Urban Water Management Plan Update

DRAFT

2025

Central Coast Water Authority

June 2026




PROVOST & PRITCHARD

CENTRAL COAST WATER AUTHORITY

2025 Urban Water Management Plan

Date signed: _____

June 2026

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ACRONYMS

AF ..... Acre-Foot
Cal OES ..... Office of Emergency Services
CCWA ..... Central Coast Water Authority
CVP ..... Central Valley Project
D-1641 ..... SWRCB Water Rights Decision 1641
DBP ..... Disinfection Byproducts
DCR ..... Delivery Capacity Report
DDW ..... Division of Drinking Water
DMM ..... Demand Management Measures
DWR ..... Department of Water Resources
ESA ..... Endangered Species Act
FEIR ..... Final Environmental Impact Report
IRWD ..... Irvine Ranch Water District
IRWMP ..... Integrated Regional Water Management Plan
MAF ..... Million Acre-Feet
MIB 2-methylisoborneol
MOU ..... Memorandum of Understanding
MWD ..... Montecito Water District
MWQI ..... Municipal Water Quality Investigations
RWEP ..... Regional Water Efficiency Program
SBCAG ..... Santa Barbara County Association of Governments
SGMA ..... Sustainable Groundwater Management Act
SLOCFCWCD ..... San Luis Obispo County Flood Control and Water Conservation District
SWRCB ..... State Water Resources Control Board
SYRWCDID#1 ..... Santa Ynez River Water Conservation District, Improvement District No. 1
State ..... State of California
SWP ..... State Water Project
SSLOCSD ..... South San Luis Obispo County Sanitation District
TOC ..... Total Organic Carbon
T&O ..... Taste and Odor
USBR ..... United States Bureau of Reclamation
UWMP ..... Urban Water Management Plan
UWMP Act ..... Urban Water Management Planning Act
Water Agency ..... Santa Barbara County Water Agency
WCD ..... Water Conservation District
WSCP ..... Water Shortage Contingency Plan

Lay Description of Urban Water Management in Central Coast Water Authority

This 2025 Urban Water Management Plan (UWMP) was prepared for the Central Coast Water Authority (CCWA), a wholesale supplier of urban water for ten water agencies in Santa Barbara County. This document describes the roles and responsibilities of CCWA, available water supplies, water demands, water reliability, and mitigation programs performed in droughts to secure additional water. This document is an update to CCWA's 2020 UWMP.

CCWA obtains its water primarily from the State Water Project (SWP), which delivers water through a series of canals and pipelines from Northern California. CCWA then treats the water to drinking water standards and delivers it to the water agencies. CCWA only provides some of the water needed by these agencies. As a result, the agencies also have other water supplies and implement water conservation programs to help meet their full water demands.

In 2025, CCWA delivered 12,514 acre-feet to all Participants. The agencies have combined water contracts to provide water supply systems with a capacity of 43,886 acre-feet of water but usually only some of the water is available due to the natural variation of rainfall from year to year as well as drought, environmental regulations, or other reasons. A report by the State estimates that water reliability is currently around 54% of contracted supplies and will go down to 48% by 2045. In dry years, the water supply can be as low as 5% of the contract amount.

CCWA has a Supplemental Water Purchase Program that allows the water agencies to ask CCWA to find and purchase extra water supplies during droughts. This program is voluntary but has successfully secured other water supplies in dry years and will be continued into the future.

1 Introduction and Overview

1.1 Introduction

This 2025 UWMP has been prepared in response to the California Urban Water Management Planning Act (UWMP Act), California Water Code, Division 6, Part 2.6, Sections 10610 through 10650[1]. The UWMP Act requires every urban water supplier to prepare and adopt an UWMP as well as to update and adopt the UWMP every five years. This 2025 UWMP must be completed by July 1, 2026.

Section 10617 of the California Water Code defines an "urban water supplier" as a public water system that that provides water for municipal purposes either directly or indirectly to more than 3,000 customers or supplies more than 3,000 acre-feet (AF) of water annually. The Central Coast Water Authority (CCWA) is considered an urban water supplier because it is classified as a public water system by the California State Water Resources Control Board (SWCRB), Division of Drinking Water (DDW) and it supplies more than 3,000 AF of water per year. In 1994, DDW issued a permit to CCWA to operate as a public water system and the associated Water System Number for CCWA is CA4210030.

Although CCWA meets the definition of an urban water supplier, it can be further classified as a wholesale urban water supplier. This classification is recognized in the California Water Code and there are several instances in the Code where the UWMP requirements for wholesaler and retail urban water suppliers are different. The primary differences are as follows:

- The Demand Management Measures (DMM) for wholesalers are different from those required for retailers. A description of the DMMs implemented by CCWA is presented in Section 8.0 of this UWMP.

- Wholesaler suppliers are not required to develop baseline and target values for daily per capita use. This data is developed by the retail urban water supplier.

An urban water supplier that does not prepare, adopt, and submit an UWMP to the California Department of Water Resources (DWR) is ineligible to receive certain grant, loans, and special drought assistance from the State of California (State). Consequently, to preserve the ability to seek assistance from the State of California, CCWA has prepared this 2025 UWMP. To ensure all required components of the UWMP have been addressed, the DWR UWMP Checklist and the DWR Standardized UWMP Tables were completed, and they are presented in in **Appendix A** and **Appendix B[2], respectively**.

1.2 The Central Coast Water Authority

The CCWA was formed in 1991 through a Joint Exercise of Powers Agreement[3] among eight public agencies in Santa Barbara County. CCWA is a party to a State Water Supply Contract with the California Department of Water Resources (DWR).[4] As a result, CCWA is responsible for the delivery of all SWP water to Santa Barbara County. Pursuant to 13 Water Supply Agreements,[5] CCWA delivers SWP water to its eight member agencies and five other entities (collectively, the "CCWA Participants"). The CCWA member agencies are the Cities of Buellton, Guadalupe, Santa Barbara and Santa Maria, Carpinteria Valley Water District, Goleta Water District, Montecito Water District and Santa Ynez River Water Conservation District, Improvement District No. 1 (SYRWCDID#1). The other non-member CCWA Participants are the Golden State Water Company, Vandenberg Space Force Base, La Cumbre Mutual Water Company, Morehart Land Company, and the Raytheon Systems Company.

The CCWA Board of Directors is composed of representatives appointed by each of the eight member agencies. CCWA's Joint Exercise of Powers Agreement provides the voting percentage for each member of the CCWA Board of Directors.

Table 1-1: Board of Directors Voting Weights

Agency	Percentage
Buellton, City of	2.21%
Carpinteria Valley Water District	7.64%
Goleta Water District	17.20%
Guadalupe, City of	1.15%
Santa Barbara, City of	11.47%
Santa Maria, City of	43.19%
Santa Ynez RWCD, Improvement District #1	7.64%
Montecito Water District	9.50%
TOTAL	100.00%

All CCWA Participants are identified in **Table 1-2** below, along with their respective SWP "Table A Amounts," which is the maximum quantity of SWP annual water supply for which each CCWA Participant has contracted:

Table 1-2: Santa Barbara County Project Participant Table A Amount

CCWA Participant	Table A Amount (AF)		
	Original Table A	Drought Buffer	Total Table A
Buellton, City of	578	58	636
Carpinteria Valley Water District	2,000	200	2,200
Golden State Water Company	500	50	550
Goleta Water District	4,500	2,950	7,450
Guadalupe, City of	550	55	605
La Cumbre Mutual Water Company	1,000	100	1,100
Montecito Water District	3,000	300	3,300
Morehart Land Company	200	20	220
Raytheon Company	50	5	55
Santa Barbara, City of	3,000	300	3,300
Santa Maria, City of	16,200	1,620	17,820
Santa Ynez River WCD ID#1[1]	2,000	200	2,200
Vandenberg Space Force Base	5,500	550	6,050
Subtotal	**39,078**	**6,408**	**45,486**

[1]Santa Ynez River WCD #1 has contracted to deliver a portion of its Table A allocation to the City of Solvang.
[2]Only CCWA and Goleta Water District have drought buffer supplies. CCWA's drought buffer includes 3,908 AF and conveyance capacity, and allocates it across CCWA Participants. . Goleta Water District has a 2,500 AF drought buffer for supply only with no associated conveyance capacity.

Several of CCWA's Participants are retail urban water suppliers and responsible for preparing their own UWMPs as well. (See additional discussion below in **Section 2.1**.)

CCWA also delivers SWP water to San Luis Obispo County. Pursuant to an agreement with DWR,[6] CCWA operates and maintains the SWP conveyance facilities in San Luis Obispo and Santa Barbara Counties (Phase II Coastal Branch) that permits the delivery of SWP water to both Santa Barbara and San Luis Obispo counties. In addition, CCWA owns and operates the Polonio Pass Water Treatment Plant in northern San Luis Obispo County. CCWA also contracts with the San Luis Obispo County Flood Control and Water Conservation District (SLOCFCWCD)[7] for the treatment and conveyance of the SWP water to San Luis Obispo County. In turn, SLOCFCWCD contracts with 11 participants in San Luis Obispo ("San Luis Obispo Participants"). All CCWA Participants and San Luis Obispo Participants receive potable water treated at the Polonio Pass Water Treatment Plant.

The San Luis Obispo County Participants are presented in the Table 1-3 below, along with their respective SWP Table A Amounts.[8]

Table 1-3: San Luis Obispo Project Participants Table A Amounts

Agency	Table A[1]
Avila Beach Community Services District	100
Avila Valley Mutual Water Company, Inc	20
California Men's Colony (State)	400
City of Morro Bay	1,313
City of Pismo Beach	1,240
County of SLO C.S.A. No. 16, I.D. #1	100
County of SLO (Op Center & Reg. Park)	425
Oceano Community Services District	750
San Luis Coastal Unified School District	7
San Miguelito Mutual Water Company	275
SLO Co. Comm. Coll. District (Cuesta College)	200
TOTAL	4,830

CCWA does not have a direct relationship with the San Luis Obispo Project Participants; only with SLOCFCWCD. Since SLOCFCWCD delivers treated drinking water to the San Luis Obispo Participants, it is classified as a wholesale urban water supplier.

2 Plan Preparation

Due to CCWA's role as a wholesale water supplier, it is important that the efforts in preparing this UWMP be coordinated with CCWA Participants, other related agencies, and the public. In fact, the UWMP Act requires CCWA Participants (see also discussion below in **Section 2.2**) to exchange important information concerning projections of service population, water supply demand and available water supply sources. Accordingly, CCWA implemented an organized coordination program to ensure that the pertinent data and issues are presented accurately. **Table 2-1** presents the agencies and the role each played in coordinating the development of this UWMP:

Table 2-1: Coordination Matrix

Coordination and Public Involvement						
Entities	**Helped write the plan**	**Was contacted for assistance**	**Received copy or link to the draft**	**Commented on the draft**	**Attended public meetings**	**Received a notice of intention to adopt**
County of San Luis Obispo – Flood Control and Water Conservation District			✔			✔
San Luis Obispo Participants			✔			✔
CCWA Participants		✔	✔			✔
Other Relevant Public Agencies*			✔			✔

*Includes Santa Barbara County

The CCWA UWMP coordination efforts focused on three groups presented below:

2.1 Santa Barbara County Participants

The first step in preparing the CCWA UWMP included contacting each CCWA Participant to establish an open line of communication between the staff members. Through contacting each project participant, CCWA determined that only six of the thirteen CCWA Participants are required to prepare an UWMP (Carpinteria Valley Water District**,** Goleta Water District**,** Montecito Water District, City of Santa Barbara, City of Santa Maria, Golden State Water Company). The remaining seven do not qualify as they are well below the 3,000 service connections and 3,000 AF of supplied water criteria that triggers the UWMP requirement.

Each CCWA Participant was asked to provide projections of water supply needs for their respective service areas in five-year increments through 2050. CCWA also provided each participant an estimate of the available water from the CCWA system. Estimated projections included a long-term average availability, single dry year availability and multi-dry year availability for a five-year drought scenario.

Table 2-2: Santa Barbara County Project Participants UWMP Requirement

Agency	UWMP Required
Buellton, City of	No
Carpinteria Valley Water District	Yes
Golden State Water Company	Yes
Goleta Water District	Yes
Guadalupe, City of	No
La Cumbre Mutual Water Company	No
Montecito Water District	Yes
Morehart Land Company	No
Raytheon Company	No
Santa Barbara, City of	Yes
Santa Maria, City of	Yes
Santa Ynez RWCD, Improvement District #1	No
Vandenberg Space Force Base	No

2.2 San Luis Obispo County Participants

In San Luis Obispo County, the SLOCFCWCD is preparing its own UWMP since it is considered a wholesale urban water supplier to the San Luis Obispo County water purveyors. Consequently, to ensure consistent accurate information, all data and data analysis concerning the San Luis Obispo water purveyors will be found in the UWMP prepared by SLOCFCWCD.

CCWA staff consulted with SLOCFCWCD staff during the preparation work on the two agencies' respective UWMPs. Both CCWA and SLOCFCWCD staff continued on-going dialog as both agencies developed their respective UWMP, as well as exchanging copies of the UWMPs for review and comment.

2.3 County of Santa Barbara, Water Resource Division

The County of Santa Barbara, Water Resources Division of the Public Works Department is comprised of \the County Water Agency (Water Agency) and Project Clean Water.[9]

Since the Water Agency is a not a water supplier, it is not required to prepare an UWMP.

2.4 Public

CCWA recognizes the importance of obtaining public input on its programs and documents. To that end, CCWA mailed notices to 14 local public agencies requesting feedback on the Draft UWMP and Water Shortage Contingency Plan (WSCP). See **Appendix C** for contact information, notices, and other outreach materials. The notice provided information regarding how to obtain a copy of the draft plan and the dates and locations of the public workshops.

The Draft Plan must be provided to the public for review and comment 30 days prior to adoption. The Draft Plan was made available on the CCWA website (www.ccwa.com) beginning **May 26, 2026**. In addition, a copy of the Draft UWMP was available for public review at the CCWA Office in Buellton. Public notices regarding the availability of the Draft UWMP for public inspection were posted in the local newspapers on _____ and _____, 2026.

2.5 Plan Adoption, Submittal, and Implementation

The 2025 UWMP is required to be adopted by each urban water supplier and submitted to the DWR by July 1, 2026. Accordingly, the CCWA Board of Directors will consider adoption of the 2025 CCWA UWMP and WSCP at its regular meeting on **June 25, 2026**. A public notice was issued in advance of this Board Meeting, in accordance with Section 6066, California Government Code. The Board Resolution is presented in **Appendix D**. ____ public comments were received on the UWMP.

Once the UWMP has been adopted by the CCWA Board of Directors, copies will be submitted electronically to DWR, the California State Library, and every city and county within which CCWA provides water supplies within 30 days of adoption. Should any changes to the UWMP or WSCP be made after adoption, the CCWA Board of Directors will consider and adopt the changes during a properly notified Board of Directors meeting. Copies of amendments or changes to the UWMP or WSCP will be submitted to DWR, the California State Library, and any city or county within which CCWA provides water supplies within 30 days of adoption. In addition, within 30 days of submitting the UWMP to DWR, a copy of the UWMP will be made available for public review.

3 System Description

3.1 Service Area Physical Description

The CCWA operates and maintains the Coastal Branch Phase II Extension of the Coastal Branch Aqueduct Pipeline, which is part of the SWP (see **Figure 3-1**). The CCWA supplies treated water for its Participants and for San Luis Obispo Participants. In addition, the service areas for each CCWA Participant are presented in **Appendix E**.

Figure 3-1:Phase II Coastal Branch and CCWA Extension

3.2 Service Area Climate

The climate in the area served by CCWA is best described as Mediterranean, characterized by hot, dry summers in inland areas, with more temperate weather along the coast, and cool, moist winters. Summers are dry with temperatures as high as 110°F in the inland areas. Winters are somewhat cool with temperatures as low as 20°F. Average monthly precipitation in the region varies from 1.6 to 1.8 inches in the coastal areas to approximately 1.4 inches in the more arid, eastern locations. A more detailed listing of relevant weather parameters (evapotranspiration (ETo), average high temperature and average rainfall) for selected representative areas within CCWA's service area can be found in **Table 3-1** through **Table 3-3.**

Table 3-1: Monthly Averages for Eto, Temperature & Precipitation (CIMIS Station #107, Santa Barbara)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Yr Ave
ETo (inches)	1.97	2.66	3.68	4.57	4.76	5.00	5.92	5.63	3.97	3.45	2.15	1.58	3.78
Ave Max Temp. (F)	68.6	69.2	67.8	71.5	72.1	73.4	75.9	80.9	79.1	77.8	71.2	71.2	72.9
Ave Min Temp. (F)	46.4	46.7	47.6	50.7	54.0	57.1	58.5	60.0	60.0	55.4	48.6	47.0	52.7
Precipitation (inches)	2.8	3.3	3.9	0.8	0.4	0.4	0.2	0.3	0.3	0.6	1.9	4.9	19.8

Table 3-2: Monthly Average for Temperature & Precipitation (CIMIS Station #52, San Luis Obispo)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Yr Ave
ETo (inches)	2.46	2.98	3.54	4.71	5.63	5.97	6.24	5.86	4.47	4.01	2.91	2.17	4.25
Ave Max Temp. (F)	65.6	66.8	64.3	67.7	70.4	74.8	76.8	80.0	79.3	77.8	71.4	65.9	71.7
Ave Min Temp (F)	44.2	44.3	44.0	46.8	48.9	52.8	54.2	55.2	55.2	51.9	47.3	45.8	49.2
Precipitation (inches)	3.8	3.1	4.4	1.1	0.1	0.1	0.0	0.0	0.3	0.6	1.9	5.5	20.9

Table 3-3: Monthly Averages for ETo, Temperature, & Precipitation (CIMIS Station# 64, Santa Ynez/ Cachuma)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Yr Ave
ETo (inches)	2.13	2.67	3.77	5.08	6.34	6.80	7.24	6.73	4.84	3.95	2.42	1.67	4.47
Ave Max Temp. (F)	67.4	68.8	67.6	72.8	77.3	82.8	89.0	90.1	87.1	83.5	74.7	68.5	77.5
Ave Min Temp (F)	35.9	37.4	40.9	44.3	48.0	51.1	54.1	54.2	52.8	44.9	36.7	36.8	44.7
Precipitation (inches)	2.9	3.1	3.4	1.1	0.1	0.0	0.0	0.0	0.1	0.6	1.2	3.8	17.7

Data Source: The California Irrigation Management Information System (CIMIS),[10] *www.cimis.water.ca.gov: Santa Maria Period of Record January 2020 to February 2026, Santa Ynez Period of Record January 2020 to February 2026, Santa Barbara. Period of Record January 2020 to February 2026.*

3.3 Service Area Population

The Santa Barbara County Association of Governments (SBCAG) published a report entitled "Regional Growth Forecast 2050" in January 2019. The summary data for the population forecast, at the jurisdiction level, from this report is presented in **Table 3-4.** The report includes data for years 2025, 2030, 2035, 2040, and 2050.

Table 3-4: Santa Barbara County Population Forecast

Jurisdiction	2025	2030	2035	2040	2045	2050
Buellton	5,700	5,900	6,200	6,400	6,500	6,600
Carpinteria	14,200	14,300	14,500	14,600	14,700	14,700
Goleta	32,500	33,100	33,700	34,300	34,500	34,700
Guadalupe	8,100	8,400	8,600	8,900	9,000	9,100
Lompoc	47,800	49,000	50,000	51,300	51,800	52,200
Lompoc Unincorporated	16,700	16,900	17,100	17,400	17,450*	17,500
Santa Barbara	97,300	98,600	99,900	101,100	101,600	102,000
Santa Maria	121,900	127,600	133,300	139,000	141,000	143,100
Santa Maria/ Guadalupe/ Cuyama	38,400	39,000	39,500	40,100	40,250*	40,500
Santa Ynez Unincorporated	13,700	13,900	14,100	14,300	14,350*	14,400
Solvang	6,000	6,000	6,200	6,300	6,300	6,300
South Coast/ Other Unincorporated	76,600	77,200	78,300	79,500	79,900*	80,300
County Total	478,900	489,900	501,400	513,200	517,350*	521,400

* Numbers were not reported and are estimates

Another source of population data are Annual Water System Reports. DDW requires all public water systems to prepare and submit an Annual Water System Report, and these reports contain population information as well as a variety of other operational data.

Considering that the SBCAG report does not include population data for all CCWA Participants, both the Annual Water System Report and the SBCAG Report were utilized to prepare the population projections for all CCWA Participants, presented in **Table 3-5**. The 2019 population for each CCWA Participant service area, as reported in the Annual Water System Report, was used as the basis of the population projections from 2020 to 2050. The growth rates shown in the SBCAG report for the closest community match for each CCWA Participant were used to project future population.

Table 3-5: Central Coast Water Authority Participant Population Projections

CCWA Participant	2020	2025	2030	2035	2040	2045	2050
Buellton, City of	5,517	5,726	5,967	6,205	6,447	6,531	6,616
Carpinteria Valley WD	15,433	15,711	15,868	16,027	16,187	16,252	16,317
Golden State Water Co	4,462	4,859	5,088	5,317	5,545	5,628	5,707
Goleta WD	86,952	87,822	89,315	90,922	92,468	93,023	93,581
Guadalupe, City of	7,605	7,787	8,068	8,350	8,634	8,737	8,834
La Cumbra Mutual	4,874	4,923	5,006	5,097	5,183	5,214	5,246
Montecito WD	11,439	11,611	11,762	11,915	12,070	12,130	12,130
Morehart Land Co[1]	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Raytheon System[2]	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Santa Barbara, City of	95,024	97,209	98,473	99,753	101,050	101,454	101,860
Santa Maria, City of	108,501	118,158	123,711	129,278	134,837	136,860	138,776
Santa Ynez ID #1	12,533	12,796	12,956	13,174	13,391	13,463	13,464
Vandenberg SFB	15,001	15,226	15,409	15,640	15,874	15,954	16,034
CCWA Participant Population	367,341	381,828	391,622	401,677	411,686	415,247	418,624
County Total Population	460,900	478,600	489,900	501,500	513,300	517,500	517,500
Percent of Santa Barbara County Population	79.7%	79.8%	79.9%	80.1%	80.2%	80.2%	80.9%

[1]Morehart Land Company is a land developer and has no population
[2]Raytheon Company has no population data
Notes:
2019 Population as reported by CCWA Participant in the 2019 Annual Water System Report (EAR) submitted to State Water Resources Control Board (SWRCB) DDW.
2020, 2025, 2030, 2040, 2045, and 2050 CCWA Participant Projection calculated using population forecasts percent change (Tables 10 and 13), SBCAG, Regional Growth Forecast 2050, Jan 2019.
La Cumbre Mutual Water Company projections calculated using Goleta forecast percentage change.
Montecito Water District projections calculated using South Coast Unincorporated forecast percent change.
Population projection for Santa Ynez ID#1 includes the population projection for Santa Ynez (based on the Santa Ynez Unincorporated forecast percent change) and the population projection for the City of Solvang because Solvang resides within the Santa Ynez ID#1 service area.
Vandenberg Space Force Base projection calculated using nearby Lompoc Unincorporated forecast percentage change.
County Total Population from Table 8, SBCAG, Regional Growth Forecast 2050, Jan 2019.
Percent of Santa Barbara County Population is calculated

3.4 Service Area Economy

The California Department of Transportation produces long-term socio-economic forecasts for each County in the State of California, through its Economic Analysis Branch. These long-term economic forecasts are updated annually and are produced to assist local and regional agencies in their planning efforts. The forecasts provide both historical data and a forecast from 2023 to 2050. To provide a general snapshot of the socioeconomics of Santa Barbara County, copies of the 2019 updated forecasts are included in **Appendix F**[11]. The summary tables of the updated Caltrans forecast for Santa Barbara County are presented below in **Table 3-6**.

Table 3-6: Caltrans Santa Barbara County Socio-Economic Forecast

Santa Barbara County Economic Forecast

Economic Indicators — 2015-2022 History, 2023-2050 Forecast

	Population (people)	House-holds (thousands)	Net Migration (people)	New Homes Permitted (homes)	Registered Vehicles (thousands)	Personal Income (billions)	Taxable Retail Sales (billions)	Total Taxable Sales (billions)	Real Industrial Production (billions)	Real per Capita Income (dollars)	Unemployment Rate (percent)	Real Farm Production (billions)	Inflation Rate (percent)
2015	442,188	144.8	971	1,071	394	$24.6	$4.8	$6.8	$3.9	$70,958	5.3	1.9	0.9
2016	444,277	146.2	-365	884	404	$25.0	$4.8	$6.9	$3.8	$70,378	5.1	1.8	1.9
2017	445,801	147.2	-737	1,263	403	$25.9	$4.9	$7.1	$4.0	$70,681	4.6	1.9	2.8
2018	447,666	148.2	-174	846	406	$27.1	$5.2	$7.3	$4.0	$70,950	4.0	1.8	3.8
2019	448,815	149.8	-1,172	1,069	414	$28.5	$5.3	$7.6	$3.9	$72,324	3.6	1.8	3.1
2020	448,484	148.4	-2,473	380	411	$31.1	$5.2	$7.4	$3.8	$77,747	8.2	2.0	1.6
2021	439,322	149.1	-10,803	521	416	$33.0	$6.2	$9.0	$4.1	$81,141	5.8	2.1	3.8
2022	443,210	150.1	1,734	1,058	418	$33.3	$6.8	$9.8	$3.7	$75,075	3.5	2.0	7.9
2023	443,186	151.3	-1,912	928	420	$35.8	$7.0	$9.9	$3.8	$77,331	3.8	2.1	3.7
2024	443,936	152.1	-1,088	777	422	$37.7	$7.3	$10.3	$3.9	$78,870	3.8	2.1	3.0
2025	444,417	152.8	-1,287	717	423	$39.1	$7.7	$11.0	$3.9	$79,882	3.6	2.1	2.7
2026	445,190	153.4	-911	713	424	$40.5	$8.2	$11.6	$3.9	$80,862	3.5	2.2	2.1
2027	445,984	154.0	-759	707	425	$42.0	$8.6	$12.3	$3.9	$81,882	3.7	2.2	2.1
2028	447,203	154.6	-274	717	425	$43.5	$9.1	$13.0	$4.0	$82,732	3.8	2.1	2.1
2029	448,889	155.2	285	745	426	$44.9	$9.5	$13.6	$4.0	$83,449	3.9	2.2	2.0
2030	450,230	155.9	76	752	427	$46.3	$10.0	$14.2	$4.0	$83,890	3.9	2.2	2.1
2031	451,268	156.5	-89	748	428	$47.7	$10.4	$14.8	$4.0	$84,383	3.9	2.2	2.0
2032	452,139	157.2	-131	756	429	$48.8	$10.8	$15.3	$4.0	$84,350	3.8	2.2	2.2
2033	452,773	157.8	-204	763	430	$50.1	$11.1	$15.9	$4.0	$84,852	3.8	2.2	1.8
2034	453,234	158.5	-219	755	431	$51.6	$11.5	$16.4	$4.0	$85,478	3.9	2.2	2.0
2035	453,633	159.1	-152	750	431	$53.1	$11.9	$16.9	$4.0	$85,982	4.0	2.2	2.1
2036	454,018	159.7	-37	745	432	$54.6	$12.2	$17.3	$4.0	$86,121	4.0	2.2	2.5
2037	454,411	160.4	89	749	433	$56.2	$12.5	$17.8	$4.0	$86,272	4.1	2.2	2.6
2038	454,796	161.0	214	754	434	$58.0	$12.8	$18.2	$4.0	$86,661	4.2	2.2	2.4
2039	455,183	161.7	310	759	434	$59.6	$13.1	$18.7	$4.0	$86,687	4.2	2.2	2.6
2040	455,118	162.3	-24	756	435	$61.4	$13.5	$19.2	$4.0	$87,076	4.3	2.2	2.5
2041	454,866	162.9	-77	757	435	$63.2	$13.8	$19.6	$4.0	$87,746	4.3	2.2	2.1
2042	454,732	163.6	152	760	436	$65.0	$14.2	$20.1	$4.0	$88,437	4.2	2.2	2.0
2043	454,688	164.3	334	760	437	$66.9	$14.6	$20.7	$4.0	$89,139	4.3	2.2	1.9
2044	454,644	164.9	432	758	437	$68.7	$15.1	$21.4	$4.0	$89,949	4.3	2.2	1.7
2045	454,269	165.6	208	740	438	$70.5	$15.5	$22.1	$4.0	$90,689	4.3	2.2	1.8
2046	453,837	166.2	229	734	438	$72.3	$16.0	$22.7	$4.0	$91,314	4.4	2.2	1.9
2047	453,408	166.8	304	729	438	$74.2	$16.5	$23.4	$4.0	$91,732	4.4	2.2	2.1
2048	453,100	167.4	499	729	439	$76.1	$17.0	$24.1	$4.0	$92,059	4.4	2.2	2.2
2049	452,594	168.1	396	726	439	$78.0	$17.5	$24.9	$4.0	$92,666	4.4	2.2	1.9
2050	452,238	168.7	646	730	440	$80.1	$18.1	$25.7	$4.0	$93,176	4.4	2.2	2.0

Overall population and economic trends are described in the Santa Barbara County Association of Governments (SBCAG) report entitled "Regional Growth Forecast 2050," published in January 2019, and referenced above in **Section 3.3**. According to this report, which covers the years 2017 through 2060, annual population growth is expected to decrease in Santa Barbara County from 3,500 in 2017 to 800 by 2060. This is due to a combination of factors including a relatively constant number of births, rising mortality as baby-boomers age, and forecasted slow decline in net in-migration.

Between 2017 and 2050, countywide population in Santa Barbara County is expected to increase by 68,000 or 15%, while both jobs and households are expected to increase by 25%. In the 2017-2050 forecast horizon, the City of Santa Maria is expected to experience the greatest population growth (32%), followed by Buellton (24%) and Guadalupe (20%), while the South Coast Cities of Carpinteria, Santa Barbara and Goleta are forecasted to grow by less than 9%.

According to the Caltrans 2020-2050 forecast, referenced above and in **Table 3-6**, housing production in the next five years is expected to be similar to the previous five years. The southern and middle parts of Santa Barbara County, including both the tourist destination of the City of Santa Barbara and the wine industry in the Santa Ynez Valley, are among the most expensive housing markets in the United States. Houses in the northern part of the county are less than half as expensive as in the southern part of the county.

4 System Demands

This section characterizes the water demand by CCWA Participants and presents projections of future demand for water supply. CCWA maintains information on deliveries of SWP water to each participant. Since each CCWA participant has additional sources of water supply, the water deliveries made by CCWA do not translate to individual retailer system demand.

As indicated in **Section 1.2**, CCWA delivers SWP water to the SLOFCWCD through the Chorro Valley and Lopez Turnouts. Since SLOFCWCD is classified as a wholesale water supplier, it is preparing an UWMP for its water purveyors. Consequently, to avoid duplication of efforts, all data analysis related to the San Luis Obispo County water purveyors can be found in the UWMP prepared by SLOFCWCD.

The mission of CCWA is to provide high quality, reliable, supplemental water to Santa Barbara and San Luis Obispo Counties. The key word in CCWA's mission statement is "supplemental." All of CCWA's project participants maintain and utilize additional sources of water supply. Each CCWA participant manages its own portfolio of water supplies that best meets its long-term and short-term needs. The water provided by CCWA is only one source of water supply for CCWA Participants and this source is also interrupted on an annual basis for scheduled maintenance work. Each year, DWR ceases water delivery operations in the Coastal Branch of the SWP for the purpose of conducting maintenance work. These annual outages typically last from two to four weeks per year. CCWA Participants are required to rely upon other sources of water supply during these annual maintenance events.

For the South Coast CCWA Participants, the groundwater basins within these agencies' respective service areas are relatively small in size and are more at risk when operated beyond their sustainable yields. Consequently, South Coast agencies are more reliant on local surface water as compared to CCWA Participants located north of Lake Cachuma.

In contrast, for CCWA Participants located north of Lake Cachuma, the groundwater basins within their respective service areas are relatively large and can generally be operated beyond their sustainable yield on a short-term basis without significant risk. Further, the importation of SWP water greatly benefited these north County groundwater basins by allowing basins to recharge to much higher levels than was possible before importation of SWP water.

4.1.1 Santa Ynez Exchange Agreement

The Santa Ynez Water Exchange Agreement[12] is an innovative water management strategy that was put into effect during the original construction of the CCWA system. This agreement provided the CCWA Participants located in southern portion of Santa Barbara County an opportunity to receive SWP water through existing infrastructure, as opposed to building a new pipeline around Lake Cachuma.

Lake Cachuma is utilized directly for water supply by five water purveyors. These water purveyors have water supply agreements with the Santa Barbara County Water Agency, which in turn has a Master Water Supply Agreement with the United States Bureau of Reclamation (USBR).[13] The five purveyors known as the Cachuma Member Units and their Cachuma project allocations are as follows:

- Carpinteria Valley Water District - 10.94%
- City of Santa Barbara - 32.19%
- Goleta Water District - 36.25%

- Montecito Water District - 10.31%
- SYRWCDID#1 - 10.31%

SYRWCDID#1 is located north of Lake Cachuma while all of the other Cachuma Member Units are located south of Lake Cachuma. The exchange agreement takes advantage of this fact and the related infrastructure. SYRWCDID#1 sold its 5-mile pipeline from the Santa Ynez Valley to Lake Cachuma to CCWA for use in conveying SWP water to Lake Cachuma. Pursuant to the Exchange Agreement, SYRWCDID#1 exchanges the Lake Cachuma water that otherwise would be delivered to SYRWCDID#1 to the other Cachuma Member Units. In exchange, the South County Cachuma Member Units cause the delivery of a like amount of SWP water to SYRWCDID#1 on a gallon-for-gallon exchange basis.

This exchange has many advantages to both SYRWCDID#1 and the South Coast Cachuma Member Units. SYRWCDID#1 receives SWP water which has a superior quality compared to Lake Cachuma water and local groundwater supplies. While the South Coast Cachuma Member Units avoid the cost of pumping water into the Lake. In addition, South Coast Cachuma Member Unit benefit from the increased conveyance capacity that the exchange can provide. In times of urgent need to deliver high volumes to Lake Cachuma, the exchange essentially provides conveyance capacity that adds to the conveyance capacity of the Santa Ynez Pumping Plant. However, these advantages only occur if the parties have water to exchange.

In times of plenty, the South Coast CCWA Participants will typically request SWP water deliveries in sufficient quantity to meet their obligations under the Santa Ynez Exchange Agreement. However, when the demand of water rises or the capacity of Lake Cachuma becomes critically low, the South Coast CCWA Participants will begin to request deliveries well above the minimum amount to fulfill their obligations under the Santa Ynez Exchange Agreement.

From 2021-2025 a total of 6,497 AF was exchanged through the Santa Ynez Agreement.

4.2 CCWA Water Demand

4.2.1 CCWA Historical Demand

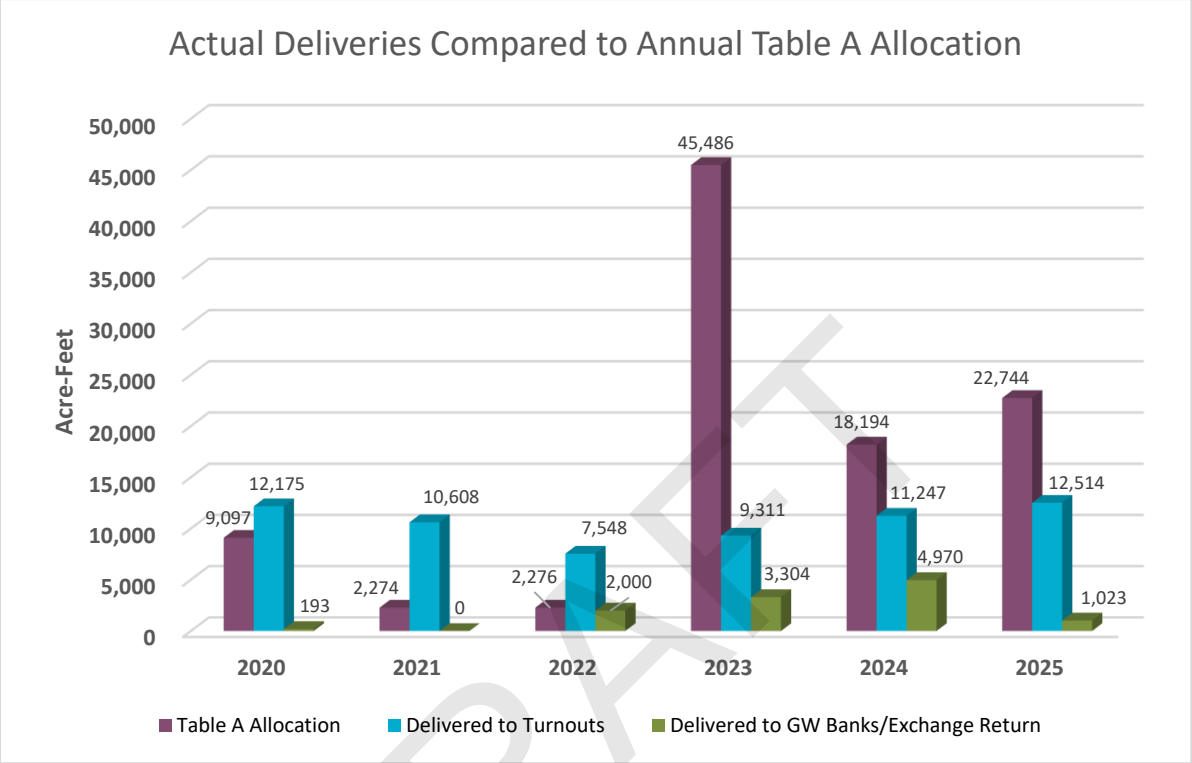
The CCWA Participants have multiple sources of water supply to respond to their own customer's water supply needs. There are a number of factors that determine their demand for water supply from CCWA. These factors may include water quality issues, water production rates and availability from other sources, water transfer arrangements and many others. The demand for water from the CCWA system is ultimately a management decision by each of the CCWA Participants.

It is CCWA's responsibility to take measures to maximize the amount of water available to CCWA Participants, up to the Table A amount (See **Section 5.2** for explanation of Table A). Although the annual DWR SWP allocation may vary from year to year, higher water delivery volumes are possible through the use of carry-over water, surplus water, water transfers, exchanges and groundwater banking opportunities. CCWA has always been successful in its ability to deliver larger volumes of water than the total Table A allocation would provide and continues to meet the annual SWP demand for CCWA Participants.

Figure 4-1 presents the annual SWP Table A allocation, water deliveries to CCWA Participants, and water transferred to another SWP contractor or groundwater bank from 2020 to 2025. Based on this data, it is clear that CCWA has the ability to deliver greater volumes of water than the total Table A allocation would provide, as observed in 2020 through 2022. Also, as can be observed each year, water can be transferred to/from another SWP contractor or groundwater bank for the purpose of securing and increasing the reliability of water

supplies for use in times of drought. The SWP allocation was a rare 100% in 2023, resulting in a very large allocation.

Figure 4-1: 2020 through 2025, Delivered Water and Table A Allocation



One of the key advantages of the CCWA system is its connection to statewide infrastructure, which provides the ability to move water from almost anywhere in the state. This ability allows for the optimum management of a given year's SWP Table A allocation. It can be utilized for supply or delivered to another SWP contractor or groundwater bank with the commitment to return the water in the future. In addition, the connection to statewide infrastructure allows CCWA to identify, secure and convey supplemental water from almost anywhere in the state to Santa Barbara County.

4.2.2 CCWA Water Demand Projections

An initial objective of importing water from the SWP into Santa Barbara and San Luis Obispo Counties was to reduce the overdraft of local groundwater basins. The Environmental Impact Report (EIR) prepared for the Phase II Coastal Branch of the SWP and for the Mission Hills Extension Project[14] indicated that both Santa Barbara and San Luis Obispo Counties had water demands well above the average safe sustainable yield for the area, with deficits of between 60,000 and 61,000 AF per year in 1985. The EIR further stated that importation of SWP water was not designed to eliminate the water supply deficit, but to help reduce it.

All CCWA Participants have continued to maintain a variety of water supply sources to draw upon. The available sources include groundwater, developed local surface water supplies, desalination, and recycled water. Therefore, the water imported by CCWA represents only one source of supply to its project participants. Due to the year-to-year variability of supply in the SWP, CCWA's charge is to make a reliable and consistent water supply available for the benefit of CCWA Participants.

Most SWP water that is not utilized for local water demand in any given year is stored within the SWP system, banked, transferred, or exchanged. The State Water Supply Contract includes provisions that allow these water management practices. Additionally, surplus water (also known as Article 21 water – see **Section 5.2.1** for further explanation) can be requested by any SWP contractor for delivery, when it is available. This management practice provides a level of protection against drought since it allows SWP contractors to store water for use in current or subsequent years to augment supply.

To estimate water delivery projections into the future, CCWA relies upon the guidance provided by DWR. As discussed more fully in **Section 5.3.1** of this UWMP, DWR conducts a delivery capability study[15] for the SWP operation every two years to provide SWP contractors with information about the SWP's ability to deliver water under current conditions as well as selected future conditions. The studies utilize a long-term historical record of flows in the Delta and the use of a sophisticated flow model known as CALSIM II. The results of this study were utilized by CCWA to prepare estimated projections of water availability for each CCWA Participant, following DWR estimation protocol.

DWR issued its most recent update, the Draft 2025 DWR State Water Project Delivery Capability Report (DCR) in December 2025. According to the 2025 DCR, the long-term reliability of SWP is 54% in 2025 and reduces down to 48% in 2043. The 2025 DCR did not provide specific reliabilities by County or region because the report is still in the draft stage, and the Technical Addendum normally containing regional reliabilities has not been released

A long-term SWP allocation of 48% was reported for the 50% 'level of concern' future condition in the 2025 DCR. For the long-term planning purposes of this UWMP, the long-term average allocations reported for the 50% level of concern is the most appropriate estimate of average future SWP water supply availability The DCR include three future conditions: 50%, 75% and 95% level of concern. The 50% presents the central tendency of project outcomes, while the other represent more severe scenarios.

Following the DWR estimation protocol, the long-term average available water was calculated every five years from 2025 through 2050. The results of this calculation are presented in **Table 4.1**

Table 4-1: Long Term Average Delivery Projections

Participant	Table A	Buffer	Total Table A	2025	2030	2035	2040	2045	2050
Predicted SWP Allocation				**54%**	**53%**	**51%**	**50%**	**48%**	**48%**
Buellton, City of	578	58	636	343	337	324	318	305	305
Carpinteria Valley WD	2,000	200	2,200	1,188	1,166	1,122	1,100	1,056	1056
Golden State Water Co	500	50	550	297	292	281	275	264	264
Goleta WD	4,500	2,950	7,450	4,023	3,949	3,800	3,725	3,576	3576
Guadalupe, City of	550	55	605	327	321	309	303	290	290
La Cumbre Mutual	1,000	100	1,100	594	583	561	550	528	528
Montecito WD	3,000	300	3,300	1,782	1,749	1,683	1,650	1,584	1584
Morehart Land Co	200	20	220	119	117	112	110	106	106
Raytheon Systems	50	5	55	30	29	28	28	26	26
Santa Barbara, City of	3,000	300	3,300	1,782	1,749	1,683	1,650	1,584	1584
Santa Maria, City of	16,200	1,620	17,820	9,623	9,445	9,088	8,910	8,554	8554
Santa Ynez ID#1[1]	2,000	200	2,200	1,188	1,166	1,122	1,100	1,056	1,056
Vandenberg SFB	5,500	550	6,050	3,267	3,207	3,086	3,025	2,904	2904
SUBTOTAL	**39,078**	**6,408**	**45,486**	**24,562**	**24,108**	**23,198**	**22,743**	**21,833**	**21,833**

[1]Santa Ynez River WCD #1 has contracted to deliver a portion of its Table A allocation to the City of Solvang.

Although the CCWA Participants may not need all of the water available in a given year, by virtue of being connected to a state-wide system, available water can be banked, exchanged or transferred in a variety of ways to further offset the risk of drought exposure in future years. Both short- and long-term measures are available to obtain additional water supplies beyond the annual allocation. These measures are discussed further in **Chapter 1** and **6**.

4.3 Reduced Delta Reliance Analysis

DWR has recommended that SWP contractors prepare documentation on reduced reliance on Delta water supplies that is consistent with the Delta Stewardship Council's Reduced Reliance Policy. While not a strict requirement of UWMPs, reduced reliance documentation would facilitate implementation of possible actions that involve the Sacramento-San Joaquin Delta (such as Delta Conveyance and multi-year water transfers from North of the Delta) and require a consistency determination with the Delta Plan.

As a wholesale agency, a reduced Delta reliance analysis is not applicable since CCWA itself has no water demands and has no control over water demands. Rather it is relevant to the CCWA Participants. As a result, CCWA provided guidance to the CCWA Participants for documenting compliance with this policy. A guidance letter was sent to each CCWA Participants and can be found in **Appendix I**. Each agency can evaluate Delta reliance as they see fit, but they are encouraged to consider CCWA's guidance document, which focus on the baseline SWP reliability to use in any analysis.

4.4 Distribution System Water Losses

The American Water Works Association (AWWA) developed software designed to guide a water distribution system operator through a water audit. DWR prepared the DWR Water Loss Audit, which was based on the AWWA method. California Water Code Section 10631 (J) requires water supplier to quantify distribution water losses using the DWR Water Loss Audit Method.

CCWA maintains a water delivery database, which serves as the basis of the water audit. This database is populated with monthly delivery data that is processed from flow measurements made at the individual Turnout meters and the DWR "sales" meter located at the inlet of the Polonio Pass Water Treatment Plant. The DWR "sales" meter essentially measures water entering the CCWA system and the turnout meters are measuring the water leaving the CCWA system.

The flow data is processed as follows. At the end of the month, DWR will provide CCWA with the monthly total of water delivered to the Polonio Pass Water Treatment Plant. Since the DWR meter is the official "sale" meter to CCWA, the total deliveries to the turnouts must be corrected to match the DWR monthly total. This ensures that each CCWA Participant is paying their share of the DWR variable costs.

First, the DWR monthly total is compared to the sum of all turnout monthly totals. If the DWR total and the Turnout totals are within 3%, the individual Participant totals will be reconciled to match the DWR monthly total. This entails an allocation that is based on the amount of water delivered in the month to each participant. This results in either adding or subtracting to the turnout meter total so that the sum of all Turnout meters will equal the DWR monthly total. If the DWR total and the turnout totals are greater than 3%, the difference is investigated further.

From 2021 to 2025, 66,006 AF was billed to CCWA Participants. This value matched the DWR total but is 649 AF higher than the turnout meter raw values for this period. This difference is reported as distribution systems losses. This number includes all meter errors and water losses through the Polonio Pass Water Treatment Plant. While not required for wholesale agencies, CCWA completed annual water audits from 2021 through 2025, including tracking of water supplied and water loss. The completed AWWA-Water Audit Software printouts are presented in **Appendix G**.

CCWA implements a number of other leak detection methods to ensure that leaks are identified in a prompt manner and repaired. The Infrastructure Leakage Index (ILI) is a performance indicator of real water loss from the supply network of a water distribution system. Quick repairs allow for CCWA to retain an average Infrastructure Leakage Index (ILI) of 0.5 from 2021 to 2025, which represents relatively low system losses. The Water Audit Data Validity Score measures the overall quality of the data in the analysis. Overall, The Authority has maintained a data validity score of 73 since 2016.
Table 4-2 below is a summary of results from the AWWA Water Loss Audits from 2021 to 2025.

Table 4-2: Water Audit Results (2021-2025)

Description	2021	2022	2023	2024	2025
Water Supplied (AF/Yr)	14,160	11,336	12,124	13,814	14,572
Water Losses (AF/Yr)	112	185	85	140	127
Percent Water Loss	0.78%	1.61%	0.70%	1.00%	0.86%
Data Validity Score	73	73	73	73	73
Infrastructure Leakage Index	0.3	1	0.2	0.6	0.4

5 CCWA System Supplies

CCWA's source of water supply is imported water from the SWP. CCWA's Water Supply Agreements with each of CCWA Participants stipulate that imported SWP water will be an interruptible source of supply. In addition, the EIR for the Phase II Coastal Branch indicated that imported SWP water is a supplemental source of water.

5.1 State Water Project (SWP) Description

The SWP is a water storage and delivery system of reservoirs, aqueducts, power plants, and pumping plants that extends for more than 600 miles (**Figure 5-1**: State Water Project System
). Its main purpose is to divert and store surplus water during wet periods and distribute it to areas in Northern California, the San Francisco Bay area, the San Joaquin Valley, the Central Coast, and Southern California. It is also used for recreation and to control floods, generate power, protect fish and wildlife, and manage water quality in the Delta.

The keystone of the SWP is Lake Oroville, which conserves water from the Feather River watershed. It is the SWP's largest storage facility with a capacity of about 3.5 million acre-feet (MAF). Releases from Lake Oroville flow down the Feather River into the Sacramento River, which drains the northern portion of California's Central Valley. The Sacramento River flows into the Delta, comprised of 738,000 acres of land interlaced with channels that receive runoff from about 40% of the state's land area. The SWP and the Central Valley Project (CVP) rely on Delta channels as a conduit to move water from the Sacramento River inflow to the points of diversion in the south Delta. Thus, the Delta is actually part of the SWP conveyance system, making the Delta a key component in SWP deliveries. The significance of the Delta to SWP deliveries is described in more detail below.

From the northern Delta, Barker Slough Pumping Plant diverts water for delivery to Napa and Solano counties through the North Bay Aqueduct. Near Byron in the southern Delta, the SWP diverts water into Clifton Court Forebay for delivery south of the Delta. Banks pumping plant lifts water from Clifton Court Forebay into the California Aqueduct, which channels the water to Bethany Reservoir. The water delivered to Bethany Reservoir from Banks Pumping Plant is either delivered into the South Bay Aqueduct for use in the San Francisco Bay Area or continues down the California Aqueduct to O'Neil Forebay, Gianelli Pumping-Generating Plant, and San Luis Reservoir.

Figure 5-1: State Water Project System

San Luis Reservoir is jointly operated by DWR and USBR and has a storage capacity of more than 2 MAF. DWR's share of gross storage in the reservoir is about 1.062 MAF. Generally, water is pumped into San Luis Reservoir during late fall through early spring and is temporarily stored for release back to the California Aqueduct to meet summertime peaking demands for SWP and CVP contractors.

SWP water not stored in San Luis Reservoir and water eventually released from San Luis reservoir continues to flow south through the San Luis Canal, a portion of the California Aqueduct jointly owned by DWR and USBR. As water flows through the San Joaquin Valley, deliveries of CVP water are made through numerous turnouts to farmlands in the service areas of the CVP. Near Kettleman City, the Coastal Branch Aqueduct splits from the California Aqueduct for water delivery to agricultural areas to the west and municipal and industrial water users in San Luis Obispo and Santa Barbara counties.

The remaining water conveyed by the California Aqueduct travels farther in the San Joaquin Valley to agriculture users such as Kern County Water Agency before reaching Edmonston Pumping Plant, which raises the water high enough to travel across the Tehachapi Mountains into Antelope Valley. In Antelope Valley, the Aqueduct divides into the East and West Branches. The East Branch carries water into Silverwood Lake and Lake Perris. Water in the West Branch flows to Quail Lake, Pyramid Lake, and Castaic Lake.

Twenty-nine SWP contractors have signed long-term water supply contracts with DWR for 4,173 MAF per year. Signed in the 1960s, all contracts are in effect to at least 2085 and are essentially uniform. Each contract contains a schedule of the maximum amount of water the contractor can receive annually. This schedule is contained in SWP Table A. The annual amount was designed to increase each year, with most SWP contractors reaching their maximum amount in 1990. In most cases, SWP water is an important component of local water supplies. Five SWP contractors use SWP water primarily for agricultural purposes and the remaining 24 SWP contractors use SWP water primarily for municipal purposes. All available water is allocated annually in proportion to each contractor's annual SWP Table A amount.

5.2 SWP Water Supply Contract

The SWP Water Supply Contract[6] between the DWR and 29 SWP Water contractors specifies the terms and conditions governing the water delivery and cost repayment for the SWP.

