (CCWD Sheep Ranch)	47	14
CA0510006	Jenny Lind Service Area (CCWD Jenny Lind)	3,864	1,954
CA0510005	West Point Service Area (CCWD West Point)	572	152
CA0510017	Copper Cove/ Copperopolis Service Areas (CCWD Copper Cove)	2,754	1,424
CA0510016	Ebbetts Pass Service Area (CCWD Ebbetts Pass Improvement District)	5,989	1,399
CA0510019	Wallace Service Area (Wallace Community Services District)	107	65
	Total	13,333	5,008
DWR NOTES:			
NOTES:			

Submittal Table 2-2: Plan Identification			
Select One or Both	**Type of Plan**		**Name of Regional Alliance or RUWMP** (Drop Down List)
☑	**Individual UWMP**		
	☐	Water Supplier is also a member of a SB X7-7 Regional Alliance	
☐	**Regional Urban Water Management Plan (RUWMP)**		
NOTES:			

Submittal Table 2-3: Supplier Identification	
Type of Supplier (select one or both)	
☐	Supplier is a wholesale supplier
☑	Supplier is a retail supplier
Fiscal or Calendar Year (select one)	
☐	UWMP Tables are in calendar years
☑	UWMP Tables are in fiscal years
If using fiscal years provide month and date that the fiscal year begins (mm/dd)	
7/1	
Units of measure used in UWMP (Select from the drop down list).	
Unit	AF
DWR NOTES: **Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Submittal Table 2-3.	
NOTES:	

Submittal Table 2-4 Retail: Water Supplier Information Exchange **Water Code Section 10631(h)**
The retail Supplier has informed the following wholesale supplier(s) of projected water use in accordance with Water Code Section 10631 (h).
Wholesale Water Supplier Name
Add additional rows as needed
N/A
NOTES:

Submittal Table 3-1 Retail: Population - Current and Projected Water Code Section 10631(a)							
	Service Area	**2025**	**2030**	**2035**	**2040**	**2045**	**2050(opt)**
Population Served	*Jenny Lind*	10,092	9,881	9,696	9,490	9,243	8,983
	Sheep Ranch	99	97	95	93	91	88
	SUB-REGION A	10,191	9,978	9,791	9,583	9,334	9,071
	Ebbetts Pass	12,060	11,808	11,587	11,340	11,046	10,735
	Copper Cove	6,398	6,265	6,147	6,016	5,860	5,695
	SUB-REGION B	18,458	18,073	17,734	17,356	16,906	16,430
	West Point (SUB-REGION C)	1,170	1,146	1,124	1,100	1,072	1,042
	Wallace (SUB-REGION D)	268	262	257	252	245	238
	TOTAL	30,087	29,459	28,906	28,291	27,557	26,781

NOTES: These projections are from the Department of Finance data and are not reflective of projections that are in the general plan

Submittal Table 4-1 Retail: 2025 Actual Total Uses for Potable and Non-Potable Water
Water Code Section 10631(d)(1)

Use Type	Additional Description (as needed)	2025 Actual Water Use	
Drop down list May select each use multiple times These are the only use types that will be recognized by the WUEdata online submittal tool		Level of Treatment When Delivered (OPTIONAL) Drop down list	Volume (AF)
Add additional rows as needed			
Other (optional)	Combined Residential - Single and Multi-Family	Potable	2,901
Other (optional)	Combined CII (commercial/institutional/industrial) and governmental	Potable	258
Landscape		Potable	182
Landscape		Non-Potable	800
Agricultural		Non-Potable	1,116
Sales/Transfers/Exchanges to other Suppliers		Potable	79
Other (optional)	Unbilled Authorized Consumption	Potable	48
Distribution System Water Loss	Real Losses	Potable	1,264
Distribution System Water Loss	Apparent Losses	Potable	54
		Subtotal Potable	4786
		Subtotal Non-Potable	1916
		Total	6,702

DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3. This table identifies the unit of measure selected in Submittal Table 2-3.

NOTES: (1) Real losses calculated using the AWWA Water Loss Audit worksheet including water physically lost in the conveyance of water supplies. Apparent losses including unauthorized consumption are reported separately for clarity (see Section 4.3)

Submittal Table 4-2 Retail: Total Uses of Potable, and Non-Potable Water - Projected
Water Code Section 10631(d)(1)

Use Type **Drop down list** May select each use multiple times These are the only Use Types that will be recognized by the WUEdata online submittal tool	Additional Description (as needed)	Projected Water Use (Report To the Extent that Records are Available) Level of Treatment When Delivered (OPTIONAL) Drop down list	**2030** (AF)	**2035** (AF)	**2040** (AF)	**2045** (AF)	**2050** (opt) (AF)
Add additional rows as needed.							
Other (optional)	Combined Residential - Single and Multi-Family	Potable	2,844	2,792	2,734	2,665	2,592
Other (optional)	Combined CII (commercial/institutional/industrial) and governmental	Potable	253	249	243	237	231
Landscape		Potable	178	175	171	167	163
Landscape		Non-Potable	800	800	800	800	800
Agricultural		Non-Potable	1,116	1,116	1,116	1,116	1,116
Sales/Transfers/Exchanges to other Suppliers		Potable	77	75	74	72	70
Other (optional)	Unbilled Authorized Consumption	Potable	37	36	35	35	34
Distribution System Water Loss		Potable	1,318	1,156	1,003	857	836
		Subtotal Potable	4,706	4,483	4,261	4,033	3,925
		Subtotal Non-Potable	1,916	1,916	1,916	1,916	1,916
		Total	6,622	6,399	6,177	5,949	5,841

DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3. This table identifies the unit of measure selected in Submittal Table 2-3.

NOTES: (1) As a user of the Subbasin, CCWD may be required to participate in some form of groundwater recharge program as part of SGMA compliance; however, future demands associated wit

Submittal Table 4-3 Retail: Inclusion in Water Use Projections Water Code Section 10631 (a), 10631 (d)(4)(A), and 10631 (d)(4)(B)	
Are Future Water Savings Included in Projections? (Refer to Appendix K of UWMP Guidebook) **Drop down list (y/n)**	No
If "Yes" to above: State the section or page number, in the cell to the right, where citations of the codes, ordinances, or otherwise are utilized in demand projections are found. **OPTIONAL** Suppliers may complete Optional Submittal Table 4-4 R to quantify the expected savings.	
Are Lower Income Residential Demands Included In Projections? (Refer to Appendix K of UWMP Guidebook) **Drop down list (y/n)**	Yes
OPTIONAL If the method for accounting Lower Income Residential Demands has been included, provide page number where this accounting can be found. (An example is included in Appendix K.)	Section 4.5, page 4-24
NOTES:	

Submittal Table 4-5 Retail: Water Loss Audit Reporting		
Public Water System ID # Reported in Table 2-1 R	Reporting Period	Submitted to DWR Water Loss Audit Program (yes/no)
Report submittal status for all five years for each Public Water System as available.		
CA0510004	2020	Yes
	2021	Yes
	2022	Yes
	2023	Yes
	2024	Yes
CA0510006	2020	Yes
	2021	Yes
	2022	Yes
	2023	Yes
	2024	Yes
CA0510005	2020	Yes
	2021	Yes
	2022	Yes
	2023	Yes
	2024	Yes
CA0510017	2020	Yes
	2021	Yes
	2022	Yes
	2023	Yes
	2024	Yes
CA0510016	2020	Yes
	2021	Yes
	2022	Yes
	2023	Yes
	2024	Yes
DWR NOTES: Suppliers will provide a link to the WUEdata submittals of their Water Loss Audit Reports.		
NOTES: The 2024 Audit for West Point Service area is listed under an incorrect PWS (CA051005).		

Submittal Table 4-6 Retail: Progress Towards 2028 Water Loss Standard
Water Code Section 10631(d)(3)(C)

Public Water System ID # Reported in Submittal Table 2-1 R	Public Water System Name Reported in Submittal Table 2-1 R	Did the Water Board Calculate a Water Loss Standard for this Public Water System? (y/n) If no, Supplier will not complete this row.	Real Water Loss					Apparent Water Loss				
			State Water Board Standard		Most Recent AWWA Water Loss Audit			State Water Board Standard		Most Recent AWWA Water Loss Audit		
			2028 Real Water Loss Standard per Unit per day	Units for Real Water Loss Drop down list	Number of Units (Connections or Miles corresponding with units selected)	Volume of Total Real Loss (from AWWA Water Loss Audit) (AF)	Real Water Loss Per Unit per Day	2028 Apparent Water Loss Standard per Unit per Day	Units for Apparent Water Loss	Number of Connections	Volume of Total Apparent Loss (from AWWA Water Loss Audit) (AF)	Apparent Water Loss Per Unit per Day
Add additional rows as needed.												
CA0510006	Jenny Lind Service Area (CCWD Jenny Lind)	Yes	21.9	Gallons per Service Connection per Day (GPSCD)	3,864	437	101.0	7.4	Gallons per Service Connection per Day (GPSCD)	3864	22.3	5.1
CA0510016	Ebbetts Pass Service Area (CCWD Ebbetts Pass Improvement District)	Yes	22.2	Gallons per Service Connection per Day (GPSCD)	5,989	391	58.3	3.3	Gallons per Service Connection per Day (GPSCD)	5989	13.6	2.0
CA0510017	Copper Cove/ Copperopolis Service Areas (CCWD Copper Cove)	Yes	24.9	Gallons per Service Connection per Day (GPSCD)	2,754	377	122.2	8.1	Gallons per Service Connection per Day (GPSCD)	2754	15.5	5.0
CA0510016	West Point Service Area (CCWD West Point)	Yes	612.6	Gallons per Mile per Day (GPMD)	19.5	33	1,510.8	4.4	Gallons per Service Connection per Day (GPSCD)	573	1.8	2.8
CA0510004	Sheep Ranch Service Area (CCWD Sheep Ranch)	No										
CA0510019	Wallace Service Area (Wallace Community Services District)	No										

Water Board's Calculated Water Loss Standards

DWR NOTES: Units of measure (AF, CCF, MG) for Water Loss **MUST** remain consistent with units reported in Submittal Table 2-3. The units reported in Submittal Table 2-3 are used in this table's calculations.

NOTES: The CA0510004 (Sheep Ranch) system and CA0510019 (Wallace) system have fewer than 200 connections and therefore the Water Board did not calculated a Water Loss Standard.

