



Zone 7 Water Agency

2025 URBAN WATER MANAGEMENT PLAN

DRAFT | April 2026

Prepared by EKI Environment & Water, Inc. C20037.04



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Zone 7 Water Agency

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ABBREVIATIONS AND ACRONYMS

AB	Assembly Bill
ACWA	Association of California Water Agencies
ACWD	Alameda County Water District
AF	acre-feet
AFY	acre-feet per year
AMP	Asset Management Plan
BARDP	Bay Area Regional Desalination Project
BARR	Bay Area Regional Reliability
BAWAC	Bay Area Water Agencies Coalition
BAWSCA	Bay Area Water Supply and Conservation Agency
CCR	California Code of Regulations
CCWD	Contra Costa Water District
CFS	cubic feet per second
CGC	California Government Code
CII	commercial, industrial, and institutional
CIP	Capital Improvement Plan
CMIP5	Coupled Model Intercomparison Project
COA	Coordinated Operation Agreement
COLCS	Chain of Lakes Conveyance System
COLs	Chain of Lakes
Cr(VI)	Hexavalent Chromium
CUWA	California Urban Water Agencies
CVP	Central Valley Project
CWC	California Water Code
DBPs	Disinfectant Byproducts
DCP	Delta Conveyance Project
DCR	Delivery Capability Report
DERWA	DSRSD-EBMUD Recycled Water Authority
DFW	Department of Fish and Wildlife
DMM	demand management measure
DSRSD	Dublin San Ramon Services District
DVWTP	Del Valle Water Treatment Plan
DWR	California Department of Water Resources
DYTP	Dry Year Transfer Program
EBMUD	East Bay Municipal Utility District
EIR	Environmental Impact Report
EO	Executive Order
EPA	Environmental Protection Agency



FT	Feet
GHG	greenhouse gas
GMP	Groundwater Management Plan
GPQ	groundwater pumping quotas
GPQ	groundwater pumping quotas
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
HECW	High-Efficiency Clothes Washers
HOA	Homeowner Association
INSP	Isabel Neighborhood Specific Plan
IRWMP	Integrated Regional Water Management Plan
ISM	Index Sequential Method
JPA	Joint Powers Authority
kWh	kilowatt hours
kWh/AF	kilowatt hours per acre-foot of water
LAVWMA	Livermore-Amador Valley Water Management Agency
LOCA	Localized Constructed Analogs
LWRP	Livermore Water Reclamation Plant
M&I	Municipal and Industrial
MCCWL	Making Conservation a California Way of Life
MCL	Maximum Contaminant Level
MGD	million gallons per day
MGDP	Mocho Groundwater Demineralization Plant
MIB	2-Methylisoborneol
MSL	Mean Sea Level
MWQI	Municipal Water Quality Investigations Program
NMP	Nutrient Management Plan
NOP	Notice of Preparation
P/MAs	projects and management actions
PFAS	per- and polyfluoroalkyl substances
Plan	Urban Water Management Plan
PPWTP	Patterson Pass Water Treatment Plant
PWAs	Public Water Agencies
PWS	Public Water System
QWEL	Qualified Water Efficient Landscaper
RCP	Representative Concentration Pathway
RUWMP	Regional Urban Water Management Plan
RWQCB	Regional Water Quality Control Board
SB	Senate Bill



SBA	South Bay Aqueduct
SCADA	Supervisory Control and Data Acquisition
SFPUC	San Francisco Public Utilities Commission
SGMA	Sustainable Groundwater Management Act
SMP	Salt Management Plan
SRVRWP	San Ramon Valley Recycled Water Program
SWAP	Shared Water Access Program
SWP	State Water Project
SWRCB	State Water Resources Control Board
T&O	taste-and-odor
TCP	Trichloropropane
TDS	Total Dissolved Solids
TOC	Total Organic Carbon
UV	Ultraviolet
UWMP	Urban Water Management Plan
UWUO	Urban Water Use Objective
WSCP	Water Shortage Contingency Plan
WSE	Water Supply Evaluation
WTP	Water Treatment Plant
WY	water year



EXECUTIVE SUMMARY

CWC §10630.5

Each plan shall include a simple lay description of how much water the agency has on a reliable basis, how much it needs for the foreseeable future, what the agency’s strategy is for meeting its water needs, the challenges facing the agency, and any other information necessary to provide a general understanding of the agency’s plan.

This 2025 Urban Water Management Plan (UWMP or Plan) is prepared for Zone 7 Water Agency (Zone 7), which serves approximately 39,000 acre-feet (AF) of drinking water to a population of approximately 267,000. Zone 7 is an urban wholesale water supplier,¹ and its retailers consist of California Water Service (Cal Water), the City of Pleasanton (Pleasanton), the City of Livermore (Livermore), and the Dublin San Ramon Services District (DSRSD). Therefore, in accordance with California Water Code (CWC) §10621(e), Zone 7 is obligated to develop and submit an UWMP to the California Department of Water Resources (DWR) by July 1, 2026. Zone 7 also provides direct retail supply to a small number of other users.

This UWMP serves as a foundational planning document and includes descriptions of historical and projected water demands and supplies, and the resulting reliability during a set of defined water supply conditions over a minimum 20-year planning horizon. This Plan also describes the actions Zone 7 is taking to promote water conservation (referred to as “demand management measures”), and includes a Water Shortage Contingency Plan (WSCP) to address potential water supply shortages from drought or other impacts to supply availability. This Plan is updated every five years in accordance with state requirements under the UWMP Act and amendments (Division 6 Part 2.6 of the CWC §10610 – 10656). Past plans developed for Zone 7 are available on the DWR Water Use Efficiency Data Portal website: <https://wuedata.water.ca.gov/>.

Pursuant to the requirements of the CWC §10630.5, this Executive Summary provides a concise description of this UWMP. This Plan includes 10 chapters, which are summarized below.

Chapter 1 Introduction and Overview

This chapter presents the background and purpose of the UWMP, describes the Plan organization, and discusses its relationship to other planning efforts. Since Zone 7 relies on water imported through the Sacramento-San Joaquin Delta (Delta), this chapter also discusses and demonstrates consistency with The Delta Plan by the Delta Stewardship Council.

Chapter 2 Plan Preparation

This chapter discusses key structural aspects related to the preparation of this UWMP, and describes the coordination and outreach conducted as part of the preparation of the Plan, including coordination with local agencies (i.e., DSRSD, Pleasanton, Livermore, Cal Water), and the public.

Chapter 3 System Description

This chapter provides a description of Zone 7’s water system and service area, including information related to the climate, population, and demographics. Zone 7 is located in Alameda County, and has a robust water supply system consisting of turn-outs at the South Bay Aqueduct, surface water treatment

¹ Per CWC §10608.12 (aj), “Urban wholesale water supplier” means a water supplier, either publicly or privately owned, that provides more than 3,000 acre-feet of water annually at wholesale for potable municipal purposes.



Executive Summary

plants (WTPs), well fields, a groundwater demineralization plant, and a storage and transmission system. Zone 7's service area has a population of approximately 267,000 and a climate characterized by a Mediterranean climate. The majority of the 19.4 inches of average annual precipitation falls between November and April. Residential, commercial, industrial, and institutional land uses are the primary land uses in Zone 7, and most customers are urban water users.

Chapter 4 Water Use Characterization

This chapter provides a description and quantifies Zone 7's current and projected demands through the year 2050. Zone 7 provides drinking water (also referred to as "potable water") and untreated water to customers. Water demands refer not only to the water used by customers, but also include the water used as part of the system's maintenance and operations, as well as unavoidable losses inherent in the operation of a water distribution system. Zone 7's annual average water demand from 2021 to 2025 was approximately 40,000 acre-feet per year (AFY). Taking into account historical water use, expected population increase, current and future developments, climatic variability, and other assumptions, Zone 7's water demand is projected to increase to 51,000 AFY by 2050, an increase of 28% compared to the 2021-2025 average demand.

As a wholesaler, Zone 7 is not subject to the Urban Water Use Objective (UWUO) as part of Making Conservation a California Way of Life (MCCWL) regulation, promulgated as per Senate Bill (SB) 606² and Assembly Bill (AB) 1668³. SB 606/AB 1688 set new requirements for urban water agencies to continue to increase water efficiency beyond Water Conservation Act of 2009 (SB X7-7). Beginning in 2027, urban water suppliers, including Zone 7's retailers, are required to meet their UWUO. Zone 7 is actively coordinating with its retailers on improving water-use efficiency and compliance with their UWUO by 2027.

Chapter 5 SB X7-7 Baseline and Targets

Although SB X7-7 does not directly apply to urban wholesale water suppliers, Zone 7 fully supported the achievement of SB X7-7 water use reduction targets by its retailers, including conducting conservation efforts in collaboration with retailers, engaging in various conservation-oriented regional and state organizations, supporting the use of recycled water in the Tri-Valley, and exploring potential options for expanding recycled water use.

Chapter 6 Water Supply Characterization

This chapter presents an analysis of Zone 7's water supplies, as well as an estimate of water-related energy-consumption. The intent of this chapter is to present a comprehensive overview of Zone 7's water supplies, estimate the volume of available supplies over a minimum 20-year planning horizon, and assess the sufficiency of Zone 7's supplies to meet projected demands under "normal" hydrologic conditions.

Imported water from the State Water Project (water originating in Lake Oroville and delivered to Zone 7 through reservoirs, rivers, aqueducts and pipelines that make up the State Water Project) makes up approximately 70% of Zone 7's water supply, with the remainder coming from groundwater basin which is recharged with imported water from the SWP and impounded local surface water from the local watershed. Zone 7's existing incoming water supplies—or sources of new water in any given year—are all surface water supplies.

² https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=202120220SB606.

³ https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180AB1668.



Calculating and reporting water system energy intensity is a requirement for UWMPs. Energy intensity is defined as the net energy used for water treatment, pumping, conveyance, and distribution for all water entering the distribution system, and does not include the energy used to treat wastewater. The energy intensity for Zone 7 is estimated to be 328 kilowatt hours per acre-foot of water (kWh/AF).

Chapter 7 Water Supply Reliability Assessment

This chapter assesses the reliability of Zone 7's water supplies, with a specific focus on potential constraints such as water supply availability, water quality, and climate change. The intent of this chapter is to identify any potential constraints that could affect the reliability of Zone 7's supply (such as drought conditions) to support Zone 7's planning efforts to ensure that its customers are well served. Water service reliability is assessed for normal year, single dry-year, and multiple dry-year hydrologic conditions.

Based on this analysis, Zone 7 expects the available supplies to be sufficient to meet projected demands in normal and single dry-year conditions. Water shortages may occur in the fifth year of the multiple dry-year hydrologic conditions by 2045. These shortages could be mitigated through efforts to augment water supplies and/or reduce water demand as described in Zone 7's WSCP.

Further, potential water quality issues are not expected to adversely affect the quality of water served to Zone 7's customers, as water quality is routinely monitored and Zone 7 is able to make all appropriate adjustments to its treatment and distribution system to ensure high quality drinking water is served.

Chapter 8 Water Shortage Contingency Planning

This chapter describes the WSCP for Zone 7. The WSCP serves as a standalone document to be implemented in the case of a water shortage event, such as a drought or supply interruption, and defines specific policies and actions that will be implemented at various shortage level scenarios such as seeking water transfers or expanding water conservation programming and outreach. Zone 7's WSCP includes five shortage levels to address conditions ranging from 10% to greater than 40%. Per DWR requirements, Zone 7's five shortage levels are mapped to the six standard shortage levels prescribed by statute.

Chapter 9 Demand Management Measures

This chapter includes descriptions of past and planned conservation programs that Zone 7 operates within each demand management measure (DMM) category outlined in the UWMP Act, specifically: (1) water waste prevention ordinances, (2) metering, (3) conservation pricing, (4) public education and outreach, (5) distribution system water loss management, (6) water conservation program coordination and staffing support, and (7) "other" DMMs. Zone 7 has developed a suite of conservation programs and policies which address each DMM category.

Chapter 10 Plan Adoption, Submittal, and Implementation

This chapter provides information on a public hearing, the adoption process for the UWMP and WSCP, the adopted UWMP and WSCP submittal process, Plan implementation, and the process for amending the adopted UWMP and WSCP. Prior to adopting the Plan, Zone 7 held a formal public hearing to present information on its Zone 7 UWMP and WSCP on **May 20, 2026**. This UWMP and corresponding WSCP were submitted to DWR within 30 days of adoption and by the July 1, 2026 deadline.



1 INTRODUCTION AND OVERVIEW

This chapter discusses the importance and uses of this Urban Water Management Plan (UWMP or Plan), the relationship of this Plan to the California Water Code (CWC), the relationship of this Plan to other local and regional planning efforts, and how this Plan is organized and developed in general accordance with the 2025 UWMP Guidebook prepared by the California Department of Water Resources (DWR).⁴

1.1 Background and Purpose

Zone 7 Water Agency (also referred to herein as “Zone 7”) is an urban wholesale water supplier, meaning it sells water to other agencies that then sell it to individual water users (e.g., residents and businesses). These other agencies are known as water retailers. Zone 7 supplies treated water to four retailers: California Water Service (Cal Water), the City of Pleasanton (Pleasanton), the City of Livermore (Livermore), and Dublin San Ramon Services District (DSRSD). Additionally, Zone 7 serves treated water directly to a small number of retail customers and untreated water for agriculture. Zone 7 supplies over 3,000 acre-feet (AF) of water annually at wholesale for potable municipal purposes, and thus is required to prepare an UWMP.

This UWMP is a foundational document and source of information about Zone 7’s historical and projected water demands, water supplies, supply reliability and potential vulnerabilities, water shortage contingency planning, and demand management programs. Among other things, it is used as:

- A long-range planning document by Zone 7 for water supply and system planning; and
- A source for data on population, housing, water demands, water supplies, and capital improvement projects used in:
 - Regional water resource management plans prepared by other regional planning authorities (as applicable),
 - General Plans prepared by cities and counties, and
 - Statewide and broad regional water resource plans prepared by DWR, the State Water Resources Control Board (SWRCB), or other state agencies.

Zone 7’s previous UWMP was completed in 2021, referred to herein as the “2020 UWMP.” This Plan is an update to the 2020 UWMP, carrying forward information from that plan that remains current and relevant, and providing additional information as required by subsequent amendments to the UWMP Act (CWC §10610-10657). Although this current Plan is an update to the 2020 UWMP, it was developed as a self-contained, stand-alone document and does not require readers to reference information contained in previous UWMP updates.

1.2 Urban Water Management Planning and the California Water Code

The UWMP Act requires urban water suppliers to prepare a UWMP every five years and to submit this plan to the DWR, the California State Library, and any city or county within which the supplier provides water supplies. All urban wholesale water suppliers, either publicly or privately owned, supplying water for municipal purposes at a volume of at least 3,000 AF annually are required to prepare an UWMP (CWC §10608.12(a)).

⁴ The 2025 UWMP Guidebook is available at:

https://wuedata.water.ca.gov/public/public_resources/4825681388/2025_Draft_UWMP_Guidebook_Release.zip



The UWMP Act was enacted in 1983. Over the years it has been amended in response to water resource challenges and planning imperatives confronting California. A significant amendment was made in 2009 as a result of the governor’s call for a statewide 20% reduction in urban water use by 2020, referred to as the Water Conservation Act of 2009, or “Senate Bill (SB) X7-7.” This amendment required urban retail water suppliers to establish water use targets for 2015 and 2020 that would result in statewide water savings of 20% by 2020. Beginning in 2016, urban retail water suppliers were required to comply with the water conservation requirements in SB X7-7 in order to be eligible for state water grants or loans. Since Zone 7 is a water wholesaler and serves only a small number of urban water users directly, it is not required to meet any water conservation targets associated with the Water Conservation Act of 2009. However, Zone 7 has fully supported and continued to support its water retailers in achieving their water conservation targets. Chapter 5 of this Plan details the extent of that support.

In 2016, Governor Brown signed Executive Order (EO) B-37-16 Making Conservation a California Way of Life (MCCWL) and subsequently SB 606 and Assembly Bill (AB) 1668 were passed. SB 606/AB 1668 added new requirements related to drought planning, including: (1) additional requirements for Water Shortage Contingency Plans (WSCPs) (CWC §10640), (2) requirements for urban water suppliers to conduct a drought risk assessments part of their future UWMPs to assess water supply reliability for a period of drought lasting five consecutive water years (WYs; CWC §10635(b)), and (3) conduct annual water supply and demand assessments to determine its water supply reliability for the current year and one dry year (CWC §10632(a)). These elements are included in Chapters 7 and 8 of this Plan. Additionally, SB 606/AB 1688 set new requirements for urban water agencies to continue to increase water efficiency beyond the requirements of SB X7-7. Beginning in 2024, agencies were required to report an annual urban water use objective (UWUO), which is a regulatory water use target established under AB 1668 and SB 606. It represents the annual volume of water an urban retail water supplier is expected to use efficiently, calculated based on standardized components including residential indoor use, outdoor irrigation demand, commercial/industrial/institutional use, and system water loss. UWUOs are used by the State to evaluate supplier compliance with urban water efficiency standards. As a wholesaler, Zone 7 is not subject to the UWUO as part of MCCWL regulation; however, Zone 7 actively coordinates with its retailers on their water use efficiency improvement and compliance with their UWUO by 2027.

The UWMP Act contains numerous other requirements that a UWMP must satisfy. This UWMP lists each of these requirements at the beginning of each major chapter.

1.3 Relationship to Other Planning Efforts

This Plan provides information specific to water management and planning within Zone 7’s service area. However, water management does not happen in isolation; there are other planning processes by Zone 7 and other agencies within its service area that may integrate with the UWMP to accomplish urban planning. Some of these relevant planning documents include General Plans for the Tri-Valley cities, the 2022 Water Supply Evaluation Update (new update is expected in 2027) the 2021 Alternative Groundwater Sustainability Plans (2026 plan is currently being developed), the Fiscal Year 2026/27 Ten-Year Water System Capital Improvement Plan, and others.

This Plan is informed by and helps to inform these other planning efforts. In particular, this Plan was prepared in close coordination with Zone 7’s water retailers; this Plan utilizes information contained in City and County General Plans and local and regional water resource plans to the extent data from these plans are applicable and available. Coordination with retailers included a demand assessment scenario planning and UWMP Kick-Off meeting held on September 30, 2025, to review demand projection assumptions, scenario considerations, and UWMP development process and schedule.



1.4 Plan Organization

The organization of this Plan follows the same sequence as outlined in the 2025 UWMP Guidebook.

- Chapter 1: Introduction and Overview;
- Chapter 2: Plan Preparation;
- Chapter 3: System Description;
- Chapter 4: Water Use Characterization;
- Chapter 5: SB X7-7 Baseline and Targets;
- Chapter 6: Water Supply Characterization;
- Chapter 7: Water Supply Reliability Assessment;
- Chapter 8: Water Shortage Contingency Planning;
- Chapter 9: Demand Management Measures;
- Chapter 10: Plan Adoption, Submittal, and Implementation.

In addition to these chapters, this Plan includes the following appendices containing supporting documentation and supplemental information.

- Appendix A: Reduced Delta Reliance
- Appendix B: UWMP Checklist
- Appendix C: Agency and Public Notices
- Appendix D: Water Shortage Contingency Plan
- Appendix E: UWMP and WSCP Adoption
- Appendix F: Additional Information for the State Water Contractors

Pursuant to CWC §10644(a)(2), this Plan utilizes the standardized forms, tables, and displays developed by DWR for the reporting of water use and supply information required by the UWMP Act. This Plan also includes additional tables, figures, and maps to supplement the set of required documents developed by DWR, as appropriate. The table headers indicate if the table is part of DWR’s standardized set of submittal tables.

1.5 Demonstration of Consistency with The Delta Plan for Participants in Covered Actions

Although not required by the UWMP Act, in the 2025 UWMP Guidebook, DWR recommends that all suppliers that are participating in, or may participate in, receiving water from a proposed project that is considered a “covered action” under The Delta Plan by the Delta Stewardship Council—such as a (1) multiyear water transfer, (2) conveyance facility, or (3) new diversion that involves transferring water through, exporting water from, or diverting water from the Sacramento-San Joaquin Delta (Delta)—provide information in their UWMP to demonstrate consistency with the Delta Plan policy WR P1, Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance (California Code of Regulations [CCR], Title 23, Section 5003).

Zone 7 is an urban water wholesaler, as described in Section 2.1 of this Plan. As a contractor of the State Water Project (SWP), Zone 7 and its retailers—Cal Water, Livermore, Pleasanton, and DSRSD—anticipate participating in a covered action and are therefore required to demonstrate reduced Delta reliance. While Zone 7 imports about 80% of its water in a normal year from the SWP, it is pursuing a number of supply



Chapter 1 Introduction and Overview

augmentation and demand management efforts to reduce reliance on the Delta. Supply-side-efforts are further discussed in Chapter 6 (Water Supply Characterization), which details existing and future projects whose implementation improves regional self-reliance, and demand conservation programs are discussed in Chapter 9 (Demand Management Measures), which details demand management measures that Zone 7 has implemented as part of its Water Conservation Program. **Appendix A** of this UWMP demonstrates Zone 7's consistency with Delta Plan Policy WR P1.



2 PLAN PREPARATION

This chapter discusses the type of UWMP Zone 7 has prepared and includes information that will apply throughout the Plan. Coordination and outreach during the development of the Plan are also discussed.

2.1 Compliance with the UWMP Act

CWC §10617

“Urban water supplier” means a supplier, either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually. An urban water supplier includes a supplier or contractor for water, regardless of the basis of right, which distributes or sells for ultimate resale to customers. This part applies only to water supplied from public water systems subject to Chapter 4 (commencing with Section 116275) of Part 12 of Division 104 of the Health and Safety Code.

CWC §10608.12

(t) “Urban retail water supplier” means a water supplier, either publicly or privately owned, that directly provides potable municipal water to more than 3,000 end users or that supplies more than 3,000 acre-feet of potable water annually at retail for municipal purposes.

(w) “Urban wholesale water supplier” means a water supplier, either publicly or privately owned, that provides more than 3,000 acre-feet of water annually at wholesale for potable municipal purposes.

Zone 7 manages Water System CA0110010 and only needs to comply with wholesaler requirements. While Zone 7 directly serves 6 retail municipal connections, including commercial and institutional water users, the total population served through direct connections is less than 3,000, and the five-year (2021-2025) average retail water demand is approximately 270 acre-feet per year (AFY). As a result, Zone 7 is considered an “urban wholesale water supplier” for the purposes of the 2025 UWMP.

2.2 Individual or Regional Planning and Compliance (Regional Alliance)

Urban water suppliers may elect to prepare individual or regional UWMPs. Zone 7 has elected to prepare an individual UWMP (see **Table 2-1**).

This Plan has been prepared in general accordance with the format suggested in the California DWR’s 2025 UWMP Guidebook. Text from the UWMP Act has been included in text boxes at the beginning of relevant chapters of this UWMP. The information presented in the respective UWMP Chapters, and the associated text, figures, and charts, are collectively intended to fulfill the requirements of that sub-section of the UWMP Act. To the extent practicable, supporting documentation has also been provided in **Appendices A** through **F**. Other sources for the information contained herein are provided in the references section of the document.

Per CWC §10644(a)(2), selected information for the UWMP updates must be presented in standardized tables for electronic submittal to DWR. Text and tables in the main body of the UWMP document have been cross-referenced to the companion DWR tables.

Zone 7 does not participate in a regional alliance, and it has not prepared a Regional Urban Water Management Plan (RUWMP). As described in **Section 2.4**, Zone 7 has notified and coordinated planning and compliance with appropriate regional agencies, including its water retailers.



Table 2-1 Plan Identification (DWR Table 2-2)

Type of Plan		Name of Regional Alliance or RUWMP
<input checked="" type="checkbox"/>	Individual UWMP	
<input type="checkbox"/>	Water Supplier is also a member of a SB X7-7 Regional Alliance	N/A
<input type="checkbox"/>	RUWMP	N/A

2.3 Plan Preparation, Standard Units, and Basis for Reporting

☑ CWC §10608.12(w)

“Urban wholesale water supplier,” means a water supplier, either publicly or privately owned, that provides more than 3,000 acre-feet of water annually at wholesale for potable municipal purposes.

☑ CWC §10617

“Urban water supplier” means a supplier, either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually. An urban water supplier includes a supplier or contractor for water, regardless of the basis of right, which distributes or sells for ultimate resale to customers. This part applies only to water supplied from public water systems subject to Chapter 4 (commencing with Section 116275) of Part 12 of Division 104 of the Health and Safety Code.

☑ CWC §10621(a)

Each urban water supplier shall update its plan at least once every five years on or before July 1, in years ending in six and one, incorporating updated and new information from the five years preceding each update.

☑ CWC §10621(e)

Each urban water supplier shall update and submit its 2025 plan to the department by July 1, 2026.

Per CWC §10608.12(w), Zone 7 is an urban wholesale water supplier providing more than 3,000 AF of water annually for potable municipal purposes as identified in **Table 2-2**. It is therefore obligated under CWC §10621(f) to develop and submit a UWMP to DWR by July 1, 2026.

Annual volumes of water reported in this UWMP are measured in AF and are reported on a calendar year basis (**Table 2-2**). Water use and planning data reported in this UWMP for calendar 2025 cover the full twelve months of the year, as required by the UWMP Guidelines.

Per the 2025 UWMP Guidebook, the UWMP preparer is requested to complete a checklist of specific UWMP requirements to assist the DWR review of the submitted UWMP. The completed checklist is included in **Appendix B**.

Further, consistent with the 2025 UWMP Guidebook, the terms “water use,” “water consumption,” and “water demand” are used interchangeably in this UWMP.



Table 2-2 Supplier Identification (DWR Table 2-3)

Type of Supplier (select one or both)	
<input checked="" type="checkbox"/>	Supplier is a wholesale supplier
<input type="checkbox"/>	Supplier is a retail supplier
Fiscal or Calendar Year (select one)	
<input checked="" type="checkbox"/>	UWMP Tables are in calendar years
<input type="checkbox"/>	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	
Unit	AF
NOTES:	

2.4 Coordination and Outreach

CWC §10620(d)(3)

Each urban water supplier shall coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.

CWC §10631(a) A plan shall be adopted in accordance with this chapter that shall do all of the following:

Urban water suppliers shall coordinate with local or regional land use authorities to determine the most appropriate land use information, including, where appropriate, land use information obtained from local or regional land use authorities, as developed pursuant to Article 5 (commencing with Section 65300) of Chapter 3 of Division 1 of Title 7 of the Government Code.

CWC §10642

Each urban water supplier shall encourage the active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of both the plan and the water shortage contingency plan. Prior to adopting either, the urban water supplier shall make both the plan and the water shortage contingency plan available for public inspection and shall hold a public hearing or hearings thereon. ...

Coordination with other water suppliers, cities, counties, and other community organizations in the region is an important part of preparing a UWMP and WSCP. This section identifies the agencies and organizations Zone 7 sought to coordinate with during the preparation of this Plan.



2.4.1 Wholesale and Retail Coordination

CWC §10631

(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, including all of the following...

(b)(2) When multiple sources of water supply are identified, a description of the management of each supply in correlation with the other identified supplies.

(h) An urban water supplier that relies upon a wholesale agency for a source of water shall provide the wholesale agency with water use projections from that agency for that source of water in five-year increments to 20 years or as far as data is available. The wholesale agency shall provide information to the urban water supplier for inclusion in the urban water supplier’s plan that identifies and quantifies, to the extent practicable, the existing and planned sources of water as required by subdivision (b), available from the wholesale agency to the urban water supplier over the same five-year increments, and during various water-year types in accordance with subdivision (f). An urban water supplier may rely upon water supply information provided by the wholesale agency in fulfilling the plan informational requirements of subdivisions (b) and (f).

Zone 7 provides wholesale water service to four customers: Cal Water, Livermore, Pleasanton, and DSRSD. This UWMP was prepared in coordination with Zone 7’s water retailers. In accordance with CWC §10631, Zone 7 provided supply information to the agencies receiving wholesale water supplies (i.e., retailers) shown in **Table 2-3**. As part of the 2025 Demand Assessment (Zone 7, 2026), Zone 7 also developed population and water demand projections in coordination with its retailers.

Table 2-3 Water Supplier Information Exchange (DWR Table 2-4)

	Supplier has informed more than 10 other water suppliers of water supplies available in accordance with Water Code Section 10631(h). 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.
X	Supplier has informed 10 or fewer other water suppliers of water supplies available in accordance with Water Code Section 10631. Complete the table below.
Water Supplier Name	
California Water Service Company	
City of Livermore	
City of Pleasanton	
Dublin San Ramon Services District	
NOTES:	



2.4.2 Coordination with and Notice to Other Agencies and the Community

CWC §10620(d)(3)

Each urban water supplier shall coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.

CWC §10642

Each urban water supplier shall encourage the active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of both the plan and the water shortage contingency plan. Prior to adopting either, the urban water supplier shall make both the plan and the water shortage contingency plan available for public inspection and shall hold a public hearing or hearings thereon. Prior to any of these hearings, notice of the time and place of the hearing shall be published within the jurisdiction of the publicly owned water supplier pursuant to Section 6066 of the Government Code. The urban water supplier shall provide notice of the time and place of a hearing to any city or county within which the supplier provides water supplies. Notices by a local public agency pursuant to this section shall be provided pursuant to Chapter 17.5 (commencing with Section 7290) of Division 7 of Title 1 of the Government Code. A privately owned water supplier shall provide an equivalent notice within its service area. After the hearing or hearings, the plan or water shortage contingency plan shall be adopted as prepared or as modified after the hearing or hearings.

As a contractor of the SWP, Zone 7 is heavily engaged with DWR, which owns, operates, and maintains the SWP. Through membership in the State Water Contractors, Zone 7 also regularly interacts with other water agencies that receive water from the SWP and collectively serve more than 25 million people across the state. The State and Federal Contractors Water Agency is a Joint Powers Authority that brings together SWP contractors like Zone 7 and Central Valley Project (CVP) contractors to work towards assuring sufficient and reliable export water supplies from the SWP and CVP.