"Table A" is a table attached to the SWP Water Supply Contract. Comprehension of the purpose of Table A is important in understanding how the SWP Water Supply Contract is administered. All water-supply related costs of the SWP are paid 100% by the SWP contractors, and the SWP Table A serves as a basis for allocating many of those costs. In addition, SWP Table A plays a key role in the annual allocation of available supply among SWP contractors. When the SWP was being planned, the amount of water projected to be available for delivery to the contractors was 4.173 MAF per year. This was referred to as the maximum project yield, and it was recognized that in some years the project would be unable to deliver that amount and in other years project supply could exceed that amount. The SWP Table A amount was used as the basis for apportioning available supply to each SWP contractor and as a factor in calculating each SWP contractor's share of the project's costs. Other contract provisions permit changes to an individual SWP contractor's SWP Table A under special circumstances.

Every year, DWR conducts modeling studies of the SWP system to determine the allocation, or percentage of the amount of Table A that can be delivered by the SWP system. This allocation is revised throughout the year as hydrologic conditions and other factors change. SWP reliability has been steadily decreasing each year and is substantially lower than what was originally anticipated. This is discussed more in later sections.

5.2.1 SWP Water Supply Classifications

The SWP Water Supply Contract defines several classifications of water available for delivery to SWP contractors under specific circumstances. All classifications are considered "project" water. Many SWP contractors make frequent use of these additional water types to increase or decrease the amount available to them under SWP Table A.

- **SWP Table A Water.** Each contract's SWP Table A is the amount in AF that is used to determine the portion of available supply to be delivered to that SWP contractor. SWP Table A water is given first priority for delivery.

- **Carryover Water.** Pursuant to the SWP Water Supply Contract, SWP contractors have the opportunity to carry over a portion of their allocated water approved for delivery in the current year for delivery during the next year. The carryover program was designed to encourage the most effective and beneficial use of water and to avoid obligating the SWP contractors to use or lose the water by December 31 of each year. The water supply contracts state the criteria for carrying over SWP Table A water from one year to the next. Normally, carryover water is water that has been exported during the year from the Delta, has not been delivered to the SWP contractor during that year, and has remained stored in the SWP share of San Luis Reservoir. Storage for carryover water no longer becomes available to the SWP contractors if it interferes with storage of SWP water for project needs. Once this occurs, the carryover water is converted to Article 21 water at a defined rate, linked to the production rate of the Banks Pumping Plant.

- **SWP Article 21 Water.** Article 21 of the SWP Water Supply Contract permits delivery of water in excess of the delivery of SWP Table A and some other water types to those SWP contractors requesting it. It is available under specific conditions.

- **Turnback Pool Water.** SWP contractors may choose to offer their allocated SWP Table A water excess to their needs to other SPW contractors through two pools in February and March. Contributing SWP contractors receive a reduction in charges, and taking SWP contractors pay extra.

5.2.2 SWP Contract Term

DWR and each of the SWP contractors entered into substantially uniform long-term SWP Water Supply Contracts in the 1960s with initial 75-year terms, which thus would begin to expire in 2035, but have been extended up to 2085.

5.2.3 SWP Conveyance Capacity

The original 1963 SWP Water Supply contractors for Santa Barbara County had a Table A amount of 60,000 AF per year. This was reduced to 57,700 AF per year in January 1964 (Amendment #2). In 1981, the Table A amount was reduced again to 45,486 AF per year (Amendment #9). In 1994, the SWP contract was amended (Amendment 16) to specify the pipeline flow capacity of the Phase II Coastal Branch as being 42,986 AF per year. This conveyance capacity is defined in Tables B1 and B2 of the amended SWP Water Supply Contract, which stipulated the proportionate share of the capital costs and variable costs for the Phase II Coastal Branch pipeline. The Table A amount was not changed due to the Goleta Valley Water District retaining 2,500 AF in Table A with no associated pipeline capacity for use as drought buffer (42,986 + 2,500 = 45,486). The 42,986 AF per year also includes the 10% drought buffer acquired by CCWA for CCWA Participants during the design phase of the Phase II Coastal Branch.

In the case of SLOCFCWCD, the SWP Water Supply Contract has a Table A amount of 25,000 AF per year. However, CCWA and SLOCFCWCD have entered into a Water Treatment Master Agreement that outlines the available capacity for treatment as well as flow capacity for SLOCFCWCD, which is 4,830 AF per year.

5.2.4 Drought Buffer

Drought buffer is a term used to identify a source of supply within the SWP system that will provide a higher level of reliability during times of drought and low DWR Table A allocations. There are two forms of drought buffer that are utilized by CCWA, CCWA Participants and SLOCFCWCD on the Coastal Branch and they are as follows:

- Acquire or maintain a higher Table A amount than pipeline flow capacity. By having a higher Table A Amount than the pipeline capacity, the DWR allocation process will not impact pipeline delivery operations until the DWR allocation is reduced to a level where available Table A is equal to pipeline capacity. This is the technique currently in use by SLOCFCWCD, as they have 25,000 AF per year in Table A amount and a pipeline conveyance capacity of only 4,830 AF per year.

- Acquire or maintain higher Table A amount and pipeline capacity. This essentially is increasing both supply and conveyance as a method of providing reliable annual water deliveries. The Goleta Valley Water District, a CCWA Participant, has 2,500 AF per year of this category of drought buffer. CCWA also has a drought buffer of 3,908 AF per year, which CCWA allocates, pro rata, to all CCWA Participants, thereby increasing the reliability of all CCWA Participants' deliveries each year.

5.2.5 Dry Year Programs

Dry Year Programs are methods of obtaining water from other sources, such as from other SWP contractors, during times of drought. The main advantage of the SWP system is that it provides the means for water transfers from throughout the State. Water from other SWP contractors and other non-project water can be wheeled through the existing infrastructure, subject to a variety of conditions and approvals. Each Water Supply Agreement between CCWA and CCWA Participants specifically includes the provision that allows the pipeline to be utilized for conveyance for other water sources, if SWP water is unavailable or less than the full Table A amount.

5.3 CCWA Deliveries

5.3.1 SWP Allocations

When allocating Table A amounts, DWR evaluates how much water is actually available in the state. The key indicators include snowpack in Sierra Nevada, reservoir storage, forecasted runoff, precipitation trends, and storage carryover. Limitations also evaluated include other environmental and regulatory factors like biological opinions and water quality standards.

DWR announces percent Table A allocations in steps each year, with the allocation generally increasing as the water year progresses. Allocation does not guarantee actual delivery. DWR's Table A Allocation from 2020 to 2025 fluctuated as shown in **Table 5-1.** This period included some extremely dry years and a rare 100% allocation in 2023.

Table 5-1: DWR Annual Total Allocation

Year	Allocation
2020	20%
2021	5%
2022	5%
2023	100%
2024	40%
2025	50%

5.3.2 CCWA Projected Deliveries

DWR prepares a biennial report to assist SWP contractors and local planners in assessing the near and long-term availability of supplies from the SWP. DWR issued the Draft 2025 DCR in December 2025. In the 2025 update, DWR provides SWP supply estimates for SWP contractors to use in their planning efforts, including for use in their 2025 UWMPs. The 2025 DCR includes DWR's estimates of SWP water supply availability under both current and future conditions.

DWR's estimates of SWP deliveries are based on a computer model that simulates monthly operations of the SWP and Central Valley Project systems. Key assumptions and inputs to the model comprise of the facilities included in the system, hydrologic inflows to the system, regulatory and operational constraints on system operations, and projected contractor demands for SWP water.

In the 2025 DCR model study under existing conditions, DWR assumed: existing facilities, hydrologic inflows to the model based on long-term historical inflows, current regulatory and operational constraints, biological opinions and contractor demands at maximum Table A Amounts. The long-term average allocation reported in the 2025 DCR for the existing conditions was 54%.

To evaluate SWP supply availability under future conditions, the 2025 DCR included a model study representing hydrologic and sea level rise conditions up to 2043. A long-term SWP allocation of 48% was reported for the 50% 'level of concern' future condition in the DCR. For the long-term planning purposes of this UWMP, the long-term average allocations reported for the 50% level of concern is the most appropriate estimate of average future SWP water supply availability The DCR include three future conditions: 50%, 75% and 95% level of concern. The 50% presents the central tendency of project outcomes, while the other represent more severe scenarios.

The anticipated long-term water deliveries from 2025 to 2050 are presented in 5-year intervals in **Table 5-2**.

Table 5-2: Long-term Average Water Delivery Estimate (2025-2050)

Long Term Average, Acre-feet per Year									
Participant	Table A	Buffer	Total Table A	2025	2030	2035	2040	2045	2050
Predicted SWP Allocation				54%	53%	51%	50%	48%	48%
Buellton, City of	578	58	636	343	337	324	318	305	305
Carpinteria Valley WD	2,000	200	2,200	1,188	1,166	1,122	1,100	1,056	1056
Golden State Water Co	500	50	550	297	292	281	275	264	264
Goleta WD	4,500	2,950	7,450	4,023	3,949	3,800	3,725	3,576	3576
Guadalupe, City of	550	55	605	327	321	309	303	290	290
La Cumbre Mutual	1,000	100	1,100	594	583	561	550	528	528
Montecito WD	3,000	300	3,300	1,782	1,749	1,683	1,650	1,584	1584
Morehart Land Co	200	20	220	119	117	112	110	106	106
Raytheon Systems	50	5	55	30	29	28	28	26	26
Santa Barbara, City of	3,000	300	3,300	1,782	1,749	1,683	1,650	1,584	1584
Santa Maria, City of	16,200	1,620	17,820	9,623	9,445	9,088	8,910	8,554	8554
Santa Ynez ID#1[1]	2,000	200	2,200	1,188	1,166	1,122	1,100	1,056	1,056
Vandenberg SFB	5,500	550	6,050	3,267	3,207	3,086	3,025	2,904	2904
SUBTOTAL	39,078	6,408	45,486	24,562	24,108	23,198	22,743	21,833	21,833

[1]Santa Ynez River WCD #1 has contracted to deliver a portion of its Table A allocation to the City of Solvang.

5.4 CCWA Participant Water Sources

CCWA was formed for the sole purpose of designing, constructing, and operating the facilities needed to bring SWP water to the agencies that contracted to receive that water. Since the SWP is considered an interruptible supply, CCWA Participants have other sources of water supply.[19, 20, xvi] The following is a brief summary of the portfolio of water supplies maintained by the CCWA Participants in Santa Barbara County:

5.4.1 City of Buellton

The City of Buellton's service area is approximately 1,025 acres and potable water is provided to residential, commercial and industrial customers. Currently, the City of Buellton relies upon two sources of water for domestic supply including the SWP and groundwater from the Buellton Uplands Groundwater Basin and the Santa Ynez River Riparian Basin. The City of Buellton has a SWP allotment of 578 AF per year with an additional 58 AF per year drought buffer. The City of Buellton's service area is approximately 1,025 acres and potable water is provided to residential, commercial and industrial customers. There are no agricultural irrigated lands within city limits.

5.4.2 Carpinteria Valley Water District

The Carpinteria Valley Water District's service area is approximately 11,300 acres. Domestic water service is provided to a population of about 18,500 and approximately 3,900 acres of irrigated crops. Currently, Carpinteria Valley Water District relies on three sources of supply which include SWP with an allotment of 2,000 AFY, groundwater from the Carpinteria Groundwater Basin, and the Cachuma Project which provides

roughly 2,813 AF. Additionally, they also receive as much as 400 AFY from the Cachuma project water from SWP exchanges with Santa Ynez ID1.

5.4.3 Golden State Water Company

Golden State Water Company is regulated by the California Public Utility Commission and is a private investor-owned utility company. The Golden State Water Company has grouped five individual water systems within the Santa Maria Valley into one Customer Service Area. Currently, the Golden State Water Company receives as much as 500 AF per year plus 50 AF per year during a drought year from the SWP and the Santa Maria Groundwater Basin.

5.4.4 Goleta Water District

The Goleta Water District provides water to approximately 85,000 customers in Goleta and parts of Santa Barbara. The Goleta Water District spans 29,000 acres and extends from the Santa Barbara County South Coast area west to Santa Barbara's city limits at El Capitan. Currently, the Goleta Water District relies on four sources of supply to meet water demand. The SWP allotment includes 4,500 AF per year with an additional 450 AF per year drought buffer. In addition, Goleta Water District has contracted for 2,500 AF of special drought buffer, Cachuma Project provides roughly 9,300 AF per year for the Goleta Water District, the Goleta Sanitary District provides tertiary disinfected recycled water, and the district utilizes wells that draw from the Goleta Groundwater Basin

5.4.5 City of Guadalupe

The City of Guadalupe encompasses an area of approximately 832 acres and relies upon two water sources. The water sources include a SWP allotment of 550 AF per year with an additional 55 AF per year of drought buffer, and groundwater wells that draw water from the Santa Maria Groundwater Basin.

5.4.6 La Cumbre Mutual Water Company

The La Cumbre Mutual Water Company was formed in 1925 to serve water to landowners totaling approximately 2,000 acres. Currently, the La Cumbre Mutual Water Company relies on two sources of supply to meet water demand with a SWP allotment of 1,000 AF per year with an additional 100 AF per year drought buffer. Additionally, the La Cumbre Mutual Water Company has six active groundwater wells that draw water from the Goleta Central Basin and the Foothill Basin.

5.4.7 Montecito Water District

The Montecito Water District encompasses an area of 9,888 acres. Currently, the Montecito Water District relies on five sources of supply including: 1) the Cachuma Project provides up to 2,651 AFY; 2) surface water from the Santa Ynez River up to 2,000 AFY, 3) SWP allotments of 3,000 AFY with an additional 300 AFY drought buffer; 4) the Charles E. Meyer Desalination Facilities provides up to of 1,430 AFY; and 5) groundwater wells draw water from the Montecito Groundwater Basin, with annual deliveries ranging from 0 to 700 AFY

5.4.8 Morehart Land Company

Morehart Land Company is a privately held California corporation which consists of approximately 605 acres. Currently, the Morehart Land Company has 200 AF in SWP water, with an additional 20 AF of drought buffer.

5.4.9 Raytheon

The Raytheon Company owns approximately 9.4 acres of land in Goleta and 75 acres of land in Santa Maria.

Raytheon has contracted for 50 AF of water from the SWP with an additional drought buffer of 5 AF per year.

5.4.10 City of Santa Barbara

The City of Santa Barbara encompasses 21 square miles and currently provides water to a population of approximately 95,650 people, or 27,405 municipal and industrial service connections. The City of Santa Barbara relies on seven water sources, including: roughly 8,277 AFY allocated from the Cachuma Project, SWP allotment of 3,000 AFY with an additional 300 AFY per year drought buffer, six groundwater wells are active and also utilized for a water source, and some local surface water sources that vary and can come from the Gibraltar Reservoir, Devils Canyon Creek, and/ or Mission Tunnel. Lastly, the City of Santa Barbara maintains a reverse osmosis seawater desalination facility which can provide 3,125 AFY.

5.4.11 City of Santa Maria

The City of Santa Maria encompasses an area of approximately 14,400 acres. The estimated population at build out, in the year 2030, will be approximately 115,000 persons. Currently, the City of Santa Maria relies upon two sources including an SWP allotment of 16,200 AF per year with an additional 1,620 AF per year of drought buffer, and groundwater wells that draw water from the Santa Maria Groundwater Basin.

5.4.12 Santa Ynez River Water Conservation District, Improvement District #1

Located in the central portion of Santa Barbara County, SYRWCDID#1serves the communities of Santa Ynez, Los Olivos, Ballard, the Santa Ynez Band of Chumash Indians, and the City of Solvang on a limited basis. It covers about 10,850 acres. Currently, SYRWCDID#1relies on four sources of supply to meet water demand in its service area, and includes an SWP Table A allotment of 2,000 AFY with an additional 200 AF per year drought buffer for the area, groundwater wells that draw water from the Santa Ynez Uplands Groundwater Basin, roughly 2,651 AFY for ID No.1 from the Cachuma Project, and ten active river production wells along Santa Ynez River.

5.4.13 Vandenberg Space Force Base

Vandenberg Space Force Base consists of 86,000 acres of open lands in the Lompoc-Guadalupe-Santa Maria triangle. Today, the base is operated by Air Force Space Command's 30th Space Wing. Population is 14,971 permanent or long-term residents. Currently, Vandenberg Space Force Base relies on two sources of supply to meet water demands, including: an SWP allotment of 5,500 AF per year with an additional 550 AF per year of drought buffer, and groundwater wells tapping the Lompoc Groundwater Basin.

5.5 Transfer Opportunities

CCWA can increase water supply reliability by participating in voluntary water transfer programs. Since the California drought of 1987-1992, the concept of water transfers has evolved into a viable supplemental source to improve supply reliability. The initial concept for water transfers was codified into law in 1986 when the California Legislature adopted the "Katz" Law (California Water Code, Sections 1810-1814)[xvii] and the Costa-Isenberg Water Transfer Law of 1986 (California Water Code, Sections 470, 475, 480-483)[xviii]. These laws help define parameters for water transfers and set up a variety of approaches through which water or water rights can be transferred among individuals or agencies. One of the more recent developments is the Water Management Amendment (Amendment 21 to CCWA's SWP Water Supply Contract). Amendment 21 expanded flexibility for SWP contractors to transfer, exchange, store, and carry over water supplies between SWP contractors. The amendment established consistent rules and administrative procedures for water transfers and exchanges while maintaining existing SWP operational criteria and delivery limits. Its purpose was to improve water management flexibility during droughts, changing hydrology, and other water supply challenges.

Up to 27 MAF of water are delivered for agricultural use every year. Over half of this water is used in the Central Valley, and much of it is delivered by, or adjacent to, SWP and CVP conveyance facilities. This proximity to existing water conveyance facilities provides a mechanism for the voluntary transfer of water to many urban areas, including CCWA, via the SWP. Such water transfers can involve water sales, conjunctive use and groundwater substitution, and water sharing, and usually occur as a form of spot, option, or core transfers agreements (see descriptions below). The cost of a water transfer varies depending on the type, term, timing, and location of the transfer.

One of the most important aspects of any resource planning process is flexibility. A flexible strategy minimizes unnecessary or redundant investments (or stranded costs). The voluntary purchase or exchange of water between willing CCWA Participants can be an effective means of achieving flexibility. However, not all water transfers or exchanges have the same effectiveness in meeting resource needs.

In 2021, CCWA adopted a policy for water transfers out of the county, requiring that water proposed to be transferred out of the county first be offered to other CCWA Participants before it is offered on the wider water market. In 2024, CCWA adopted a comprehensive set of rules and procedures governing transfers and exchanges[25].

5.5.1 Groundwater Banking Opportunities

Conjunctive use is a well-established water management method of using multiple water supply sources to achieve improved supply reliability. Most conjunctive use concepts are based on storing water within groundwater basins during times of water surplus. During dry periods and drought, the water could be recovered from the groundwater basins for use as supply at a time when surface water supplies would likely be limited. With recent developments in conjunctive use and groundwater banking, significant opportunities exist to improve water supply reliability for CCWA.

Groundwater banking programs involve storing available surface water supplies during wet years in groundwater basins either locally or in locations convenient to water transportation facilities. Water is typically stored either directly by surface spreading or injection, or indirectly by supplying surface water to farmers for their use in-lieu of their intended groundwater pumping. During water shortages, the stored water could be pumped out and conveyed through the California Aqueduct. There are several conjunctive use and groundwater banking opportunities throughout the State that are available to CCWA.

CCWA is currently involved in two Groundwater Banking Projects: 1) Strand Ranch Groundwater Bank through Irvine Ranch Water District and 2) Semitropic Water Banking and Exchange Program. The agreement with Strand Ranch is between CCWA and Irvine Ranch Water District (IRWD). CCWA entered into the agreement on behalf of La Cumbre Mutual Water Company. CCWA's agreement with IRWD allows for a total yield of up to 416 AFY. Any annual yield above that amount would be determined by IRWD. The Semitropic Water Banking Agreement is between Montecito Water District (MWD) and Semitropic. CCWA facilitates the deliveries and transfers on behalf of MWD.

5.6 Desalinated Water Opportunities

CCWA is not currently pursuing any desalination projects or opportunities.

5.7 Recycled Water and Local Groundwater

CCWA was formed to operate and maintain the Coastal Branch of the SWP and the local facilities required to deliver SWP to Santa Barbara and San Luis Obispo Counties, and to manage the delivery of SWP water in both

counties. There are no plans to expand the charter of CCWA to include the management and/or distribution of recycled water or local groundwater.

5.8 Future Water Projects

CCWA Participants are forward thinking and sophisticated water managers. A wide variety of potential projects are under evaluation, as follows:

5.8.1 Delta Conveyance Project

An ongoing planning effort to increase long-term supply reliability for both the SWP and CVP is taking place through the Delta Conveyance Project. The Delta Conveyance Project facilities would allow for greater flexibility in balancing the needs of the estuary with the reliability of water supplies. The plan would also provide other benefits, such as reducing the risk of long outages from Delta levee failures. CCWA has opted-out of the Delta Conveyance Project and has communicated that to DWR and other public water agency participants.

5.8.2 Suspended Table A Reacquisition

The original 1963 State Water Contract for Santa Barbara County provided for the delivery of up to 57,700 AFY of Table A Amount from SWP to Santa Barbara County. In 1981, DWR agreed to reduce the Table A amount from 57,700 to 45,486 AFY (see Amendment No. 9). As a result, the remaining 12,214 AF was "suspended" by DWR. The 12,214 AF of SWP water supply entitlement is known as "Suspended Table A Water" and CCWA has the option of reacquiring this Suspended Table A Water through payment of past costs, plus interest. The possible future project is to reacquire the Suspended Table A Water.

Since Phase II of the Coastal Branch and the local facilities were designed to convey only 42,985 AF, the reacquisition of the Suspended Table A Water would have the potential to increase the reliability of SWP deliveries to Santa Barbara County, but the capacity of the existing facilities would not change. Reacquiring the Suspended Table A Water, some or all CCWA Participants' allocations would be based on a larger contract amount. By having a larger amount, CCWA Participants will enhance the reliability of their SWP water supply in two important ways:

- During high allocation years, CCWA Participants will be able to utilize a number of available water banking opportunities which increases the reliability of supply during low allocation years.

- During low allocation years, CCWA Participants will be able to receive volumes of water more consistent with their contract amounts. The volume of delivered water will be larger because (1) the allocation percentage will be applied to a larger contract amount and (2) water stored in water banks as a result of higher contract allocation amount during wetter years can also be used to augment imported supplies.

Suspended Table A provides 12,214 AF of additional Table A contract amount. For a long-term average reliability of 48% at future conditions, per the 2025 DCR, this translates to an average of 5,863 AF of potential additional supply. On February 14, 2020, CCWA published a Notice of Preparation for the project, and began preparation of a draft EIR, but work on the report is currently on-hold.

5.8.3 SLOFCWCD and CCWA Long-term Exchange

SLOFCWCD executed a Water Supply Agreement with the DWR in 1963 for a Table A amount of 25,000 AF. This Agreement was to fund the construction of water conservation and conveyance facilities for the SWP. DWR moved forward with the construction of these facilities, which included Phase I of the Coastal Branch

conveyance facilities. The Coastal Branch facilities were designed to handle the 25,000 AF requested by SLOFCWCD. Construction of Phase II of the Coastal Branch was not immediately constructed and was delayed indefinitely by SLOFCWCD, as allowed by the SWP Water Supply Agreement.

When the design for the Phase II Coastal Branch was initiated, SLOFCWCD ultimately decided not to fund construction of conveyance facilities for the full 25,000 AF Table A amount. Rather, SLOFCWCD entered into the Master Water Treatment Agreement with CCWA. This agreement specified that CCWA would provide SLOFCWCD with 4,830 AFY of treatment and conveyance capacity. This measure provided a very high level of reliability for the SLOFCWCD subcontractors, as the annual DWR allocation would need to fall to less than 20% to impact delivery requests to the San Luis Obispo water purveyors.

Currently, there is interest by the San Luis Obispo County water purveyors to secure additional treatment plant and pipeline flow capacity. Since, SLOFCWCD has 25,000 AF of Table A contract amount, it typically have more than 4,830 AF available to it in any given year. Accordingly, CCWA and SLOFCWCD are exploring potential exchange concepts that may be mutually beneficial. Additionally, in some years short-term annual transfers between CCWA and SLOFCWCD are made.

5.8.4 CCWA Water Management Strategies Study

CCWA and SLOFCWCD developed the Coastal Branch Water Management Strategies study in January of 2019, which evaluates opportunities to improve water supply reliability for agencies served by the Coastal Branch of the California Aqueduct. The primary challenge of SWP supply variability show where annual allocation significantly fluctuate due to hydrologic conditions and regulatory constraints. In addition, they system faces conveyance limitations, particularly during peak summer demand, and limited storage capacity to capture excess water during wet periods. Regulatory requirements and environmental protections further constrain operations. The report evaluates several management strategies to address these challenges. These include increasing water transfers and exchanges between agencies, expanding storage opportunities such as groundwater banking, optimization conveyance by utilizing unused capacity during off peak periods, and facilitating water purchases and sales to balance supply and demand. Evaluation of the success of the strategies include more reliable water supplies, cost effectiveness, fair distribution, feasibility of regulatory aspects, proximity logistics, and improved water quality. The report emphasizes a portfolio-based approach, combining multiple strategies to improve the system performance. The portfolios are evaluated based on criteria such as supply reliability, cost, environmental feasibility, equity, and water quality. Findings indicate that significant benefits can be achieved through improved coordination and more efficient use of existing infrastructure, particularly by leveraging unused conveyance capacity and facilitating interagency transfers.

Overall, the report concludes that enhancing regional cooperation and operational flexibility is critical to improving water supply reliability along the Coastal Branch. Rather than relying on new infrastructure, the recommended approach focuses on better management of existing resources to adapt to increasing variability in water availability.

5.9 Energy Usage

Energy intensity is defined as the amount of energy used to collectively divert, store, convey, treat, and distribute each unit volume of water and herein is reported as kilowatt hours per acre-foot (kW-hr/AF). An analysis was performed for the reporting period of December 29, 2021 through December 28, 2022. The analysis covers energy usage within CCWA including water treatment and pumping for storage in Lake Cachuma.

The energy intensity analysis is shown below in **Table 5-3**. The final calculated energy intensity is 431 kWh/AF. CCWA does not generate any electricity to offset its electricity use. Also, this analysis excludes energy used by the CCWA Participants

Table 5-3: Energy Intensity

Energy Intensity (Year 2022)			
Description	**Water Management Process**		
	Place into Storage	**Treatment**	**Total Utility**
Volume of Water Entering Process (AF)	5,301	11,518	11,518
Energy Consumed (kWh)	2,286,866	894,712	3,181,578
Energy Intensity (kWh/AF)	431	78	276

6 Water Supply Reliability

CCWA provides a supplemental source of water supply to CCWA Participants. It is also an interruptible supply, as specified in each of CCWA Participant's Water Supply Agreements. In fact, DWR ceases water delivery operations on the SWP Coastal Branch on an annual basis for maintenance work. This maintenance shutdown is typically scheduled in the fall of each calendar year and lasts from two to four weeks. During this time, all CCWA Participants are required to utilize their other sources of water supply to meet their individual system demands. It is CCWA's mission to deliver the SWP water that is available to each CCWA Participant and to manage undelivered SWP as each CCWA Participant dictates.

The UWMP Act requires urban water suppliers to compare the total projected demand for water supply with the amount of water supply that is available over the next twenty-five years, in five-year increments. As described in Section 4.2, the demand for water from the CCWA system is highly influenced by the management decisions of CCWA Participants. To respond to end user demands for water supply, the CCWA Participant will first select the source of supply to be utilized and then convey it to where the water is needed. The selection of which source of supply to be used in responding to the end user demand for water involves both short term and long-term considerations. Since the CCWA system is only one of the sources that are available to the CCWA Participants, it is difficult to predict the proportion of their system demand that will be met by water supplied by the CCWA system in any given year.

In terms of the amount of water supply that is available over the next twenty years, DWR has provided data and estimation protocols to assist with the assessment. The estimation of available supply in future years is termed "water supply reliability." The reliability estimations that are presented in this chapter are strictly focused on the routine delivery of Table A water. Water Transfers, Article 21 Water and Groundwater Banking are not considered. This chapter presents the reliability assessment for CCWA's source of water supply, based on individual CCWA Participant Table A and drought buffer amounts. It also presents a reliability assessment of a single-dry year and multiple-year (5-year) drought.

6.1 Water Supply Reliability Estimations

Each water supply source has its own reliability characteristics. In any given year, the variability in weather patterns around the state may affect the availability of water supplies. The various engineered water supply systems throughout the state can only capture what nature provides, in terms of rainfall and run-off patterns. However, there are numerous other factors that influence the availability of water, including regulatory restrictions, operational status of key pumping and storage facilities and many other factors.

As discussed in Section 5.2, each SWP contractor's Water Supply Contract contains a Table A amount that identifies the maximum amount of Table A water that contractor may request each year. However, the amount of SWP water actually allocated to SWP contractors each year is dependent on a number of factors than can vary significantly from year to year. The primary factors affecting SWP supply availability include the availability of water at the source of supply in northern California, the ability to transport that water from the source to the primary SWP diversion point in the southern Delta, and the magnitude of total SWP contractor demand for that water. In many years, the availability of SWP supplies to CCWA and the other SWP contractors is less than their maximum Table A amounts and can be significantly less in very dry years.

DWR's 2025 DCR,[20] prepared biennially, assists SWP contractors and local planners in assessing the reliability of the SWP component of their overall supplies. In the report DWR presents the results of an SWP reliability analysis based on model studies of SWP operations. The results are interpreted as the capability of the SWP to meet the assumed SWP demand, over a range of hydrologic conditions, for that assumed set of physical facilities and operating constraints.

DWR's estimates of SWP deliveries are based on a computer model that simulates monthly operations of the SWP and CVP systems. Key assumptions and inputs to the model comprise of the facilities included in the system, hydrologic inflows to the system, regulatory and operational constraints on system operations, and projected contractor demands for SWP water.

DWR presents the SWP delivery capability resulting from these studies as a percent of maximum contractor Table A Amounts, which is called the reliability factor. The following sections provide an estimate of the availability of SWP supply during various hydrologic conditions based on these reliability factors.

6.1.1 Reliability Factor Estimates

In the 2025 DCR, DWR provided reliability estimates for current and future conditions up to the year 2043.[19] This data was utilized, following DWR guidance, to estimate the long-term average, the single driest year, and five-year drought reliability factors. **Table 6-1** represent the results of these calculations:

Table 6-1: CCWA Table A Reliability Estimate

				5-Year Drought - Option 1: 1929-1934				
Year	**Long Term Average**	**Single Dry Year 1977**	**Lowest Allocation on Record (2014)**	**5-Year Drought Year 1: 1929**	**5-Year Drought Year 2: 1930**	**5-Year Drought Year 3: 1931**	**5-Year Drought Year 4: 1932**	**5-Year Drought Year 5: 1933**
2025	54.0%	6.0%	5.0%	15.0%	15.0%	15.0%	15.0%	15.0%
2030	53.0%	5.0%	5.0%	15.0%	15.0%	15.0%	15.0%	15.0%
2035	51.0%	4.0%	5.0%	15.0%	15.0%	15.0%	15.0%	15.0%
2040	50.0%	3.0%	5.0%	15.0%	15.0%	15.0%	15.0%	15.0%
2045	48.0%	2.0%	5.0%	14.0%	14.0%	14.0%	14.0%	14.0%
2050	48.0%	2.0%	5.0%	14.0%	14.0%	14.0%	14.0%	14.0%

1. Highlighted rows are linked to tab "SWP Delivery Capability Report"
2. Other cells are interpolated by formula
3. 5% in 2014 is based on actual allocation that year

The table above was sent to all of CCWA Participants so they could plan consistently with CCWA. An example of one of the memos including the table is included in **Appendix C**.

6.1.2 Long-term Average Condition

As required by DWR guidelines, the long-term annual average delivery has been calculated for each CCWA Participant in five-year increments from 2025 to 2050. All calculations follow the estimation protocol outlined in the DCR. The Table A amount and drought buffer amount for each CCWA Project Participant was utilized in the delivery estimate, provided that the conveyance capacity allocation for each participant was not exceeded. **Table 6-2** presents the results of these calculations:

Table 6-2: Long-term Average Delivery Estimate (2025 to 2050)

Long Term Average, Acre-feet per Year									
Participant	**Table A**	**Buffer**	**Total Table A**	**2025**	**2030**	**2035**	**2040**	**2045**	**2050**
Predicted SWP Allocation				**54%**	**53%**	**51%**	**50%**	**48%**	**48%**
Buellton, City of	578	58	636	343	337	324	318	305	305
Carpinteria Valley WD	2,000	200	2,200	1,188	1,166	1,122	1,100	1,056	1056
Golden State Water Co	500	50	550	297	292	281	275	264	264
Goleta WD	4,500	2,950	7,450	4,023	3,949	3,800	3,725	3,576	3576
Guadalupe, City of	550	55	605	327	321	309	303	290	290
La Cumbre Mutual	1,000	100	1,100	594	583	561	550	528	528
Montecito WD	3,000	300	3,300	1,782	1,749	1,683	1,650	1,584	1584
Morehart Land Co	200	20	220	119	117	112	110	106	106
Raytheon Systems	50	5	55	30	29	28	28	26	26
Santa Barbara, City of	3,000	300	3,300	1,782	1,749	1,683	1,650	1,584	1584
Santa Maria, City of	16,200	1,620	17,820	9,623	9,445	9,088	8,910	8,554	8554
Santa Ynez ID#1[1]	2,000	200	2,200	1,188	1,166	1,122	1,100	1,056	1,056
Vandenberg SFB	5,500	550	6,050	3,267	3,207	3,086	3,025	2,904	2904
SUBTOTAL	**39,078**	**6,408**	**45,486**	**24,562**	**24,108**	**23,198**	**22,743**	**21,833**	**21,833**

[1]Santa Ynez River WCD #1 has contracted to deliver a portion of its Table A allocation to the City of Solvang.

6.1.3 Single Year Drought

As required by DWR guidelines, the available delivery for the single driest year was calculated for each CCWA Project Participant in five-year increments from 2025 to 2050. All calculations follow the estimation protocol outlined in the DCR. The Table A amount and drought buffer amount for each CCWA Project Participant was utilized in the delivery estimate, provided that the conveyance capacity allocation for each participant was not exceeded. **Table 6-3** presents the results of these calculations for 1977, which has a reliability of 6% in current conditions and down to 2% in 2043.

Table 6-4 presents a single dry year reliability of 5% based on actual allocations in 2014. Further discussions on the 2014 water year and why it is considered the "worst-case" scenario are provided after **Tables 6-3 and 6-4.**

Table 6-3: Single Dry Year Delivery Estimate, Based on 1977

Single Driest Year, 1977, Acre-Feet per Year									
Participant	Table A	Buffer	Total Table A	2025	2030	2035	2040	2045	2050
Predicted SWP Allocation				6%	5%	4%	3%	2%	2%
Buellton, City of	578	58	636	38	32	25	19	13	13
Carpinteria Valley WD	2,000	200	2,200	132	110	88	66	44	44
Golden State Water Co	500	50	550	33	28	22	17	11	11
Goleta WD	4,500	2,950	7,450	447	373	298	224	149	149
Guadalupe, City of	550	55	605	36	30	24	18	12	12
La Cumbre Mutual	1,000	100	1,100	66	55	44	33	22	22
Montecito WD	3,000	300	3,300	198	165	132	99	66	66
Morehart Land Co	200	20	220	13	11	9	7	4	4
Raytheon Systems	50	5	55	3	3	2	2	1	1
Santa Barbara, City of	3,000	300	3,300	198	165	132	99	66	66
Santa Maria, City of	16,200	1,620	17,820	1,069	891	713	535	356	356
Santa Ynez ID#1[1]	2,000	200	2,200	132	110	88	66	44	44
Vandenberg SFB	5,500	550	6,050	363	303	242	182	121	121
			Total	**2,729**	**2,274**	**1,819**	**1,365**	**910**	**910**

[1]Santa Ynez River WCD #1 has contracted to deliver a portion of its Table A allocation to the City of Solvang.

Table 6-4: Single Dry Year Delivery Estimate, Based on 2014

Lowest Allocation on Record, 2014, Acre-Feet per Year										
Participant	Table A	Buffer	Total Table A	2020	2025	2030	2035	2040	2045	2050
Predicted SWP Allocation				5%	5%	5%	5%	5%	5%	5%
Buellton, City of	578	58	636	32	32	32	32	32	32	32
Carpinteria Valley WD	2,000	200	2,200	110	110	110	110	110	110	110
Golden State Water Co	500	50	550	28	28	28	28	28	28	28
Goleta WD	4,500	2,950	7,450	373	373	373	373	373	373	373
Guadalupe, City of	550	55	605	30	30	30	30	30	30	30
La Cumbre Mutual	1,000	100	1,100	55	55	55	55	55	55	55
Montecito WD	3,000	300	3,300	165	165	165	165	165	165	165
Morehart Land Co	200	20	220	11	11	11	11	11	11	11
Raytheon Systems	50	5	55	3	3	3	3	3	3	3
Santa Barbara, City of	3,000	300	3,300	165	165	165	165	165	165	165
Santa Maria, City of	16,200	1,620	17,820	891	891	891	891	891	891	891
Santa Ynez ID#1[1]	2,000	200	2,200	110	110	110	110	110	110	110
Vandenberg SFB	5,500	550	6,050	303	303	303	303	303	303	303
Total	39,078	6,408	45,486	2,274	2,274	2,274	2,274	2,274	2,274	2,274

[1]Santa Ynez River WCD #1 has contracted to deliver a portion of its Table A allocation to the City of Solvang.

The extremely dry sequence from the beginning of January 2013 through the end of 2014 was one of the driest two-year periods in the historical record. Water year 2013 was a year with two hydrologic extremes. October through December 2012 was one of the wettest fall periods on record but was followed by the driest consecutive 12 months on record. Accordingly, the 2013 SWP allocation was 35% of SWP Table A amounts. The 2013 hydrology ended up being even drier than DWR's conservative hydrologic forecast, so the SWP began 2014 with reservoir storage lower than targeted levels and less stored water available for 2014 supplies. Compounding this low storage situation, 2014 also was an extremely dry year, with runoff for water year 2014 the fourth driest on record. Due to extraordinarily dry conditions in 2013 and 2014, the 2014 SWP water supply allocation was a historically low 5% of Table A amounts.

The exceedingly dry sequence from the beginning of January 2013 through the end of 2014 was one of the driest two-year periods in the historical record. As noted above, the circumstances that led to the low 2014 SWP water supply allocation were unusual and have a low probability of occurrence in the future. Thus, the assumption for CCWA is that a 5% allocation represents the "worst-case" scenario.

6.1.4 Five-Year Drought

The average delivery for a five-year drought period was calculated for each CCWA Participant in five-year increments from 2025 to 2050. All calculations follow the estimation protocol outlined in the DCR. **Table 6-5** presents the results of these calculations:

Table 6-5: Five Year Drought Delivery Estimate – Based on 1988 to 1992

Five Year Drought, 1929-1933, Acre-Feet per Year										
Participant	Table A	Buffer	Total Table A	2020	2025	2030	2035	2040	2045	2050
Predicted SWP Allocation				15%	15%	15%	15%	15%	14%	14%
Buellton, City of	578	58	636	95	95	95	95	95	89	89
Carpinteria Valley WD	2,000	200	2,200	330	330	330	330	330	308	308
Golden State Water Co	500	50	550	83	83	83	83	83	77	77
Goleta WD	4,500	2,950	7,450	1,118	1,118	1,118	1,118	1,118	1,043	1,043
Guadalupe, City of	550	55	605	91	91	91	91	91	85	85
La Cumbre Mutual	1,000	100	1,100	165	165	165	165	165	154	154
Montecito WD	3,000	300	3,300	495	495	495	495	495	462	462
Morehart Land Co	200	20	220	33	33	33	33	33	31	31
Raytheon System	50	5	55	8	8	8	8	8	8	8
Santa Barbara, City of	3,000	300	3,300	495	495	495	495	495	462	462
Santa Maria, City of	16,200	1,620	17,820	2,673	2,673	2,673	2,673	2,673	2,495	2,495
Santa Ynez ID#1[1]	2,000	200	2,200	330	330	330	330	330	308	308
Vandenberg SFB	5,500	550	6,050	908	908	908	908	908	847	847
Total	39,078	6,408	45,486	6,823	6,823	6,823	6,823	6,823	6,368	6,368

[1]Santa Ynez River WCD #1 has contracted to deliver a portion of its Table A allocation to the City of Solvang.

6.2 Comparison of Demand and Supply

As discussed previously, the CCWA Participants have multiple sources of water supply. The CCWA system is only one of those sources. In responding to the long-term and short-term needs for water supply, each CCWA Participant will determine the best use of each available source of supply. The water demand upon the CCWA system is highly dependent on the management decision by the individual CCWA Participants, as opposed to arising directly from an end user demand for water supply. Consequently, it is difficult to predict the level of water demand for the CCWA system.

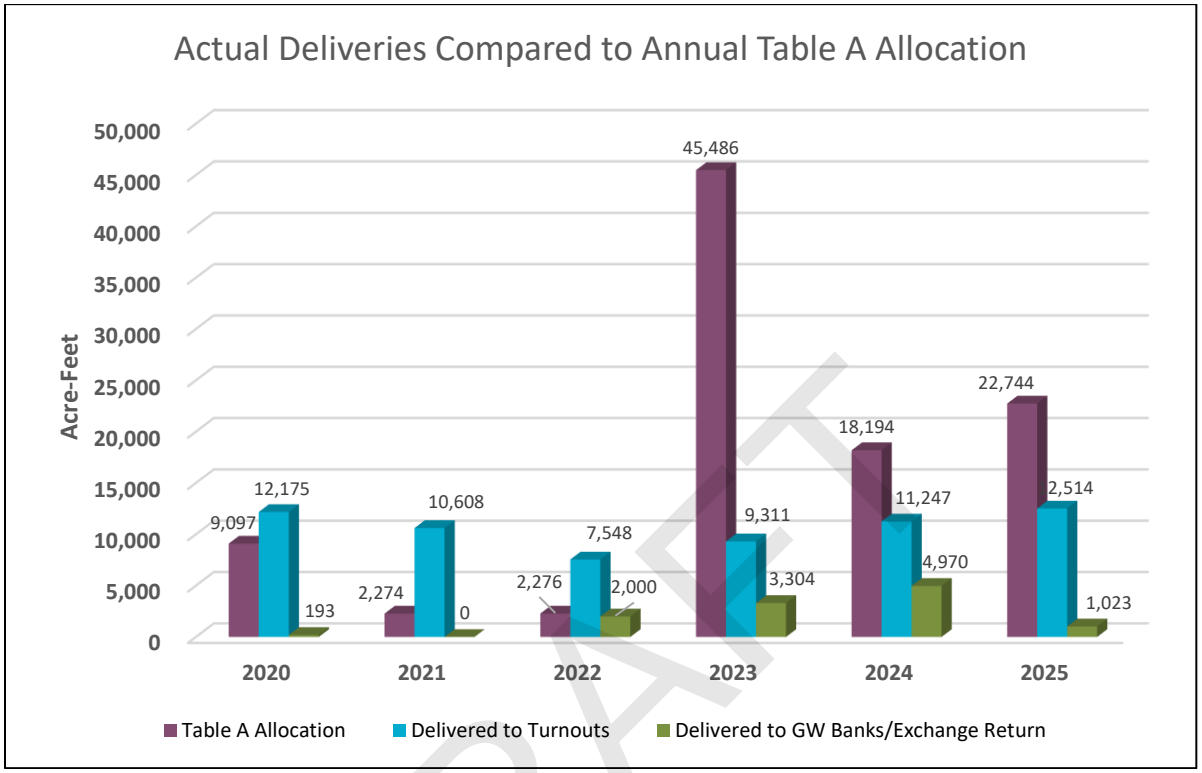
Most of the CCWA Participants rely on other supplies, and the quantity of SWP water delivered can vary significantly each year. **Table 6-6** presents the actual deliveries, expressed as a percent of the Table A amount from 2021 through 2025. The associated DWR annual allocations are also presented. Cells highlighted in green represent years when the SWP deliveries exceeded the allocated volume.

Table 6-6: CCWA Deliveries, as Percent of Table A, Compared to DWR Annual Allocation

CCWA Participants Actual Deliveries, 2010 through 2015 in Percent Table A									
Participant	**Table A**	**Buffer**	**Total Table A**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**
Predicted SWP Allocation				**20%**	**5%**	**5%**	**100%**	**40%**	**50%**
Buellton, City of	578	58	636	54.6%	28.5%	13.4%	38.5%	39.8%	30.0%
Carpinteria Valley WD	2,000	200	2,200	12.3%	83.5%	20.0%	3.6%	12.7%	16.2%
Golden State Water Co	500	50	550	16.7%	10.2%	10.4%	46.2%	44.7%	57.3%
Goleta WD	4,500	2,950	7,450	8.1%	25.3%	47.8%	2.4%	8.5%	11.0%
Guadalupe, City of	550	55	605	36.7%	2.0%	1.7%	94.9%	72.7%	50.6%
La Cumbre Mutual WC	1,000	100	1,100	84.4%	12.8%	49.0%	33.6%	30.4%	33.2%
Montecito WD	3,000	300	3,300	12.3%	8.8%	3.9%	3.5%	12.8%	16.5%
Morehart Land Co	200	20	220	22.3%	18.6%	46.8%	21.4%	6.8%	12.3%
Raytheon System	50	5	55	45.5%	36.4%	0.0%	0.0%	0.0%	0.0%
Santa Barbara, City of	3,000	300	3,300	12.2%	11.5%	15.8%	3.5%	12.8%	16.5%
Santa Maria, City of	16,200	1,620	17,820	32.0%	15.9%	8.9%	26.6%	26.1%	31.0%
Santa Ynez ID#1	2,000	200	2,200	62.9%	26.9%	23.1%	61.3%	41.7%	24.0%
Vandenberg AFB	5,500	550	6,050	40.3%	38.8%	0.0%	20.5%	43.6%	49.2%

Note: Green cells represent years when deliveries exceeded the DWR allocation

Figure 6-1: Historical Deliveries Compared to DWR Allocation



As can be observed in the historical delivery record, deliveries and DWR allocations have varied significantly since 2020. In several years deliveries exceeded the allocation due to supplemental sources of SWP and other water obtained by CCWA Participants.

To meet demand for water during drought years, the CCWA system will be able to facilitate the delivery of additional supplies above the DWR annual allocation amount. This is accomplished using many reliability measures including: drought buffer, carryover water, water transfers among CCWA Participants, water transfers with other SWP contractors, water transfers from "non-project" sources, DWR dry year purchase programs, exchanges, and groundwater banking programs. All these programs are possible because of the physical connection to a state-wide distribution system.

6.3 Water Quality

6.3.1 CCWA Treatment of SWP Deliveries

CCWA provides water from the SWP to participants in Santa Barbara and San Luis Obispo Counties. This water is treated at Polonio Pass Water Treatment Plant which is operated by CCWA. SWP water comes from the Delta which is fed by rain and snow from the Sierra Nevada, Cascade, and Coastal Mountain ranges. Water from the Delta is pumped into a series of canals and reservoirs and provides water to urban and agricultural consumers throughout the Bay Area and central and southern California. Water flowing through the Delta is of generally high quality; however certain water quality aspects may vary considerably due to conditions across the Delta. Variability in water quality along the Delta is generally a function of flow conditions, tidal mixing,

water export operations, within the Delta. Total organic carbon (TOC) concentrations also increase as the water flows through the Delta due to agricultural drainage from peat soil islands in the Delta. Treated wastewater discharged into the Delta also contributes towards increased minerals and TOC.

Treatment Process

This SWP source water is treated at Polonio Pass Water Treatment Plant, by conventional surface water treatment, with enhanced coagulation, flocculation, sedimentation, filtration, and disinfection with free chlorine. CCWA uses data provided by the Municipal Water Quality Investigations (MWQI) Program[1] and its own water monitoring programs to optimize the treatment approach at the Polonio Pass Water Treatment Plant to produce water to the highest standards attainable. The Polonio Pass Water Treatment Plant provides a multi-barrier treatment strategy. The first barrier is advanced coagulation which removes organic and sediment particulates as well as dissolved organic matter. Removing particles improves the anti-microbial action of the disinfectants and the removal of dissolved organic matter removes a microbial food source as well as precursors for disinfection byproducts (DBP). The water is then passed through a second barrier of activated carbon filters where filters remove particulate matter, while activated carbon absorbs dissolved organic compounds. The filters also adsorb additional organic matter. Finally, the water enters the third barrier, a dedicated chlorine contactor. Chlorine kills any remaining microbes that have made it through the treatment process. After a sufficient chlorination contact time, ammonia is added to the water to form chloramines. Chloramines are used to prevent the growth of bacteria in the distribution system and help to prevent microbial regrowth, which delivers water from the Polonio Pass Water Treatment Plant to CCWA Participants. Monitoring data reported in the SWP Watershed Sanitary Survey 2022 Update indicate that current treatment for *Cryptosporidium*, *Giardia* and viruses continue to be appropriate for the Polonio Pass Water Treatment Plant.

Disinfection Byproducts

The TOC and bromide in Delta source water have the potential to form harmful DBPs by reacting with chlorine or chloramines in the treatment process. Water in the San Luis Reservoir has a greater likelihood of forming DBPs during the spring and summer when the most water is released from the reservoir to flow south in the Aqueduct due to release volume fluctuations (Watershed Sanitary Survey 2016 Update)[20]. In addition to factors related to temperature, organic matter reactivity, and residence time. To reduce the potential for the formation of DBPs, TOC levels are reduced prior to the disinfection through enhanced coagulation and filtration processes. The concentration of TOC in water from the Delta varies from below 2 parts per million (ppm) to more than 10 ppm in water from the Delta. The cost of treatment fluctuates with the amount of chemicals necessary to remove the organic carbon.

Mineral Content

Another important property of SWP water is the mineral content. SWP water is generally low in alkalinity and dissolved minerals, such as calcium, magnesium, sodium, potassium, iron, manganese, nitrate, and sulfate. Most of these do not pose health concerns, but "hard" water (water high mostly in calcium and magnesium) can cause several problems for consumers, such as the formation of white crusts in plumbing fixtures, water spots, damage to water heaters, and excess use of soaps. Nitrate is the main exception, as it has significant health effects for infants; however, the nitrate content of SWP water is very low. Low alkalinity levels affect the coagulation treatment process. Alkalinity is necessary to react with aluminum sulfate (alum) used in the treatment process to cause coagulation and flocculation of suspended solids and colloidal particles. The reaction of alum (aluminum sulfate) with alkalinity also removes excess alum from the processed water. Without this reaction, some alum may stay dissolved in the water and be released in the processed water. Alum has been linked to health-related problems. The use of additional chemicals may be used to compensate for low alkalinity leading to higher treatment costs. Also of significance is the chloride content. Although not a human health

[1] The MWQC Program improves the usability of Delta water as a municipal source by providing monitoring, forecasting and reporting of SWP water quality at sites in the Delta.

risk, chloride can have a negative impact on agricultural activities and regulatory compliance for local sanitation agencies.

Taste and Odor Issues

Water from the Delta is also susceptible to taste and odor (T&O) problems associated with algal growth in the Delta. This is typically a seasonal problem only occurring in the warmer months which, when accompanied by high nutrient concentrations, can lead to algal blooms. Some algae, especially blue green algae (cyanobacteria), release 2-methylisoborneol (MIB) and geosmin which are T&O chemicals associated with musty and earthy taste and smells. Both compounds have very low odor thresholds and can be sensed by some people at concentrations around 10 to 30 parts per trillion. The source of these compounds is not fully understood so CCWA uses a combination of monitoring by the DWR in the Delta and at San Luis Reservoir and monitoring of the water entering the treatment plant to forecast a possible spike in the levels of these two T&O compounds. In the case of an actual T&O event, CCWA is prepared to remove these contaminants using powdered activated carbon in the treatment process which is effective at absorbing MIB and geosmin and reducing associate T&O impacts in finished water.

System Shut-Down

Each calendar year DWR performs maintenance and inspections on the Coastal Branch of the SWP, which requires the Polonio Pass Water Treatment Plant to shut down and the Coastal Branch to be slowly dewatered to provide access to the canal and pipelines. As the water flow decreases, concentrations of ammonia in the canal can rise significantly. During the shutdown, ammonia levels may continue to rise in the raw water tanks at the Polonio Pass Water Treatment Plant. The management of the excess ammonia prior to and following the plant shutdown creates a challenge in the treatment of the water along with extra expenses associated with the use of additional chemicals. This has been remedied to some extent by the removal of sediment buildup in the canal and pumping plant forebays of the Coastal Branch as part of the routine maintenance performed during the winter shutdowns.