Submittal Table 5-1 Retail: SB X7-7 2020 Target Progress Water Code Section 10608.40						
☐	**Check the box if the Supplier was not an Urban Water Supplier during or before the 2020 UWMP reporting cycle. Proceed to the next table.**					
Was Supplier part of a merger or consolidation since 2020?	Regional Alliance Target or Individual Target? Drop down list	2020 Target	Actual 2020 GPCD	Did Supplier Achieve Targeted Reduction for 2020?	**Only for suppliers that did not meet the Target in 2020** **See DWR NOTES below.**	
					Actual 2025 GPCD (From SB X7-7 Compliance Form)	Did Supplier meet the 2020 Target in 2025?
No	Individual Target	192	192	Yes		NA

DWR NOTES:
Suppliers calculating a 2025 GPCD will need to complete and submit SB X 7-7 Compliance Tables to verify the use of SB X7-7 Methodologies.
Suppliers that were part of a merger or consolidation since 2020 see Chapter 5 and Appendix P for guidance.
NA=Not Applicable

NOTES:

Submittal Table 6-1 Retail: Groundwater Volume Pumped							
☐	Check the box if the Supplier does not pump groundwater. Proceed to the next table.						
☐	Check the box if all or part of the groundwater described below is desalinated. (OPTIONAL)						
Groundwater Type **Drop Down List** May use each category multiple times	Water Type (OPTIONAL) **Drop down list**	Location or Basin Name	2021 (AF)	2022 (AF)	2023 (AF)	2024 (AF)	2025 (AF)
Add additional rows as needed							
Alluvial Basin	Potable	Eastern San Joaquin Groundwater Subbasin	68.8	69.5	68.6	63.8	65
		Total	69	70	69	64	65
DWR NOTES:							
NOTES							

Submittal Table 6-2 Retail: Wastewater Collected Within Service Area in 2025				
	Check the box if there is no wastewater collection system.			
	Percentage of 2025 service area served by wastewater collection system (OPTIONAL)			
	Percentage of 2025 service area population served by wastewater collection system (OPTIONAL)			
Wastewater Collection			Recipient of Collected Wastewater	
Name of Wastewater Collection Agency	Wastewater Volume Metered or Estimated? OPTIONAL **Drop Down List**	Volume of Wastewater Collected from UWMP Service Area 2025 (AF)	Name of Wastewater Treatment Plant (WWTP) and Place ID Number	Is WWTP Located Within UWMP Area? **Drop Down List**
Add additional rows as needed				
CCWD	Metered	193	La Contenta WWT & RF, Place ID 235798	Yes
CCWD	Metered	66	Arnold WWTP, Place ID 206381	Yes
CCWD	Metered	219	Copper Cove WWRF, Place ID 255003	Yes
CCWD	Metered	40	Douglas Flat/Vallecito WWTP, Place ID 220618	Yes
CCWD	Metered	74	Forest Meadows WWT & RP, Place ID 224889	Yes
CCWD	Metered	14	West Point WWTF, Place ID 272109	Yes
CCWD	Metered	0.4	Wilseyville Wastewater Treatment Plant, Place ID 272716	Yes
CCWD	Metered	11	Southworth Ranch Estates WWTF, Place ID 258004	Yes
CCWD	Metered	23	Wallace Lake Estates WWTF, Place ID 271817	Yes
CCWD	Metered	9	Angels City WWTP, Place ID 205793	No
Total Wastewater Received from UWMP Service Area in		648		
DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3. This table				
NOTES: (1) Wallace Lake Estates WWTF is not recognized by the DWR drop-down tables provided as part UWMP Guidance and is reported manually. (2) The District has consolidated Wilseyville WWTP and West Point WWTF; these plants are currently permitted separately and therefore are reported separately here. (3) Wastewater from Six Mile Village WWTP is ultimately treated at Angels City WWTP. Other small domestic dischargers exist in the service area.				

Submittal Table 6-3 Retail: Wastewater Treatment and Outcomes Within UWMP Service Area in 2025

☐ Check the box if no wastewater is treated or disposed of within the UWMP service area.

Wastewater Treatment Plant Name and Place ID Number Drop down list	Does This Plant Treat Wastewater Generated Outside the UWMP Service Area? (OPTIONAL) Drop down list	Wastewater Received from UWMP Service (AF)	Total 2025 Volume of Water Treated (AF)	2025 Outcomes of Treated Wastewater										
				Water Recycled Within		Water Recycled Outside of		Effluent Discharge that is not a		Required Discharge for		Delivered to Another Entity for Additional		
				Treatment Level Drop down list	Volume (AF)	Treatment Level Drop down list	Volume (AF)	Treatment Level Drop down list	Volume (AF)	Treatment Level Drop down list	Volume (AF)	Treatment Level Drop down list	Volume (AF)	Name of other entity
Add additional rows as needed														
La Contenta WWT & RF, Place ID 235798	No	193	193	Tertiary	135			Tertiary	0					
Arnold WWTP, Place ID 206381	No	66	66					Secondary Disinfected - 23	73					
Copper Cove WWRF, Place ID 255003	No	219	219	Tertiary	295			Secondary Disinfected - 23	0					
Douglas Flat/Vallecito WWTP, Place ID 220618	No	40	40					Tertiary	40					
Forest Meadows WWT & RP, Place ID 224889	No	74	74	Tertiary	58			Tertiary	20					
West Point WWTF, Place ID 272109	No	14	14					Secondary Disinfected - 23	14					
Wilseyville Wastewater Treatment Plant, Place ID 272716	No	0.4	0.4					Secondary Undisinfected	0.4					
Southworth Ranch Estates WWTF, Place ID 258004	No	11	11					Secondary Undisinfected	11					
Wallace Lake Estates WWTF, Place ID 271817	No	23	23					Tertiary	23					
	Total	639	639		488		0		180		0		0	

DWR NOTES:

NOTES: (1) Small domestic WWTP within the service area are not recognized by DWR provided drop-down menus and therefore reported separately. This includes Six Mile Village WWTP, which delivers its wastewater to Angels City WWTP for treatment. (2) Wallace Lake Estates WWTF is not recognized by DWR provided drop-down menus. (3) The District has consolidated West Point WWTF and Wilseyville WWTP, but reports volumes separately in accordance with their current permits.

Submittal Table 6-4 Retail: Recycled Water Direct Beneficial Uses Within Service Area										
	Check box if recycled water is not used and is not planned for use within the service area of the supplier. The supplier will									
Name(s) of Facility/ies Producing (Treating) the Recycled										
Name of Supplier Operating the Recycled Water Distribution										
Supplemental Water Added in 2025 (volume) Include units										
Source of 2025 Supplemental Water (OPTIONAL) :										
Use Type **Drop down list**	Water Type (after treatment if treated) (OPTIONAL) **Drop down list**	Additional Information (as needed)	2025	2030	2035	2040	2045	2050 (opt)	**Potential Recycled Water Use**	
			(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	Volume	Narrative page number (OPTIONAL)
Add additional rows as needed										
Golf course irrigation	Non-Potable		488	488	488	488	488	488	0	
		Total	488	488	488	488	488	488	0	0
DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3. This										
NOTES: Future build-out and associated demands are anticipated to occur after 2050.										

Submittal Table 6-5 Retail: 2020 UWMP Recycled Water Use Projection		
	Check the box if recycled water was not used in 2025 nor	
Use Type Drop Down list	2020 Projection for 2025	2025 Actual Use
	(AF)	(AF)
Add additional rows as needed		
Agricultural irrigation	93	0
Landscape irrigation (exc golf courses)	206	0
Golf course irrigation	267	488
Total	566	488
DWR NOTES:		
NOTES:		

Submittal Table 6-6 Retail: Methods to Encourage Future Recycled Water Use
Water Code Section 10633 (f)

☐	Check the box if the Supplier does not plan to expand recycled water use in the future. Supplier will not complete the table below but will provide narrative explanation.
	Provide page location of narrative in the UWMP

Name of Action	Description	Planned Implementation Year	Expected Increase in Recycled Water Use (AF)
Add additional rows as needed			
Recycled Water Landscape Use in Jenny Lind and Copper Cove	Additional developments are expected in the La Contenta and Copper Cove Wastewater Areas, facilitating possible recycled water use for landscape irrigation and expanded golf course use.	2025-2040	269
Recycled Water Agricultural Use in Jenny Lind and Copper Cove	CCWD is working with potential agricultural customers to utilize recycled water from the WWTPs.	2025 - 2040	139
Recycled Water for New Golf Course Irrigation in Copper Cove	An additional golf course may be built in Copper Cove Wastewater Area, which will be required to irrigate with recycled water.	2025 - 2040	278
		Total (AF)	686
		Unit Conversion to AF	686

DWR NOTES:
Units of measure (AF, CCF, MG) MUST remain consistent with units reported in Submittal Table 2-3. The units reported in Submittal Table 2-3 are used in this table's calculations.
The unit conversion to Acre Feet addresses the Water Code's requirement that this value be provided in acre-feet.

NOTES:

Submittal Table 6-7 Retail: Expected Future Water Supply Projects or Programs
Water Code Section 10631 (f)

☐	Check the box if there are no expected future water supply projects or programs that provide a quantifiable increase to the agency's water supply. Procees to the next table.
☑	Check the box if some or all of the supplier's future water supply projects or programs are not compatible with this table and are described in a narrative format.
Section 6.8	Provide page location of narrative in the UWMP

Name of Future Projects or Programs	Joint Project with other suppliers?		Additional Description (as needed)	Water Type (after treatment if treated) (OPTIONAL) **Drop Down list**	Planned Implementation Year	Planned for Use in Year Type **Drop Down List**	Expected Increase in Water Supply to Supplier (This may be a range)
	Drop Down List (yes/no)	If Yes, Supplier Name					(AF)
Add additional rows as needed							
Highway 4 Corridor Regional Water Supply Long-Term Water Supply Plan	Yes	City of Angels, Union PUD, Utica Water and Power Authority	Collaborative effort to evaluate future water needs and supplies for the Highway 4 corridor from Copperopolis to Camp Connel.	Potable	2026	All Year Types	Unknown
White Pines and Mill Pond Restoration Project	No		Restores storage capacity loss due to sedimentation in White Pines and reestablishes the Mill Pond as wetland.	Potable	2024	All Year Types	Unknown
Sheep Ranch Supply Resilience Project	No		Proposal for intertie from Ebbetts Pass distribution system to Sheep Ranch system to replace existing Sheep Ranch use of San Antonio supplies.	Potable	2028	All Year Types	15 AFY, with capacity up to 100 AFY for fire combat and future development (under existing water rights)

DWR NOTES: **Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Submittal Table 2-3. This table identifies the unit of measure reported in Submittal Table 2-3.