Through membership and active participation in the California Urban Water Agencies (CUWA), Zone 7 regularly confers with other urban water agencies across California on statewide water issues such as drought management, water supply reliability challenges, and water quality management. Zone 7 is also an active member of the Association of California Water Agencies (ACWA), the largest statewide coalition of public water agencies in the country representing water suppliers responsible for 90% of the water delivered to cities, farms, and businesses in California.

At the regional level, Zone 7 is actively engaged in the Bay Area Water Agencies Coalition (BAWAC), which is comprised of water agencies in Alameda, Contra Costa, San Francisco, San Mateo, and Santa Clara counties. The BAWAC is committed to advancing water conservation in the region as part of the Bay Area Integrated Regional Water Management Plan. Zone 7 is also a member of the Bay Area Regional Reliability Partnership, which brings together nine Bay Area water agencies aiming to improve regional water supply reliability by working cooperatively on a mutually beneficial and regionally focused basis.

Zone 7 also encourages local community participation in water management activities and specific water-related projects. Zone 7's public participation program includes both active and passive means of obtaining input from diverse members of the community, such as mailings, public meetings, and web-based communication. Zone 7's website describes on-going projects and posts announcements of planned rate increases to fund these water projects. Water supply planning documents are posted on Zone 7's website, along with monthly water inventories to inform the public of water supply conditions over the year.

In addition to the ongoing coordination described above, Zone 7 coordinated with its retailers and other regional stakeholders specifically during the preparation of this UWMP. Coordination included regular



communication and meetings with retailers to review demand projections, planning assumptions, and water supply information. Zone 7 also distributed a Notice of Preparation (NOP) to cities, counties, and other relevant water management agencies to notify them of the UWMP preparation process and provide an opportunity to review and comment on the draft UWMP. Feedback received during the review process was considered and incorporated into the final UWMP where appropriate.

Zone 7 provided notice to these entities and the communities it serves 60 days prior to the public hearing held on **May 20, 2026**, to present the draft of this UWMP, address questions, and receive comments. A total of 33 recipients from 13 agencies and groups received notices, several of which are listed in **Table 10-1** in **Chapter 10**. Cities and counties receiving the public hearing notification from Zone 7 as required per CWC §10621(b) are also listed in **Table 10-1** of this Plan. A full list of recipients and copies of correspondence with other agencies and public notices are provided in **Appendix C**.

The public hearing provided an opportunity for all Zone 7 water users and the general public to become familiar with the UWMP and to ask questions about Zone 7’s water supply and its plans for continuing to provide reliable, safe, high-quality water.

2.4.3 Coordination with Land Use Authorities

CWC §10631(a) A plan shall be adopted in accordance with this chapter that shall do all of the following:

Urban water suppliers shall coordinate with local or regional land use authorities to determine the most appropriate land use information, including, where appropriate, land use information obtained from local or regional land use authorities, as developed pursuant to Article 5 (commencing with Section 65300) of Chapter 3 of Division 1 of Title 7 of the Government Code.

Zone 7 does not have land use authorities and therefore does not make decisions on community growth. Zone 7 coordinated with its water retailers' staff to review and confirm that appropriate land use assumptions were used to develop the UWMP demand projections as part of the 2025 Water Demand Assessment (Zone 7, 2026). Land use information within the Zone 7 service area can be found in **Section 3.2**.

2.4.4 Public Participation

CWC §10642

Each urban water supplier shall encourage the active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of both the plan and the water shortage contingency plan. Prior to adopting either, the urban water supplier shall make both the plan and the water shortage contingency plan available for public inspection and shall hold a public hearing or hearings thereon. Prior to any of these hearings, notice of the time and place of the hearing shall be published within the jurisdiction of the publicly owned water supplier pursuant to Section 6066 of the Government Code. The urban water supplier shall provide notice of the time and place of a hearing to any city or county within which the supplier provides water supplies. Notices by a local public agency pursuant to this section shall be provided pursuant to Chapter 17.5 (commencing with Section 7290) of Division 7 of Title 1 of the Government Code. A privately owned water supplier shall provide an equivalent notice within its service area. After the hearing or hearings, the plan or water shortage contingency plan shall be adopted as prepared or as modified after the hearing or hearings.

Water suppliers are required by the UWMP Act to encourage active involvement of the community within the service area prior to and during the preparation of its UWMP. The UWMP Act also requires water suppliers to make a draft of the UWMP available for public review and to hold a public hearing regarding the findings of the UWMP prior to its adoption. In addition to sending notices to the various agencies



Chapter 2 Plan Preparation

listed in **Table 2-3**, Zone 7 also notified the public of its intent to adopt its UWMP. The Public Review Draft of the UWMP was made available on Zone 7's [website \(https://www.zone7waterca.gov/reports-planning-documents\)](https://www.zone7waterca.gov/reports-planning-documents) on **April 15, 2026**. Additional information on public participation, including information on noticing, is provided in **Section 10** and in **Appendix C**.



3 SYSTEM DESCRIPTION

CWC §10631(a)

A plan shall be adopted in accordance with this chapter that shall do all of the following:

Describe the service area of the supplier, including current and projected population, climate, and other social, economic, and demographic factors affecting the supplier's water management planning. The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier and shall be in five-year increments to 20 years or as far as data is available. The description shall include the current and projected land uses within the existing or anticipated service area affecting the supplier's water management planning. Urban water suppliers shall coordinate with local or regional land use authorities to determine the most appropriate land use information, including, where appropriate, land use information obtained from local or regional land use authorities, as developed pursuant to Article 5 (commencing with Section 65300) of Chapter 3 of Division 1 of Title 7 of the Government Code.

This chapter of the UWMP provides a description of Zone 7's water system and service area, including climate, population, demographics, and land use to help in understanding various elements of water supply and demand.

3.1 General Description

Zone 7 is a dependent special district established under the Alameda County Flood Control and Water Conservation District (District) Act. Of the ten active zones in the District, Zone 7 is the only one that provides water services in addition to flood protection. Zone 7 manages water resources and provides wholesale treated potable water supply to water retailers in the Livermore-Amador Valley, serves treated water directly to a small number of direct retail customers, and serves untreated water for agriculture. Zone 7 was created in 1957 through voter approval in response to groundwater overdraft, flood hazards, and uncertainty over future water supplies. Zone 7 is governed by a locally elected, seven-member Board of Directors, who set policy and provide direction for Zone 7 management and staff. Each director is elected at-large by residents within Zone 7's service area for a four-year term.

Zone 7's key water resources goals include:

- Provide customers with reliable water supply and infrastructure
- Provide customers with safe water
- Manage and protect the groundwater basin as the State designated Groundwater Sustainability Agency for the Livermore Valley Groundwater Basin
- Manage and sustain effective flood protection systems

Zone 7 supplies treated water to four cities in the Livermore-Amador Valley, also commonly referred to as the Tri-Valley: Livermore, Pleasanton, Dublin, and part of San Ramon. Dougherty Valley in San Ramon, which is located in Contra Costa County, is served via an out-of-service agreement with DSRSD. Zone 7 provides water to four retailers: Cal Water, Livermore, Pleasanton, and DSRSD, which deliver water for Municipal and Industrial (M&I) purposes within their individual service areas. Zone 7 works closely with its retailers on Tri-Valley water issues. **Figure 3-1** shows the location of Zone 7's service area.

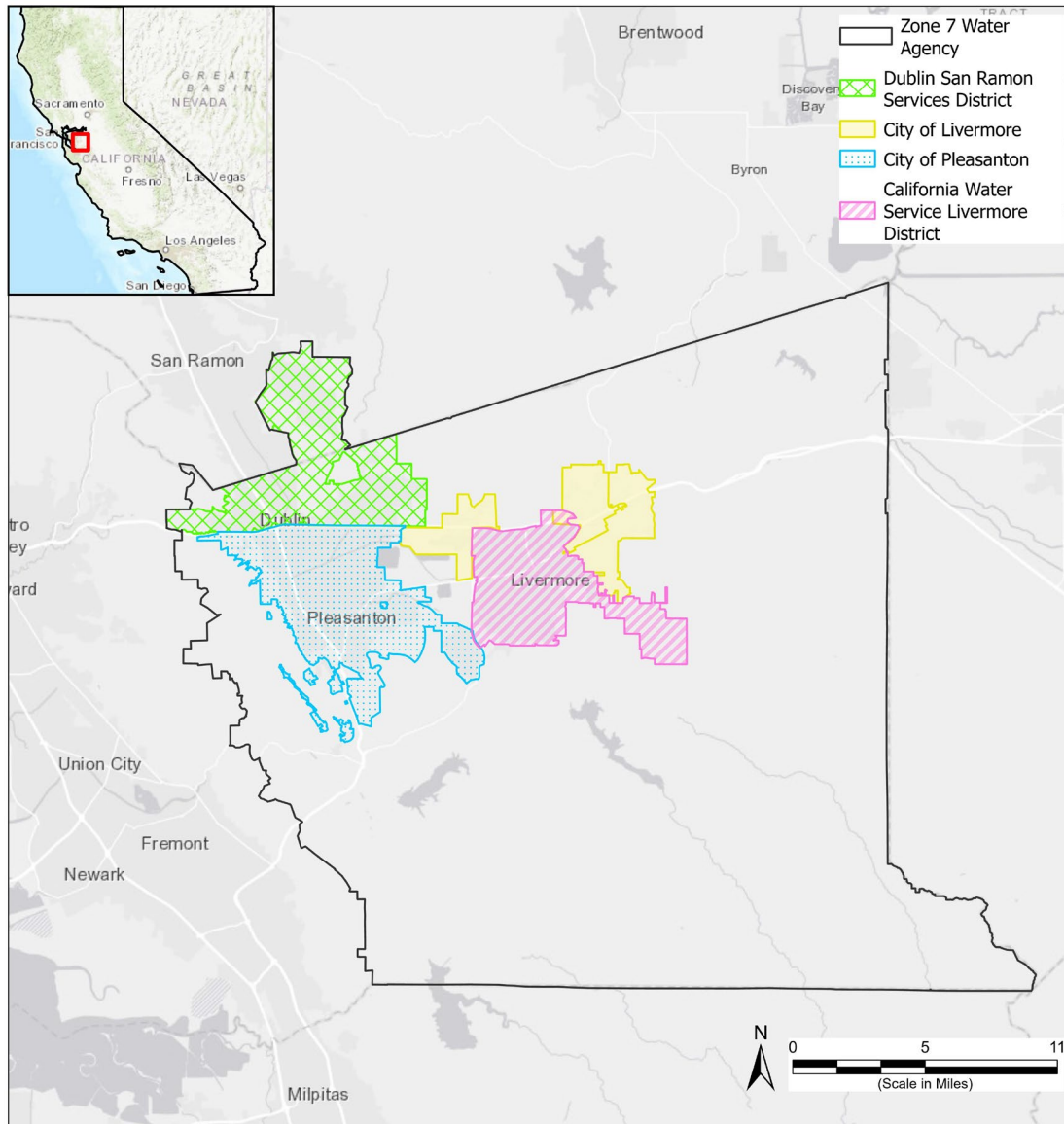


Figure 3-1 Zone 7 Location and Service Boundaries

3.2 Land Uses within Service Area

General Plans are required by State law to guide land use and development within cities (California Government Code [CGC] §65030.1). This section describes the current and projected land uses for each municipality within Zone 7’s service area. Land use information is based on each city’s adopted General Plan and specific plans, and the relevant studies that include the latest planned development for demand projections by the retailers.

3.2.1 City of Livermore

Existing land use within Livermore remains predominantly single-family residential, with multi-family housing generally located along major streets and near activity centers. Retail and office land uses are concentrated in Downtown Livermore and along key commercial corridors, while industrial and employment land uses are clustered primarily along the I-580 and in eastern portions of Livermore. Parks,



open space, public and institutional uses, agriculture and viticulture, the municipal airport area, and remaining undeveloped lands make up much of the non-residential land. Consistent with the City of Livermore’s 2045 General Plan (City of Livermore, 2026), most areas of the City are not expected to change substantially. Proposed land use changes are primarily concentrated in a limited number of “Focus Areas” intended to accommodate growth and redevelopment through 2045, generally characterized by vacant or underutilized parcels and proximity to existing or planned transit and infrastructure.

Livermore’s planned land use through 2045 is shaped by targeted planning efforts in major redevelopment areas, including the Isabel Neighborhood Specific Plan (INSP) and the Midtown Focus Area, the Downtown Specific Plan, and the South Livermore Valley Specific Plan. The INSP (approximately 1,138 acres) is a transit-oriented plan centered on the future Valley Link rail station near the Isabel Avenue and I-580 interchange, and provides for a complete neighborhood with a mix of housing, employment, commercial services, parks, and multimodal connectivity. The INSP framework allows for approximately 5,700 new single-family and multi-family units along with new commercial development, neighborhood parks, and supporting infrastructure. One major project within the INSP is Isabel Crossing (at Isabel Ave and Portola Ave), planned for approximately 1,300 for-sale and rental units. In addition, the 2045 General Plan identifies Midtown as a key transformation area and indicates the City’s intent to advance Midtown planning (including a specific plan approach) to address Valley Link access, housing targets, and circulation/services as redevelopment proceeds. The South Livermore Valley Specific Plan is focused on long-term agricultural preservation and a clear urban boundary, with about 1,200 new single-family units proposed. The Downtown Specific Plan details commercial and public space improvements.

3.2.2 City of Dublin

Land use planning for Dublin continues to be organized around three principal planning areas: the Primary Planning Area, the Eastern Extended Planning Area, and the Western Extended Planning Area. As reflected in the City of Dublin’s current General Plan land use designations, most of the Primary Planning Area is developed, with the dominant land uses consisting of established single-family residential neighborhoods supported by commercial centers and services, business park and employment areas, public/semi-public land uses, and parks/open space. In recent years, redevelopment and infill activities have increasingly shaped land use patterns in Central Dublin and the Downtown area, including higher-density residential and mixed-use projects in proximity to transit and services.

Development opportunities in the Western Extended Planning Area remain limited, consistent with the City’s long-standing growth management approach in the western hills. Large portions of the western planning area are designated for open space, resource protection, and low-intensity uses, and the City does not plan to extend urban services and facilities beyond its established growth limits in these hillside areas.

Future development in Dublin is therefore expected to occur primarily through infill and redevelopment within the Primary Planning Area and through remaining development capacity in the eastern portions of the City associated with the Eastern Dublin Specific Plan area. Land uses in eastern Dublin continue to include a range of residential densities, along with supporting retail, service commercial, office and employment uses, public facilities, and parks/open space, including areas near Camp Parks Reserve Forces Training Area. Overall, consistent with current City planning documents and recent demand update assumptions, Dublin’s growth is anticipated to be focused in central and eastern Dublin, with limited to no growth expected in western Dublin.

3.2.3 City of San Ramon

The following land use discussion focuses on the portion of San Ramon served by DSRSD, specifically the Dougherty Valley area, to which DSRSD provides potable and recycled water services.



The Dougherty Valley area is characterized by established suburban land use patterns, with residential uses comprising the majority of developed lands and supported by neighborhood-serving commercial establishments, schools, community facilities, and local parks. As reflected in the City’s zoning framework, residential designations in these areas are primarily low- to medium-density, with higher-intensity and mixed-use designations occurring in limited locations along major streets and within planned activity centers.

Development in Dougherty Valley is governed by the Dougherty Valley Specific Plan, which envisioned residential neighborhood clusters supported by public facilities and integrated with commercial and mixed-use lands, including the Village Center, while preserving a substantial backdrop of open space and hillside areas. Development in the Dougherty Valley area is substantially complete, and consistent with recent growth projection assumptions, limited additional growth is anticipated in this portion of the service area.

3.2.4 City of Pleasanton

Existing land use in Pleasanton generally consists of distinct residential neighborhoods, with non-residential areas integrated along major arterials and separated to minimize potential land use incompatibility. A notable area where mixed-use development exists is historic Downtown Pleasanton, which includes both residential and non-residential uses integrated together. Pleasanton remained predominantly residential through about 1980, after which industrial, commercial, and office development expanded. Major non-residential activity centers include Stoneridge Shopping Center, multiple business parks including Hacienda, several major hotels, and a variety of retail and service centers. Open space areas also surround much of the city’s developed footprint, providing physical separation between growth areas, surrounding undeveloped lands, and neighboring jurisdictions.

Future growth within Pleasanton’s service area is expected to include both residential and commercial development. Of note, the City’s 2023-2031 (6th Cycle) Housing Element (City of Pleasanton, 2022) outlines planned residential growth for the City to meet its regional housing allocation. Non-residential uses include a large industrial project proposed near eastern boundaries, within the area identified in the General Plan as East Pleasanton. Anticipated residential units are based on Pleasanton’s Housing Element, including: (1) housing sites under existing zoning, (2) approved/entitled developments, (3) accessory dwelling units, and (4) rezone sites. Non-residential projects that have been submitted and are currently under review are also included in the water demands, as well as residential projects that were not anticipated in the Housing Element. These land use updates are used to project future water demands for Pleasanton.

3.3 Service Area Population and Demographics

Current and projected population within the Zone 7 service area, as shown in **Table 3-1**, are estimated as an aggregate of population by retailers based on information developed for or provided by each retailer.

Livermore’s baseline and projected population were developed using a data-driven approach that integrates U.S. Census information with local development data. The 2020 U.S. Census was used as the primary baseline population source and adjusted to reflect recent growth in residential accounts through 2025, in coordination with the City of Livermore. Future population was projected based on anticipated residential development, applying a persons-per-household factor derived from Census data to convert projected household growth to population. Known single-family and multi-family developments were incorporated using their expected buildout schedules, while planned growth areas identified in the City’s General Plan were represented using reasonable assumptions regarding timing and phasing of development.



For Pleasanton, DSRSD, and Cal Water, current and projected population data were provided directly by each retailer, as described further in the 2025 Water Demand Assessment (Zone 7, 2026).

By 2050, the total population within Zone 7’s service area is expected to be approximately 341,000, which represents a 1% annual growth rate compared to the 2025 population. Compared to 2020 projections, 2025 data and 2030 projections are slightly lower than previously estimated, while 2040 and beyond are slightly greater.

Table 3-1 Population – Current and Projected (DWR Table 3-1)

Population Served	2025	2030	2035	2040	2045	2050(opt)
	267,000	288,000	310,000	330,000	339,000	341,000
NOTES:						

3.3.1 Other Social, Economic, and Demographic Factors

Demographics for Zone 7’s service area are approximated using a city-proxy approach because the Zone 7 service area does not align perfectly with city boundaries. Specifically, the demographic data summarized in **Table 3-2** are shown for the cities of Livermore, Pleasanton, Dublin, and San Ramon. These data are from the U.S. Census American Community Survey’s 2024 5-Year Estimates.⁵ Relative to the rest of California, Zone 7’s population is generally younger with higher educational attainment, higher median household income, and lower poverty rates.

⁵ U.S. Census Bureau, 2024. *2020-2024 American Community Survey 5-year Estimates*. United States Census Bureau, dated 2024. Retrieved from: <https://data.census.gov/cedsci/>



Table 3-2 Demographic and Housing Characteristics, 2020-2024

Demographics (a)	San Ramon	Dublin	Pleasanton	Livermore	California
Age and Sex					
Persons under 5 years	4.9%	6.1%	4.2%	5.7%	5.3%
Persons under 18 years	25.8%	25.0%	23.1%	23.0%	21.3%
Persons 65 years and older	12.2%	9.6%	16.7%	14.7%	16.5%
Female persons	51.1%	49.8%	50.7%	49.9%	50.1%
Race and Hispanic Origin					
White alone	34.9%	25.7%	38.4%	57.3%	69.8%
Black or African American alone	3.3%	4.1%	1.8%	2.0%	6.4%
American Indian and Alaska Native alone	0.3%	0.8%	0.4%	0.9%	1.8%
Asian alone	49.7%	55.2%	43.9%	17.1%	17.0%
Native Hawaiian and Other Pacific Islander alone	0.2%	0.3%	0.5%	0.4%	0.5%
Two or More Races	9.1%	10.6%	11.4%	15.0%	4.4%
Hispanic or Latino	7.5%	10.5%	12.5%	21.9%	40.8%
White alone, not Hispanic or Latino	32.9%	23.8%	36.1%	52.5%	33.6%
Families & Living Arrangements					
Persons per household	2.9	2.8	2.7	2.7	2.84
Living in same house 1 year ago, % of persons age 1 year+	89.0%	84.7%	89.4%	90.0%	89.2%
Language other than English spoken at home, age 5 years+	46.8%	49.1%	43.6%	26.4%	44.4%
Education					
High school graduate or higher, persons age 25 years+	97.0%	95.3%	96.5%	94.2%	84.7%
Bachelor's degree or higher, persons age 25 years+	71.6%	69.8%	69.9%	52.3%	37.1%
Income & Poverty					
Median Household Income (2023 dollars)	\$196,161	\$214,385	\$190,124	\$160,775	\$99,122
Per capita income in past 12 months (2023 dollars)	\$84,288	\$84,023	\$88,401	\$73,933	\$49,513
Persons in poverty	4.4%	4.5%	5.3%	4.9%	11.8%
NOTES:					
(a) 2024 demographic data per the U.S. Census Bureau QuickFacts website (U.S. Census, 2024).					



3.4 Service Area Climate

Zone 7’s climate is characterized by a Mediterranean climate with cool, wet winters and warm, dry summers. Based on data downloaded from the PRISM datasets for 1991-2020, 90% of rainfall occurs between November and April (see **Figure 3-2** and **Table 3-3**). On average, Zone 7 receives 19.4 inches of rainfall annually. The maximum daily air temperature averages 72.5 degrees Fahrenheit during the summer months. In the winter, it averages 48.6 degrees Fahrenheit.

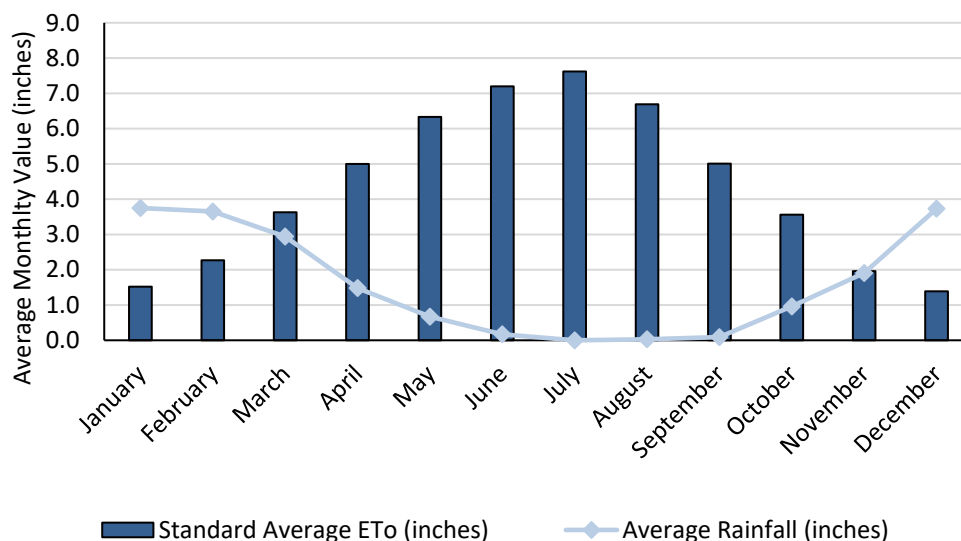
Table 3-3 Climate Characteristics

Month	Average Temperature		Standard Average ETo (inches)	Average Rainfall (inches)
	Min (°F)	Max (°F)		
January	40.0	57.2	1.5	3.8
February	42.2	61.1	2.3	3.7
March	44.4	65.2	3.6	2.9
April	46.6	69.3	5.0	1.5
May	50.7	74.8	6.3	0.7
June	54.2	82.0	7.2	0.2
July	57.0	87.4	7.6	0.0
August	57.2	87.2	6.7	0.0
September	55.7	85.1	5.0	0.1
October	51.1	77.5	3.6	1.0
November	44.3	65.6	2.0	1.9
December	39.8	57.5	1.4	3.7
Annual	48.6	72.5	4.4	19.4

NOTES:

- Average temperature and rainfall data were obtained from PRISM datasets from 1991 to 2020.
- Reference evapotranspiration data are for the Pleasanton station #191, Department of Water Resources, California Irrigation Management Information System.

Figure 3-2 Average Monthly Climatic Conditions





3.4.1 Climate Change Considerations

CWC §10635(b)

(4) 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.

Climate change is expected to impact both water availability (supplies) and water demand patterns across California. For example, higher temperatures can lead to increases in water use, particularly for irrigation; declining snowpack and earlier runoff patterns could result in changes in stream flow and reservoir operations; projection of frequent, severe, and prolonged droughts could lead not only to less available surface water, but could also exacerbate ongoing stressors in groundwater basins. Some of these pressures are already apparent in California as of 2025.

According to the Cal-Adapt tool, Zone 7's service area experienced a 30-year average temperature of 72.5 degrees Fahrenheit between 1961 and 1990.⁶ Future projections using Localized Constructed Analogs (LOCA) downscaled Coupled Model Intercomparison Project (CMIP5) model indicate an average increase in temperature of 3.5 degrees Fahrenheit for medium emissions (Representative Concentration Pathway [RCP] 4.5) models and 4.4 degrees Fahrenheit for high emissions (RCP 8.5) models by 2064 (**Figure 3-3**).

Climate projections for precipitation in the Zone 7 service area show greater uncertainty compared to temperature projections, exhibiting a wider range of possible outcomes. Cal-Adapt projections using LOCA downscaled CMIP5 models suggest that the maximum 1-day precipitation may increase slightly by 0.08 and 0.09 inches under medium emissions (RCP 4.5) and high emissions (RCP 8.5) scenarios, respectively, relative to historical conditions (**Figure 3-4**).

⁶ The Cal-Adapt tool is available at: <https://cal-adapt.org/tools/local-climate-change-snapshot>

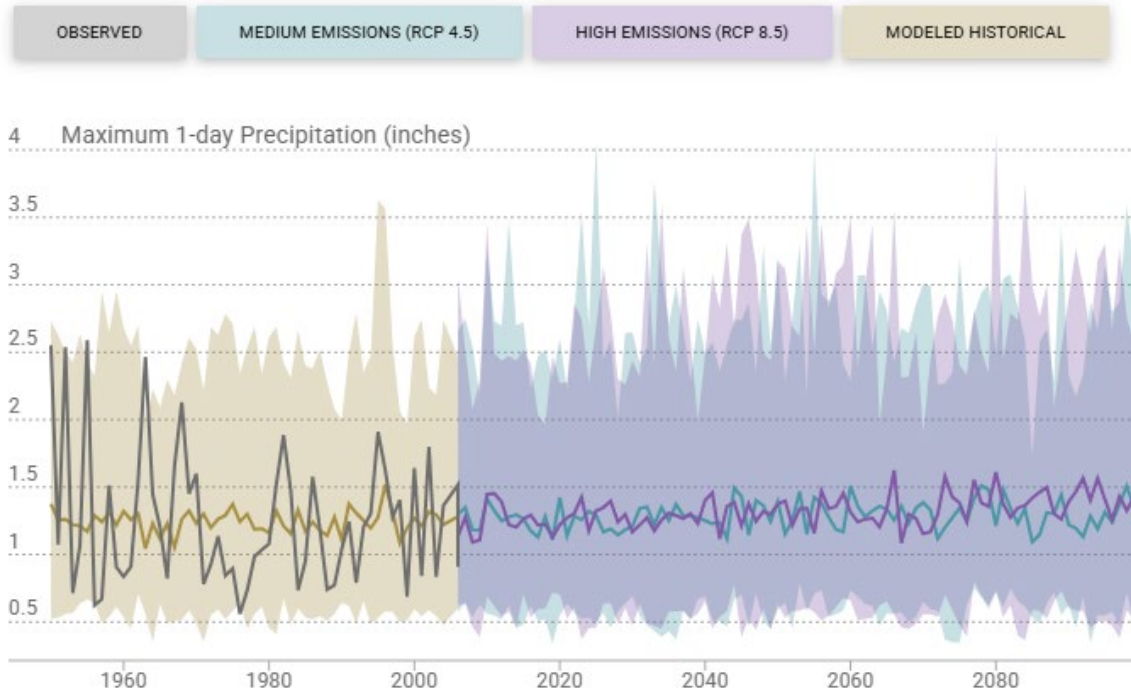


Figure 3-3 Observed and Forecasted Temperature for Zone 7’s Service Area⁷

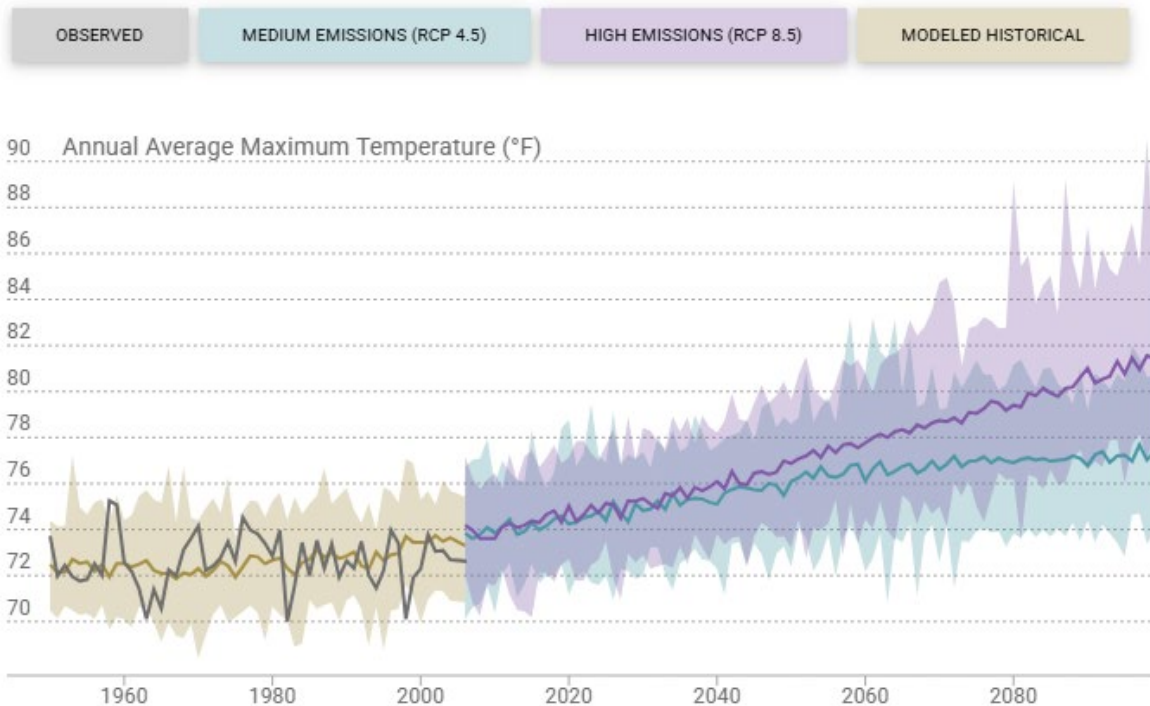


Figure 3-4 Observed and Forecasted Precipitation for Zone 7’s Service Area

Pursuant to the CWC requirements and the 2025 UWMP Guidebook, this Plan incorporates climate change considerations into the following relevant chapters:

⁷ Figure 3-3 and Figure 3-4 generated from: <https://cal-adapt.org/tools/local-climate-change-snapshot>



- Section 3 – System Description;
- Section 4 – Water Use Characterization;
- Section 6 – Water Supply Characterization; and
- Section 7 – Water Supply Reliability Assessment.