Treated Water Quality Impacts on Reliability

The ability to control nitrification is critical to reliability during drought conditions. To reduce DBP formation, the Polonio Pass Water Treatment Plant adjusts the pH of water leaving the Chlorine Contact Basin and subsequently doses ammonia to form a chloramine secondary disinfectant. While chloramines are very effective in controlling DBPs. However, this treatment step presents the potential of nitrification, a biological process in which ammonia oxidizing bacteria convert ammonia to nitrite and nitrate, leading to the depletion of chloramine residual. This process can ultimately reduce the chloramine secondary disinfectant to non-detectable concentrations. This is a condition that needs to be avoided since drinking water standards require that all treated surface water to continuously have a detectable secondary disinfectant. One parameter that influences when nitrification occurs is water age following treatment. The potential for nitrification increases as water age increases, which becomes as important consideration during drought conditions when water deliveries may be reduced due to lack of supply. As water deliveries are reduced, water age begins to increase. The point at which a drinking water aqueduct using chloramine secondary disinfectant will need to shut down is when the nitrification process cannot be adequately controlled.

CCWA has implemented a comprehensive nitrification monitoring and control strategy which has allowed CCWA to operate the Polonio Pass Water Treatment Plant and pipeline to less than 50% of the minimum design flow rate of the system. This greatly improves reliability of the CCWA system. CCWA does not believe that water quality will negatively impact its ability to provide a reliable supply of water over the next twenty years, although water quality is certainly a consideration in water supply planning. CCWA's approach has been to monitor water quality both upstream and downstream of the Polonio Pass Water Treatment Plant and to use that information to treat the water to the highest standards attainable.

6.4 Operational Factors Effecting SWP Deliveries

While Table A identifies the maximum annual amount of Table A water a SWP contractor may request, the amount of SWP water available and allocated to SWP contractors each year is dependent on several factors and can vary significantly from year to year. The primary factors affecting SWP supply availability include: the availability of water at the source of supply in northern California, the ability to transport that water from the source to the primary SWP diversion point in the southern Delta, and the magnitude of total SWP contractor demand for that water.

6.4.1 Availability of SWP Source Water

SWP supplies originate in northern California, primarily from the Feather River watershed. The availability of these supplies is dependent on the amount of precipitation in the watershed, the amount of that precipitation that runs off into the Feather River, water use by others in the watershed and the amount of water in storage in the SWP's Lake Oroville at the beginning of the year. Variability in the location, timing, amount, and form (rain or snow) of precipitation, as well as how wet or dry the previous year was, produces variability from year to year in the amount of water that flows into Lake Oroville. However, Lake Oroville acts to regulate some of that variability, storing high inflows in wetter years that can be used to supplement supplies in dry years with lower inflows.

6.4.2 Ability to Convey SWP Source Water

Water released from Lake Oroville flows down natural river channels into the Delta. The Delta is a network of channels and reclaimed islands at the confluence of the Sacramento and San Joaquin rivers. The SWP and the CVP use Delta channels to convey water to the southern Delta for diversion, making the Delta a focal point for water distribution throughout the state.

Several issues affecting the Delta can impact the ability to divert water supplies from the Delta, including water quality, fishery protection, and levee system integrity. Water quality in the Delta can be adversely affected by both SWP and CVP diversions, which primarily affect salinity, as well as by urban discharge and agricultural runoff that flows into the Delta, which can increase concentrations of constituents such as mercury, organic carbon, selenium, pesticides, toxic pollutants and reduce dissolved oxygen. The Delta also provides a unique estuarine habitat for many resident and migratory fish species, some of which are listed as threatened or endangered. The decline in some fish populations is likely the result of several factors, including water diversions, habitat destruction, degraded water quality through urban runoff and wastewater discharge, and the introduction of non-native species. Delta islands are protected from flooding by an extensive levee system. Levee failure and subsequent island flooding can lead to increased salinity requiring the temporary shut-down of SWP pumps.

To address some of these issues, SWP and CVP operations in the Delta are limited by a number of regulatory and operational constraints. These constraints are primarily incorporated into the SWRCB's Water Rights Decision [21]1641 (D-1641), which establishes Delta water quality standards and outflow requirements that the SWP and CVP must comply with.

The requirements in the biological opinions are based on real-time physical and biological phenomena (such as turbidity, water temperature and location of fish), which results in uncertainty in estimating potential impacts on supply of the additional constraints imposed by the biological opinions.

6.4.3 Demand for SWP Water

The reliability of SWP supplies is affected by the total amount of water requested and used by SWP contractors, since an increase in total requests increases the competition for limited SWP supplies. As previously mentioned, contractor Table A amounts in the SWP Water Supply Contracts have ramped up over time, based on projected increases in population and water demand at the time the contracts were signed. Urban SWP contractors' requests for SWP water were low in the early years of the SWP, but have increased steadily over time, although more slowly than the ramp-up in their Table A amounts, which reached a maximum for most SWP contractors in the early to mid-1990s. Since that time, urban contractors' requests for SWP have continued to increase until recent years when nearly all SWP contractors are requesting their maximum Table A amounts.

6.5 Drought Risk Assessment

A new requirement for UWMPs is to prepare a 5-year drought risk assessment for the years 2021 to 2025 and identify response actions and mitigation measures to address the water shortages. This analysis is not applicable to CCWA since they provide a wholesale water supply and are not responsible for response actions. CCWA does offer mitigation measures by securing supplemental water for the CCWA Participants, but this is only done at their specific request. In addition, the supplies vary by circumstances, availability, and CCWA Participant demand, and it is not feasible to predict or assign what would be available during a specific dry year. CCWA can only provide what water is available. When requested to find supplies CCWA makes an effort to secure supplemental water but is not responsible for resolving other agencies' water shortages. More details on CCWA's roles and the Supplemental Water Program are provided below.

CCWA is a Joint Powers Authority that was formed by its member agencies to design, construct, operate and maintain the Coastal Branch of the SWP and the associated CCWA aqueduct extension and to convey, treat, and deliver SWP to CCWA Participants. CCWA is a wholesale provided of imported SWP water to CCWA Participants. Conservation measures and water management planning are the responsibility of each CCWA Participant, not CCWA.

CCWA's main function is to respond to the water supply needs of CCWA Participants. In times of abundant supply, CCWA will facilitate a range of actions to manage excess SWP supplies to effectively store the excess supplies for later use. Likewise, in times of drought, CCWA will facilitate securing supplemental supplies of water that can be delivered through the SWP system to CCWA Participants. However, each CCWA Participant has its own unique portfolio of water supplies and, as a result, each has a unique way of responding to their individual customers' demand for water supply.

As described in the Water Contingency Shortage Plan (**Appendix H**), CCWA has developed program that will allow individual CCWA Participants to pursue supplemental sources of water supply, transfers of surplus water, or participation in a groundwater bank. This program is essential due to the wide range of possible responses to changing conditions.

An important function of the CCWA operation is to fully characterize the source of supply for CCWA Participants so that they can incorporate this information into their individual water management strategies. CCWA will provide frequent updates on the current year available supply at each Board of Directors meeting and at each Operating Committee meeting. This update includes the status of precipitation and snow levels of the SWP's watershed, current reservoir levels, and the results of DWR periodic special studies regarding potential changes to the amount of available supply as well as DWR's annual position analysis. In addition, a Water Delivery Status Report is also posted on the CCWA's website. This report provides the amount of available water supply for the current year, and the amount delivered to date for the given year.

6.6 Climate Change Impact on State Water Project Water

This section includes a general discussion on climate change followed by analyses of climate change impacts to water demands, water supply, and water supply reliability.

General Discussion on Climate Change

Climate change model projections indicate that California in general can expect to be impacted by the following:

- Increased temperatures
- Changes in the timing and quantity of precipitation
- Increased risk of wildfires
- Increased risk of flooding, and
- Sea-level rise

The Santa Barbara County Integrated Regional Water Management Plan (IRWMP) (Dudek, 2019)[22] presented a summary of climate change findings from various studies and models, which is included in **Table 6-7**.

Table 6-7: Impacts of Climate Change on the Region by Mid-Century

Impact	Ranges*
Temperature	Winter: Projected increases of 4°F to 5°F Summer: Projected increases of 5°F to 6°F
Precipitation	5- to 7-inch decrease in average annual rainfall Increase in annual precipitation variability, fewer and more intense storms, and longer dry periods
Sea-Level Rise	4–30 centimeters (cm) by 2030 12–61 cm by 2050 42–167 cm by 2100
Supply	State Water Project delivery decrease of 7%–10% by 2050, and 21%–25% by 2100; changes to local supply not quantified
Wildfire	Low to moderate increase in projected fire risk
Flooding	Greater flood magnitudes**

Source: Information compiled by the Cooperating Partners in 2018.
* Changes to occur by 2100 unless otherwise noted.
** Greater flood magnitudes are anticipated to result from more frequent atmospheric river-storm events (Fourth California Climate Change Assessment and the corresponding Regional Reports (http://www.climateassessment.ca.gov).

The effects of climate change are addressed and quantified in the DCR, as previously described. CCWA communicates this information to CCWA Participants to characterize the impacts of climate change. CCWA Participants will, in turn, utilize this information and incorporate it into their own unique plans for managing the effects of climate change. Additional information regarding climate change effects to the water supplies available to Santa Barbara County can be found in the County's IRWMP.

Impacts to Water Demands

The IRWMP identified the primary expected effect from climate change in the future is an increase in average global temperature. By the mid-century, temperatures in the Central Coast area are projected to increase 4°–5°Fahrenheit during the winter and increase 5°–6°Fahrenheit during the summer. By the end of the century, annual average temperatures are anticipated to be 7°–8°Fahrenheit higher than the historic average. Increases in temperature may be expected to impact water resources through changes to precipitation patterns, evapotranspiration rate increases, increased customer water use, increased wildfire potential, and faster snowmelt. These potential impacts are likely to impact the SWP supplies.

The IRWMP also noted the frequency of extreme hot days was also projected to increase significantly from 3 to 4 extreme hot days in the historical period (1985–2014), 6 to 10 extreme hot days by 2030, 9 to 18 extreme hot days by 2050, and 23 to 43 extreme hot days by 2090.

As climate change becomes noticeable and quantifiable, the CCWA Participants' responses will need to include reducing demands to match possible reduction of water supplies from the SWP. At this point, impacts from possible climate change are not quantifiable. Reduction of the per capita demands in the system can help respond to climate change in two ways. Reduced water demands equate to less energy use through reduced groundwater pumping and/or movement of water supplies through the system. Further reduction of per capita water demands may be challenging to achieve, as the CCWA Participants have already implemented many demand management or conservation methodologies.

It is anticipated that climate change related temperatures increases, and more hot days will impact landscape water demands within member agency jurisdictions; however, as CCWA Participants likely have goals to maintain their per capita use goal, overall water demands are not anticipated to increase. Temperature rises will translate to increased evapotranspiration rates, which may trigger possible mitigation measures to reduce water demands for landscape such as requiring less landscaping, increased use of drought tolerant plantings, or more efficient irrigation strategies by CCWA Participants.

Impacts to Water Supplies

The IRWMP quoted the County's Long-term Supplemental Water Supply Alternatives Report (Long-term Supplemental Water Supply Alternatives Report, County of Santa Barbara, 2015)[23], which stated that future water availability for some municipal suppliers will be reduced by lost reservoir capacity and reduced reliability of SWP deliveries. In addition, climate change effects such as extended periods of drought and more frequent occurrence as well as variance in the frequency and intensity of rain and storm events and the increased frequency and intensity of fires will all further limit water supplies locally and throughout the state. SWP deliveries are affected each year by weather conditions within the source areas and measures to protect habitat in key water transport facilities, particularly within the Delta.

The IRWMP said that imported water supply from the SWP is projected to decrease from current levels by 7% to 10% by 2050, and 21% to 25% by 2100. Seawater inundation in coastal aquifers; increased evapotranspiration rates due to increased temperatures; changes in the amount, timing, and quality of runoff and recharge as precipitation patterns change; increased sedimentation to reservoirs due to increased wildfires; more extreme storm events; longer and more frequent droughts; and damage to infrastructure due to increased flooding and sea-level rise all present significant risk to local water supply. Although these risks have not been quantified, they are widely recognized. These impacts could be reduced through various mitigation measures by CCWA Participants.

The IRWMP states that sea-level rise has the potential to impact water supplies in Santa Barbara County through seawater intrusion into coastal aquifers, impacts to water infrastructure, and decreased deliveries from the SWP. Seawater intrusion did occur in the Santa Barbara Groundwater Basin in the late 1970s due to heavy pumping, which was later reversed by effective pumping practices and groundwater injection. In Santa Barbara County, basins that are subject to the Sustainable Groundwater Management Act (SGMA) have or will be preparing Groundwater Sustainability Plans (GSP) and will be monitoring for possible seawater intrusion. If needed the Groundwater Sustainability Agencies (GSA) will implement measures to limit seawater intrusion that might impact local groundwater supplies used by the CCWA Participants.

The CCWA Participants will need to meet these potential reductions in SWP surface water supplies by improved water efficiency measures, additional groundwater recharge or a reduction in groundwater pumping in wet years to leave water in the aquifer for drier years.

Impacts on Water Supply Reliability

Statewide, rainfall and snowfall are expected to change in terms of both type and timing, also as indicated by the IRWMP. The state is already experiencing decreases to natural snowpack in the Sierra Nevada, which has implications for SWP deliveries. Climate change will likely cause more precipitation to fall as rain, and warmer temperatures will cause snowpack to melt 4 to 14 days earlier in the season. DWR is predicting that the Sierra snowpack will experience a 25% to 40% reduction from current levels by 2050 based on historical modeling, with additional decreases caused by warmer storms due to climate change. At the local level, changes in the timing and intensity of precipitation could negatively affect groundwater recharge, runoff flowing to rivers and reservoirs, flooding frequency, and length of the dry season and resulting increased risk of wildfires and vegetation die off. The local impacts could affect the local supplies of CCWA Participants.

A significant portion of Santa Barbara County is occupied by forest land, and wildfire is already a common occurrence in the Region due primarily to the warm, dry climate. Earlier onset of dryness that lasts longer and becomes more intense is likely to result in a low to moderate increase in fire risk according to the IRWMP. The annual area burned by fire in Santa Barbara County is projected to increase under climate change. An increase in the average annual area burned by wildfires would result in increased sedimentation to reservoirs, negatively impacting water quality, reducing storage capacity, and potentially reducing delivery of local supplies due to operational impacts to CCWA Participants..

The Coastal Branch of the SWP delivers water originating in Northern California to water agencies in Santa Barbara and San Luis Obispo Counties including the CCWA. The Delta is the central hub of the SWP. Potential impacts to the Delta resulting from climate change include increased risk of levee failure, reduced water quality, and reduced water supply, all of which could significantly impact SWP operations, and the reliability of the supply of water delivered through the CCWA to its CCWA Participants. Sea-level rise threatens to disrupt deliveries from the SWP if saltwater advances into the Delta and increased quantities of fresh water would need to be released to protect water quality.

The CCWA Participants will need to consider adapting to reduced deliveries from the SWP as a component of climate change adaptation. Climate change and sea level rise have both been taken into account in determining the future reliability and future allocations as presented in the 2025 DCR (DWR, 2025).

6.7 Interruption of Delta Supplies

It has been estimated by DWR that in the event of a major earthquake in or near the Delta, water supplies could be interrupted for up to three years, posing a significant and unacceptable risk to the California business economy. A post-event strategy would provide necessary water supply protections to avert this catastrophe. Such a plan has been coordinated through DWR, Corps of Engineers (Corps), USBR, California Office of Emergency Services (Cal OES), the Metropolitan Water District of Southern California (Metropolitan) and the State Water contractors. The state and federal government have developed emergency management plans and emergency operations plans to address these situations.

This would result in a very significant disruption to CCWA and CCWA Participants. In this situation, only water south of the Delta would be available. CCWA would need to rely on banked water and other supplies they could purchase on the open market.

6.8 WP Adaptation Strategy

In August 2025, DWR released the State Water Project Adaptation Strategy (Report) to reduce risk to the SWP water supply and other broad benefits from climate change vulnerabilities through 2085 timeframe. The Report identifies a set of actions with the most promise to protect the benefits of the SWP. It concludes that

maintenance of the SWP aging infrastructure and a modernized tunnel system to transport water under the Delta are the most valuable adaptations.

The Report considered structural, operational and maintenance, and nature-based solution strategies. Of the 17 strategies considered, five have been identified as the most promising. Each individual strategy addresses different climate stressors such as increasing drought frequency, more extreme precipitation, earlier runoff, and sea level rise. A combination of responses is needed to address these climate stressors. The five strategies included in the adaptation portfolios include enhanced asset management, California Aqueduct subsidence remediation, Delta Conveyance Project, Forecast-Informed Reservoir Operations at Oroville Dam, and South-of-Delta storage augmentation.

CCWA supports efforts to improve SWP reliability, but for now has chosen not to participate in the Delta Conveyance Project.

7 Water Shortage Contingency Planning

The UWMP Act requires that the UWMP include a Water Shortage Contingency Plan (WSCP) that documents procedures for evaluating water supplies, declaring water shortages due to a drought or catastrophic event, and responding with conservation measures or mitigation actions. Since CCWA is a pass-through wholesale water agency some of the components of the WSCP, such as water conservation measures, are not applicable.

CCWA's WSCP is an independent document from the UWMP and can be found in **Appendix H**. The WSCP was last updated as part of the 2020 UWMP. There are no new requirements to update the WSCP in 2025. The main topics covered in the updated WSCP include:

- Water Supply Agreement with CCWA Participants
- Procedures for Evaluating Water Supplies
- Water Shortage Stages and Response Actions
- Mitigation Measures
- Catastrophic Water Supply Interruption
- Public Outreach
- Legal Authority of the Plan
- Revenue Reductions and Expense Increases
- Monitoring and Evaluating the Plan

8 Demand Management Measures

The UWMP Act defines a set of Demand Management Measures (DMM), which are a set of specific methods employed by a water supplier to encourage and facilitate water conservation. The UWMP Act requires that any water management grant or loan that is administered by DWR, SWRCB or California Bay-Delta Authority (Funding Agencies) and issued to an urban water supplier must be conditioned to require implementation of applicable DMMs.

For wholesale water suppliers, there are three specific measures and a fourth "other" category of DMMs, as listed below:

- Metering
- Public Education and Outreach
- Water Conservation program coordination and staffing support
- Other DMMs that have a significant impact on water use as measured in gallons per capita per day.

The UWMP Act also requires wholesale water suppliers to provide a narrative discussion in their UWMP that addresses asset management and wholesale assistance programs.

CCWA powers are set forth in the Joint Exercise of Powers Agreement that created CCWA. CCWA does not have the legal authority to implement some of the wholesaler DMMs.

8.1 CCWA's Wholesale Demand Management Measures

CCWA does implement some of the wholesale DMMs. A description of the CCWA's wholesale DMM efforts is presented below:

8.1.1 Water Metering

The CCWA pipeline has ten turnouts where water is delivered. Each turnout is equipped with a meter that provides continuous measurement of flow rate and provides totalized delivery volumes. The meters are monitored continuously through the CCWA Supervisory Control and Data Acquisition system. On a monthly basis, the total recorded delivery volume for each turnout is reviewed and reconciled with Master Meters, as required by contract. All variable costs associated with the CCWA operation is based on the monthly totals of each CCWA Participant turnout.

The CCWA Instrumentation, Calibration and Repair Department is charged with the responsibility of servicing the turnout meters to ensure they perform to industry standards. The service includes routine calibration and replacement of faulty parts or complete meters, as appropriate. The meters in use are as follows:

Table 8-1: CCWA Meters

Turnout	Type of Meter	Min Flow gpm	Max Flow gpm
Chorro	Venturi	500	3,500
Lopez	Electromagnetic	150	3,500
Guadalupe	Venturi	65	680
Santa Maria	Venturi	1,480	15,500
So Cal	Venturi	185	1,950
Vandenberg	Venturi	550	5,500
Buellton	Venturi	100	500
Solvang	Venturi	140	1,300
Santa Ynez	Venturi	500	6,000
Lake Cachuma	Electromagnetic	0	14,360

8.1.2 Public Education and Outreach

CCWA does not disseminate water conservation information to the public or school system, other than by providing links to conservation resources on its website. In Santa Barbara County, public education and outreach is handled by the Regional Water Efficiency Program (RWEP).

8.1.3 Water Conservation Program Coordination and Staffing

CCWA maintains a water loss program, which is a DMM for wholesale water suppliers. CCWA's Water Treatment Plant Supervisor is primarily responsible for implementing the water loss control program, as described in Section 8.3.4.

8.1.4 Water Loss Control

The CCWA distribution system consists of a 122-mile-long pipeline, ranging from 36-inches to 60-inches in diameter. The pressure within the pipeline can range from atmospheric pressure within the pipeline reservoirs to pressures reaching up to 400 pounds-per-square-inch. Due to the length of the pipeline and the remote locations in which the pipeline traverses, it is critically important to implement a comprehensive leak detection program.

To address the critical need for leak detection, CCWA has implemented a program that consists of a variety of physical inspection, testing and analytical techniques. The leak detection tasks that are in use at CCWA are as follows:

- Visual Ground Surface Inspections. The full 122-mile Right-of-Way for the CCWA pipeline is inspected for a variety of purposes throughout the year. One element of each inspection is to identify any evidence of leakage from the pipeline. The evidence can include excess growth of vegetation, water seeping from the ground surface, leakage from one of the pipeline appurtenance vaults, leakage in any aboveground pipe or piping within the appurtenance vaults. The pipeline right-of-way is inspected during the annual valve exercise and vault assessment program, the annual close interval survey of the cathodic protection system and the annual mowing of the right-of-way. There are other numerous maintenance and repair tasks that bring CCWA along the pipeline right-of-way.

  In addition to CCWA inspections, an informational flier is mailed to every owner of property in which the pipeline crosses. In this flier, information about the pipeline and its associated structures

is provided and also provides information about how to report a leak to CCWA. The CCWA website also provides important contact information if a leak is detected by a member of the public as well.

- Periodic Hydrostatic Testing of the Pipeline. Typically, DWR will shutdown the Coastal Branch of the SWP once per calendar year to conduct maintenance work for a period of two to four weeks. This shut down results in the CCWA pipeline being shut down for delivery operations as well. Although maintenance work is planned for some sections of the pipeline, there are section that will remain idle and fully charge with water. During this planned outage, CCWA will make pressure measurements within the sections of pipeline that are idle at the start of the shutdown and at the end of the shutdown. Considering that the shutdown lasts up to four weeks, even a small leak can be detected. The pressure measurements are reviewed annually immediately following a shutdown. If there is a loss of pressure, additional investigation will be implemented.

- Periodic Internal Inspection of the Pipeline. During the annual DWR Coastal Branch shutdown, CCWA staff will conduct internal pipeline inspections for selected sections of the pipeline. A different section of the pipeline is inspected with each shutdown to ensure a good coverage of all sections of the pipeline. The interior inspections look for potential damage to the pipe, such as pipe deflection arising from excessive ground surface loading or improper installation, delamination of the protective mortar lining, excessive corrosion or any other compromise of the pipe's integrity that may have led to leakage or lead to future leakage.

- Annual AWWA Water Loss Audit Analysis. The AWWA developed software designed to guide a water distribution system operator through a water audit. DWR prepared the DWR Water Loss Audit, which was based on the AWWA method. California Water Code Section 10631 (J) requires retail water suppliers to quantify distribution water losses using the DWR Water Audit Method, but they are optional for wholesale agencies. CCWA did however prepare these audits for 2021-2025, which are found in **Appendix G**.

  CCWA maintains a water delivery database, which serves as the basis of the water audit. This database contains the monthly delivery volumes to each CCWA Participant. Each CCWA Participant Turnout has a flow meter and the total monthly delivery is logged. Also, at the end of each month, DWR will provide CCWA with the monthly total of water delivered to the CCWA Polonio Pass Water Treatment Plant, as the DWR meter is the official "sale" meter to CCWA. The DWR monthly total is compared to the sum of all turnout monthly totals. If the DWR total and the Turnout totals are within 3%, the individual CCWA Participant totals will be reconciled to match the DWR monthly total. This entails an allocation based on the amount of water delivered in the month to each CCWA Participant to either add or subtract so that the sum of all Turnout meters will equal the DWR monthly total. If the difference between the DWR total and the turnout totals is greater than 3%, the difference is investigated further.

From 2021 to 2025, 66,006 AF was billed to CCWA Participants. This value matched the DWR total but was about 649 AF higher than the turnout meter raw values for this period. This difference is reported as distribution systems losses. This number includes all meter errors and water losses through the Polonio Pass Water Treatment Plant. This indicates that the pipeline has relatively low leakage and is currently in good condition.

- Analysis of Daily Delivery Data. The water entering the CCWA distribution system is measured by the Polonio Pass Water Treatment Plant outlet meter and the water leaving the distribution system is measured by ten turnout meters. As part of the leak detection program, the daily delivery

totals for the Polonio Pass Water Treatment Plant outlet meter are compared to the sum total of the Turnout meters. Due to the errors inherently associated with flow measurements, there will always be a difference between the total volume measured going into the distribution system and the total volume measured leaving the distribution system.

To evaluate if the pipeline is leaking, the daily flow data is analyzed to determine if the Polonio Pass Water Treatment Plant outlet meter and the Turnout meters are measuring the same volume. If the analysis suggests that the same volume is not being measured, this would constitute evidence of a potential leak that would require additional investigation.

8.2 CCWA Asset Management Program

An asset management program is in place at CCWA. The program consists of three elements addressing routine maintenance, condition assessment and long-term planning for replacing or improving CCWA assets. A description of the program follows:

8.2.1 Routine Maintenance

The goal of any asset management program is to ensure that all assets are routinely serviced to ensure reliable operation and to maximize service life. CCWA accomplishes this goal through two key tools: (1) use of a computerized maintenance management systems (CMMS) and (2) the use of qualified and skilled employees.

CCWA has utilized a CMMS since the CCWA's inception. CMMS is database software that will maintain an inventory of assets, the associated maintenance tasks for each asset, a schedule of all maintenance tasks and location of each asset. The software will also provide automated notification of when maintenance tasks are required, accept work completion reports and allow for entry of discrepancy reports for requesting work to be completed. There are also a wide range of capabilities of the software to allow for specific work instruction, safety procedures and any other pertinent data in the work order produced by the software. Finally, CMMS software can also produce management reports so that the status of maintenance activities can be rapidly assessed and utilized for work planning purposes.

CCWA convenes weekly meetings in which CMMS management reports are used to plan the workweek. Supervisors of each department attend, and work is coordinated among the departments, as needed.

The most important part of a maintenance program is the use of highly qualified and skilled staff. CCWA implements its maintenance program through four primary departments: (1) Instrumentation/Electrical/Network, (2) Distribution, (3) Treatment Operations and (4) Maintenance. Each department is staffed with employees that are qualified and skilled for the work they are responsible for. In addition, each department has a training plan to maintain and enhance the knowledge and skill of each employee.

8.2.2 Condition Assessment

Beyond routine maintenance, CCWA implements a variety of assessment programs to determine the performance of assets to plan for refurbishment or replacement. The programs currently in place at CCWA include the following:

- **Cathodic Protection Program**. The pipeline is protected from corrosion by an impressed current cathodic protection (CP) system. This system consists of a series of rectifiers that are electrically connected to the pipe. The rectifiers are also electrically connected to a nearby deep-bed anode. This

arrangement creates conditions where the pipeline is protected from corrosion while the deep-bed anode is corroded instead.

The operation of the CP system must be routinely assessed to ensure that the cathodic protection remains within its protective range. The assessment of the CP system function includes monitoring of the electrical potential created by the CP system at fixed testing stations located along the pipeline route as well as close interval survey where CCWA staff walks directly above the pipeline to measure the electrical potential. In addition, where needed, special cathodic investigations are carried out.

Since CP systems only protect the exterior of the pipeline, additional cathodic protection is needed to protect the interior of the pipeline. The pipeline has a mortar lining, which is designed to provide internal cathodic protection. To monitor the effectiveness of the lining, CCWA conducts annual internal inspections of selected sections of the pipeline to check the physical condition of the motor lining. The internal inspections are performed during the annual DWR maintenance shutdown, typically scheduled for two to four weeks in the fall of each calendar year. The sections of pipeline that are inspected rotate from year to year.

Finally, the chemistry of the water in the pipeline is sampled and tested weekly to determine if conditions exist that would facilitate degradation of the mortar lining of the pipe. The water samples are analyzed for the Calcium Carbonate Precipitation Potential and the Langelier Index. These indices will indicate if calcium carbonate will be likely to precipitate onto the walls of the pipe or not. A calcium carbonate precipitation on the pipe interior walls will assist with prevention of corrosion of the metal pipe.

- **Leak Detection Program**. As discussed in Section 7.3.4, CCWA implements a program to detect leakage from the pipeline. In short, the program includes hydro-static testing of pipeline segments during winter shutdown, pipeline Right-of-Way inspections for evidence of leakage, analysis of flow measurements into and out of the pipeline and internal pipeline inspections. The locations of leaks will be identified in the CCWA CMMS system.

- **Winter Preparation Inspection Program**. The pipeline is 122 miles long and passes through a wide variety of terrain. Along the pipeline alignment, there are certain locations that are at a higher risk of erosional damage from heavy winter storms. To assess the erosion control systems put into place at these locations, annual winter preparation inspections are conducted, as well as post-storm inspections.

  The inspections will identify drainage area, concentrated flow paths of storm water run-off, condition of drainage facilities, if present, and the extent of damage, if present. If the erosion control features require service or repair, they will be serviced prior to the storm event.

- **Valve Exercise/Valve Vault Assessments**. Every year, all valve on the pipeline will be inspected and fully exercised through fulling opening and closing each valve. In addition, the condition of the concrete vaults will be assessed, along with the area immediately surrounding the vault. Standardized forms and common descriptive terms are used to document the condition of the valves, associated vaults and immediate area surrounding the vault.

- **Electric Motors and Pumps Assessments**. All electric motors and pumps are assessed as follows: (1) monthly vibration monitoring, (2) annual integrity testing of the electric motor winding insulation, (3) annual wire-to-wire efficiency testing, (4) annual infrared camera inspections of motor control centers and switchgear, and (5) at reinstallation or as needed, a mechanical check of shaft alignment between motor and pump as well as verification of pump clearance specifications.

- **Major Facilities Assessment Program**. All major structures and facilities are assessed on an annual basis. CCWA conducts the following assessments: (1) pavement assessments, (2) structure paint assessments, (3) concrete assessments, (4) fencing/gates/locks/signage assessment and (5) assessment of the condition of miscellaneous appurtenances. CCWA receives training on assessment methods to ensure consistent assessments and the use of common nomenclature of conditions.

  In addition to assessments, specialized vendors are also utilized by CCWA to evaluate the conditions of CCWA assets. These specialized vendors include: (1) licensed land surveyors to conduct the biennial monument survey of the pipeline seismic joint, which crosses the San Andreas Fault, (2) potable water divers for the five-year internal tank inspection and cleaning, and (3) structural engineers for assessments of selected structure, as needed.

8.2.3 Capital Improvement Program

As the various facilities and systems that are operated and maintained by CCWA ages, there will be a need for projects to replace, refurbish and improve those facilities and systems. Not only will the number of these kinds of project increase but their magnitude in both costs and potential impact on operations will increase as well. In addition, the CCWA Board of Directors may find that CCWA facilities can be improved or modified to provide addition benefits to CCWA Participants. Consequently, there is a need to carefully consider what specific projects are required or desired by the CCWA Board of Directors and to plan and schedule their implementation. The project identification, planning, prioritization, and scheduling steps are the basic steps of preparing a formal Capital Improvement Program (CIP).

Another important purpose of a formal CIP is that it provides a format in which to communicate to the CCWA Board of Directors a more comprehensive long-range plan for CCWA system operation and development. The current method for presenting projects to the CCWA Board of Directors is through the annual budgeting process. Historically, all projects are funded on a current year basis and are included in the agency's draft budget, which is submitted to the CCWA Board of Directors for approval. This process does not provide a full view of multi-year projects nor does it provide a definitive long-term plan. A formal CIP is needed to adequately communicate to the CCWA Board Directors the ongoing work of careful planning and prioritizing of projects.

CCWA is moving forward with developing a formal CIP through retaining the services of an experienced engineering consultant to assist CCWA staff. As with all CIPs, the basic elements will include the following

- Identification of Projects. Since the purpose of the CIP is to communication the long-term development plans for CCWA, it is important to identify the size of the projects to highlight. For the purposes of initial evaluation, CCWA will use $75,000 as the threshold level in which to include a project in the CIP. The Board of Directors may decide to increase or reduce this threshold level

  In terms of identifying projects, there are two kinds of projects: (1) projects identified through routine facility assessments and (2) projects that improve the CCWA facilities that provided additional benefits to CCWA Participants, such as expanding the
  Polonio Pass Water Treatment Plant.
  .

- Identify Funding for Projects. All funding of projects occurs through the annual budgeting process for the CCWA operation. However, for large projects, the Board of Directors may decide to pursue grant funding opportunities. Since applying for grants is a project and may require an extended timeframe to secure a grant, this may be the first step in developing a project.

- Budgeting Project. A formal CIP will allow the Board of Directors to fully consider the costs and schedule of a multi-year project. In addition, annual updates of the CIP will allow updates to project costs estimates and other important updates for the Board of Directors to consider. This will improve the current method of submitting projects on a current year budget basis only.

- Implementing Projects. A standard project management approach will be utilized in organizing and implementing projects. Every project will be described, in terms of cost and schedule, as a multi-phased project.

CCWA, completed a system capacity study in 2025. This study helped verify previous capacity estimates, and showed that additional capacity may be available on a second priority basis. For more information, refer to the Coastal Branch Available Capacity Study.

9 References

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CENTRAL COAST WATER AUTHORITY
URBAN WATER MANAGEMENT PLAN

APPENDIX A – DWR UWMP CHECKLIST

Appendix I: UWMP Checklist 2025

Retail	Wholesale	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2025 UWMP Location
x	x	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	Chapter 1
x	x	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	Lay Description at the beginning of the UWMP
x	x	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
x	n/a	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	N/A
x	x	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	N/A

Retail	Wholesale	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2025 UWMP Location
x	x	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	Section 2
x	x	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	Section 2.4- 2.5
x	x	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	Section 2.4- 2.5
x	n/a	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	N/A
n/a	x	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	Section 2

Retail	Wholesale	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2025 UWMP Location
x	x	Chapter 3.0	10631(a)	Describe the Supplier service area.	System description	Section 3.1
x	x	Section 3.3	10631(a)	Describe the climate of the Supplier's service area.	System description	Section 3.2
x	x	Section 3.4.1	10631(a)	Provide the current and projected service area populations for 2030, 2035, 2040, 2045 and optionally 2050.	System description	Section 3.3
x	x	Section 3.4.2	10631(a)	Describe other social, economic, and demographic factors affecting the Supplier's water management planning.	System description	Section 3.4
x	x	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	Section 4
x	Optional	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	Section 4.3
x	Optional	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	Section 4.4
x	n/a	Section 4.3.2	10631(d)(3)(C)	Retail Suppliers shall provide data to show the distribution loss standards were met.	System water use	N/A
x	n/a	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	N/A

Retail	Wholesale	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2025 UWMP Location
x	n/a	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	N/A
x	n/a	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	N/A
x	n/a	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	N/A
x	x	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	Section 6.6
n/a	x	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	Appendix H & Section 6.5

Retail	Wholesale	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2025 UWMP Location
x	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	N/A
x	x	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	Chapter 5
x	x	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	Section 6.1- 6.2& 6.6

Retail	Wholesale	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2025 UWMP Location
x	x	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	Section 5.7
x	x	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
x	x	Section 6.2.2	10631(b)(4)(B)	Describe the groundwater basin.	System supplies	N/A
x	x	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
x	x	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

Retail	Wholesale	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2025 UWMP Location
x	x	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
x	x	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
x	x	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	N/A
x	x	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	Section 5.3
x	x	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	Section 5.5
x	n/a	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)	N/A

Retail	Wholesale	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2025 UWMP Location
x	x	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)	N/A
x	x	Section 6.2.5	10633(c)	Describe the recycled water currently being used in the Supplier's service area.	System supplies (recycled water)	Section 5.7
x	x	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)	N/A
x	x	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)	N/A
x	x	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)	N/A
x	x	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
x	x	Section 6.2.6	10631(g)	Describe desalinated water project opportunities for long-term supply.	System supplies	Section 5.6

Retail	Wholesale	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2025 UWMP Location
x	x	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	Section 5.8
x	x	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	Section 5.9
x		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	Section 6.3
x	x	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	Section 6.1
x	x	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	Section 6.5

Retail	Wholesale	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2025 UWMP Location
x	x	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	Section 6.5
x	x	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	Section 6.5
x	x	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	Section 6.1
x	x	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	Section 6.1
x	x	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	Section 6.6
x	x	Chapter 8	10632(a)	Provide a water shortage contingency plan (WSCP) with specified elements below.	Water shortage contingency planning	Appendix H
x	x	Chapter 8	10632(a)(1)	Provide an analysis of water supply reliability (from Guidebook Chapter 7) in the WSCP.	Water shortage contingency planning	Appendix H

Retail	Wholesale	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2025 UWMP Location
x	x	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	Appendix H
x	x	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	Appendix H
x	x	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	Appendix H
x	x	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	N/A
x	x	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	Appendix H

Retail	Wholesale	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2025 UWMP Location
x	x	Section 8.4	10632(a)(4)(B)	Specify locally appropriate demand reduction actions to adequately respond to shortages.	Water shortage contingency planning	Appendix H
x	x	Section 8.4	10632(a)(4)(C)	Specify locally appropriate operational changes.	Water shortage contingency planning	Appendix H
x	x	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	Appendix H
x	x	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	Appendix H
x	x	Section 8.4.6	10632.5	The UWMP shall include a seismic risk assessment and mitigation plan.	Water shortage contingency plan	Appendix H
x	x	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	Appendix H
x	x	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	Appendix H
x	n/a	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

Retail	Wholesale	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2025 UWMP Location
x	x	Section 8.7	10632(a)(7)(A)	Describe the legal authority that empowers the Supplier to enforce shortage response actions.	Water shortage contingency planning	Appendix H
x	x	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	Appendix H
x	x	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	Appendix H
x	x	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	Appendix H
x	x	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	Appendix H
x	n/a	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

Retail	Wholesale	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2025 UWMP Location
x	n/a	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
x	x	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	Appendix H
x	n/a	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
x	x	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	Section 2.5
x	n/a	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

Retail	Wholesale	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2025 UWMP Location
n/a	x	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	Section 8
x	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
x	x	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	Section 2.4- 2.5
x	x	Section 10.4	10621(f)	Each urban water Supplier shall update and submit its 2025 plan to DWR by July 1, 2026.	Plan adoption, submittal, and implementation	Section 2.5
x	x	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	Section 2.5
x	x	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	Section 2.5

Retail	Wholesale	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2025 UWMP Location
x	x	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	Section 2.5
x	x	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	Section 2.5
x	x	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	Section 2.5
x	x	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	Section 2.5
x	x	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	Section 2.5
x	x	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	Section 2.5
x	x	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	Section 2.5

Retail	Wholesale	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2025 UWMP Location
x	x	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

CENTRAL COAST WATER AUTHORITY
URBAN WATER MANAGEMENT PLAN

APPENDIX B – DWR STANDARDIZED UWMP TABLES

Submittal Table 2-2: Plan Identification		
Select One	**Type of Plan**	**Name of Regional Alliance or RUWMP** (Drop Down List)
☑	**Individual UWMP**	
	If Water Supplier is also a member of a SB X7-7 Regional Alliance, select name from the drop-down.	
☐	**Regional Urban Water Management Plan (RUWMP)**	
	If Supplier selected RUWMP, select name from the drop-down.	
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)	
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 Wholesale: Water Supplier Information Exchange Water Code Section 10631(h)	
☑	Check the box if the Supplier has informed more than 10 other water suppliers of water supplies available. **Completion of the table below is optional. If not completed, include a list of the water suppliers that were informed.**
	Provide page number for location of the list.
☐	Check the box if the Supplier has informed 10 or fewer other water suppliers of water supplies available. **Complete the table below.**

Water Supplier Name
Add additional rows as needed
City of Buellton
Carpinteria Valley Water District
Goleta Water District
City of Guadalupe
La Cumbre Mutual Water Company
Montecito Water District
Morehart Land Company
City of Santa Barbara
Raytheon Company
City of Santa Maria
Santa Ynez River Water Conservation District, Improvement District #1
Golden State Water Company
Vandenberg Air Force Base
Solvang
NOTES: CCWA Participants

10631(h) ... The wholesale agency shall provide information to the urban water supplier for

Submittal Table 3-1 Wholesale: Population - Current and Projected Water Code Section 10631(a)						
Population Served	2025	2030	2035	2040	2045	2050(opt)
	381,828	391,622	401,677	411,686	415,247	418,624
NOTES: Numbers are based on 2019 data from agency Annual Water System Reports. Future population values estimated based on growth rates provided in Santa Barbara County Association of Governments Regional Growth Forecast 2050 released in January 2019.						

CWC 10631(a) describe the current and projected population of the service area…

Optional Submittal Table 4-1 Wholesale: Total Uses for Potable and Non-Potable Water — Actual 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		**Potable or Non-Potable** (OPTIONAL) Drop down list	Volume (AF)
Add additional rows as needed			
Sales to other agencies	CCWA is a pass through agency.	Drinking Water	12,514
	Water is treated and conveyed to		
	member agencies.		
		Subtotal Potable	0
		Subtotal Non-Potable	0
		Total	12,514
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:			

10631(d) (1) for an urban retail water supplier, quantify to the extent records are available, past and current water use...

Optional Submittal Table 4-2 Wholesale: Total Uses for Potable and Non-Potable Water — Projected Water Code Section 10631(d)(1)							
Use Type		**Projected Water Use** (Report To the Extent that Records are Available)					
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)	**Potable or Non-Potable** (OPTIONAL) Drop down list	**2030 (AF)**	**2035 (AF)**	**2040 (AF)**	**2045 (AF)**	**2050 opt (AF)**
Add additional rows as needed							
Sales to other agencies			24,108	23,198	22,743	21,833	21,833
		Subtotal Potable	0	0	0	0	0
		Subtotal Non-Potable	0	0	0	0	0
		Total	24,108	23,198	22,743	21,833	21,833
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:							

10631(d) (1) for an urban retail water supplier, quantify to the extent records are available, past and current water use...

Submittal Table 6-1 Wholesale: Groundwater Volume Pumped							
☑	Check the box if the Supplier does not pump groundwater.						
☐	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	Potable or Non-Potable (OPTIONAL) Drop down list	Location or Basin Name	2021 (AF)	2022 (AF)	2023 (AF)	2024 (AF)	2025 (AF)
Add additional rows as needed							
		Total	0	0	0	0	0
DWR NOTES:							
NOTES: CCWA is a wholesale agency and does not have a groundwater supply							

10631(4) If groundwater is identified as an existing or planned source of water available to the supplier, all of the following
(C) A detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

Submittal Table 6-3 Wholesale: Wastewater Treatment and Discharge Within Service Area
Water Code Section 10633(b)

☑ Check the box if the Wholesale Supplier neither distributes nor provides supplemental treatment to recycled water. Proceed to the next table.

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**	2025 Volume of Wastewater Received from UWMP Service Area (AF)	Total 2025 Volume of Water Treated (AF)	**2025 Outcomes of Treated Wastewater**										
				Water Recycled Within UWMP Service Area (enter data as applicable)		**Water Recycled Outside of UWMP Service Area** (enter data as applicable)		**Effluent Discharge that is not a Permitted Recycled Water Use** (enter data as applicable)		**Required Discharge for Instream Flow** (enter data as applicable)		**Delivered to Another Entity for Additional Treatment** (enter data as applicable)		
				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.														
Total		0	0		0		0		0		0		0	

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.
IPR: Indirect Potable Reuse would have the treatment level of its end use requirement in the Level of Treatment drop-down.
Additional Guidance: See Appendix M, Section M.21 for detailed guidance on this table.

NOTES:

10633. The plan shall provide, to the extent available, information on recycled water and its potential for use as a water source in the service area of the urban water supplier. ...and shall include all of the following:
(b) A description of the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.

Submittal Table 6-4 Wholesale: Current and Projected Recycled Water Uses
Water Code Section 10633(c),(d),(e)

☑	Check box if recycled water is not used and is not planned for use within the service area of the supplier. The supplier will only complete the column on "Potential Recycled Water Use" and submit an accompanying narrative on the feasibility of that potential recycled water use.

Name(s) of Facility/ies Producing (Treating) the Recycled Water (OPTIONAL) :	
Name of Supplier Operating the Recycled Water Distribution System (OPTIONAL) :	
Volume of Supplemental Water Added in 2025 (OPTIONAL) :	
Source of 2025 Supplemental Water (OPTIONAL) :	

Name of Receiving Supplier or Direct Use by Wholesale Supplier	Potable or Non-Potable (after treatment if treated) (OPTIONAL) Drop down list	Additional Information (as needed)	2025 (AF)	2030 (AF)	2035 (AF)	2040 (AF)	2045 (AF)	2050 (AF)	Potential Recycled Water Use	
									Volume (AF)	Narrative page number (OPTIONAL)
Add additional rows as needed										
		Subtotal Potable	0	0	0	0	0	0	0	
		Subtotal Non-Potable	0	0	0	0	0	0	0	
		Total	0	0	0	0	0	0	0	0

DWR NOTES:
Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3. This table reports the unit of measure selected in Submittal Table 2-3.
Additional Guidance: See Appendix M, Section M.21 for detailed guidance on this table.
Potential recycled water use: a description of the feasibility of these uses must be included in the narrative.
Multiple Producers: If you have multiple recycled water producers, submit a separate table for each.

NOTES:

10633. The plan shall provide, to the extent available, information on recycled water and its potential for use as a water source in the service area of the urban water supplier... and shall include...
(c) A description of the recycled water currently being used in the supplier's service area, including, but not limited to, the type, place, and quantity of use
d) A description and quantification of the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse, groundwater recharge, indirect potable reuse, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.
(e) The projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected pursuant to this subdivision.

Submittal Table 6-5 Wholesale: 2020 UWMP Recycled Water Use Projection Compared to 2025 Actual
Water Code Section 10633(e)

☑	Check the box if recycled water was not used or distributed by the supplier in 2025, nor projected for use or distribution in 2020. Proceed to the next table.

Name of Receiving Supplier or Direct Use by Wholesale Supplier	2020 Projection for 2025 (AF)	2025 Actual Use (AF)
Add additional rows as needed		
Total	0	0

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.
Additional Guidance: See Appendix M, Section M.21 for detailed guidance on this table.

NOTES:

10633. The plan shall provide, to the extent available, information on recycled water and its potential for use as a water source in the serv`ice area of the urban water supplier. The preparation of the plan shall be coordinated with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area, and shall include all of the following: (e) ...a description of the actual use of recycled water in comparison to uses previously projected pursuant to this subdivision

Submittal Table 6-7 Wholesale: 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. Proceed 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.						
	Provide page location of narrative in the UWMP						
Name of Future Projects or Programs	Joint Project with other suppliers?		Additional Description (as needed)	Potable or Non-Potable (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) (AF)
	Drop Down List (yes/no)	If Yes, Supplier Name					
Add additional rows as needed							
Suspended Table A	*Yes*	CCWA Project Participants	Reacquire 12,214 AF of Table A water		2026-2030	Average Year	5,863
Long Term Exchange with SLOCFCWCD	*Yes*	San Luis Obispo County Flood Control and Water Conservation District (SLOCFCWCD)	Long Term Unbalanced Exchange with SLOCFCWCD		2026-2030	Average Year	4,830
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: See Section 5.8 of the UWMP for more details							

10631 (f) Include a description of all water supply projects and water supply programs that may be undertaken by the urban water supplier to meet the total projected water use, as established pursuant to subdivision (a) of Section 10635. The urban water supplier shall include a detailed description of expected future projects and programs that the urban water supplier may implement to increase the amount of the water supply available to the urban water supplier in normal and single-dry water years and for a period of drought lasting five consecutive water years. The description shall identify specific projects and include a description of the increase in water supply that is expected to be available from each project. The description shall include an estimate with regard to the implementation timeline for each project or program.

Submittal Table 6-8 Wholesale: Water Supplies — Actual
Water Code Section 10631(b)

Water Supply	Additional Description (as needed)	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 submittal tool		**Potable or Non-Potable** (after treatment if treated) (OPTIONAL) Drop Down list	Actual Volume (AF)	Total Entitlement (OPTIONAL) See 'DWR Notes' below (AF)
Add additional rows as needed				
Purchased or Imported Water	State Water Project	12,514	Non-Potable	
		Subtotal Potable	0	0
		Subtotal Non-Potable	12,514	0
		Total	12,514	0

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.
Total Entitlement: e.g. Water Right, Groundwater Allocation, Contracted Amount.

NOTES:

10631. A plan shall be adopted in accordance with this chapter that shall do all of the following... (b) Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a), providing supporting and related information

Submittal Table 6-9 Wholesale: 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	**Potable or Non-Potable** (after treatment if treated) (OPTIONAL) Drop Down list	Reasonably Available Volume (AF)	Total Entitlement (OPTIONAL) See 'DWR Notes' below (AF)	Reasonably Available Volume (AF)	Total Entitlement (OPTIONAL) See 'DWR Notes' below (AF)	Reasonably Available Volume (AF)	Total Entitlement (OPTIONAL) See 'DWR Notes' below (AF)	Reasonably Available Volume (AF)	Total Entitlement (OPTIONAL) See 'DWR Notes' below (AF)	Reasonably Available Volume (AF)	Total Entitlement (OPTIONAL) See 'DWR Notes' below (AF)
Add additional rows as needed												
Purchased or Imported Water			24,108		23,198		22,743		21,833		21,833	
Subtotal Potable			0	0	0	0	0	0	0	0	0	0
Subtotal Non-Potable			0	0	0	0	0	0	0	0	0	0
Total			24,108	0	23,198	0	22,743	0	21,833	0	21,833	0

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 a Submittal Table 2-3.

Total Entitlement: e.g. Water Right, Groundwater Allocation, Contracted Amount.