NOTES:

Submittal Table 6-8 Retail: Subregion A Water Supplies — 2025 Actual				
Water Supply		**2025**		
Drop down list May use each category multiple times. These are the only water supply categories that will be recognized by the WUEdata online	Additional Description (as needed)	**Water Type** (after treatment if treated) (OPTIONAL) **Drop Down list**	**Actual Volume**	**Total Entitlement** (OPTIONAL) See "DWR Notes" below
			(AF)	(AF)
Add additional rules as needed				
Surface water (not desalinated)		Potable	86,767	
Recycled Water		Non-Potable	488	
Groundwater (not desalinated)		Potable	65	
		Subtotal Potable	86,832	0
		Subtotal Non-Potable	488	0
		Total	87,320	0
DWR NOTES:				

Submittal Table 6-9 Retail: Water Supplies — Projected
Water Code Section 10631 (b)

Water Supply			Projected Water Supply (Report to the Extent Practicable)									
			2030		2035		2040		2045		2050 (opt)	
Drop down list May use each category multiple times. These are the only water supply categories that will be recognized by the WUEdata online submittal tool	Additional Detail on Water Supply	**Water Type** (after treatment if treated) (OPTIONAL) **Drop Down list**	Reasonably Available Volume	Total Entitlement (OPTIONAL) See "DWR Notes" below	Reasonably Available Volume	Total Entitlement (OPTIONAL) See "DWR Notes" below	Reasonably Available Volume	Total Entitlement (OPTIONAL) See "DWR Notes" below	Reasonably Available Volume	Total Entitlement (OPTIONAL) See "DWR Notes" below	Reasonably Available Volume	Total Entitlement (OPTIONAL) See "DWR Notes" below
			(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)
Add additional rows as needed												
Surface water (not desalinated)		Potable	109,995	0	109,995	0	109,995	0	109,995	0	109,995	0
Groundwater (not desalinated)		Potable	65	0	65	0	65	0	65	0	65	0
Recycled Water		Non-Potable	488	0	488	0	488	0	488	0	488	0
		Subtotal Potable	110,060	0	110,060	0	110,060	0	110,060	0	110,060	0
		Subtotal Non-Potable	488	0	488	0	488	0	488	0	488	0
		Total	110,548	0	110,548	0	110,548	0	110,548	0	110,548	0

DWR NOTES:
Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3.
Total Entitlement: e.g. Water Right, Groundwater Allocation, Contracted Amount.

NOTES:

Optional Submittal Table O-1B: Recommended Energy Reporting - SINGLE DELIVERY PRODUCT - TOTAL UTILITY				
Water Delivery Product drop down list (If delivering more than one type of product recommend using Table O-1C)	Retail Non-Potable Deliveries	**Only for Water Delivery Products Under the Urban Water Supplier's Operational Control**		
Start Date of Reporting Period	7/1/2024	**Sum of All Water Management Processes**	**Non-Consequential Hydropower**	
End Date of Reporting Period	6/30/2025			
Is upstream embedded energy in the values reported?	No			
Units of Measure for Water	(AF)	**Total Utility** See DWR NOTES	**Hydropower**	**Net Utility**
Volume of Water Entering Process		5,007	-	5,007
Energy Consumed (kWh)		5,872,560	-	5,872,560
Energy Intensity (kWh/vol. converted to MG)		-	-	-
DWR NOTES:				

Optional Submittal Table O-2: Recommended Energy Reporting - WASTEWATER AND RECYCLED WATER					
Start Date of Reporting Period	7/1/2024	Only for Water Delivery Products Under the Urban Water Supplier's Operational Control			
End Date of Reporting Period	6/30/2025				
Is upstream embedded energy in the values reported?	No	Water Management Process			
Units of Measure for Water	(AF)	Collection / Conveyance	Treatment	Discharge / Distribution	Total
Volume of Wastewater Entering Process (volume units selected above)		650	48	37	735
Wastewater Energy Consumed (kWh)		716985	118045	0	835030
Wastewater Energy Intensity (kWh/volume)		1103	2459	0	1136
Volume of Recycled Water Entering Process (volume units selected above)		NA	602	488	1090
Recycled Water Energy Consumed (kWh)		NA	4321521	371820	4693341
Recycled Water Energy Intensity (kWh/volume converted to MG)		0.0	22030.4	2338.3	0.0

OPTIONAL Submittal Table 7-1 Retail: Basis of Water Year Data (Reliability Assessment)			
Year Type	**Base Year** If not using a calendar year, type in the last year of the fiscal, water year, or range of years, for example, water year 2024-2025, use 2025	**Available Supplies if**	
		☐	Check the box if quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. **Location:** [insert location from UWMP]
		Quantification of available supplies is provided in this table as either volume only, percent	
		Volume Available AF	**% of Average Supply**
Average Year	2025	110,060	100%
Single-Dry Year	2015	79,583	72%
Consecutive Dry Years 1st Year	Varies	86,832	109%
Consecutive Dry Years 2nd Year	Varies	84,132	97%
Consecutive Dry Years 3rd Year	Varies	81,433	97%
Consecutive Dry Years 4th Year	Varies	76,883	94%
Consecutive Dry Years 5th Year	Varies	74,184	96%

DWR NOTES: Supplier may use multiple versions of Submittal Table 7-1 R if different water sources have different base years and the supplier chooses to report the base years for each water source separately. If a Supplier uses multiple versions of Submittal Table 7-1 R, in the "Note" section of each submittal table, state that multiple versions of Submittal Table 7-1 R are being used and identify the particular water source that is being reported in each submittal table.
Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3. This table reports the units of measure reported in Submittal Table 2-3.

NOTES:

Submittal Table 7-2 Retail: Normal Year Supply and Use Comparison Water Code Section 10635 (a)					
	2030 (AF)	2035 (AF)	2040 (AF)	2045 (AF)	2050 (Opt) (AF)
Supply totals (autofill from Submittal Table 6-9 R)	110,548	110,548	110,548	110,548	110,548
Use totals (autofill from Submittal Table 4-2 R)	6,622	6,399	6,177	5,949	5,841
Surplus/(shortfall)	103,926	104,149	104,371	104,599	104,707
DWR NOTES : Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3.					
NOTES: Recycled water is included in both supply and demand total.					

Submittal Table 7-3 Retail: Single Dry Year Supply and Use Comparison					
	2030	2035	2040	2045	2050 (Opt)
	(AF)	(AF)	(AF)	(AF)	(AF)
Supply totals	79,583	79,583	79,583	79,583	79,583
Use totals	6,622	6,399	6,177	5,949	5,841
Surplus/(shortfall)	72,960	73,183	73,406	73,634	73,742
DWR NOTES : Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP					
NOTES: Recycled water is included in both supply and demand total.					

Submittal Table 7-4 Retail: Multiple Dry Years Supply and Use Comparison Water Code Section 10635(a)						
		2030	2035	2040	2045	2050 (Opt)
		(AF)	(AF)	(AF)	(AF)	(AF)
First year	Supply totals	#REF!	#REF!	#REF!	#REF!	#REF!
	Use totals	6,622	6,399	6,177	5,949	5,841
	Surplus/(shortfall)	#REF!	#REF!	#REF!	#REF!	#REF!
Second year	Supply totals	#REF!	#REF!	#REF!	#REF!	#REF!
	Use totals	6,622	6,399	6,177	5,949	5,841
	Surplus/(shortfall)	#REF!	#REF!	#REF!	#REF!	#REF!
Third year	Supply totals	#REF!	#REF!	#REF!	#REF!	#REF!
	Use totals	6,622	6,399	6,177	5,949	5,841
	Surplus/(shortfall)	#REF!	#REF!	#REF!	#REF!	#REF!
Fourth year	Supply totals	#REF!	#REF!	#REF!	#REF!	#REF!
	Use totals	6,622	6,399	6,177	5,949	5,841
	Surplus/(shortfall)	#REF!	#REF!	#REF!	#REF!	#REF!
Fifth year	Supply totals	#REF!	#REF!	#REF!	#REF!	#REF!
	Use totals	6,622	6,399	6,177	5,949	5,841
	Surplus/(shortfall)	#REF!	#REF!	#REF!	#REF!	#REF!
DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3.						
NOTES:						

Submittal Table 8-1: Cross-reference for Standard vs Supplier Shortage Levels Water Code Section 10632(a)(3)(B)			
☑	Check the box if the Supplier uses the Standard six levels of water shortage. Proceed to the next table.		
Standard Shortage Levels	**Percent Shortage Range**	**Suppliers Shortage Levels**	**Percent Shortage Range**
1	Up to 10%		
2	Up to 20%		
3	Up to 30%		
4	Up to 40%		
5	Up to 50%		
6	>50%		
NOTES: Included in District's WSCP (Appendix E of this UWMP)			

Submittal Table 8-2 Retail: Supply Augmentation and Other Actions				
Yes	Is the Supplier completing this table using the standard six levels? (yes/no)			
Shortage Level	Supply Augmentation Methods and Other Actions by Water Supplier **Drop down list**	How much is this going to reduce the shortage		Additional Explanation or Reference (OPTIONAL)
		Volume or Percentage Drop down	Shortage Gap Reduction Value (May be a range) (AF)	
Add additional rows as needed				
DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3.				
NOTES: As discussed in Section 5 of the District's WSCP (Appendix E of this UWMP), CCWD's shortage response actions do not include any supply augmentation.				

Submittal Table 8-3 Retail: Demand Reduction Actions					
Yes	Is the Supplier completing this table using the standard six levels? (yes/no)				
Shortage Level	Demand Reduction Actions **Drop down list** These are the only categories that will be accepted by the WUEdata online submittal tool. Select those that apply.	How much is this going to reduce the Volume or Percentage Drop down	Shortage Gap Reduction Value (May be a range) (AF)	Additional Explanation or Reference (OPTIONAL)	Penalty, Charge, or Other Enforcement? **For Retail Suppliers Only** Drop Down List
Add additional rows as needed					
Ongoing	Other landscape restriction or prohibition	Percentage	0	Irrigating outdoors during, and within 48 hours after, measurable rainfall is prohibited	Yes
Ongoing	Other landscape restriction or prohibition	Percentage	0	Inspect all irrigation systems, repair leaks, and adjust spray heads to provide optimum coverage and eliminate avoidable overspray	Yes
1	Other landscape restriction or prohibition	Percentage	1	Customers should take responsive actions to establish appropriate run-times for landscape irrigation to eliminate excessive water runoff extending beyond the customer property	No
1	Other landscape restriction or prohibition	Percentage	1	Request that landscape watering is avoided during the hottest portion of the day	No
2, 3, 4, 5, 6	Restrict or prohibit runoff from landscape irrigation	Percentage	1	Customers must take actions to establish appropriate run-times for landscape irrigation to eliminate excessive water runoff extending beyond the customer property	Yes
2, 3, 4, 5	Limit landscape irrigation to specific times	Percentage	3	Irrigation is prohibited between the hours of 10 a.m. and 6 p.m.	Yes
3	Limit landscape irrigation to specific days	Percentage	10	Limit landscape irrigation to three days per week	Yes
3, 4, 5, 6	Prohibit certain types of landscape irrigation	Percentage	3	Golf course irrigation will be restricted to greens and trees if raw water is sole source	Yes
4	Limit landscape irrigation to specific days	Percentage	15	Limit landscape irrigation to two days per week	Yes
5	Limit landscape irrigation to specific days	Percentage	20	Limit landscape irrigation to one day per week	Yes
6	Prohibit all landscape irrigation	Percentage	25		Yes
6	Prohibit certain types of landscape irrigation	Percentage	5	Golf courses are limited to the use of treated effluent or private well water sources for irrigation	Yes
2, 3, 4, 5, 6	Lodging establishment must offer opt out of linen service	Percentage	1		Yes
2, 3, 4, 5, 6	Restaurants may only serve water upon request	Percentage	1		Yes
Ongoing	Require covers for any new pools and spas	Percentage	0		Yes
Ongoing	Other recreational water feature or swimming pool restriction	Percentage	0	All pools, spas, must use recirculating pumps and be maintained leak free. Dump and fill maintenance practice for pools is prohibited	Yes
Ongoing	Restrict water use for decorative water features, such as fountains	Percentage	0	Prohibit non-recirculating water displays or features such as decorative water fountains	Yes
3, 4, 5, 6	Restrict water use for decorative water features, such as fountains	Percentage	1	Prohibit operation of water displays or features such as decorative water fountains and recreational ponds	Yes
3, 4, 5, 6	Other recreational water feature or swimming pool restriction	Percentage	1	Prohibit filling new or existing pools	Yes
Ongoing	Require automatic shut-off hoses	Percentage	0		Yes
Ongoing	Other	Percentage	0	All new water connections are prohibited from having single-pass cooling systems	Yes
Ongoing	Other	Percentage	0	All new conveyor car wash and commercial laundry systems are prohibited from having non-recirculating washing systems	Yes
Ongoing	Other	Percentage	0	Any use of potable water that results in excessive runoff from the property and/or gutter flooding is prohibited	Yes
Ongoing	Other	Percentage	0	Limit use of potable water for cleaning driveways, sidewalks, parking lots, and streets except when necessary to alleviate health and safety hazards	Yes
1	Prohibit use of potable water for washing hard surfaces	Percentage	1	Use of water for cleaning driveways, walkways, parking lots and streets is discouraged, except to alleviate immediate safety or sanitation hazards.	No
2, 3, 4, 5, 6	Prohibit use of potable water for washing hard surfaces	Percentage	3	Use of water for cleaning driveways, walkways, parking lots and streets is prohibited, except to alleviate immediate safety or sanitation hazards.	Yes
2, 3, 4, 5, 6	Customers must repair leaks, breaks, and malfunctions in a timely manner	Percentage	3	All leaks, breaks, or other malfunctions shall be repaired within 72 hours of being notified by the District	Yes
3, 4, 5, 6	Other	Percentage	1	Request that local fire departments limit training exercises that use potable water and cease hydrant testing.	No
3, 4, 5, 6	Limit use of potable water for construction and dust control	Percentage	0	Potable water shall not be used for construction or dust control if recycled or raw water is reasonably available	Yes