In the water sector, climate change mitigation, or reducing contribution to the causes of climate change (e.g., greenhouse gas emissions) is generally achieved by reducing energy use, increasing energy efficiency, and/or replacing fossil fuel-based energy sources with renewable energy sources. In 2024, Zone 7 adopted its first Energy Policy. The policy acknowledges the integral relationship between water supply and energy management, and provides a framework for proactive energy management activities that align with the agency’s values of fiscal responsibility, proactivity, innovation, and environmental sensitivity. Through elective participation in green energy procurement programs, Zone 7’s purchased electricity has been carbon-free since 2023. In 2024, purchased electricity was 100% renewable including large hydropower, and 60% renewable excluding large hydropower. Additionally, Zone 7 has a solar facility at the Del Valle Water Treatment Plant (DVWTP) and continues to explore ways to further decrease emissions associated with water operations.

Because water requires energy to move, treat, use, and discharge, water conservation results in energy conservation. Adaptation initiatives include alternative water supply/storage options that Zone 7 is considering (further discussed in Chapter 6). These options bolster Zone 7’s ability to adapt to climate change through additional storage, providing a buffer against more variable hydrology, and new supplies like potable reuse and desalination, which are not as vulnerable to hydrologic variations. Sites Reservoir performs well under the greater extreme rainfall events expected under climate change. SWP infrastructure improvements are also key adaptation tools: for example, the Delta Conveyance Project will address higher sea levels and greater salinity in the Delta and the greater vulnerability of the Delta levees.

3.5 Water Distribution System

As shown on **Figure 3-5**, Zone 7 has a robust water supply system consisting of an aqueduct, surface water treatment plants, wells, a groundwater demineralization plant, and a storage and transmission system.

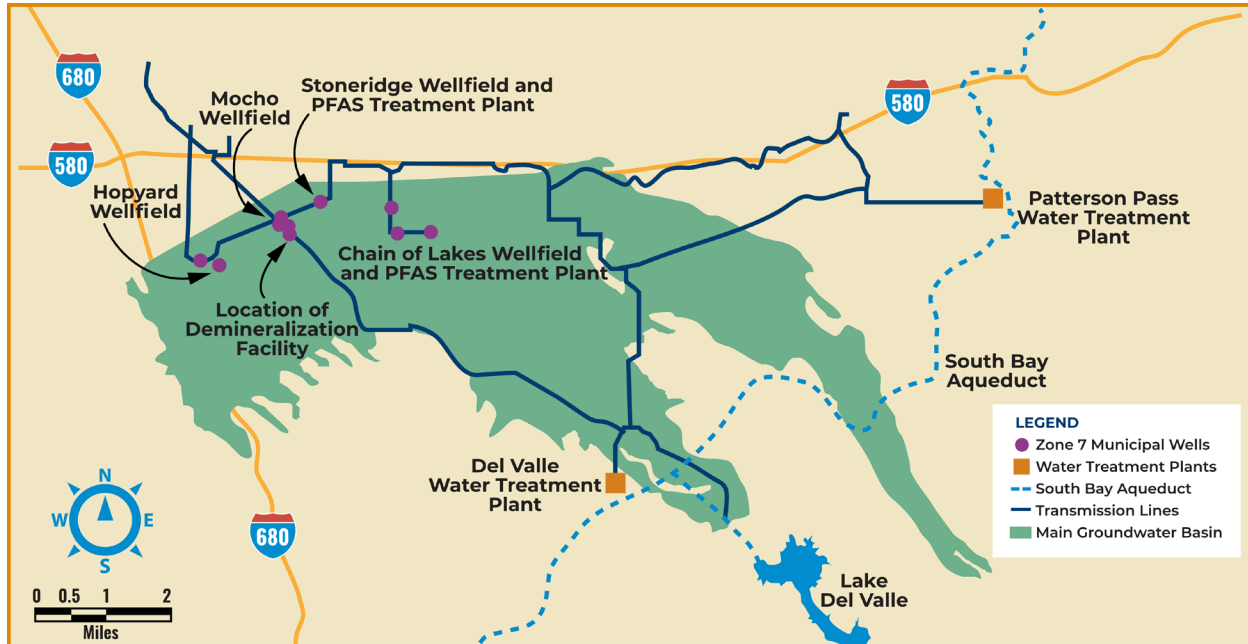


Figure 3-5 Zone 7 Facilities

3.5.1 South Bay Aqueduct

Zone 7 imports raw surface water from the SWP through the South Bay Aqueduct (SBA) for direct irrigation use by agricultural users, for treatment and transmission to retailers and direct retail customers, and for groundwater recharge. The SBA, which is owned, operated, and maintained by DWR as part of the SWP system, starts from Bethany Reservoir near the City of Tracy in the northeastern corner of Zone 7’s service area and leaves the service area southwest of the San Antonio Reservoir, ultimately terminating in the City of San Jose. The SBA serves the Alameda County Water District (ACWD) and Valley Water (formerly known as the Santa Clara Valley Water District), in addition to Zone 7 (collectively, the SBA contractors). The SBA delivers SWP water pumped from the Delta and water released from Lake Del Valle, which is part of the SWP system. Other water supplies procured by Zone 7 (e.g., via water transfer agreements) are also delivered through the Delta and SBA system. The SBA also conveys Delta water to Lake Del Valle for storage and later use by the SBA contractors.

3.5.2 Surface Water Treatment Plants

Zone 7 operates two water treatment plants: DVWTP and Patterson Pass Water Treatment Plant (PPWTP). Built in the 1970s, the DVWTP is located along the SBA, just north of Lake Del Valle, and has an average capacity of 36 million gallons per day (MGD), although it is permitted to operate up to 40.9 MGD. DVWTP can receive water either directly from the SBA or from Lake Del Valle. As shown on **Figure 3-6**, the treatment processes include ozone disinfection, along with coagulation, flocculation, clarification, multi-media biofiltration, and chlorine for backup/supplemental disinfection. In addition, chloramine is added to maintain a disinfectant residual in the transmission system.

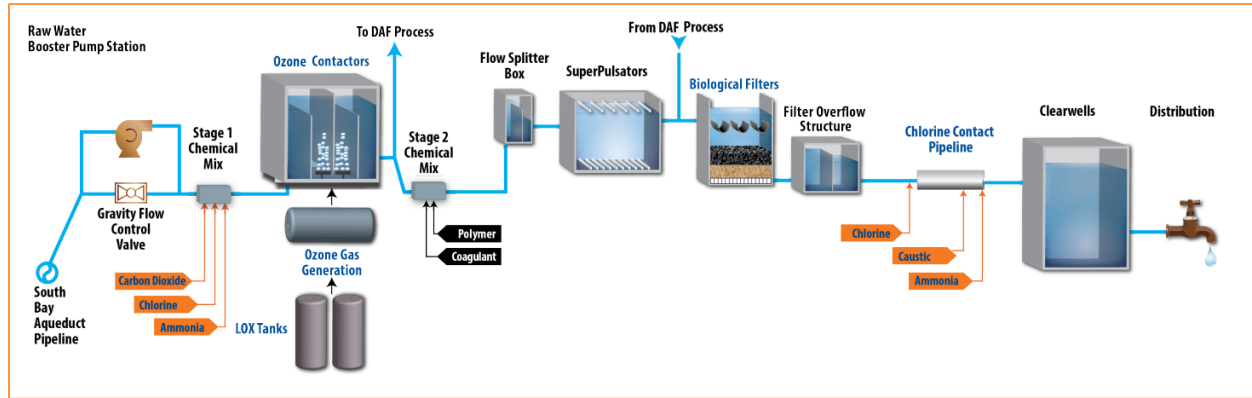


Figure 3-6 DVWTP Treatment Processes

Constructed in the early 1960s, the PPWTP is also strategically located along the SBA, just south of I-580, and has a production capacity of 21 MGD. Because PPWTP is upstream of Lake Del Valle, it is not able to physically receive water from this water supply source. There is a 30-MG raw water reservoir onsite, operated by DWR. PPWTP typically receives water from Patterson Reservoir, and can receive water directly from the SBA. As shown on **Figure 3-7**, the treatment processes include ozone disinfection, along with coagulation, flocculation, clarification, multi-media biofiltration, and chlorine for backup/supplemental disinfection. Similar to the DVWTP, chloramine is used to maintain a disinfectant residual in the transmission system.

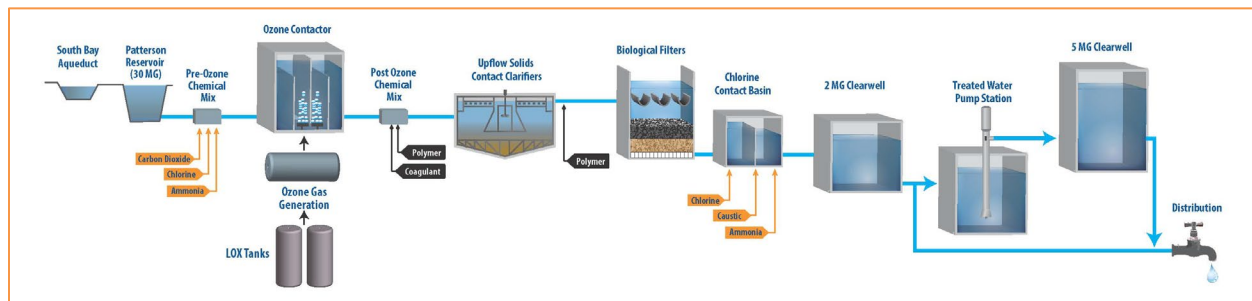


Figure 3-7 PPWTP Treatment Processes

3.5.3 Wells

Zone 7 owns and operates nine municipal supply wells located in four wellfields. The Hopyard, Mocho, Stoneridge, and Chain of Lakes wellfields are situated on the west side of the service area. Their rated capacities are summarized in **Table 3-4** below. The total combined pumping capacity of all Zone 7 wells is approximately 39.0 MGD. Of the total pumping capacity, 10.8 MGD is intended primarily for use in emergency and drought conditions. Therefore, total groundwater pumping capacity under normal operating conditions is approximately 28.2 MGD. Zone 7 uses the wells to supplement the DVWTP and PPWTP during daily peaks in demand, typically during the dry season to meet higher average monthly demands, and during emergencies or outage(s) of the DVWTP and/or PPWTP.



Table 3-4 Zone 7 Groundwater Well Capacities

Wellfield	Facility	Rated Capacity	
		gpm	MGD
Hopyard	Hopyard 6	3,817	5.5
	Hopyard 9	1,110	1.6
Hopyard Subtotal		4,927	7.1
Mocho 2, 3, and 4	Mocho 2	2,221	3.2
	Mocho 3	4,164	6.0
	Mocho 4	3,678	5.3
Mocho2, 3, and 4 Subtotal		10,063	14.5
Stoneridge	--	4,580	6.6
Chain of Lakes	Chain of Lakes 1	2,498	3.6
	Chain of Lakes 2	3,470	5.0
	Chain of Lakes 5	1,527	2.2
Chain of Lakes Subtotal		7,495	10.8
Total		27,066	39.0

NOTES:
(a) The Mocho well field is currently out of service due to PFAS, and its capacity will be restored when the PFAS treatment plant comes online in 2028.

3.5.4 Mocho Groundwater Demineralization Plant

A reverse osmosis membrane-based demineralization facility (Mocho Groundwater Demineralization Plant or MGDP) was installed in 2009 at the Mocho 3 and 4 wellfield to improve delivered water quality (lower Total Dissolved Solids [TDS] and hardness) and mitigate salt build-up in the groundwater basin via export of brine from the MGDP. This facility can produce up to 6.1 MGD of demineralized water. Under normal operation, 20% of the influent to the MGDP is lost through brine disposal.

3.5.5 Stoneridge and COL PFAS Treatment Plants

Two per- and polyfluoroalkyl substances (PFAS) treatment plants have come online since the 2020 UWMP: the Stoneridge PFAS Treatment Plant in 2023 and the COL PFAS Treatment Plant in 2025. Both plants are situated at wells used to extract groundwater from underlying groundwater basin and use Ion Exchange treatment technology. The two plants have a total capacity of about 16 million gallons per day. Construction for a third PFAS treatment plant at the Mocho wellfield is expected to start in 2027.

3.5.6 Storage and Transmission System

Zone 7’s treated water transmission system is shown on **Figure 3-5**. There are five treated water storage reservoirs within the system: Dougherty Reservoir (joint use with DSRSD), DVWTP Clearwells 1 and 2, PPWTP Clearwell, and PPWTP Finished Water Tank. These five facilities provide a total storage volume of 18.5 MG.

Zone 7’s transmission system consists of approximately 40 miles of pipeline ranging from 12 to 48 inches in diameter. Elevations across the transmission system range from 520 to 680 feet above mean sea level



Chapter 3 System Description

(msl) on the eastern side of the service area, to approximately 330 feet above msl on the western side of the service area.



4 WATER USE CHARACTERIZATION

CWC §10635

(a) Every urban water Supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the long-term total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and a drought lasting five consecutive water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.

This chapter provides a description and quantifies Zone 7 historical, current, and projected water uses through 2050. For the purposes of the UWMP, the terms “water use” and “water demand” are used interchangeably.

4.1 Historical and Current Water Demand

Zone 7 provides wholesale potable water to its retailers for municipal and industrial purposes within their service areas, including Cal Water, Pleasanton, Livermore, and DSRSD. A small number of direct retail customers, including commercial and institutional water users, are also served by Zone 7 and represent less than 1% of Zone 7’s overall potable water demand.

In addition to treated water, Zone 7 supplies raw or untreated (non-potable) water for agricultural purposes to approximately 3,500 acres of agricultural land, primarily consisting of vineyards in the southern portion of Livermore Valley. Zone 7 does not produce nor distribute recycled water directly, however three retailers—DSRSD, Livermore, and Pleasanton—provide recycled water (mainly for landscape irrigation) within their respective service areas.

Zone 7’s historical and current (i.e., 2025 calendar year) potable and non-potable water demands are reported in **Table 4-1** and **Table 4-2**, respectively. Water use within Zone 7’s service area includes domestic, municipal, industrial, and agricultural uses. As shown in **Figure 4-1**, total water use has varied over time and is influenced by several factors including population growth, hydrologic conditions, drought response actions, water conservation programs, and economic conditions.

Historical water use between 2004 and 2020 was generally higher than the most recent demand levels. Water use declined substantially during the 2012–2016 drought and has not fully rebounded. Zone 7’s investments in water conservation in recent years have helped decrease overall water use in the county over the past 5 years despite a 0.4% increase in population over the same period. As a result, overall water demand has decreased in recent years despite continued population and economic growth in the region.



Table 4-1 Historical Water Demands

Use Type	Level of Treatment When Delivered	Historical Water Use – Volume (a)							
		2004	2009	2015	2020	2021	2022	2023	2024
Retail Demand	Potable	42,371	38,083	24,300	38,020	35,435	33,140	33,470	35,339
Untreated Water Demand	Non-Potable	3,530	4,920	5,600	5,810	5,975	5,352	4,866	4,351
Direct Retail Demand	Potable	775	233	300	730	200	309	339	296
Losses	Potable	523	1,900	800	180	163	181	100	0
Total		47,199	45,136	31,000	44,740	41,773	38,982	38,775	39,986

NOTES:

(a) Volumes are in units of AF

Table 4-2 Demands for Potable and Non-Potable Water – Actual (DWR Table 4-1 Wholesale)

Use Type	Additional Description	2025 Actual	
		Level of Treatment When Delivered	Volume (a)
Sales to other agencies	Retail Demand	Potable	34,150
Agricultural	Untreated Water Demand	Non-Potable	4,360
Direct retail	Direct Retail Demand	Potable	200
Distribution System Water Loss	--	Potable	180
Total			38,890

NOTES:

(a) Volumes are in units of AF.

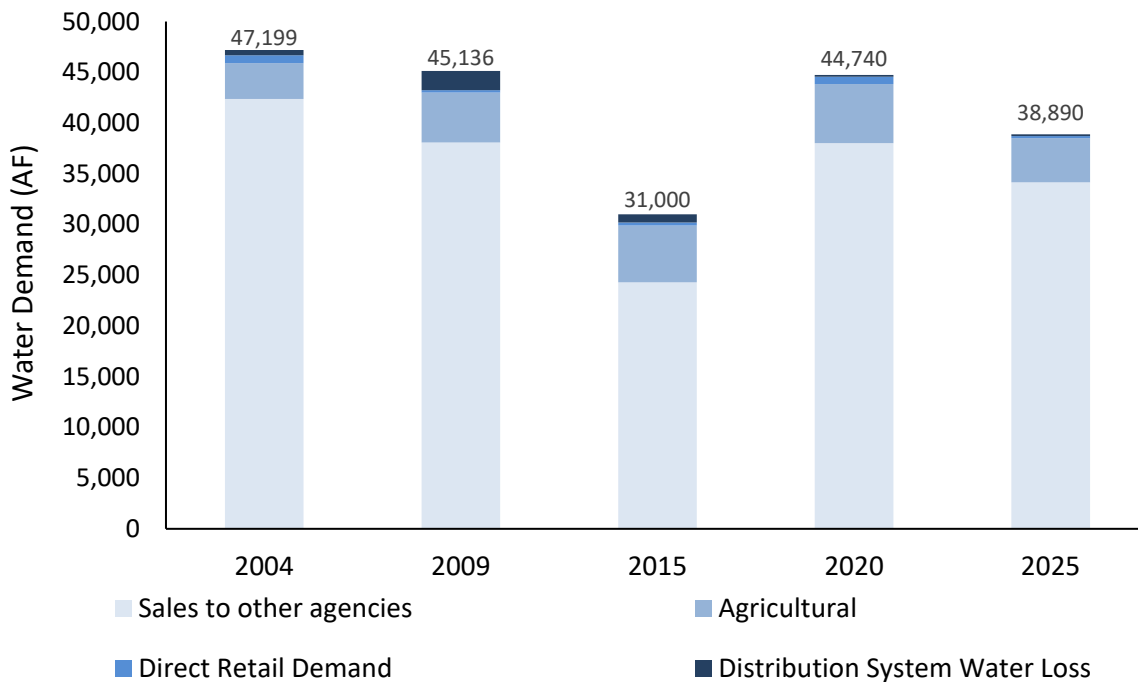


Figure 4-1 Historical Water Demand 2004-2025

4.1.1 Distribution System Water Loss

As a wholesaler, Zone 7 is not required to perform water loss audits and reporting. However, Zone 7 monitors water loss and conducts audits for reliability planning and water demand projections.

The volume of water loss in Zone 7’s transmission system for the previous five calendar years (2021-2025) is provided in **Table 4-3**. 2021-2025 water losses make up less than 1% of total water demands and are much lower than in the 2020 UWMP due to system improvements, reducing physical losses, and improved measurement.

Table 4-3 Water Loss Audit Reporting (DWR Table 4-5)

Reporting Period Start Date	Volume of Water Loss
01/2021	163
01/2022	181
01/2023	100
01/2024	0
01/2025	180

NOTES:
Volumes are in AF.

4.2 Projected Water Demand

This section presents water demand projections for Zone 7’s service area through 2050.



Zone 7 worked closely with its retailers to develop the demand projections under the “Sales to other agencies” category, which represents most of Zone 7’s potable demand. The projected potable and non-potable water demands provided are based on the 2025 Water Demand Assessment Study, which Zone 7 prepared in coordination with its retailers.

The primary goal of the 2025 Water Demand Assessment Study (Study) was to update Zone 7’s Regional Demand Model (Zone 7, 2021a) to support development of this UWMP, as well as to inform Zone 7’s future Water Supply Status Report, its water conservation program implementation, and other planning efforts. The Model developed through this Study provides demand projections through 2050, forecasting the total demand for the Zone 7 service area as an aggregate of the demands projected for Livermore; the validated independent demand forecasts from the other three retailers (Cal Water, DSRSD, and Pleasanton); and the demand projected for Zone 7’s direct retail customers, untreated water (agricultural) customers, and losses (i.e., unaccounted-for water) in its water supply system.

Uncertainty is inherent with any type of projection. The rate of increase in demand and the ultimate realized demands will be affected by economic and local development conditions, regulations (e.g., land use ordinances), technology (e.g., water efficiency of future appliances), consumer behavior, climate conditions, and other factors. A range of plausible future conditions was evaluated in the scenario planning in the Study, which provides a structured way to capture uncertainty and test how different assumptions influence future water needs.

4.2.1 Basis of Demand Projections

As further detailed in the Study, demand projections for Livermore were developed by Zone 7 using a land-use-based methodology. Demand projections for Pleasanton and DSRSD were developed by the respective agencies using land-use-based planning approaches. Demand projections for Cal Water were developed using a service-based methodology that projects future water demand based on forecasts of the number of service connections and expected water use per service. These projections were subsequently reviewed and validated by Zone 7 for consistency and reasonableness.

Livermore’s sector-level demand projections were developed using a land-use-based approach that accounts for projected growth across major water use sectors, including single-family residential, multifamily residential, commercial, industrial and institutional (CII), and park uses. Historical water consumption data were organized by billing categories corresponding to these land-use sectors and paired with land-use information to develop unit demand factors over representative baseline periods. These baseline demand factors were applied to current and projected land-use conditions provided by Livermore to estimate future potable demand.

Potable demand projections for Cal Water, DSRSD, and Pleasanton were provided by the respective retailers and were validated by Zone 7 to confirm that they are consistent with historical water use trends and regional planning efforts. Validation included a review of historical consumption data to assess long-term trends and verify that selected baseline periods reasonably represent typical operating conditions without undue influence from short-term anomalies such as drought restrictions. In addition, the retailers’ current projections were compared with demand forecasts developed for the 2020 Regional Demand Model and the 2020 UWMP (Zone 7, 2021b). This comparison demonstrated that the updated projections fall within a reasonable range relative to prior forecasts, accounting for updated development information, revised demand factors, and evolving land-use assumptions.

Zone 7’s total demand projections were developed by aggregating projected potable demands of each retailer with projected direct retail and agricultural irrigation demands. Because the retailers do not rely exclusively on Zone 7 for their potable water supplies, and instead meet a portion of demand through local groundwater pumping, the Zone 7–supplied share of each retailer’s total potable demand was



estimated by subtracting their corresponding groundwater pumping quotas (GPQ). In addition to the retailer-supplied potable demands, Zone 7 also provides direct retail water service to a limited number of customers within its service area and irrigation water to agricultural users. Direct retail demand was conservatively projected to increase slightly by 2045 and to remain at that level through 2050. Agricultural irrigation demand was assumed to remain relatively constant throughout the planning horizon.

Accordingly, total projected Zone 7 demand represents the sum of: (1) Zone 7's proportional share of retailer potable demands, (2) Zone 7 direct retail demand, and (3) agricultural irrigation demand. In estimating the portion of retailer demand to be met by Zone 7 supplies, GPQs were accounted for based on each retailer's groundwater supply assumptions. For Pleasanton and DSRSD, the GPQ allocation was directly subtracted from the projected potable demand to estimate the portion of demand expected to be supplied by Zone 7. For Cal Water, groundwater use was assumed to represent 30% of total demand, capped by the applicable GPQ allocation, and the remaining demand was assumed to be supplied by Zone 7. This approach ensures internal consistency between retailer demand projections, supply source assumptions, and Zone 7's role in meeting regional water demands.

4.2.2 Projected Total Water Demand

Zone 7 does not currently handle wastewater nor recycled water as discussed in **Chapter 6**. Projected total potable and non-potable water demand (i.e., "gross water use") in five-year increments is summarized by sector in **Table 4-4** and **Figure 4-2**. Zone 7's total projected water use is projected to increase steadily from 44,500 AFY to 51,000 AFY between 2030 and 2050, for an annual increase of 0.68%. The growth is mainly driven by the "Sales to other agencies" category, which represents 92% of the total increase by 2050.



Table 4-4 Total Uses of Potable and Non-Potable Water - Projected (DWR Table 4-2)

Use Type	Additional Description	Projected Water Use (a)					
		Level of Treatment When Delivered	2030	2035	2040	2045	2050 (opt)
Sales to other agencies		Potable	34,900	37,600	39,400	41,000	40,900
Agricultural		Non-Potable	8,100	8,100	8,100	8,100	8,100
Direct Retail Use	Direct Retail Demand	Potable	470	650	820	1,000	1,000
Distribution System Water Loss		Potable	1,000	1,000	1,000	1,000	1,000
Total			44,500	47,300	49,300	51,100	51,000

NOTES:
(a) Volumes are in units of AF.

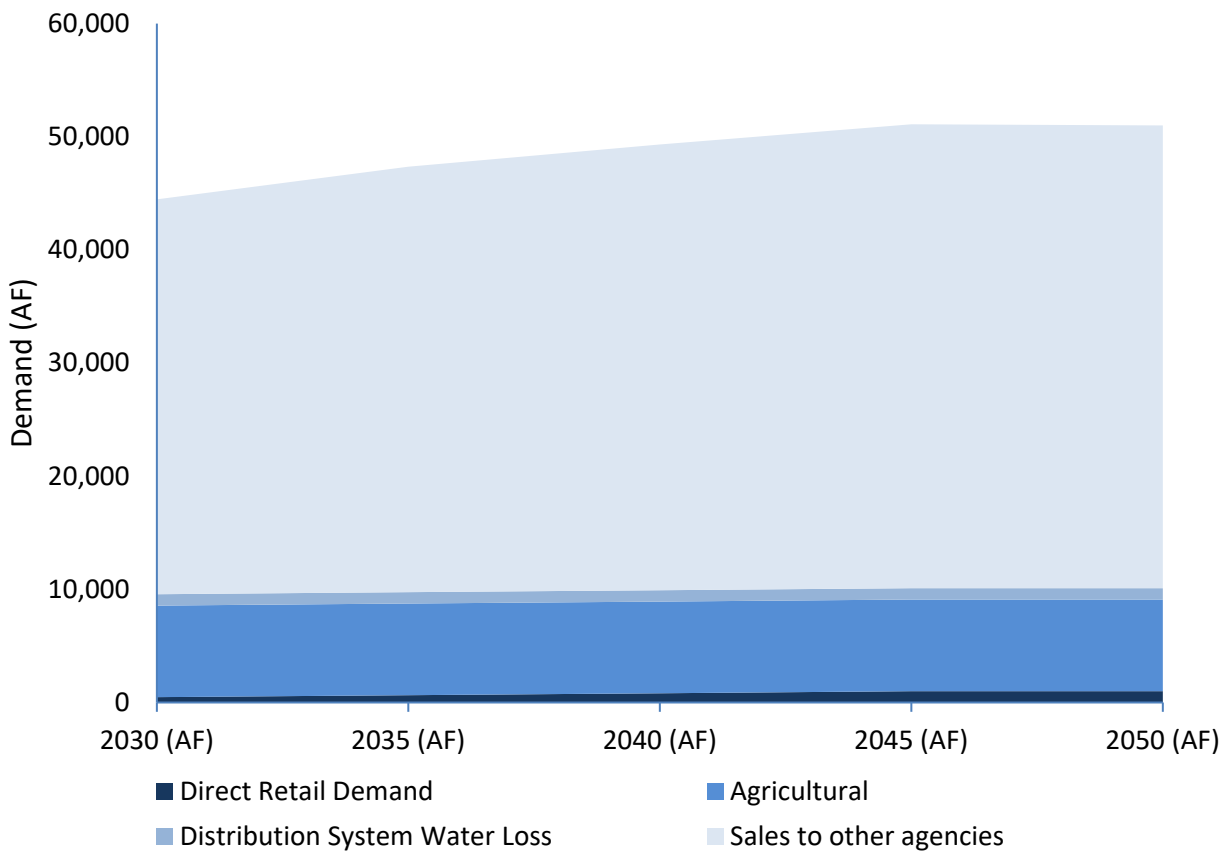


Figure 4-2 Total Uses of Potable and Non-Potable Water – Projected



4.2.3 Characteristic Five-Year Water Use

☑ CWC §10635

(b) Every urban water supplier shall include, as part of its urban water management plan, a drought risk assessment for its water service to its customers as part of information considered in developing the demand management measures and water supply projects and programs to be included in the urban water management plan. The urban water supplier may conduct an interim update or updates to this drought risk assessment within the five-year cycle of its urban water management plan update. The drought risk assessment shall include each of the following...