NOTES:

10631. A plan shall be adopted in accordance with this chapter that shall do all of the following... (b) Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year

Submittal Table 7-2 Wholesale: Normal Year Supply and Use Comparison Water Code Section 10635 (a)					
	2030 (AF)	**2035 (AF)**	**2040 (AF)**	**2045 (AF)**	**2050 (AF)**
Supply totals (autofill from Submittal Table 6-9 W)	24,108	23,198	22,743	21,833	21,833
Use totals (see OPTIONAL Submittal Table 4-2 W)					
Surplus/(shortfall)	24,108	23,198	22,743	21,833	21,833
OPTIONAL Planned WSCP Actions					
WSCP - supply augmentation benefit					
WSCP - use reduction savings benefit					
Revised Surplus/(shortfall)					
DWR NOTES : Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3.					
NOTES:					

Submittal Table 7-3 Wholesale: Single Dry Year Supply and Use Comparison Water Code Section 10635(a)					
	2030 (AF)	**2035 (AF)**	**2040 (AF)**	**2045 (AF)**	**2050 (AF)**
Supply totals	2,274	1,819	1,365	910	910
Use totals	2,274	1,819	1,365	910	910
Surplus/(shortfall)	0	0	0	0	0
OPTIONAL Planned WSCP Actions					
WSCP - supply augmentation benefit					
WSCP - use reduction savings benefit					
Revised Surplus/(shortfall)					
DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3.					
NOTES:					

Submittal Table 7-4 Wholesale: Multiple Dry Years Supply and Use Comparison Water Code Section 10635(a)						
		2030 (AF)	2035 (AF)	2040 (AF)	2045 (AF)	2050 (AF)
First year	Supply totals	6,823	6,823	6,823	6,368	6,368
	Use totals	6,823	6,823	6,823	6,368	6,368
	Surplus/(shortfall)	0	0	0	0	0
	OPTIONAL Planned WSCP Actions					
	WSCP - supply augmentation benefit					
	WSCP - use reduction savings benefit					
	Revised Surplus/(shortfall)					
Second year	Supply totals	6,823	6,823	6,823	6,368	6,368
	Use totals	6,823	6,823	6,823	6,368	6,368
	Surplus/(shortfall)	0	0	0	0	0
	OPTIONAL Planned WSCP Actions					
	WSCP - supply augmentation benefit					
	WSCP - use reduction savings benefit					
	Revised Surplus/(shortfall)					
Third year	Supply totals	6,823	6,823	6,823	6,368	6,368
	Use totals	6,823	6,823	6,823	6,368	6,368
	Surplus/(shortfall)	0	0	0	0	0
	OPTIONAL Planned WSCP Actions					
	WSCP - supply augmentation benefit					
	WSCP - use reduction savings benefit					
	Revised Surplus/(shortfall)					
Fourth year	Supply totals	6,823	6,823	6,823	6,368	6,368
	Use totals	6,823	6,823	6,823	6,368	6,368
	Surplus/(shortfall)	0	0	0	0	0
	OPTIONAL Planned WSCP Actions					
	WSCP - supply augmentation benefit					
	WSCP - use reduction savings benefit					
	Revised Surplus/(shortfall)					
Fifth year	Supply totals	6,823	6,823	6,823	6,368	6,368
	Use totals	6,823	6,823	6,823	6,368	6,368
	Surplus/(shortfall)	0	0	0	0	0
	OPTIONAL Planned WSCP Actions					
	WSCP - supply augmentation benefit					
	WSCP - use reduction savings benefit					
	Revised Surplus/(shortfall)					
DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3.						
NOTES:						

Submittal Table 7-5 Wholesale: Five-Year Drought Risk Assessment Water Code Section 10635(b)(3)	
2026	**Total**
Total Water Use (AF)	6,823
Total Supplies (AF)	6,823
Surplus/Shortfall w/o WSCP Action	0
OPTIONAL Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit (AF)	
WSCP - use reduction savings benefit (AF)	
Revised Surplus/(shortfall)	
2027	**Total**
Total Water Use (AF)	6,823
Total Supplies (AF)	6,823
Surplus/Shortfall w/o WSCP Action	0
OPTIONAL Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit (AF)	
WSCP - use reduction savings benefit (AF)	
Revised Surplus/(shortfall)	
2028	**Total**
Total Water Use (AF)	6,823
Total Supplies (AF)	6,823
Surplus/Shortfall w/o WSCP Action	0
OPTIONAL Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit (AF)	
WSCP - use reduction savings benefit (AF)	
Revised Surplus/(shortfall)	
2029	**Total**
Total Water Use (AF)	6,823
Total Supplies (AF)	6,823
Surplus/Shortfall w/o WSCP Action	0
OPTIONAL Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit (AF)	
WSCP - use reduction savings benefit (AF)	
Revised Surplus/(shortfall)	
2030	**Total**
Total Water Use (AF)	6,823
Total Supplies (AF)	6,823
Surplus/Shortfall w/o WSCP Action	0
OPTIONAL Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit (AF)	
WSCP - use reduction savings benefit (AF)	
Revised Surplus/(shortfall)	
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: Not applicable to CCWA. See UWMP Water Shortage Contingency Plan for more details			

Submittal Table 8-2 Wholesale: Supply Augmentation and Other Actions Water Code Section 10632(a)(4)(A),(C) and (E)				
No	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** These are the only categories that will be accepted by the WUEdata online submittal tool	How much is this going to reduce the shortage gap?		Additional Explanation or Reference (OPTIONAL)
		Volume or Percentage Drop down	Shortage Gap Reduction Value (May be a range) (AF)	
Add additional rows as needed				
All	Transfers			Varies based on availability and demand from member agencies
All	Exchanges			Varies based on availability and demand from member agencies
All	Other Purchases			Varies based on availability and demand from member agencies
DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3.				
NOTES:				

10632(a)(4) Shortage response actions that align with the defined shortage levels and include, at a minimum, all of the following:

(A) Locally appropriate supply augmentation actions.

(C) Locally appropriate operational changes.

(E) For each action, an estimate of the extent to which the gap between supplies and demand will be reduced by implementation of the action.

Submittal Table 8-3 Wholesale: Demand Reduction Actions Water Code Section 10632(a)(4)(B) and (E)				
	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 shortage gap?		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: CCWA is a wholesale water agency and not reponsbile for demand management measures. See the Water Shortage Contingency Plan for more details				

10632(a)(4) Shortage response actions that align with the defined shortage levels and include, at a minimum, all of the following:
(B) Locally appropriate demand reduction actions to adequately respond to shortages.
(E) For each action, an estimate of the extent to which the gap between supplies and demand will be reduced by implementation of the action.

Submittal Table 10-1 Wholesale: Notification to Cities and Counties Water Code Section 10621(b) and 10642		
☑	Check the box if the Supplier has notified more than 10 cities or counties. **Completion of the table below is not required. Provide a separate list of the cities and counties that were notified.**	
	Provide the page or location of this list in the UWMP.	
☐	Check the box if the Supplier has notified 10 or fewer cities or counties. **Complete the table below.**	
City Name	60 Day Notice **Drop Down (yes/no)**	Notice of Public Hearing **Drop Down (yes/no)**
Add additional rows as needed		
Multiple, See Section 2 of UWMP	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		
Santa Barbara County	Yes	Yes
San Luis Obispo County	Yes	Yes
NOTES:		

CWC 10621 (b)Notify at least 60 days prior to the public hearing any city or county within which the supplier provides water that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan.

CWC 10642 The water supplier is to provide the time and place of the hearing to any city or county within which the supplier provides water.

CENTRAL COAST WATER AUTHORITY
URBAN WATER MANAGEMENT PLAN

APPENDIX C – NOTICES AND PUBLIC OUTREACH MATERIALS

February 26, 2026

Subject: 60-Day Notification for Preparation of the 2025 Urban Water Management Plan for the Central Coast Water Authority

Santa Barbara and San Luis Obispo County Stakeholders:

The Central Coast Water Authority (CCWA) is in the process of updating its Urban Water Management Plan, as required under the Urban Water Management Planning Act (Act). The deadline for completing and adopting the final Urban Water Management Plan is July 1, 2026.

Water Code, Section 10621(b) of the Act requires CCWA to provide a 60-day advance notice regarding the preparation of its 2025 Urban Water Management Plan (Plan). This notice must be provided to any city, county or water agency that receives water from the Central Coast Water Authority. This letter constitutes CCWA's 60-day notice.

When a draft Plan is available for public review, a copy will be posted on our website (www.ccwa.com). A copy of the draft Plan will also be available for review at our office in Buellton, California, once available to the public.

A public hearing to consider adoption of the final Plan is expected to be held in June 2026. The hearing will take place at the CCWA Board room, located at 255 Industrial Way, Buellton, CA 93427-9565. A notice will be issued specifying the date, time and forum in advance of the hearing, as required.

If you have any questions or would like to be involved in the development of the Plan, please call CCWA's office at (805) 688-2292.

Sincerely,

David R. Beard
Deputy Director of Operations and Engineering

Delivered Via Email

255 Industrial Way
Buellton, CA 93427
(805) 688-2292
Fax (805) 686-4700
www.ccwa.com

CENTRAL COAST WATER AUTHORITY
URBAN WATER MANAGEMENT PLAN

APPENDIX D – CCWA BOARD RESOLUTION

The final resolution for adopting the UWMP will be placed here

CENTRAL COAST WATER AUTHORITY
URBAN WATER MANAGEMENT PLAN

APPENDIX E – SERVICE AREA MAPS OF CCWA PARTICIPANTS

WATER SOURCES AND DISTRIBUTION IN SANTA BARBARA COUNTY

Department of Public Works
County of Santa Barbara

San Luis Obispo County

San Luis Obispo County

Santa Barbara County

Ventura County

Pacific Ocean

Cuyama River

Santa Maria River

Sisquoc River

Santa Ynez River

Santa Ynez River

HWY 101

HWY 101

HWY 101

HWY 246

State HWY 154

STATE WATER PIPELINE

STATE WATER PIPELINE

TWITCHELL RESERVOIR

TWITCHELL DAM

BRADBURY DAM

CACHUMA RESERVOIR

GIBRALTAR DAM

GIBRALTAR RESERVOIR

JUNCAL DAM

JAMESON RESERVOIR

TECOLOTE TUNNEL

MISSION TUNNEL

DOULTON TUNNEL

SOUTH COAST CONDUIT

Guadalupe

Santa Maria

GSWC

GSWC

GSWC

GSWC

Casmalia CSD

Vandenberg Air Force Base

Vandenberg Village CSD

Mission Hills CSD

Lompoc

Los Alamos CSD

Buellton

Solvang

Santa Ynez R WCD ID1

Goleta WD

La Cumbre Mutual Water Co

City of Santa Barbara Water Service Area

Montecito WD

Carpinteria Valley WD

Cuyama CSD

Legend

- Dams
- SWP Turnout
- City Boundary Line
- State Water Project Pipeline
- Rivers
- South Coast Conduit
- Tunnel
- Roads
- Highways Freeways
- Groundwater Basins
- Lakes & Reservoirs
- Casmalia CSD
- City of Santa Barbara Water Service Area
- County boundary
- Santa Maria
- Vandenberg Air Force Base
- La Cumbre Mutual Water Co
- Goleta WD
- Buellton
- Carpinteria Valley WD
- Cuyama CSD
- Guadalupe
- Lompoc
- Los Alamos CSD
- Mission Hills CSD
- Montecito WD
- Vandenberg Village CSD
- Golden State Water Co (GSWC)
- Solvang
- Santa Ynez R WCD ID1
- Pacific Ocean

N
W E
S

Miles
0 0.5 1 2 3 4

Coordinate System: State Plane California Zone V NAD 1983

WATER SOURCES AND DISTRIBUTION IN SANTA BARBARA COUNTY

Santa Barbara County, California

PUBLIC WORKS
ENTERPRISE GIS

Prepared By:
O. Reedy

Compiled by the Public Works Enterprise GIS in October 2012

Santa Barbara Flood Control and Water Conservation District

Compiled by the Office of the County Surveyor in September of 2007

Legend

- Parcel Boundary
- Annexation
- Detachment
- Formation

N

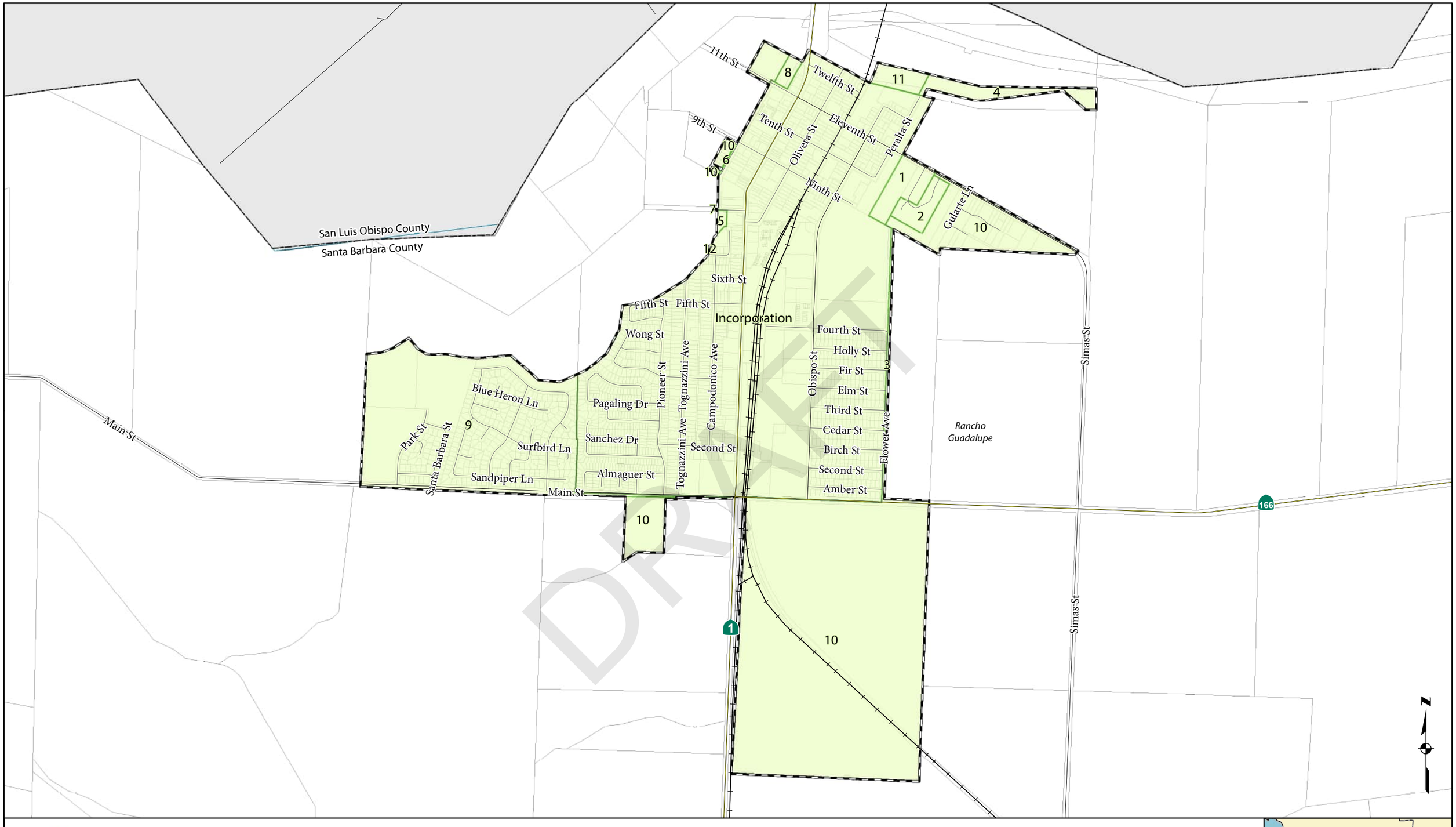
W E

S

GRAPHIC SCALE

0 2.5 5 10 15 20

Miles



City of Guadalupe

Compiled by the Office of the County Surveyor in December of 2010. Incorporated 8/3/1946 by County Res. 6769. Last Action: Gowing Reorg., LAFCO 07-10, 11/13/2007. Sphere: 11/4/2010. See boundary activity table at http://www.countyofsb.org/pwd/pwsurveyor.aspx?id=5118

GRAPHIC SCALE

0 0.125 0.25 0.5

Miles

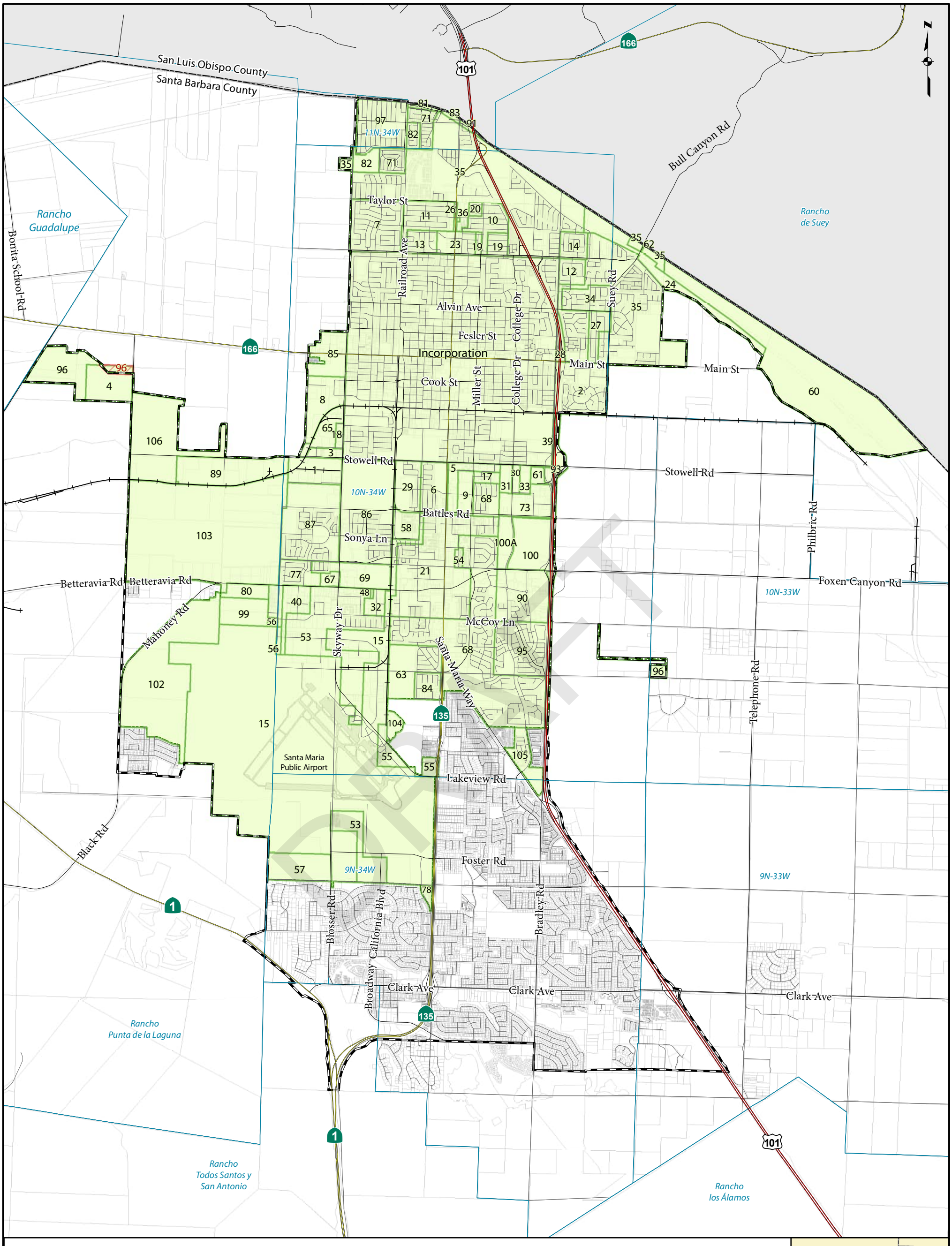
Legend

- Freeways
- Highways
- Roads
- Railroads
- Parcels
- Sections
- Ranchos and Townships
- County Boundary
- City Boundary
- Sphere of Influence
- Annexation
- Incorporation
- Detachment

City of Guadalupe Boundary Activity

See map at http://www.countyofsb.org/pwd/pwsurveyor.aspx?id=5118

InternalNo	Title	Type	Effective	County_Res	City_Ord	City_Res	City_Date	LAFCO_Res	LAFCO_Date	Instrument	Recorded
0	Incorporation of the City of Guadalupe	Formation	8/3/1946	6769						32/177-179	
1	Ordinance No. 45	Annexation	3/19/1951		45		3/19/1951				
2	Ordinance No. 55	Annexation	9/24/1956		55						
3	Annexation No. 3	Annexation	5/31/1960								
4	Annexation No. 4	Annexation	1/26/1961		71		12/27/1960				
5	Annexation No. 5	Annexation	8/7/1963		88	6769	7/8/1963				
6	Pioneer Street Annexaton No. 1	Annexation	12/5/1974			432		1974-385	12/5/1974		
7	Sewer Lift Station	Annexation	3/31/1975			433	2/7/1975	1974-386			
8	El Club Comote Civico Mexicano de Guadalupe	Annexation	3/28/1980			554		1979-533	4/2/1982	1980-0012905	3/28/1980
9	Annexation No. 6, Wastewater Treatment Plant	Annexation	11/29/1988		88-846			1988-774	11/18/1988	1988-0076520	11/29/1988
10	DJ Farms Reorganization	Annexation	6/5/1995			95-05	5/11/1995	1993-14	5/23/1995	1995-0030210	6/8/1995
11	Jasco Reorganization	Annexation	8/5/2004					2003-11	9/4/2004	2004-0111676	10/20/2004
12	Gowing Reorganization	Annexation	11/13/2007					2007-10	11/13/2007	2007-0078906	11/13/2007
	City of Guadalupe Sphere of Influence	SOI	11/4/2010						11/4/2010		



City of Santa Maria

Compiled by the Office of the County Surveyor in December of 2011.
Incorporated 9/18/1905, Board of Supervisors Minute Book J/ 150-152.
Last Action: 106, Wastewater Treatment Plant Reorg., LAFCO 07-08, 10/5/2007.
Sphere: 11/4/2010. See Boundary Activity Table at
http://www.countyofsb.org/pwd/pwsurveyor.aspx?id=5118

A missing number means no completion information was found for a proposed boundary change.

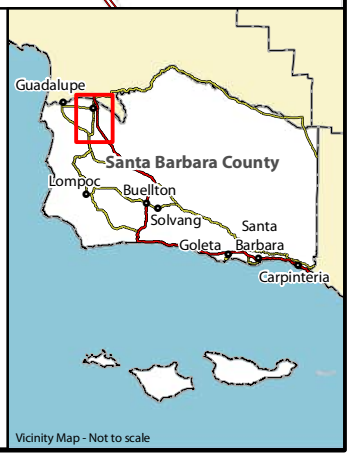
Legend

- Freeways
- Highways
- Roads
- Railroads
- Parcels
- Sections
- Ranchos and Townships
- County Boundary
- City Boundary
- Sphere of Influence
- Annexation
- Incorporation
- Detachment

GRAPHIC SCALE

0 0.25 0.5 1 1.5 2

Miles



Vicinity Map - Not to scale

City of Santa Maria Boundary Activity

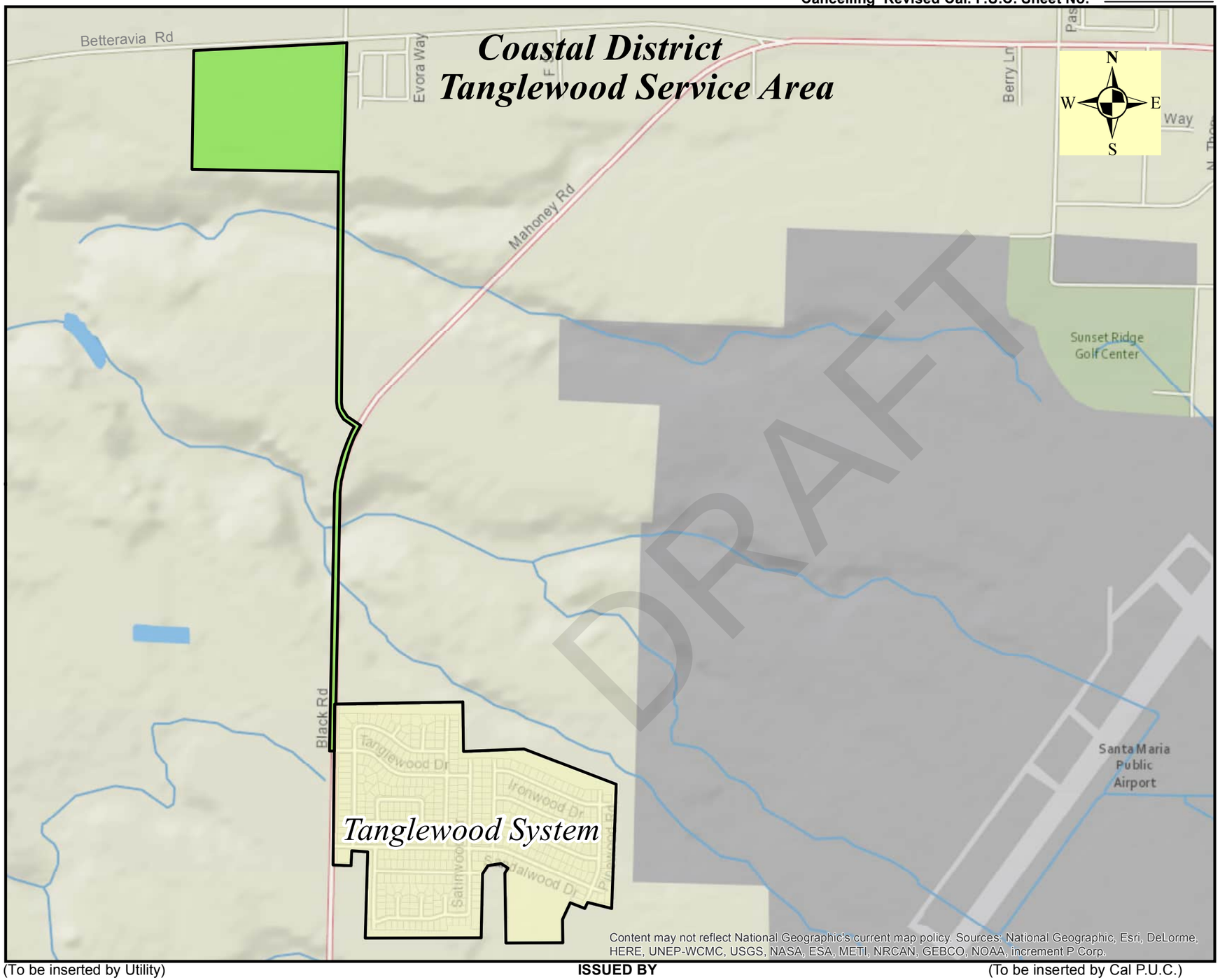
See map at http://www.countyofsb.org/pwd/pwsurveyor.aspx?id=5118

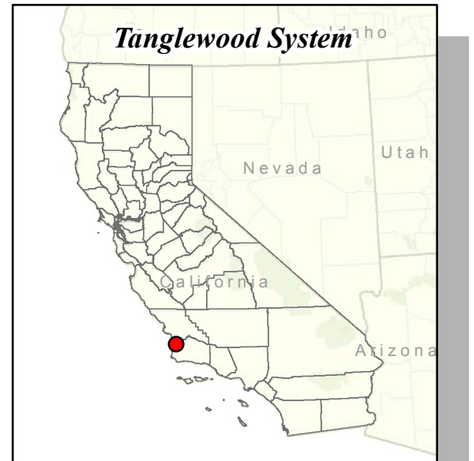
InternalNo	Title	Type	Effective	City_Ord	City_Res	City_Date	County_Res	LAFCO_Res	LAFCO_Date	Instrument	Recorded	State_Date
0	Incorporation of the City of Santa Maria	Formation	9/18/1905							BOS Min. J 150		
1	S. M. Freezer	Annexation	7/16/1956	340		7/16/1956						
2	La Brea Securities	Annexation	7/15/1957	354		7/15/1957						
3	Driver Co.	Annexation	3/15/1958	368		3/15/1958						
4	Sewer Plant	Annexation	3/17/1958				17704					
5	Enos	Annexation	10/24/1958	378		10/24/1958						
6	Porter (Stowell)	Annexation	11/5/1958	382		11/5/1958						
7	Ray Hommes Dev. Co. (Donovan)	Annexation	3/2/1959	384		3/2/1959						
8	Diani Hanson	Annexation	4/6/1959	389		4/6/1959						
9	Enos	Annexation	2/16/1959	390		2/16/1959						
10	Thompson (Holcomb)	Annexation	2/16/1959	392		2/16/1959						
11	Maria Vista (Pasquini)	Annexation	3/23/1959	396		3/23/1959						
12	Pace - Paige	Annexation	1/16/1961	413		1/16/1961						
13	EB Taylor Estate (No Park.)	Annexation	7/27/1959	405		7/27/1959						
14	Porter - Ruiz	Annexation	4/4/1960	428		4/4/1960						
15	Airport	Annexation	7/18/1960	445		7/18/1960						
17	Enos	Annexation	3/7/1960	431		3/7/1960						
18	Mahoney	Annexation	8/15/1960	436		8/15/1960						
19	Cortez Land and Mortgage Co.	Annexation	2/6/1961	463		2/6/1961						
20	Thompson Associates	Annexation	7/17/1961	472		7/17/1961						
21	Newlove	Annexation	9/18/1961	492		9/18/1961						
23	Mayer Tract	Annexation	9/4/1962	546		9/4/1962						
24	City Dump	Annexation	8/7/1961	481		8/7/1961						
26	Pasquini	Annexation	1/22/1962	510		1/22/1962						
27	Cossa (East Gate)	Annexation	11/20/1961	502		11/20/1961						
28	Freeway R/W (Sec. 12)	Annexation	3/5/1962	513		3/5/1962						
29	Bognuda	Annexation	4/24/1962	517		4/24/1962						
30	S. Counties Gas Co.	Annexation	4/2/1962	518		4/2/1962						
31	Cemetery Association	Annexation	7/16/1962	523		7/16/1962						
32	McCoy	Annexation	6/4/1962	530		6/4/1962						
33	South Side of E. Stowell Rd. and Vicinity	Annexation	6/18/1962	532		6/18/1962						
34	Machado	Annexation	8/20/1962	533		8/20/1962						
35	Suey Iliff	Annexation	4/1/1963	564		4/1/1963						
36	Theo Holcomb	Annexation	7/24/1962	538		7/24/1962						
39	South Bradley Road (Jones to Stowell)	Annexation	11/5/1962	551		11/5/1962						
40	Bob Roberts and Aguirre	Annexation	1/21/1963	554		1/21/1963						
48	Petrolane Gas	Annexation	1/17/1964	589		1/17/1964						
53	Airport (SMPA2), et al	Annexation	3/31/1967	659		3/31/1967		17	6/23/1966			
54	Viking AFCO (Iverson)	Annexation	8/1/1966		2442	8/1/1966						

InternalNo	Title	Type	Effective	City_Ord	City_Res	City_Date	County_Res	LAFCO_Res	LAFCO_Date	Instrument	Recorded	State_Date
55	Skyway Drive Annex (SMPA)	Annexation	12/17/1976	1976-879		11/2/1976				1976-0054319	12/17/1976	
56	"A" Street	Annexation	12/27/1977		1977-444	8/2/1977		1976-445		1977-0063359	12/27/1977	
57	Foster Road	Annexation	12/27/1977		1977-4446	12/6/1977		1977-469	6/1/1977	1977-0063357	12/27/1977	
58	Sander Mobile Home Park	Annexation	9/9/1970	746		9/9/1970		1970-205	7/9/1970			
60	Suey Disposal Site	Annexation	11/20/1972		3395	11/20/1972		1972-319	10/26/1972			
61	Columbia Broadcasting System	Annexation	11/20/1972		3383	11/20/1972		310	9/28/1972			
62	Suey Crossing	Annexation	11/11/1977	1977-907		6/7/1977		1976-412	1/8/1976	1977-0056586	11/11/1977	12/12/1977
63	Country Club	Annexation	5/5/1975		3898	4/1/1975		1975-391	2/27/1975	1975-0015095		5/5/1975
65	Mahoney	Annexation	12/28/1977	1977-924		11/1/1977		1977-472	7/28/1977	1977-0063659	12/28/1977	1/11/1978
67	Pertusi	Annexation	12/17/1976	1976-881		12/16/1976				1976-0054320	12/17/1976	
68	Libeu	Annexation	6/15/1979		1979-4804	7/15/1979		1979-526	5/24/1979	1979-0027232	6/15/1979	7/5/1979
69	Kerr Hall Hurly Deutsch (SB Research)	Annexation	7/14/1982		1982-416	6/22/1982				1982-0029007	7/14/1982	7/28/1982
71	Hidden Pines	Annexation	3/17/1987		1986-190	12/16/1986		1986-738	11/13/1986	1987-0019714	3/17/1987	5/5/1987
73	First Christian Church	Annexation	5/13/1987		1987-44	4/7/1987		1987-745	2/26/1987	1987-0035655	5/13/1987	7/14/1987
77	Jeff White ("A" Street)	Annexation	9/27/1989		1989-112	9/19/1989		1989-793	6/15/1989	1989-0064342	9/27/1989	10/27/1989
78	Foxenwoods	Annexation	12/5/1990		1990-146	11/20/1990		1990-804	9/6/1990	1990-0077404	12/5/1990	1/18/1991
80	Robinson Helicopter Co.	Annexation	2/10/1992		1992-03	2/5/1992		1991-828	12/5/1991	1992-0008884	2/10/1992	3/5/1992
81	Hidden Pines Estates Reorg.	Annexation	5/7/1992		1991-191	12/17/1991		1991-826	11/7/1991	1992-0034516	5/7/1992	01920605
82	Hidden Pines Reorg. (Cherry Blossom)	Annexation	12/27/1994		1994-204	11/15/1994				1994-0092336	12/27/1994	
83	Hidden Pines II/Riverside MHP Reorg.	Annexation	7/29/1992		1992-72	6/2/1992		1992-835	5/7/1992	1992-0058964	7/29/1992	8/31/1992
84	Old Country Club Estates	Annexation	9/15/1993		1993-114	9/9/1993		1992-02	6/10/1993	1994-0018617	3/3/1994	
85	West Main Reorg.	Annexation	10/24/1994		1994-160	8/16/1994				1994-0079390	10/24/1994	
86	Blosser Southeast Reorg.	Annexation	12/30/1994		1994-205					1994-0093861	12/30/1994	
87	Blosser Southwest Reorg.	Annexation	12/27/1994		1994-206	11/15/1994				1994-0092337	12/27/1994	
89	West Stowell Reorg.	Annexation	9/30/1994		1994-161	8/16/1994				1994-0074841	9/30/1994	
90	Entrada Este Reorg.	Annexation	12/27/1994		1994-207	11/15/1994				1994-0092335	12/27/1994	
91	Sur Del Rio Reorg.	Annexation	7/24/1995		1995-93	7/17/1995		1993-04	8/18/1994	1995-0039890	7/24/1995	
93	Sur Del Rio Reorg. (Costco/Carls)	Annexation	7/24/1995		1995-93	7/17/1995		1993-04	8/18/1994	1995-0039890	7/24/1995	
95	Refiled Bradley Land Co. Reorg.	Annexation	7/24/2000					2000-01	2/3/2000	2000-0044768	7/24/2000	
96	City Wastewater Treatment Plant Reorg.	Annexation	12/3/1999					1999-13	10/7/1999	1999-0094776	12/3/1999	
96	City Wastewater Treatment Plant Reorg.	Detachment	12/3/1999					1999-13	10/7/1999	1999-0094776	12/3/1999	
97	North Preisker Ranch Reorg.	Annexation	3/16/2000					1999-06	8/5/1999	2000-0015587	3/16/2000	
99	Robinson Annex	Annexation	4/12/2004					2002-15	2/6/2003	2004-0036513	4/12/2004	
100A	Santa Maria Cemetery Reorg.	Annexation	11/19/2003					2002-18	9/4/2003	2003-0158428	11/19/2003	
100	Enos-[Buss] Ranchos Reorg.	Annexation	8/7/2008					2008-04	7/3/2008	2008-0046995	8/7/2008	
102	Refiled Mahoney Ranch Annex	Annexation	11/9/2004					2003-05	3/4/2004	2004-0119171	11/9/2004	
103	Black Road Reorg.	Annexation	11/23/2004					2004-01	9/17/2004	2004-0124282	11/23/2004	
104	Hagerman Sports Complex (CSM)	Annexation	7/14/2006					2005-17	12/1/2005	2006-0055703	7/14/2006	
105	Quail Run Reorg. (ADAM)	Annexation	1/28/2008					2007-11	12/28/2007	2008-0004886	1/28/2008	
106	Wastewater Treatment Plant Reorg.	Annexation	10/5/2007					2007-08	9/6/2007	2007-0071432	10/5/2007	
	City of Santa Maria Sphere of Influence	SOI	2/2/2006						2/2/2006			

GOLDEN STATE WATER COMPANY (U 133 W)
630 EAST FOOTHILL BOULEVARD
SAN DIMAS, CALIFORNIA 91773

Revised Cal. P.U.C. Sheet No. 7429-W
Cancelling Revised Cal. P.U.C. Sheet No. 5258-W





California Vicinity Map

SHOWING TERRITORY WITHIN WHICH DULY ESTABLISHED AND REGULARLY FILLED TARIFF SCHEDULES APPLICABLE TO WATER SERVICE ARE IN EFFECT

This map shall not be considered by the Public Utilities Commission of the State of California or any other public body as a final or conclusive determination or establishment of the dedicated area of service, or any portion thereof.

Indicates Existing Service Area

Indicates Service Area Added by the Filing of this Map

Golden State Water Company
A Subsidiary of American States Water Company

(To be inserted by Utility)
Advice Letter No. 1651-W
Decision No._____

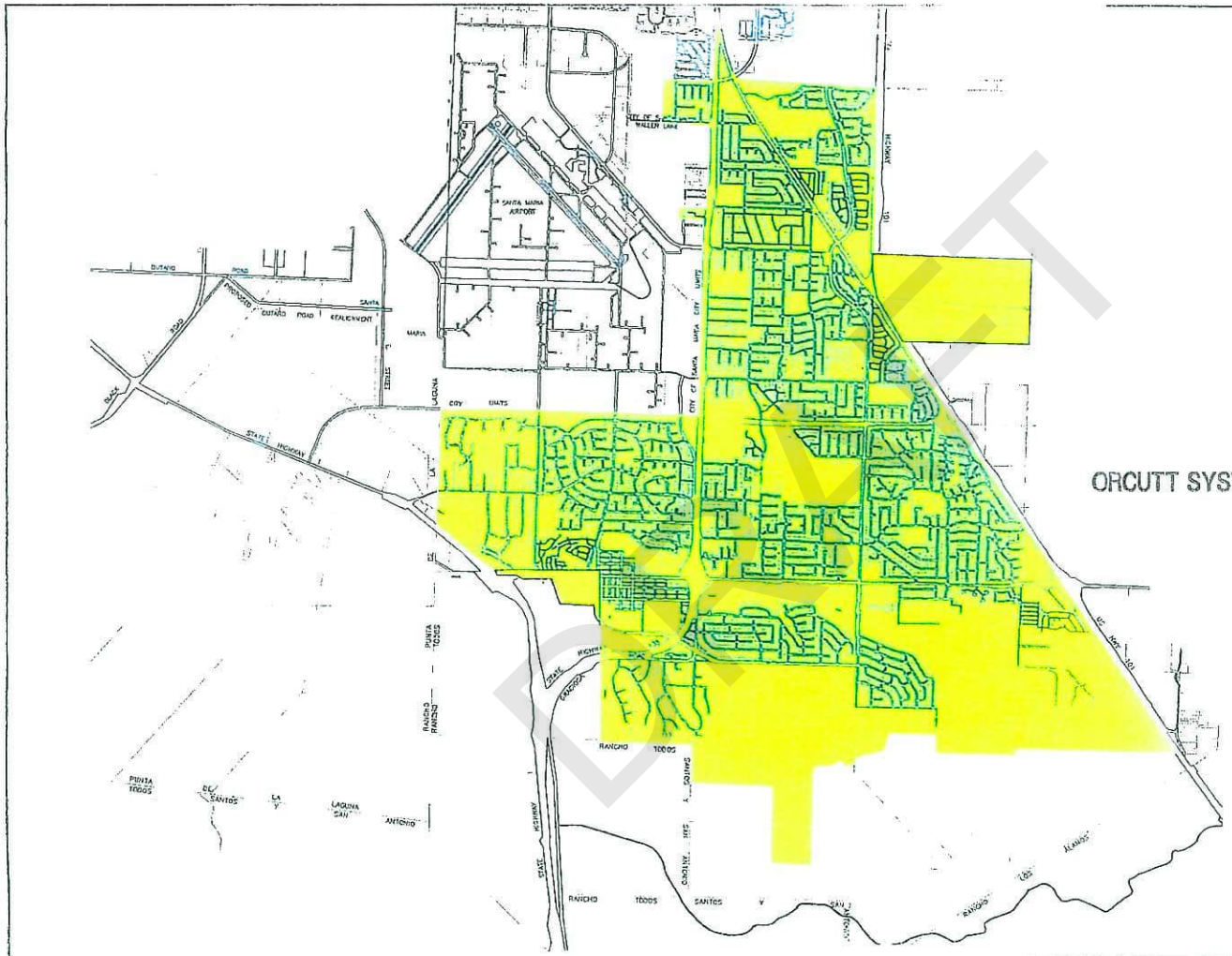
ISSUED BY
R.J. SPROWLS
PRESIDENT

(To be inserted by Cal P.U.C.)
Date Filed: February 22, 2016
Effective: March 23, 2016
Resolution No._____

GOLDEN STATE WATER COMPANY
630 E. FOOTHILL BLVD. P. O. BOX 9016
SAN DIMAS, CALIFORNIA 91773-9016

Revised Cal. P.U.C. Sheet No. 5558-W

Canceling Revised Cal. P.U.C. Sheet No. 5256-W



COASTAL DISTRICT
SANTA MARIA SERVICE AREA

Indicates Existing Service Area

ORCUTT SYSTEM

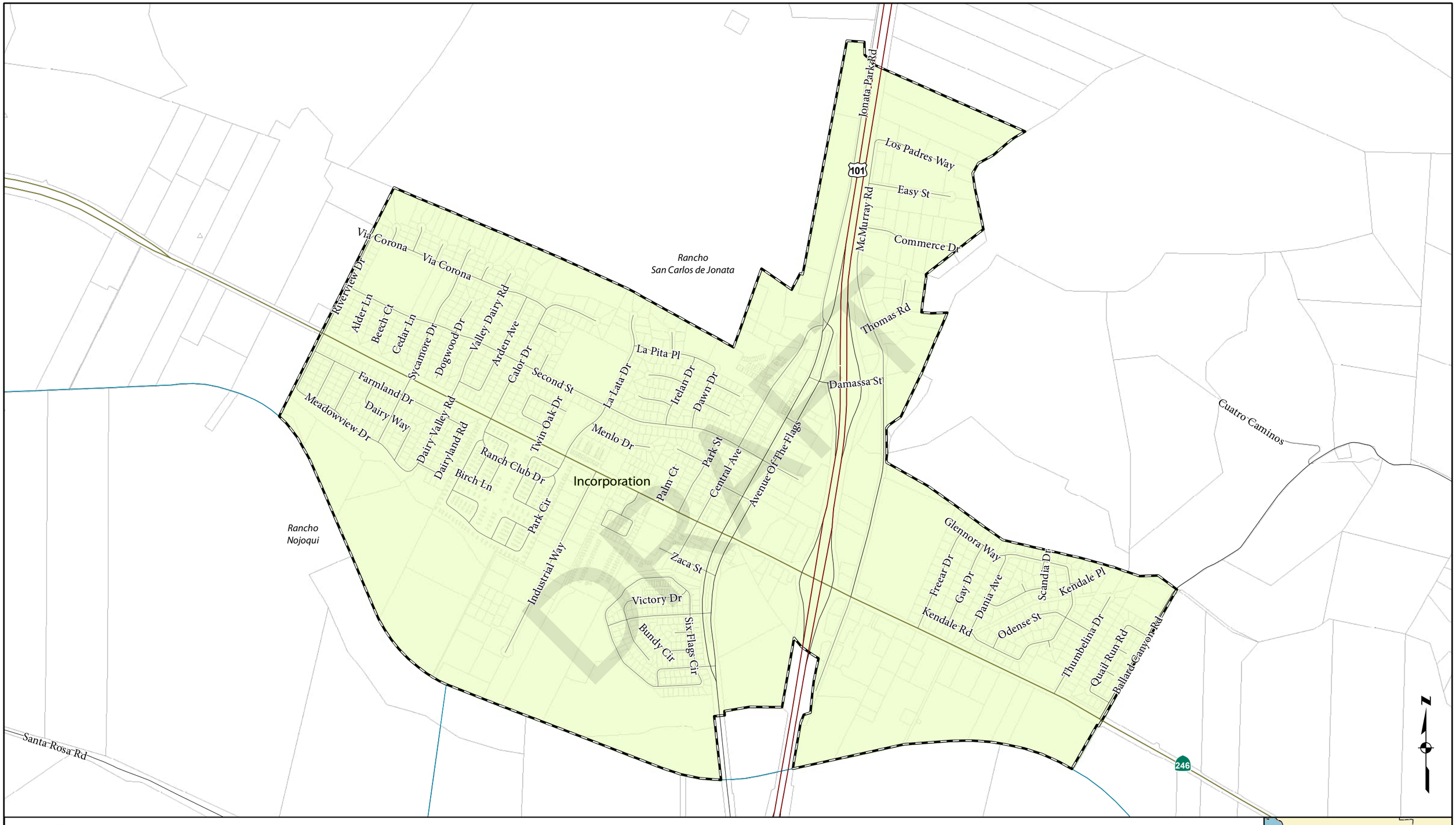
This map shall not be considered by the Public Utilities Commission of the State of California or any other public body as a final or conclusive determination of establishment of the dedicated area of service, or any portion thereof.

SHOWING TERRITORY WITHIN WHICH DULY ESTABLISHED AND REGULARLY FILED TARIFF SCHEDULES APPLICABLE TO WATER SERVICE ARE IN EFFECT

ISSUED BY
R. J. SPROWLS
President

(To be inserted by Cal. P.U.C.)
Date Filed MAR 20 2009
Effective Date MAR 27 2009
Resolution No.

Advice Letter No. 1322-W
Decision No.



City of Buellton

Compiled by the Office of the County Surveyor in December of 2010. Incorporated 2/1/1992 by 1991-0081535, Official Records of Santa Barbara County. Sphere: 11/4/2010. Boundary activity table at http://www.countyofsb.org/pwd/pwsurveyor.aspx?id=5118

GRAPHIC SCALE

0 0.1 0.2 0.4

Miles

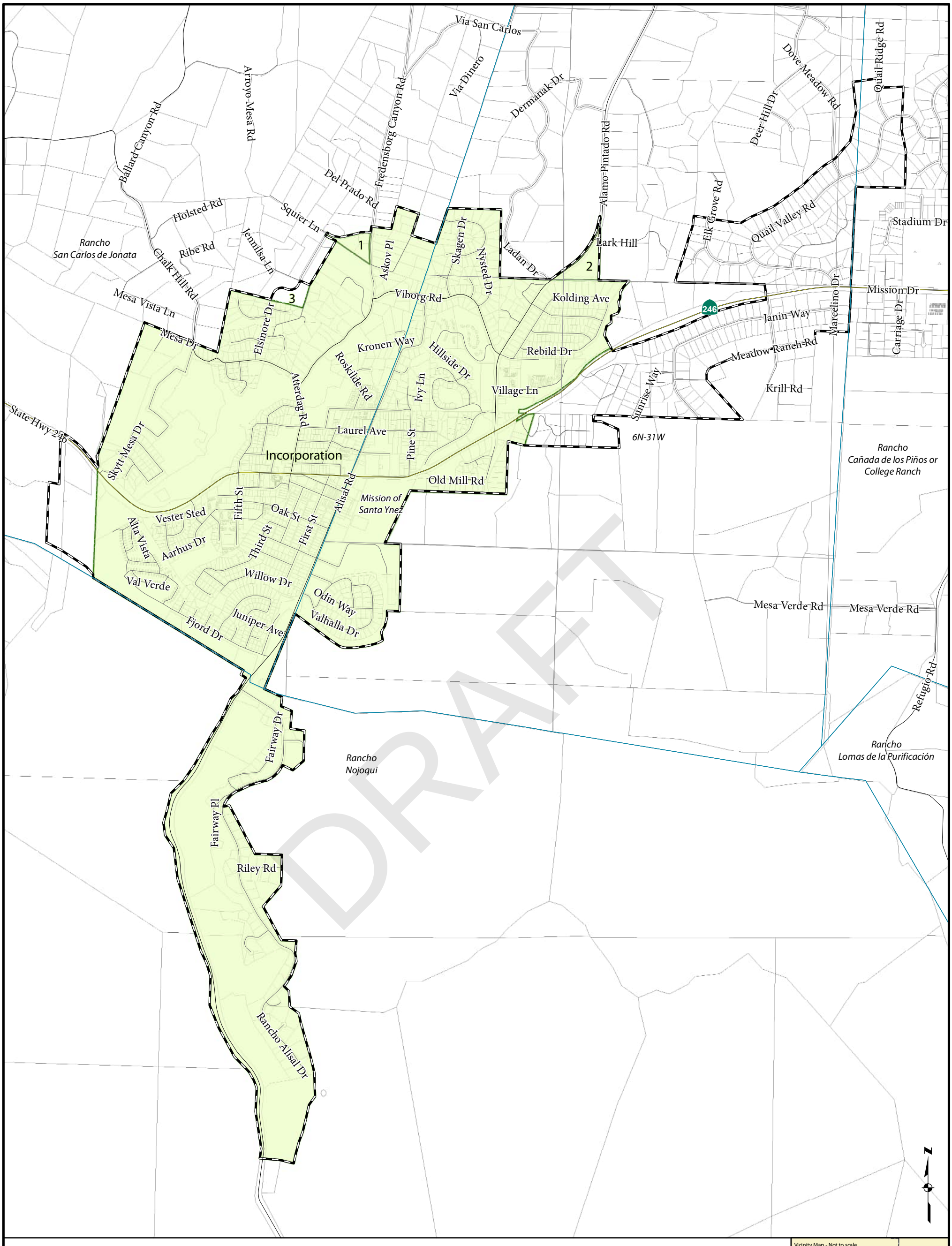
Legend

- Freeways
- Highways
- Roads
- Ranchos and Townships
- City Boundary
- Sections
- Parcels
- Sphere of Influence
- Annexation
- Incorporation
- Detachment

City of Buellton Boundary Activity

See map at http://www.countyofsb.org/pwd/pwsurveyor.aspx?id=5118

InternalNo	Title	Type	Effective	County_Res	LAFCO_Res	LAFCO_No	Instrument	Recorded
0	City of Buellton Incorporation	Formation	2/1/1992	1991-676	1991-821	1990-R-01	1991-0081535	12/5/1991
	City of Buellton Sphere of Influence	SOI	11/4/2010					



City of Solvang

Compiled by the Office of the County Surveyor in June of 2010.
Incorporated 12/17/1984, by 1984-0066853, Official Records.
Last Action: Seltzer Modification, LAFCO 05-14, 9/1/2005.
Sphere: 11/4/2010. See boundary activity table at
http://www.countyofsb.org/pwd/pwsurveyor.aspx?id=5118

Legend

- Freeways
- Highways
- Roads
- Railroads
- Parcels
- Sections
- Ranchos and Townships
- City Boundary
- Sphere of Influence
- Annexation
- Incorporation
- Detachment

GRAPHIC SCALE

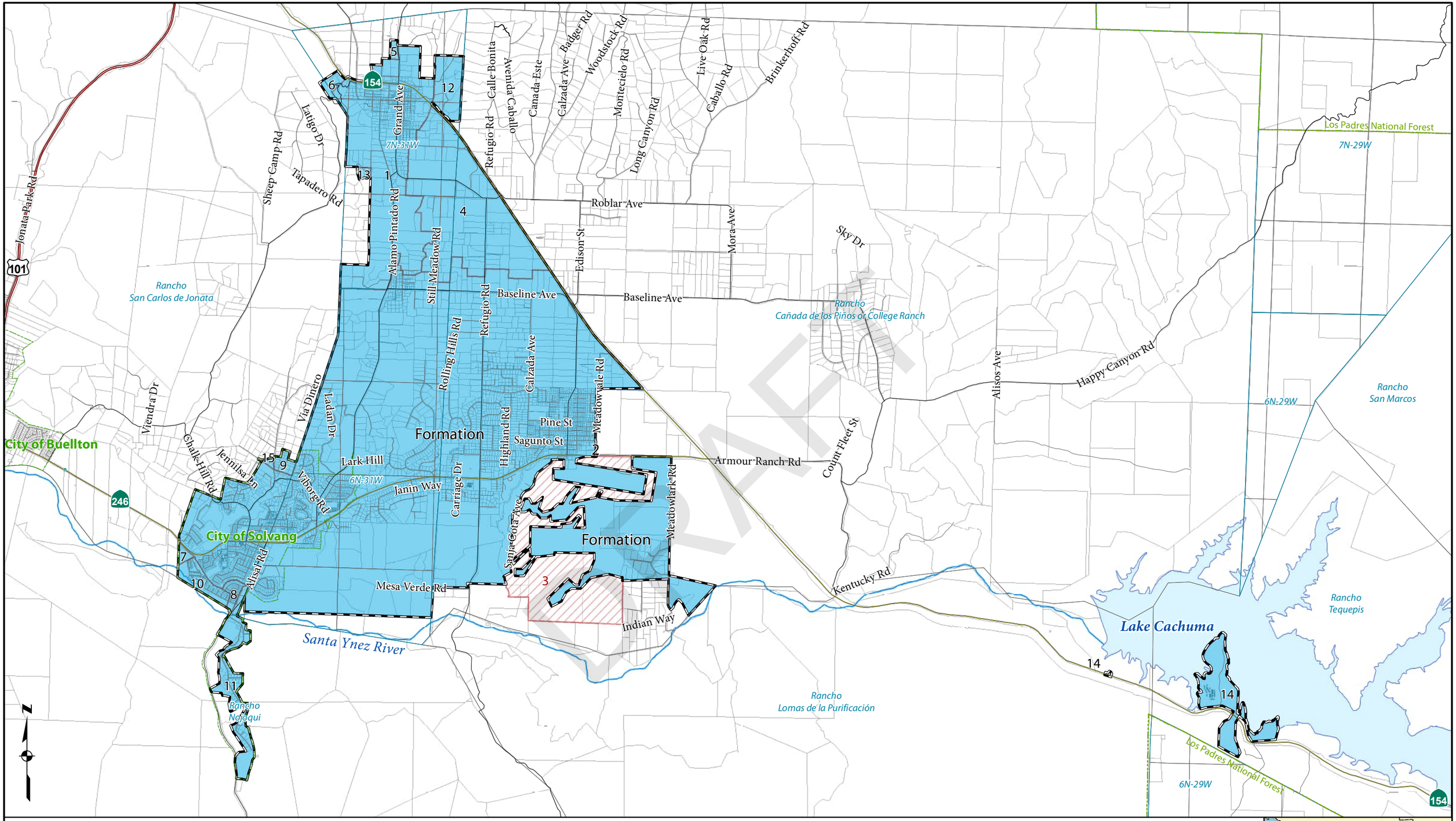
0 0.125 0.25 0.5 0.75 1

Miles

City of Solvang Boundary Activity

See map at http://www.countyofsb.org/pwd/pwsurveyor.aspx?id=5118

InternalNo	Title	Type	Effective	County_Res	LAFCO_Res	LAFCO_No	LAFCO_Date	Instrument	Recorded
0	Incorporation of Solvang 1985	Formation	5/1/1985	1984-560	1984-667	1982-R-01	4/19/1984	1984-0066853	12/17/1984
1	Shley Reorg	Annexation	8/9/1995		1995-01	1995-01	4/12/1995	1995-0043869	8/9/1995
2	Triangle Park Reorganization	Annexation	10/20/2005		2004-08	2004-08	12/16/2004	2005-0102320	10/20/2005
3	Seltzer Modification	OOASA	9/1/2005		2005-14	2005-14	9/1/2005		
	City of Solvang Sphere of Influence	SOI	4/6/2006				4/6/2006		