5, 6	Other	Percentage	1	New water service applications will be granted upon the condition that water shall be used only for interior purposes and landscaping shall be delayed until the District determines that Level 5 rationing levels or above are no longer needed	Yes
Ongoing	Expand public information campaign	Percentage	0	Extend public information campaign	No
Ongoing	Expand public information campaign	Percentage	0	Provide customers with a wide variety of free conservation supplies	No
Ongoing	Provide rebates on plumbing fixtures and devices	Percentage	0	Provide rebates on plumbing fixtures and devices, offer other incentives and conservation tools	No
Ongoing	Reduce system water losses	Percentage	0	Identify and repair transmission and distribution system leaks to reduce water losses	No
3, 4	Decrease line flushing	Percentage	2	Discontinue non-essential flushing of mains and hydrants.	No
5, 6	Decrease line flushing	Percentage	5	Discontinue line flushing	No
1, 2, 3, 4, 5, 6	Implement or modify drought rate structure or surcharge	Percentage	0	Identify emergency water delivery rate structure	No
1, 2, 3, 4, 5, 6	Expand public information campaign	Percentage	0	Encourage conservation through public outreach (local media, billing statements, direct mailings)	No

DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3.

NOTES: (1) Ongoing restrictions and prohibitions are listed but are not assumed to help reduce a shortage gap during a shortage condition. (2) Public outreach campaigns and implementation of a drought rate structure are not assumed to help reduce a shortage gap directly, but rather to increase the water savings from other Demand Reduction Actions.

Submittal Table 10-1 Retail: Notification to Cities and Counties		
City Name	60 Day Notice **Drop Down (yes/no)**	Notice of Public Hearing **Drop Down (yes/no)**
Add additional rows as needed		
Blue Lake Springs Mutual Water Company	Yes	Yes
Calaveras Chamber of Commerce	Yes	Yes
Calaveras County Environmental Management Agency	Yes	Yes
Calaveras Planning Coalition	Yes	Yes
Calaveras Public Utilities District	Yes	Yes
Central Sierra Environmental Resource Center	Yes	Yes
City of Angels Camp Planning & Development	Yes	Yes
Foothill Conservancy	Yes	Yes
Mokelumne Hill Sanitary District	Yes	Yes
Murphys Sanitary District	Yes	Yes
San Andreas Sanitary District	Yes	Yes
Snowshoe Springs Homeowners Association	Yes	Yes
Union Public Utility District	Yes	Yes
Utica Water and Power Authority	Yes	Yes
Valley Springs Public Utility District	Yes	Yes
County Name **Drop Down List**	60 Day Notice **Drop Down (yes/no)**	Notice of Public Hearing **Drop Down (yes/no)**
Add additional rows as needed		
Calaveras County Administrative Department	Yes	Yes
Calaveras County Planning Department	Yes	Yes
Calaveras County Public Works Department	Yes	Yes
NOTES:		

Appendix B

DWR Checklist

Appendix B includes the DWR checklist, which indicates the section in the Urban Water Management Plan that corresponds to each requirement of the California Water Code related to urban water management planning.

2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	Relevant Submittal Table	2025 UWMP Location
Chapter 1	10615	A plan shall describe and evaluate sources of supply, reasonable and practical efficient uses, reclamation and demand management activities.	Introduction and overview	n/a	Chapter 1
Chapter 1	10630.5	Each plan shall include a simple description of the Supplier's plan including water availability, future requirements, a strategy for meeting needs, and other pertinent information. Additionally, a Supplier may also choose to include a simple description at the beginning of each chapter.	Plan preparation	n/a	Chapter 1
Section 2.1	10620(b)	Every person that becomes a Supplier shall adopt UWMP within one year after it has become a Supplier.	Plan preparation	n/a	N/A
Section 2.4	10642	Provide supporting documentation that the Supplier has encouraged active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan and contingency plan.	Plan preparation	n/a	Section 2.5; Chapter 10
Section 2.4.1	10631(h)	Retail Suppliers will include documentation that they have provided their Wholesale Supplier(s)—if any—with water use projections from that source.	Plan preparation	2-4 R	Section 2.5
Section 2.4.1	10631(h)	Wholesale Suppliers will provide their Suppliers with identification and quantification of the existing and planned sources of water available from the Wholesale Supplier to the Supplier during various water year types.	Plan preparation	2-4 W	N/A
Section 2.4.2	10620(d)(3)	Coordinate the preparation of its plan with other appropriate agencies in the area, including other Suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.	Plan preparation	n/a	Section 2.5; Chapter 10
Section 2.5	10644	Supplier shall report the Public Water Systems number, volume of delivered water, and number of connections that are included in this UWMP.	Plan preparation	2-1	Section 2.1
Section 2.5	10644	Supplier shall report if this UWMP is an individual UWMP and whether the Supplier belongs to a regional UWMP or regional alliance.	Plan preparation	2-2	Section 2.3
Section 2.5	10644	Supplier shall report whether the data is in fiscal or calendar years and the units of measure used for reporting water volumes.	Plan preparation	2-3	Section 2.4
Chapter 3.0	10631(a)	Describe the Supplier service area.	System description	n/a	Chapter 3
Section 3.3	10631(a)	Describe the climate of the Supplier's service area.	System description	n/a	Section 3.3
Section 3.4.1	10631(a)	Provide the current and projected service area populations for 2030, 2035, 2040, 2045 and optionally 2050.	System description	3-1	Section 3.4
Section 3.4.2	10631(a)	Describe other social, economic, and demographic factors affecting the Supplier's water management planning.	System description	n/a	Chapter 3; Section 3.4
Section 3.5	10631(a)	Describe the land uses within the service area… include the current and projected land uses within the existing or anticipated service area affecting the Supplier's water management planning. Describe the land uses within the service area.	System description and baselines	n/a	Section 3.2
Section 4.2.5.3	10631(d)(4)(A)	In projected water use, include estimates of water savings from adopted codes, plans, and other policies or laws.	System water use	4-3	Section 4.4
Section 4.2.5.3	10631(d)(4)(B)	Provide citations of codes, standards, ordinances, or plans used to make water use projections.	System water use	4-3	Section 4.2
Section 4.2.5.3	10631(d)(4)(B)(ii)	To the extent that a Supplier reports the information described in subparagraph (A), an urban water Supplier shall… Indicate the extent that the water use projections consider savings from codes, standards, ordinances, or transportation and land use plans. Water use projections that do not account for these water savings shall be noted of that fact.	System water use	4-3	Section 4.4
Section 4.2.5.4	10631.1(a)	Include projected water use needed for lower income housing projected in the service area of the Supplier.	System water use	4-3	Section 4.5
Section 4.2.5.6	10635(b)	Demands under climate change considerations must be included as part of the drought risk assessment.	System water use	n/a	Section 7.3
Sections 4.2.3 and 4.2.4	10631(d)(1)	Quantify past, current, and projected water use, identifying the uses among water use sectors.	System water use	4-1 and 4-2	Sections 4.1, 4.2
Section 4.3.1	10631(d)(3)(A)	Report the distribution system water loss for each of the five years preceding the plan update.	System water use	4-5	Section 4.3
Section 4.3.2	10631(d)(3)(C)	Retail Suppliers shall provide data to show the distribution loss standards were met.	System water use	4-6	Section 4.3