*(3) A comparison of the total water supply sources available to the water supplier with **the total projected water use for the drought period.** (Emphasis added).*

(4) 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.

In accordance with CWC §10635(b)(3), UWMPs must provide a five-year Drought Risk Assessment (see **Section 7.5**). As a first step, DWR suggests that water suppliers estimate their unconstrained water demand for the next five years (2026-2030). Unconstrained water demand is water use in the absence of drought water use restrictions. These numbers can then be adjusted to estimate the five-years’ cumulative drought effects. The Drought Risk Assessment presented in **Section 7.5** accounts for this increase in unconstrained water demand. **Table 4-5** shows unconstrained demands for 2026-2030.

Table 4-5 Characteristic Five-Year Water Use (AF)

2026	2027	2028	2029	2030
40,000	41,200	42,200	43,400	44,500
NOTES:				
<ul style="list-style-type: none"> The table shows unconstrained demand (i.e., demand in the absence of drought water use restrictions). 				

4.3 Climate Change Considerations

Climate change may impact Zone 7’s future water demand and use patterns. Warmer temperatures are expected to increase irrigation demand and lengthen the growing season. In addition, climate change may increase the frequency and intensity of wildfires. Increased water efficiency and conservation, along with expanded use of recycled water by Zone 7’s retailers, could mitigate the effects of climate change on water demands.

The 2025 Demand Assessment accounts for climate change by increasing outdoor water demands by 5% by 2045 through scenario planning. This demand multiplier starts at 0% in 2025, increases linearly to 5% in 2045, and remains at 5% through 2050. As the actual impact of climate change on water use becomes clearer, this value can easily be updated in the model that informs the 2025 Demand Assessment.

A general discussion regarding the potential impacts of climate change on Zone 7’s water supplies is provided in Chapter 6.



4.4 Urban Water Use Objective

CWC § 10609.20

(a) Each urban retail water supplier shall calculate its urban water use objective no later than January 1, 2024, and by January 1 every year thereafter.

(b) The calculation shall be based on the urban retail water supplier's water use conditions for the previous calendar or fiscal year.

CWC § 10609.22

(a) An urban retail water supplier shall calculate its actual urban water use no later than January 1, 2024, and by January 1 every year thereafter.

(b) The calculation shall be based on the urban retail water supplier's water use for the previous calendar or fiscal year.

CWC § 10609.24

(a) An urban retail water supplier shall submit a report to the department no later than January 1, 2024, and by January 1 every year thereafter. The report shall include all of the following:

(1) The urban water use objective calculated pursuant to Section 10609.20 along with relevant supporting data.

(2) The actual urban water use calculated pursuant to Section 10609.22 along with relevant supporting data.

(3) Documentation of the implementation of the performance measures for CII water use.

(4) A description of the progress made towards meeting the urban water use objective.

(5) The validated water loss audit report conducted pursuant to Section 10608.34.

(b) The department shall post the reports and information on its internet website.

(c) The board may issue an information order or conservation order to, or impose civil liability on, an entity or individual for failure to submit a report required by this section.

As a wholesaler, Zone 7 is not subject to the UWUO as part of the MCCWL regulation, which is based on SB 606 and AB 1668. SB 606/AB 1668 set new requirements for urban water suppliers to continue to increase water efficiency beyond SB X7-7. Beginning in 2024, urban water suppliers, including Zone 7's retailers, were required to report an annual UWUO. Beginning in 2027, urban water suppliers are required to meet their UWUO. Retailers' UWUO submittals are available through DWR's Water Use Efficiency Data.⁸ The retailers' progress in meeting their UWUOs can be found in their individual UWMPs. Zone 7 is actively coordinating with its retailers on their water use efficiency improvement and compliance with their UWUO by 2027. Zone 7 collaborates with its retailers on water conservation outreach and programming, as discussed in **Chapter 9**.

⁸ DWR's Water Use Efficiency Data Portal: https://wuedata.water.ca.gov/uwuo_plans



5 SB X7-7 BASELINE AND TARGETS

☑ **CWC §10608.24 (b)**

(aj) “Urban wholesale water supplier,” means a water supplier, either publicly or privately owned, that provides more than 3,000 acre-feet of water annually at wholesale for potable municipal purposes.

☑ **CWC §10608.36**

Urban wholesale water suppliers shall include in the urban water management plans required pursuant to Part 2.6 (commencing with Section 10610) an assessment of their present and proposed future measures, programs, and policies to help achieve the water use reductions required by this part.

SB X7-7 does not directly apply to wholesale water suppliers. Wholesale suppliers may adopt programs and policies that support SB X7-7 compliance by the retail water suppliers they serve. They may also take part in a Regional Alliance (discussed below) set up to satisfy SB X7-7 requirements on a regional basis. As discussed in **Chapter 2**, Zone 7 is a wholesale water supplier.

5.1 Zone 7 Support to Retailers

Zone 7 fully supported the achievement of SB X7-7 water use reduction targets by its retailers. Zone 7 conducts a comprehensive set of conservation efforts in collaboration with retailers, which include rebate and giveaway programs, school education programs, a website with numerous resources and videos, social media engagement, community workshops, trainings, and other events, as discussed in **Chapter 9**.

Zone 7’s conservation staff actively engages in various conservation-oriented regional and state organizations, including the CUWA and the California Water Efficiency Partnership (CalWEP). Zone 7 tracks conservation-related state legislation and local ordinances. Zone 7 assesses its conservation programs and updates them as needed.

Zone 7 also fully supports the current and expanded use of recycled water in the Tri-Valley including the projects and programs developed by the DSRSD-EBMUD Recycled Water Authority (DERWA), which helps reduce reliance on potable water supplies. Recycled water in the service area is currently used primarily for landscape irrigation and other non-potable applications. Zone 7 continues to coordinate with its Retailers to evaluate opportunities to expand recycled water use where feasible. Additionally, Zone 7 has been working closely with its retailers in exploring potential options for expanding recycled water use beyond irrigation applications (i.e., potable reuse), as discussed in **Chapter 6**.



6 WATER SUPPLY CHARACTERIZATION

☑ **CWC §10631(b)** A plan shall be adopted in accordance with this chapter that shall do all of the following:

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).

This chapter of the UWMP provides a description of Zone 7's current and potential water supplies, as well as an assessment of the energy intensity used to operate Zone 7's water treatment and distribution systems.

6.1 Water Supply Analysis Overview

Zone 7's water supplies are used to meet potable water demands from M&I customers (i.e., water retailers and direct retail customers) and untreated water demands from agricultural customers. On average, imported surface water (primarily Table A water from the SWP, among other sources) directly provides 70% of Zone 7's water supplies; locally captured watershed runoff from Arroyo Valle and stored in Lake Del Valle makes up, on average, 10%; and previously-imported supplies stored in the local groundwater basin comprise the remaining 20%. Groundwater is not considered a separate source of water supply because Zone 7 only extracts groundwater that is recharged from surface water supplies as described in **Section 6.2.2**. Other potential imported water supplies include surplus SWP water (i.e., Article 21 water), the Yuba Accord (a type of water transfer), and other water transfers.

In years of abundant supply, Zone 7 places water in storage both locally and outside its service area to prepare for future dry years, emergencies, and planned facility outages. Zone 7 typically reserves about 10,000 AF of SWP Table A water to carry over for use in the following year, with water stored in the SWP's San Luis Reservoir. Imported water supplies are also stored in the Livermore Valley Groundwater Basin (Basin) through artificial recharge when excess surface water is available from the SWP. Finally, surplus water can be transferred to non-local storage in groundwater banks in Kern County. Unused Arroyo Valle runoff is stored in Lake Del Valle for use during the following year. If needed during dry years, emergencies, or planned facility outages, stored water is released to meet demands.

Using the Basin as a local storage reservoir bolsters the Tri-Valley's water supply reliability, as it provides a local water supply that is not dependent on external conveyance facilities. Given the highly variable hydrology in California—and corresponding variability in SWP allocations—the use of storage facilities, both local and outside of the Tri-Valley, is key to Zone 7's strategy for maintaining water supply system reliability.

Zone 7 is currently evaluating a number of local, regional, and statewide projects for improved water supply reliability and to meet additional water demands through buildout in the Tri-Valley as described in **Section 6.2.9**. A "portfolio" of these projects could provide additional water and/or storage to Zone 7's water supply system.

In addition to water provided by Zone 7, water supplies for the Tri-Valley are supplemented by local groundwater pumping and recycled water. Two of the retailers, Cal Water and Pleasanton, pump groundwater under their GPQ (3,069 AFY and 3,500 AFY respectively), which supplement the potable water supply provided by Zone 7 in their respective service areas. Per the water supply agreement, Zone 7 pumps DSRSD's GPQ (645 AFY) on their behalf. DSRSD and Livermore also produce recycled water for non-potable uses (primarily irrigation) in the Tri-Valley.

Anticipated availability of Zone 7's water supplies under a normal water year is discussed in this chapter. The availability of Zone 7's water supplies under a single dry year and a drought lasting five years, as well



as more frequent and severe periods of drought are described in detail in **Chapter 7** of this UWMP, along with the basis of those estimates.

6.2 Water Supply Characterization

As described above, Zone 7’s water supply has two major components: (1) incoming water supplies available through contracts and water rights each year, and (2) accumulated water supplies in storage derived from previous years. Incoming water supplies typically consist of annually allocated imported surface water supply and local surface water runoff. Accumulated or “banked” water supplies are available in local and non-local storage locations.

Three of Zone 7’s retailers—DSRSD, Livermore, and Pleasanton—also produce and/or supply recycled water to their service areas; more details about recycled water are presented in **Section 6.2.6**. Two retailers, Pleasanton and Cal Water, pump groundwater directly in addition to the water supply provided by Zone 7. DSRSD has a contract with Zone 7 that specifies Zone 7 will pump groundwater on DSRSD’s behalf.

To optimize use of its local resources, Zone 7 practices conjunctive use of the Basin, as detailed in **Section 6.2.2**. Zone 7 also stores local runoff from the Arroyo Valle watershed in the local reservoir (Lake Del Valle), which is owned and operated by DWR.

Two long-term water storage (“banking”) agreements with agencies south of Zone 7’s service area in Kern County (Semitropic Water Storage District and Cawelo Water District) provide additional flexibility in managing annual fluctuations in supplies. Additionally, Zone 7 expects to obtain additional non-local water banking agreements. These agreements are described in **Section 6.2.5** and **Section 7.2.5**.

To mitigate the risk associated with significant reliance on imported water supply, Zone 7 continues to develop local sources of water to diversify its water supply portfolio. Zone 7 periodically conducts Water Supply Evaluation (WSE) Updates to assess future water supply conditions in the Tri-Valley to support Zone 7’s planning for long-term water supply reliability. In May 2023, Zone 7 completed its 2022 WSE Update (Zone 7, 2022) to capture the latest assumptions for Zone 7’s system, supply, and demands since its 2019 WSE Update. The 2022 WSE Update also evaluated various future water supply portfolios, which are discussed in **Section 6.2.9**.

In this section, Zone 7’s water supplies and their management in relation to each other are described in detail. Zone 7’s efforts to meet future water demands are also discussed.

6.2.1 Purchased Water

CWC §10631(h) A plan shall be adopted in accordance with this chapter and shall do all of the following:

An urban water supplier that relies upon a wholesale agency for a source of water shall provide the wholesale agency with water use projections from that agency for that source of water in five-year increments to 20 years or as far as data is available. The wholesale agency shall provide information to the urban water supplier for inclusion in the urban water supplier’s plan that identifies and quantifies, to the extent practicable, the existing and planned sources of water as required by subdivision (b), available from the wholesale agency to the urban water supplier over the same five-year increments, and during various water-year types in accordance with subdivision (f). An urban water supplier may rely upon water supply information provided by the wholesale agency in fulfilling the plan informational requirements of subdivisions (b) and (f).

Purchased or imported water consists of SWP water and water transfers through the Yuba Accord and other agreements.



6.2.1.1 State Water Project

Imported water from the SWP, which is owned and operated by DWR, is Zone 7’s largest water source, providing about 90%⁹ of the treated water supplied to its customers on an average annual basis (Zone 7, 2021b).

The primary origin of SWP water is the Feather River watershed, where water is captured in and released from Lake Oroville, and flows through the Delta before it is conveyed by the SBA to Zone 7 and two other water agencies (Valley Water and ACWD). Much of the SWP water continues to southern California via the California Aqueduct. Lake Del Valle is part of the SWP’s SBA system and is used for storage of SWP water, as well as local runoff.

SWP water is used by Zone 7 to meet potable demands from M&I customers and untreated water demands from agricultural customers. It is also used to recharge the Basin, as discussed in **Section 6.2.2**, and to fill non-local groundwater storage in Kern County.

The following sections describe Zone 7’s contract with DWR for SWP water and the types of water Zone 7 receives under this contract.

6.2.1.1.1 Contract with DWR

DWR provides water supply from the SWP to 29 SWP contractors, including Zone 7, in exchange for contractor payment of all costs associated with providing that supply. DWR and each of the contractors entered into substantially uniform long-term water supply SWP contracts in the 1960s. Zone 7 entered into a contract with DWR for water supplies in 1961. That contract has subsequently been amended 28 times and currently terminates on December 31, 2085.

6.2.1.1.2 SWP Supplies

The following sections describe the types of water available to Zone 7 from the SWP.

Table A Allocation

Each SWP contractor is limited to a maximum annual contract amount as specified in Article 6(c) and Table A of the SWP Contract; this amount is therefore commonly referred to as “Table A.” As noted above, Zone 7 first entered into the SWP Contract in November 1961; as the SWP was expanded and as Zone 7 demands increased over the years, Zone 7’s Table A amount was increased, reaching the amount of 46,000 AFY in 1997. Since then, Zone 7 has increased its supply from the SWP through a series of five permanent transfers. In December 1999, Zone 7 secured Table A SWP allocations from Lost Hills Water District of 15,000 AFY and Berrenda Mesa Water District of 7,000 AFY. In December 2000, 10,000 AFY of SWP allocation from Belridge Water Storage District was acquired. An additional 2,219 AFY was obtained from the same source in October 2003. Finally, 400 AFY of water was acquired from the Tulare Lake Basin Water Storage District in 2003. Together, these transfers have raised Zone 7’s current Table A allocation to 80,619 AFY.

In practice, the actual amount of SWP water available to Zone 7 under the Table A allocation process (presented as % Table A) varies from year to year due to hydrologic conditions, water demands of other contractors, existing SWP stored water, SWP facility capacity, and environmental/regulatory requirements. The Table A allocation is typically less than 100% of the Table A amount. SWP reliability is defined based on the long-term average Table A allocation.

⁹ This includes direct SWP deliveries, SWP carryover, and groundwater that originated from the SWP that was stored for later use.



DWR prepares a biennial SWP Delivery Capability Report (DCR) to assist SWP contractors and local planners in assessing the availability of supplies from the SWP. DWR issued its most recent update, the Draft 2025 DCR, in December 2025. In this update, DWR provided SWP supply estimates for SWP contractors to use in their planning efforts, including for use in their 2025 UWMPs. The Draft 2025 DCR includes DWR’s estimates of SWP water supply availability under both existing (2025) and future conditions (2043).

DWR’s estimates of SWP deliveries are based on the CalSim 3 computer model that simulates monthly operations of the SWP and Central Valley Project systems. Key inputs to the model include the facilities included in the system, hydrologic inflows to the system, regulatory and operational constraints on system operations, and contractor demands for both CVP and SWP water. In conducting its model studies, DWR must make assumptions regarding each of these key inputs.

In the Draft 2025 DCR for its model study under existing conditions, DWR assumed: existing facilities, hydrologic inflows to the model based on 100 years of adjusted historical inflows (1921 through 2021) incorporating recent changes to climate, current regulatory and operational constraints including 2018 Coordinated Operation Agreement (COA) Amendment, 2024 biological opinions, and 2024 SWP Incidental Take Permit, and SWP contractor demands at maximum Table A Amounts. The long-term average allocation reported in the Draft 2025 DCR for the existing conditions study provides an appropriate estimate of the SWP water supply availability under current conditions.

To evaluate SWP supply availability under future conditions, the Draft 2025 DCR included three model studies representing hydrologic and sea level rise conditions at 2043. The future condition studies used all of the same model assumptions as the study under existing conditions, but reflected changes expected to occur from climate change, specifically, projected temperature and precipitation changes centered around 2043 (2028 to 2057) and sea level rise. The three risk-informed climate scenarios (50%, 75%, and 95% level of concern) for the year 2043 included in the Draft 2025 DCR provide explicit representation of climate change uncertainties and improved transparency and information for local planners. The level of concern is defined based on projected climate-informed system performance levels of April-to-July unimpaired runoff (Eight River Index) in the Delta watershed. The 50% level of concern scenario represents a middle-of-the-road or central tendency future at 2043 for the SWP. The 75% level of concern scenario represents a worse than average future for the SWP and 95% level of concern represents much worse. In other words, a 95% level of concern scenario depicts a future condition in which 95% of model-informed climate outcomes result in better SWP system reliability. For the long-term planning purposes of this UWMP, the long-term average allocations reported for the 50% level of concern 2043 study from the draft 2025 DCR is the most appropriate estimate of average future SWP water supply availability. The 75% and 95% level of concern studies can be used to further understand the sensitivity of the water supply portfolio to the projected changes in the future SWP supplies.

From 2020 to 2025, Zone 7’s Table A allocations ranged from 5% to 100%, demonstrating large annual variability in supply. DWR has projected decreasing reliability of Table A supplies. In the Draft 2025 DCR, DWR projects long-term average Table A allocations to decrease from 54% under existing conditions to 48% under future conditions in 2043 for the 50% level of concern scenario. Since the future conditions scenario incorporates impacts from climate change and sea level rise, it is more conservative than the existing conditions scenario. For this UWMP, Zone 7’s assumes a Table A supply from 2025 through 2050 based on the 50% level of concern in the Draft 2025 DCR. This enables Zone 7 to include the impacts of future climate change throughout the planning horizon. The 75% and 95% level of concern studies will be used to further assess water supply sensitivity in future studies.

As a SWP contractor, Zone 7 has the option to store unused Table A water from one year to the next in the SWP’s San Luis Reservoir, when there is storage capacity available. This “carryover” water is also called



Article 12e or 56c water, in reference to the relevant contract terms. Article 12e water must be taken by March 31 of the following year, but Article 56c water may remain as carryover as long as San Luis Reservoir storage is available. This analysis assumes Zone 7 carries over, on average, 10,000 AF of water each year.

Article 21 Water (Interruptible or Surplus Water)

Article 21 of the SWP contract allows SWP contractors to take deliveries above their Table A allocations when surplus water is available from the SWP. DWR can only offer Article 21 deliveries if: (1) it does not interfere with SWP operations or Table A allocations, (2) excess water is available in the Delta, and (3) it will not be stored in the SWP system. As described in the Draft 2025 DCR, Article 21 water deliveries are highly variable year-to-year, and also by month. This water becomes available during short periods in the wet season when storms bring excess water that DWR cannot store in San Luis Reservoir. When Article 21 water becomes available, SWP contractors can request deliveries, and the available water is distributed generally in proportion to the Table A contract amounts of those contractors. Delivery of Article 21 water requires the ability to store the water in a non-SWP facility during very wet conditions and/or the ability to use the water directly without impacting scheduled Table A deliveries to Zone 7 (i.e., an Article 21 delivery cannot be used to substitute scheduled Table A deliveries). Historically, these conditions have been difficult to meet for Zone 7 and have resulted in infrequent and low yields. On average, Article 21 water is available for Zone 7 about once every six years. Zone 7 last received Article 21 water in 2023, when it took 2,360 AF. Having access to additional storage in the future would increase Zone 7's access to Article 21 water.

6.2.1.1.3 Yuba Accord

In 2008, Zone 7 entered into a contract with DWR to purchase additional water under the Lower Yuba River Accord (Yuba Accord). The original contract expired in 2025, and several amendments have been executed over the years, including a recent 2026 extension through 2056.

There are four different types ("Components") of Yuba Accord water made available as a water purchase or transfer; Zone 7 has the option to purchase Components 1, 2, and 3 water during drought conditions, and Component 4 water when the Yuba County Water Agency has determined that it has water supply available to sell.

Water is primarily available during dry years under the Yuba Accord, and the amount is highly variable. Zone 7 has purchased Yuba Accord water in 12 of the last 18 years, purchasing as little as 41 AF in 2025 and 3,159 AF in 2013. For planning purposes, Zone 7 currently does not assume any water supply yield specifically from the Yuba Accord, although 'water transfers' could potentially include any supplies from the Yuba Accord.



6.2.2 Groundwater

☑ CWC §10631

(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, including all of the following:

(4) If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information:

(A) The current version of any groundwater sustainability plan or alternative adopted pursuant to Part 2.74 (commencing with Section 10720), any groundwater management plan adopted by the urban water supplier, including plans adopted pursuant to Part 2.75 (commencing with Section 10750), or any other specific authorization for groundwater management for basins underlying the urban water supplier’s service area.

(B) A description of any groundwater basin or basins from which the urban water supplier pumps groundwater. For basins that a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree. For a basin that has not been adjudicated, information as to whether the department has identified the basin as a high- or medium-priority basin in the most current official departmental bulletin that characterizes the condition of the groundwater basin, and a detailed description of the efforts being undertaken by the urban water supplier to coordinate with groundwater sustainability agencies or groundwater management agencies listed in subdivision (c) of Section 10723 to maintain or achieve sustainable groundwater conditions in accordance with a groundwater sustainability plan or alternative adopted pursuant to Part 2.74 (commencing with Section 10720).

(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.

Zone 7 has managed local surface water and groundwater resources for beneficial uses in the Livermore Valley Groundwater Basin (DWR No. 2-010) for more than 50 years. Consistent with its management responsibilities, duties, and powers, Zone 7 is designated as the exclusive Groundwater Sustainability Agency (GSA) within its jurisdictional boundaries.

6.2.2.1 Basin Description and Status

As shown in **Figure 6-1**, the Zone 7 jurisdictional boundary overlies the Livermore Valley Groundwater Basin (DWR Basin No. 2-010). The Basin is not adjudicated, and in its recent evaluation of California groundwater basins, DWR determined that the Basin is not in a condition of critical overdraft (DWR, 2019).

The Basin is designated as a medium priority basin under DWR’s 2019 Phase 2 Basin Prioritization.¹⁰ Under this prioritization process, basins are ranked on eight components, and their priority is based on the total number of points assigned. If a basin is assigned more than 14 but less than 21 total points, it is defined as “medium priority.” In the case of the Basin, a total of 16 points were assigned, resulting in a designation as “medium priority.” The main factors driving the Basin’s designation include total population (3 out of 5 possible points), population growth (3 out of 5 possible points), numbers of public supply wells (3 out of 5 possible points), and total numbers of wells (3 out of 5 possible points).

The Basin covers an area of approximately 69,600 acres (109 square miles) and is located about 40 miles east of San Francisco and 30 miles southwest of Stockton within a structural trough of the Diablo Range.

¹⁰ Ibid.



The Basin extends from the Pleasanton Ridge east to the Altamont Hills (about 14 miles) and from the Livermore Upland north to the Orinda Upland (about 13 miles). Surface drainage features include Arroyo Valle, Arroyo Mocho, and Arroyo las Positas as principal streams, with Alamo Creek, South San Ramon Creek, and Tassajara Creek as minor streams. Elevations within the Basin range from about 600 feet above mean sea level (ft msl) in the east, near the Altamont Hills, to about 280 ft msl in the southwest, where Arroyo de la Laguna flows into the Sunol Basin.

The Basin has been and continues to be managed by Zone 7, both prior to and since the passage of the Sustainable Groundwater Management Act (SGMA) in 2014 (Zone 7, 2021c). Zone 7's local groundwater supply comes from the Main Basin, which is the portion of the Basin that contains high-yielding aquifers and generally produces the best-quality groundwater.

Additional details on the Livermore Valley Groundwater Basin are provided in DWR's Groundwater Bulletin 118, as well as in the key documents described below related to groundwater management of the Basin, which are incorporated into this UWMP by reference and discussed in the following sections:

- The [updated Livermore Valley Basin Alternative Groundwater Sustainability Plan](#) ("Alternative GSP"), which includes current groundwater conditions, a hydrogeologic conceptual model, a water budget, local sustainable management criteria, and projects and management actions (P/MAs) for maintaining sustainability in the Basin, available on the DWR's SGMA Portal website here:

<https://sgma.water.ca.gov/portal/alternative/periodiceval/preview/8>

- The [Annual Report](#) for the Sustainable Groundwater Management Program, 2024 Water Year, Livermore Valley Groundwater Basin, available on the Zone 7 website here:

<https://www.zone7waterca.gov/reports-planning-documents>

- The [Bay Area Integrated Regional Water Management Plan](#) (IRWMP), including detailed descriptions of local and regional hydrogeology, groundwater conditions, and groundwater monitoring practices, available on the Bay Area IRWMP website:

<http://bayareairwmp.org/irwm-plans/>

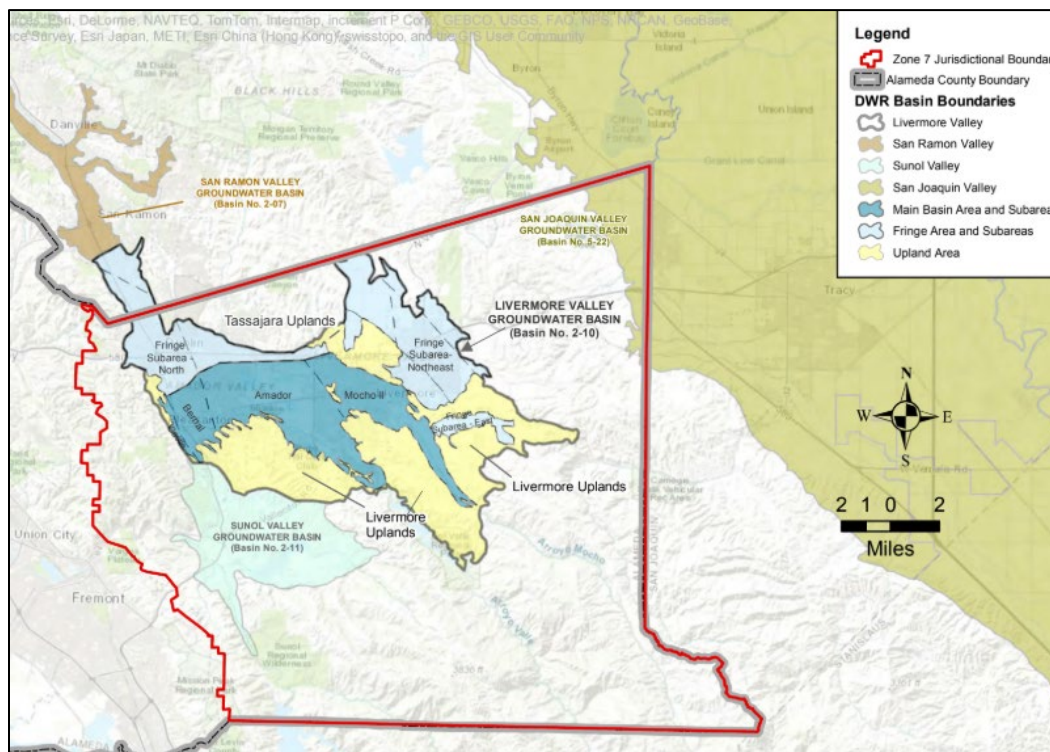


Figure 6-1 Groundwater Basins within Zone 7 Service Area

6.2.2.2 Pre-SGMA Groundwater Management

Before SGMA took effect, Zone 7 managed the Basin under its 2005 Groundwater Management Plan (GMP; Zone 7, 2005), which was developed to comply with the requirements set forth in the California Groundwater Management Planning Act (Water Code Section 10750, et seq.). The GMP established a formal framework for monitoring, protecting, and managing groundwater resources within the Basin. As part of the GMP, Zone 7 incorporated a Salt and Nutrient Management Plan to address long-term groundwater quality protection. In addition to monitoring and planning efforts, Zone 7 actively managed the Basin through conjunctive use operations, including artificial recharge using imported and local surface water supplies.

6.2.2.3 Groundwater Management under SGMA

In 2014, the California State Legislature enacted SGMA with subsequent amendments in 2015. SGMA requires the formation of GSAs and the development and implementation of GSPs or Alternative GSPs for groundwater basins that are designated by DWR as medium or high priority. As discussed above, the Basin is medium priority and therefore subject to the requirements of SGMA.

Zone 7 is the exclusive GSA for the Basin. Under SGMA, Zone 7 submitted an Alternative GSP to DWR in December 2016 (Zone 7, 2016). The Alternative GSP documented Zone 7's longstanding conjunctive use program, monitoring network, groundwater conditions, pumping management policies, and water quality protection efforts, all of which collectively demonstrate sustainable basin management. DWR approved the Alternative GSP on July 17, 2019.

Zone 7 submitted its first Five-Year Periodic Evaluation of the Alternative GSP (2021 Alt-GSP) in December 2021 (Zone 7, 2021c) to reflect updated Basin conditions, monitoring data, and refinements to sustainability criteria and management actions. The update included revised minimum thresholds and measurable objectives where appropriate, updated water budget analyses, enhanced evaluation of



interconnected surface water conditions, and documentation of ongoing management measures such as the GPQ, artificial recharge operations, and monitoring programs. DWR approved the first Periodic Evaluation of the Alternative GSP in June 2024, confirming that Zone 7 continues to meet SGMA requirements and is managing the Basin sustainably.

Under SGMA, Zone 7 is also responsible for annual reporting and Five-Year Periodic Evaluations to demonstrate continued progress toward sustainability. Zone 7’s latest Annual Report was developed for Water Year 2025. The second Five-Year Periodic Evaluation of the Alternative GSP is being prepared and is due to DWR by December 21, 2026.