Santa Ynez River Water Conservation District

Improvement District No. 1

Compiled by the Office of the County Surveyor in April of 2012. Formed by Santa Ynez River Water Conservation District Board of Directors Resolution 103, Recorded 7/20/1961. Last Action: 15, Schley Annexation, SYRWCDID1 Board Resolution 526, Adopted 6/6/1995. Shprere: 4/5/2012. See Boundary Activity Table at http://www.countyofsb.org/pwd/pwsurveyor.aspx?id=23260

GRAPHIC SCALE

0 0.5 1 2

Miles

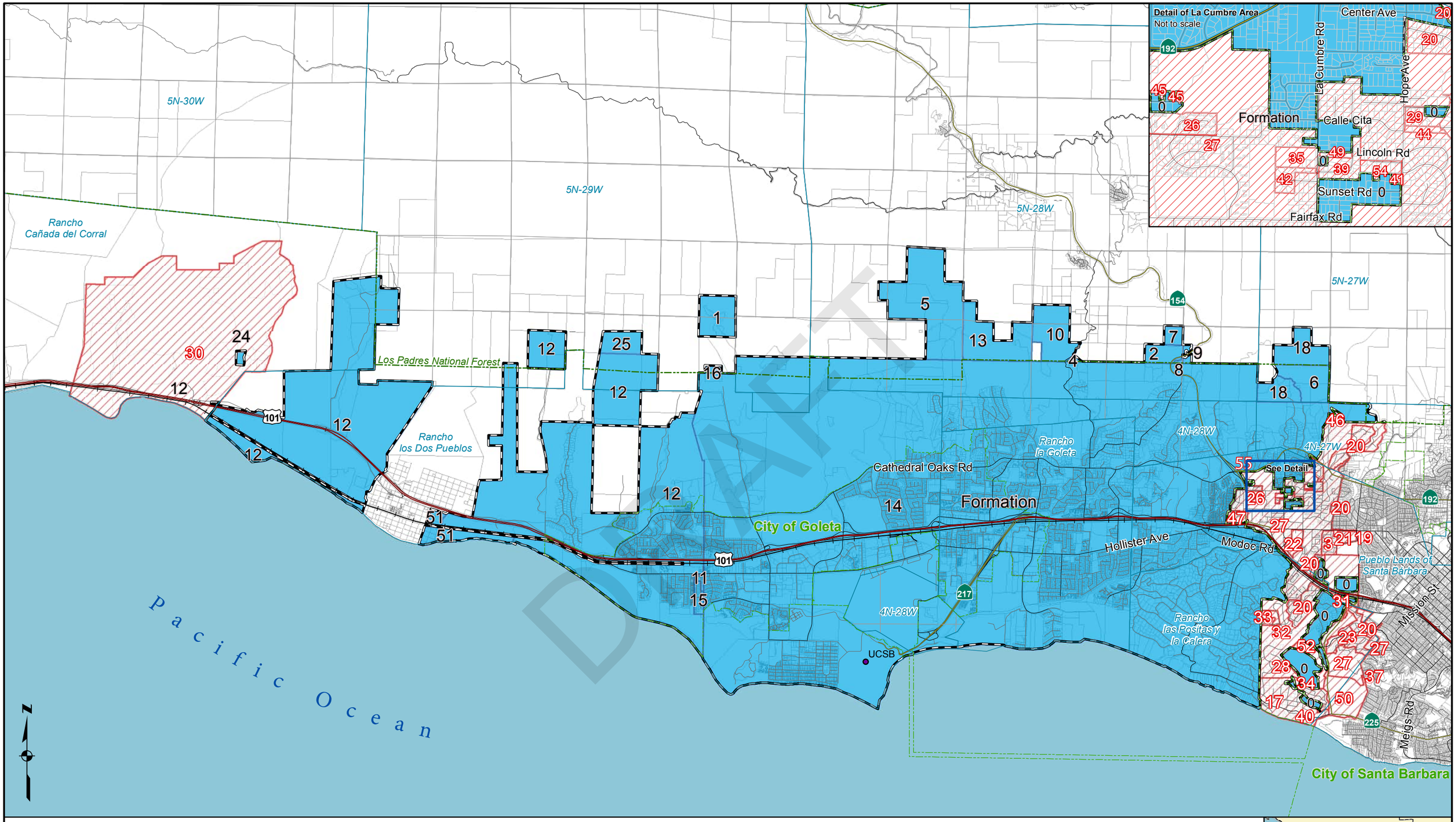
Legend

- Freeways
- Highways
- Roads
- Santa Ynez River
- Parcels
- Sections
- Los Padres National Forest
- City Boundaries
- Lake Cachuma
- Annexation
- Formation
- Detachment
- Sphere of Influence

Santa Ynez River Water Conservation District Improvement District No. 1

See map at http://www.countyofsb.org/pwd/pwsurveyor.aspx?id=23260

InternalNo	Title	Type	BOS_Date	Dist_Number	District_Res	District_Date	LAFCO_No	LAFCO_Res	LAFCO_Date	Instrument	Recorded	Equalization_Secretary_of_State
0	Formation	Formation			103	7/7/1959						
1	Los Olivos Area, A	Annexation			280	10/3/1963				2017/393-412	10/16/1963	
2	Los Olivos Area, B	Annexation			280	10/3/1963				2017/393-412	10/16/1963	
3	Gainey Ranch	Detachment		1964-1	303	12/18/1964				2093/942-953	3/1/1965	
4	Refugio Road Area	Annexation		1965-1	317, 319	2/3/1966				2146/1378-1400	4/7/1966	
5	Sides Property	Annexation		1965-2	317, 319	2/3/1966				2146/1378-1400	4/7/1966	
6	Hansen Property	Annexation		1965-3	317, 319	2/3/1966				2146/1378-1400	4/7/1966	
7	SMID No. 4 Area	Annexation		1965-4	318, 320	2/3/1966				2146/1401-1413	4/7/1966	
8	SMID No. 9 Area	Annexation		1965-5	318, 320	2/3/1966				2146/1401-1413	4/7/1966	
9	SMID Fredensborg Area	Annexation		1967-1	1967-11	10/13/1967						11/1/1967
10	SMID 1970-1 Area	Annexation	5/7/1973		356	7/8/1970						
11	Alisal Ranch	Annexation		1972-1	367, 370	7/27/1972						
12	Stewart	Annexation		1981-1	424, 426	9/30/1981						
13	Osborne	Annexation		1981-2	425, 427	9/30/1981						
14	Cachuma Park	Annexation		1983-1	291,449	12/13/1983	83-AD-6	83-643	10/30/1983	1983-0053181	10/4/1983	10/17/1983
15	Schley Annex 1995-1	Annexation		1995-1	526	6/6/1995						
		SOI							4/5/2012			



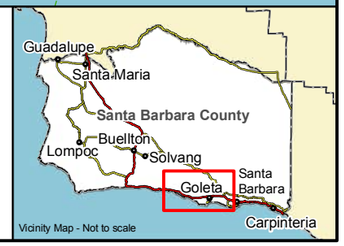
Goleta Water District

Compiled by the Office of the County Surveyor on 10/17/2015.
Last Action: 55, Cieneguitas Reorganization, LAFCO 12-04, recorded 12/6/2012. Sphere: 3/1/2012.
See Boundary Activity Table at http://www.countyofsb.org/pwd/pwsurveyor.aspx?id=23260

GRAPHIC SCALE
0 0.5 1 2
Miles

Legend

- Freeways
- Highways
- Roads
- Railroads
- Parcels
- Sections
- Land Grants and Townships
- Los Padres National Forest
- City Boundaries
- Sphere of Influence
- Formation
- Annexation
- Detachment

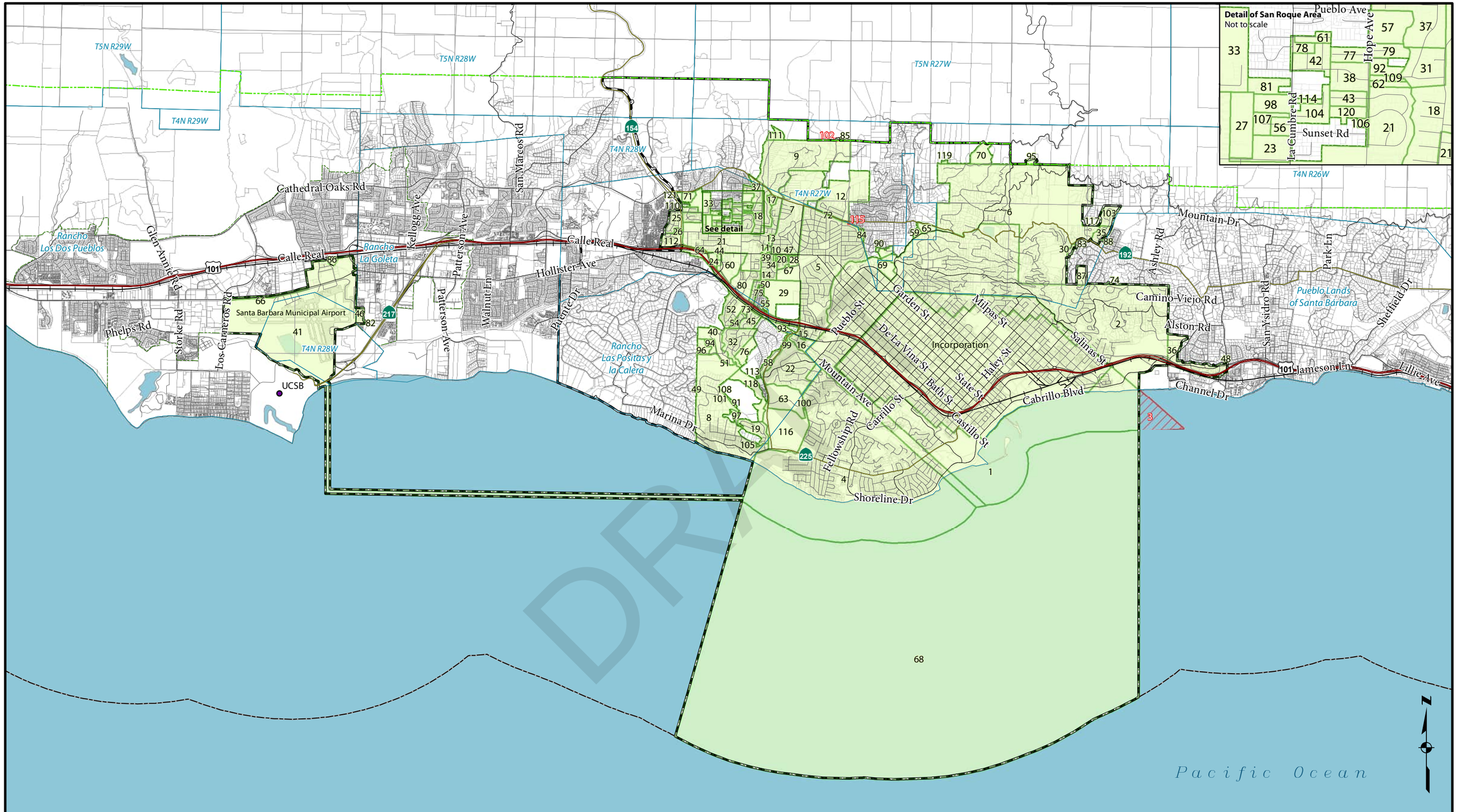


Goleta Water District Boundary Activity

See map at http://www.countyofsb.org/pwd/pwsurveyor.aspx?id=23260

InternalNo	Title	Type	Effective	County_Res	County_DT	Ord	Dist_Res	LAFCO_Res	LAFCO_No	Instrument	Recorded
0	Goleta County Water District Formation	Formation	11/13/1944		11/13/1944						
1	George W. Smith and Bird S. Smith	Annexation	7/2/1954	14096	7/2/1954	Ord. #2	126				
2	Oluf O. Hove, et al. Annexation	Annexation	7/2/1954	14096	7/2/1954	Ord. #2	126				
3	San Roque Exclusion	Detachment	1/24/1955	14096			116, 126			1282/0180-0183	1/24/1955
4	Ruth D. Ehrenborg Annexation	Annexation	11/27/1955	15170	11/27/1955	Ord. #3					
5	Esther H. Marchiando Et Al. Annexation	Annexation	5/23/1955	15170		Ord. #4				1613/0018-0024	5/23/1955
6	Horace F. Pierce	Annexation	10/15/1956	16387	10/15/1956	Ord. #5					
7	George W. Smith Et Ux. Annexation	Annexation	10/10/1956	16387	10/10/1956	Ord. #6					
8	Henry J. Kuzen Annexation	Annexation	11/29/1956	16387	11/29/1956	Ord. #7					
9	Eleanor S. Parker, Et Al. Annexation	Annexation	12/24/1956	16387	12/24/1956	Ord. #8					
10	T. Scudelari Annexation	Annexation	11/29/1956	16387	11/29/1956	Ord. #9					
11	Ann and Nathaniel Perkoff Annexation	Annexation	5/23/1957	17552	5/23/1957	Ord. #11	237				
12	Edwards Et Al. Annexation	Annexation	5/23/1957	17552		Ord. #10	209, 237			1652/0514-0522, 1652/0523-0533	5/23/1957
13	Sharky Et Al. Annexation	Annexation	5/21/1959			Ord. #12					
14	La Patera Land Company	Annexation	7/21/1960	21098	7/21/1960	Ord. #13	365, 404, 405, 426				
15	Charlotte W. Anderson Et Al. Annexation	Annexation	10/12/1960	21098	10/12/1960	Ord. #13	404, 405, 426				
16	So. Cal. Edison Company Annexation	Annexation	9/13/1962	22850	9/13/1962	Ord. #14	519				
17	Henry L. Mertz Et Al. Detachment	Detachment	1/17/1963	23746		Ord. #14A				1977/0759-0765	1/17/1963
18	Horace F. & Shirley H. Pierce Annexation	Annexation	11/21/1963	23746		Ord. #15				2022/0872-0877	11/21/1963
19	De Loreto Exclusion	Detachment	3/24/1966	1966-663			586	1966-05		2146/0968-0977	3/24/1966
20	Hidden Valley Estates, et. al. (Hope Area)	Detachment	4/15/1966	1966-663			589	1966-06		2149/0093-0110	4/15/1966
21	Plaza Felipe Subdivision	Detachment	12/16/1968	1968-676			618, 621	1967-58		2225/0829-0838	12/16/1968
22	Prevedello-Lasarzig et al withdrawal	Detachment	2/6/1969				634	1968-109		2262/0435-0445	2/6/1969
23	Bel-Air Knolls	Detachment	11/14/1969				649	1969-175		2290/0673-0682	11/14/1969
24	El Capitan Ranch Annex.	Annexation	10/22/1970				664	1970-219		2330/0886-0902	10/22/1970
25	Cavalletto Property Annex.	Annexation	12/6/1972				699	1972-293		2434/1460-1471	12/6/1972
26	Reino Land Company Inc. Property Reorg.	Detachment	8/16/1982					1982-616	1981-AC-02	1982-0034183	8/16/1982
27	City of Santa Barbara Proceedings, Parcel 2, Detach.	Detachment	7/23/1983				1983-13	1983-642	1983-DD-01	1983-0037200	7/23/1983
27	City of Santa Barbara Proceedings, Parcel 1, Detach.	Detachment	7/23/1983				1983-13	1983-642	1983-DD-01	1983-0037200	7/23/1983
28	Portion of APN 47-010-43 (Fard & Cambell) Reorg.	Detachment	9/27/1983					1983-648	1983-AC-02	1983-0057795	9/27/1983
29	Tatjes Property Reorg.	Detachment	9/4/1984					1984-664	1983-AC-04	1984-0048035	9/4/1984
30	El Capitan Ranch Detachment	Detachment	10/11/1984				1984-14	1981-595	1981-DD-01	1984-0055526	10/11/1984
31	Kirkhart & Ozolins Property (Modoc Rd Condos) Reorg.	Detachment	11/1/1984					1984-663	1983-AC-03	1984-0059471	11/1/1984
32	Valle Verde Property Reorg.	Detachment	11/8/1984				1984-184	1984-681	1984-AC-02	1984-0067876	11/8/1984
33	Rutherford Property Reorg.	Detachment	6/27/1986				1986-105	1985-704	1985-AC-05	1986-0038606	6/27/1986
34	Nichols Property Reorg.	Detachment	6/8/1987					1986-734	1986-R-02	1987-0042369	6/8/1987

InternalNo	Title	Type	Effective	County_Res	County_DT	Ord	Dist_Res	LAFCO_Res	LAFCO_No	Instrument	Recorded
35	Feazelle	Detachment	7/13/1987					1986-732		1987-0052422	7/13/1987
36	APN 49-150-47 Reorganization	Detachment	1/11/1988					1987-754		1988-0001665	1/11/1988
37	Elbek (Jesuit Property) Reorganization	Detachment	1/26/1988					1986-743		1988-0004999	1/26/1988
38	Markel Reorganization	Detachment	4/19/1988					1988-766		1988-0022828	4/19/1988
39	Towbes Reorganization	Detachment	6/11/1996					1994-22		1996-0035858	6/11/1996
40	Morgan Reorganization	Detachment	2/4/1997				1996-138	1995-16		1997-0006130	2/4/1997
41	Cantor Reorg. Part 1	Detachment	9/4/1997					1997-07		1997-0056661	9/4/1997
42	Carey Reorg	Detachment	12/8/1998				1998-150	1998-07		1998-0095550	12/8/1998
43	Compton Reorg.	Detachment	12/24/1998				1998-159	1998-08		1998-0100683	12/24/1998
44	Investec Reorganization	Detachment	7/19/2000					2000-10		2000-0044014	7/19/2000
45	Cantor Reorg Part 2	Detachment	7/25/2000					1997-07		2000-0044976	7/25/2000
46	Northridge Reorganization	Detachment	1/11/2001					2000-24		2001-0002894	1/11/2001
47	St Vincents Reorg.	Detachment	10/24/2002					2002-09		2002-0107674	10/24/2002
48	Kennedy Reorg.	Detachment	10/21/2003					2003-08		2003-0145552	10/21/2003
49	Hart Reorg.	Detachment	8/16/2005					2004-10		2005-0078552	8/16/2005
50	Las Positas Reorganization	Detachment	4/7/2008					2006-06		2008-0019858	4/7/2008
51	Dos Pueblos Golf Links Reorganization	Annexation	8/11/2008					1998-11		2008-0047472	8/11/2008
52	Veronica Meadows Reorganization	Detachment	7/14/2009					2007-12		2009-0042221	7/14/2009
53	Las Canoas Reorganization	Detachment	9/7/2010					2009-08		2010-0048697	9/7/2010
54	Hope Avenue Reorganization	Detachment	8/6/2012					2012-03		2012-0051116	8/6/2012
55	Cieneguitas Reorganization	Detachment	12/6/2012					2012-04		2012-0083507	12/6/2012
	Goleta County Water District Sphere of Influence	SOI	3/1/2012								3/1/2012



City of Santa Barbara

Compiled by the Office of the County Surveyor on 08/05/2013. Incorporated April, 1850.
Last Action: Cieneguitas Reorganization, LAFCO 12-04, 12/6/2012. Sphere updated with no changes: 2/3/2011.
See boundary activity table at http://www.countyofsb.org/pwd/pwsurveyor.aspx?id=5118

GRAPHIC SCALE
0 0.25 0.5 1 1.5
Miles

Legend

- Freeways
- Highways
- Roads
- Railroads
- Parcels
- City Boundary
- Sections
- Ranchos and Townships
- County Boundary
- Los Padres National Forest
- Sphere of Influence
- Annexation
- Incorporation
- Detachment

City of Santa Barbara Boundary Activity

See map at http://www.countyofsb.org/pwd/pwsurveyor.aspx?id=5118

InternalNo	Title	Type	Effective	City_Ord	City_Res	City_Date	County_Res	LAFCO_Res	LAFCO_No	LAFCO_Date	Instrument	Recorded
0	Haley - Official Maps 1 & 2	Formation	8/9/1855	7								
1	City Charter Article I	Annexation	4/4/1898			4/4/1898						
2	city boundary	Annexation	9/21/1915	454		10/21/1903						
3	Line Change statute of 1917 (Elmer L. Jones)	Detachment	1/1/1917			1/1/1917						
4	Mesa Annexation, Territory No.1	Annexation	5/6/1921	1066		5/6/1921						
5	Pedregosa Annexation, Territory No.2	Annexation	5/6/1921	1066		5/6/1921						
6	Las Canoas, Territory No.3	Annexation	5/6/1921	1066		5/6/1921						
7	City Boundaries (Foothill)	Annexation	1/8/1926	1282		1/8/1926						
8	Braemar Tract	Annexation	12/31/1945	2052		11/29/1945						
9	Ontare Annexation	Annexation	11/29/1945	2053		1/19/1946						
10	Dixon Tract	Annexation	4/12/1946	2076		4/12/1946						
11	Higbee Tract	Annexation	5/1/1947	2139		5/1/1947						
12	Johnston Property	Annexation	5/5/1948	2182		3/4/1948						
13	Greene Tract	Annexation	8/26/1948	2202		8/26/1948						
14	San Roque Gardens	Annexation	3/26/1951	2315		3/26/1951						
15	West Property	Annexation	4/5/1951	2318		4/5/1951						
16	Las Positas Estates No.1	Annexation	5/31/1956	2541		5/31/1956						
17	Blackmore Annexation	Annexation	7/19/1956	2555		7/19/1956						
18	Schooler Annexation	Annexation	8/23/1956	2563		8/23/1956						
19	Braemar Annexation	Annexation	8/30/1956	2566		8/30/1956						
20	Phillips State Street Annexation	Annexation	9/13/1956	2571		9/13/1956						
21	State-Hope-La Cumbre Annex	Annexation	2/21/1957	2594		2/21/1957						
22	Las Positas Estates No.2	Annexation	3/14/1957	2601		3/14/1957						
23	La Colina Annexation	Annexation	2/27/1958	2649		2/27/1958						
24	Hollister Wye Annexation	Annexation	3/20/1958	2651		3/20/1958						
25	San Marcos Gardens Annexation	Annexation	3/27/1958	2654		3/27/1958						
26	Watling Annexation	Annexation	3/27/1958	2655		3/27/1958						
27	Hope School Property of the Hope Elem. School Dist	Annexation	8/7/1958	2681		7/21/1958	18187					
28	De Loreto Annexation	Annexation	11/20/1958	2692		11/20/1958						
29	Municipal Golf Course and Adams School Annex.	Annexation	7/7/1959	2716		7/7/1959						
30	Sycamore Canyon Annexation	Annexation	7/16/1959	2721		7/16/1959						
31	Coleman Annexation	Annexation	7/16/1959	2723		7/16/1959						
32	Hidden Valley Annexation	Annexation	7/16/1959	2722		7/16/1959						
33	La Colina Jr. High School Property	Annexation	9/3/1959	2731		9/3/1959						
34	Shapiro Annexation	Annexation	10/26/1959	2733		9/17/1959						
35	Montecito Circle Annexation	Annexation	1/27/1960	2752		1/27/1960						
36	Montecito Strip Annexation	Annexation	5/13/1960	2765		4/12/1960	2765					
37	Archer Annexation	Annexation	6/17/1960	2770		5/17/1960						
38	Hope Terrace Annexation	Annexation	9/6/1960	2779		8/2/1960						

InternalNo	Title	Type	Effective	City_Ord	City_Res	City_Date	County_Res	LAFCO_Res	LAFCO_No	LAFCO_Date	Instrument	Recorded
39	Ormiston Annexation	Annexation	9/6/1960	2783		8/2/1960						
40	Rutherford Annexation	Annexation	9/6/1960	2783		8/2/1960						
41	Santa Barbara Airport Annexation	Annexation	11/14/1961	2846		11/14/1961						
42	Moxcey Annexation	Annexation	4/27/1962	2870								
43	Lincoln Road Annexation	Annexation	5/1/1962	2874		5/1/1962						
44	State Street-South La Cumbre Road	Annexation	7/31/1962	2887		7/31/1962						
45	Hidden Valley Estates Annexation	Annexation	1/22/1963	2907		1/22/1963						
46	Airport Clear Zone Annexation	Annexation	3/12/1963	2914		3/12/1963						
47	Schaefer Annexation	Annexation	5/7/1963	2923		5/7/1963						
48	Robillard Annexation	Annexation	10/29/1963	2947	5682	9/24/1963						
49	Hope Ranch Estates Annexation	Annexation	10/29/1963	2949		10/29/1963						
50	Widling Annexation	Annexation	12/10/1963	2959		12/10/1963						
51	Hope Ranch Misc (Boundary Correction)	Annexation	1/21/1964	2964		1/21/1964						
52	Williams, et al Annexation	Annexation	1/30/1964	2963		12/31/1963						
53	Rue Property Annexation	Annexation	3/3/1964	2969		3/3/1964						
54	Cavaletto Annexation	Annexation	4/21/1964	2977		4/21/1964						
55	Karleskint Annexation	Annexation	9/8/1964	3005		9/8/1964						
56	Stacy Lane Annexation	Annexation	4/5/1965	3031		2/23/1965						
57	Hope School District Annex. No. 2	Annexation	7/6/1965				24812					
58	Esperanza Estates	Annexation	7/13/1965	3056		7/13/1965						
59	City Water Dept Property Annexation	Annexation	8/17/1965	3062		8/17/1965						
60	Prevedello-Lasarzig et al Annexation	Annexation	2/23/1966	3160		2/23/1966						
61	Blankenship Annexation	Annexation	6/14/1966	3152		6/14/1966						
62	Bethany Congregational Church Annexation	Annexation	7/5/1966	3161		7/5/1966						
63	City Sanitary Fill Site, et al. Annexation	Annexation	7/19/1966	3166		7/19/1966						
64	Calle Real Property Annexation	Annexation	12/6/1966	3184		12/6/1966						
65	John F. Kennedy School Site Annexation	Annexation	12/13/1966	3188		12/13/1966						
66	Hollister Avenue Annexation	Annexation	1/3/1967	3198		1/3/1967						
67	Renwick Annexation	Annexation	4/4/1967	3212		4/4/1967						
68	Tidelands Annexation	Annexation	11/7/1967	3257		11/7/1967						
69	Old Mission-Museum Annexation	Annexation	3/19/1968	3283				1967-43	1967-AC-02			
70	St. Mary's Seminary Annexation	Annexation	4/16/1968	3289	6554	4/16/1968						
71	Gainor Annexation	Annexation	4/23/1968	3293		4/23/1968						
72	Foothill Road Annexation	Annexation	9/12/1968	3309				1968-100	1968-AC-03			
73	Emanuel Lutheran Church Annexation	Annexation	5/20/1969	3367		5/20/1969						
74	Alexander Annexation	Annexation	10/14/1969	3384	6960	10/14/1969						
75	Thompson-Anderman Annexation	Annexation	12/23/1969	3397		12/23/1969						
76	Veronica Springs Road Properties Annexation	Annexation	2/19/1970	3400				1969-169	1969-AC-05			
77	Connie Way Properties Annexation	Annexation	7/9/1971	3479		7/9/1971						
78	Brooks Property Annexation	Annexation	10/14/1971	3489		9/14/1971			1971-AC-01			
79	Avco-Demelik Annexation	Annexation	2/20/1973	3581		2/20/1973						
80	Bueneman, Cavaletto & Transportation Corridor Ann*	Annexation	12/10/1973	3606	7670			1973-333	1973-AC-05			

InternalNo	Title	Type	Effective	City_Ord	City_Res	City_Date	County_Res	LAFCO_Res	LAFCO_No	LAFCO_Date	Instrument	Recorded
81	Aiches Property Annexation	Annexation	10/15/1974	3691		10/15/1974						
82	Airport Easterly Clear Zone Annexation	Annexation	5/27/1975	3772		5/27/1975						
83	Eucalyptus Knolls #2 (Williams Property)	Annexation	3/15/1979	1979-016				1978-511	1978-AC-02		1978-0011541	3/15/1979
84	PM 12,700	Annexation	10/11/1979		1979-78,79	10/11/1979		1979-520	1978-AC-04		1979-0047689	
85	Giordani Property	Annexation	5/22/1980								1980-0042163	5/22/1980
86	Airport Property	Annexation	10/16/1980								1980-0042162	10/16/1980
87	Thompson Property (Via Alicia)	Annexation	10/16/1980		1980-055	10/16/1980		1997-481	1977-AC-03		1980-0042161	
88	M. Edwards Property (APN 13-123-09)	Annexation	7/22/1982	1980-576		11/3/1981		1981-594	1979-AC-07		1982-0030245	7/22/1982
89	Reino Land Company Inc. Property Annexation	Annexation	8/16/1982								1982-0034183	8/16/1982
90	Hill Property	Annexation	11/23/1982								1982-0053336	11/23/1982
91	Portion of APN 47-010-43 (Fard & Cambell Property)	Annexation	10/23/1983								1983-0057795	10/23/1983
92	Tatjes Property	Annexation	9/4/1984								1984-0048035	9/4/1984
93	Kirkhart & Ozolins Property (Modoc Road Condos)	Annexation	11/1/1984		1984-164	11/1/1984		1984-663	1983-AC-03	10/23/1984	1984-0059471	
94	Valle Verde Property	Annexation	12/21/1984		1984-184	12/21/1984		1984-681	1984-AC-2	11/8/1984	1984-0067876	
95	Sanchez Property Annexation	Annexation	1/11/1985	1984-191				1984-671	1994-14		1985-0001805	1/11/1985
96	Koelsch/Schwaiger & Rutherford Property Reorg	Annexation	5/20/1986		1986-104	5/20/1986		1985-704	1985-AC-5		1986-0038606	
97	Nichols Property Reorganization	Annexation	6/8/1987								1987-0042369	6/8/1987
98	Feazelle Annexation	Annexation	7/13/1987		1986-165	7/13/1987		1986-732	1986-AC-03		1987-0052422	
99	APN 49-150-47 Reorganization	Annexation	1/11/1988								1988-0001665	1/11/1988
100	Elbek (Jesuit Property) Annexation	Annexation	1/26/1988								1988-0004999	1/26/1988
101	Markel Reorganization	Annexation	4/5/1988								1988-0022828	4/5/1988
102	Giordani Detachment	Detachment	12/10/1993		1993-124	12/10/1993		1992-842	1991-DC-1		1993-0098471	
103	Westmont Reorganization	Annexation	8/28/1995	1995-014		1/17/1995		1994-014	1994-14		1995-0048109	8/28/1995
104	Towbes Reorganization	Annexation	6/11/1996								1996-0035858	6/11/1996
105	Morgan Reorganization	Annexation	2/4/1997								1997-0006130	2/4/1997
106	Cantor Reorg. Part 1	Annexation	9/23/1997					1997-07	1997-07	1/1/1997	1977-0056661	9/23/1997
107	Carey Reorganization	Annexation	12/8/1998								1998-0095550	12/8/1998
108	Compton Reorganization	Annexation	12/24/1998								1998-0100683	12/24/1998
109	Investec Reorganization	Annexation	7/19/2000					2000-10	2000-10	7/18/2000	2000-0044014	7/19/2000
110	Cantor Reorg. Part 2	Annexation	7/25/2000					1997-07	1997-07	1/1/1997	2000-0044976	7/25/2000
111	Northridge Reorganization	Annexation	1/11/2001					2000-24	2000-24	12/18/2000	2001-0002894	1/11/2001
112	St. Vincent's Reorganization	Annexation	10/24/2002					2002-09	2002-09		2002-0107674	10/24/2002
113	Kennedy Reorganization	Annexation	10/21/2003					2003-08	2003-08		2003-0145552	10/21/2003
114	Hart Reorg.	Annexation	8/16/2005					2004-10	2004-10		2005-0078552	8/16/2005
115	Lengsfelder Reorganization	Detachment	5/17/2006					2006-03	2006-03	4/6/2006	2006-0039991	5/17/2006
116	Las Positas Reorganization	Annexation	4/7/2008					2006-06	2006-06		2008-0019858	4/7/2008
117	Rivera Trust Out-of-Agency Service Agreement	OOASA	7/2/2009					2009-03	2009-03		n/a	7/2/2009
118	Veronica Meadows Reorganization	Annexation	7/14/2009					2007-12	2007-12		2009-0042221	7/14/2009
119	Las Canoas Reorganization	Annexation	9/7/2010					2009-08	2009-08		2010-0048697	9/7/2010
120	Hope Avenue Reorganization	Annexation	8/6/2012					2012-03	2012-03		2012-0051116	8/6/2012
121	Cieneguitas Reorganization	Annexation	12/6/2012					2012-04	2021-04	11/1/2012	2012-0083507	12/6/2012
	City of Santa Barbara Sphere of Influence	SOI	2/3/2011							2/3/2011		

Montecito Water District

Compiled by the Office of the County Surveyor in October of 2014.
Formed by resolution of the County Board of Supervisors, BOS Minute Book T, Pages 287-293, 11/7/1921.
Sphere 3/1/2012. Last Action: 24, Bella Vista Annexation, LAFCO 10-01, 5/6/2010.
See Boundary activity table at http://www.countyofsb.org/pwd/pwsurveyor.aspx?id=23260

GRAPHIC SCALE
0 0.25 0.5 1
Miles

Legend

- Freeways
- Highways
- Roads
- Railroads
- Parcels
- Sections
- Ranchos and Townships
- Los Padres National Forest
- City Boundaries
- Sphere of Influence
- Formation
- Annexation
- Detachment

Vicinity Map - Not to scale
Guadalupe, Santa Maria, Santa Barbara County, Buellton, Lompoc, Solvang, Santa Barbara, Goleta, Carpinteria

5N-27W 5N-26W 5N-25W 4N-27W 4N-26W 4N-25W
Los Padres National Forest
Formation
City of Santa Barbara
Pueblo Lands of Santa Barbara
Pacific Ocean

Montecito Water District Boundary Activity

See map at http://www.countyofsb.org/pwd/pwsurveyor.aspx?id=23260

Note: Only the portion of the SPRR Detachment (1) not annexed by the Berenzer Annexation (18) is depicted

InternalNo	Title	Type	Effective	County_Res	County_DT	LAFCO_Res	Dist_Ord	Dist_DT	Instrument	Recorded
0	Montecito Water District Formation	Formation	11/7/1921	Minute T/287	11/7/1921					
1	SPRR Detachment	Detachment	6/12/1922					6/12/1922		
2	Ordinance 6	Annexation	12/29/1925				6	12/29/1925		
3	Langley Hill	Annexation	12/29/1925				7	12/29/1925		
4	Ordinance No. 8	Annexation	12/29/1925				8	12/29/1925		
5	Ordinance No. 9	Annexation	12/29/1925				9	12/29/1925		
6	Barnes & Barnes	Annexation	3/27/1934				15	3/27/1934		
7	Ortega Hill	Annexation	3/27/1934				16	3/27/1934		
8	King	Annexation	1/19/1948	7768	1/19/1948		18			
9	Ordinance No. 20	Annexation	3/1/1948				20	3/1/1948		
10	Ordinance No. 23	Annexation	5/19/1948				23	5/19/1948		
11	Ordinance No. 37	Annexation	4/15/1959	19850	4/15/1959		37			
12	Ordinance No. 38	Annexation	4/15/1959	19850	4/15/1959		38			
13	Stegall	Annexation	12/2/1969	1108 A		1968-181			2291/1434-1444	12/2/1969
14	Casa Dorinda	Annexation	7/23/1974	1362-A		1973-341			1974-0027146	7/23/1974
15	Slovak Bondi	Annexation	8/16/1994			1994-09			1994-0064238	8/16/1994
16	Miller Reorganization	Annexation	8/17/1994			1994-10			1994-0064734	8/17/1994
17	Knoll	Annexation	8/26/1994			1994-11			1994-0066591	8/26/1994
18	Berenzer	Annexation	12/12/1994			1994-13			1994-0089380	12/12/1994
19	Summerland Water Reorg.	Annexation	12/6/1995			1994-21			1995-0068098	12/6/1995
20	McCaslin	Annexation	7/8/1996			1995-13			1996-0041210	7/8/1996
21	Vista	Annexation	11/18/1997			1996-16			1997-0069733	11/18/1997
22	Gostovich	Annexation	7/27/2000			2000-04			2000-0045765	7/27/2000
23	Dishion	Annexation	10/11/2001			2001-10			2001-0087500	10/11/2001
24	Bella Vista Annexation	Annexation	5/6/2010			2010-01			2010-0043982	8/16/2010
	Montecito Water District SOI	Sphere	3/1/2012							

Carpinteria Valley Water District

Compiled by the Office of the County Surveyor in September of 2014. Formed 2/10/1941.
Sphere: 3/1/2012. Last Action: 6, Railroad Corridor Annexation, LAFCO 13-08, 9/10/2014.
See Boundary activity table at http://www.countyofsb.org/pwd/pwsurveyor.aspx?id=23260

GRAPHIC SCALE
0 0.5 1 2
Miles

Legend

- Freeways
- Highways
- Roads
- Railroads
- Parcels
- Sections
- Ranchos and Townships
- Los Padres National Forest
- City Boundaries
- County Boundary
- Ventura County Parcels
- Sphere of Influence
- Formation
- Annexation
- Detachment

Vicinity Map - Not to scale

Carpinteria Valley Water District Boundary Activity

See map at http://www.countyofsb.org/pwd/pwsurveyor.aspx?id=23260

InternalNo	Title	Type	Effective	County_Res	County_DT	LAFCO_Res	Instrument	Recorded
0	Carpinteria Valley Water District Formation	Formation	2/10/1941		2/10/1941		Min 23/385-389	
1	Resolution 16388	Annexation	1/21/1957	16388	1/21/1957			
2	Louis C. Blau	Annexation	7/26/1966	1966-634		1966-13	2159/1103-1115	7/26/1966
3	Borgatello (Kaiser-Aetna)	Annexation	10/9/1973			1972-304	2487/0394-0406	10/9/1973
4	Miller Reorganization	Detachment	8/17/1994			1994-10	1994-0064734	8/17/1994
5	Rancho Monte Alegre	Annexation	4/20/2004			2003-02	2004-0039865	4/20/2004
6	Railroad Corridor	Annexation	9/10/2014			2013-08	2014-0041234	9/10/2014
	Carpinteria Valley Water District Sphere of Influence	SOI	3/1/2012					

CENTRAL COAST WATER AUTHORITY
URBAN WATER MANAGEMENT PLAN

APPENDIX F – CALTRANS SOCIO-ECONOMIC FORECAST FOR SANTA BARBARA COUNTY

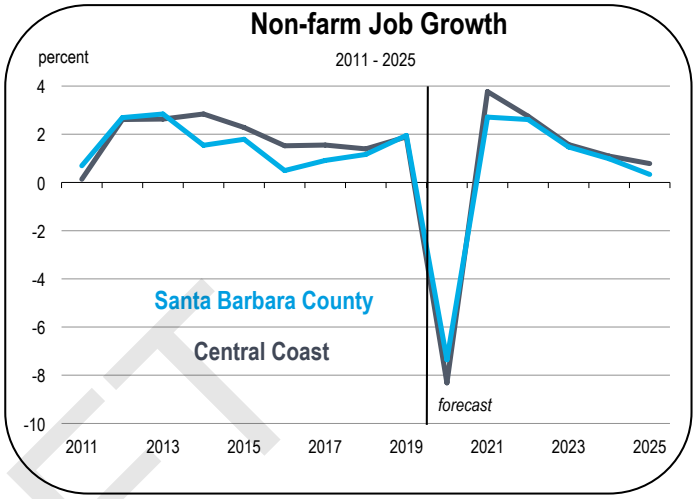
Santa Barbara County Economic Forecast

Forecast Summary

- It is estimated that an average of 13,000 to 17,000 jobs will be lost in Santa Barbara County during 2020. Job losses will be heavy in the first half of the year.
- Employment losses will be largest in leisure services, retail trade, professional business services, and government.
- Some sectors may expand slowly in 2020, including construction and financial activities.
- The unemployment rate averaged 3.7 percent in 2019. It will average between 8 percent and 10 percent for the 2020 calendar year.
- The Santa Barbara County population is expected to grow more quickly than the Central Coast average during most of the 2020-2025 forecast period.
- Home values are not expected to change much in 2020 or 2021.
- During the 2020-2025 forecast period, housing production is expected to be similar to the 2014-2019 period.

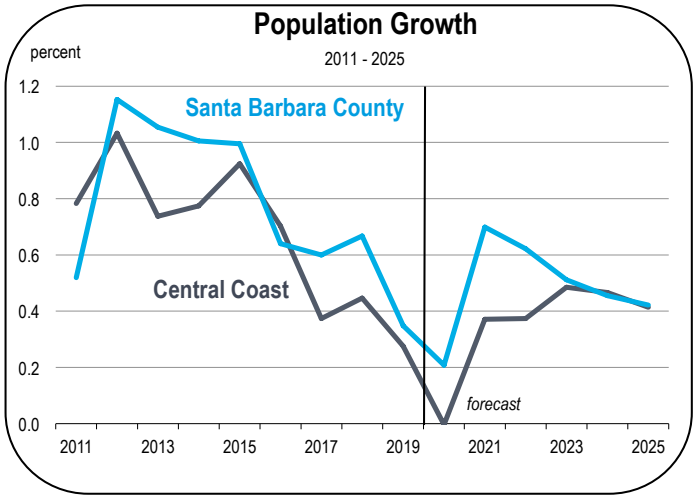
Job Growth

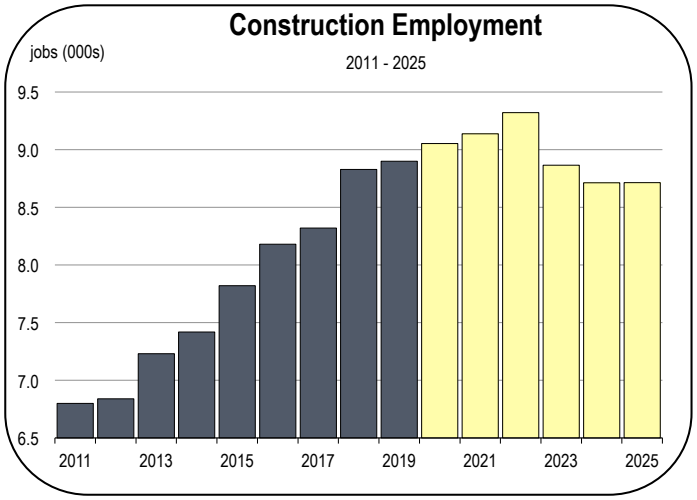
- Total employment in the county will decline by at least 6 percent in 2020. This is an annual average change from 2019.
- In 2021, Santa Barbara County is expected to re-gain many of the jobs that were lost during the Coronavirus Recession.



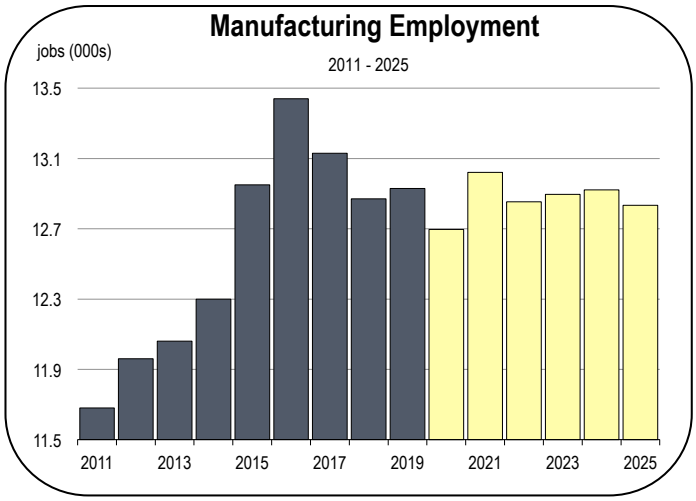
Construction Employment

- The construction sector is expected to expand by a small number of jobs in 2020 and 2021.
- Most California construction activity was deemed non-essential for portions of March and April, leading to construction layoffs.
- Restrictions on construction were lifted in late April, and overall construction activity began to ramp back up during the spring and summer.
- Construction projects will largely have resumed by 2021, but employment might decline again after 2022 as existing projects are completed and fewer new projects are started.





Santa Barbara County Economic Forecast



Manufacturing Employment

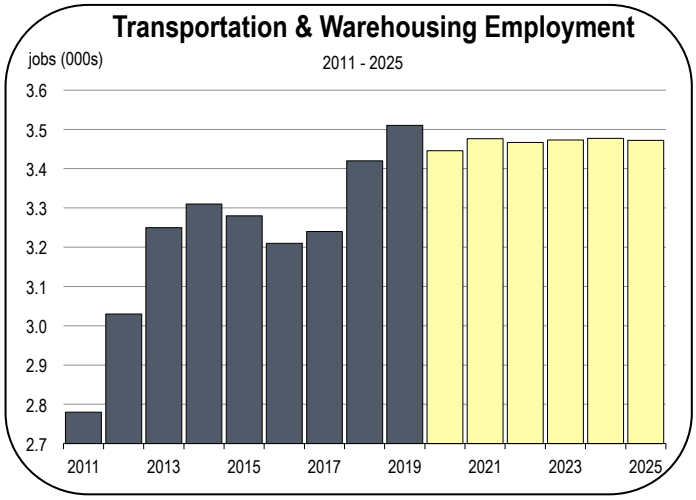
- Manufacturing employment is expected to decrease by a few hundred in Santa Barbara County during 2020.
- Manufacturing activity is forecast to rebound sharply after the recession subsides, but it is unlikely that sustained growth will transpire through the entire 2020-2025 forecast period.

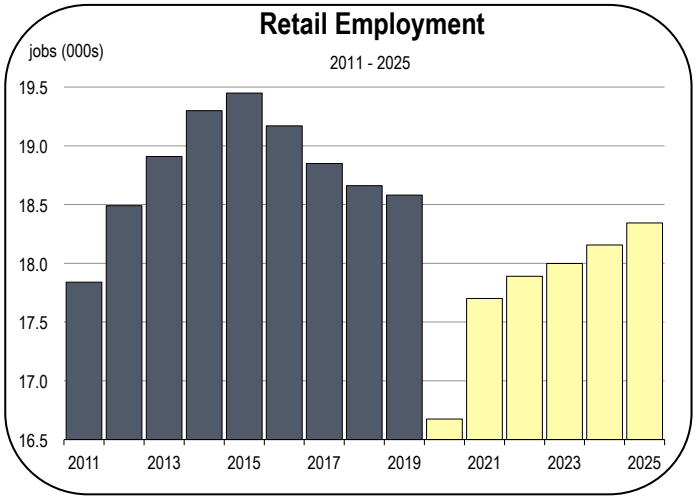
Transportation and Warehousing Employment

- Most transportation jobs in Santa Barbara County are in trucking and warehousing, where firms deliver goods to and from local businesses, and store these goods in logistics facilities.
- A meaningful share of Santa Barbara County transportation jobs are in delivery firms like UPS, FedEx, and Instacart. Delivery firms hired large numbers of workers during the second quarter of 2020, and could be among the few corners of the labor market to expand throughout the year.
- Approximately 300 jobs are located at the Santa Barbara and Santa Maria airports. Air travel declined sharply in 2020 as the coronavirus crisis severely limited passenger activity across the globe.
- Overall transportation and warehousing employment is not expected to expand in a meaningful way during the next few years.

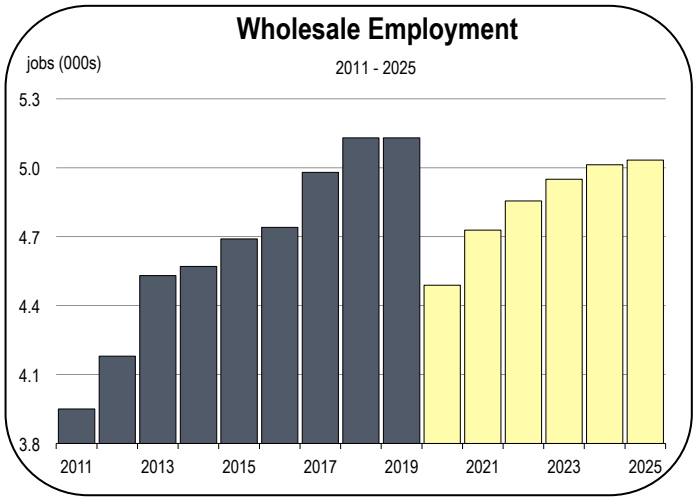
Retail Trade Employment

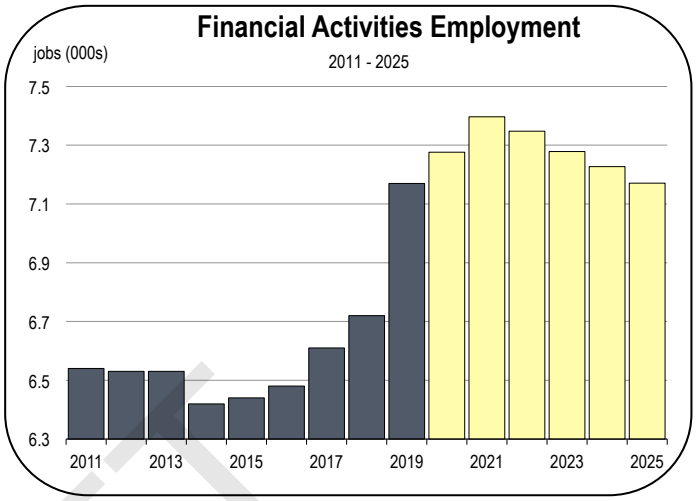
- The retail sector is expected to lose at least 1,800 jobs in 2020 on an annual average basis.
- Many retail chains chose to furlough their employees rather than lay them off completely, and furloughed workers are not considered to be unemployed. This is a technical detail that will mask the true number of work stoppages in the retail sector.
- Accounting for furloughed workers more than 3,000 retail workers could be effectively not working and not earning an income on an annual average basis in 2020.
- Retail trade jobs will return after in-store shopping is permitted in a sustained way.





Santa Barbara County Economic Forecast





Wholesale Trade Employment

- Wholesale trade employment is expected to fall by at least 500 jobs on an annual average basis in 2020.
- Wholesale employment is expected to re-gain some jobs in 2021 and 2022, but is unlikely to return to pre-recession levels during the 2020-2025 forecast period.