Section 5.1	10608.36	Wholesale Suppliers shall include an assessment of present and proposed future measures, programs, and policies to help their Retail Suppliers achieve targeted water use reductions.	Baselines and targets	n/a	N/A
Section 5.2	10608.4	Retail Suppliers shall report on their compliance in meeting their water use targets. Reporting requirements will vary depending on whether the Supplier: - Was considered an urban retail water supplier in 2020, - Met its 2020 target in 2020, or - Was part of a merger or consolidation since 2020. Chapter 5 Subsections 5.2.1, 5.2.2, and 5.2.3 address each of these situations.	Baselines and targets	5-1	Chapter 5
Section 6.1	10631(b)	Identify and quantify the existing and planned sources of water available for 2025, 2030, 2035, 2040, 2045 and optionally 2050.	System supplies	6-8 and 6-9	Section 6.11
Section 6.1	10631(b)(2)	When multiple sources of water supply are identified, describe the management of each supply in relationship to other identified supplies.	System supplies	n/a	Chapter 6
Sections 6.1 and 6.2	10631(b)(1)	Provide a discussion of anticipated supply availability under a normal, single dry year, and a drought lasting five years, as well as more frequent and severe periods of drought, including changes in supply due to climate change.	System supplies	n/a	Section 7.2
Section 6.2.10	10631(f)	Describe the expected future water supply projects and programs that may be undertaken by the water Supplier to address water supply reliability in average, single-dry, and for a period of drought lasting five consecutive water years.	System supplies	6-7	Sections 6.10, 6.11
Section 6.2.2	10631(b)(4)(A)	Indicate whether a groundwater sustainability plan or groundwater management plan has been adopted by the Supplier or if there is any other specific authorization for groundwater management. Include a copy of the plan or authorization.	System supplies	n/a	Section 2.2.2
Section 6.2.2	10631(b)(4)(B)	Describe the groundwater basin.	System supplies	n/a	Section 6.3
Section 6.2.2	10631(b)(4)(B)	Indicate if the basin has been adjudicated and include a copy of the court order or decree and a description of the amount of water the Supplier has the legal right to pump.	System supplies	n/a	Section 6.3.4
Section 6.2.2	10631(b)(4)(B)	For unadjudicated basins… (include) information as to whether DWR has identified the basin as a high- or medium-priority basin in the most current official departmental bulletin…	Water supplies and recycled water	n/a	Section 6.3.4
Section 6.2.2	10631(b)(4)(B)	For unadjudicated basins… describe efforts by the Supplier to coordinate with sustainability or groundwater agencies to achieve sustainable groundwater conditions.	Water supplies and recycled water	n/a	Section 6.3.4
Section 6.2.2	10631(b)(4)(C)	Indicate whether groundwater is an existing or planned source of water available to the Supplier. If groundwater is identified as an existing or planned source of water… (include) a detailed description and analysis of the location, amount and sufficiency of groundwater pumped by the Supplier for the past five years.	Water supplies and recycled water	6-1	Section 6.3.4
Section 6.2.2	10631(b)(4)(D)	Provide a detailed description and analysis of the amount and location of groundwater that is projected to be pumped.	System supplies	6-9	Section 6.11.4
Section 6.2.2.	10631(b)(4)(C)	If groundwater is identified as an existing or planned source of water… (include) a detailed description and analysis of the location, amount and sufficiency of groundwater pumped by the Supplier for the past five years.	System supplies	n/a	Section 6.3.4
Section 6.2.5	10633(a)	Describe the wastewater collection and treatment systems in the Supplier's service area with quantified amount of collection and treatment and the disposal methods.	System supplies (recycled water)	6-2	Section 6.6
Section 6.2.5	10633(b)	Describe the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.	System supplies (recycled water)	6-3	Section 6.6
Section 6.2.5	10633(c)	Describe the recycled water currently being used in the Supplier's service area.	System supplies (recycled water)	6-4	Section 6.7
Section 6.2.5	10633(d)	Describe and quantify the potential uses of recycled water and provide a determination of the technical and economic feasibility of those uses.	System supplies (recycled water)	6-4	Section 6.7

Section 6.2.5	10633(e)	Describe the projected use of recycled water within the Supplier's service area at the end of 5, 10, 15, and 20 years, and describe the actual use of recycled water in comparison to uses previously projected.	System supplies (recycled water)	6-4 and 6-5	Section 6.7
Section 6.2.5	10633(f)	Describe the actions that may be taken to encourage the use of recycled water and the projected results of these actions in terms of acre-feet of recycled water used per year.	System supplies (recycled water)	6-6	Section 6.7
Section 6.2.5	10633(g)	Provide a plan for optimizing the use of recycled water in the Supplier's service area.	System supplies (recycled water)	n/a	Section 6.7
Section 6.2.6	10631(g)	Describe desalinated water project opportunities for long-term supply.	System supplies	6-7	Section 6.8
Section 6.2.7	10631(c)	Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.	System supplies	n/a	Section 6.9
Section 6.3 and Appendix O	10631.2(a)	The UWMP must include energy information, as stated in the code, that a Supplier can readily obtain.	System suppliers, energy intensity	O-1A, O-1B, O-1C, and O-2	Section 6.13
Section 7.1	10634	Provide information on the quality of existing sources of water available to the Supplier and the manner in which water quality affects water management strategies and supply reliability.	Water supply reliability assessment	n/a	Section 7.1
Section 7.2	10635(a)	Service Reliability Assessment: Assess the water supply reliability during normal, dry, and a drought lasting five consecutive water years by comparing the total water supply sources available to the Supplier with the total projected water use over the next 20 years.	Water supply reliability assessment	7-2, 7-3, and 7-4	Section 7.2 and 7.3
Section 7.2.3	10620(f)	Describe water management tools and options to maximize resources and minimize the need to import water from other regions.	Water supply reliability assessment	n/a	Section 7.5
Section 7.3	10635(b)	Provide a drought risk assessment as part of information considered in developing the demand management measures and water supply projects.	Water supply reliability assessment	n/a	Section 7.4
Section 7.3	10635(b)(1)	Include a description of the data, methodology, and basis for one or more supply shortage conditions that are necessary to conduct a drought risk assessment for a drought period that lasts five consecutive years.	Water supply reliability assessment	n/a	Section 7.4.1
Section 7.3	10635(b)(2)	Include a determination of the reliability of each source of supply under a variety of water shortage conditions.	Water supply reliability assessment	n/a	Section 7.2
Section 7.3	10635(b)(3)	Include a comparison of the total water supply sources available to the Supplier with the total projected water use for the drought period.	Water supply reliability assessment	7-5	Section 7.4
Section 7.3	10635(b)(4)	Include considerations of the historical drought hydrology, plausible changes on projected supplies and demands under climate change conditions, anticipated regulatory changes, and other locally applicable criteria.	Water supply reliability assessment	n/a	Chapter 7
Chapter 8	10632(a)	Provide a water shortage contingency plan (WSCP) with specified elements below.	Water shortage contingency planning	n/a	Appendix E
Chapter 8	10632(a)(1)	Provide an analysis of water supply reliability (from Guidebook Chapter 7) in the WSCP.	Water shortage contingency planning	n/a	Appendix E, Section 2
Section 8.10	10632(a)(10)	Describe reevaluation and improvement procedures for monitoring and evaluation the WSCP to ensure risk tolerance is adequate and appropriate water shortage mitigation strategies are implemented.	Water shortage contingency planning	n/a	Appendix E, Section 9
Section 8.11	10632(b)	Analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas.	Water shortage contingency planning	n/a	Appendix E, Section 5
Section 8.12	10632(c)	Make available the WSCP to customers and any city or county where it provides water within 30 days after adoption of the plan.	Water shortage contingency planning	n/a	Section 10.5
Section 8.2	10632(a)(2)(A)	Provide the written decision-making process and other methods that the Supplier will use each year to determine its water reliability.	Water shortage contingency planning	n/a	Appendix E, Section 3
Section 8.2	10632(a)(2)(B)	Provide data and methodology to evaluate the Supplier’s water reliability for the current year and one dry year pursuant to factors in the code.	Water shortage contingency planning	n/a	Appendix E, Section 3
Section 8.3	10632(a)(3)(A)	Define six standard water shortage levels of 10%, 20%, 30%, 40%, 50% shortage, and greater than 50% shortage. These levels shall be based on supply conditions, including percent reductions in supply, changes in groundwater levels, changes in surface elevation, or other conditions. The shortage levels shall also apply to a catastrophic interruption of supply.	Water shortage contingency planning	n/a	Appendix E, Section 4
Section 8.3	10632(a)(3)(B)	Suppliers with an existing WSCP that uses different water shortage levels must cross reference their categories with the six standard categories.	Water shortage contingency planning	8-1	Appendix E, Section 4

Section 8.4	10632(a)(4)(A)	Suppliers with WSCPs that align with the defined shortage levels must specify locally appropriate supply augmentation actions.	Water shortage contingency planning	8-2	Appendix E, Section 4
Section 8.4	10632(a)(4)(B)	Specify locally appropriate demand reduction actions to adequately respond to shortages.	Water shortage contingency planning	8-3	Appendix E, Section 5
Section 8.4	10632(a)(4)(C)	Specify locally appropriate operational changes.	Water shortage contingency planning	8-2	Appendix E, Section 5
Section 8.4	10632(a)(4)(D)	Specify additional mandatory prohibitions against specific water use practices that are in addition to State-mandated prohibitions are appropriate to local conditions.	Water shortage contingency planning	Table 8-3	Appendix E, Section 5
Section 8.4	10632(a)(4)(E)	Estimate the extent to which the gap between supplies and demand will be reduced by implementation of the action.	Water shortage contingency planning	8-2 and 8-3	Appendix E, Section 5
Section 8.4.6	10632.5	The UWMP shall include a seismic risk assessment and mitigation plan.	Water shortage contingency plan	n/a	Appendix E
Section 8.5	10632(a)(5)(A)	Suppliers must describe that they will inform customers, the public and others regarding any current or predicted water shortages.	Water shortage contingency planning	n/a	Appendix E, Section 6
Section 8.5	10632(a)(5)(B), 10632(a)(5)(C)	Suppliers must describe that they will inform customers, the public and others regarding any shortage response actions triggered or anticipated to be triggered and other relevant communications.	Water shortage contingency planning	n/a	Appendix E, Section 6
Section 8.6	10632(a)(6)	Retail Supplier must describe how it will ensure compliance with and enforce provisions of the WSCP.	Water shortage contingency planning	n/a	Appendix E, Section 7
Section 8.7	10632(a)(7)(A)	Describe the legal authority that empowers the Supplier to enforce shortage response actions.	Water shortage contingency planning	n/a	Appendix E, Section 1.1
Section 8.7	10632(a)(7)(B)	Provide a statement that the Supplier will declare a water shortage emergency per Water Code Chapter 3. *Water Shortage Emergencies*.	Water shortage contingency planning	n/a	Appendix E, Section 1.1
Section 8.7	10632(a)(7)(C)	Provide a statement that the Supplier will coordinate with any city or county within which it provides water for the possible proclamation of a local emergency.	Water shortage contingency planning	n/a	Appendix E, Section 1.1
Section 8.8	10632(a)(8)(A)	Describe the potential revenue reductions and expense increases associated with activated shortage response actions.	Water shortage contingency planning	n/a	Appendix E, Section 8
Section 8.8	10632(a)(8)(B)	Provide a description of mitigation actions needed to address revenue reductions and expense increases associated with activated shortage response actions.	Water shortage contingency planning	n/a	Appendix E, Section 8
Section 8.8	10632(a)(8)(C)	Retail Suppliers must describe the cost of compliance with Water Code Chapter 3.3, *Excessive Residential Water Use During Drought*.	Water shortage contingency planning	n/a	Appendix E, Section 7
Section 8.9	10632(a)(9)	Retail Suppliers must describe the monitoring and reporting requirements and procedures that ensure appropriate data are collected, tracked, and analyzed for purposes of monitoring customer compliance.	Water shortage contingency planning	n/a	Appendix E, Section 9
Sections 9.1	10631(e)(1)	Retail Suppliers shall provide a description of the nature and extent of each demand management measure implemented over the past five years. The description will address specific measures listed in code.	Demand management measures	n/a	Chapter 9
Sections 9.2	10631(e)(2)	Wholesale Suppliers shall describe specific demand management measures listed in code, their distribution system asset management program, and Supplier assistance program.	Demand management measures	n/a	N/A
Chapter 10	10608.26(a)	Retail Suppliers shall conduct a public hearing to discuss adoption, implementation, and economic impact of water use targets (recommended to discuss compliance).	Plan adoption, submittal, and implementation	n/a	Appendix K
Section 10.2.1	10621(b)	Notify, at least 60 days prior to the public hearing, any city or county within which the Supplier provides water that the Supplier will be reviewing the UWMP and considering amendments or changes to the plan.	Plan adoption, submittal, and implementation	10-1	Chapter 10, Appendix H
Section 10.2.2	10642	The Supplier is to provide the time and place of the hearing to any city or county within which the Supplier provides water.	Plan adoption, submittal, and implementation	10-1	Chapter 10, Appendix H
Sections 10.2.2, 10.3, and 10.5	10642	Provide supporting documentation that the Supplier made the UWMP and WSCP available for public inspection, published notice of the public hearing, and held a public hearing about the UWMP and WSCP.	Plan adoption, submittal, and implementation	n/a	Chapter 10, Appendices H-L
Section 10.3.2	10642	Provide supporting documentation that the UWMP and WSCP has been adopted as prepared or modified.	Plan adoption, submittal, and implementation	n/a	Appendix M
Section 10.4	10621(f)	Each urban water Supplier shall update and submit its 2025 plan to DWR by July 1, 202 6.	Plan adoption, submittal, and implementation	n/a	Appendix M
Section 10.4	10644(a)	Provide supporting documentation that the Supplier has submitted their UWMP to the California State Library.	Plan adoption, submittal, and implementation	n/a	Section 10.4