6.2.2.4 Sustainable Yield and Allocation across Main Basin Groundwater Users

Zone 7 continues to operate the Livermore Valley Groundwater Basin within its Sustainable Yield over a long-term period (10 years) and manages groundwater resources to prevent significant chronic lowering of groundwater levels and reduction of groundwater storage. Zone 7 determined historic lows by measuring groundwater elevations in multiple Main Basin wells and identifying the minimum observed level. Zone 7 also defines operational storage as the difference in surface water elevation between a full Main Basin and its historic low. The total storage capacity of the Basin is about 254,000 AF (or 254 TAF), of which about 126 TAF is managed as operational storage (Zone 7, 2024). Moreover, pumping is managed to keep groundwater within the operational storage band and above emergency reserved levels.

The natural sustainable yield of the Main Basin has been determined to be about 13,400 AFY, which is about 11% of the operational storage. This long-term natural sustainable yield is based on over a century of hydrologic records and projections of future recharge conditions. **Table 6-1** summarizes how this sustainable yield is allocated among non-Zone 7 groundwater users.

Table 6-1 Natural Sustainable Yield Demand Components

Demand Component of the Sustainable Yield	Sustainable Average (AFY)
Pleasanton	3,500
Cal Water	3,069
DSRSD	645
Other Groundwater Pumping	1,186
Agricultural Pumping	400
Mining Area Losses	4,600
Total	13,400

Each retailer has an established “Groundwater Pumping Quota”, formerly referred to as the “Independent Quota” in the original M&I water supply contract between Zone 7 and each retailer. Pleasanton and Cal Water are entitled to pump their own GPQ, while Zone 7 pumps DSRSD’s GPQ on their behalf. Livermore has not had any groundwater pumping capability for many years and has therefore not been using their GPQ. Averages are maintained by allowance of “carryover”—limited to 20% of the GPQ—when less than the GPQ is used in a given year. A retailer must pay a “recharge fee” for all groundwater pumped exceeding their GPQ and any carryover. This practice helps avoid a repeat of historical overdrafting of the basin by the larger municipal users. The fee covers the cost of importing and recharging additional water



into the Main Basin. The balance of the natural sustainable yield is pumped for other municipal, agricultural, and gravel mining uses.

6.2.2.5 Zone 7's Groundwater Pumping and Monitoring Strategy

Zone 7's groundwater extraction for its treated water system does not use the natural sustainable yield from the Main Basin; instead, Zone 7 pumps only water that has been recharged as part of its artificial recharge program using its available surface water supplies. During high-demand periods, groundwater is used to supplement surface water supply delivered via the SBA. Groundwater is also used when the SBA is out of service due to maintenance and improvements or when Zone 7's surface water treatment plants are operating under reduced capacity due to construction, repairs, etc. Finally, Zone 7 taps into its stored groundwater under emergency or drought conditions, when there may be insufficient surface water supply available. Zone 7 also pumps groundwater out of the Main Basin during normal water years to help reduce the salt loading in the Main Basin in accordance with the Salt Management Plan.

Table 6-2 presents groundwater pumping over the last five years for Zone 7, which ranges from 1,686 AFY to 16,836 AFY. More groundwater was pumped during the 2021-2022 drought due to low Table A allocations (5%); as SWP supply increased in subsequent years, Zone 7 reduced groundwater pumping accordingly.

Table 6-2 Groundwater Volume Pumped (DWR Table 6-1)

<input type="checkbox"/>	Supplier does not pump groundwater. The supplier will not complete the table below.						
<input checked="" type="checkbox"/>	All or part of the groundwater described below is desalinated. (OPTIONAL)						
Groundwater Type	Water Type (OPTIONAL)	Location or Basin Name	2021	2022	2023	2024	2025
Alluvial Basin		Livermore Valley Groundwater Basin (DWR 2-010)	14,621	16,836	1,686	3,583	7,156
Total			14,621	16,836	1,686	3,583	7,156
NOTES: Volumes are in units of AF. Zone 7 pumps only water that it has first recharged with surface water supplies.							

6.2.2.6 Supply Sufficiency

Before the construction of the SWP in the early 1960s, groundwater was the sole water source for the Livermore-Amador Valley. This resource has gone through several periods of extended withdrawal and subsequent recovery. The Main Basin was overdrafted in the early 1960s when approximately 110,000 AF of groundwater was extracted. The Main Basin was allowed to recover from 1962 to 1983. It was during this era that Zone 7 first conducted a program of groundwater replenishment by recharging imported surface water via its streams or arroyos ("in-stream recharge" or "artificial recharge") for storage in the Main Basin, supplying treated surface water to customers to augment groundwater supplies, and regulating municipal pumping by other users.

Zone 7 actively manages the Basin under a conjunctive use strategy designed to balance natural recharge, artificial recharge, and groundwater extraction. Zone 7's operational policy is to maintain the balance between the combination of natural and artificial recharge and withdrawal or pumping to maintain groundwater levels above the emergency reserve storage, thereby preserving a reliable drought buffer.



Artificial recharge operations provide the ability to store surplus imported and local surface water during wet periods for later recovery during dry conditions, enhancing overall supply reliability. This conjunctive use framework allows Zone 7 to adaptively shift between surface water and groundwater sources depending on hydrologic conditions, operational needs, and regulatory constraints. **Figure 6-2** shows Zone 7’s artificial recharge and pumping from 1974 through 2025.

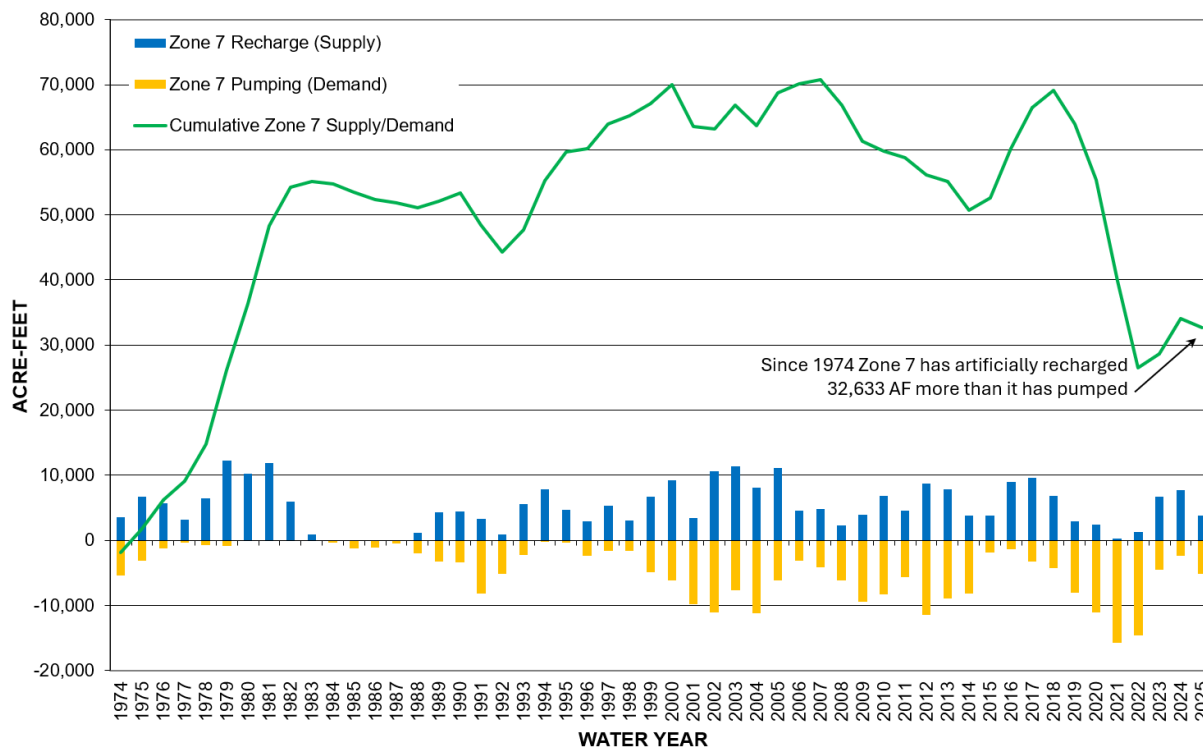


Figure 6-2 Artificial Recharge, Pumping, and Net Cumulative Impacts to Operational Storage

Over the past five years, Zone 7 has generally been able to meet groundwater production needs while maintaining basin storage within sustainable ranges. Although recent drought conditions resulted in temporary localized groundwater level declines that affected production at certain wells, these impacts were managed within the broader conjunctive use system which allowed groundwater levels to subsequently recover and did not compromise overall supply reliability. Zone 7 was able to meet its demand in all prior years.

Zone 7 has continued to operate the Basin within its Sustainable Yield over a period of at least 10 years and is meeting the sustainability goal defined for the Basin. Groundwater levels have remained stable or generally increased over the past 10 years, demonstrating continued sustainable groundwater management practices. Groundwater storage in the Basin from 1974 to 2025 is shown in **Figure 6-3**. Ongoing basin monitoring and implementation of the Alternative GSP ensure that groundwater extraction remains sustainable and protective of long-term basin health.

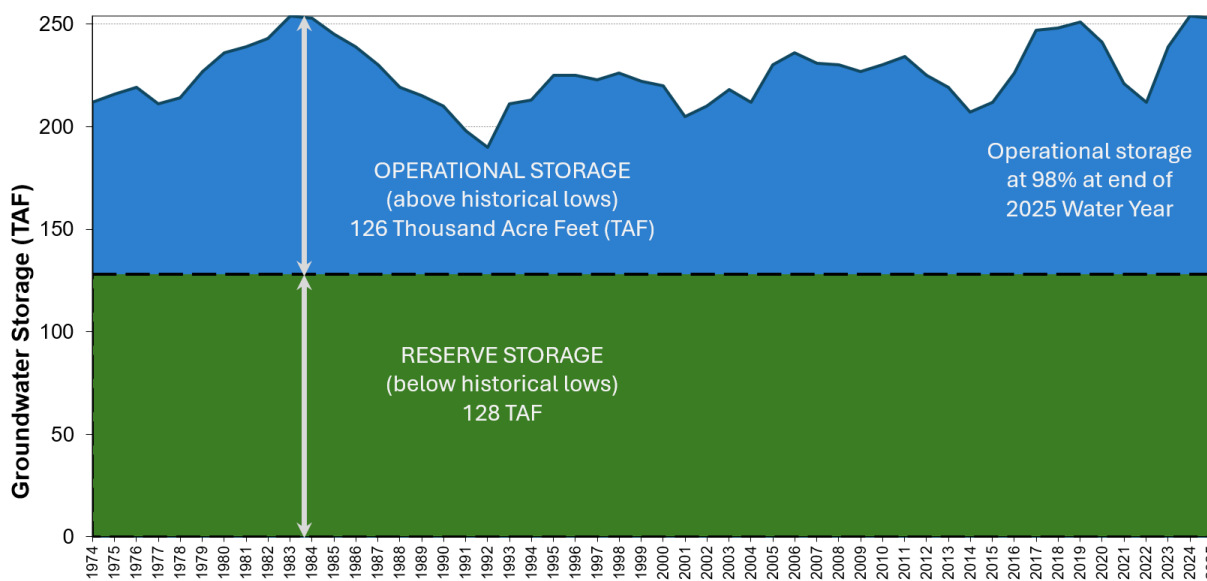


Figure 6-3 Main Basin Groundwater Storage

Zone 7 is continuing to study the groundwater basin and develop new tools (including an improved groundwater model which was completed in 2025 and a Decision Support Tool completed in 2026) to better understand the levels of groundwater extraction possible under various conditions and contributing factors, such as groundwater connectivity, spatial distribution of groundwater in the Main Basin, and others. These efforts strengthen Zone 7’s ability to manage the Basin sustainably and maintain a resilient long-term water supply portfolio.

Section 7.1.1 presents additional information related to groundwater supply availability. As discussed in **Section 3.5.3**, Zone 7 has approximately 28.2 MGD (approximately 30,000 AFY) total groundwater pumping capacity under normal operating conditions. Based on the available information, the groundwater supply and the other water supply sources Zone 7 has are expected to be sufficient to meet the projected future demands of Zone 7 in normal year and single dry year periods through 2050. Multiple dry year periods may result in shortages of up to 20% that can be mitigated through demand reduction measures, further discussed in **Chapter 8** and the WSCP.

6.2.3 Surface Water – Arroyo Valle

Zone 7, along with ACWD, has a water right (Permit 11319 [Application 17002]) to divert flows from Arroyo Valle. Runoff from the Arroyo Valle watershed above Lake Del Valle is stored in the lake, which is managed by DWR as part of the SWP. Lake Del Valle also stores imported surface water deliveries from the SWP and serves both a flood control function, as well as a recreational one. In late fall, DWR typically lowers lake levels in anticipation of runoff from winter storm events. Water supply in Lake Del Valle is made available to Zone 7 via the SBA through operating agreements with DWR. Inflows to Lake Del Valle, after accounting for permit conditions, are equally divided between ACWD and Zone 7 under their respective permits.

Zone 7’s has historically had yields from Arroyo Valle ranging from 3,000 to 7,000 AFY on average. The ten-year calendar year average (2016-2025) has been 4,000 AFY. Construction of the Chain of Lakes Conveyance System (discussed in **Section 6.2.9**) will allow Zone 7 to capture more of the storm releases from Lake Del Valle and will likely increase the yield from this water supply in the future. For this UWMP, modeling assumes an expected availability of 4,000 AF in a normal year or at the beginning of a drought.



This assumption will be re-evaluated as more climate change downscaled information is developed and as the Chain of Lakes project progresses.

6.2.4 Stormwater and Local Storage

Zone 7 has two existing local storage options: Lake Del Valle and the Main Basin. Lake Del Valle stores runoff from the Arroyo Valle watershed and imported surface water deliveries from the SWP. Zone 7 can store up to about 7,500 AF of its share of Arroyo Valle runoff in the lake; runoff collected in any given year is required to be delivered to Zone 7 by the end of the following year. The Main Basin is used conjunctively and is artificially recharged with SWP water. Zone 7 relies on the operational storage capacity of 126,000 AF in the Main Basin.

6.2.5 Non-Local Storage

In addition to local storage, Zone 7 currently participates in two non-local (also called “out-of-basin”) water banking programs described below; both located in Kern County. Total storage and annual deposits and withdrawals from the two Kern County banks are shown in **Figure 6-4**. Zone 7 may enter into additional water banking agreements in the future.

These banking programs hold water previously stored from Zone 7’s surface water supplies during wet years and provide a water source during drought years. Therefore, they do not have a net contribution to Zone 7’s water supply over the long-term and in fact result in some operational losses as described below. While the out-of-basin water banks significantly enhance system reliability, receiving this banked water supply requires Banks Pumping Plant in the Delta and the SBA to be operational; low SWP Table A allocations (and generally low levels of water movement in the SWP system) can limit the delivery of these banked supplies via exchange. The use of these banking programs successfully augmented water supplies during the recent drought.

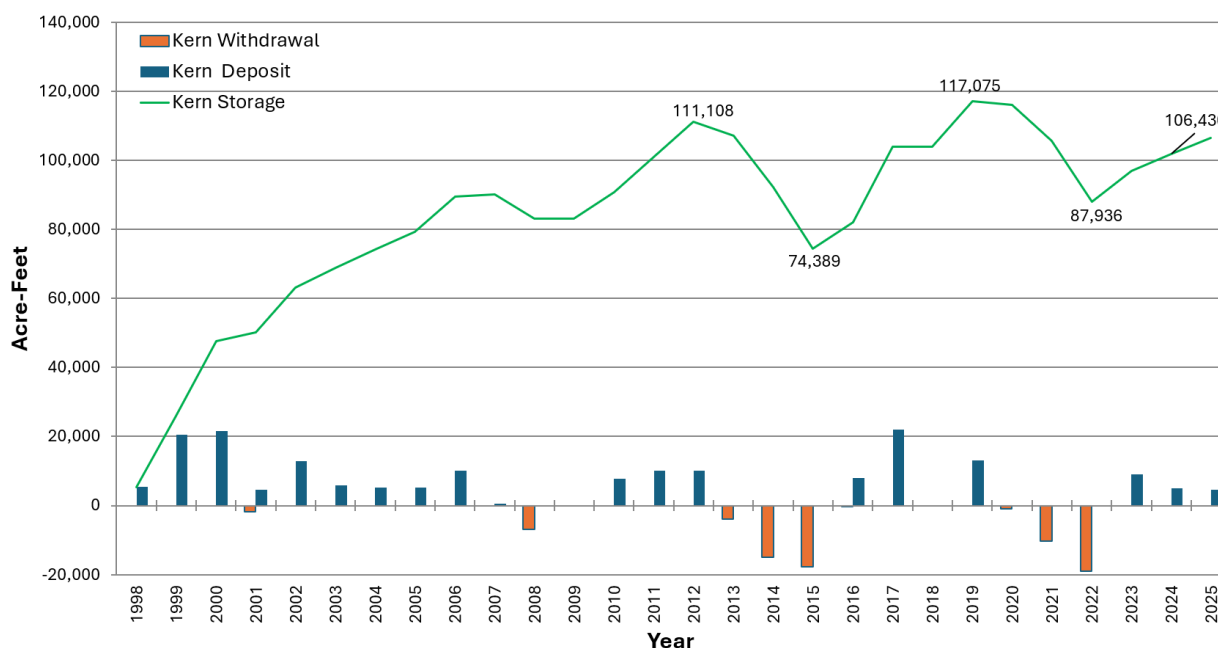


Figure 6-4 Kern County Annual Water Storage, Deposits, and Withdrawals



6.2.5.1 Semitropic Water Storage District

Zone 7 entered into a water banking contract with Semitropic Water Storage District (Semitropic) in 1998. As of January 1, 2026, Zone 7 had 79,570 AF stored in Semitropic. Water put into Semitropic is subject to a 10% leave behind. Zone 7’s contract allocates 9,100 AF of pumpback. Pumpback is water that is pumped out of Semitropic and delivered to the SWP system. In certain years when Table A allocation is above 50%, Zone 7’s pumpback can be increased to 12,241 AFY. Between 2021 and 2025, Zone 7 stored approximately 13,500 AF after losses and withdrew approximately 20,100 AF from Semitropic Water Bank.

6.2.5.2 Cawelo Water District

Similar to the arrangements with Semitropic, Zone 7 has 120,000 AF of groundwater banking storage capacity available with Cawelo Water District (Cawelo), as executed in a 2006 agreement. Zone 7 can request up to 10,000 AFY of pumpback (or SWP exchange water) from Cawelo. While Zone 7 can send up to 10,000 AFY to the bank, Zone 7 only stores 50% of the water sent to storage in Cawelo; the other 50% goes towards a leave behind for Cawelo. This results in a net deposit of up to 5,000 AFY. Between 2021 and 2025, Zone 7 stored approximately 5,000 AF after losses and withdrew approximately 8,000 AF from Cawelo Water Bank.

6.2.5.3 San Luis Reservoir

In addition to the non-local groundwater banking programs described above, Zone 7 can store unused Table A water in San Luis Reservoir from one year to the next (Article 56 or carryover) as long as storage in San Luis Reservoir is available. Zone 7 can lose water stored in San Luis Reservoir if the reservoir “spills” (i.e., DWR needs the storage capacity to store its SWP water) during a wet year. Zone 7 typically targets storing approximately 10,000 AFY of its Table A allocation as carryover in San Luis Reservoir. DWR is considering expanding the San Luis Reservoir by 130 TAF, which is further discussed in **Appendix F**.

6.2.6 Wastewater and Recycled Water

CWC §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. The preparation of the plan shall be coordinated with local water, wastewater, groundwater, and planning agencies that operate within the supplier’s service area.

Zone 7 does not currently handle wastewater nor recycled water; however, three local agencies—all water supply retailers—are involved in wastewater and recycled water activities as listed in **Table 6-3**. Further details regarding recycled water use in Zone 7’s service area can be found in the 2025 UWMPs for Livermore, Pleasanton, and DSRSD. In the Zone 7 service area, recycled water is currently only used for non-potable applications, primarily landscape irrigation.



Table 6-3 Agencies involved in Wastewater and Recycled Water

Agency	Collects Wastewater	Treats and Discharges Wastewater	Produces Recycled Water	Distributes Recycled Water
Livermore	✓	✓	✓	✓
Pleasanton	✓			✓
DSRSD	✓	✓	✓	✓
NOTES:				

6.2.6.1 Recycled Water Coordination

Zone 7 recognizes that recycled water is an important part of a complete water resource management program for the Livermore-Amador Valley. As a result, Zone 7 is assessing its use through future water supply planning efforts and is supporting retailer efforts to ensure safe, economically feasible, and publicly acceptable methods to produce and utilize recycled water. Zone 7’s coordination efforts have included working closely with retailers, regulatory agencies, and planning agencies regarding recycled water use; and mitigating potential impacts of recycled water on local groundwater quality.

To encourage and optimize future recycled water use, Zone 7 continues to work with its retailers to develop recycled water use projects for non-potable uses (e.g., irrigation) in the Livermore-Amador Valley and to identify potential opportunities for storage—which would facilitate expanded recycled water use—during non-irrigation months. This coordination recently included assisting the City of Livermore in securing state grant funding for an automated recycled water fill station at the City’s Water Treatment Plant. The fill station, which is expected to be completed in late 2026, will allow recycled water users to fill tanks and haul the non-potable water to an off-site end use destination. The feasibility of developing potable reuse will also continue to be evaluated as detailed in **Section 6.2.9.1.2**.

Plans for water recycling within the Zone 7 service area involve coordination beyond Zone 7 and its retailers, including the local wastewater/recycled water agencies (DSRSD, Livermore, and Pleasanton), regulatory agencies such as the Division of Drinking Water and the Regional Water Quality Control Board (RWQCB), and planning agencies such as the City of Livermore Community Development Department. Zone 7 reviews recycled water plans both from a water supply management perspective and from a groundwater protection perspective. Given Zone 7’s integral role in water supply and groundwater management in the Livermore-Amador Valley, Zone 7 is a co-permittee under the Master Water Recycling Permit issued by the RWQCB in December 1993 (Order No. 93-159).

Additionally, as the GSA, Zone 7 has identified salt as a constituent of concern for water quality impacts and continues to monitor Basin-wide salt loading, including loading from recycled water use. Zone 7 has taken a proactive approach to mitigate such impacts, particularly within the Main Basin. Provision D.1.c.ii of the Master Water Recycling Permit requires the development of a Salt Management Plan (SMP) to assess and manage cumulative salt loading impacts on the Basin. Zone 7’s original SMP was approved in October 2004 by the RWQCB, which identified demineralization with export of the brine stream as the best means of mitigating salt loading in the Basin. DSRSD and Pleasanton are now operating under State Water Board General Order WQ 2016-0068-DDW, while Livermore still operates under Master Permit Order 96-011. The SWRCB’s 2009 Recycled Water Policy required the development of a Nutrient



Management Plan, which Zone 7 completed in 2015 as an addendum to the SMP. Both plans were developed in close consultation with Zone 7's retailers and other stakeholders and together, the Nutrient Management Plan (NMP) and SMP fulfill requirements of a joint Master Water Recycling Permit and the General Reuse Order adopted by the Regional Water Board and are consistent with the provisions of the State's Recycled Water Policy. In 2016, Zone 7 submitted an Alt-GSP as a requirement under SGMA; the SMP and NMP were incorporated into the Alt-GSP. Zone 7 continues to implement the SMP and NMP under its 2021 Alt-GSP.

Recharging the Basin with low TDS water while simultaneously pumping high TDS water is a primary strategy within the SMP. Zone 7 also operates its MGDP, which removes salt and exports the brine out of the valley, ultimately helping manage the salt loading in the Main Basin. The MGDP has the added benefit of providing softer water to Zone 7's potable water customers in the western portion of Zone 7's service area, where there is a regional concentration of groundwater production facilities with relatively high levels of TDS. Expansion of recycled water use over the groundwater basin will require additional measures to mitigate the associated additional salt loading.

6.2.6.2 Wastewater Collection, Treatment, and Disposal

CWC §10633 (a)

A description of the wastewater collection and treatment systems in the supplier's service area, including a quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.

CWC §10633 (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.

DSRSD and Livermore treat all the wastewater collected within the city limits of Pleasanton, Dublin, Livermore, and portions of San Ramon. Transport of treated wastewater effluent out of the area is handled through the Livermore-Amador Valley Water Management Agency (LAVWMA), a joint-powers authority (JPA) composed of DSRSD, Livermore, and Pleasanton. Since 1979, LAVWMA has owned the conveyance facilities that transport treated wastewater from the treatment plants west over the Dublin grade, and eventually to the East Bay Dischargers Authority, which dechlorinates the effluent and discharges it through a deepwater pipeline into San Francisco Bay.

Since Zone 7 does not handle wastewater or recycled water, **Table 6-4** is intentionally blank.



Table 6-4 Wastewater Treatment and End Uses Within UWMP Service Area in 2025 (DWR Table 6-3)

<input checked="" type="checkbox"/> 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	Does This Plant Treat Wastewater Generated Outside the UWMP Service Area? (OPTIONAL)	2025 Volume of Wastewater Received from UWMP Service Area (As Reported in Submittal Table 6-2 R)	Total 2025 Volume of Water Treated	2025 End Uses of Wastewater in UWMP Service Area										
				Recycled Water Within UWMP Service Area		Recycled Water Outside of UWMP Service Area		Effluent Discharge that is not a Permitted Recycled Water Use		Required Discharge for Instream Flow		Delivered to Another Entity for Additional Treatment		
				Recycled Water Standard or Treatment Level	Volume	Recycled Water Standard or Treatment Level	Volume	Recycled Water Standard or Treatment Level	Volume	Recycled Water Standard or Treatment Level	Volume	Recycled Water Standard or Treatment Level	Volume	Recycled Water Standard or Treatment Level
Total														
NOTES: Volumes are in units of AF.														



6.2.6.3 Recycled Water System and Recycled Water Beneficial Uses

CWC §10633 (c-g)

(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.

(f) A description of actions, including financial incentives, which 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.

(g) A plan for optimizing the use of recycled water in the supplier's service area, including actions to facilitate the installation of dual distribution systems, to promote recirculating uses, to facilitate the increased use of treated wastewater that meets recycled water standards, and to overcome any obstacles to achieving that increased use.

Zone 7 does not handle recycled water, so **Table 6-5** and **Table 6-6** are intentionally blank. Recycled water use in Zone 7's service area is summarized below, and further detail can be found in the 2025 UWMPs of Livermore, Pleasanton, and DSRSD.

In Livermore, recycled water was first used in the early 1960s. Since then, additional irrigated areas have switched to recycled water and additional treatment processes have been added in lieu of chlorine. Today, Livermore provides disinfected tertiary treated recycled water to the northwestern portion of the City. The distribution system consists of two aboveground reservoirs with a holding capacity of 1.88 MG each. There are approximately 20 miles of distribution pipeline ranging in size from 4 to 18 inches in diameter, with 163 metered connections. There are also 123 recycled water fire hydrants available for contractors to use during construction and for firefighting and system maintenance. Currently, recycled water is provided for several uses including landscape and agricultural irrigation, fire protection, construction, street sweeping, and toilet and urinal flushing. In 2025, the Livermore Water Reclamation Plant (LWRP) distributed approximately 1,780 AF of recycled water for use within the Livermore Municipal Service Area.

In 1995, DSRSD and East Bay Municipal Utility District (EBMUD), a major water and wastewater retailer serving a portion of San Ramon, formed a JPA called the "DSRSD-EBMUD Recycled Water Authority" (DERWA). This entity operates the San Ramon Valley Recycled Water Program (SRVRWP), which supplies recycled water to portions of DSRSD's and EBMUD's service areas. Through DERWA's SRVRWP, DSRSD began supplying tertiary-treated recycled water in 2006 for landscape irrigation. In 2014, Pleasanton entered into an agreement with DERWA for purchase of recycled water for its service area. In 2025, DERWA supplied approximately 3,300 AF of recycled water combined to DSRSD's and Pleasanton's service area. Across Zone 7's service area, existing uses for recycled water include landscape irrigation, fire protection, commercial/industrial use, golf course irrigation, and construction.



Table 6-5 Recycled Water Direct Beneficial Uses Within Service Area (DWR Table 6-4)

X	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) :										
Supplemental Water Added in 2025 (volume). Include units (OPTIONAL) :										
Source of 2025 Supplemental Water (OPTIONAL) :										
Name of Receiving Supplier or Direct Use by Wholesale Supplier	Water Type (after treatment if treated) (OPTIONAL)	Additional Information (as needed)	2025	2030	2035	2040	2045	2050 (opt)	Potential Recycled Water Use	
									Volume	Narrative page number
Total			0	0	0	0	0	0	0	
NOTES: Volumes are in units of AF.										



Table 6-6 2020 UWMP Recycled Water Use Projection Compared to 2025 Actual (DWR Table 6-5)

☒	Recycled water was not used or distributed by the supplier in 2025, nor projected for use or distribution in 2020. The wholesale supplier will not complete the table below.	
Name of Receiving Supplier or Direct Use by Wholesale Supplier	2020 Projection for 2025 (a)	2025 Actual Use (a)
Insert additional rows as needed using the types found in this list		
Total	0	0
NOTES: (a) Volumes are in units of AF.		

6.2.7 Desalinated Water Opportunities

CWC §10631(g) A plan shall be adopted in accordance with this chapter and shall do all of the following:
Describe the opportunities for development of desalinated water, including, but not limited to, ocean water, brackish water, and groundwater, as a long-term supply.

The Bay Area Regional Desalination Project (BARDP) is a regional effort involving Contra Costa Water District (CCWD), EBMUD, San Francisco Public Utilities Commission (SFPUC), Valley Water, and other participating agencies to evaluate the potential construction of a brackish water treatment plant in eastern Contra Costa County. Previous studies considered a potential allocation of up to 5,600 AFY for Zone 7; however, Zone 7 is no longer pursuing participation in the BARDP. As such, no supply from this project is assumed for Zone 7 in this UWMP. As noted in **Section 6.2.2**, Zone 7 desalinates a portion of its groundwater.