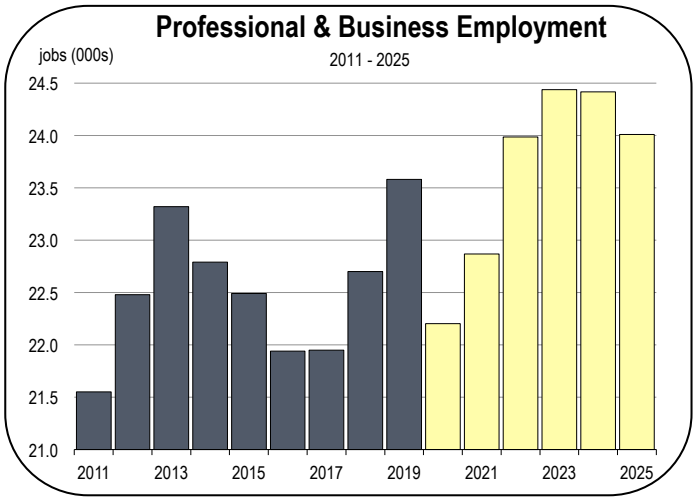
Financial Activities Employment

- The financial activities sector expanded strongly in 2019 and should add even more jobs in 2020 and 2021.
- The financial activities industry is primarily comprised of real estate companies, banks, and insurance firms, which were relatively unaffected by the Coronavirus Recession in Santa Barbara County.
- The most prominent growth is expected in real estate. Local banks and insurance firms have been consolidating for years, and are not expected to generate a substantial number of new jobs between 2020 and 2025.

Financial Activities Sub-Sectors 2019	Jobs in Subsector	Subsector's Share of Overall Industry
Real Estate	2,600	36.1%
Banks	1,700	23.6%
Insurance	1,300	18.1%
Asset Management	900	12.5%
Other	700	9.7%

Professional and Business Services Employment

- The professional and business services industry has a diverse array of subsectors, and each will be impacted differently during the recession and recovery phases of 2020 and 2021.
- Jobs in building maintenance declined substantially during the shutdowns but are expected to rebound at office and industrial buildings with repopulating employment.
- Staffing agencies had significant losses during the contraction, but may bounce back quickly through 2021.
- Staffing agencies primarily employ temp workers, who are often laid off first in a downturn but hired back first during a recovery.



Santa Barbara County Economic Forecast

Professional & Business Services Sub-Sectors 2019	Jobs in Subsector	Subsector's Share of Overall Industry
Building Maintenance	4,700	20.0%
Engineering & Architecture	3,300	14.0%
Corporate Headquarters	2,900	12.3%
Custom IT Services	2,700	11.5%
Staffing Agencies	2,100	8.9%
Scientific Research	1,100	4.7%
Business & Technical Consulting	1,100	4.7%
Accounting & Bookkeeping	1,100	4.7%
Law	900	3.8%
Total	3,600	15.3%

- Aside from maintenance, staffing agencies, and scientific research labs, most subsectors of the professional business services industry operated remotely and were largely unaffected by the shutdowns, although some had layoffs due to the recessionary macroeconomic conditions that persisted through the U.S.

Information Employment

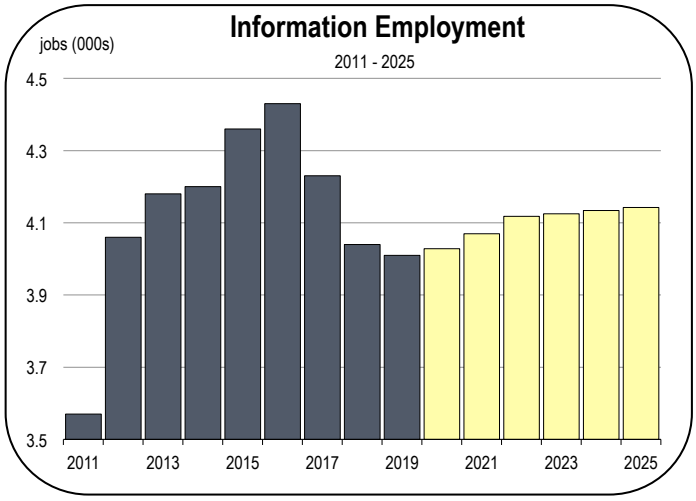
- In Santa Barbara County, the information sector is dominated by software firms.
- Software firms are primarily located near U.C. Santa Barbara. Major employers include Citrix and Procore, and the region has a particular concentration software that is designed for real estate, property management, and construction companies.

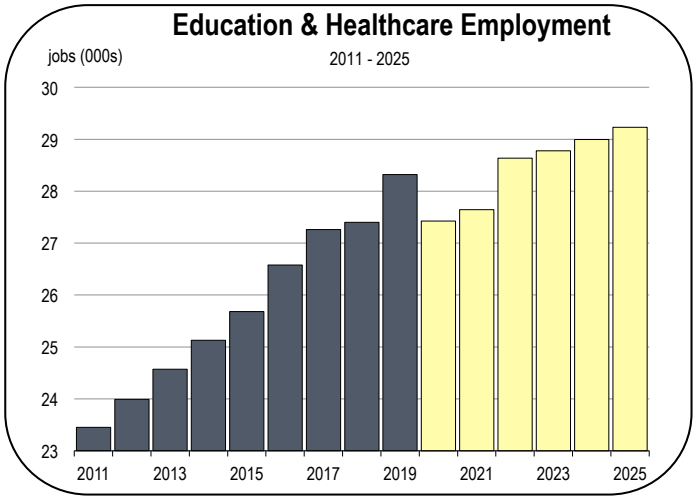
Information Sub-Sectors 2019	Jobs in Subsector	Subsector's Share of Overall Industry
Software Publishers	1,800	47.5%
Newspaper / Magazine / Book Publishing	400	10.7%
Radio & TV Broadcasting	300	9.0%
Movie Theaters	300	8.6%
Telecommunications	300	8.2%
Data & Internet Services	200	5.1%
Total	500	14.2%

- Aside from software publishing and data/Internet services, most subsectors of the information industry are in long-term patterns of stagnation, and will not generate a meaningful number of jobs during the 2020-2025 forecast period.

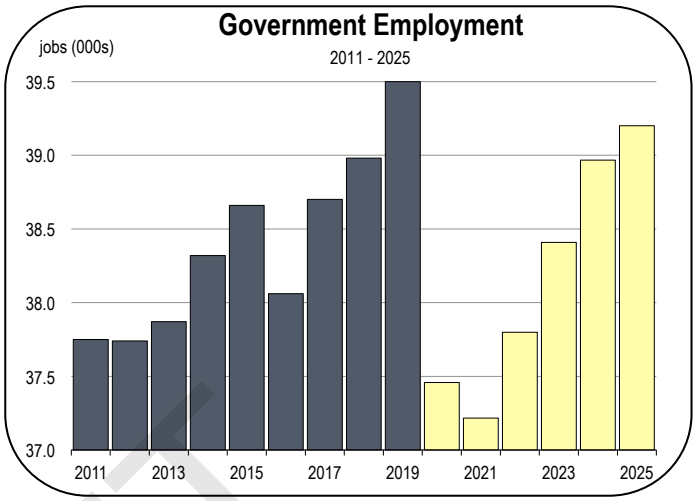
Private Education and Healthcare Employment

- There were 19,000 healthcare jobs in Santa Barbara County in 2019. Approximately 4,000 these jobs were in the Cottage Health system, which operates the primary hospitals in the county.
- Healthcare jobs were recession proof during the 2008-2009 financial crisis. However, some non-essential medical offices had to close in 2020.
- There were approximately 6,000 social assistance jobs in 2019, including industries like childcare, housing shelters, and non-medical care for senior citizens.





Santa Barbara County Economic Forecast



- There were also 3,000 jobs in private schools and colleges, tutoring services, vocational schools, and other educational organizations.
- Jobs in social assistance and education were mostly classified as essential. Nevertheless, there were layoffs at institutions with revenue shortfalls.

Leisure and Hospitality Employment

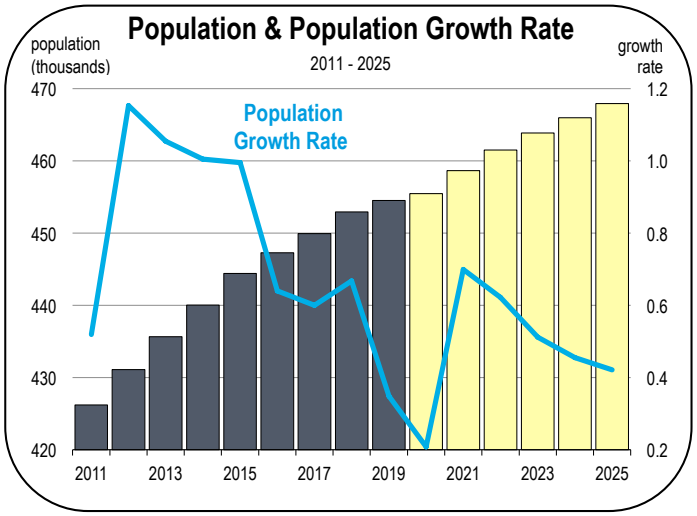
- The leisure and hospitality industry was devastated by the recession more than any other sector of the labor market.
- In 2019, Santa Barbara County had 25,000 jobs in restaurants, hotels, and bars. Our research indicates that most were laid off, furloughed, or had their hours cut in March and April of 2020.
- Santa Barbara also had 3,800 jobs in entertainment and recreation in 2019, including things like fitness centers, museums, and event venues. Many of these organizations will operate at reduced capacities into 2021.

Government Employment

- Government agencies are expected to lose revenue from taxes and fees in 2020, and these revenue shortfalls will likely persist into 2021 and 2022.
- Government employment is strongly influenced by enrollment at U.C. Santa Barbara.
- U.C. Santa Barbara has more than 10,000 employees and is the largest single employer in the county.
- Student enrollment is expected to increase by several thousand students over the forecast period, but because the Coronavirus Recession may lead to budget cuts for U.C. Santa Barbara, employment levels may decline.
- When government agencies need to reduce expenditures on salaries, many workers are expected to be given unpaid furlough days that are distributed throughout the year, and many staffing reductions could be the result of hiring freezes rather than layoffs.
- However, if revenue shortfalls are severe and Congress does not appropriate funding to mitigate these shortfalls, government agencies may have no choice but to issue layoffs.

Population Growth

- The Santa Barbara County population is expected to expand more quickly than the Central Coast average between 2020 and 2025.



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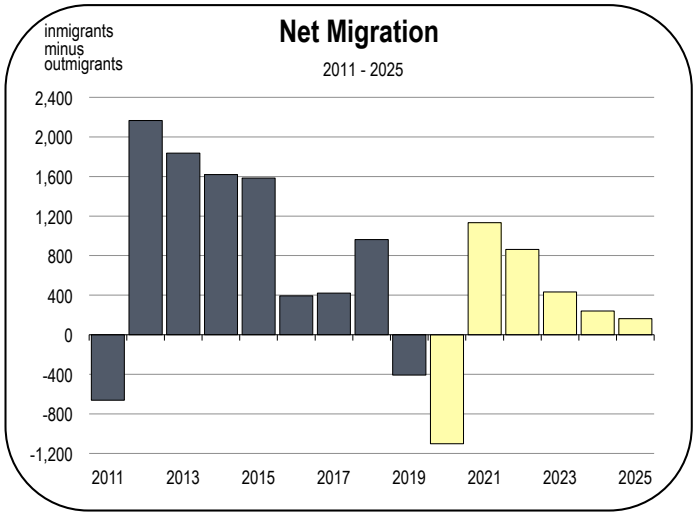
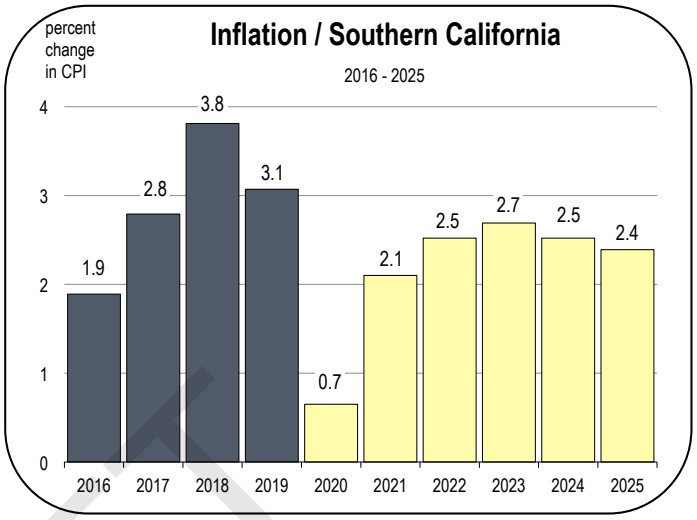




- Net migration is expected to be positive during most years of the forecast period, with more people moving into the county than moving out.
- The population will expand at an annual average rate of 0.5 percent per year from 2020 to 2025.
- By 2025 the Santa Barbara County population will surpass 465,000 residents.

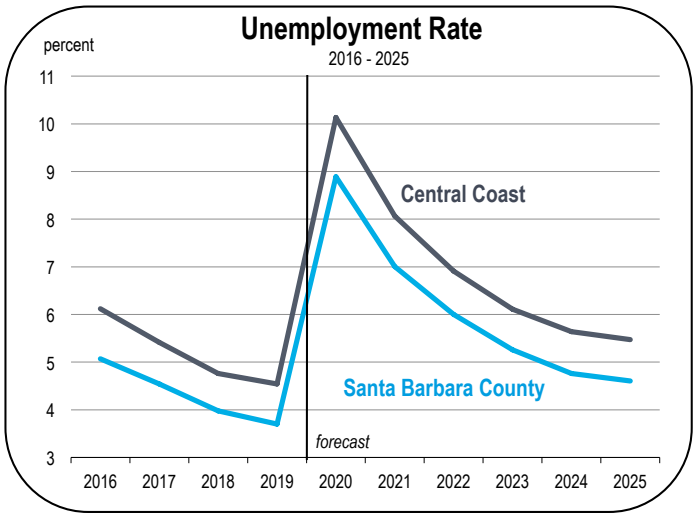
Unemployment and Inflation Rates

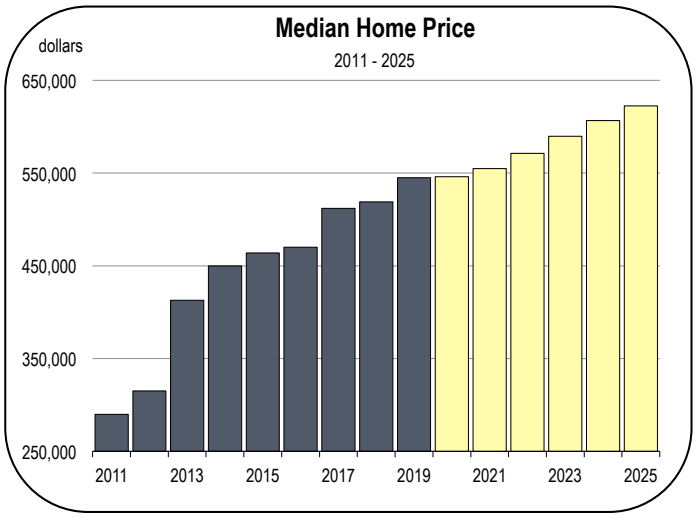
- The unemployment rate in Santa Barbara County averaged 3.7 percent in 2019, which was well below the composite rate for the Central Coast.
- The unemployment rate is expected to average between 8 and 10 percent in 2020.

- The unemployment rate is expected to remain elevated for several years, but is likely to improve more quickly than after the 2008-2009 recession.
- Inflation decelerated in 2019 as energy prices declined and home prices increased more slowly than the previous year.
- Inflation is expected to be very low in 2020 but could accelerate in 2021 or 2022.

Home Prices and New Housing Production

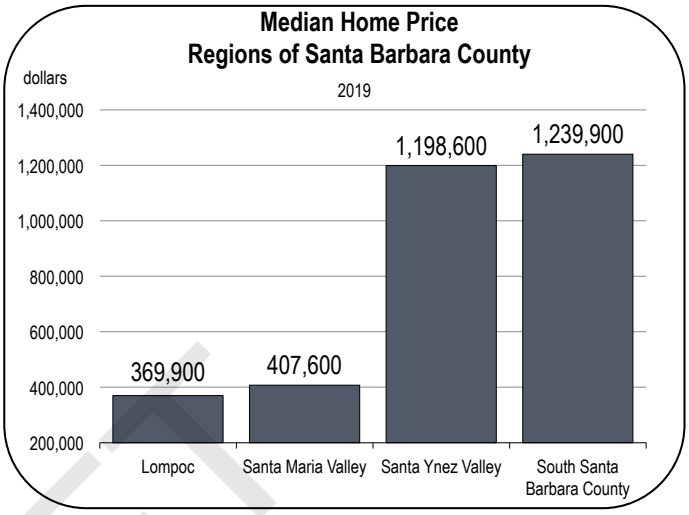
- In 2019 the median home price in Santa Barbara County was $545,100.
- The median price is not expected to show much change in 2020 or 2021.

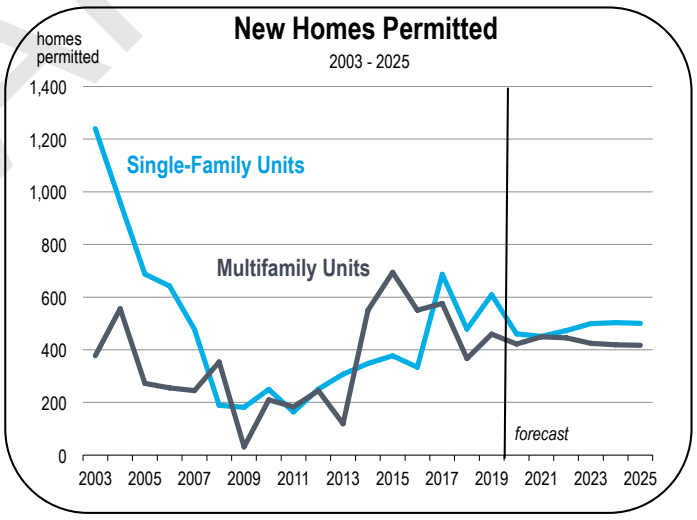




Santa Barbara County Economic Forecast

- Home prices differ drastically across the carious regions of Santa Barbara County.
- In Southern Santa Barbara County, which includes the City of Santa Barbara and is the primary tourist destination in the county, the median home price exceeded $1.2 million in 2019.
- In the Santa Ynez Valley, which is home to Santa Barbara County's wine making industry and is within commuting distance of the job centers of the southern portion of the county, the median home price was almost $1.2 million in 2019.
- In Southern Santa Barbara County and the Santa Ynez Valley, home prices have become prohibitively expensive. In order to afford a median priced home, the typical household would have had to spend 57 percent of its income on mortgage payments in 2019, making this area one of the most expensive markets in the country.
- Across California, the typical household would have to spend approximately 30 percent of its income on mortgage payments for the median priced home.
- Across the northern portion of Santa Barbara County, which includes Lompoc and the Santa Maria Valley, the median home price was well below $500,000 in 2019, less than half as expensive as the southern portion of the county.
- From 2014 to 2019, an average of 1,000 new homes were started per year in Santa Barbara County. Approximately half were single-family homes and the other half were apartments and condos.
- Housing production is expected to average 910 homes per year from 2020 to 2025, consisting of an even mix of single-family homes and multifamily units.





Santa Barbara County Economic Forecast

Economic Indicators — 2015-2019 History, 2020-2050 Forecast

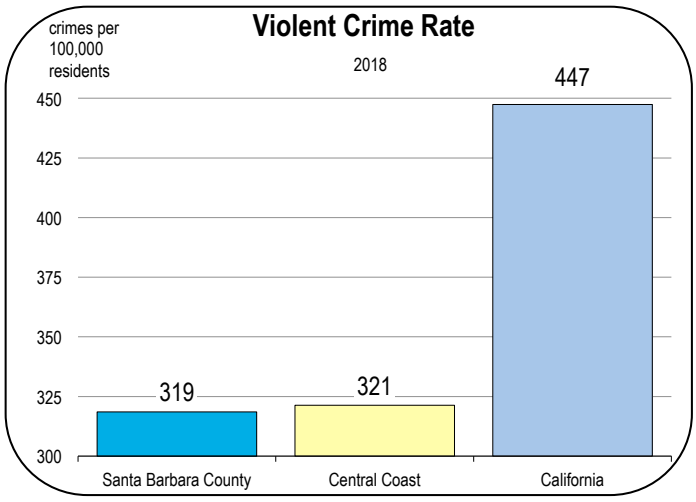
	Population (people)	House-holds (thousands)	Net Migration (people)	New Homes Permitted (homes)	Registered Vehicles (thousands)	Personal Income (billions)	Taxable Retail Sales (billions)	Total Taxable Sales (billions)	Real Industrial Production (billions)	Real per Capita Income (dollars)	Unemployment Rate (percent)	Real Farm Production (billions)	Inflation Rate (percent)
2015	444,421	144.9	1,583	1,071	394	$25.4	$4.8	$6.8	$3.4	$63,938	5.3	1.7	0.9
2016	447,267	146.4	392	884	404	$25.5	$4.8	$6.9	$3.3	$62,794	5.1	1.6	1.9
2017	449,950	147.1	422	1,263	403	$26.6	$4.9	$7.1	$3.4	$63,183	4.5	1.7	2.8
2018	452,953	148.1	963	846	406	$28.0	$5.2	$7.3	$3.5	$63,695	4.0	1.6	3.8
2019	454,529	149.5	-408	1,069	414	$29.5	$5.3	$7.6	$3.5	$65,002	3.7	1.6	3.1
2020	455,475	149.7	-1,102	882	412	$29.3	$4.1	$5.9	$3.7	$63,810	8.9	1.6	0.7
2021	458,660	150.7	1,133	900	413	$30.1	$4.9	$7.0	$3.7	$63,958	7.0	1.6	2.1
2022	461,513	151.6	863	918	414	$31.4	$5.1	$7.4	$3.6	$64,519	6.0	1.6	2.5
2023	463,874	152.5	433	924	416	$32.7	$5.4	$7.7	$3.7	$65,238	5.3	1.6	2.7
2024	465,984	153.4	240	923	417	$34.1	$5.6	$8.0	$3.7	$66,052	4.8	1.6	2.5
2025	467,948	154.2	163	917	418	$35.4	$5.9	$8.4	$3.7	$66,700	4.6	1.7	2.4
2026	469,902	155.0	205	920	419	$36.9	$6.0	$8.6	$3.8	$67,537	4.4	1.7	2.3
2027	471,730	155.8	162	921	421	$38.4	$6.2	$8.9	$3.9	$68,437	4.2	1.7	2.2
2028	473,529	156.6	209	923	422	$39.9	$6.4	$9.1	$3.9	$69,372	4.1	1.7	2.3
2029	475,260	157.5	194	909	423	$41.4	$6.6	$9.4	$4.0	$69,967	4.0	1.7	2.4
2030	476,992	158.3	238	894	425	$42.8	$6.8	$9.7	$4.0	$70,575	3.9	1.7	2.3
2031	478,591	159.0	233	882	426	$44.3	$6.9	$9.9	$4.1	$71,181	3.8	1.8	2.2
2032	480,069	159.8	213	869	427	$45.7	$7.1	$10.1	$4.1	$71,595	3.7	1.8	2.4
2033	481,517	160.5	267	860	428	$47.2	$7.2	$10.3	$4.2	$72,246	3.8	1.8	2.0
2034	482,888	161.3	314	842	429	$48.8	$7.4	$10.6	$4.2	$72,864	3.9	1.8	2.2
2035	484,206	162.0	385	824	430	$50.4	$7.6	$10.8	$4.3	$73,479	4.0	1.8	2.3
2036	485,436	162.7	409	802	431	$52.2	$7.8	$11.2	$4.3	$73,895	4.0	1.9	2.7
2037	486,638	163.4	478	786	432	$54.0	$8.1	$11.5	$4.3	$74,254	4.1	1.9	2.8
2038	487,811	164.1	570	772	433	$55.9	$8.3	$11.8	$4.4	$74,748	4.0	1.9	2.6
2039	488,909	164.7	584	759	434	$57.9	$8.5	$12.2	$4.4	$75,164	4.1	1.9	2.8
2040	489,945	165.4	651	743	435	$59.9	$8.8	$12.5	$4.4	$75,615	4.1	1.9	2.7
2041	490,859	166.0	677	730	435	$62.1	$9.0	$12.8	$4.5	$76,275	4.2	2.0	2.5
2042	491,702	166.6	703	715	436	$64.2	$9.2	$13.1	$4.5	$77,003	4.3	2.0	2.4
2043	492,509	167.2	739	700	437	$66.5	$9.4	$13.5	$4.6	$77,787	4.3	2.0	2.3
2044	493,170	167.8	664	685	437	$68.7	$9.6	$13.7	$4.6	$78,683	4.2	2.0	2.1
2045	493,747	168.4	662	665	438	$71.1	$9.9	$14.1	$4.7	$79,548	4.0	2.1	2.3
2046	494,264	169.0	653	649	438	$73.5	$10.1	$14.4	$4.7	$80,326	4.1	2.1	2.2
2047	494,713	169.6	646	632	438	$75.7	$10.3	$14.7	$4.8	$80,963	4.0	2.1	2.2
2048	495,107	170.1	643	616	439	$78.0	$10.6	$15.1	$4.8	$81,535	4.1	2.1	2.2
2049	495,323	170.6	533	600	439	$80.5	$10.8	$15.5	$4.8	$82,292	4.2	2.2	2.2
2050	495,454	171.1	536	585	439	$82.9	$11.1	$15.8	$4.9	$83,018	4.3	2.2	2.2

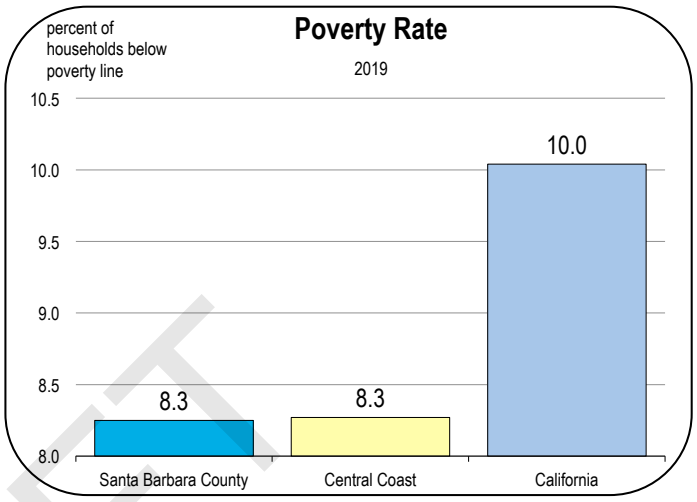
Employment Sectors — 2015-2019 History, 2020-2050 Forecast

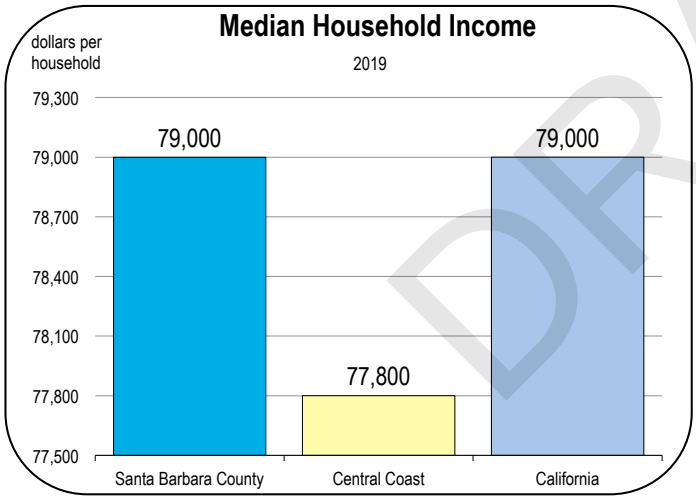
	Total Wage & Salary	Farm	Construction	Manufac-turing	Transportation & Utilities	Wholesale & Retail Trade	Financial Activities	Professional Services	Information	Health & Education	Leisure	Government
	(thousands of jobs)											
2015	200.4	21.0	7.8	13.0	3.3	24.1	6.4	22.5	4.4	25.7	26.6	38.7
2016	201.3	20.9	8.2	13.4	3.2	23.9	6.5	21.9	4.4	26.6	27.2	38.1
2017	203.7	21.7	8.3	13.1	3.2	23.8	6.6	22.0	4.2	27.3	27.8	38.7
2018	207.0	22.9	8.8	12.9	3.4	23.8	6.7	22.7	4.0	27.4	28.2	39.0
2019	211.8	24.0	8.9	12.9	3.5	23.7	7.2	23.6	4.0	28.3	28.5	39.5
2020	196.9	23.0	9.1	12.7	3.4	21.2	7.3	22.2	4.0	27.4	22.7	37.5
2021	203.1	24.5	9.1	13.0	3.5	22.4	7.4	22.9	4.1	27.6	24.6	37.2
2022	207.8	24.5	9.3	12.9	3.5	22.7	7.3	24.0	4.1	28.6	25.7	37.8
2023	210.9	24.9	8.9	12.9	3.5	22.9	7.3	24.4	4.1	28.8	27.2	38.4
2024	213.0	25.2	8.7	12.9	3.5	23.2	7.2	24.4	4.1	29.0	28.1	39.0
2025	213.8	25.4	8.7	12.8	3.5	23.4	7.2	24.0	4.1	29.2	28.6	39.2
2026	215.2	25.5	8.7	12.9	3.5	23.4	7.1	24.1	4.2	29.4	29.1	39.4
2027	216.2	25.6	8.7	13.0	3.5	23.5	7.1	24.1	4.2	29.7	29.4	39.5
2028	217.3	25.8	8.8	13.1	3.5	23.6	7.1	24.3	4.2	29.8	29.5	39.7
2029	218.3	26.0	8.8	13.2	3.5	23.6	7.1	24.4	4.2	30.0	29.7	39.8
2030	219.4	26.2	8.8	13.3	3.5	23.7	7.1	24.6	4.2	30.2	29.8	40.0
2031	220.2	26.4	8.8	13.3	3.5	23.7	7.1	24.7	4.2	30.4	30.0	40.1
2032	220.9	26.6	8.8	13.4	3.5	23.7	7.0	24.6	4.2	30.6	30.2	40.2
2033	221.6	26.9	8.7	13.4	3.5	23.7	7.0	24.6	4.2	30.8	30.3	40.3
2034	222.3	27.1	8.7	13.5	3.6	23.7	7.0	24.6	4.2	30.9	30.5	40.3
2035	223.1	27.3	8.7	13.5	3.6	23.8	7.0	24.6	4.2	31.1	30.7	40.5
2036	224.0	27.5	8.7	13.6	3.6	23.8	6.9	24.6	4.2	31.3	30.8	40.6
2037	224.8	27.8	8.7	13.6	3.6	23.8	6.9	24.6	4.2	31.5	31.0	40.8
2038	225.8	28.0	8.7	13.6	3.6	23.8	6.9	24.7	4.2	31.7	31.2	41.0
2039	226.7	28.3	8.7	13.7	3.6	23.8	6.9	24.8	4.2	31.9	31.3	41.2
2040	227.7	28.5	8.7	13.7	3.6	23.8	6.9	24.9	4.2	32.1	31.5	41.3
2041	228.6	28.8	8.7	13.8	3.6	23.8	6.9	25.0	4.2	32.3	31.7	41.5
2042	229.6	29.0	8.7	13.8	3.6	23.8	6.8	25.1	4.2	32.5	31.8	41.7
2043	230.6	29.3	8.7	13.8	3.6	23.8	6.8	25.3	4.3	32.7	32.0	41.8
2044	231.5	29.6	8.7	13.9	3.6	23.8	6.8	25.4	4.3	32.9	32.2	42.0
2045	232.6	29.8	8.7	13.9	3.6	23.9	6.8	25.5	4.3	33.1	32.3	42.2
2046	233.6	30.1	8.7	13.9	3.6	23.9	6.8	25.6	4.3	33.3	32.5	42.4
2047	234.6	30.4	8.7	14.0	3.6	23.9	6.8	25.7	4.3	33.5	32.6	42.6
2048	235.6	30.7	8.7	14.0	3.6	23.9	6.7	25.8	4.3	33.8	32.8	42.8
2049	236.6	31.0	8.6	14.0	3.7	23.9	6.7	25.9	4.3	34.0	32.9	43.0
2050	237.7	31.3	8.6	14.1	3.7	23.9	6.7	26.0	4.3	34.2	33.1	43.2

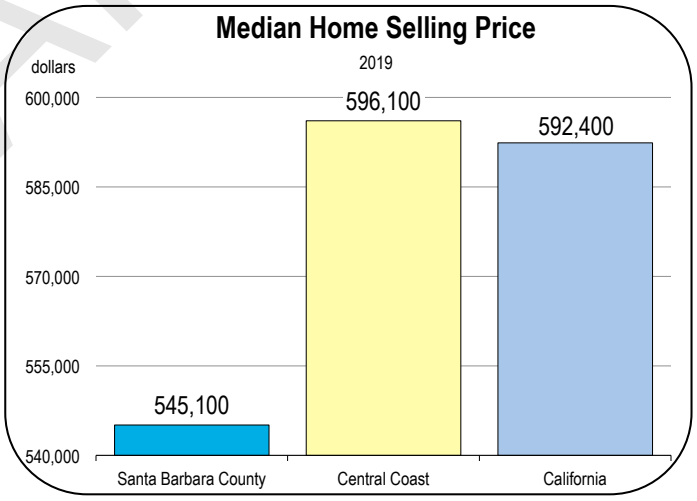
Santa Barbara County Economic Forecast

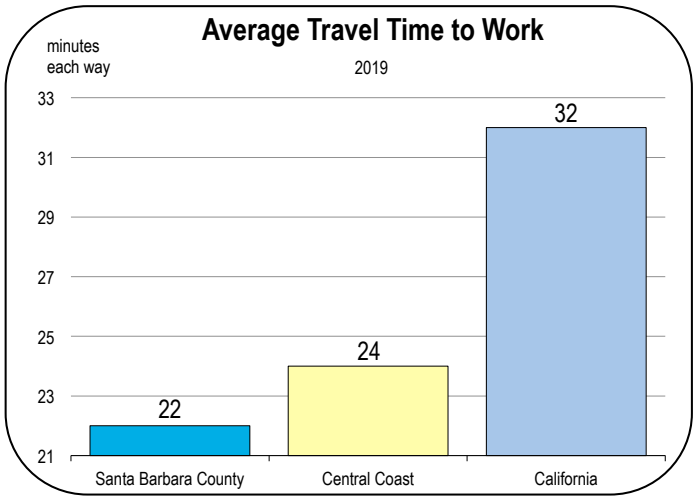
Socioeconomic Indicators

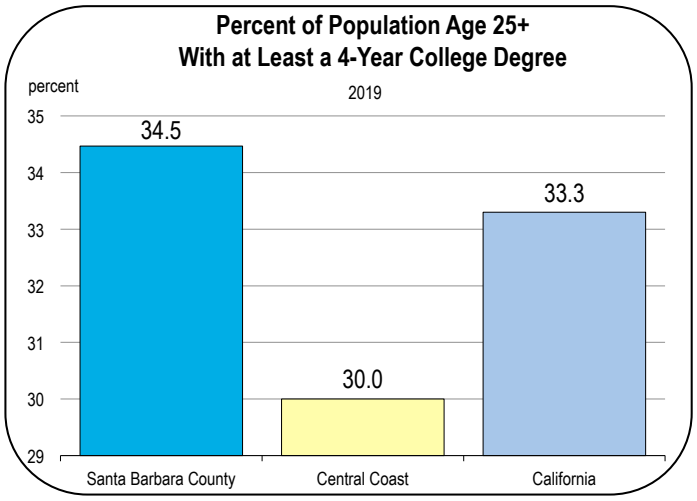












CENTRAL COAST WATER AUTHORITY
URBAN WATER MANAGEMENT PLAN

APPENDIX G – COMPLETED AWWA AUDIT REPORTS

AWWA Free Water Audit Software v6.1

FWAS v6.1

This spreadsheet-based water audit tool is designed to help quantify and track water losses associated with water distribution systems and identify areas for improved efficiency and cost recovery. It provides a "top-down" summary water audit format and is not meant to take the place of a full-scale, comprehensive water audit format. Auditors are strongly encouraged to refer to the most current edition of AWWA M36 Manual for Water Audits for detailed guidance on the water auditing process and targeting loss reduction levels. This tool contains several separate worksheets. Sheets can be accessed using the tabs at the bottom of the screen, or by clicking the TOC links below.

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- Example Water Audit v6.0
- Water Audit Compiler v6.0
- AWWA Reports on Performance Indicators
- M36 Manual
- Leakage Emissions Initiative - Water Loss Control Committee Report[10]

Enter Basic Information

Name of Utility:	Central Coast Water Authority
Name of Contact Person:	David Beard
Email:	drb@ccwa.com
Telephone | Ext.:	(805) 688-2292 Ext. 228
City/Town/Municipality:	Buellton
State / Province:	California (CA)
Country:	USA
Audit Preparation Date:	Mar 20 2026
Audit Year:	2021
Audit Year Label:	Calendar (Fiscal, Calendar, etc)
Audit Period Start Date:	Jan 01 2021
Audit Period End Date:	Dec 31 2021
Volume Reporting Units:	Acre-feet
Water System Structure:	Wholesale
Water Type:	Potable Water
System ID Number:	4210030
Validator Name/ID:	N/A
Validator Email:	N/A
Estimated Total Population Served by Water Utility:	

Key of Input Acronyms

In order of appearance in the Worksheet

VOS	Volume from Own Sources
VOSEA	VOS Error Adjustment
WI	Water Imported
WIEA	WI Error Adjustment
WE	Water Exported
WEEA	WE Error Adjustment
BMAC	Billed Metered Authorized Consumption
BUAC	Billed Unmetered Authorized Consumption
UMAC	Unbilled Metered Authorized Consumption
UUAC	Unbilled Unmetered Authorized Consumption
SDHE	Systematic Data Handling Errors
CMI	Customer Metering Inaccuracies
UC	Unauthorized Consumption
Lm	Length of mains
Nc	Number of service connections
Lp	Average length of (private) customer service line
AOP	Average Operating Pressure
CRUC	Customer Retail Unit Charge
VPC	Variable Production Cost

Color Key User input | Calculated | Optional default

Guidance for the Worksheet

Choosing to enter unit of **percent** or **volume** (applies to VOSEA, WIEA, WEEA, CMI) choose entry option:

1.00%	percent	*or*
	volume	25.000

Choosing to enter **default** or **custom input** (applies to UUAC, SDHE, UC) choose entry option:

0.25%	default	*or*
	custom	75.000

Guidance for the Interactive Data Grading

Use acronym buttons in IDG header to navigate among inputs. Acronym Key above. White = needs answers, orange = complete, clear = not required. Example below.

VOS	VOSEA	WI	WIEA	WE	WEEA	BMAC	BUAC	UMAC	UUAC
SDHE	CMI	UC	Lm	Nc	Lp	AOP	CRUC	VPC	

After clicking an acronym button, answer all visible questions in the order they're presented, choosing best-fit answer

Grade will populate when all visible questions are complete for an input: **7**

The limiting criteria will be labeled along the right. If only 1 limiting criterion is shown, improving on that criterion will achieve a higher data grade. If multiple limiting criteria are shown, improving on *each* limiting criterion is necessary to achieve a higher data grade. A complete inventory of data grading criteria is available in the Data Grading Matrix v6.0 (see web resources)

Limiting

If you have questions or comments regarding this software please contact us at: wlc@awwa.org

AWWA Free Water Audit Software: Worksheet

FWAS v6.1
American Water Works Association.

Water Audit Report for: Central Coast Water Authority
Audit Year: 2021 | Jan 01 2021 - Dec 31 2021 | Calendar

Click 'n' to add notes
Click 'g' to determine data validity grade

To edit water system info: go to start page

To access definitions, click the input name

All volumes to be entered as: ACRE-FEET PER YEAR

Water Supplied Error Adjustments

WATER SUPPLIED

choose entry option:

VOS	Volume from Own Sources:	n	g	6	14,272.000	Acre-ft/Yr	n	g	9	percent	VOSEA
WI	Water Imported:	n	g	n/a		Acre-ft/Yr					WIEA
WE	Water Exported:	n	g	n/a		Acre-ft/Yr					WEEA
	WATER SUPPLIED:				14,272.000	Acre-ft/Yr					

AUTHORIZED CONSUMPTION

choose entry option:

BMAC	Billed Metered:	n	g	9	14,125.000	Acre-ft/Yr		
BUAC	Billed Unmetered:	n	g	n/a		Acre-ft/Yr		
UMAC	Unbilled Metered:	n	g	n/a		Acre-ft/Yr		
UUAC	Unbilled Unmetered:	n	g	3	35.313	Acre-ft/Yr	0.25%	default

Default option selected for Unbilled Unmetered, with automatic data grading of 3

AUTHORIZED CONSUMPTION: 14,160.313 Acre-ft/Yr

WATER LOSSES

111.688 Acre-ft/Yr

Apparent Losses

choose entry option:

Default option selected for Systematic Data Handling Errors, with automatic data grading of 3

SDHE	Systematic Data Handling Errors:	n	g	3	35.313	Acre-ft/Yr	0.25%	default	
CMI	Customer Metering Inaccuracies:	n	g	10	0.000	Acre-ft/Yr		percent	under-registration
UC	Unauthorized Consumption:	n	g	3	35.313	Acre-ft/Yr	0.25%	default	

Default option selected for Unauthorized Consumption, with automatic data grading of 3

Apparent Losses: 70.625 Acre-ft/Yr

Real Losses

Real Losses: 41.063 Acre-ft/Yr

WATER LOSSES: 111.688 Acre-ft/Yr

NON-REVENUE WATER

NON-REVENUE WATER: 147.000 Acre-ft/Yr

SYSTEM DATA

Lm	Length of mains:	n	g	10	122.8	miles	(including fire hydrant lead lengths)
Nc	Number of service connections:	n	g	8	10		(active *and* inactive)
	Service connection density:				0	conn./mile main	
	Are customer meters typically located at the curbstop/property line?				No		
Lp	Average length of (private) customer service line:	n	g	10		ft	(average distance between property line and meter)
AOP	Average Operating Pressure:	n	g	7	165.3	psi	

COST DATA

CRUC	Customer Retail Unit Charge:	n	g	n/a			Total Annual Operating Cost
VPC	Variable Production Cost:	n	g	10		$/acre-ft	$/yr (optional input)

Click here to calculate carbon emissions ---> carbon

WATER AUDIT DATA VALIDITY TIER:

***** The Water Audit Data Validity Score is in Tier IV (71-90). See Dashboard tab for additional outputs. *****

go to dashboard

A weighted scale for the components of supply, consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION TO IMPROVE DATA VALIDITY:

Based on the information provided, audit reliability can be most improved by addressing the following components:

1: Volume from Own Sources (VOS)
2: Unauthorized Consumption (UC)
3: Systematic Data Handling Errors (SDHE)

KEY PERFORMANCE INDICATOR TARGETS:

OPTIONAL: If targets exist for the operational performance indicators, they can be input below:

Unit Total Losses:		gal/conn/day
Unit Apparent Losses:		gal/conn/day
Unit Real Losses[A]:		gal/conn/day
Unit Real Losses[B]:		gal/mile/day

If entered above by user, targets will display on KPI gauges (see Dashboard)

FWAS v6.1

AWWA Free Water Audit Software: Dashboard

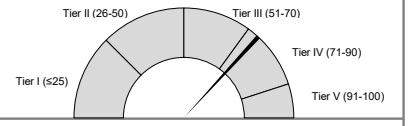
go to worksheet | go to grading | go to references

Water Audit Report for: Central Coast Water Authority **Audit Year:** 2021 Calendar Jan 01 2021 - Dec 31 2021

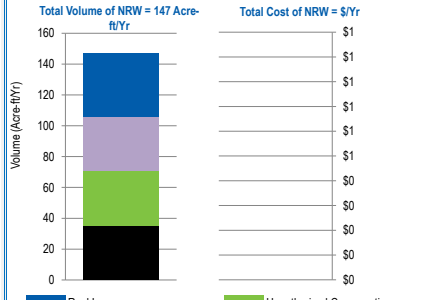
Data Validity

Data Validity Score: 73 **Data Validity Tier:** Tier IV (71-90)

See Loss Control Planning for Tier Details



NRW Components Summary



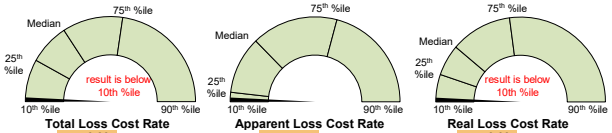
	Volume Acre-ft/Yr	Value $/Yr	Carbon Emissions mt/Yr
Apparent Losses	70.6		0
Real Losses	41.1	$0	0
Unbilled Authorized Cons	35.3		0
Non-Revenue Water	147.0		0

mt = metric tons

Key Performance Indicators

Actual KPI result | Target (see Worksheet)

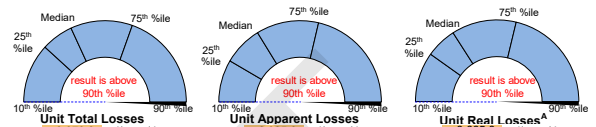
gauge %iles per validated industry ranges[2]



Total Loss Cost Rate 0.00 $/conn/year

Apparent Loss Cost Rate $/conn/year

Real Loss Cost Rate 0.00 $/conn/year

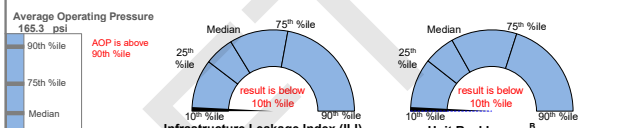


Unit Total Losses 9,970.8 gal/conn/day

Unit Apparent Losses 6,305.0 gal/conn/day

Unit Real Losses[A] 3,665.8 gal/conn/day

Average Operating Pressure 165.3 psi



Infrastructure Leakage Index (ILI) 0.3 dimensionless

Unit Real Losses[B] 299 gal/mile/day

See UARL definition for additional guidance on the ILI

(UARL) Unavoidable Annual Real Losses 123.3 Acre-ft/Yr 11,006.5 gal/conn/day

Guidance Information for Key Performance Indicators

- The eight indicators shown are the recommended suite per the AWWA Water Loss Control Committee 2020 Position on KPIs[1].
- A suite of KPIs is necessary, as no single KPI can holistically communicate water loss performance for a given water system.
- See Table 1 below for Uses and Limitations for each KPI, excerpted from the AWWA Water Loss Control Committee Report (2020)[1], with naming conventions updated.
- Percentiles (%iles) shown on KPI gauges come from Level 1 validated data in the AWWA WLCC Reference Water Audit Dataset (2020)[2].
- KPI %iles shown above are not segregated by cohorts. Limited KPI data by cohorts may be found in WRF 4695 Guidance Manual, Appendix B (2019)[3].
- Actual KPI results that fall below 10th %ile or above 90th %ile do not necessarily imply error, but should be viewed with scrutiny.
- Percentiles not intended to imply targets. Targets may be input by user for operational KPIs, if desired, on Worksheet.
- See UARL and ILI in Definitions tab for discussion of size and pressure limitations.
- Systems that fall on the extreme ends of size or connection density should use caution when interpreting Unit Losses KPIs.

Table 1

Source: AWWA Water Loss Control Committee Report (2020)[1], with naming conventions updated

2020 AWWA Water Audit Method – Water Audit Outputs and Key Performance Indicators: Uses and Limitations

Type	Indicator	Description	Suitable Purposes: Assessment	Bench-Marking	Target-Setting	Planning	Tracking	Uses and Limitations	Principal Users
Attribute	Apparent Loss Volume	Calculated by Free Water Audit Software	✓				✓	Assess loss level	Utility, Regulators
	Apparent Loss Cost	Calculated by Free Water Audit Software	✓				✓	Assess cost loss level	Utility, Regulators
	Real Loss Volume	Calculated by Free Water Audit Software	✓				✓	Assess loss level	Utility, Regulators
	Real Loss Cost	Calculated by Free Water Audit Software	✓				✓	Assess loss cost level	Utility, Regulators
	Unavoidable Annual Real Loss (UARL)	Calculated by Free Water Audit Software	✓				✓	Reveal theoretical technical low level of leakage	Utility, Regulators
Volume	Unit Apparent Losses (vol/conn/day)	Strong and understandable indicator for multiple users.	✓	✓	✓	✓	✓	Used for performance tracking and target-setting	Utility, Regulators
	Unit Real Losses[A] (vol/conn/day)	Strong and understandable indicator for multiple users.	✓	✓	✓	✓	✓	Used for performance tracking and target-setting	Utility, Regulators, Policy Makers
	Unit Real Losses[B] (vol/pipeline length/ day)	Strong and understandable indicator for use by utilities with low connection density.	✓	✓	✓	✓	✓	Data collection and assessment of systems with "low" connection density	Utility, Regulators, Policy Makers
	Unit Total Losses (vol/conn/day) **New KPI**	Strong and understandable indicator, suitable for high-level performance measurement.	✓				✓	High level indicator for trending analysis. Not appropriate for target-setting or benchmarking	Utilities, Customers
	Infrastructure Leakage Index (ILI)	Robust, specialized ratio KPI; can be influenced by pressure and connection density.	✓	✓			✓	Benchmarking after pressure management is implemented	Utilities
Value	Apparent Loss Cost Rate (value/conn/year) **New KPI**	Indicators with sufficient technical rigor. Provide the unit financial value of each type of loss, which is useful for planning and assessment of cost efficiency of water loss reduction and control interventions and programs.	✓			✓	✓	Data collection and assessment on AWWA indicators or contextual parameters to use in conjunction with Loss Cost Rates	Utilities, Regulators, Customers
	Real Loss Cost Rate (value/conn/year) **New KPI**		✓			✓	✓		Utilities, Regulators, Customers
Validity	Data Validity Tier (DVT)	Strong indicator of water loss audit data quality, if data has been validated. Tier provides guidance on priority areas of activity.	✓	✓		✓	✓	Assess caliber of data inputs of the water audit	Regulators, Utilities

AWWA Free Water Audit Software
Water Balance

VOLUME in Acre-ft/Yr

Water Audit Report for: Central Coast Water Authority
Audit Year: 2021 Jan 01 2021 - Dec 31 2021
Data Validity Tier: Tier IV (71-90)

FWAS v6.1

Volume from Own Sources (VOS)
(corrected for known errors)
14,272.000

Water Imported (WI)
(corrected for known errors)
0.000

System Input Volume
14,272.000

Water Exported (WE)
(corrected for known errors)
0.000

Water Supplied
14,272.000

Billed Water Exported

Revenue Water (Exported)
0.000

Authorized Consumption
14,160.313

Billed Authorized Consumption
14,125.000

Billed Metered Consumption (BMAC) (water exported is removed)
14,125.000

Billed Unmetered Consumption (BUAC)
0.000

Revenue Water
14,125.000

Unbilled Authorized Consumption
35.313

Unbilled Metered Consumption (UMAC)
0.000

Unbilled Unmetered Consumption (UUAC)
35.313

Non-Revenue Water (NRW)
147.000

Water Losses
111.688

Apparent Losses
70.625

Systematic Data Handling Errors (SDHE)
35.313

Customer Metering Inaccuracies (CMI)
0.000

Unauthorized Consumption (UC)
35.313

Real Losses
41.063

Target Leakage Reduction
0.000

Leakage Level After Reduction
41.063

Water Audit Report for: Central Coast Water Authority
Audit Year: 2021 Jan 01 2021 - Dec 31 2021
Data Validity Tier: Tier IV (71-90)

Water Loss Control Planning Guide

Functional Focus Area	Water Audit Data Validity Tier (Score Range)				
	Tier I (1-25)	Tier II (26-50)	Tier III (51-70)	Tier IV (71-90)	Tier V (91-100)
Audit Data Collection	Launch auditing and loss control team; address supply metering deficiencies	Analyze business process for customer metering and billing functions and water supply operations; Identify data gaps; improve supply metering	Establish/revise policies and procedures for data collection	Refine data collection practices and establish as routine business process	Annual water audit is a reliable gauge of year-to-year water efficiency standing
Short-term loss control	Research information on leak detection programs; Begin flowcharting analysis of customer billing system	Conduct loss assessment investigations on a sample portion of the system: customer meter testing, leak survey, unauthorized consumption, etc	Establish ongoing mechanisms for customer meter accuracy testing, active leakage control and infrastructure monitoring	Refine, enhance or expand ongoing programs based upon economic justification	Stay abreast of improvements in metering, meter reading, billing, leakage management and infrastructure rehabilitation
Long-term loss control		Begin to assess long-term needs requiring large expenditure: customer meter replacement, water main replacement program, new customer billing system or AMR/AMI system	Begin to assemble economic business case for long-term needs based upon improved data becoming available through the water audit process	Conduct detailed planning, budgeting and launch of comprehensive improvements for metering, billing or infrastructure management	Continue incremental improvements in short-term and long-term loss control interventions
Target-setting			Establish long-term apparent and real loss reduction goals (+10 year horizon)	Establish mid-range (5 year horizon) apparent and real loss reduction goals	Evaluate and refine loss control goals on a yearly basis
Benchmarking			Preliminary Comparisons - can begin to rely upon with PIs for performance comparisons for real losses	Performance Benchmarking with PIs is meaningful in comparing real loss standing	Identify Best Practices/ Best in class; PIs are very reliable as real loss performance indicators for best in class service

For validity scores of 50 or below, the shaded blocks should not be focus areas until better data validity is achieved.