Section 10.4	10644(a)(1)	Provide supporting documentation that the Supplier has submitted their UWMP to any city or county within which the Supplier provides water no later than 30 days after adoption.	Plan adoption, submittal, and implementation	n/a	Section 10.4
Sections 10.4.1 and 10.4.2	10644(a)(2)	The UWMP, or amendments to the UWMP, submitted to DWR shall be submitted electronically.	Plan adoption, submittal, and implementation	n/a	Section 10.4
Section 10.5	10645(a)	Provide supporting documentation that, not later than 30 days after filing a copy of its UWMP with DWR, the Supplier has or will make the plan available for public review during normal business hours.	Plan adoption, submittal, and implementation	n/a	Section 10.5
Section 10.5	10645(b)	Provide supporting documentation that, not later than 30 days after filing a copy of its WSCP with DWR, the Supplier has or will make the plan available for public review during normal business hours.	Plan adoption, submittal, and implementation	n/a	Section 10.5
Section 10.6	10621(c)	If Supplier is regulated by the Public Utilities Commission, include its plan and contingency plan as part of its general rate case filings.	Plan adoption, submittal, and implementation	n/a	N/A
Section 10.7.2	10644(b)	If revised, submit a copy of the WSCP to DWR within 30 days of adoption.	Plan adoption, submittal, and implementation	n/a	Section 10.6

Appendix C

2025 Water Demands by Service Area

Appendix C includes the actual 2025 water demands and number of connections for each of the District's service areas in Sub-Region A (Calaveras River) and Sub-Region B (Stanislaus River).

TABLE C-1: SUB-REGION A DEMANDS FOR POTABLE AND RAW WATER BY SERVICE AREA (DWR TABLE 4-1)

Use Type	Additional Description (as needed)	2025 Actual Water Use			
		Level of Treatment	Volume (AF)		
			Jenny Lind	Sheep Ranch	Total
Other	Combined SF and MF Residential Use	Potable	1,305	7	1,311
Other	Combined CII and	Potable	58	0	58
Landscape	--	Potable	15	0	15
Landscape	Recycled and raw water for golf course irrigation	Non-Potable	227	0	227
Agricultural Irrigation	--	Non-Potable	1,116	0	1,116
Other	Unbilled Authorized Consumption	Potable	26	0	26
Distribution System Water Loss[1]	Real Losses	Potable	437	7	444
Distribution System Water Loss[1]	Apparent Losses	Potable	22	0	22
		Subtotal Potable	1,864	14	1,878
		Subtotal Non-Potable	1,343	0	1,343
		Total	3,207	3,207	3,207

NOTES: (1) Real losses calculated using the AWWA Water Loss Audit worksheet including water physically lost in the conveyance of water supplies. Apparent losses including unauthorized consumption are reported separately for clarity (see Section 4.3).

TABLE C-2: SUB-REGION B DEMANDS FOR POTABLE AND RAW WATER BY SERVICE AREA (DWR TABLE 4-1)

Use Type	Additional Description (as needed)	2025 Actual Water Use			
		Level of Treatment	Volume (AF)		
			Ebbetts Pass	Copper Cove	Total
Other	Combined SF and MF Residential Use	Potable	665	789	1,454
Other	Combined CII and governmental use	Potable	143	39	182
Landscape	--	Potable	14	153	167
Landscape	Recycled and raw water for golf course irrigation	Non-Potable	573	0	573
Sales/Transfers/Exchanges to Other Agencies	--	Potable	79	0	79
Other	Unbilled Authorized Consumption	Potable	13	7	21
Distribution System Water Loss[1]	Real Losses	Potable	392	377	768
Distribution System Water Loss[1]	Apparent Losses	Potable	14	16	29
		Subtotal Potable	1,319	1,381	2,700
		Subtotal Non-Potable	573	0	573
		Total	1,892	3,207	3,272

NOTES: (1) Real losses calculated using the AWWA Water Loss Audit worksheet including water physically lost in the conveyance of water supplies. Apparent losses including unauthorized consumption are reported separately for clarity (see Section 4.3). (2) Volumes reported are rounded. This creates a discrepancy between the sum of the rounded values shown here (3,273 AF) and the sum of the exact values (3,272.1 AF). To minimize rounding error, the total was calculated using exact water use values and subsequently rounded to 3,272 AF.

Appendix D

Projected Water Demands by Service Area

Appendix D includes the projected water demands for each of the District's service areas in Sub-Region A (Calaveras River) and Sub-Region B (Stanislaus River).

TABLE D-1: JENNY LIND USE FOR POTABLE AND NON-POTABLE WATER - PROJECTED

Use Type	Description	Level of Treatment When Delivered	Projected Water Use (AF)				
			2030	2035	2040	2045	2050
Other	Combined Residential – Single and Multi-Family	Potable	1,278	1,255	1,229	1,198	1,165
Other	Combined CII	Potable	57	56	55	53	52
Landscape		Potable	15	14	14	14	13
Landscape		Non-potable	227	227	227	227	227
Agricultural		Non-potable	1,116	1,116	1,116	1,116	1,116
Other	Unbilled Authorized Consumption	Potable	16	15	15	15	14
Distribution System Water Losses		Potable	459	394	332	272	265
		Subtotal Potable	1,825	1,734	1,645	1,551	1,509
		Subtotal Non-Potable	1,343	1,343	1,343	1,343	1,343
		Total	3,168	3,077	2,988	2,894	2,852

NOTES: (1) As a user of the Subbasin, CCWD may be required to participate in some form of groundwater recharge program as part of SGMA compliance; however, future demands associated with such activities are currently unknown; (2) Landscape non-potable uses include recycled water demands for golf course irrigation, discussed further in Chapter 6 (3) Losses were calculated by applying an estimated volume loss per connection to the projected number of connections. See Section 4.3; (4) California Department of Finance data indicates that, between 2025 and 2050, Calaveras County may experience an 11% decrease in population.

TABLE D-2: SHEEP RANCH USE FOR POTABLE AND NON-POTABLE WATER - PROJECTED

Use Type	Description	Level of Treatment When Delivered	Projected Water Use (AF)				
			2030	2035	2040	2045	2050
Other	Combined Residential – Single and Multi-Family	Potable	7	7	7	7	7
Other	Unbilled Authorized Consumption	Potable	0.1	0.1	0.1	0.1	0.1
Distribution System Water Losses		Potable	7	7	6	5	5
		Subtotal Potable	15	14	13	13	2,225
		Subtotal Non-Potable	0	0	0	0	0
		Total	15	14	13	13	13

NOTES: (1) As a user of the Subbasin, CCWD may be required to participate in some form of groundwater recharge program as part of SGMA compliance; however, future demands associated with such activities are currently unknown; (2) Landscape non-potable uses include recycled water demands for golf course irrigation, discussed further in Chapter 6 (3) Losses were calculated by applying an estimated volume loss per connection to the projected number of connections. See Section 4.3; (4) California Department of Finance data indicates that, between 2025 and 2050, Calaveras County may experience an 11% decrease in population.

TABLE D-3: EBBETTS PASS USE FOR POTABLE AND NON-POTABLE WATER - PROJECTED

Use Type	Description	Level of Treatment When Delivered	Projected Water Use (AF)				
			2030	2035	2040	2045	2050
Other	Combined Residential – Single and Multi-Family	Potable	651	639	626	610	594
Other	Combined CII	Potable	140	137	135	131	128
Landscape		Potable	14	13	13	13	12
Landscape		Non-potable	573	573	573	573	573
Sales/Transfers/Exchanges with other agencies		Potable	77	75	74	72	70
Other	Unbilled Authorized Consumption	Potable	8	8	8	7	7
Distribution System Water Losses		Potable	405	397	390	382	372
		Subtotal Potable	1,295	1,271	1,245	1,215	1,183
		Subtotal Non-Potable	650	648	647	645	643
		Total	1,868	1,844	1,818	1,788	1,756

NOTES: (1) As a user of the Subbasin, CCWD may be required to participate in some form of groundwater recharge program as part of SGMA compliance; however, future demands associated with such activities are currently unknown; (2) Landscape non-potable uses include recycled water demands for golf course irrigation, discussed further in Chapter 6 (3) Losses were calculated by applying an estimated volume loss per connection to the projected number of connections. See Section 4.3; (4) California Department of Finance data indicates that, between 2025 and 2050, Calaveras County may experience an 11% decrease in population.

TABLE D-4: COPPER COVE USE FOR POTABLE AND NON-POTABLE WATER - PROJECTED

Use Type	Description	Level of Treatment When Delivered	Projected Water Use (AF)				
			2030	2035	2040	2045	2050
Other	Combined Residential – Single and Multi-Family	Potable	773	759	743	724	704
Other	Combined CII	Potable	39	38	37	36	35
Landscape		Potable	150	147	144	140	137
Other	Unbilled Authorized Consumption	Potable	12	12	12	12	12
Distribution System Water Losses		Potable	392	311	233	158	154
		Subtotal Potable	1,366	1,266	1,169	1,070	1,042
		Subtotal Non-Potable	0	0	0	0	0
		Total	1,366	1,266	1,169	1,070	1,042

NOTES: (1) As a user of the Subbasin, CCWD may be required to participate in some form of groundwater recharge program as part of SGMA compliance; however, future demands associated with such activities are currently unknown; (2) Landscape non-potable uses include recycled water demands for golf course irrigation, discussed further in Chapter 6 (3) Losses were calculated by applying an estimated volume loss per connection to the projected number of connections. See Section 4.3; (4) California Department of Finance data indicates that, between 2025 and 2050, Calaveras County may experience an 11% decrease in population.

APPENDIX E: WATER SHORTAGE CONTINGENCY PLAN

Appendix F

Water Waste Ordinance No. 2010-02

Appendix F includes the District's ordinance to prohibit water waste.

ORDINANCE NO. 2010-02

AN ORDINANCE OF THE CALAVERAS COUNTY WATER DISTRICT

PROHIBITING WATER WASTE

Section I: Title

This ordinance will be known as the Calaveras County Water District Water Waste Prevention Program.