6.2.8 Water Exchanges and Transfers

CWC §10631 (c) A plan shall be adopted in accordance with this chapter and shall do all of the following:
Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.

Zone 7 periodically supplements existing supplies with short-term transfers when needed and intends to more regularly acquire transfer water over the coming decade until major supply reliability project(s) come online starting around 2035. The proposed water transfers include water from the Yuba Accord and the Dry Year Transfer Program (DYTP) administered by the SWP contractors but could also include transfer agreements between Zone 7 and other SWP contractors and potentially Zone 7 and other water purveyors. The DYTP coordinates and negotiates water sales between interested SWP contractors and sellers in the Feather River watershed. A transfer agreement with another SWP contractor using the SWP system—which Zone 7 is already invested in—is likely the most expedient and cost-effective transfer option. Transfer water would be conveyed to Zone 7 through the Delta and the SBA; the transfer amount could vary from year-to-year depending on hydrology. For the 2025 UWMP, Zone 7 is assuming 3,000 AFY in water transfers through 2035.



Additionally, in some years, Zone 7 also participates in water transfers as a seller. This was the case in 2023 and 2025, when Zone 7 transferred 8,000 AF and 4,000 AF respectively to other SWP contractors. These transfers were non-permanent Table A transfers.

Zone 7 will continue to pursue and evaluate transfer opportunities in the Bay Area and statewide. Through the Bay Area Regional Reliability Partnership, Zone 7 is participating in a United States Bureau of Reclamation grant-funded project to develop a “Shared Water Access Program (SWAP),” which will identify transfer types and opportunities and develop a road map to facilitate transfers and exchanges in the Bay Area. The Delta Conveyance Project, discussed in **Section 6.2.9.1.1**, may also create opportunities for long-term water transfers between SWP contractors across the state.

6.2.9 Future Water Projects

CWC §10631 A plan shall be adopted in accordance with this chapter and shall do all of the following:

(b) (3) For any planned sources of water supply, a description of the measures that are being undertaken to acquire and develop those water supplies.

(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.

Zone 7 anticipates future supply deficits as SWP reliability continues to decline and Zone 7’s service area population grows. As a result, Zone 7 is pursuing several water supply reliability projects to obtain additional water storage and water supplies, address the need for alternative conveyance in the Delta, and improve access to groundwater and local emergency supplies. The 2022 WSE Update evaluated potential future water projects and their impacts on the reliability of Zone 7’s water supply system. Zone 7 expects that a portfolio (likely a subset) of these projects will be needed to address future supply deficits; projects still under consideration by Zone 7 are described below.

6.2.9.1 Supply Projects

6.2.9.1.1 Delta Conveyance Project

The Delta, a key conveyance component of the SWP, is increasingly threatened by ecosystem considerations, seismic risk, and climate change/sea level rise, reducing the reliability of the SWP system. The Delta Conveyance Project (DCP) will reduce these risks and partially restore the SWP’s projected reliability.

In early 2019, consistent with Executive Order N-10-19, the state announced a single tunnel project, which proposed a set of new diversion intakes along the Sacramento River in the north Delta for the SWP. In 2019, the DWR initiated planning and environmental review for the single tunnel (named the “Delta Conveyance Project”) to protect the reliability of SWP supplies from the effects of climate change and seismic events, among other risks. On December 21, 2023, DWR certified the Environmental Impact Report (EIR) and approved the DCP selecting “Bethany Reservoir Alignment” for further engineering, design, and permitting. DWR received the Incidental Take Permit for the DCP from the California Department of Fish and Wildlife in February 2025. Currently, DWR is in the process of obtaining a change in point of diversion permit from the State Water Resources Control Board to add the two proposed DCP



diversion intakes to the SWP's water rights. In October 2025, DWR certified that DCP is consistent with the Delta Plan. DWR is continuing with design refinements, environmental planning and permitting through 2026-27, including resolving appeals on its Delta Plan certification. DCP will potentially be operational in 2045 following extensive planning, permitting and construction.

DWR estimates of SWP supply reliability in the Draft 2025 DCR are based on existing facilities, and do not include the proposed DCP. Since this UWMP uses DWR's Draft 2025 DCR to estimate SWP supplies at 2043, any changes in SWP reliability resulting from the proposed DCP are not included in this UWMP. Most recent estimates from DWR indicate that DCP is expected to increase SWP Delta exports by about 467,000 AFY on a long-term average under current climate conditions.

The Zone 7 Board has approved funding and participation in planning, permitting, and other pre-construction work of the DCP through 2027. The Zone 7 Board has not yet made a decision on whether to participate in construction of the project. For planning purposes, the 2025 UWMP does not include DCP, since it is expected to come online around 2045, near the end of Zone 7's future planning period.

Continued participation by Zone 7 in the planning efforts will allow Zone 7 to elect to participate in the DCP implementation in the future based on information developed in the planning process, allow access by Zone 7 to information related to benefits and costs, and provide Zone 7 influence throughout the process. The work over the next two to four years will inform the Zone 7 Board's decision-making as the DCP continues to advance.

6.2.9.1.2 Potable Reuse

Potable reuse is the use of purified water derived from wastewater effluent to supplement potable water supplies. Zone 7 does not currently have a potable reuse project planned; it is being studied for its potential as a source of supply. While recycled water for non-potable uses (e.g., irrigation) has been available for many years in the Tri-Valley, potable reuse would be a new use of local wastewater resources collected by DSRSD and Livermore, if implemented. Its main benefits include local production and control, drought supply, and use of an existing water resource.

Although Zone 7 does not supply recycled water, recycled water service has been available through DSRSD, Livermore, and Pleasanton for many years. Initiating potable reuse in the Tri-Valley would involve a partnership between Zone 7 and its retailers to manage the wastewater collection and treatment, and purified water production and distribution/storage. Local wastewater resources would be collected by DSRSD and/or Livermore and treated to meet drinking water standards. Following treatment, potential purified water uses could include: 1) groundwater augmentation or recharge, 2) storage in the Chain of Lakes, and/or 3) raw water augmentation to Zone 7's Del Valle Water Treatment Plant.

Zone 7 collaborated with Tri-Valley retailers to develop the Joint Tri-Valley Potable Reuse Feasibility Study in 2018, which evaluated the feasibility of potable reuse in the Tri-Valley. An updated study may be developed in upcoming years. Zone 7 also participated with ACWD, Livermore, DSRSD, LAVWMA, and Union Sanitary District on a project which developed outreach materials in 2025 to support purified water awareness.

For planning purposes, the 2025 UWMP does not include potable reuse as a future supply for Zone 7.

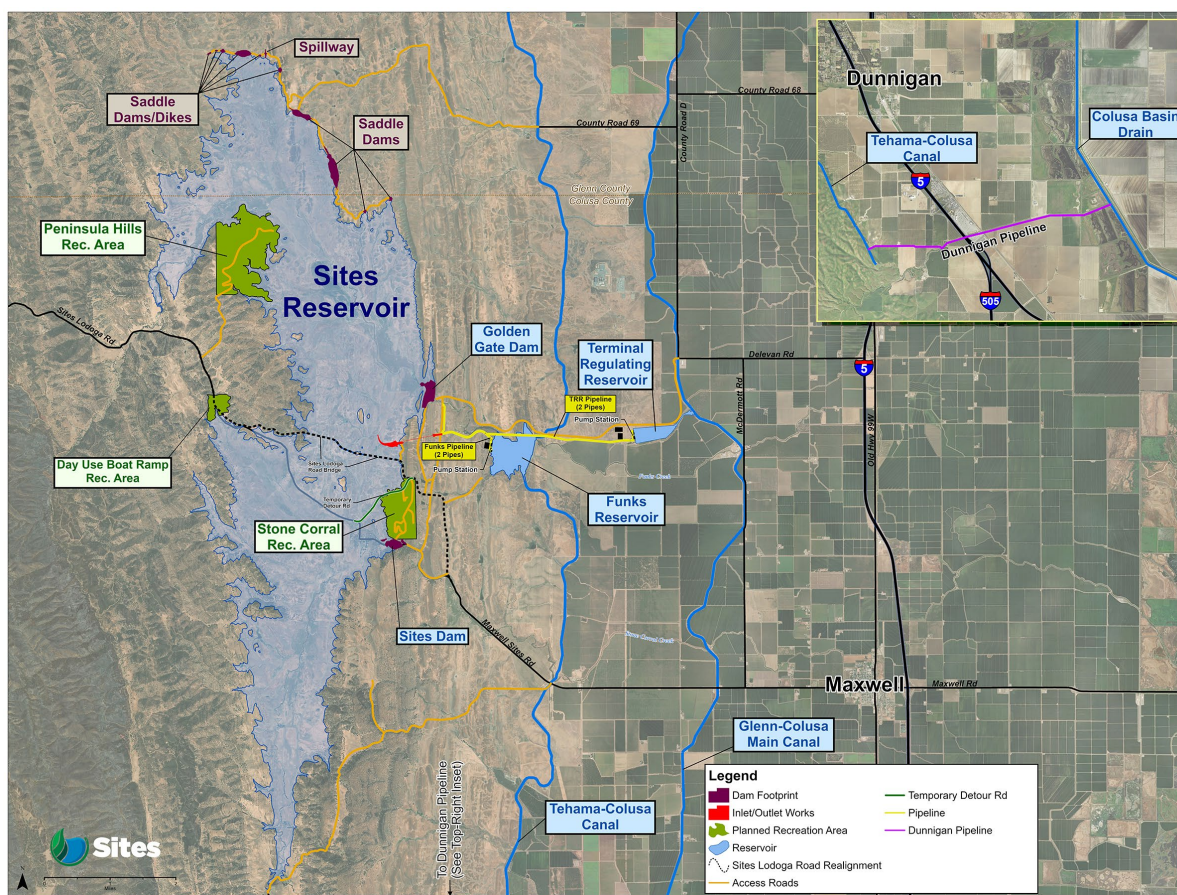
6.2.9.1.3 Sites Reservoir

Sites Reservoir is a proposed new 1,500,000 AF off-stream storage reservoir in northern California near Maxwell. Sacramento River flows will be diverted during excess flow periods and stored in the off-stream reservoir and released for use in the drier periods. Shown in **Figure 6-5**, Sites Reservoir is expected to provide water supply, environmental, flood and recreational benefits. The proponents of Sites Reservoir include 30 entities including several individual SWP Public Water Agencies (PWAs). Sites Reservoir is

expected to provide approximately 205,000 AF (Sites Reservoir Final EIR/EIS, Table 5-30, Alternative 3) of additional deliveries on average to participating agencies under existing conditions. Sites Reservoir is currently undergoing environmental planning and permitting. Sites Reservoir project filed a water rights petition and is expected to receive a water right permit in 2026 from the State Water Resources Control Board. DWR estimates of SWP supply reliability in its Draft 2025 DCR are based on existing facilities, and do not include the proposed Sites Reservoir.

Zone 7 participates in Sites as a member of the Reservoir Committee. The Reservoir Committee consists of 22 water agencies across California who are investing in the project and provides recommendations to the Sites Project Authority to help advance the project.

Based on Zone 7 internal modeling, Sites is estimated to provide Zone 7 an average of 3,500 AFY, after accounting for losses as the released water travels through the Delta (“carriage water” or “carriage losses”). This level of water supply reflects Zone 7’s likely buy-in share of storage in the reservoir at approximately 31,170 AF or 3% of the storage capacity allocated to participating water agencies. Modeling efforts for the UWMP show large variability year-to-year, with yields exceeding 10,000 AF in dry years, resulting in the average yield being greater than the median yield. To present a conservative analysis and for consistency with presentation of the results in Chapter 7, a median value of 2,200 AFY is reported in Table 6-10. As currently envisioned, Sites would be utilized by Zone 7 as a water supply for all year types (i.e., wet, average, and dry years).



Source: Sites Project Authority

Figure 6-5. Sites Reservoir Project: Location and Facilities

In December 2016, the Zone 7 Board authorized participation in Phase 1 of the project. In January 2022, the Zone 7 Board authorized participation through the completion of Phase 2 at the end of December



2024. Phase 2 focused on completing the environmental documentation, securing key permits, advancing design to a 30% level, and preparing for long-term financing. Additionally, in January 2026, the federal government approved the Record of Decision for the project. Sites is expected to break ground in late 2026 and is planned to be fully operational in 2034.

6.2.9.2 Infrastructure Projects

6.2.9.2.1 Chain of Lakes Conveyance System

Zone 7 is planning the COLCS, a project that interconnects retired gravel quarries with existing water supplies for local surface water storage. This project will have multiple benefits, including:

- provide Zone 7 with an emergency supply during a prolonged SWP outage,
- enhance drought supplies,
- improve recharge of the local groundwater basin,
- make water available for transfers,
- allow Zone 7 to divert surplus water, and
- perfect local water rights.

The current phase of the project involves two of the retired quarry lakes, Lake I and Cope Lake, which Zone 7 already owns. The project would build a two-way pipeline to allow them to be used as a reservoir. During wet periods, the project will enable the storage of local and SWP water that would otherwise be lost or require non-local storage. This water would then be pumped back to the DVWTP during dry periods, thereby enhancing water supply reliability.

The project involves constructing a 42-inch diameter, 6.5-mile bidirectional pipeline between DVWTP and Lake I, in addition to inlet and outlet facilities at Lake I, a pump station, and PFAS treatment facilities at DVWTP. Lake I and Cope Lake have a combined storage capacity of approximately 36,400 AF. Over the coming years, additional quarries are slated to be transferred to Zone 7 and integrated into this project, adding storage capacity or other multi-benefit opportunities. As shown in **Figure 6-6**, the Chain of Lakes (COLs) area includes ten lakes named Lakes A through I and Cope Lake, which cover approximately 1,500 acres.

In 2023, Zone 7 completed a pipeline alignment study to evaluate the cost and benefits associated with potential pipeline alignments. The West Alignment was chosen as the preferred alternative due to its shortened route compared to other alternatives, use of an existing access road/recreational trail, and avoidance of construction through the quarries. In 2024, a feasibility study was done, and from 2025-2026, three facilitated brainstorming workshops were conducted to define and develop the project. If approved by the Zone 7 Board, planning efforts over the next few years include preliminary engineering and design, permitting, and obtaining right-of-way easements.

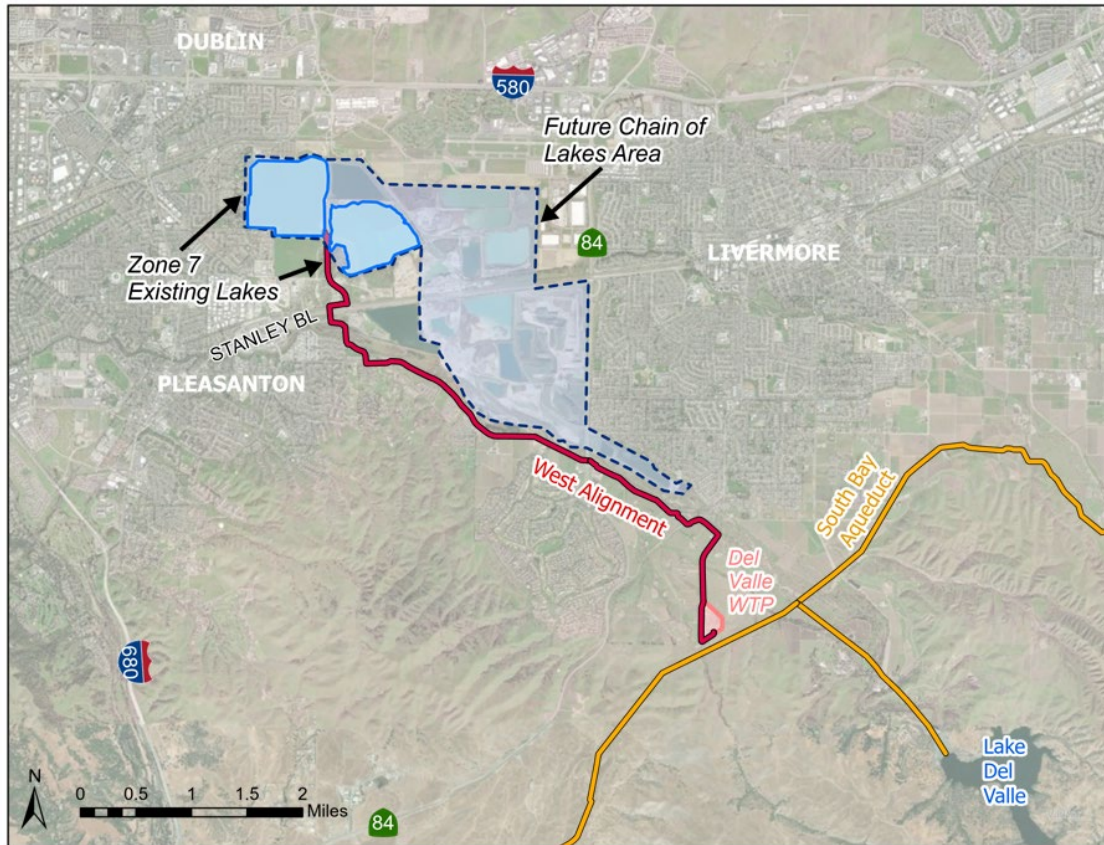


Figure 6-6. Chain of Lakes: Existing and Planned Facilities

6.2.9.2.2 [New Wells](#)

Additional municipal water supply wells could maximize access to existing local storage in the Main Basin during droughts and facility outages. Zone 7’s Mocho I well has been out of service since 2019. Zone 7 has since been seeking opportunities to recover groundwater production by adding additional wells to replace Mocho I. Additionally, the City of Pleasanton stopped pumping from its wells in 2023 due to PFAS concerns and has therefore been unable to access the allotted GPQ, relying solely on water purchased from Zone 7. As part of ongoing efforts to ensure reliable, drought-resilient water supplies, Zone 7 and Pleasanton are evaluating the feasibility of constructing additional municipal supply wells in the Bernal Subarea of the Livermore Valley Groundwater Basin. This Joint Regional Groundwater Wells project would serve both Zone 7 and the City of Pleasanton by allowing the City to access their annual GPQ (3,500 AFY) and expand Zone 7’s existing Hopyard well field in the Bernal subarea, an area currently outside of the PFAS footprint. The project, if successful, could provide enhanced water supply reliability and boost drought resiliency to the region. If approved by Zone 7’s Board of Directors and Pleasanton’s City Council, the project could be initiated in 2026.

Zone 7 has recently completed PFAS treatment facilities at its Chain of Lakes (completed in 2025) and Stoneridge (completed in 2023) well fields and are anticipating construction of an additional PFAS treatment facility at its Mocho wellfield starting in 2026 to meet the regulatory standards and in alignment with Zone 7’s PFAS management strategy. Future treatment for additional constituents of concern (e.g. hexavalent chromium [Cr (VI)]) are being considered as needed to meet regulatory requirements. The treatment will cause a slight reduction in well production capacity.



Table 6-7 Expected Future Water Supply Projects or Programs (DWR Table 6-7)

<input checked="" type="checkbox"/>	No expected future water supply projects or programs that provide a quantifiable increase to the agency's water supply. Supplier will not complete the table below.						
<input type="checkbox"/>	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)	Planned Implementation Year	Planned for Use in Year Type	Expected Increase in Water Supply to Supplier (a)
	Yes/no	If Yes, Supplier Name					
Delta Conveyance Project	Yes	Department of Water Resources and other SWP contractors	Construction of new intakes and tunnel as part of the State Water Project	Non-Potable	2045	All Year Types	6,500 AFY of restored Table A (not included in the 2025 UWMP for planning purposes)
Potable Reuse	Yes	Livermore, DSRSD, Pleasanton, Cal Water	Use of purified water derived from wastewater effluent to supplement potable water supplies	Non-Potable	n/a	n/a	0 AFY



Chapter 6
Water Supply Characterization

<input checked="" type="checkbox"/>	No expected future water supply projects or programs that provide a quantifiable increase to the agency's water supply. Supplier will not complete the table below.						
<input type="checkbox"/>	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)	Planned Implementation Year	Planned for Use in Year Type	Expected Increase in Water Supply to Supplier (a)
	Yes/no	If Yes, Supplier Name					
Sites Reservoir	Yes	Sites Project Authority and Sites Reservoir Project Committee members	Construction of a new 1.5 million AF off-stream reservoir in Colusa County	Non-Potable	2034	All Year Types	2,200 AFY
SWP Transfers	Yes	Other SWP contractors	Temporary water transfer agreement/s until major projects are implemented	Non-Potable	2026-2035	Single-Dry and Multi-Dry Year	3,000 AFY
Chain of Lakes Conveyance System	Yes	Other SWP contractors, Del Valle Water Treatment Plant	A large facility for water management and surface storage.	Non-Potable	2035	All Year Types	New storage of 36,400 AF
NOTES: (a) Volumes are in units of AF. (b) For consistency with Chapter 7, yield for Sites reflects the median value from Zone 7 modeling.							



6.2.10 Summary of Existing and Planned Sources of Water

CWC §10631(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).

CWC §10631(b)(2)

When multiple sources of water supply are identified, a description of the management of each supply in correlation with the other identified supplies.

CWC §10631(b)(4)(D)

A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the urban water supplier. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

Zone 7’s water supplies consist of SWP, local surface water (Arroyo Valle), local groundwater, and transfers. Zone 7’s existing storage facilities include Lake Del Valle, the Main Basin, Kern County Storage and Recovery Program, and San Luis Reservoir. **Table 6-8** summarizes the actual water supply volumes produced in 2025 and **Table 6-9** summarizes the water storage as of December 2025 as well as the total operational storage capacity.

Table 6-8 Water Supplies – 2025 Actual (DWR Table 6-8)

Water Supply	Additional Description (as needed)	2025		
		Actual Volume	Potable or Non-Potable (after treatment if treated) (OPTIONAL)	Total Right or Safe or Sustainable Yield (OPTIONAL)
Purchased or Imported Water	SWP Table A	26,320	Non-Potable	
Purchased or Imported Water	Yuba Accord	0	Non-Potable	
Purchased or Imported Water	Water Transfer	0	Non-Potable	
Supply from Storage	SWP Carryover	9,160	Non-Potable	
Groundwater (not desalinated)	Main Basin	7,520	Non-Potable	
Surface water (not desalinated)	Arroyo Valle	8,000	Non-Potable	
Supply from Storage	Non-Local Storage	0	Non-Potable	
Total		51,000		0
NOTES: Volumes are in units of AF.				



Table 6-9 Zone 7’s 2025 Water Storage and Operational Storage Capacity

Storage Option		Water in Storage through December 2025 (AF)	Operational Storage Capacity (AF)
Local	Lake Del Valle	5,000	7,500
	Main Basin	123,100	126,000
Non-Local Groundwater Banks	Semitropic	79,600	78,000
	Cawelo	26,900	120,000
Other Non-Local	SWP – Carryover	14,000	Varies
Total		248,600	At least 331,500

Table 6-10 summarizes Zone 7’s average projected water supplies available during a normal hydrologic water year. Just because water is available in a normal year does not mean it is necessarily used. During a normal hydrologic year, the majority of Zone 7’s supply comes from SWP Table A and carryover water, Arroyo Valle, and some supplemental water from the groundwater basin. For the UWMP modeling effort, the median result across the modeled 1922-2021 hydrology is reported as the “average” projected supply. Under dry, drought, or emergency conditions, the percentage distribution of sources used by Zone 7 to meet demands may shift; in particular, Zone 7 is likely to tap into water stored in the various storage facilities. Note, however, that even under normal water supply conditions, water from storage—particularly SWP carryover and local groundwater—is a key component of Zone 7’s operations.

As shown in **Table 6-10**, Zone 7’s modeling for the UWMP estimates that Sites Reservoir would provide about 2,200 AFY of new supply, once online in 2034. This is a conservative estimate based on the median modeled value, whereas the average modeled value is higher at about 3,500 AF, as previously discussed. At this time, no additional yield has been included for the DCP; this will be revisited when the project is better defined. **Table 6-10** also shows that Zone 7’s total projected normal year water supplies range from 100,000 AF in 2030 to 118,000 AF in 2040 and down to 114,000 AF at buildout around 2045.



Table 6-10 Water Supplies – Projected (DWR Table 6-9)

Water Supply			Projected Water Supply									
Water supply category	Additional Detail on Water Supply	Potable or Non-Potable (after treatment if treated) (optional)	2030		2035		2040		2045		2050 (opt)	
			Reasonably Available Volume	Total Right or Safe or Sustainable Yield (optional)	Reasonably Available Volume	Total Right or Safe or Sustainable Yield (optional)	Reasonably Available Volume	Total Right or Safe or Sustainable Yield (optional)	Reasonably Available Volume	Total Right or Safe or Sustainable Yield (optional)	Reasonably Available Volume	Total Right or Safe or Sustainable Yield (optional)
Purchased or Imported Water	SWP Table A	Non-Potable	36,574		36,574		36,574		36,574		36,574	
Purchased or Imported Water	Yuba Accord (available mainly in dry years)	Non-Potable	0		0		0		0		0	
Supply from Storage	SWP Carryover	Non-Potable	7,000		9,000		10,000		10,000		10,000	
Surface water (not desalinated)	Arroyo Valle	Non-Potable	4,000		4,000		4,000		4,000		4,000	
Groundwater (not desalinated)	Main Basin	Non-Potable	20,000		30,000		30,000		30,000		30,000	
Supply from Storage*	Kern County Groundwater Banking Programs	Non-Potable	22,428		19,741		19,741		19,741		19,741	
Supply from Storage	Chain of Lakes Conveyance System	Non-Potable	0		8,725		15,700		11,700		11,700	
Other (optional)	SWP/Other Transfer	Non-Potable	0		0		0		0		0	
Purchased or Imported Water	Sites Reservoir	Non-Potable	0		2,185		2,185		2,185		2,185	
Total			90,002	0	110,225	0	118,200	0	114,200	0	114,200	0

NOTES:
 (1) Volumes are in units of AF.
 (2) Projected groundwater volumes presented in the table represent the maximum pumping capacity Zone 7 can provide.
 (3) Supply from Kern County Groundwater Banking Program includes supply from Semitropic Water Storage District, Cawelo Water District, which has a groundwater banking agreement with Zone 7 that will end in 2035, and other non-local storage.



6.2.11 Special Conditions

6.2.11.1 Climate Change Effects

Zone 7 is committed to incorporating climate change into its ongoing water supply planning. **Section 3.4.1** of this UWMP includes a description of plausible changes to projected demands under climate change conditions.

Since the SWP is the main source of Zone 7's water supplies, climate change impacts to the SWP could significantly impact Zone 7. As shown in **Table 6-10**, supplies derived from the SWP, including Table A deliveries, groundwater (i.e., stored SWP water), and SWP carryover, represent roughly 90% of Zone 7's supplies now and in the future. The scenarios in the Draft 2025 DCR that were used for this UWMP account for climate change impacts based on 2043 emissions level and 15-centimeter (cm) sea level rise; therefore, these impacts have been incorporated into Zone 7's water supply planning efforts.

Zone 7 has also evaluated the impacts of climate change to local water supplies (SWP, Arroyo Valle, Main Basin) for the 2022 WSE Update, which incorporates a more conservative risk-based analysis; as downscaling of climate change data is refined further, local climate change impacts will continue to be incorporated in future UWMPs and other planning efforts.

6.3 Energy Intensity

CWC §10631.2

(a) *In addition to the requirements of Section 10631, an urban water management plan shall include any of the following information that the urban water supplier can readily obtain:*

- (1) *An estimate of the amount of energy used to extract or divert water supplies.*
 - (2) *An estimate of the amount of energy used to convey water supplies to the water treatment plants or distribution systems.*
 - (3) *An estimate of the amount of energy used to treat water supplies.*
 - (4) *An estimate of the amount of energy used to distribute water supplies through its distribution systems.*
 - (5) *An estimate of the amount of energy used for treated water supplies in comparison to the amount used for nontreated water supplies.*
 - (6) *An estimate of the amount of energy used to place water into or withdraw from storage.*
 - (7) *Any other energy-related information the urban water supplier deems appropriate.*
- (b) *The department shall include in its guidance for the preparation of urban water management plans a methodology for the voluntary calculation or estimation of the energy intensity of urban water systems. The department may consider studies and calculations conducted by the Public Utilities Commission in developing the methodology.*
- (c) *The Legislature finds and declares that energy use is only one factor in water supply planning and shall not be considered independently of other factors.*

The "Total Utility Approach" as defined by DWR in the 2025 UWMP Guidebook is used to report water-related energy-consumption data for Zone 7. Calendar year 2025 is selected as the one-year reporting period, and utility bills for the associated time period are used as the source for energy consumption data.

Total energy consumed by Zone 7 during calendar year 2025 based on reported utility bills is 11,307,000 kilowatt hours (kWh). The amount of energy to divert, pump, treat, and distribute Zone 7's water supply



within the system it owns and operates is included. The amount of energy that Zone 7's water retailers require to transport and deliver treated water to their customers is excluded from this analysis.

Water energy intensity is the total amount of energy, calculated on a whole-system basis, used to deliver water to Zone 7's customers for use. Energy intensity is the total amount of energy in kWh expended on a per AF basis to take water from Zone 7's source to its point of delivery. Understanding the whole system's energy intensity allows Zone 7 to implement the following water supply management and system operation strategies:

- Identify energy saving opportunities as energy consumption is often a large portion of the cost of delivering water,
- Calculate energy savings and greenhouse gas (GHG) emissions reductions associated with water conservation programs,
- Identify potential opportunities for receiving energy efficiency funding for water conservation programs,
- Inform climate change mitigation strategies, and
- Benchmark energy use at each water acquisition and delivery step and comparing energy use among similar agencies.

In **Table 6-11**, the energy intensity of Zone 7's water service is calculated for 2025, as it provides a typical year's energy use. The breakdown of energy use by Zone 7 was as follows: water treatment plants (31.8%); wells, including treatment (54.7%); transmission system (10.0%); and offices (3.5%).