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Enter Basic Information

Name of Utility:	Central Coast Water Authority
Name of Contact Person:	David Beard
Email:	drb@ccwa.com
Telephone | Ext.:	(805) 688-2292 Ext. 228
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State / Province:	California (CA)
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SDHE	CMI	UC	Lm	Nc	Lp	AOP	CRUC	VPC	

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FWAS v6.1
American Water Works Association.

Water Audit Report for: Central Coast Water Authority
Audit Year: 2022 | Jan 01 2022 - Dec 31 2022 | Calendar

Click 'n' to add notes
Click 'g' to determine data validity grade

To edit water system info: go to start page

To access definitions, click the input name

All volumes to be entered as: ACRE-FEET PER YEAR

Water Supplied Error Adjustments

WATER SUPPLIED

choose entry option:

		n	g				n	g				
VOS	Volume from Own Sources:	n	g	6	11,521.000	Acre-ft/Yr	n	g	9		percent	VOSEA
WI	Water Imported:	n	g	n/a		Acre-ft/Yr						WIEA
WE	Water Exported:	n	g	n/a		Acre-ft/Yr						WEEA
	WATER SUPPLIED:				11,521.000	Acre-ft/Yr						

AUTHORIZED CONSUMPTION

choose entry option:

BMAC	Billed Metered:	n	g	9	11,308.000	Acre-ft/Yr		
BUAC	Billed Unmetered:	n	g	n/a		Acre-ft/Yr		
UMAC	Unbilled Metered:	n	g	n/a		Acre-ft/Yr		
UUAC	Unbilled Unmetered:	n	g	3	28.270	Acre-ft/Yr	0.25%	default

Default option selected for Unbilled Unmetered, with automatic data grading of 3

AUTHORIZED CONSUMPTION: 11,336.270 Acre-ft/Yr

WATER LOSSES

184.730 Acre-ft/Yr

Apparent Losses

Default option selected for Systematic Data Handling Errors, with automatic data grading of 3

choose entry option:

SDHE	Systematic Data Handling Errors:	n	g	3	28.270	Acre-ft/Yr	0.25%	default	
CMI	Customer Metering Inaccuracies:	n	g	10	0.000	Acre-ft/Yr		percent	under-registration
UC	Unauthorized Consumption:	n	g	3	28.270	Acre-ft/Yr	0.25%	default	

Default option selected for Unauthorized Consumption, with automatic data grading of 3

Apparent Losses: 56.540 Acre-ft/Yr

Real Losses

Real Losses: 128.190 Acre-ft/Yr

WATER LOSSES: 184.730 Acre-ft/Yr

NON-REVENUE WATER

NON-REVENUE WATER: 213.000 Acre-ft/Yr

SYSTEM DATA

Lm	Length of mains:	n	g	10	122.8	miles	(including fire hydrant lead lengths)
Nc	Number of service connections:	n	g	8	10		(active *and* inactive)
	Service connection density:				0	conn./mile main	
	Are customer meters typically located at the curbstop/property line?				No		
Lp	Average length of (private) customer service line:	n	g	10		ft	(average distance between property line and meter)
AOP	Average Operating Pressure:	n	g	7	165.3	psi	

COST DATA

CRUC	Customer Retail Unit Charge:	n	g	n/a			Total Annual Operating Cost	
VPC	Variable Production Cost:	n	g	10		$/acre-ft		$/yr (optional input)

Click here to calculate carbon emissions ---> carbon

WATER AUDIT DATA VALIDITY TIER:

***** The Water Audit Data Validity Score is in Tier IV (71-90). See Dashboard tab for additional outputs. *****

go to dashboard

A weighted scale for the components of supply, consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION TO IMPROVE DATA VALIDITY:

Based on the information provided, audit reliability can be most improved by addressing the following components:

1: Volume from Own Sources (VOS)
2: Unauthorized Consumption (UC)
3: Systematic Data Handling Errors (SDHE)

KEY PERFORMANCE INDICATOR TARGETS:

OPTIONAL: If targets exist for the operational performance indicators, they can be input below:

Unit Total Losses:		gal/conn/day
Unit Apparent Losses:		gal/conn/day
Unit Real Losses[A]:		gal/conn/day
Unit Real Losses[B]:		gal/mile/day

If entered above by user, targets will display on KPI gauges (see Dashboard)

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AWWA Free Water Audit Software: Dashboard

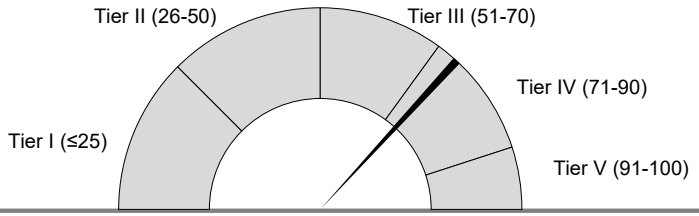
go to worksheet | go to grading | go to references

Water Audit Report for: Central Coast Water Authority **Audit Year:** 2022 Calendar Jan 01 2022 - Dec 31 2022

Data Validity

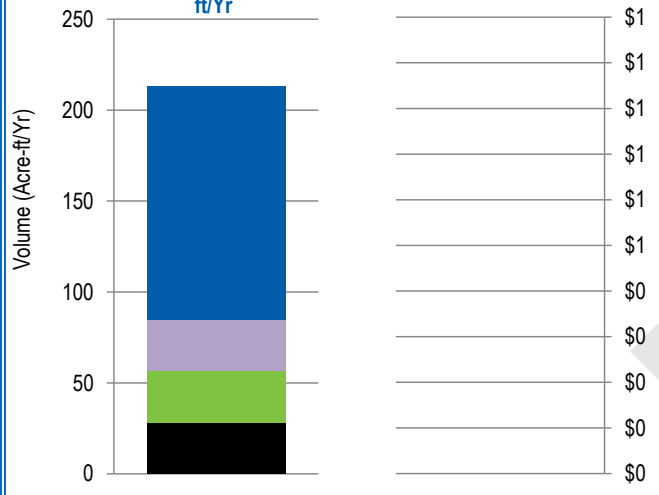
Data Validity Score: 73 **Data Validity Tier:** Tier IV (71-90)

See Loss Control Planning for Tier Details



NRW Components Summary

Total Volume of NRW = 213 Acre-ft/Yr **Total Cost of NRW = $/Yr**



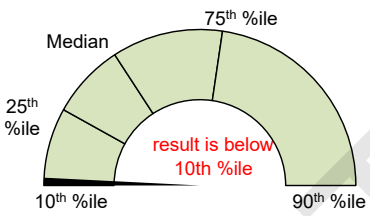
	Volume Acre-ft/Yr	Value $/Yr	Carbon Emissions mt/Yr
Apparent Losses	56.5		0
Real Losses	128.2	$0	0
Unbilled Authorized Cons	28.3		0
Non-Revenue Water	213.0		0

mt = metric tons

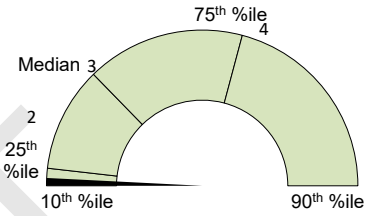
Actual KPI result — Target (see Worksheet)

Key Performance Indicators

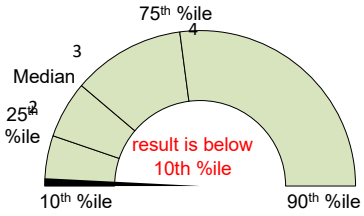
gauge %iles per validated industry ranges[2]



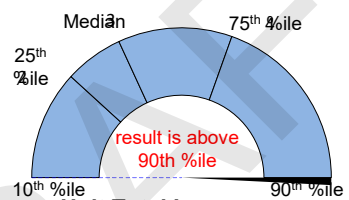
Total Loss Cost Rate
0.00 $/conn/year



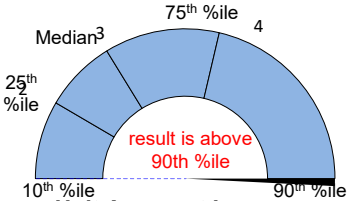
Apparent Loss Cost Rate
$/conn/year



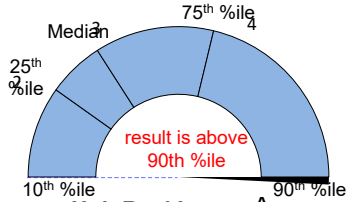
Real Loss Cost Rate
0.00 $/conn/year



Unit Total Losses
16,491.6 gal/conn/day

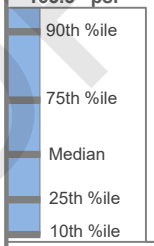


Unit Apparent Losses
5,047.6 gal/conn/day

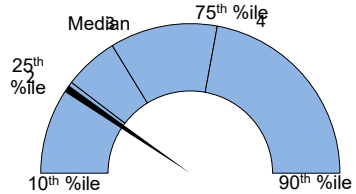


Unit Real Losses[A]
11,444.1 gal/conn/day

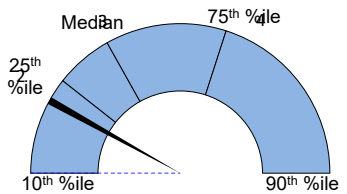
Average Operating Pressure
165.3 psi



AOP is above 90th %ile



Infrastructure Leakage Index (ILI)
1.0 dimensionless



Unit Real Losses[B]
932 gal/mile/day

See UARL definition for additional guidance on the ILI

(UARL) Unavoidable Annual Real Losses	123.3 Acre-ft/Yr	11,006.5 gal/conn/day

Guidance Information for Key Performance

- The eight indicators shown are the recommended suite per the AWWA Water Loss Control Committee 2020 Position on KPIs[1].
- A suite of KPIs is necessary, as no single KPI can holistically communicate water loss performance for a given water system.
- See Table 1 below for Uses and Limitations for each KPI, excerpted from the AWWA Water Loss Control Committee Report (2020)[1], with naming conventions updated.
- Percentiles (%iles) shown on KPI gauges come from Level 1 validated data in the AWWA WLCC Reference Water Audit Dataset (2020)[2].
- KPI %iles shown above are not segregated by cohorts. Limited KPI data by cohorts may be found in WRF 4695 Guidance Manual, Appendix B (2019)[5].
- Actual KPI results that fall below 10th %ile or above 90th %ile do not necessarily imply error, but should be viewed with scrutiny.
- Percentiles not intended to imply targets. Targets may be input by user for operational KPIs, if desired, on Worksheet.
- See UARL and ILI in Definitions tab for discussion of size and pressure limitations.
- Systems that fall on the extreme ends of size or connection density should use caution when interpreting Unit Losses KPIs.

Table 1

Source: AWWA Water Loss Control Committee Report (2020)[1], with naming conventions updated

2020 AWWA Water Audit Method – Water Audit Outputs and Key Performance Indicators: Uses and Limitations

Type	Indicator	Description	Suitable Purposes					Uses and Limitations	Principal Users
			Assessment	Bench-Marking	Target-Setting	Planning	Tracking		
Attribute	Apparent Loss Volume	Calculated by Free Water Audit Software	✓				✓	Assess loss level	Utility, Regulators
	Apparent Loss Cost	Calculated by Free Water Audit Software	✓				✓	Assess cost loss level	Utility, Regulators
	Real Loss Volume	Calculated by Free Water Audit Software	✓				✓	Assess loss level	Utility, Regulators
	Real Loss Cost	Calculated by Free Water Audit Software	✓				✓	Assess loss cost level	Utility, Regulators
	Unavoidable Annual Real Loss (UARL)	Calculated by Free Water Audit Software	✓				✓	Reveal theoretical technical low level of leakage	Utility, Regulators
Volume	Unit Apparent Losses (vol/conn/day)	Strong and understandable indicator for multiple users.	✓	✓	✓	✓	✓	Used for performance tracking and target-setting	Utility, Regulators
	Unit Real Losses[A] (vol/conn/day)	Strong and understandable indicator for multiple users.	✓	✓	✓	✓	✓	Used for performance tracking and target-setting	Utility, Regulators, Policy Makers
	Unit Real Losses[B] (vol/pipeline length/ day)	Strong and understandable indicator for use by utilities with low connection density.	✓	✓	✓	✓	✓	Data collection and assessment of systems with "low" connection density	Utility, Regulators, Policy Makers
	Unit Total Losses (vol/conn/day) **New KPI**	Strong and understandable indicator, suitable for high-level performance measurement.	✓				✓	High level indicator for trending analysis. Not appropriate for target-setting or benchmarking	Utilities, Customers
	Infrastructure Leakage Index (ILI)	Robust, specialized ratio KPI; can be influenced by pressure and connection density.	✓	✓			✓	Benchmarking after pressure management is implemented	Utilities
Value	Apparent Loss Cost Rate (value/conn/year) **New KPI**	Indicators with sufficient technical rigor. Provide the unit financial value of each type of loss, which is useful for planning and assessment of cost efficiency of water loss reduction and control interventions and programs.	✓			✓	✓	Data collection and assessment on AWWA indicators or contextual parameters to use in conjunction with Loss Cost Rates	Utilities, Regulators, Customers
	Real Loss Cost Rate (value/conn/year) **New KPI**		✓			✓	✓		Utilities, Regulators, Customers
Validity	Data Validity Tier (DVT)	Strong indicator of water loss audit data quality, if data has been validated. Tier provides guidance on priority areas of activity.	✓	✓		✓	✓	Assess caliber of data inputs of the water audit	Regulators, Utilities

AWWA Free Water Audit Software
Water Balance

VOLUME in Acre-ft/Yr

Water Audit Report for: Central Coast Water Authority
Audit Year: 2022 — Jan 01 2022 - Dec 31 2022
Data Validity Tier: Tier IV (71-90)

FWAS v6.1

		Water Exported (WE) (corrected for known errors) *0.000*	**Billed Water Exported**			**Revenue Water (Exported)** 0.000
Volume from Own Sources (VOS) (corrected for known errors) *11,521.000*	**System Input Volume** *11,521.000*	**Water Supplied** *11,521.000*	**Authorized Consumption** *11,336.270*	**Billed Authorized Consumption** *11,308.000*	**Billed Metered Consumption (BMAC)** (water exported is removed) *11,308.000*	**Revenue Water** 11,308.000
					Billed Unmetered Consumption (BUAC) *0.000*	
				Unbilled Authorized Consumption *28.270*	**Unbilled Metered Consumption (UMAC)** *0.000*	**Non-Revenue Water (NRW)** 213.000
					Unbilled Unmetered Consumption (UUAC) *28.270*	
			Water Losses *184.730*	**Apparent Losses** *56.540*	**Systematic Data Handling Errors (SDHE)** *28.270*	
					Customer Metering Inaccuracies (CMI) *0.000*	
					Unauthorized Consumption (UC) *28.270*	
Water Imported (WI) (corrected for known errors) *0.000*				**Real Losses** *128.190*	**Target Leakage Reduction** *0.000*	
					Leakage Level After Reduction *128.190*	

AWWA Free Water Audit Software: Determining Water Loss Standing

FWAS v6.1

Water Audit Report for: Central Coast Water Authority
Audit Year: 2022 (Jan 01 2022 - Dec 31 2022)
Data Validity Tier: Tier IV (71-90)

Water Loss Control Planning Guide

Functional Focus Area	Water Audit Data Validity Tier (Score Range)				
	Tier I (1-25)	Tier II (26-50)	Tier III (51-70)	Tier IV (71-90)	Tier V (91-100)
Audit Data Collection	Launch auditing and loss control team; address supply metering deficiencies	Analyze business process for customer metering and billing functions and water supply operations; Identify data gaps; improve supply metering	Establish/revise policies and procedures for data collection	Refine data collection practices and establish as routine business process	Annual water audit is a reliable gauge of year-to-year water efficiency standing
Short-term loss control	Research information on leak detection programs; Begin flowcharting analysis of customer billing system	Conduct loss assessment investigations on a sample portion of the system: customer meter testing, leak survey, unauthorized consumption, etc	Establish ongoing mechanisms for customer meter accuracy testing, active leakage control and infrastructure monitoring	Refine, enhance or expand ongoing programs based upon economic justification	Stay abreast of improvements in metering, meter reading, billing, leakage management and infrastructure rehabilitation
Long-term loss control		Begin to assess long-term needs requiring large expenditure: customer meter replacement, water main replacement program, new customer billing system or AMR/AMI system	Begin to assemble economic business case for long-term needs based upon improved data becoming available through the water audit process	Conduct detailed planning, budgeting and launch of comprehensive improvements for metering, billing or infrastructure management	Continue incremental improvements in short-term and long-term loss control interventions
Target-setting			Establish long-term apparent and real loss reduction goals (+10 year horizon)	Establish mid-range (5 year horizon) apparent and real loss reduction goals	Evaluate and refine loss control goals on a yearly basis
Benchmarking			Preliminary Comparisons - can begin to rely upon with PIs for performance comparisons for real losses	Performance Benchmarking with PIs is meaningful in comparing real loss standing	Identify Best Practices/ Best in class; PIs are very reliable as real loss performance indicators for best in class service

For validity scores of 50 or below, the shaded blocks should not be focus areas until better data validity is achieved.

AWWA Free Water Audit Software v6.1

FWAS v6.1

This spreadsheet-based water audit tool is designed to help quantify and track water losses associated with water distribution systems and identify areas for improved efficiency and cost recovery. It provides a "top-down" summary water audit format and is not meant to take the place of a full-scale, comprehensive water audit format. Auditors are strongly encouraged to refer to the most current edition of AWWA M36 Manual for Water Audits for detailed guidance on the water auditing process and targeting loss reduction levels. This tool contains several separate worksheets. Sheets can be accessed using the tabs at the bottom of the screen, or by clicking the TOC links below.

Table of Contents (TOC)

AWWA Web Resources for Water Loss Control
https://www.awwa.org/resource/water-loss-control/
Items referenced in the Free Water Audit Software v6.0 on the web:
- Data Grading Matrix v6.0
- Example Water Audit v6.0
- Water Audit Compiler v6.0
- AWWA Reports on Performance Indicators
- M36 Manual
- Leakage Emissions Initiative - Water Loss Control Committee Report[10]

Enter Basic Information

Name of Utility:	Central Coast Water Authority
Name of Contact Person:	David Beard
Email:	drb@ccwa.com
Telephone | Ext.:	(805) 688-2292 Ext. 228
City/Town/Municipality:	Buellton
State / Province:	California (CA)
Country:	USA
Audit Preparation Date:	Mar 20 2026
Audit Year:	2023
Audit Year Label:	Calendar (Fiscal, Calendar, etc)
Audit Period Start Date:	Jan 01 2023
Audit Period End Date:	Dec 31 2023
Volume Reporting Units:	Acre-feet
Water System Structure:	Wholesale
Water Type:	Potable Water
System ID Number:	4210030
Validator Name/ID:	N/A
Validator Email:	N/A
Estimated Total Population Served by Water Utility:	

Key of Input Acronyms

In order of appearance in the Worksheet

VOS	Volume from Own Sources
VOSEA	VOS Error Adjustment
WI	Water Imported
WIEA	WI Error Adjustment
WE	Water Exported
WEEA	WE Error Adjustment
BMAC	Billed Metered Authorized Consumption
BUAC	Billed Unmetered Authorized Consumption
UMAC	Unbilled Metered Authorized Consumption
UUAC	Unbilled Unmetered Authorized Consumption
SDHE	Systematic Data Handling Errors
CMI	Customer Metering Inaccuracies
UC	Unauthorized Consumption
Lm	Length of mains
Nc	Number of service connections
Lp	Average length of (private) customer service line
AOP	Average Operating Pressure
CRUC	Customer Retail Unit Charge
VPC	Variable Production Cost

Color Key User input | Calculated | Optional default

Guidance for the Worksheet

Choosing to enter unit of **percent** or **volume** (applies to VOSEA, WIEA, WEEA, CMI) choose entry option:

1.00%	percent	*or*
	volume	25.000

Choosing to enter **default** or **custom input** (applies to UUAC, SDHE, UC) choose entry option:

0.25%	default	*or*
	custom	75.000

Guidance for the Interactive Data Grading

Use acronym buttons in IDG header to navigate among inputs. Acronym Key above. White = needs answers, orange = complete, clear = not required. Example below.

VOS	VOSEA	WI	WIEA	WE	WEEA	BMAC	BUAC	UMAC	UUAC
SDHE	CMI	UC	Lm	Nc	Lp	AOP	CRUC	VPC	

After clicking an acronym button, answer all visible questions in the order they're presented, choosing best-fit answer

Grade will populate when all visible questions are complete for an input: **7**

The limiting criteria will be labeled along the right. If only 1 limiting criterion is shown, improving on that criterion will achieve a higher data grade. If multiple limiting criteria are shown, improving on *each* limiting criterion is necessary to achieve a higher data grade. A complete inventory of data grading criteria is available in the Data Grading Matrix v6.0 (see web resources)

Limiting

If you have questions or comments regarding this software please contact us at: wlc@awwa.org

AWWA Free Water Audit Software: Worksheet

FWAS v6.1
American Water Works Association.

Water Audit Report for: Central Coast Water Authority
Audit Year: 2023 | Jan 01 2023 - Dec 31 2023 | Calendar

Click 'n' to add notes
Click 'g' to determine data validity grade

To edit water system info: go to start page

To access definitions, click the input name

All volumes to be entered as: ACRE-FEET PER YEAR

Water Supplied Error Adjustments

WATER SUPPLIED

choose entry option:

VOS	Volume from Own Sources:	n	g	6	12,209.000	Acre-ft/Yr	n g 9		percent	VOSEA
WI	Water Imported:	n	g	n/a		Acre-ft/Yr				WIEA
WE	Water Exported:	n	g	n/a		Acre-ft/Yr				WEEA
	WATER SUPPLIED:				12,209.000	Acre-ft/Yr				

AUTHORIZED CONSUMPTION

choose entry option:

BMAC	Billed Metered:	n	g	9	12,094.000	Acre-ft/Yr			
BUAC	Billed Unmetered:	n	g	n/a		Acre-ft/Yr			
UMAC	Unbilled Metered:	n	g	n/a		Acre-ft/Yr			
UUAC	Unbilled Unmetered:	n	g	3	30.235	Acre-ft/Yr	0.25%	default	

Default option selected for Unbilled Unmetered, with automatic data grading of 3

AUTHORIZED CONSUMPTION: 12,124.235 Acre-ft/Yr

WATER LOSSES

84.765 Acre-ft/Yr

Apparent Losses

choose entry option:

Default option selected for Systematic Data Handling Errors, with automatic data grading of 3

SDHE	Systematic Data Handling Errors:	n	g	3	30.235	Acre-ft/Yr	0.25%	default	
CMI	Customer Metering Inaccuracies:	n	g	10	0.000	Acre-ft/Yr		percent	under-registration
UC	Unauthorized Consumption:	n	g	3	30.235	Acre-ft/Yr	0.25%	default	

Default option selected for Unauthorized Consumption, with automatic data grading of 3

Apparent Losses: 60.470 Acre-ft/Yr

Real Losses

Real Losses: 24.295 Acre-ft/Yr

WATER LOSSES: 84.765 Acre-ft/Yr

NON-REVENUE WATER

NON-REVENUE WATER: 115.000 Acre-ft/Yr

SYSTEM DATA

Lm	Length of mains:	n	g	10	122.8	miles	(including fire hydrant lead lengths)
Nc	Number of service connections:	n	g	8	10		(active *and* inactive)
	Service connection density:				0	conn./mile main	
	Are customer meters typically located at the curbstop/property line?				No		
Lp	Average length of (private) customer service line:	n	g	10		ft	(average distance between property line and meter)
AOP	Average Operating Pressure:	n	g	7	165.3	psi	

COST DATA

CRUC	Customer Retail Unit Charge:	n	g	n/a			Total Annual Operating Cost
VPC	Variable Production Cost:	n	g	10		$/acre-ft	$/yr (optional input)

Click here to calculate carbon emissions ---> carbon

WATER AUDIT DATA VALIDITY TIER:

***** The Water Audit Data Validity Score is in Tier IV (71-90). See Dashboard tab for additional outputs. *****

go to dashboard

A weighted scale for the components of supply, consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION TO IMPROVE DATA VALIDITY:

Based on the information provided, audit reliability can be most improved by addressing the following components:

1: Volume from Own Sources (VOS)
2: Unauthorized Consumption (UC)
3: Systematic Data Handling Errors (SDHE)

KEY PERFORMANCE INDICATOR TARGETS:

OPTIONAL: If targets exist for the operational performance indicators, they can be input below:

Unit Total Losses:		gal/conn/day
Unit Apparent Losses:		gal/conn/day
Unit Real Losses[A]:		gal/conn/day
Unit Real Losses[B]:		gal/mile/day

If entered above by user, targets will display on KPI gauges (see Dashboard)

FWAS v6.1

AWWA Free Water Audit Software: Dashboard

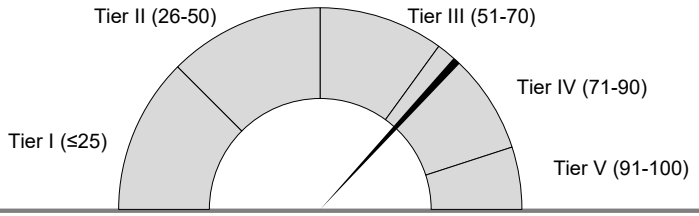
go to worksheet | go to grading | go to references

Water Audit Report for: Central Coast Water Authority **Audit Year:** 2023 Calendar Jan 01 2023 - Dec 31 2023

Data Validity

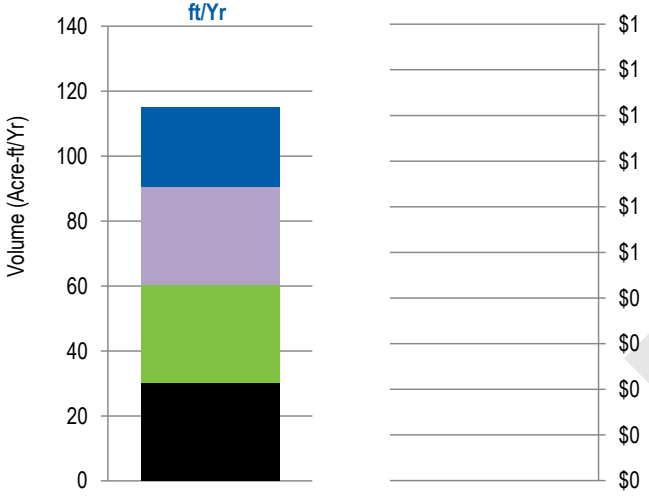
Data Validity Score: 73 **Data Validity Tier:** Tier IV (71-90)

See Loss Control Planning for Tier Details



NRW Components Summary

Total Volume of NRW = 115 Acre-ft/Yr **Total Cost of NRW = $/Yr**



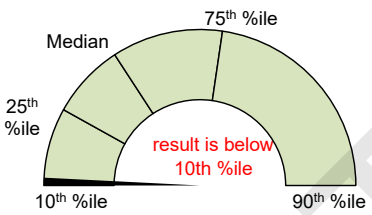
	Volume Acre-ft/Yr	Value $/Yr	Carbon Emissions mt/Yr
Apparent Losses	60.5		0
Real Losses	24.3	$0	0
Unbilled Authorized Cons	30.2		0
Non-Revenue Water	115.0		0

mt = metric tons

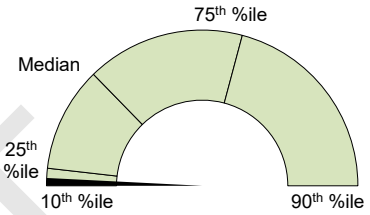
Key Performance Indicators

Actual KPI result — Target (see Worksheet)

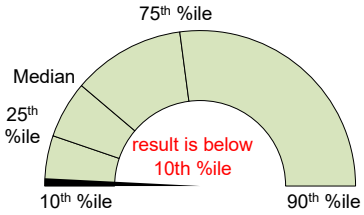
gauge %iles per validated industry ranges[2]



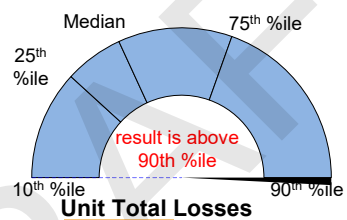
Total Loss Cost Rate
0.00 $/conn/year



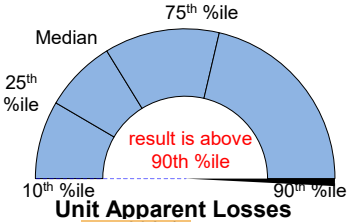
Apparent Loss Cost Rate
$/conn/year



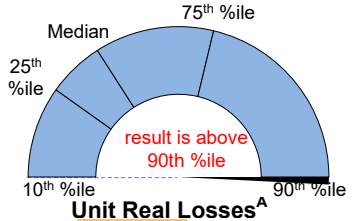
Real Loss Cost Rate
0.00 $/conn/year



Unit Total Losses
7,567.3 gal/conn/day

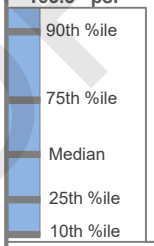


Unit Apparent Losses
5,398.4 gal/conn/day

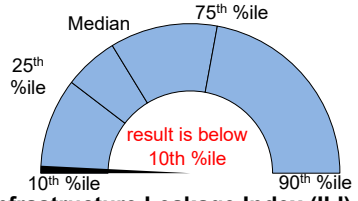


Unit Real Losses[A]
2,168.9 gal/conn/day

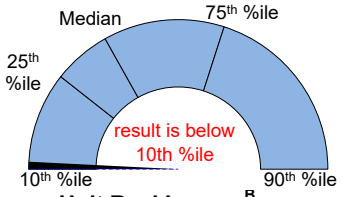
Average Operating Pressure
165.3 psi



AOP is above 90th %ile



Infrastructure Leakage Index (ILI)
0.2 dimensionless



Unit Real Losses[B]
177 gal/mile/day

See UARL definition for additional guidance on the ILI

(UARL) Unavoidable Annual Real Losses	123.3 Acre-ft/Yr	11,006.5 gal/conn/day

Guidance Information for Key Performance

- The eight indicators shown are the recommended suite per the AWWA Water Loss Control Committee 2020 Position on KPIs[1].
- A suite of KPIs is necessary, as no single KPI can holistically communicate water loss performance for a given water system.
- See Table 1 below for Uses and Limitations for each KPI, excerpted from the AWWA Water Loss Control Committee Report (2020)[1], with naming conventions updated.
- Percentiles (%iles) shown on KPI gauges come from Level 1 validated data in the AWWA WLCC Reference Water Audit Dataset (2020)[2].
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- Percentiles not intended to imply targets. Targets may be input by user for operational KPIs, if desired, on Worksheet.
- See UARL and ILI in Definitions tab for discussion of size and pressure limitations.
- Systems that fall on the extreme ends of size or connection density should use caution when interpreting Unit Losses KPIs.

Table 1

Source: AWWA Water Loss Control Committee Report (2020)[1], with naming conventions updated

2020 AWWA Water Audit Method – Water Audit Outputs and Key Performance Indicators: Uses and Limitations

Type	Indicator	Description	Suitable Purposes					Uses and Limitations	Principal Users
			Assessment	Bench-Marking	Target-Setting	Planning	Tracking		
Attribute	Apparent Loss Volume	Calculated by Free Water Audit Software	✓				✓	Assess loss level	Utility, Regulators
	Apparent Loss Cost	Calculated by Free Water Audit Software	✓				✓	Assess cost loss level	Utility, Regulators
	Real Loss Volume	Calculated by Free Water Audit Software	✓				✓	Assess loss level	Utility, Regulators
	Real Loss Cost	Calculated by Free Water Audit Software	✓				✓	Assess loss cost level	Utility, Regulators
	Unavoidable Annual Real Loss (UARL)	Calculated by Free Water Audit Software	✓				✓	Reveal theoretical technical low level of leakage	Utility, Regulators
Volume	Unit Apparent Losses (vol/conn/day)	Strong and understandable indicator for multiple users.	✓	✓	✓	✓	✓	Used for performance tracking and target-setting	Utility, Regulators
	Unit Real Losses[A] (vol/conn/day)	Strong and understandable indicator for multiple users.	✓	✓	✓	✓	✓	Used for performance tracking and target-setting	Utility, Regulators, Policy Makers
	Unit Real Losses[B] (vol/pipeline length/ day)	Strong and understandable indicator for use by utilities with low connection density.	✓	✓	✓	✓	✓	Data collection and assessment of systems with "low" connection density	Utility, Regulators, Policy Makers
	Unit Total Losses (vol/conn/day) **New KPI**	Strong and understandable indicator, suitable for high-level performance measurement.	✓				✓	High level indicator for trending analysis. Not appropriate for target-setting or benchmarking	Utilities, Customers
	Infrastructure Leakage Index (ILI)	Robust, specialized ratio KPI; can be influenced by pressure and connection density.	✓	✓			✓	Benchmarking after pressure management is implemented	Utilities
Value	Apparent Loss Cost Rate (value/conn/year) **New KPI**	Indicators with sufficient technical rigor. Provide the unit financial value of each type of loss, which is useful for planning and assessment of cost efficiency of water loss reduction and control interventions and programs.	✓			✓	✓	Data collection and assessment on AWWA indicators or contextual parameters to use in conjunction with Loss Cost Rates	Utilities, Regulators, Customers
	Real Loss Cost Rate (value/conn/year) **New KPI**		✓			✓	✓		Utilities, Regulators, Customers
Validity	Data Validity Tier (DVT)	Strong indicator of water loss audit data quality, if data has been validated. Tier provides guidance on priority areas of activity.	✓	✓		✓	✓	Assess caliber of data inputs of the water audit	Regulators, Utilities

AWWA Free Water Audit Software
Water Balance

VOLUME in Acre-ft/Yr

Water Audit Report for: Central Coast Water Authority
Audit Year: 2023 — Jan 01 2023 - Dec 31 2023
Data Validity Tier: Tier IV (71-90)

FWAS v6.1

		Water Exported (WE) (corrected for known errors) 0.000	Billed Water Exported			Revenue Water (Exported) 0.000
Volume from Own Sources (VOS) (corrected for known errors) 12,209.000	System Input Volume 12,209.000	Water Supplied 12,209.000	Authorized Consumption 12,124.235	Billed Authorized Consumption 12,094.000	Billed Metered Consumption (BMAC) (water exported is removed) 12,094.000	Revenue Water 12,094.000
					Billed Unmetered Consumption (BUAC) 0.000	
				Unbilled Authorized Consumption 30.235	Unbilled Metered Consumption (UMAC) 0.000	Non-Revenue Water (NRW) 115.000
					Unbilled Unmetered Consumption (UUAC) 30.235	
			Water Losses 84.765	Apparent Losses 60.470	Systematic Data Handling Errors (SDHE) 30.235	
					Customer Metering Inaccuracies (CMI) 0.000	
					Unauthorized Consumption (UC) 30.235	
Water Imported (WI) (corrected for known errors) 0.000				Real Losses 24.295	Target Leakage Reduction 0.000	
					Leakage Level After Reduction 24.295	

AWWA Free Water Audit Software: Determining Water Loss Standing

FWAS v6.1

Water Audit Report for: Central Coast Water Authority
Audit Year: 2023 (Jan 01 2023 - Dec 31 2023)
Data Validity Tier: Tier IV (71-90)

Water Loss Control Planning Guide

Functional Focus Area	Water Audit Data Validity Tier (Score Range)				
	Tier I (1-25)	Tier II (26-50)	Tier III (51-70)	Tier IV (71-90)	Tier V (91-100)
Audit Data Collection	Launch auditing and loss control team; address supply metering deficiencies	Analyze business process for customer metering and billing functions and water supply operations; Identify data gaps; improve supply metering	Establish/revise policies and procedures for data collection	Refine data collection practices and establish as routine business process	Annual water audit is a reliable gauge of year-to-year water efficiency standing
Short-term loss control	Research information on leak detection programs; Begin flowcharting analysis of customer billing system	Conduct loss assessment investigations on a sample portion of the system: customer meter testing, leak survey, unauthorized consumption, etc	Establish ongoing mechanisms for customer meter accuracy testing, active leakage control and infrastructure monitoring	Refine, enhance or expand ongoing programs based upon economic justification	Stay abreast of improvements in metering, meter reading, billing, leakage management and infrastructure rehabilitation
Long-term loss control		Begin to assess long-term needs requiring large expenditure: customer meter replacement, water main replacement program, new customer billing system or AMR/AMI system	Begin to assemble economic business case for long-term needs based upon improved data becoming available through the water audit process	Conduct detailed planning, budgeting and launch of comprehensive improvements for metering, billing or infrastructure management	Continue incremental improvements in short-term and long-term loss control interventions
Target-setting			Establish long-term apparent and real loss reduction goals (+10 year horizon)	Establish mid-range (5 year horizon) apparent and real loss reduction goals	Evaluate and refine loss control goals on a yearly basis
Benchmarking			Preliminary Comparisons - can begin to rely upon with PIs for performance comparisons for real losses	Performance Benchmarking with PIs is meaningful in comparing real loss standing	Identify Best Practices/ Best in class; PIs are very reliable as real loss performance indicators for best in class service

For validity scores of 50 or below, the shaded blocks should not be focus areas until better data validity is achieved.

AWWA Free Water Audit Software v6.1

FWAS v6.1

This spreadsheet-based water audit tool is designed to help quantify and track water losses associated with water distribution systems and identify areas for improved efficiency and cost recovery. It provides a "top-down" summary water audit format and is not meant to take the place of a full-scale, comprehensive water audit format. Auditors are strongly encouraged to refer to the most current edition of AWWA M36 Manual for Water Audits for detailed guidance on the water auditing process and targeting loss reduction levels. This tool contains several separate worksheets. Sheets can be accessed using the tabs at the bottom of the screen, or by clicking the TOC links below.

Table of Contents (TOC)

AWWA Web Resources for Water Loss Control
https://www.awwa.org/resource/water-loss-control/
Items referenced in the Free Water Audit Software v6.0 on the web:
- Data Grading Matrix v6.0
- Example Water Audit v6.0
- Water Audit Compiler v6.0
- AWWA Reports on Performance Indicators
- M36 Manual
- Leakage Emissions Initiative - Water Loss Control Committee Report[10]

Enter Basic Information

Name of Utility:	Central Coast Water Authority
Name of Contact Person:	David Beard
Email:	drb@ccwa.com
Telephone | Ext.:	(805) 688-2292 Ext. 228
City/Town/Municipality:	Buellton
State / Province:	California (CA)
Country:	USA
Audit Preparation Date:	Mar 20 2026
Audit Year:	2024
Audit Year Label:	Calendar (Fiscal, Calendar, etc)
Audit Period Start Date:	Jan 01 2024
Audit Period End Date:	Dec 31 2024
Volume Reporting Units:	Acre-feet
Water System Structure:	Wholesale
Water Type:	Potable Water
System ID Number:	4210030
Validator Name/ID:	N/A
Validator Email:	N/A
Estimated Total Population Served by Water Utility:	

Key of Input Acronyms

In order of appearance in the Worksheet

VOS	Volume from Own Sources
VOSEA	VOS Error Adjustment
WI	Water Imported
WIEA	WI Error Adjustment
WE	Water Exported
WEEA	WE Error Adjustment
BMAC	Billed Metered Authorized Consumption
BUAC	Billed Unmetered Authorized Consumption
UMAC	Unbilled Metered Authorized Consumption
UUAC	Unbilled Unmetered Authorized Consumption
SDHE	Systematic Data Handling Errors
CMI	Customer Metering Inaccuracies
UC	Unauthorized Consumption
Lm	Length of mains
Nc	Number of service connections
Lp	Average length of (private) customer service line
AOP	Average Operating Pressure
CRUC	Customer Retail Unit Charge
VPC	Variable Production Cost

Color Key User input | Calculated | Optional default

Guidance for the Worksheet

Choosing to enter unit of **percent** or **volume** (applies to VOSEA, WIEA, WEEA, CMI) choose entry option:

1.00%	percent	*or*
	volume	25.000

Choosing to enter **default** or **custom input** (applies to UUAC, SDHE, UC) choose entry option:

0.25%	default	*or*
	custom	75.000

Guidance for the Interactive Data Grading

Use acronym buttons in IDG header to navigate among inputs. Acronym Key above. White = needs answers, orange = complete, clear = not required. Example below.

VOS	VOSEA	WI	WIEA	WE	WEEA	BMAC	BUAC	UMAC	UUAC
SDHE	CMI	UC	Lm	Nc	Lp	AOP	CRUC	VPC	

After clicking an acronym button, answer all visible questions in the order they're presented, choosing best-fit answer

Grade will populate when all visible questions are complete for an input: **7**

The limiting criteria will be labeled along the right. If only 1 limiting criterion is shown, improving on that criterion will achieve a higher data grade. If multiple limiting criteria are shown, improving on *each* limiting criterion is necessary to achieve a higher data grade. A complete inventory of data grading criteria is available in the Data Grading Matrix v6.0 (see web resources)

Limiting

If you have questions or comments regarding this software please contact us at: wlc@awwa.org

AWWA Free Water Audit Software: Worksheet

FWAS v6.1
American Water Works Association.

Water Audit Report for: Central Coast Water Authority
Audit Year: 2024 | Jan 01 2024 - Dec 31 2024 | Calendar

Click 'n' to add notes
Click 'g' to determine data validity grade

To edit water system info: go to start page

To access definitions, click the input name

All volumes to be entered as: ACRE-FEET PER YEAR

Water Supplied Error Adjustments

WATER SUPPLIED

choose entry option:

VOS	Volume from Own Sources:	n	g	6	13,954.000	Acre-ft/Yr	n g 9		percent	VOSEA
WI	Water Imported:	n	g	n/a		Acre-ft/Yr				WIEA
WE	Water Exported:	n	g	n/a		Acre-ft/Yr				WEEA
	WATER SUPPLIED:				13,954.000	Acre-ft/Yr				

AUTHORIZED CONSUMPTION

choose entry option:

BMAC	Billed Metered:	n	g	9	13,779.000	Acre-ft/Yr			
BUAC	Billed Unmetered:	n	g	n/a		Acre-ft/Yr			
UMAC	Unbilled Metered:	n	g	n/a		Acre-ft/Yr			
UUAC	Unbilled Unmetered:	n	g	3	34.448	Acre-ft/Yr	0.25%	default	
	Default option selected for Unbilled Unmetered, with automatic data grading of 3								
	AUTHORIZED CONSUMPTION:				13,813.448	Acre-ft/Yr			

WATER LOSSES

140.553 Acre-ft/Yr

Apparent Losses

choose entry option:

	Default option selected for Systematic Data Handling Errors, with automatic data grading of 3								
SDHE	Systematic Data Handling Errors:	n	g	3	34.448	Acre-ft/Yr	0.25%	default	
CMI	Customer Metering Inaccuracies:	n	g	10	0.000	Acre-ft/Yr		percent	under-registration
UC	Unauthorized Consumption:	n	g	3	34.448	Acre-ft/Yr	0.25%	default	
	Default option selected for Unauthorized Consumption, with automatic data grading of 3								
	Apparent Losses:				68.895	Acre-ft/Yr			

Real Losses

	Real Losses:				71.657	Acre-ft/Yr			
	WATER LOSSES:				140.553	Acre-ft/Yr			

NON-REVENUE WATER

	NON-REVENUE WATER:				175.000	Acre-ft/Yr			

SYSTEM DATA

Lm	Length of mains:	n	g	10	122.8	miles	(including fire hydrant lead lengths)
Nc	Number of service connections:	n	g	8	10		(active *and* inactive)
	Service connection density:				0	conn./mile main	
	Are customer meters typically located at the curbstop/property line?				No		
Lp	Average length of (private) customer service line:	n	g	10		ft	(average distance between property line and meter)
AOP	Average Operating Pressure:	n	g	7	165.3	psi	

COST DATA

CRUC	Customer Retail Unit Charge:	n	g	n/a			Total Annual Operating Cost		
VPC	Variable Production Cost:	n	g	10		$/acre-ft			$/yr (optional input)

Click here to calculate carbon emissions ---> carbon

WATER AUDIT DATA VALIDITY TIER:

***** The Water Audit Data Validity Score is in Tier IV (71-90). See Dashboard tab for additional outputs. *****

go to dashboard

A weighted scale for the components of supply, consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION TO IMPROVE DATA VALIDITY:

Based on the information provided, audit reliability can be most improved by addressing the following components:

1: Volume from Own Sources (VOS)
2: Unauthorized Consumption (UC)
3: Systematic Data Handling Errors (SDHE)

KEY PERFORMANCE INDICATOR TARGETS:

OPTIONAL: If targets exist for the operational performance indicators, they can be input below:

Unit Total Losses:		gal/conn/day
Unit Apparent Losses:		gal/conn/day
Unit Real Losses[A]:		gal/conn/day
Unit Real Losses[B]:		gal/mile/day

If entered above by user, targets will display on KPI gauges (see Dashboard)

FWAS v6.1

AWWA Free Water Audit Software: Dashboard

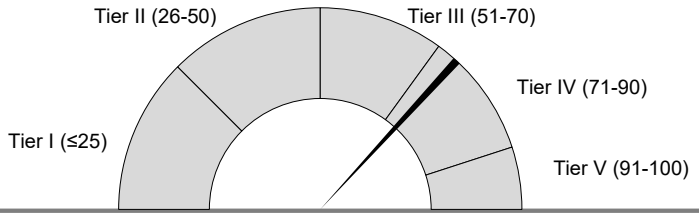
go to worksheet | go to grading | go to references

Water Audit Report for: Central Coast Water Authority **Audit Year:** 2024 Calendar Jan 01 2024 - Dec 31 2024

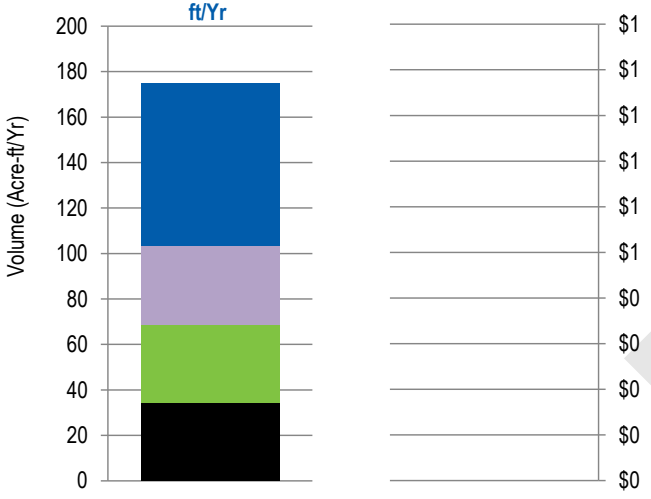
Data Validity

Data Validity Score: 73 **Data Validity Tier:** Tier IV (71-90)

See Loss Control Planning for Tier Details



NRW Components Summary



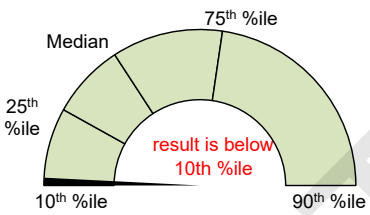
	Volume Acre-ft/Yr	Value $/Yr	Carbon Emissions mt/Yr
Apparent Losses	68.9		0
Real Losses	71.7	$0	0
Unbilled Authorized Cons	34.4		0
Non-Revenue Water	175.0		0

mt = metric tons

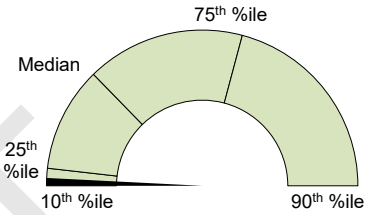
Key Performance Indicators

Actual KPI result | Target (see Worksheet)

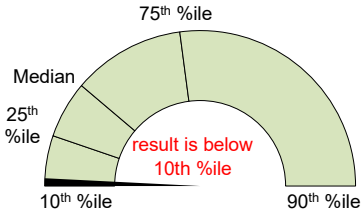
gauge %iles per validated industry ranges[2]



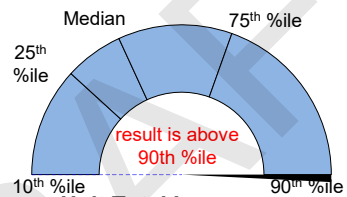
Total Loss Cost Rate
0.00 $/conn/year



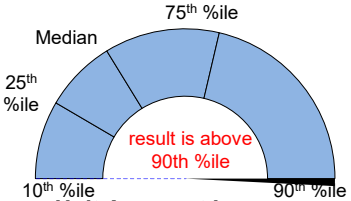
Apparent Loss Cost Rate
$/conn/year



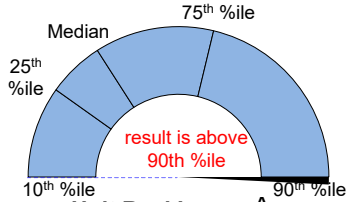
Real Loss Cost Rate
0.00 $/conn/year



Unit Total Losses
12,547.7 gal/conn/day

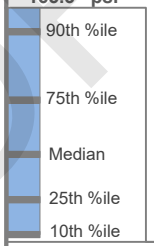


Unit Apparent Losses
6,150.5 gal/conn/day

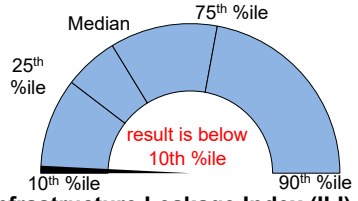


Unit Real Losses[A]
6,397.2 gal/conn/day

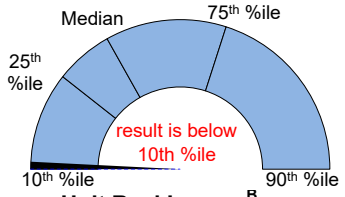
Average Operating Pressure
165.3 psi



AOP is above 90th %ile



Infrastructure Leakage Index (ILI)
0.6 dimensionless



Unit Real Losses[B]
521 gal/mile/day

See UARL definition for additional guidance on the ILI

(UARL) Unavoidable Annual Real Losses	123.3 Acre-ft/Yr	11,006.5 gal/conn/day

Guidance Information for Key Performance

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	Apparent Loss Cost	Calculated by Free Water Audit Software	✓				✓	Assess cost loss level	Utility, Regulators
	Real Loss Volume	Calculated by Free Water Audit Software	✓				✓	Assess loss level	Utility, Regulators
	Real Loss Cost	Calculated by Free Water Audit Software	✓				✓	Assess loss cost level	Utility, Regulators
	Unavoidable Annual Real Loss (UARL)	Calculated by Free Water Audit Software	✓				✓	Reveal theoretical technical low level of leakage	Utility, Regulators
Volume	Unit Apparent Losses (vol/conn/day)	Strong and understandable indicator for multiple users.	✓	✓	✓	✓	✓	Used for performance tracking and target-setting	Utility, Regulators
	Unit Real Losses[A] (vol/conn/day)	Strong and understandable indicator for multiple users.	✓	✓	✓	✓	✓	Used for performance tracking and target-setting	Utility, Regulators, Policy Makers
	Unit Real Losses[B] (vol/pipeline length/ day)	Strong and understandable indicator for use by utilities with low connection density.	✓	✓	✓	✓	✓	Data collection and assessment of systems with "low" connection density	Utility, Regulators, Policy Makers
	Unit Total Losses (vol/conn/day) **New KPI**	Strong and understandable indicator, suitable for high-level performance measurement.	✓				✓	High level indicator for trending analysis. Not appropriate for target-setting or benchmarking	Utilities, Customers
	Infrastructure Leakage Index (ILI)	Robust, specialized ratio KPI; can be influenced by pressure and connection density.	✓	✓			✓	Benchmarking after pressure management is implemented	Utilities
Value	Apparent Loss Cost Rate (value/conn/year) **New KPI**	Indicators with sufficient technical rigor. Provide the unit financial value of each type of loss, which is useful for planning and assessment of cost efficiency of water loss reduction and control interventions and programs.	✓			✓	✓	Data collection and assessment on AWWA indicators or contextual parameters to use in conjunction with Loss Cost Rates	Utilities, Regulators, Customers
	Real Loss Cost Rate (value/conn/year) **New KPI**		✓			✓	✓		Utilities, Regulators, Customers
Validity	Data Validity Tier (DVT)	Strong indicator of water loss audit data quality, if data has been validated. Tier provides guidance on priority areas of activity.	✓	✓		✓	✓	Assess caliber of data inputs of the water audit	Regulators, Utilities

AWWA Free Water Audit Software
Water Balance

VOLUME in Acre-ft/Yr

Water Audit Report for: Central Coast Water Authority
Audit Year: 2024 — Jan 01 2024 - Dec 31 2024
Data Validity Tier: Tier IV (71-90)

FWAS v6.1

Volume from Own Sources (VOS)
(corrected for known errors)
13,954.000

Water Imported (WI)
(corrected for known errors)
0.000

System Input Volume
13,954.000

Water Exported (WE)
(corrected for known errors)
0.000

Water Supplied
13,954.000

Authorized Consumption
13,813.448

Billed Authorized Consumption
13,779.000

Billed Water Exported

Billed Metered Consumption (BMAC)
(water exported is removed)
13,779.000

Billed Unmetered Consumption (BUAC)
0.000

Revenue Water (Exported)
0.000

Revenue Water
13,779.000

Unbilled Authorized Consumption
34.448

Unbilled Metered Consumption (UMAC)
0.000

Unbilled Unmetered Consumption (UUAC)
34.448

Non-Revenue Water (NRW)
175.000

Water Losses
140.553

Apparent Losses
68.895

Systematic Data Handling Errors (SDHE)
34.448

Customer Metering Inaccuracies (CMI)
0.000

Unauthorized Consumption (UC)
34.448

Real Losses
71.657

Target Leakage Reduction
0.000

Leakage Level After Reduction
71.657

AWWA Free Water Audit Software: Determining Water Loss Standing

FWAS v6.1

Water Audit Report for: Central Coast Water Authority
Audit Year: 2024 (Jan 01 2024 - Dec 31 2024)
Data Validity Tier: Tier IV (71-90)

Water Loss Control Planning Guide

Functional Focus Area	Water Audit Data Validity Tier (Score Range)				
	Tier I (1-25)	Tier II (26-50)	Tier III (51-70)	Tier IV (71-90)	Tier V (91-100)
Audit Data Collection	Launch auditing and loss control team; address supply metering deficiencies	Analyze business process for customer metering and billing functions and water supply operations; Identify data gaps; improve supply metering	Establish/revise policies and procedures for data collection	Refine data collection practices and establish as routine business process	Annual water audit is a reliable gauge of year-to-year water efficiency standing
Short-term loss control	Research information on leak detection programs; Begin flowcharting analysis of customer billing system	Conduct loss assessment investigations on a sample portion of the system: customer meter testing, leak survey, unauthorized consumption, etc	Establish ongoing mechanisms for customer meter accuracy testing, active leakage control and infrastructure monitoring	Refine, enhance or expand ongoing programs based upon economic justification	Stay abreast of improvements in metering, meter reading, billing, leakage management and infrastructure rehabilitation
Long-term loss control		Begin to assess long-term needs requiring large expenditure: customer meter replacement, water main replacement program, new customer billing system or AMR/AMI system	Begin to assemble economic business case for long-term needs based upon improved data becoming available through the water audit process	Conduct detailed planning, budgeting and launch of comprehensive improvements for metering, billing or infrastructure management	Continue incremental improvements in short-term and long-term loss control interventions
Target-setting			Establish long-term apparent and real loss reduction goals (+10 year horizon)	Establish mid-range (5 year horizon) apparent and real loss reduction goals	Evaluate and refine loss control goals on a yearly basis
Benchmarking			Preliminary Comparisons - can begin to rely upon with PIs for performance comparisons for real losses	Performance Benchmarking with PIs is meaningful in comparing real loss standing	Identify Best Practices/ Best in class; PIs are very reliable as real loss performance indicators for best in class service

For validity scores of 50 or below, the shaded blocks should not be focus areas until better data validity is achieved.