Section II: Findings

WHEREAS, a reliable supply of potable water is essential to the public health, safety and welfare of the people and economy of Calaveras County; and

WHEREAS, many service areas of the Calaveras County Water District (District) are within the semi-arid areas of Calaveras County where the District's potable water customers are solely dependent on surface water supplies diverted from three important watersheds: the Mokelumne, Calaveras, and Stanislaus Rivers. A growing population, climate change, environmental concerns, along with external statewide water supply factors, make District potable water customers potentially susceptible to water supply reliability issues; and

WHEREAS, careful water management that includes active water conservation measures not only in times of drought, but at all times, are essential to ensure a reliable supply of water to meet current and future needs; and

WHEREAS, Article X, Section 2 of the California Constitution declares that the general welfare requires that water resources be put to beneficial use, waste or unreasonable use or unreasonable method of use of water be prevented, and conservation of water be fully exercised with a view to the reasonable and beneficial use thereof; and

WHEREAS, California Water code Section 375 et seq. authorizes urban water suppliers to adopt and enforce a comprehensive water conservation program to reduce water consumption and conserve water supplies; and

WHEREAS, the adoption and enforcement of water conservation and supply shortage program is necessary to manage the District's potable water supply in the short and long-term and to avoid or minimize the impacts of drought and shortage within the District. Such a program is essential to ensure a reliable and sustainable supply of water for the public health, safety, and welfare; and

WHEREAS, the Board of Directors has previously adopted a water waste provision per Article II, Section 16 of the District's Rules and Regulations for Furnishing Water/Sewer Service; and

WHEREAS, based upon the above findings, the District's legal counsel advises, and the Board of Directors finds, that actions taken pursuant to this ordinance are categorically exempt from CEQA according to 14 California Code of Regulations 15301 and 15307.

NOW, THEREFORE, BE IT RESOLVED THAT THE CALAVERAS COUNTY WATER DISTRICT BOARD OF DIRECTORS DOES ORDAIN AS FOLLOWS:

Section III. Amendment of District Rules and Regulations.

That Article II, Section 16 of the District Rules and Regulations shall be amended to read as follows:

Section 16. 1. Customer's Negligence or Wasteful Use of Water. Where negligent or wasteful use of water exists on a customer's premises, seriously affecting the District's ability to fully serve all reasonable and beneficial water needs of all existing customers without interruption or limitation, the District may discontinue the service to the customer making such negligent or wasteful use of water if such conditions are not corrected within five (5) days after giving customer written notice of intent to do so.

Section 16.2. Prevention of Water Waste.

16.2.1. Declaration of Purpose and Intent. The Board of Directors of the Calaveras County Water District hereby finds it necessary to establish an ordinance to prohibit the waste of water in order to:

a. Manage and protect the water resources of Calaveras County per the County Water District Law, Water Code § 30000 et seq.

b. Maintain compliance with the Memorandum of Understanding regarding Urban Water Conservation in California adopted by the California Urban Water Conservation Council (CUWCC) of which the District is a member.

c. Maintain compliance with AB1420, codified at Water Code Sections 10631.5 (added) and 10631.7 (revised), which mandates full implementation of all locally cost effective CUWCC conservation best management practices for an urban water supplier to be eligible for state water management grants and loans

16.2.2. No person shall use or permit the use of water in the District's service areas in Calaveras County as specified:

a. **No excessive Water Flow or Run-Off:** Any use of water that results in excessive water runoff from the property and/or gutter flooding.

b. **Limited Washing Down of Hard or Paved Surfaces:** Hosing down paved surfaces is only allowed to alleviate health or safety hazards.

c. **Free Flowing Hoses Prohibited for Any Use:** All hoses must have an automatic shutoff device.

d. **Single-pass Cooling Systems Prohibited:** All new water connections are prohibited from having single-pass cooling systems.

e. **Non-recirculating Washing Systems Prohibited**: All new conveyor car wash and commercial laundry systems are prohibited from having non-recirculating washing systems.

f. **Re-circulating Water Required for Water Fountains and Decorative Water Features:** All pools, spas, fountains, and other water displays must use a recirculation pump and be maintained leak free. "Dump and Fill" maintenance practice for pools is prohibited.

Section IV. Effective Date

This Ordinance is effective upon adoption.

PASSED AND ADOPTED this 14th day of July 2010 by the following vote:

AYES: Directors Dean, Stump, Dooley, and Davidson
NOES: None
ABSTAIN: None
ABSENT: Director McCartney

CALAVERAS COUNTY WATER DISTRICT

Jeff Davidson, Vice President
Board of Directors

ATTEST:

Mona Walker, Clerk to the Board

Appendix G

Conservation as a Way of Life Compliance Summary for FY 2024-2025

Appendix G includes the State Board's compliance summary for the annual report submitted by the District on December 30, 2025 in compliance with the Making Conservation a California Way of Life regulation.

CALIFORNIA
Water Boards
STATE WATER RESOURCES CONTROL BOARD
REGIONAL WATER QUALITY CONTROL BOARDS

"Conservation as a Way of Life" Compliance Summary: Calaveras County Water District (ORG ID 351)

Report prepared by State Water Resources Control Board staff on February 23, 2026

Report Sections

1 Executive Summary

The "Making Conservation a California Way of Life" regulation establishes unique efficiency goals for each urban retail water supplier in California and provides those suppliers flexibility to implement locally appropriate solutions. The regulation seeks to cultivate long-term practices that help communities adapt to California's ongoing water challenges.

The regulation requires suppliers to:

- Annually calculate urban water use objectives for a subset of urban water uses: residential indoor water use, residential outdoor water use, real water loss, and commercial, industrial, and institutional (CII) landscapes with dedicated irrigation meters (DIMs)
- Carry out performance measures for CII water use
- Annually report to the State Water Board

This report summarizes the supplier's compliance with annual reporting requirements under the "Making Conservation a California Way of Life" regulation for the state fiscal year 2024-2025. This report was due on January 1, 2026.

1.1 Key Highlights from the Report

The following points are a summary of Sections 3 through 7.

- The report was submitted **on time**, on December 30, 2025.
- The supplier has **met** its calculated objective for fiscal year 2024-2025.[1]
- The supplier has no approved variances or temporary provisions for fiscal year 2024-2025.
- The report contains 0 data quality flags.

1.2 Objectives Calculated with Future Standards

The water use objectives will become progressively smaller as standards change through 2040. The following table compares the current water use objective and reported water use (shown in million gallons) to future efficiency requirements, assuming that the irrigable-not-irrigated (INI) buffer is utilized when applicable; the full summary, which also contains a table of projected objectives absent the INI buffer, can be found in Section 8. While this table does not capture how future water use objectives will be influenced by changes in local climatology, service area population, square footage of irrigated landscapes, and other data that will factor into future water use efficiency objectives, it is provided as a tool for local planning purposes.

Year	FY 24-25 Use (MG)	Calculated/Projected Objective (MG)	Current use lower than objective?
Current	1,438.8	1,542.3	Yes
FY25-26	1,438.8	1,501.1	Yes
FY30-31	1,438.8	1,450.0	Yes
FY35-36	1,438.8	1,285.4	No (objective is 10.7% lower)
FY40-41	1,438.8	1,206.2	No (objective is 16.2% lower)

Table 1: Simplified version of Table 6. Objectives calculated using the values and standards specified in Table 5 (with the exception of CII DIMs due to lack of data). See Section 8 for more information on the calculations and assumptions made.

[1]The State Water Board will begin formally assessing compliance with the objective for the report due on January 1, 2027.

2 Introduction

The "Making Conservation a California Way of Life" regulation went into effect on January 1, 2025. Pursuant to the regulation, urban retail water suppliers are annually required to submit a reporting form to the State Water Resources Control Board (State Water Board) by January 1 of each year. This document is intended to provide the supplier with a high-level summary of its compliance with reporting requirements for the state fiscal year 2024-2025, as well as some supplemental information that may help to inform future decision-making. Sections 3 through 7 summarize the information that the supplier provided on the required reporting form, as well as data quality issues identified by State Water Board staff. Section 8 calculates what the objective for fiscal year 2024-2025 would look like if future water use efficiency standards were applied.

Note: This is the second year that water use and water use objectives were required to be reported and calculated pursuant to the State Water Board's regulation, and State Water Board staff are identifying errors in the submitted data and reporting form as review is ongoing; these errors may impact the values shown throughout this report. Staff are taking steps to identify the more common errors so that they are corrected by suppliers and are resolved by the time water use objective compliance is assessed (i.e., for reports submitted January 1, 2027).

This report was generated by the State Water Board on February 23, 2026.

3 Report Submittal Date

The fiscal year 2024-2025 report was due on January 1, 2026. The version reviewed by the State Water Board was submitted on December 30, 2025.

4 Comparing the Objective to Reported Water Use

The supplier has **met** its calculated objective for fiscal year 2024-2025.

The final urban water use objective and corresponding reported water use, as calculated in the reporting workbook, is summarized in Table 2 in both million gallons (MG) and acre-feet (AF). Please note that compliance with the objective will first be formally assessed for the fiscal year 2025-2026, based on the report due January 1, 2027.

Quantity	Value (MG)	Value (AF)
Objective	1,542.3	4,733.0
Actual Water Use	1,438.8	4,415.7

Table 2: Objective and reported water use for fiscal year 2024-2025

As of the report due January 1, 2026, the SBx7-7 backstop volumes for process and recycled water are no longer equivalent to the values reported in the 2020 Urban Water Management Plan. Instead, they are based on values calculated in the SBx7-7 Backstop section of the reporting form. If the supplier had previously reported process and/or recycled water in the 2020 urban water management plan and did not include it in this year's report, this may lower the volume of the SBx7-7 backstop relative to that shown in the fiscal year 2023-2024 report, and result in a lower objective volume. Please refer questions about these changes to State Water Board staff at waterconservation@waterboards.ca.gov.

If you have any questions about how the objective was calculated, please refer to Appendix A.

5 Summary of Data Quality Flags for Objective Calculations

Table 3 summarizes objective data-related issues as identified by State Water Board staff.

Section	Data Checked	Reporting Issues Flagged
Objective	Calculated Final Volume	None
Objective	Intermediate Calculations	None
Residential Indoor	Calculated Volume	None
Residential Indoor	Required Cells Left Blank	None
Residential Outdoor	Calculated Volume	None
Residential Outdoor	LAM Data	None
Residential Outdoor	Required Cells Left Blank	None
Bonus Incentive	Calculated Volume	None
Water Loss Budget	Calculated Volume	None
Water Loss Budget	Service Connections/ Length of Mains	None
Actual Water Use	Calculated Volume	None
Actual Water Use	Missing/ Zero Potable Deliveries	None
Actual Water Use	Required Cells Left Blank	None
Real Water Loss	Reported Volume	None
Real Water Loss	Reporting Method	None
SBx7-7 Backstop	Required Cells Left Blank	None

Table 3: Data quality flags for the objective-related data

6 Summary of Data Quality Flags for Variance Calculations

As of the fiscal year 2024-2025 reporting period, variances and temporary provisions are reviewed by State Water Board staff; approved variances and temporary provisions are prefilled into the report. This has removed the need for variance data quality flags.