Table 6-11 shows the energy consumed for each AF of water entering the distribution system in Zone 7, including energy associated with extracting and diverting, placing into storage, treating, conveying, and distributing drinking water, but not including energy associated with the treatment of wastewater. Based on this, the energy intensity is estimated to be 328 kWh/AF.



Table 6-11 Recommended Energy Reporting (DWR Table O-1B)

Water Delivery Product (If delivering more than one type of product, use Table O-1C)	Wholesale Potable Deliveries	Urban Water Supplier Operational Control		
		Sum of All Water Management Processes	Non-Consequential Hydropower	
Start Date of Reporting Period	1/1/2025	Total Utility	Hydropower	Net Utility
End Date of Reporting Period	12/31/2025			
Is upstream embedded energy in the values reported?	No			
Units of Measure for Water	AF			
Volume of Water Entering Process		34,515	0	34,515
Energy Consumed (kWh)		11,307,029	0	11,307,029
Energy Intensity (kWh/vol. converted to MG)		1,005	0	1,005
Quantity of Self-Generated Renewable Energy				
	619,280	kWh		
Data Quality (Estimate, Metered Data, Combination of Estimates and Metered Data)				
Metered Data				
Data Quality Narrative:				
Water production and energy consumption data are based on metered data collected and provided by Zone 7.				
Narrative:				
Zone 7's water management processes that consume energy include raw water treatment; groundwater pumping, recharge, and treatment; and treated water pumping.				



7 WATER SUPPLY RELIABILITY ASSESSMENT

CWC §10620 (f)

An urban water supplier shall describe in the plan water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions.

CWC §10630.5

Each plan shall include a simple lay description of how much water the agency has on a reliable basis, how much it needs for the foreseeable future, what the agency's strategy is for meeting its water needs, the challenges facing the agency, and any other information necessary to provide a general understanding of the agency's plan.

This chapter of the UWMP describes the reliability of Zone 7 water supplies. Assessment of water supply reliability is complex and dependent upon a number of factors, such as the number of water sources, regulatory and legal constraints, hydrological and environmental conditions, climate change, and expected growth, among others. Based on available historical information and projections of future supplies and demands, Zone 7 has made its best determination of future water supply reliability for its service area.

To evaluate water service reliability, Zone 7 developed an advanced water supply management model (Model) for the 2022 WSE Update, which superseded the previous spreadsheet-based model developed for the 2019 WSE Update. The Model is implemented in RiverWare and simulates Zone 7's updated demand, integrated supply, storage, conveyance, treatment, and groundwater operations on a monthly time step, allowing the analysis to reflect seasonal patterns, operational constraints, water rights, and year-to-year carryover storage behavior. Hydrologic uncertainty is represented using the Index Sequential Method (ISM), which generates multiple hydrologic "traces" by shifting through the historical record so that wet, average, and dry sequences (including multi-year droughts) are preserved while providing many plausible future sequences for evaluation. The historical hydrologic inputs (e.g., SWP availability and local hydrology proxies) are adjusted to account for climate change impacts and aging infrastructure in the SWP. Each trace is simulated across the full planning horizon (2025-2050). In this modeling effort, Zone 7 defines operating rules that represent how the system is managed as different supply sources come online or go offline—this includes priorities for use of SWP deliveries, local surface water, groundwater pumping, storage drawdown and refill targets, and use of banking and transfers—along with key physical constraints (e.g., conveyance capacities, treatment limits, pumping limits, and storage capacities). For the purpose of this UWMP, the results are presented in DWR's required tables, listing the supply availability and potential shortages under normal, single dry, and multi dry year periods from 2025 to 2050.

7.1 Constraints on Water Sources

Zone 7's water supply portfolio includes a combination of water supply sources, including the SWP, local surface water (Arroyo Valle), local groundwater, and transfers. The following sections provide a summary of potential constraints on future water supply availability, water quality, and impacts of climate change.

7.1.1 Supply Availability

Information on supply availability, including the impacts of various hydrologic conditions, is provided for each of Zone 7's supply sources in the following sections.



7.1.1.1 Purchased Water

Constraints on the SWP water supplies, including Delta conveyance, water quality, and SBA conveyance are discussed below.

7.1.1.1.1 Delta Conveyance

Zone 7's long-term contract with DWR for SWP supply provides Zone 7 access to Table A water, Article 56c carryover water, and Article 21 water. As a SWP contractor, Zone 7 can use SWP facilities to convey water transfers or exchanges of SWP water (from another contractor) or from another water agency outside of the SWP system. SWP water moves through the Delta before it is conveyed by the California Aqueduct and the SBA to Zone 7's water facilities.

The instability of the aging levees in the Delta (including their vulnerability to seismic events and climate change, further discussed in **Appendix F**), regulatory uncertainty, water quality issues such as saltwater intrusion, and the impacts of climate change on water supply (such as reduced snowpack, altered runoff timing, and increased drought frequency), along with the declining health of the Delta ecosystem, all challenge the long-term reliability of the SWP and, more generally, the Delta's water conveyance capability. These issues directly challenge the Tri-Valley's long-term water supply reliability since a majority of Zone 7's water supply is and will continue to be tied to the Delta and SWP system. **Appendix F** discusses additional current and future constraints on Delta conveyance, including regulatory constraints from the Coordinated Operations Agreement; operational constraints due to the Endangered Species Act; emergency management constraints necessary to prepare for potential Delta outages or interruptions from floods, earthquakes, and other risks; and impacts from subsidence.

Furthermore, Zone 7 and other SWP contractors are currently working with DWR and other key stakeholders to address the many complex issues undermining the Delta through the proposed DCP, as discussed in **Section 6.2.9.1.1**. The proposed new diversion structure in the northern Delta provides alternative intakes in case the Delta is affected by an earthquake, levee failure, or some other catastrophic event that impacts water quality and prevents pumping from the Delta. The DCP would also provide alternative intakes that could be used to minimize harm to endangered and threatened species in the Delta. DWR is working closely with regulatory and natural resource agencies to address regulatory uncertainty and protect the Delta ecosystem using an adaptive management framework based on the best available science. With these benefits, the DCP is expected to significantly alleviate constraints on SWP operation and provide more water supply reliability.

7.1.1.1.2 Water Quality

Until the DCP is constructed and operational, there continues to be water quality concerns associated with transport through the Delta. In 1982, DWR formed the Interagency Delta Health Aspects Monitoring Program to monitor water quality in the Delta and protect human health. The program was renamed the Municipal Water Quality Investigations Program (MWQI Program) in 1990. From a municipal water supply perspective, water quality issues in the Delta are associated with salinity from seawater intrusion, wastewater effluent discharges, agricultural drainages from the island surfaces, and recreational activities. Water quality issues of specific concern to Zone 7 are:

- **Algal byproducts:** Parameters of concern include compounds that cause taste-and-odor (T&O) and algal toxins. T&O is primarily a problem in the warmer months, when algal blooms may be present. It can affect supplies from the Delta and from Lake Del Valle (which stores SWP water). Algae produce geosmin and 2-methylisoborneol (MIB), which are key T&O-causing compounds in surface water supply. Algal toxins derived from blue-green algae can also be a concern. Zone 7's ozonation facilities (installed at the DVWTP and PPWTP) effectively



- treat algal byproducts. Without ozonation, high levels of algal byproducts in both Delta and Lake Del Valle supplies may necessitate temporarily switching to groundwater supplies; blending of sources is also an option depending on the source of algal byproducts and severity.
- **Total and dissolved organic carbon (TOC/DOC):** Zone 7 treats organic carbon with coagulant and disinfectant chemicals, and therefore higher levels of organic carbon increase costs. In addition, TOC/DOC help form disinfectant byproducts (DBPs), which are regulated compounds in drinking water. Historically, Zone 7's WTPs have managed high TOC/DOC by increasing coagulant dosages. However, this operational change results in greater sludge production and limits plant production. The use of ozone reduces coagulant and chlorine demands, thus reducing typical chlorination DBPs; however, formation of ozonation DBPs, such as bromate, will need to be controlled.
 - **Turbidity:** Like TOC/DOC, turbidity affects the amount of chemicals used in treatment and Zone 7's ability to meet drinking water standards. It can also reduce the production capacities of Zone 7's WTPs, requiring increased groundwater production under high demands. Coagulant dosages can be adjusted to address high turbidity (which can happen after big storms), but if filters require more frequent backwashing, then production may decrease.
 - **Salinity or TDS:** Salinity has significant impacts on SWP operations and the availability of water. To meet the salinity objectives in the Delta, water exports from the Delta may be restricted, reducing the amount of water supply available during certain times of the year. Salinity intrusion can be a problem during dry years, when there is insufficient freshwater to repel salinity. Sea level rise due to climate change is also expected to increase salinity in the Delta. Finally, levee breaks—due to earthquakes and other factors—would result in significant saltwater intrusion from the Bay as water floods affected islands in the Delta that are below sea level.
 - **Algal blooms:** In addition to T&O and the threat of algal toxins, algal blooms can significantly degrade filter performance through clogging. Filter clogging reduces plant production capacities and could require supplemental groundwater use.

As noted above, Zone 7 has state-of-the-art ozonation facilities at the DVWTP and PPWTP. Ozonation improves treatment of T&O, TOC/DOC, turbidity, and algal blooms and significantly increases the surface water system's reliability.

In 2008, the SBA contractors (Valley Water, ACWD, and Zone 7) developed the SBA Watershed Protection Program to protect water quality once the water from the Delta reaches the SBA. The primary objectives of the SBA Watershed Protection Program include developing a Watershed Management Program for the SBA system, including Lake Del Valle and Bethany Reservoir, and protecting local drinking water and water resources from identified contaminant sources (e.g., septic tanks) for urban, agricultural, recreational, and environmental uses.

Additional information on water quality control measures for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (called the Bay-Delta Plan), is included in **Appendix F**.

7.1.1.1.3 [SBA Conveyance](#)

A limitation of Zone 7's water supply system is its dependence on the SBA. All of Zone 7's imported water supplies are conveyed through the Delta and the SBA; Arroyo Valle water is also conveyed through the SBA. Zone 7 has continuously worked with DWR, Valley Water, and ACWD to improve the reliability of the SBA. Between 2003 and 2012, DWR made improvements to the SBA within Zone 7's service area to



increase capacity and improve reliability. The work included building a new pump station (180 cubic feet per second [cfs]) and Dyer reservoir (500 AF) and increasing the canal carrying capacity to 350 cfs. As part of this project, DWR installed an emergency slide gate to maintain service to Zone 7 in the event of a pipeline rupture downstream. Zone 7 will continue coordinating with DWR and the other SBA contractors to improve reliability of the entire SBA system.

A recent possible threat to Zone 7's primary water supply emerged in 2024 when DWR discovered Golden Mussels in the Delta. Since then, these organisms have proliferated throughout the SWP system as far away as southern California. This species, which is more resilient than the previously discovered Zebra Mussel, has the potential to clog water systems by settling and growing in pipes, valves, pumps, gates, canals or any other surface suitable for settling. Individual specimens have been found in the SBA, but colonies have not yet been confirmed. DWR, in collaboration with Department of Fish and Wildlife (DFW), is developing a Golden Mussel management plan including chemical injection, ultraviolet (UV) radiation and physical removal at critical facilities. Experts have stated that it is unlikely that this invasive species can be fully eradicated, but measures can be taken to minimize their impact. Zone 7 is carefully monitoring the situation and is taking precautions to avoid disruption to its water supply. Zone 7 is also obtaining guidance from DFW on developing a Golden Mussel control plan.

In addition, Zone 7 is pursuing the Chain of Lakes Conveyance System project to reduce its reliance on the SBA. This project would allow for access to water stored in the Chain of Lakes as an alternative local water supply and storage source; water would be pumped to DVWTP for use.

7.1.1.2 Groundwater

Chapter 6 details the issues affecting Zone 7's use of the Main Basin, specifically water quality management and prevention of overdraft.

Zone 7 is actively implementing its SMP and NMP. Basin salt levels are being addressed primarily through groundwater pumping and demineralization using the MGD in the Mocho wellfield. Simultaneously, the Basin is being recharged with water containing low salt concentrations. The facility allows for the export of concentrated minerals or salts from the Main Basin while improving the water quality of treated water. The MGD is expected to be offline from 2026 to 2028 while a new PFAS treatment facility is constructed at the Mocho wellfield. Zone 7 will continue its Basin management under the SMP and NMP while the facility is down.

PFAS have been detected above the U.S. Environmental Protection Agency's (EPA) maximum contaminant levels (MCLs) and the Response and Notification Levels established by SWRCB in several of Zone 7's well fields. Zone 7 is managing PFAS under its PFAS management strategy by monitoring contaminant levels, blending and treating groundwater, and diversifying groundwater resources. Zone 7 is planning a dedicated Mocho PFAS Treatment Plant, which will be the third PFAS treatment project following the Stoneridge and Chain of Lakes PFAS plants. This facility will also use ion exchange technology to remove PFAS from Mocho wellfield groundwater and restore production reliability. Planning, environmental review, and funding efforts are underway, with design anticipated in 2026 and construction expected to follow. Zone 7 continues to meet water quality standards and is currently meeting the PFAS MCLs ahead of the federal deadline.

Zone 7 has several groundwater wells with naturally occurring Hexavalent Chromium (Cr(VI)). On October 1, 2024, California issued a new MCL for Cr(VI) at 10 micrograms per Liter ($\mu\text{g/L}$) with a compliance deadline for large water systems by October 1, 2026. Several of Zone 7's wells have had Cr(VI) detections near or slightly above 10 $\mu\text{g/L}$. The Cr(VI) concentrations in the affected wells are reduced



below the MCL by the onsite ion exchange treatment facilities. Zone 7 continues to monitor for Cr(VI) and research additional treatment options if necessary for elevated concentrations of CR(VI).

Zone 7 continues to study the groundwater basin and utilize new tools (e.g., an improved groundwater model) to better understand the volumes of groundwater extraction possible under various Basin conditions while maintaining groundwater elevations above the historic-low groundwater elevations that have been reached in certain portions of the Main Basin (“historic lows”). Zone 7 also plans to augment its ability to recharge the Main Basin (e.g., through the COLCS) to increase local storage and allow for more pumping when necessary. Recharging the Main Basin will improve both water supply reliability and salt management. Zone 7 is evaluating opportunities to construct and operate an additional demineralization facility to continue to decrease the salt content of the Main Basin.

Finally, Zone 7, in partnership with Pleasanton, is advancing the Joint Groundwater Wells Study to evaluate the feasibility of adding new municipal production wells in the Bernal Subbasin of the Livermore Valley Groundwater Basin. The goal of these additional wells is to increase groundwater production capacity, enhance drought resiliency, and provide greater operational flexibility in managing groundwater sustainability during extended droughts or surface water supply constraints.

7.1.1.3 Arroyo Valle and Lake Del Valle

ACWD and Zone 7 both have water rights to divert water from the Arroyo Valle. This water is captured and stored in Lake Del Valle, which is owned and operated by DWR. DWR utilizes Lake Del Valle for flood control, water supply, and recreation. Typically, DWR lowers the lake elevation after Labor Day, allowing Zone 7 and ACWD to put runoff from the Arroyo Valle to beneficial use. In the summer months, lake elevations are raised for recreational purposes. Historically, access to Zone 7’s stored water in Lake Del Valle has not been problematic, unless there is an outage on the Del Valle Branch pipeline. Zone 7 closely coordinates use of Arroyo Valle water with both ACWD and DWR.

Water collected from the local watershed is protected under the SBA Watershed Protection Program Plan. In general, the water quality of Arroyo Valle runoff is good and does not affect the reliability of this water supply; however, as noted above, T&O can also affect supplies from Lake Del Valle. Zone 7 treats T&O using ozonation, although a switch to groundwater supplies is sometimes necessary under excessive levels of T&O compounds. Algal blooms in the lake can also reduce production capacities, though adding ozonation at DVWTP and PPWTP has significantly reduced the impact.

7.1.1.4 Local Storage

Constraints for Zone 7’s existing local storage options, the Main Basin and Lake Del Valle, are discussed in **Sections 7.1.1.2** and **7.1.1.3**, respectively. The Chain of Lakes Conveyance System project, once constructed, will increase Zone 7’s local storage. Currently, Zone 7 is planning to construct the project using the two lakes that are available, Lake I and Cope Lake. These lakes will provide additional local storage in the near term. However, the transfer dates for the remaining lakes are uncertain, as the timing of gravel mining operations and reclamation is not yet known, and a full transition may extend through 2060. Zone 7 continues to work closely with mining companies and quarry operators to coordinate planning efforts. Through this project, Zone 7 can enhance its use of the available lakes during the interim period before all lakes are transferred to Zone 7’s ownership.

7.1.1.5 Non-Local Storage

Access to banked water in Semitropic and Cawelo—both located downstream of Zone 7—requires exchange(s) with other SWP contractors located south of Kern County (e.g., Metropolitan Water District of Southern California). There must be sufficient water flowing through the Delta and California Aqueduct



system to facilitate these exchanges, which could be challenging during a drought. Furthermore, the banked water must be conveyed through the Delta, rendering this supply susceptible to the Delta disruptions described in **Section 7.1.1.1**.

During the 2020-2022 drought, access to banked water became uncertain because of the historically low Table A allocation (leading to minimal amounts of water moving through the SWP), and the potential cessation of pumping in the Delta to control salinity intrusion. DWR was able to manage salinity so that Delta pumping could continue, and, with coordination among stakeholders including Zone 7, DWR prioritized the delivery of banked water to Zone 7 and other SBA contractors. Ultimately, despite severe drought conditions in 2021 and 2022 and historic low 5% SWP allocation, Zone 7 was able to successfully recover 20,000 AF from both groundwater banks. Between 2020 and 2022, Zone 7 recovered approximately 21,000 AF from non-local storage.

Zone 7 will continue to coordinate closely with DWR, other SWP contractors, Semitropic, and Cawelo to ensure the future reliability of the banked water supplies. Zone 7 will also continue to pursue new non-local groundwater banking opportunities.

Additionally, some of Semitropic’s wells are contaminated with arsenic and trichloropropane (TCP). This is currently being managed through treatment before the affected groundwater is pumped into the California Aqueduct. The DWR Facilitation Group established arsenic criteria for this “pump-in” to mitigate any impacts to the downstream SWP contractors. Semitropic and the banking partners have developed a coordination process for discussing arsenic treatment. While the presence of arsenic in the Semitropic groundwater bank may increase the cost of this water storage option, it is not likely to affect overall reliability levels.

7.1.1.6 Water Exchanges and Transfers

Transfer water can be used to supplement Zone 7’s existing water supplies. Advantages of water transfers include: 1) they can be pursued as needed in any given year and 2) they do not require new infrastructure. Annual water transfers are subject to water market conditions. Generally, water transfers are less expensive in wet years when extra water is available and more expensive in dry years when extra water is scarce. One strategy Zone 7 could utilize is purchasing more water during wet years at a lower cost to store for later use in dry years. Zone 7 continues to pursue and evaluate water transfer opportunities in the Bay Area and statewide.

7.1.2 Water Quality

CWC §10634

The plan shall include information, to the extent practicable, relating to the quality of existing sources of water available to the supplier over the same five-year increments as described in subdivision (a) of Section 10631, and the manner in which water quality affects water management strategies and supply reliability.

Impaired water quality also has the potential to affect water supply reliability. Zone 7 has and will continue to meet all state and federal water quality regulations. All drinking water standards are set by the EPA under the authorization of the Federal Safe Drinking Water Act of 1974. In California, the SWRCB Division of Drinking Water, can either adopt the USEPA standards or set more stringent standards, which are then codified in Title 22 of the CCR. There are two general types of drinking water standards:

- **Primary MCLs:** health protective standards established using a very conservative risk-based approach for each constituent that considers potential health effects, detectability and



treatability, and treatment costs. Public water systems (PWS) may not serve water that exceeds Primary MCLs for any constituent.

- **Secondary MCLs:** standards based on the aesthetic qualities of the water such as taste, odor, color, and certain mineral content, and are considered limits for constituents that may affect consumer acceptance of the water.

Zone 7 routinely monitors its wells and the water that is treated and served to customers to ensure that water delivered to customers meets these drinking water standards. The results of this testing are reported to the SWRCB and are summarized annually in Water Quality Reports (also known as “Consumer Confidence Reports”), which are provided to customers electronically/ by mail and made available on Zone 7’s website: <https://www.zone7waterca.gov/post/annual-water-quality-reports>.

Although there is the potential for some regulated constituents to be present in source water, as documented in the Water Quality Reports, Zone 7’s monitoring, management, and treatment of its water results in high quality drinking water meeting all drinking water standards being served to customers. Zone 7 tracks changes in constituent concentrations to proactively address water quality issues before they impact supply reliability. In the event that water quality constituents are detected in source water at concentrations requiring treatment, Zone 7 is able to implement appropriate treatment. Further, as part of the siting process for all new wells, Zone 7 evaluates the presence of groundwater contamination and avoids placing wells in areas of known contamination.

Additional water quality discussion specifically on purchased or imported water is provided in **Section 7.1.1.1.2** and on groundwater in **Section 7.1.1.2**. Given Zone 7’s proactive monitoring and management of water quality in its source water supplies, water quality is not expected to impact the reliability of Zone 7’s available supplies within the planning horizon (i.e., through 2050).

7.1.3 Climate Change

CWC §10631 (b) (1)

...For each source of water supply, consider any information pertinent to the reliability analysis conducted pursuant to Section 10635, including changes in supply due to climate change.

Section 6.2.11 provides a summary of potential climate change impacts on supplies that Zone 7 has considered when evaluating water supply availability and reliability. As discussed, Zone 7 is actively working to further quantify and consider future climate change impacts as part of its ongoing supply and operations planning. Additionally, **Appendix F** discusses DWR efforts to reduce climate change impacts on the SWP.



7.2 Reliability by Type of Year

CWC §10631 (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, including all of the following:

CWC §10631 (b)(1)

A detailed discussion of anticipated supply availability under a normal water year, single dry year, and droughts lasting at least five years, as well as more frequent and severe periods of drought, as described in the drought risk assessment. For each source of water supply, consider any information pertinent to the reliability analysis conducted pursuant to Section 10635, including changes in supply due to climate change.

CWC §10635 (a)

Every urban water supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the long-term total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and a drought lasting five consecutive water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.

The water service reliability assessment includes three unique year types:

- A normal hydrologic year represents the water supplies available under normal conditions; Zone 7 uses the median outcome at demand year 2045 based on the index sequential method modeling;
- A single dry year represents the lowest available water supply, which was chosen to be the driest year in the historical record, 1977; and
- A five-consecutive year drought represents the driest five-year period in the historical record. Selection of the design drought corresponds with the driest five-year sequence on record, 1987-1991.

For each of Zone 7's sources, this section presents the available supply under the hydrologic conditions described above. Data presented below were derived from historical conditions, adjustments to account for climate change impacts and other projected trends, DWR's 2025 Draft DCRs, and Zone 7's latest modeling results. More information on how these connect to the SWP's annual allocations is included in **Appendix F**.

7.2.1 State Water Project

The quantity of water available from the SWP, including Table A, Article 21 and Article 56d, Yuba Accord, and carryover water are discussed below.

7.2.1.1 Table A Water

The current reliability of SWP supplies is derived from the Draft 2025 DCR, which is described in more detail in **Chapter 6**. DWR's estimates of SWP deliveries are based on a computer model that simulates operations of the SWP and CVP systems. The Draft 2025 DCR uses the following assumptions to model current (2025) conditions: existing facilities, hydrologic inflows to the model based on 100 years of historical inflows (1922 through 2021), current regulatory and operational constraints, and contractor demands at maximum Table A



amounts. To evaluate SWP supply availability under future conditions, the Draft 2025 DCR included a model representing hydrologic and sea level rise conditions in 2043.

For Zone 7, the hydrologic time series from the Draft 2025 DCR’s 2043 50% level-of-concern scenario was applied to the 2025 to 2050 planning horizon. Note that while the proposed DCP is designed to increase the SWP’s reliability, the quantitative effect on SWP water supply yield is still being analyzed and has not been included at this time to allow for a more conservative analysis.

Figure 7-1 illustrates modeled SWP allocations from 1922 to 2021 using the results from Draft 2025 DCR’s 50% level-of-concern scenario. As shown on **Figure 7-1**, 1977 (2% Table A allocation) represents the worst-case single dry year scenario, which corresponds to 3% of normal (average) year SWP supply amounts since a normal year typically exhibits less than 100% of the SWP Table A amount. Additionally, 1987 to 1991 closely represents the driest five-year period included in DWR’s model, which includes SWP allocations ranging from 6% to 52% under future (2043) conditions.

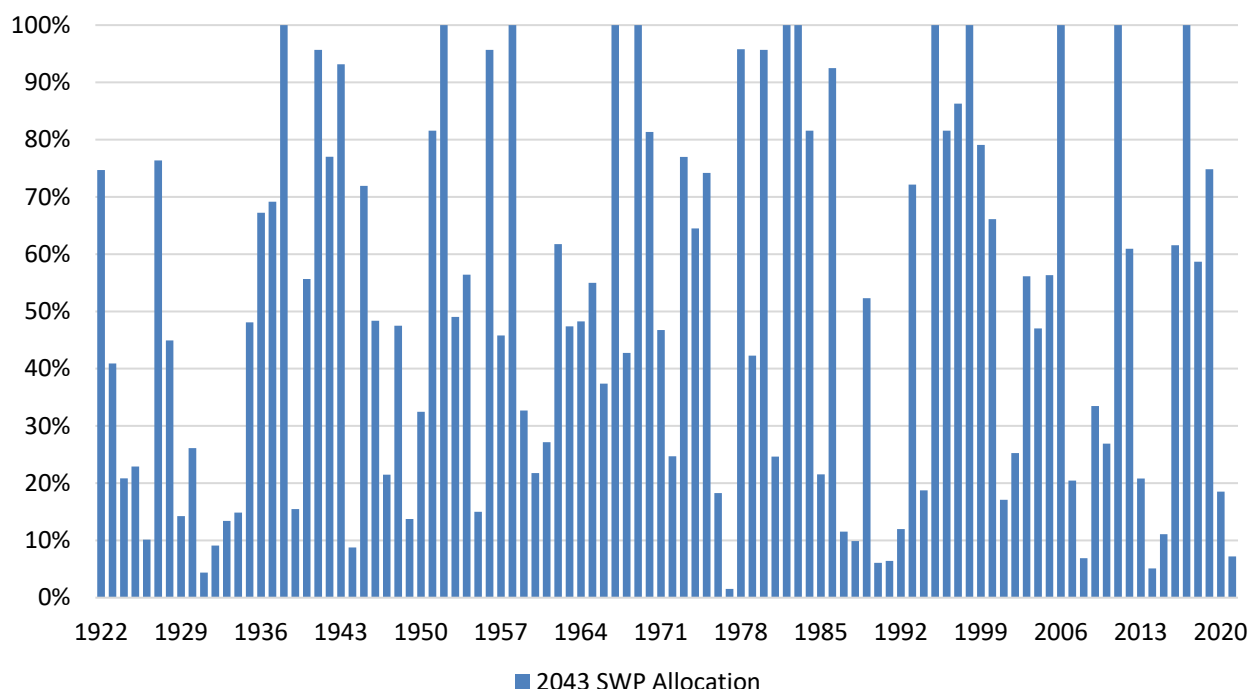


Figure 7-1. Future SWP Table A Allocations from the Draft 2025 Delivery Capability Report

Table 7-1 summarizes the basis of water year and available supply for Zone 7 from the SWP.



Table 7-1 Basis of Water Year Data (Reliability Assessment): SWP Table A Water (DWR Table 7-1)

Year Type	Base Year	Available Supplies if Year Type Repeats	
		□	Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. Location
		Quantification of available supplies is provided in this table as either volume only, percent only, or both.	
		Volume Available	% of Average Supply
Average Year	1922-2021 Median	36,574	100%
Single-Dry Year	1977	1,229	3%
Consecutive Dry Years 1st Year	1987	9,303	25%
Consecutive Dry Years 2nd Year	1988	7,961	22%
Consecutive Dry Years 3rd Year	1989	32,793	90%
Consecutive Dry Years 4th Year	1990	4,897	13%
Consecutive Dry Years 5th Year	1991	5,185	14%
NOTES: Volumes are in units of AF. All values utilize a demand year of 2045.			

7.2.1.2 Article 21 Water and Article 56d Water

As a contractor of the SWP, Zone 7 also has access to Article 21 water (interruptible or surplus water) and Article 56d water (turnback pool water). Neither Article 21 nor Article 56d water were included in this UWMP for planning-level purposes. Zone 7’s access to Article 21 water may increase in the future once the Chain of Lakes Conveyance System is in service; this access will be reflected in a future UWMP as appropriate. Water that could have been part of the Article 56d turnback pool will now be available through water transfers, which are a component of Zone 7’s supply, as described below.

7.2.1.3 Yuba Accord

Water is primarily available during dry years under the Yuba Accord, but the amount is relatively small: 400 AF in 2014, approximately 300 AF in 2015, 3,000 AF in 2020, and 190 AF in 2021. For planning purposes, Zone 7 currently does not assume any water supply yield specifically from the Yuba Accord, although Zone 7 will continue to pursue this supply when available. Water from the Yuba Accord could contribute to Zone 7’s supply as a water transfer.



7.2.1.4 Carryover

As a SWP contractor, Zone 7 can carry water from one year to the next in San Luis Reservoir – also called Article 56(c) water. The amount of carryover depends on DWR’s allocation for that year. For example, if allocations are equal to or less than 50% of Zone 7’s Table A amount, then Zone 7’s carryover limit is 25% of Zone 7’s total Table A amount, or approximately 20,200 AFY (25% of 80,619 AF). However, if allocations are at least 75% of Zone 7’s Table A amount, then the carryover limit increases to 50% of Zone 7’s total Table A amount, or approximately 40,300 AFY (50% of 80,619 AF).