AWWA Free Water Audit Software v6.1

FWAS v6.1

This spreadsheet-based water audit tool is designed to help quantify and track water losses associated with water distribution systems and identify areas for improved efficiency and cost recovery. It provides a "top-down" summary water audit format and is not meant to take the place of a full-scale, comprehensive water audit format. Auditors are strongly encouraged to refer to the most current edition of AWWA M36 Manual for Water Audits for detailed guidance on the water auditing process and targeting loss reduction levels. This tool contains several separate worksheets. Sheets can be accessed using the tabs at the bottom of the screen, or by clicking the TOC links below.

Table of Contents (TOC)

AWWA Web Resources for Water Loss Control
https://www.awwa.org/resource/water-loss-control/
Items referenced in the Free Water Audit Software v6.0 on the web:
- Data Grading Matrix v6.0
- Example Water Audit v6.0
- Water Audit Compiler v6.0
- AWWA Reports on Performance Indicators
- M36 Manual
- Leakage Emissions Initiative - Water Loss Control Committee Report[10]

Enter Basic Information

Name of Utility:	Central Coast Water Authority
Name of Contact Person:	David Beard
Email:	drb@ccwa.com
Telephone | Ext.:	(805) 688-2292 Ext. 228
City/Town/Municipality:	Buellton
State / Province:	California (CA)
Country:	USA
Audit Preparation Date:	Mar 20 2026
Audit Year:	2025
Audit Year Label:	Calendar (Fiscal, Calendar, etc)
Audit Period Start Date:	Jan 01 2025
Audit Period End Date:	Dec 31 2025
Volume Reporting Units:	Acre-feet
Water System Structure:	Wholesale
Water Type:	Potable Water
System ID Number:	4210030
Validator Name/ID:	N/A
Validator Email:	N/A
Estimated Total Population Served by Water Utility:	

Key of Input Acronyms

In order of appearance in the Worksheet

VOS	Volume from Own Sources
VOSEA	VOS Error Adjustment
WI	Water Imported
WIEA	WI Error Adjustment
WE	Water Exported
WEEA	WE Error Adjustment
BMAC	Billed Metered Authorized Consumption
BUAC	Billed Unmetered Authorized Consumption
UMAC	Unbilled Metered Authorized Consumption
UUAC	Unbilled Unmetered Authorized Consumption
SDHE	Systematic Data Handling Errors
CMI	Customer Metering Inaccuracies
UC	Unauthorized Consumption
Lm	Length of mains
Nc	Number of service connections
Lp	Average length of (private) customer service line
AOP	Average Operating Pressure
CRUC	Customer Retail Unit Charge
VPC	Variable Production Cost

Color Key User input | Calculated | Optional default

Guidance for the Worksheet

Choosing to enter unit of **percent** or **volume** (applies to VOSEA, WIEA, WEEA, CMI) choose entry option:

1.00%	percent	*or*
	volume	25.000

Choosing to enter **default** or **custom input** (applies to UUAC, SDHE, UC) choose entry option:

0.25%	default	*or*
	custom	75.000

Guidance for the Interactive Data Grading

Use acronym buttons in IDG header to navigate among inputs. Acronym Key above. White = needs answers, orange = complete, clear = not required. Example below.

VOS	VOSEA	WI	WIEA	WE	WEEA	BMAC	BUAC	UMAC	UUAC
SDHE	CMI	UC	Lm	Nc	Lp	AOP	CRUC	VPC	

After clicking an acronym button, answer all visible questions in the order they're presented, choosing best-fit answer

Grade will populate when all visible questions are complete for an input: **7**

The limiting criteria will be labeled along the right. If only 1 limiting criterion is shown, improving on that criterion will achieve a higher data grade. If multiple limiting criteria are shown, improving on *each* limiting criterion is necessary to achieve a higher data grade. A complete inventory of data grading criteria is available in the Data Grading Matrix v6.0 (see web resources)

Limiting

If you have questions or comments regarding this software please contact us at: wlc@awwa.org

AWWA Free Water Audit Software: Worksheet

FWAS v6.1
American Water Works Association.

Water Audit Report for: Central Coast Water Authority
Audit Year: 2025 | Jan 01 2025 - Dec 31 2025 | Calendar

Click 'n' to add notes
Click 'g' to determine data validity grade

To edit water system info: go to start page

To access definitions, click the input name

All volumes to be entered as: ACRE-FEET PER YEAR

Water Supplied Error Adjustments

WATER SUPPLIED

choose entry option:

VOS	Volume from Own Sources:	n	g	6	14,699.000	Acre-ft/Yr	n g 9		percent	VOSEA
WI	Water Imported:	n	g	n/a		Acre-ft/Yr				WIEA
WE	Water Exported:	n	g	n/a		Acre-ft/Yr				WEEA
	WATER SUPPLIED:				14,699.000	Acre-ft/Yr				

AUTHORIZED CONSUMPTION

choose entry option:

BMAC	Billed Metered:	n	g	9	14,536.000	Acre-ft/Yr			
BUAC	Billed Unmetered:	n	g	n/a		Acre-ft/Yr			
UMAC	Unbilled Metered:	n	g	n/a		Acre-ft/Yr			
UUAC	Unbilled Unmetered:	n	g	3	36.340	Acre-ft/Yr	0.25%	default	
	Default option selected for Unbilled Unmetered, with automatic data grading of 3								
	AUTHORIZED CONSUMPTION:				14,572.340	Acre-ft/Yr			

WATER LOSSES

126.660 Acre-ft/Yr

Apparent Losses

choose entry option:

	Default option selected for Systematic Data Handling Errors, with automatic data grading of 3								
SDHE	Systematic Data Handling Errors:	n	g	3	36.340	Acre-ft/Yr	0.25%	default	
CMI	Customer Metering Inaccuracies:	n	g	10	0.000	Acre-ft/Yr		percent	under-registration
UC	Unauthorized Consumption:	n	g	3	36.340	Acre-ft/Yr	0.25%	default	
	Default option selected for Unauthorized Consumption, with automatic data grading of 3								
	Apparent Losses:				72.680	Acre-ft/Yr			

Real Losses

	Real Losses:				53.980	Acre-ft/Yr			
	WATER LOSSES:				126.660	Acre-ft/Yr			

NON-REVENUE WATER

	NON-REVENUE WATER:				163.000	Acre-ft/Yr			

SYSTEM DATA

Lm	Length of mains:	n	g	10	122.8	miles	(including fire hydrant lead lengths)
Nc	Number of service connections:	n	g	8	10		(active *and* inactive)
	Service connection density:				0	conn./mile main	
	Are customer meters typically located at the curbstop/property line?				No		
Lp	Average length of (private) customer service line:	n	g	10		ft	(average distance between property line and meter)
AOP	Average Operating Pressure:	n	g	7	165.3	psi	

COST DATA

CRUC	Customer Retail Unit Charge:	n	g	n/a			Total Annual Operating Cost	
VPC	Variable Production Cost:	n	g	10		$/acre-ft		$/yr (optional input)

Click here to calculate carbon emissions ---> carbon

WATER AUDIT DATA VALIDITY TIER:

***** The Water Audit Data Validity Score is in Tier IV (71-90). See Dashboard tab for additional outputs. *****

go to dashboard

A weighted scale for the components of supply, consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION TO IMPROVE DATA VALIDITY:

Based on the information provided, audit reliability can be most improved by addressing the following components:

1: Volume from Own Sources (VOS)
2: Unauthorized Consumption (UC)
3: Systematic Data Handling Errors (SDHE)

KEY PERFORMANCE INDICATOR TARGETS:

OPTIONAL: If targets exist for the operational performance indicators, they can be input below:

Unit Total Losses:		gal/conn/day
Unit Apparent Losses:		gal/conn/day
Unit Real Losses[A]:		gal/conn/day
Unit Real Losses[B]:		gal/mile/day

If entered above by user, targets will display on KPI gauges (see Dashboard)

FWAS v6.1

AWWA Free Water Audit Software: Dashboard

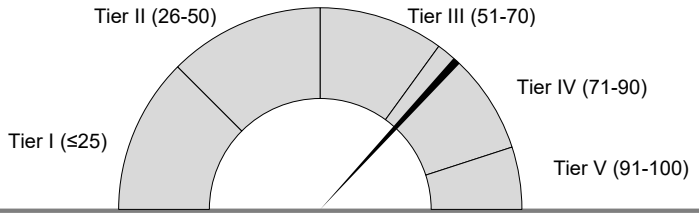
go to worksheet | go to grading | go to references

Water Audit Report for: Central Coast Water Authority **Audit Year:** 2025 Calendar Jan 01 2025 - Dec 31 2025

Data Validity

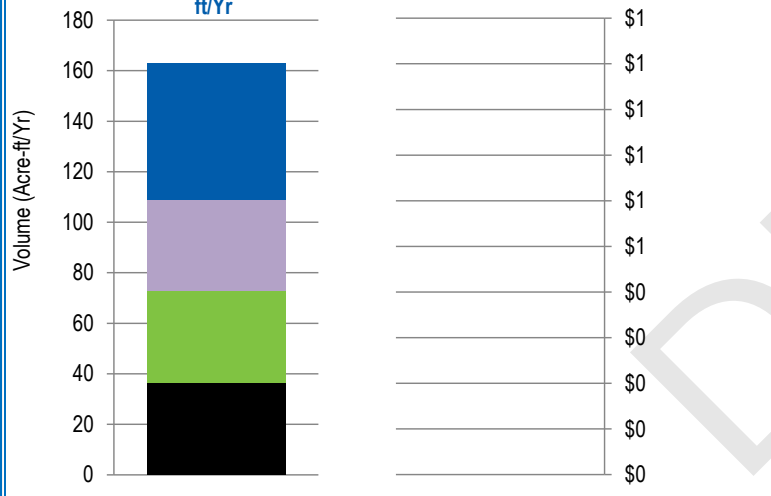
Data Validity Score: 73 **Data Validity Tier:** Tier IV (71-90)

See Loss Control Planning for Tier Details



NRW Components Summary

Total Volume of NRW = 163 Acre-ft/Yr **Total Cost of NRW = $/Yr**



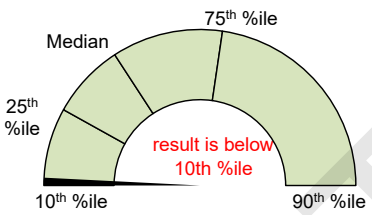
	Volume Acre-ft/Yr	Value $/Yr	Carbon Emissions mt/Yr
Apparent Losses	72.7		0
Real Losses	54.0	$0	0
Unbilled Authorized Cons	36.3		0
Non-Revenue Water	163.0		0

mt = metric tons

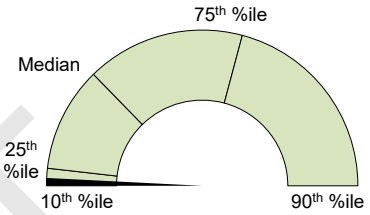
Key Performance Indicators

Actual KPI result — Target (see Worksheet)

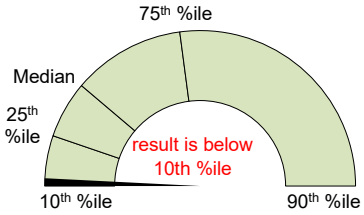
gauge %iles per validated industry ranges[2]



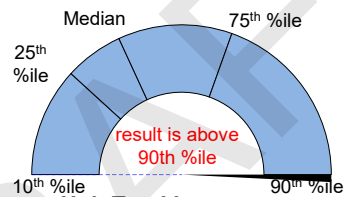
Total Loss Cost Rate
0.00 $/conn/year



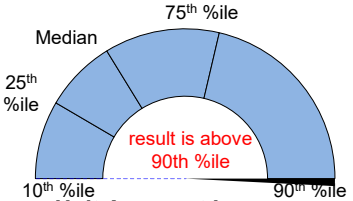
Apparent Loss Cost Rate
$/conn/year



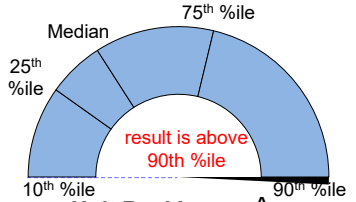
Real Loss Cost Rate
0.00 $/conn/year



Unit Total Losses
11,307.5 gal/conn/day

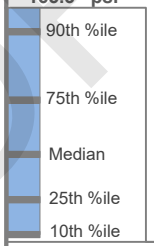


Unit Apparent Losses
6,488.5 gal/conn/day

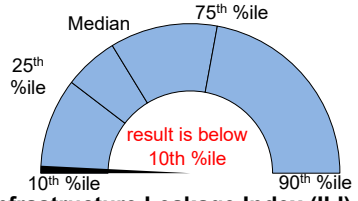


Unit Real Losses[A]
4,819.0 gal/conn/day

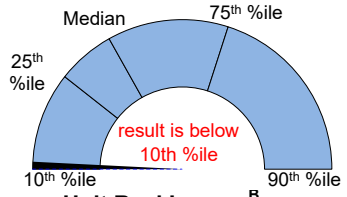
Average Operating Pressure
165.3 psi



AOP is above 90th %ile



Infrastructure Leakage Index (ILI)
0.4 dimensionless



Unit Real Losses[B]
392 gal/mile/day

See UARL definition for additional guidance on the ILI

(UARL) Unavoidable Annual Real Losses	123.3 Acre-ft/Yr	11,006.5 gal/conn/day

Guidance Information for Key Performance

- The eight indicators shown are the recommended suite per the AWWA Water Loss Control Committee 2020 Position on KPIs[1].
- A suite of KPIs is necessary, as no single KPI can holistically communicate water loss performance for a given water system.
- See Table 1 below for Uses and Limitations for each KPI, excerpted from the AWWA Water Loss Control Committee Report (2020)[1], with naming conventions updated.
- Percentiles (%iles) shown on KPI gauges come from Level 1 validated data in the AWWA WLCC Reference Water Audit Dataset (2020)[2].
- KPI %iles shown above are not segregated by cohorts. Limited KPI data by cohorts may be found in WRF 4695 Guidance Manual, Appendix B (2019)[5].
- Actual KPI results that fall below 10th %ile or above 90th %ile do not necessarily imply error, but should be viewed with scrutiny.
- Percentiles not intended to imply targets. Targets may be input by user for operational KPIs, if desired, on Worksheet.
- See UARL and ILI in Definitions tab for discussion of size and pressure limitations.
- Systems that fall on the extreme ends of size or connection density should use caution when interpreting Unit Losses KPIs.

Table 1

Source: AWWA Water Loss Control Committee Report (2020)[1], with naming conventions updated

2020 AWWA Water Audit Method – Water Audit Outputs and Key Performance Indicators: Uses and Limitations

Type	Indicator	Description	Suitable Purposes					Uses and Limitations	Principal Users
			Assessment	Bench-Marking	Target-Setting	Planning	Tracking		
Attribute	Apparent Loss Volume	Calculated by Free Water Audit Software	✓				✓	Assess loss level	Utility, Regulators
	Apparent Loss Cost	Calculated by Free Water Audit Software	✓				✓	Assess cost loss level	Utility, Regulators
	Real Loss Volume	Calculated by Free Water Audit Software	✓				✓	Assess loss level	Utility, Regulators
	Real Loss Cost	Calculated by Free Water Audit Software	✓				✓	Assess loss cost level	Utility, Regulators
	Unavoidable Annual Real Loss (UARL)	Calculated by Free Water Audit Software	✓				✓	Reveal theoretical technical low level of leakage	Utility, Regulators
Volume	Unit Apparent Losses (vol/conn/day)	Strong and understandable indicator for multiple users.	✓	✓	✓	✓	✓	Used for performance tracking and target-setting	Utility, Regulators
	Unit Real Losses[A] (vol/conn/day)	Strong and understandable indicator for multiple users.	✓	✓	✓	✓	✓	Used for performance tracking and target-setting	Utility, Regulators, Policy Makers
	Unit Real Losses[B] (vol/pipeline length/ day)	Strong and understandable indicator for use by utilities with low connection density.	✓	✓	✓	✓	✓	Data collection and assessment of systems with "low" connection density	Utility, Regulators, Policy Makers
	Unit Total Losses (vol/conn/day) **New KPI**	Strong and understandable indicator, suitable for high-level performance measurement.	✓				✓	High level indicator for trending analysis. Not appropriate for target-setting or benchmarking	Utilities, Customers
	Infrastructure Leakage Index (ILI)	Robust, specialized ratio KPI; can be influenced by pressure and connection density.	✓	✓			✓	Benchmarking after pressure management is implemented	Utilities
Value	Apparent Loss Cost Rate (value/conn/year) **New KPI**	Indicators with sufficient technical rigor. Provide the unit financial value of each type of loss, which is useful for planning and assessment of cost efficiency of water loss reduction and control interventions and programs.	✓			✓	✓	Data collection and assessment on AWWA indicators or contextual parameters to use in conjunction with Loss Cost Rates	Utilities, Regulators, Customers
	Real Loss Cost Rate (value/conn/year) **New KPI**		✓			✓	✓		Utilities, Regulators, Customers
Validity	Data Validity Tier (DVT)	Strong indicator of water loss audit data quality, if data has been validated. Tier provides guidance on priority areas of activity.	✓	✓		✓	✓	Assess caliber of data inputs of the water audit	Regulators, Utilities

AWWA Free Water Audit Software
Water Balance

VOLUME in Acre-ft/Yr

Water Audit Report for: Central Coast Water Authority
Audit Year: 2025 Jan 01 2025 - Dec 31 2025
Data Validity Tier: Tier IV (71-90)

FWAS v6.1

		Water Exported (WE) (corrected for known errors) 0.000	Billed Water Exported			Revenue Water (Exported) 0.000
Volume from Own Sources (VOS) (corrected for known errors) 14,699.000	System Input Volume 14,699.000	Water Supplied 14,699.000	Authorized Consumption 14,572.340	Billed Authorized Consumption 14,536.000	Billed Metered Consumption (BMAC) (water exported is removed) 14,536.000	Revenue Water 14,536.000
					Billed Unmetered Consumption (BUAC) 0.000	
				Unbilled Authorized Consumption 36.340	Unbilled Metered Consumption (UMAC) 0.000	Non-Revenue Water (NRW) 163.000
					Unbilled Unmetered Consumption (UUAC) 36.340	
			Water Losses 126.660	Apparent Losses 72.680	Systematic Data Handling Errors (SDHE) 36.340	
					Customer Metering Inaccuracies (CMI) 0.000	
					Unauthorized Consumption (UC) 36.340	
Water Imported (WI) (corrected for known errors) 0.000				Real Losses 53.980	Target Leakage Reduction 0.000	
					Leakage Level After Reduction 53.980	

AWWA Free Water Audit Software: Determining Water Loss Standing

FWAS v6.1

Water Audit Report for: Central Coast Water Authority
Audit Year: 2025 (Jan 01 2025 - Dec 31 2025)
Data Validity Tier: Tier IV (71-90)

Water Loss Control Planning Guide

Functional Focus Area	Water Audit Data Validity Tier (Score Range)				
	Tier I (1-25)	**Tier II (26-50)**	**Tier III (51-70)**	**Tier IV (71-90)**	**Tier V (91-100)**
Audit Data Collection	Launch auditing and loss control team; address supply metering deficiencies	Analyze business process for customer metering and billing functions and water supply operations; Identify data gaps; improve supply metering	Establish/revise policies and procedures for data collection	Refine data collection practices and establish as routine business process	Annual water audit is a reliable gauge of year-to-year water efficiency standing
Short-term loss control	Research information on leak detection programs; Begin flowcharting analysis of customer billing system	Conduct loss assessment investigations on a sample portion of the system: customer meter testing, leak survey, unauthorized consumption, etc	Establish ongoing mechanisms for customer meter accuracy testing, active leakage control and infrastructure monitoring	Refine, enhance or expand ongoing programs based upon economic justification	Stay abreast of improvements in metering, meter reading, billing, leakage management and infrastructure rehabilitation
Long-term loss control		Begin to assess long-term needs requiring large expenditure: customer meter replacement, water main replacement program, new customer billing system or AMR/AMI system	Begin to assemble economic business case for long-term needs based upon improved data becoming available through the water audit process	Conduct detailed planning, budgeting and launch of comprehensive improvements for metering, billing or infrastructure management	Continue incremental improvements in short-term and long-term loss control interventions
Target-setting			Establish long-term apparent and real loss reduction goals (+10 year horizon)	Establish mid-range (5 year horizon) apparent and real loss reduction goals	Evaluate and refine loss control goals on a yearly basis
Benchmarking			Preliminary Comparisons - can begin to rely upon with PIs for performance comparisons for real losses	Performance Benchmarking with PIs is meaningful in comparing real loss standing	Identify Best Practices/ Best in class; PIs are very reliable as real loss performance indicators for best in class service

For validity scores of 50 or below, the shaded blocks should not be focus areas until better data validity is achieved.

CENTRAL COAST WATER AUTHORITY
URBAN WATER MANAGEMENT PLAN

APPENDIX H - WATER SHORTAGE CONTINGENCY PLAN

WATER SHORTAGE CONTINGENCY PLAN

FOR

CENTRAL COAST WATER AUTHORITY

June 2021

Prepared By:

Provost & Pritchard Consulting Group

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1 - PURPOSES AND PRINCIPLES OF PLAN

The purpose of the Central Coast Water Authority (CCWA or Authority) Water Shortage Contingency Plan (WSCP) is to document the methodology for analyzing water supply reliability, declaring water shortage emergencies, identifying mitigation actions, and documenting protocols for implementing the WSCP. This WSCP was prepared according to requirements in Sections 10632 & 10635 of the California Water Code. Certain components of the WSCP, such as water use restrictions and enforcement, are not applicable to CCWA since they provide wholesale water. The agencies served by CCWA (also called project participants) also have their own Water Shortage Contingency Plans and are ultimately responsible for addressing their water supply shortages. However, CCWA will try to secure supplemental water supplies in dry years if requested to by the project participants.

2 - WATER SUPPLY AGREEMENT WITH PARTICIPANTS

Water supplies may be interrupted or reduced significantly in a number of ways, such as a drought which limits supplies, an earthquake which damages water delivery or storage facilities, or a toxic spill that affects water quality. As a wholesaler of a supplemental water supply, CCWA's obligation during water supply interruptions or reductions is limited. The Water Supply Agreements signed by each project participant includes the following language to address shortage of water supply:

"Shortage in Water Supply

a) Temporary Shortages; Delivery Priorities. In any Year in which there may occur a shortage or interruption due to drought or other temporary cause in the supply of water available for delivery to the Contractor, with the result that such supply is less than the total of the annual Project Allotments of all Project Participants for that Year, the Authority Shall reduce the delivery of water to the Contractor based upon water use in accordance with the State Water Supply Contract.

b) Permanent Shortage Entitlements. In the event that the State is unable to construct sufficient additional conservation facilities to prevent a reduction in the minimum State Water Project yield, or if for any other reason there is a reduction in the minimum State Water Project yield, which, notwithstanding preventive or remedial measures taken or to be taken by the State, threatens a permanent shortage in the supply of State Water Project water to be made available to the Authority under the State Water Supply Contract the Project Allotment of the Contractor shall be reduced in accordance with the State Water Supply Contract.

c) No Liability for Shortages. Neither the Authority nor any of its officers, agents, or employees shall be liable for any damage, direct or indirect, arising from the shortages in the amount of water to be made available for delivery to the Contractor under this Agreement caused by non-availability of water to the Authority under the State Water Supply Contract or caused by drought, operation of area of origin statutes, or any other cause beyond its control.

d) Wheeling During Shortages. In the event that the Contractor's Project Allotment has been temporarily or permanently reduced, the Contractor may direct the Authority to deliver water acquired by the Contractor outside of Santa Barbara County and delivered through the Coastal Aqueduct, up to an amount equal to such reduction, subject to the Authority's overall delivery ability considering the then current delivery schedule of all Project Participants and subject to water quality requirements reasonably approved by the Authority. For purpose of Section 13 hereof, such water shall

be treated as Project Allotment and the Authority shall not charge any fee in connection with the delivery of such water except Fixed O&M Costs and Variable O&M Costs which would be allocable to such Contractor's Project Allotment."

3 - PROCEDURES FOR EVALUATING WATER SUPPLIES

Overview of Water Supply Assessment

CCWA provides wholesale treated water originating from the State Water Project to the 13 water providers in Santa Barbara County annually. These agencies are collectively called the project participants. Quantifying water supplies is fairly simple since they are based on the project participant's SWP contract amounts multiplied by the announced SWP allocation. The allocation can be adjusted throughout winter, spring and summer months, usually gradually increasing during the year but in some cases can be decreased. CCWA can only deliver what is available. If project participants desire more water one option is to ask CCWA to search for more water through transfers, exchanges or water banking opportunities. These water supplies, if available, can be added to the SWP allocations for those agencies willing to pay their cost. A shortage can also occur from a catastrophic water supply interruption, which may or may not be under the control of CCWA. CCWA has plans in place to respond to a catastrophic water supply emergency and restore service as soon as feasible.

Existing Infrastructure Constraints

Primary infrastructure includes a water treatment plant and the Coastal Aqueduct for conveying flows to the project participants. In addition, the State Water Project also operates facilities, including Delta pumping facilities and the California Aqueduct, that deliver water to CCWA.

Water Treatment Plant. The water treatment plant has backup generators so it can continue operating during a power outage. The water treatment plant may temporarily be down in case of malfunction or other operational problem, but most treatment processes have backup systems or redundancies, making the risk of a plant shutdown relatively low.

Coastal Aqueduct. The Coast Aqueduct is the sole conveyance facility for delivering water to the project participants. CCWA has special design features, stockpiled materials and emergency plans in place to address an outage or problem with the aqueduct. For more details refer to Section 6 – Catastrophic Water Supply Interruption.

State Water Project Facilities. The State of California has an Emergency Response Plan to deal with catastrophic failures or emergencies on State Water Project Facilities. These would generally be out of the control of CCWA. However, if the facility failures occurred North of San Luis Reservoir, there may still be opportunities for CCWA to retrieve their own water from San Luis Reservoir, or other water supplies via exchange or transfers.

Locally Appropriate Operational Changes

When participant delivery requests fall below the design minimum flow rate of the Coastal Aqueduct (10 million gallons per day or 30 AF per day), CCWA management will attempt to coordinate deliveries rates as a measure to maintain water quality within the pipeline. This action is coupled with a wide range of nitrification control measures. If nitrification cannot be controlled due to elevated water age arising from low flow rates in the aqueduct, CCWA will need to cease delivery operations.

Gap Between Supply and Demand

The District can only provide water that is available. The project participants must close any gaps between supply and demand with their own local water supplies, their own water transfer/exchanges agreements, water conservation programs, or supplemental water which they must request from CCWA.

4 - WATER SHORTAGE STAGES AND RESPONSE ACTIONS

The Water Code lists six standard Water Shortage Stages for use in WSCPs, each increasing gradually by 10% up to the highest level which is a 50+% reduction. These stages are generally not applicable to CCWA since they provide a wholesale supply and are not responsible for response actions. It is the responsibility of the project participants to declare local water shortages and implement water conservation measures. CCWA has no ability to reduce water consumption during a water shortage event. In fact, during a water shortage event, CCWA is called upon by its member agencies to increase and maximize deliveries. However, CCWA regularly notifies the project participants of the current SWP allocation and will declare an emergency if there is a catastrophic water supply interruption.

5 - MITIGATION MEASURES

CCWA's charge is to assure that the delivery of the SWP to retail agencies is as reliable as possible each and every year. To that end, CCWA will respond to the need of its participants when additional sources of water, beyond that provided by the annual DWR Table A allocation process, are requested. During one of the driest periods on record (late 2013 and 2014), the CCWA Board of Directors established two important goals for CCWA staff to pursue: (1) establish a program to identify and secure supplemental water during times of drought and (2) investigate the options for a groundwater banking partnership for storing excess water, when it is available. The Supplemental Water Program has been very successful in securing additional supplies in dry years and CCWA is also currently participating in two groundwater banks. More details on these two topics are provided below.

The CCWA Supplemental Water Purchase Program (SWPP) was first implemented in 2014, which was the year with the lowest annual Table A allocation in the history of the SWP. Considering that each CCWA participant had their own unique set of water supply needs, it was necessary to develop a specific program to assist only those agencies that required supplemental source of water supplies. The purpose of this separation was to isolate the participants not involved with purchasing supplemental water from the costs and liabilities associated with such transactions.

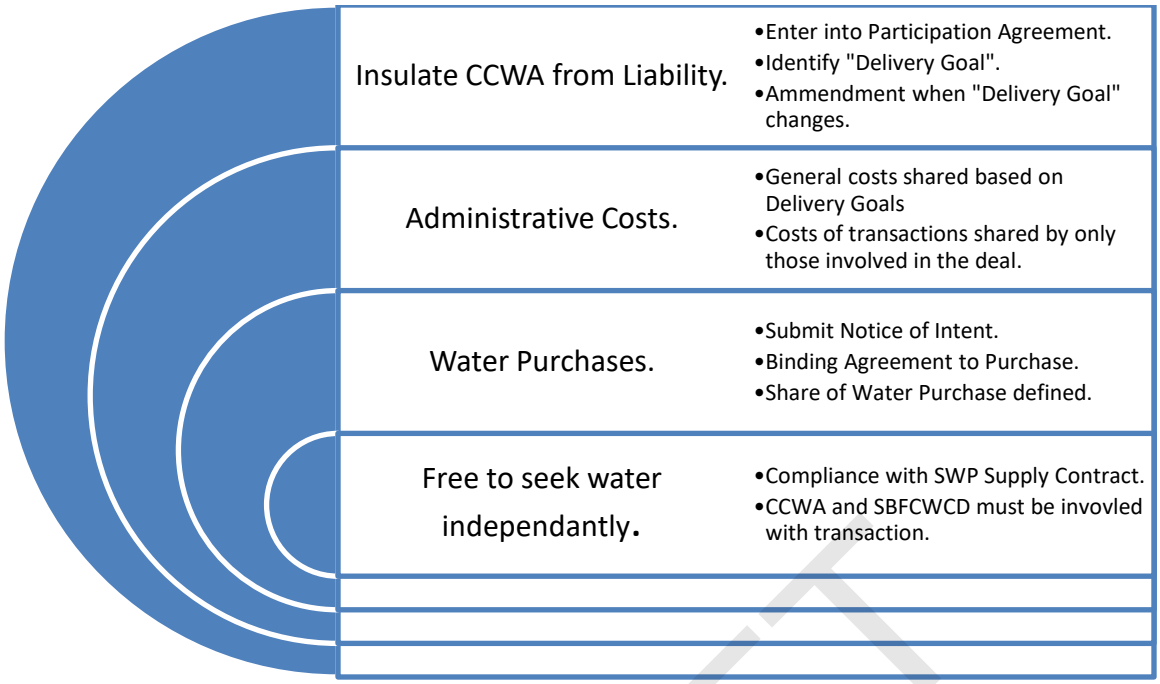

Figure 1 Supplemental Water Purchase Program

As illustrated in Figure 1, the SWPP was formed through a contract among the CCWA participants joining the program. The program was established to facilitate a group effort to secure supplemental water, while not prohibiting individual CCWA participants from making their own independent efforts.

The SWPP Participation Agreement included provisions where those signing the agreement would agree to indemnify CCWA and its member agencies from the costs and liabilities associated with the program. The Agreement also outlined how general administrative costs and specific transaction costs would be allocated to the membership of the SWPP.

First, to join the SWPP, a CCWA participant would need to identify a delivery goal and this goal would be documented in the Participant Agreement. If a SWPP member wanted to change their delivery goal at a later date due to changing circumstances, they would need to change it by an amendment to the Agreement. All general administrative costs for the program would be proportionally shared based on Delivery Goals.

When a specific supplemental water transaction is identified, SWPP members will opt in or opt out. Those that opt in on the transaction will need to submit a Notice of Intent. The costs for the transaction would be shared only by those SWPP members involved with the transaction and would be proportionally paid based on the volumes presented in the Notice of Intent. Finally, once the specifics of the transaction became finalized, each participating SWPP member would need to enter a Binding Agreement to Purchase. This agreement included provisions to allocate the share of the water purchase in terms of costs and water received.

The SWPP proved to be highly effective in responding to the urgent need for supplemental water in the 2014 - 2016 drought and will be made available to the project participants in future water shortages.

As of 2021, CCWA was participating in two groundwater banks: The Strand Water Bank in Irvine Ranch Water District and the Semitropic Water Banking and Exchange Program. These projects can provide stable dry-year water supplies since the water can be stored for multiple years. Refer to the 2020 UWMP for more details on the groundwater banking agreements.

6 - CATASTROPHIC WATER SUPPLY INTERRUPTION

A catastrophic water supply interruption can come from a number of causes including natural disaster, equipment malfunctions, terrorism, water quality issues, or power failures. This represents a different situation than a drought and will require efforts by CCWA to restore services as soon as feasible, as well as coordination with the project participants. The following topics will be covered in this section: 1) Mitigation and prevention measures; 2) CCWA Risk Resilience Assessment and Emergency Response Plan; 3) Seismic Hazard Risk Assessment and Mitigation; and 4) Seismic Damage to the California Aqueduct.

Mitigation and Prevention Measures

Both CCWA and DWR are committed to delivering all of the water that is available in a given year. There are many design features in the DWR and CCWA systems that are intended to facilitate continuous supply and delivery operations, with a minimum of interruptions. Some of the features are as follows:

- To prevent service interruption due to power failures, all key facilities have emergency electrical generators to, at least, maintain communication and control of these facilities.
- To prevent malicious acts of vandalism or terrorism, a wide variety of security measures are in place.
- To minimize the impact of earthquakes, there are a range of design features on the pipeline to minimize damage. These features include specialized pipe connections such as the Coastal Branch pipeline crosses the San Andreas Fault and isolation valves at other fault crossing locations.
- To provide early detection of contamination, the pipeline and treatment plant are equipped with a wide variety of water quality instrumentation. All of these water quality instruments can be monitored through CCWA's Supervisory Control and Data Acquisition (SCADA) System.

Risk and Resiliency Assessment and Updated Emergency Response Plan

The American Water Infrastructure Act (AWIA) of 2018 requires community water systems serving more than 3,300 people to develop or update Risk and Resiliency Assessments (RRA) and Emergency Response Plans (ERP). Since CCWA provides water to over 100,000 people, the deadline for completing the RRA was March 31, 2020, and the deadline for completing the ERP was September 30, 2020. CCWA was able to complete both of these required tasks well before the regulatory deadline.

The Risk and Resiliency Assessment (RRA) includes six overall tasks: (1) identification of critical assets, (2) estimation of a Utility Resilience Index, (3) utilization of the Cyber Security Assessment Tool, (4) completing a Malevolent Acts Risk Review, (5) identification of Threat-Asset Pairs and (6) utilizing the VSAT software to complete and document the RRA. These tasks were completed by the CCWA Supervisor group (project team) in a several collaborative workshop setting. The project team reviewed original design documentation as well as maintenance and maintenance records of the CCWA system as they considered each element of the RRA.

The results of the RRA identified specific actions that could be taken to improve overall resiliency of the CCWA operation. As required by AWIA, the existing CCWA Emergency Response Plan (ERP) was updated, as appropriate, to include resiliency improvements measures that were identified during the RRA. In addition, the updated ERP was also required to include specific elements that did not existing in the previous CCWA ERP. The main elements of an updated ERP included (1) Utility Information, (2) Resilience Strategies, (3) Emergency Plans and Procedures, (4) Mitigation Actions and (5) Detection Strategies.

The ERP also provides detailed instructions for catastrophic interruption of its water supply including chemical spill, SCADA or other communications failure, accidental contamination of water supply,

contamination of water supply threat, earthquake, fire, intrusion alarm at CCWA facilities, power failure, vandalism or other damage to CCWA facilities, water supply failure and water treatment failure.

The ERP includes job classification-specific instructions for all the above situations, notification lists, facility specific information, chain of command/emergency operations center information, emergency contractor and supplier information and a complete set of forms to assist in emergency tracking. CCWA also maintains an inventory of essential equipment such as emergency generators, portable chlorination and de-chlorination equipment, lighting, etc. as well as long lead time supplies such as pipe sections in various diameters, valves and other critical items.

The ERP is updated annually. Additionally, staff receives training and performs emergency response exercises on a frequent basis. The ERP is not attached because it contains sensitive security information, but is available to CCWA staff, project participants, and other approved public agencies.

Seismic Hazard Assessment and Mitigation Plan

The seismic hazards associated with the CCWA system are addressed through the original design of the system, periodic seismic risk assessments of selected components of the system and routine operations and maintenance work. All structures within the CCWA system have been designed to comply with the applicable sections of the Uniform Building Code for seismic safety in California. In addition, the CCWA pipeline crosses two known earthquake faults, the San Andreas and the Santa Ynez River Faults, and certain features have been incorporated into the pipeline design to mitigate damage arising from an earthquake event at these locations.

As required by Title 19 California Code of Regulations (CCR) CalARP Program, CCWA retains the services of an engineering consultant to conduct a CalARP Seismic Assessment every 5 years at the Water Treatment Plant (WTP), with the first one completed in 2017. The purpose of the assessment is to reduce the likelihood of releasing significant quantities of the regulated materials in the event of strong ground motion at the facility due to an earthquake. The assessment specifically focused on the storage, control and dosing systems for Aqueous Ammonia (19% by weight) and chlorine (one ton compressed liquid chlorine cylinders). These chemicals are classified as hazardous materials and are stored in quantities above the CalARP regulatory thresholds. The results of the 2017 assessment did not identify conditions that merited specific recommendations for improvements of the systems inspected.

In addition to design features, periodic assessment and routine operations and maintenance measures, the CCWA Emergency Response Plans outlines procedures for staff to implement upon detection of a significant earthquake event. These procedures include both assessment activities and specific operational responses, depending upon the circumstances.

San Andreas Fault. The CCWA pipeline is an underground pipeline, however, as it approaches the San Andreas Fault, it becomes an above ground pipeline for approximately 1,325 feet. The design approach for this section of pipeline is to reinforce the pipe anchoring at the points of transition from underground to aboveground. The above ground portion of the pipeline has numerous design features to improve stability and is connected in a way to facilitate articulation and movement during an earthquake event.

The pipe connections are accomplished with a sleeve coupling assembly. This assembly consists of a middle ring and two follower rings. The middle ring is 1 foot - 3 inches wide and is slipped over the ends of the two joined pipe spools. The two follower rings are positioned on each side of the middle ring. A special gland is presents between the middle ring and follower rings where a resilient rubber gasket is placed. The follower ringers are joined together with long 3/4 inch through-bolts that are used to tighten the follower rings together and squeeze the resilience rubber gasket into the middle ring to form a watertight seal. This kind of pipe joining assembly allows for a certain degree of lateral movement by the pipes.

Finally, the Seismic Joint is inspected monthly by CCWA staff for any signs of leakage or significant movement of the pipeline. If needed the sleeve coupling assemblies are tightened to prevent leakage. Also, on a periodic basis, the concrete foundations of each pipe support are surveyed in order to monitor for gradual movements over time.

Santa Ynez River Fault. The CCWA pipeline crosses over the Santa Ynez Fault. To mitigate potential environmental impacts and potential safety risk to the general public, isolation valve systems have been installed on the main aqueduct pipeline. Two are located on each side of the San Antonio Creek crossing and two additional isolation valve systems are located at strategic locations as the aqueduct crosses the Santa Ynez River. The isolation valves are designed to reduce the flow rate but not completely eliminate flow from the pipeline.

The isolation valve system is equipped with a large butterfly valve on the main aqueduct pipeline and a smaller bypass pipe and associated isolation valve. The isolation valve system also includes a seismic sensor and flow meter. If an earthquake is sensed above a certain magnitude or if a high rate of flow is detected, the isolation valves will activate. First, the smaller bypass pipeline isolation valve will open. When the bypass pipeline isolation valve is fully open, the larger butterfly isolation valve in the main aqueduct pipeline will start to close. Once the main butterfly isolation valve closes, the bypass pipeline isolation valve will close. The closure time and sequence have been established to minimize the formation of the pressure transient within the main aqueduct. If the isolation valves are activated, they can only be manually opened so that CCWA staff can conduct physical inspection to determine the extent of damage

These isolation valve systems have a number of features that ensure continuous operation. All instrumentation has battery back-up power supply, which can accommodate connection of an emergency electrical generator. Also, the valve actuation is powered through a "Hydraulic Package", which is a system that stores hydraulic pressure that can be utilized to actuate the valves during a power failure event. All of these systems and control sequences are verified on an annual basis by CCWA staff, typically during the annual winter shutdown maintenance.

Spare Pipe. As part of the Risk and Resilience Assessment of the CCWA System, it was concluded that purchasing pipe spools and related parts would significantly reduce repair time if an earthquake were to significantly damage the aqueduct pipeline. The pipe materials are stored in strategic locations and have been manufactured in a way to allow for long term storage without corrosion or other damage.

Seismic Damage to the California Aqueduct

The Phase II Coastal Branch pipeline traverses the San Andreas Fault, in addition, the California Aqueduct passes within 20 miles of the San Andreas Fault as well. The California Division of Mines and Geology has stated that two of the aqueduct systems that import water to southern California (including the California Aqueduct) could be ruptured by displacement on the San Andreas Fault. The situation would be further complicated by physical damage to pumping equipment and local loss of electrical power.

As previously stated, the CCWA ERP addresses seismic risks and some facilities have been constructed to minimize impacts from earthquakes, including special pipe connections and isolation valves.

DWR has an Aqueduct Outage Plan for restoring the California Aqueduct to service should a major break occur, which it estimates would take approximately four months to repair. This would interrupt the SWP source of supply to the CCWA project participants for the four-month repair period. Since the CCWA system is a supplemental and interruptible supply, the CCWA project participants maintain other sources of water supply that could be utilized during this potential extended outage. However, CCWA staff would work and cooperate with DWR in facilitating a speedy resumption of service.

Since the CCWA system receives all of its water supply through the SWP system, any interruption between the San Luis Reservoirs and the Coastal Branch will represent significant potential for interrupting water supply

delivery operations. The complete disruption of the California Aqueduct between San Luis Reservoir and the Coastal Branch would represent the worst-case scenario because it separates the Coastal Branch from both the Delta and San Luis Reservoir. As discussed above, DWR has estimated that the time to repair a complete disruption of the aqueduct would be four months. Although the Levee failures in the Delta would impact SWP export for up to six months, CCWA typically has carryover water in San Luis Reservoir, which would reduce, but not eliminate, the impact.

7 - COMMUNITY OUTREACH

An important function of the CCWA operation is to fully characterize the source of supply for CCWA Participants so that they can incorporate this information into their individual water management strategies. CCWA management provides frequent updates on the current year available supply at each Board of Directors Meeting and at each Operating Committee Meeting. This update includes the current status of precipitation and snow levels of the SWP's watershed, current reservoir levels, and the results of DWR periodic special studies regarding potential changes to the amount of available supply as well as DWR's annual position analysis. In addition, a Water Delivery Status Report is also posted on the agency's website. This report provides the amount of available water supply for the current year and the amount delivered to date for the given year. Most of the project participants also closely follow SWP water allocation announcements. Nevertheless, CCWA regularly notifies project participants of changes in allocations, as well as the availability of other supplementary water supplies.

8 - LEGAL AUTHORITY OF THE PLAN

This WSCP adheres with the California Water Code 10632. This document is also required by State law as outlined in the Water Code, which states that, "Every urban water supplier shall prepare and adopt a water shortage contingency plan as part of its urban water management plan…" (WC 10632). As an established California water agency, CCWA has the authority to implement the WSCP, declare water shortages, and implement mitigation measures requested by the project participants.

CCWA will follow the protocols outlined in this Plan should it become necessary to declare a water shortage emergency, such as a catastrophic water supply interruption. The process will follow the pertinent sections of the California Water Code and be noticed for a public hearing, typically at a Board of Directors meeting. If time is of the essence, then the CCWA Executive Director can declare a water emergency before Board approval is possible.

9 - REVENUE REDUCTIONS AND EXPENSE INCREASES

Expenses for the Supplemental Water Purchase Program are passed on directly to the agencies choosing to participate, so there are not additional costs for CCWA.

Responding to a catastrophic water supply interruption could feasibly be covered under existing budgets and using existing staff and resources. If additional costs were incurred, CCWA could rely on reserves or the CCWA Board of Directors, which is composed of project participants, could increase fees for the following year to recover any deficits. CCWA is funded entirely by the project participants who are required to cover any expenses incurred by CCWA.

10 - MONITORING AND EVALUATING THE PLAN

This WSCP has been prepared to incorporate new requirements established in 2020. The WSCP will be re-evaluated at least every five years and at the end of each drought period to assess its performance. If deemed necessary, it will be modified and updated.

CENTRAL COAST WATER AUTHORITY
URBAN WATER MANAGEMENT PLAN

APPENDIX I – REDUCED DELTA RELIANCE NOTICE FOR CCWA MEMBERS

CENTRAL COAST WATER AUTHORITY

MEMORANDUM

April 21, 2026

TO: CCWA Member Agencies

FROM: David Beard
Deputy Director of Operations and Engineering

SUBJECT: Reduced Reliance Notice for CCWA Members

The Department of Water Resources recommends that all suppliers planning to participate in, or that would receive water supply benefits from, a proposed project considered a "covered action" under the Delta Plan provide information in their Urban Water Management Plan to demonstrate consistency with the Delta Plan Policy WR P1, Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance (23 CCR Section 5003). Included in this is, for example, a multiyear water transfer, conveyance facility, or new diversion that involves transferring water through, exporting water from, or using water in the Delta.

On March 24, 2021, CCWA provided a guidance document to CCWA member agencies for documenting compliance with the Delta Plan Policy WR P1. CCWA's previous guidance has not changed and encourages CCWA member agencies to consider it while evaluating reduced reliance on the Delta.

A copy of CCWA's guidance document is provided as Attachment 1.

CENTRAL COAST WATER AUTHORITY

MEMORANDUM

March 24, 2021

TO: CCWA Member Agencies

FROM: Ray Stokes
Executive Director

SUBJECT: Reduced Reliance Notice for CCWA Members

As you may have heard, on December 18, 2020 the Department of Water Resources recommended that potential participants in the Delta Conveyance project prepare documentation on reduced reliance on Delta water supplies that is consistent with the Delta Stewardship Council (DSC)'s Reduced Reliance Policy. While not a strict requirement of the UWMP, reduced reliance documentation would facilitate implementation of possible future actions that involve the Sacramento-San Joaquin Delta (such as Delta Conveyance and multi-year water transfers from North of the Delta) and require a consistency determination with the Delta Plan.

CCWA has reviewed the Reduced Reliance Policy and the guidelines for documenting compliance with this policy. A key factor in documenting Reduced Reliance is defining a baseline for 2010. CCWA is proposing to use the 2009 State Water Project (SWP) Delivery Reliability Report (DRR) as the basis for documenting Reduced Reliance. The 2009 SWP DRR was the last documentation of SWP supply availability prior to the 2010 implementation of the Delta Plan and is supported for documentation by the DSC. The 2009 SWP DRR identified a SWP average reliability of 60%.

The distribution of baseline for CCWA members based on the 60% average delivery amount from 2009 SWP DRR is shown in Table 1.

Table 1
2010 SWP Baseline for CCWA Project Participants

Agency	Table A	2009 SWP DRR	2009 SWP DRR w/ Buffer
City of Buellton	578	347	381
Carpinteria Valley Water District	2,000	1,200	1,320
Goleta Water District	4,500	2,700	4,470
City of Guadalupe	550	330	363
La Cumbre Mutual Water Company	1,000	600	660
Montecito Water District	3,000	1,800	1,980
Morehart Land Company	200	120	132
City of Santa Barbara	3,000	1,800	1,980
Raytheon Systems Company	50	30	33
City of Santa Maria	16,200	9,720	10,692
Santa Ynez RWCD, Improvement District #1	2,000	1,200	1,320
Golden State Water Company	500	300	330

Vandenberg Air Force Base	5,500	3,300	3,630
TOTAL	39,078	23,447	27,291
CCWA Drought Buffer	3,908		
Goleta WD Drought Buffer	2,500		
Total	45,486		27,292

CCWA believes that the values shown in Table 1 would collectively cover potential future use of SWP supplies within Santa Barbara County and provide for documentation of Reduced Reliance. Note that the amounts above are intended to document average water use over a normal period, and would not be a single year cap on future use of SWP and other Delta water supplies. If you desire, your agency may choose to use another estimate of 2010 baseline supplies. If your agency chooses to use another estimate, we request that you provide us with that estimate and the rationale for choosing the alternative baseline.

If you have any questions about the Reduced Reliance 2010 Baseline, please contact me at 805-698-5923.