The supplier has no approved variances or temporary provisions for fiscal year 2024-2025.

7 CII Performance Measures

Table 4 summarizes Commercial, Institutional, and Industrial (CII) Performance Measures data-related issues as identified by State Water Board staff. The table summarizes flags for the CII Classification, Dedicated Irrigation Meters (DIMs) and In-Lieu Technologies, and Best Management Practices (BMPs) sections in the reporting form.

Section	Data Checked	Reporting Issues Flagged
CII Classification (972)	Required Cells Left Blank	None
CII Classification (972)	Number of Service Connections	None
DIMs and In-Lieu Tech (973)	Large Landscapes Identification Method	None
DIMs and In-Lieu Tech (973)	Required Cells Left Blank	None
BMPs (974)	CII BMP Identification Method	None
974(c)(1)	Required Cells Left Blank	None

Table 4: Data quality flags for the CII BMP sections

8 Objectives Calculated with Future Standards

The current and future standards for the urban water use objective calculations are summarized in Table 5.

Year	Residential Indoor	Residential Outdoor	CII DIMs	Water Loss Budget
FY23-24	55 GPCD	0.8 LEF	Volume as Reported	Reported or Budget
FY25-26	47 GPCD	0.8 LEF	Volume as Reported	Reported or Budget
FY30-31	42 GPCD	0.8 LEF	0.8 LEF (starts July 1, 2028)	Budget (starts July 1, 2027)
FY35-36	42 GPCD	0.63 LEF	0.63 LEF	Budget
FY40-41	42 GPCD	0.55 LEF	0.45 LEF	Budget

Table 5: Summary of the standards that inform objective calculations

Using the standards in Table 5 and the calculation steps explained in Appendix A, as well as the data provided in the fiscal year 2024-2025 report, State Water Board staff generated objective volume estimates as shown in Tables 6 and 7.

Please note that these values do **not** represent the final calculated budgets for the corresponding years; they are intended to show what an objective for the fiscal year 2024-2025 would look like if future standards, rather than the standards in effect at the time, were applied to the reported data. Compliance with the regulation is a long-term process, but programs or actions implemented to reduce service area demand may also take time to implement and produce intended outcomes. State Water Board staff have provided these numbers as a starting point for considerations of which actions, if any, may need to be taken.

The budget associated with irrigable-not-irrigated landscapes (INI) is conditionally included or not included in the budget as noted in the "INI Included?" column of the table (see item 6 in the list of assumptions below for details). Future water use objectives will be influenced by changes in local climatology, service area population, and square footage of irrigated landscapes, as well as other data points that are not yet available, such as the square footage of CII landscapes with DIMs.

Please note that issues with missing or incorrect data from the fiscal year 2024-2025 report may also affect these values.

Year	INI Included?	Capped?	Objective (MG)	Objective (AF)	FY 24-25 use lower than objective?
Current	Yes	No	1,542.3	4,733.0	Yes
FY25-26	Yes	No	1,501.1	4,606.6	Yes
FY30-31	Yes	No	1,450.0	4,449.9	Yes
FY35-36	Yes	No	1,285.4	3,944.7	No (objective is 10.7% lower)
FY40-41	Yes	No	1,206.2	3,701.7	No (objective is 16.2% lower)

Table 6: Objectives calculated using the values and standards specified in Table 5 (with the exception of CII DIMs due to lack of data; see point 3 below)

Year	INI Included?	Capped?	Objective (MG)	Objective (AF)	FY 24-25 use lower than objective?
Current	Yes	No	1,542.3	4,733.0	Yes
FY25-26	No	No	1,272.9	3,906.3	No (objective is 11.5% lower)
FY30-31	No	No	1,221.8	3,749.6	No (objective is 15.1% lower)
FY35-36	No	No	1,105.7	3,393.2	No (objective is 23.2% lower)
FY40-41	No	No	1,049.3	3,220.2	No (objective is 27.1% lower)

Table 7: Similar to Table 6 but no INI after current reporting period. INI will not be included in the objective if residential landscape area is updated according to Section 968(b)(3)

While Table 6 follows all of the listed assumptions below, Table 7 does not include the 20% INI buffer past the current reporting period.

These values were generated using some or all of the following assumptions:

1. For all years, reported quantities such as population, irrigated residential landscapes, and excluded demands remained constant.
2. For all years, the volume of requested variances (with the exception of the seasonal population variance, if applicable) remained the same as the volumes requested in this year's submitted report.
3. For all years, the CII with DIMs budget was assumed to be equivalent to the reported actual water use for CII with DIMs, since the landscape area data is not yet available. Variances for CII with DIMs are therefore assumed to be 0.
4. The water loss budget prior to FY2030-2031 was equivalent to the value selected by the reporter in this year's submitted report. The water loss budget for FY2030-2031 onwards was set as either (A) the water loss budget calculated using the standards; or (B) the reported water loss, if one or more necessary components for the water loss budget calculation were missing.
5. The volume of the bonus incentive, if applicable, was capped according to the reported method and calculated objective for the corresponding year.
6. The 20% INI was included if actual water use exceeded the pre-"capped" objective for the corresponding year.
7. Before 2040, if the "no backsliding" provision was applicable and the supplier was part of a regional alliance that met its regional target, the pre-"capped" objective was used in place of the "capped" objective.

A Steps to Calculate Objective

Table 8 summarizes the initial budget components as determined within the submitted workbook, in both million gallons (MG) and acre-feet (AF).

Budget Component	Equation Symbol	Budget Value (MG)	Budget Value (AF)
Residential Indoor	RI_B	521.2	1,599.5
Residential Indoor Variances and Provisions	RI_V	0.0	0.0
Residential Outdoor	RO_B	614.5	1,885.8
Residential Outdoor Variances and Provisions	RO_V	0.0	0.0
CII with DIMs	DIM_B	61.1	187.5
Real Water Loss	RWL_B	117.3	360.0
Bonus Incentive	BI	0.0	0.0
Sum (before INI)	OBJ	1,314.0	4,032.7

Table 8: Individual budgets within the objective for fiscal year 2024-2025

The following section describes the step-by-step calculations that produced the final objective for fiscal year 2024-2025. All calculations are shown in million gallons.

1. The initial water use objective (not including INI, the bonus incentive, or the "no backsliding" provision) was calculated as follows:

$$Obj_{init} = RI_B + RI_V + RO_B + RO_v + DIM_B + RWL_B$$

$$OBJ_{init} = 521.2 + 0.0 + 614.5 + 0.0 + 61.1 + 117.3$$

$$OBJ_{init} = 1,314.0 \text{ Million Gallons}$$

2. The bonus incentive was reported as 0 or not calculated. Therefore,

$$OBJ = OBJ_{init}$$

$$OBJ = 1,314.0 \text{ Million Gallons}$$

If you think the bonus incentive should be greater than 0, please review the values that were entered in the "Bonus Incentive" tab of the reporting form.

3. The calculated objective was less than actual water use for FY 2024-2025, so the 20% INI buffer was added to the objective.

Volume	Equation Symbol	Value (MG)	Value (AF)
Objective without INI	OBJ	1,314.0	4,032.7
Actual Water Use	AWU	1,438.8	4,415.7
20 pct INI Volume (if applicable)	RO_{INI}	228.2	700.3
Excluded Demands	$EXCL$	79.4	243.5

Table 9: Summary of volumes used in steps 3 and 4 to compare to the SBx7-7 target volume

$$OBJ_{ADJ} = OBJ + RO_{INI}$$

$$OBJ_{ADJ} = 1,542.3 \text{ Million Gallons}$$

4. The "no backsliding" provision was assessed.

SBx7-7 Component	Equation Symbol	Value (MG)	Value (AF)
SBx7-7 Target Volume	SBX_V	1,960.8	6,017.6
Process Water	PW	0.0	0.0
Indirect Recycled	IR	0.0	0.0
Total No Backsliding Volume	SBX_{TOT}	1,960.8	6,017.6

Table 10: Summary of supplier's individual SBX7-7 target volume, plus any additional demands excluded from the original target

The sum of the objective plus excluded demands (OE) is as follows:

$$OE = OBJ_{ADJ} + EXCL$$

$$OE = 1,542.3 + 79.4$$

$$OE = 1,621.6 \text{ Million Gallons}$$

OE was less than the no backsliding volume, SBX_{TOT}. Therefore, the final objective remains as calculated in the prior step.

$$OBJ_{FINAL} = OBJ_{ADJ}$$

$$OBJ_{FINAL} = 1,542.3 \text{ Million Gallons}$$

Appendix H

Notification to Cities and County

Appendix H includes notification of preparation of the District's 2025 Urban Water Management Plan and 2025 Water Shortage Contingency Plan. This notification to the cities and county that CCWD serves (and other relevant entities) indicate that the District intends to update the Plans at least 60 days prior to the public hearing, as required by the California Water Code.

CALAVERAS COUNTY WATER DISTRICT
120 Toma Court • San Andreas, CA 95249 • Main Line (209) 754-3543

February 24, 2026

Blue Lake Springs Mutual Water Company
[redacted]

Subject: Notice of Preparation
Calaveras County Water District's 2025 Urban Water Management Plan and Water Shortage Contingency Plan

Dear [redacted]:

Calaveras County Water District (CCWD) will be updating its Urban Water Management Plan (UWMP) document to support CCWD's long-term water resources planning, and to help ensure there are adequate water supplies to meet existing and future water needs. The California Urban Water Management Planning Act (Act, under California Water Code Sections 10610-10657) requires CCWD, and many other public water supply utilities in California, to submit an updated UWMP to the California Department of Water Resources (DWR) every five years. The 2025 update, due to DWR by July 1, 2026, will incorporate new analysis related to water supply vulnerabilities, climate change risks, and drought supply reliability.

CCWD will also be updating its Water Shortage Contingency Plan (WSCP) in parallel to the UWMP update. Per the Act, the WSCP is separate from the UWMP update and must therefore be adopted by CCWD as a standalone plan, even though these documents will share several water supply planning and analyses concepts.

State law requires that, at least 60 days prior to the public hearing, the District provide notice to any city or county within which it provides water supplies that the District intends to update its UWMP and WSCP. This letter serves as the required notification. A public hearing will be held to hear comments on the UWMP and WSCP in June 2026. A draft UWMP and WSCP will be released at least two weeks before the public hearing. Adoption of the UWMP and WSCP is expected in June 2026. Hearing date information, along with the draft UWMP and WSCP, will be posted online at www.ccwd.org. Please contact me with any questions or comments at (209) 754-3094 or via email at andrewr@ccwd.org

Sincerely,

Andrew Renshaw
Water Resources Program Manager
Calaveras County Water District

APPENDIX I: PUBLIC HEARING NOTICE

APPENDIX J: EMAIL SENT TO INTERESTED PARTIES

APPENDIX K: PUBLIC HEARING AGENDA

APPENDIX L: RESPONSE TO COMMENTS

APPENDIX M: BOARD RESOLUTION ADOPTING THE 2025 UWMP