If the San Luis Reservoir level gets too high, a portion of Zone 7’s carryover can be lost; this condition is more likely when the reservoir is relatively full and hydrologic conditions are above normal. Zone 7 manages carryover to avoid or minimize losses. As part of its operating agreement with DWR, Zone 7 can also store inflow from Arroyo Valle in Lake Del Valle from one year to the next.

Typically, any carryover brought into a normal water year would be used in that year; however, a similar amount of supply from the current year would then also be carried over for use in the following year. Zone 7 typically targets carryover of about 10,000 AF of water from one year into the next.

Table 7-2 summarizes the average available carryover under each water year type. Modeled average carryover in 2045 was estimated at about 10,000 AF, while carryover is reduced significantly during multiple dry years, averaging about 6,000 AF during the latter four years of drought, and dropping down to 0 in the fifth year. Zone 7 would likely pursue additional water transfers during such periods to increase these carryover levels.



Table 7-2 Basis of Water Year Data (Reliability Assessment): Carryover Water (DWR Table 7-1)

Year Type	Base Year	Available Supplies if Year Type Repeats	
		☐	Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. Location
		Quantification of available supplies is provided in this table as either volume only, percent only, or both.	
		Volume Available	% of Average Supply
Average Year	1922-2021 Median	10,000	100%
Single-Dry Year	1977	10,000	100%
Consecutive Dry Years 1st Year	1987	10,000	100%
Consecutive Dry Years 2nd Year	1988	8,858	89%
Consecutive Dry Years 3rd Year	1989	8,864	89%
Consecutive Dry Years 4th Year	1990	6,802	68%
Consecutive Dry Years 5th Year	1991	0	0%
NOTES: Volumes are in units of AF. All values utilize a demand year of 2045.			

7.2.2 Water Transfers

A transfer agreement with another SWP contractor using the SWP system—which Zone 7 is already invested in—is likely the most expedient and cost-effective transfer option. The transfer amount could vary from year to year depending on hydrology but could average around 3,000 AFY. For the 2025 UWMP, Zone 7 assumes a constant 3,000 AFY in water transfers through 2035 in years when the SWP allocation is less than 35%. Zone 7 intends to use transfers as an interim supply until future water reliability projects come online.

Table 7-3 summarizes the basis of water year and available supply from SWP transfers. Since no transfers are assumed after 2035, all values in this table are zero.



Table 7-3 Basis of Water Year Data (Reliability Assessment) : SWP/Other Transfers (DWR Table 7-1)

Year Type	Base Year	Available Supplies if Year Type Repeats	
		☐	Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. Location
		Quantification of available supplies is provided in this table as either volume only, percent only, or both.	
		Volume Available	% of Average Supply
Average Year	1922-2021 Median	0	100%
Single-Dry Year	1977	0	
Consecutive Dry Years 1st Year	1987	0	
Consecutive Dry Years 2nd Year	1988	0	
Consecutive Dry Years 3rd Year	1989	0	
Consecutive Dry Years 4th Year	1990	0	
Consecutive Dry Years 5th Year	1991	0	
NOTES: Volumes are in units of AF. All values utilize a demand year of 2045. Because modeling assumes transfers cease after 2035, all values in this table are zero.			

7.2.3 Local Surface Water: Arroyo Valle

Inflows from Arroyo Valle into Lake Del Valle are used for environmental releases and for water supply to Zone 7 and ACWD. Some inflows may end up as flood releases when there is insufficient capacity in the lake and insufficient ability for Zone 7 and ACWD to store/use the water.

Zone 7’s latest modeling forecasts future average yields from Arroyo Valle to Zone 7 at approximately 4,000 AFY, using the methodology described previously. Local climate change effects on the watershed are expected to reduce the yield over time. Conversely, construction of the Chain of Lakes Conveyance System (discussed in **Section 6.2.9**) will allow Zone 7 to capture more of the storm releases from Lake Del Valle, and likely increase the yield from this water supply in the future. This modeling effort uses an average initial availability estimate of 4,000 AFY; it will be re-evaluated as more climate change downscaled information is developed and as the COLCS project progresses and additional yield could be better quantified.

The analysis in this UWMP assumes that average inflow is available during a single dry year and in the first year of a multi-year drought. **Table 7-4** summarizes the basis of water year and available supply for Zone 7 from local runoff under the Arroyo Valle water right permit.



Table 7-4 Basis of Water Year Data (Reliability Assessment): Arroyo Valle (DWR Table 7-1)

Year Type	Base Year	Available Supplies if Year Type Repeats	
		□	Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. Location
		Quantification of available supplies is provided in this table as either volume only, percent only, or both.	
		Volume Available	% of Average Supply
Average Year	1922-2021 Median	4,000	100%
Single-Dry Year	1977	4,000	100%
Consecutive Dry Years 1st Year	1987	4,000	100%
Consecutive Dry Years 2nd Year	1988	209	5%
Consecutive Dry Years 3rd Year	1989	258	6%
Consecutive Dry Years 4th Year	1990	60	2%
Consecutive Dry Years 5th Year	1991	4,381	110%

NOTES:
Volumes are in units of AF.
All values utilize a demand year of 2045.

7.2.4 Local Storage

As mentioned previously, Zone 7’s existing local storage options include Lake Del Valle and the Main Basin. With future completion of the Chain of Lakes Conveyance System around 2035, Zone 7 could begin to use the COLs for storage of imported or local surface water, which may be used by pumping to DVWTP or may also enhance groundwater recharge in the Main Basin. The amounts shown in **Table 7-5** indicate the amount of water supply that would be available from the Chain of Lakes Conveyance System. During the five-year drought, the operational storage in Chain of Lakes is depleted, resulting in no available supplies in years four and five.



Table 7-5 Basis of Water Year Data (Reliability Assessment): Chain of Lakes Conveyance System (DWR Table 7-1)

Year Type	Base Year	Available Supplies if Year Type Repeats	
		☐	Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. Location
		Quantification of available supplies is provided in this table as either volume only, percent only, or both.	
		Volume Available	% of Average Supply
Average Year	1922-2021 Median	11,700	100%
Single-Dry Year	1977	11,700	100%
Consecutive Dry Years 1st Year	1987	11,700	100%
Consecutive Dry Years 2nd Year	1988	14,586	125%
Consecutive Dry Years 3rd Year	1989	13,868	119%
Consecutive Dry Years 4th Year	1990	0	0%
Consecutive Dry Years 5th Year	1991	0	0%

NOTES:
Volumes are in units of AF.
All values utilize a demand year of 2045.

The use of Lake Del Valle is tied to SWP reliability, discussed under **Section 7.2.1**, and to the availability of local water from the Arroyo Valle, discussed under **Section 7.2.3**. The following focuses on the reliability of the groundwater supply from the Main Basin.

Based on a review of current and planned well capacities and groundwater modeling, Zone 7 estimates that it can pump approximately 30,000 AF over a one-year period. For conservative planning-level purposes in this UWMP, Zone 7 staff included limits on the total volume of groundwater pumped during multiple dry years to ensure that water surface elevations remain above historic lows during a multiple-dry year event. A historical low within the model prohibits groundwater levels from dipping below this value.

Table 7-6 summarizes the available supply under each water year type for the Main Basin. The volume available is likely greater than the volume utilized annually, as Zone 7 normally targets about 5,000 AFY of groundwater pumping.



Table 7-6 Basis of Water Year Data (Reliability Assessment): Main Basin (DWR Table 7-1)

Year Type	Base Year	Available Supplies if Year Type Repeats	
		□	Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. Location
		Quantification of available supplies is provided in this table as either volume only, percent only, or both.	
		Volume Available	% of Average Supply
Average Year	1922-2021 Median	30,000	100%
Single-Dry Year	1977	30,000	100%
Consecutive Dry Years 1st Year	1987	30,000	100%
Consecutive Dry Years 2nd Year	1988	30,000	100%
Consecutive Dry Years 3rd Year	1989	30,000	100%
Consecutive Dry Years 4th Year	1990	30,000	100%
Consecutive Dry Years 5th Year	1991	24,343	81%

NOTES:
Volumes are in units of AF.
All values utilize a demand year of 2045.

7.2.5 Non-Local Storage Programs

Zone 7 has multiple non-local storage programs located in Kern County that augment water supplies during drought conditions through groundwater banking. These include the Semitropic and Cawelo Water Districts, as well as potential groundwater banking program(s).

Zone 7 has 78,000 AF of groundwater storage capacity available through Semitropic. During non-drought periods, Zone 7 can store at minimum 5,900 AFY. During droughts, Zone 7 can request up to 9,100 AFY of pumpback and up to 8,645 AFY of exchange water, though the availability of exchange water depends on projected SWP deliveries.

Zone 7 has 120,000 AF of groundwater storage capacity available through Cawelo. During non-drought periods, Zone 7 can bank at minimum 5,000 AFY¹¹, and during droughts, Zone 7 can request at minimum 10,000 AFY of pumpback. Zone 7's current contract with Cawelo expires in 2035. For the purpose of

¹¹ Zone 7 only gets storage credit for 50% of the water provided to Cawelo. Per the existing contract, Zone 7 can only send 10,000 AF in any given year to Cawelo; therefore, the maximum contractual credit is 5,000 AF (50% of 10,000 AF).



presenting conservative modeling in the UWMP, Zone 7 assumes no supplies from Cawelo are available after 2035.

Zone 7 expects to enter into additional non-local water banking agreements. While specific opportunities are still being investigated, for this UWMP, Zone 7 assumes an additional 7,500 AF of groundwater banking storage capacity with a required leave-behind of 50% upon deposit and a maximum withdrawal of 7,500 AFY.

Table 7-7 summarizes the projected non-local stored water across Semitropic, Cawelo, and other future programs that would likely be available under normal, single-dry, and five consecutive dry years. The values are based on model results and reflect storage levels, conveyance/delivery capacity, and potential Delta outages built into the Model that could affect access to this supply. Note that Zone 7 generally does not rely on this water during normal water years, so while water may be available, it would generally not be used.

Table 7-7 Basis of Water Year Data (Reliability Assessment): Non-Local Storage Programs (DWR Table 7-1)

Year Type	Base Year	Available Supplies if Year Type Repeats	
		□	Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. Location
		Quantification of available supplies is provided in this table as either volume only, percent only, or both.	
		Volume Available	% of Average Supply
Average Year	1922-2021 Median	19,741	100%
Single-Dry Year	1977	16,600	84%
Consecutive Dry Years 1st Year	1987	16,600	84%
Consecutive Dry Years 2nd Year	1988	16,600	84%
Consecutive Dry Years 3rd Year	1989	19,268	98%
Consecutive Dry Years 4th Year	1990	16,600	84%
Consecutive Dry Years 5th Year	1991	9,448	48%

NOTES:
Volumes are in units of AF.
All values utilize a demand year of 2045.



7.2.6 Sites Reservoir

Sites Reservoir is assumed to increase Zone 7's water supplies by about 2,200 AFY in a normal year beginning in 2034. Delivery would vary based on hydrology, Zone 7's needs, and available storage. Deliveries would be coordinated with SWP deliveries.

Table 7-8 summarizes the water supply assumptions for Sites Reservoir used in this plan, with water supplies assumed to be available by 2034. All results are shown for the demand year of 2045. There is a large amount of variability in the water available from Sites, with a median (used as the average year) of about 2,200 AFY (the mathematical average is about 3,500 AFY), and four to six times as much available in a single dry year or the early years of a multi-year drought.

Table 7-8 Basis of Water Year Data (Reliability Assessment): Sites Reservoir Project (DWR Table 7-1)

Year Type	Base Year	Available Supplies if Year Type Repeats	
		□	Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. Location
		Quantification of available supplies is provided in this table as either volume only, percent only, or both.	
		Volume Available	% of Average Supply
Average Year	1922-2021 Median	2,185	100%
Single-Dry Year	1977	10,511	481%
Consecutive Dry Years 1st Year	1987	8,909	408%
Consecutive Dry Years 2nd Year	1988	12,085	553%
Consecutive Dry Years 3rd Year	1989	1,834	84%
Consecutive Dry Years 4th Year	1990	214	10%
Consecutive Dry Years 5th Year	1991	755	35%

NOTES:
Volumes are in units of AF.
All values utilize a demand year of 2045.



7.2.7 Other New Water Supplies: Potable Reuse

As discussed in **Section 6.2.9.1**, Zone 7 continues to study potable reuse to potentially increase future supplies. This plan does not include potable reuse in supply estimates. Future iterations of the UWMP may include potable reuse in available supplies, if a project is determined to be feasible and needed.

7.3 Supply and Demand Assessment

CWC §10635(a)

Every urban water supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the long-term total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and a drought lasting five consecutive water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.

Water supply and demand change during normal, single dry, and multiple dry years. The following sections compare Zone 7's projected water demands with projected water supply availability during normal years, single dry years, and multiple dry year periods.

7.3.1 Normal Year Supply and Demand Assessment

As described in **Chapter 4.2**, Zone 7 has relied on the 2025 Water Demand Assessment Study to forecast demands for normal, single dry, and multiple dry years.

As discussed in **Section 7.2**, Zone 7's current water supply portfolio consists of imported SWP supplies, local surface water (Arroyo Valle), local groundwater from the Main Basin, stored water (including carryover in San Luis Reservoir and storage in Kern Banks), and short-term transfers. Zone 7 also expects to have new projects come online throughout the planning period (2025-2050), including the Sites Reservoir and COLCS. SWP supplies, which comprise the majority of Zone 7's portfolio, are hydrologically variable and subject to regulatory, environmental, and conveyance constraints; therefore, their reliability declines in dry and critically dry years and under future climate change conditions. Local surface water from Arroyo Valle is also hydrology-dependent and can vary significantly from year to year. In contrast, groundwater production provides operational flexibility and short-term reliability during dry periods because Zone 7 can pump previously recharged water from the Main Basin; however, groundwater availability is ultimately constrained by recharge, storage levels, water quality considerations, and well production capacity. Banked water in Kern County and carryover storage in San Luis Reservoir provide additional drought buffering capacity, although delivery of these supplies depends on the availability of SWP conveyance through the Delta. Transfers can supplement supplies in specific years but are subject to market availability, conveyance capacity, and timing limitations. Overall, Zone 7's reliability is strengthened by diversification across these supply types, but imported supplies remain the most variable component of the portfolio.

Table 7-9 shows the projected supply and demand totals for a normal year. The supply and demand totals are consistent with those in **Table 6-10** and **Table 4-4**, respectively.



Table 7-9 Normal Year Supply and Demand Comparison (DWR Table 7-2)

	2030	2035	2040	2045	2050 (Opt)
Supply totals (autofill from Submittal Table 6-9 R)	90,002	110,225	118,200	114,200	114,200
Use totals (autofill from Submittal Table 4-2 R)	44,500	47,300	49,300	51,100	51,000
Surplus/(shortfall)	45,502	62,925	68,900	63,100	63,200
NOTES: Volumes are in units of AF.					

7.3.2 Single-Dry Year Supply and Demand Assessment

Table 7-10 shows that in a single dry year, Zone 7’s supplies are adequate to meet projected demands on average. Starting around 2035, when the Sites Reservoir and Chain of Lakes Conveyance System are online, Zone 7 is well prepared for a single dry year. Note that conservation is not included in the demands; any extra supply due to conservation will remain in storage or go towards storage.

There is a potential for operational constraints, especially during a Delta outage when there may be no or minimal water moving through the SBA from the Delta, which could result in shortages, particularly in the near-term before major water supply projects are online. Untreated water customers would be most vulnerable because of their reliance on Delta water. As described in the WSCP in **Chapter 8** and **Appendix D**, in these cases, Zone 7 could call for voluntary or mandatory conservation and could make operational adjustments to minimize such shortages.

Table 7-10 Single Dry Year Supply and Demand Comparison – District Total (DWR Table 7-3)

	2030	2035	2040	2045	2050 (Opt)
Supply totals	64,516	83,065	88,040	84,040	84,040
Use totals	44,500	47,300	49,300	51,100	51,000
Surplus/(shortfall)	20,016	35,765	38,740	32,940	33,040
NOTES: Volumes are in units of AF.					

7.3.3 Multiple Dry Year Supply and Demand Assessment

Table 7-11 shows that in five consecutive dry years, Zone 7’s supplies are adequate to meet projected demands on average through 2040. In the fifth year of a drought, in both 2045 and 2050, there is a risk of shortages in the range of 10-20%. This level of shortage could be mitigated through efforts described in the Water Shortage Contingency Plan, such as water use reduction and water transfers, as detailed in **Chapter 8** and **Appendix D**.

The values in **Table 7-11** reflects average output from Zone 7’s Model, which was initialized given 2025 conditions and configured to simulate a five consecutive dry years scenario beginning in each year



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required in the reliability assessment (e.g., 2030, 2035, etc.). The Model simulates 100 trials to reflect varying hydrologic conditions. The five-consecutive-dry year scenario reflects hydrologic years 1987-1991. Given this model configuration, reported availability may differ slightly from long-term average values identified in the tables in **Section 7.2**.

As noted previously, operational constraints, especially during a Delta outage, could also result in shortages, which Zone 7 can mitigate through conservation and operational adjustments. The possibility and amount of such shortages will decrease as major water supply reliability projects are implemented starting around 2035.



Table 7-11 Five Consecutive Dry Years Supply and Demand Comparison (DWR Table 7-4)

		2030	2035	2040	2045	2050 (Opt)
First year	Supply totals	72,590	89,537	94,512	90,512	90,512
	Use totals	44,500	47,300	49,300	51,100	51,000
	Surplus/(shortfall)	28,090	42,237	45,212	39,412	39,512
Second year	Supply totals	69,442	92,769	95,776	90,299	90,399
	Use totals	44,500	47,300	49,300	51,100	51,000
	Surplus/(shortfall)	24,942	45,469	46,476	39,199	39,399
Third year	Supply totals	93,948	111,773	113,342	106,885	81,978
	Use totals	44,500	47,300	49,300	51,100	51,000
	Surplus/(shortfall)	49,448	64,473	64,042	55,785	30,978
Fourth year	Supply totals	57,948	65,912	65,468	58,573	58,573
	Use totals	44,500	47,300	49,300	51,100	51,000
	Surplus/(shortfall)	13,448	18,612	16,168	7,473	7,573
Fifth year	Supply totals	58,898	57,929	50,610	44,112	40,665
	Use totals	44,500	47,300	49,300	51,100	51,000
	Surplus/(shortfall)	14,398	10,629	1,310	(6,988)	(10,335)
NOTES: Volumes are in units of AF.						



7.4 Water Supply Management Tools and Options

CWC §10620 (f)

An urban water supplier shall describe in the plan water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions.

Zone 7 promotes regional supply reliability and reduced reliance on water imports by:

- Pursuing new water supply projects such as the Chain of Lakes Conveyance System and Sites Reservoir, which will reduce the need for imported water purchases during dry years;
- Evaluating and pursuing new water supply options, including right-sizing water supply and storage options and studying the potential for potable reuse as a water supply;
- Supporting the continued use of recycled water for irrigation;
- Working closely with its retailers to implement an active conservation program; and
- Optimizing and expanding local storage, such as the Chain of lakes Conveyance System.

As part of its existing CIP, Zone 7 is planning to invest in a diverse set of projects to support long-term water supply reliability. Zone 7's CIP includes a regional wells project to expand the groundwater production system, investment in Sites Reservoir, and investment in local storage via the Chain of Lakes Conveyance System project, and continued study of the potential for potable reuse in the region.

In addition, Zone 7 is a member of the Bay Area Regional Reliability (BARR) partnership, which brings together eight Bay Area water agencies to improve regional water supply reliability. In addition to Zone 7, these agencies include: ACWD, SFPUC, the Bay Area Water Supply and Conservation Agency (BAWSCA), CCWD, EBMUD, Marin Municipal Water District (Marin Water), and Valley Water. The BARR partners have agreed to work cooperatively to address water supply reliability concerns and drought preparedness on a mutually beneficial and regionally focused basis. Near- and long-term joint water supply reliability projects may be evaluated through BARR, such as use of the capacity of existing facilities, changes to infrastructure (including new interties, recycled water, water conservation, expanded treatment, regional desalination, and water transfers and exchanges), and other projects or institutional arrangements that encourage a regional approach to achieving water supply reliability in the Bay Area.



7.5 Drought Risk Assessment

CWC §10635(b)

Every urban water supplier shall include, as part of its urban water management plan, a drought risk assessment for its water service to its customers as part of information considered in developing the demand management measures and water supply projects and programs to be included in the urban water management plan. The urban water supplier may conduct an interim update or updates to this drought risk assessment within the five-year cycle of its urban water management plan update. The drought risk assessment shall include each of the following:

(1) 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 water years, starting from the year following when the assessment is conducted.

(2) A determination of the reliability of each source of supply under a variety of water shortage conditions. This may include a determination that a particular source of water supply is fully reliable under most, if not all, conditions.

(3) A comparison of the total water supply sources available to the water supplier with the total projected water use for the drought period.

(4) 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.

In addition to the long-term water service reliability assessment presented above, the Drought Risk Assessment evaluates Zone 7's supply risks under a severe drought period lasting for the next five consecutive years after the assessment is completed, i.e., from 2026 through 2030. The Drought Risk Assessment is intended to inform the demand management measures (DMMs) and water supply projects and programs to be included in the UWMP (see **Section 9**). Suppliers may conduct an interim update or updates to this Drought Risk Assessment within the five-year cycle of its UWMP update (i.e., before the 2030 UWMP).

7.5.1 Data, Methods, and Basis for Water Shortage Condition

This evaluation considers historical drought hydrology and plausible changes on projected supplies and demands under climate change conditions, anticipated regulatory changes, and other locally applicable criteria.

As a first step to the Drought Risk Assessment, Zone 7 estimated unconstrained water demand for the next five years (i.e., 2026-2030). Unconstrained water demand is the expected water use in the absence of drought water use restrictions. The characteristic five-year water demand is described in **Section 4**.

The available potable water supplies assumed in the Drought Risk Assessment are based upon the same methodology and assumptions used for the long-term water service reliability assessment (**Section 7.1.1**) and relies on information provided by Draft 2025 DCR. Details of how Zone 7's available supplies are then estimated as part of the Drought Risk Assessment are provided below.

The Drought Risk Assessment assumes 30, 10, 41, 6, and 6% Table A allocations for 2026-2030, respectively. Data for 2026 reflects projected water year supply availability based on currently available data. Data for 2027-2030 reflect the last four years of the multiple-dry year scenario previously discussed



(1988-1991). Projections are based on existing facilities and the expected availability of supplies from various sources given the constraints previously described. A five-year modeling analysis using 2025 conditions as the initial baseline was conducted. This approach accounts for differences in demand levels and the availability and timing of supply sources during the 2026–2030 planning period. Surplus water is stored for use during subsequent years; a portion is also lost to evaporation, unavailable as carriage loss under water transfers, and lost to brine disposal.

7.5.2 Drought Risk Assessment Individual Water Source Reliability

As described in **Chapter 6**, Zone 7 relies on a combination of water supply sources, including the SWP, local surface water (Arroyo Valle), local groundwater, and transfers.

Table 7-12 summarizes Zone 7’s available supplies and projected demands for each year of the Drought Risk Assessment.

Table 7-12 Projected Supplies and Demands for Drought Risk Assessment

Supply Source Calendar Year	Available Supply (AFY)				
	2026	2027	2028	2029	2030
Equivalent Hydrologic Year	<i>Actual</i>	<i>1988</i>	<i>1989</i>	<i>1990</i>	<i>1991</i>
SWP Table A	24,186	7,961	32,793	4,897	5,185
SWP Carryover	14,000	8,441	9,270	9,098	5,946
Water Transfers	1,000	3,000	0	3,000	3,000
Arroyo Valle	5,000	2,672	4,934	2,876	3,014
Chain of Lakes	0	0	0	0	0
Main Basin (Local Groundwater)	30,000	30,000	30,000	30,000	30,000
Non-Local Storage Programs	13,379	19,287	21,955	19,287	19,287
Sites	0	0	0	0	0
Total Supplies	87,565	71,361	98,952	69,157	66,431
Total Demands	40,000	41,200	42,200	43,400	44,500
Surplus	47,565	30,161	56,752	25,757	21,931

NOTES:
Volumes are in units of AF.

7.5.3 Drought Risk Assessment Total Water Supply and Use Comparison

Table 7-13 provides a comparison of the water supply sources available to Zone 7 with the total projected water use for an assumed drought period of 2026 through 2030.

Zone 7’s supply is expected to be sufficient to meet demands in all hydrologic conditions, including an extended multi-year drought period from 2026 through 2030. **Table 7-13** also summarizes planned WSCP actions that Zone 7 will implement to augment supply and/or reduce demands (see **Appendix D**).



Table 7-13 Five-Year Drought Risk Assessment Tables (DWR Table 7-5)

2026		Total
	Total Water Use	40,000
	Total Supplies	87,565
	Surplus/Shortfall without WSCP Action	47,565
2027		Total
	Total Water Use	41,200
	Total Supplies	71,361
	Surplus/Shortfall without WSCP Action	30,161
2028		Total
	Total Water Use	42,200
	Total Supplies	98,952
	Surplus/Shortfall without WSCP Action	56,752
2029		Total
	Total Water Use	43,400
	Total Supplies	69,157
	Surplus/Shortfall without WSCP Action	25,757
2030		Total
	Total Water Use	44,500
	Total Supplies	66,431
	Surplus/Shortfall without WSCP Action	21,931
NOTES: Volumes are in units of AF.		



8 WATER SHORTAGE CONTINGENCY PLANNING

CWC §10640

(a) Every urban water supplier required to prepare a plan pursuant to this part shall prepare its plan pursuant to Article 2 (commencing with Section 10630). The supplier shall likewise periodically review the plan as required by Section 10621, and any amendments or changes required as a result of that review shall be adopted pursuant to this article.

(b) Every urban water supplier required to prepare a water shortage contingency plan shall prepare a water shortage contingency plan pursuant to Section 10632. The supplier shall likewise periodically review the water shortage contingency plan as required by paragraph (10) of subdivision (a) of Section 10632 and any amendments or changes required as a result of that review shall be adopted pursuant to this article.

The WSCP for Zone 7 is included in this UWMP as **Appendix D**. The WSCP serves as a standalone document to be engaged in the case of a water shortage event, such as a drought or supply interruption, and defines specific policies and actions that will be implemented at various shortage level scenarios. The primary objective of the WSCP is to ensure that Zone 7 has in place the necessary resources and management responses needed to protect health and human safety, minimize economic disruption, and preserve environmental and community assets during water supply shortages and interruptions.

Consistent with CWC §10632, the WSCP includes five levels to address shortage conditions ranging from up to 10% to greater than 40% shortage and map to DWR's standard six levels, identifies a suite of demand mitigation measures for Zone 7 to implement at each level, and identifies procedures for Zone 7 to annually assess whether or not a water shortage is likely to occur in the coming year, among other things.

A summary of the key elements of the WSCP including water shortage levels and demand-reduction actions is shown in **Table 8-1**, **Table 8-2**, and **Table 8-3**.

Zone 7's WSCP is included in this plan as **Appendix D** to allow for updates outside of the UWMP preparation process. Zone 7 intends for its WSCP to be dynamic, so that it may assess response action effectiveness and adapt to foreseeable and unforeseeable events. When an update to the WSCP is proposed, the revised WSCP will undergo the process described in Section 8 of the WSCP. Additional details are provided in **Appendix D**.



Table 8-1 Cross-reference for Standard vs Supplier Shortage Levels (DWR Table 8-1)

□	Supplier Uses the Standard Six Levels of Water Shortage. The supplier will not complete this table.		
Standard Shortage Levels	Percent Shortage Range	Suppliers Shortage Levels	Percent Shortage Range
1	Up to 10%	1	Up to 10%
2	Up to 20%	2	Up to 20%
3	Up to 30%	3	Up to 30%
4	Up to 40%	4	Up to 40%
5	Up to 50%	5	> 40%
6	>50%	5	> 40%
NOTES:			



Table 8-2 Supply Augmentation and Other Actions (DWR Table 8-2)

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	How much is this going to reduce the shortage gap? Include units used (volume type or percentage)	Additional Explanation or Reference (OPTIONAL)
1	Transfers	3000 AF	Utilize pre-negotiated transfers, like the Sutter Extension
2	Transfers	1000-4000 AF (up to full shortage gap)	Seek additional transfers beyond pre-negotiated transfer/exchange program.
5	Stored Emergency Supply	1-3% (or as needed)	Bring in bottled water or emergency supplies as needed
<p>NOTES: Actions introduced in a lower stage will also be used in higher stages, unless otherwise noted.</p>			



Table 8-3 Demand Reduction Actions (DWR Table 8-3)

No	Is the Supplier completing this table using the standard six levels? (yes/no)		
Shortage Level	Demand Reduction Actions	How much is this going to reduce the shortage gap? Include units used (volume type or percentage)	Additional Explanation or Reference (OPTIONAL)
1	Other	0-10%	Declare 10% voluntary conservation target.
1	Expand Public Information Campaign	1-5%	Expand public information on Zone 7 conservation rebate programs and voluntary restrictions.
1	Provide Rebates for Landscape Irrigation Efficiency	1-5%	Promote Zone 7 rebate programs for DSRSD, Livermore, and Pleasanton.
1	Provide Rebates on Plumbing Fixtures and Devices	1-5%	Promote Zone 7 rebate programs for DSRSD, Livermore, and Pleasanton.
1	Provide Rebates for Turf Replacement	1-5%	Promote Zone 7 rebate programs for DSRSD, Livermore, and Pleasanton.
1	Other	1-5%	Consider voluntary restrictions, e.g., limit irrigation to specific times of day, require shut-off nozzles for hoses, etc.
2	Other	0-10%	Declare a call for mandatory conservation (up to 10%)



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No	Is the Supplier completing this table using the standard six levels? (yes/no)		
Shortage Level	Demand Reduction Actions	How much is this going to reduce the shortage gap? Include units used (volume type or percentage)	Additional Explanation or Reference (OPTIONAL)
2	Expand Public Information Campaign	1-5%	Continue public information campaign and outreach/education efforts.
2	Provide Rebates for Landscape Irrigation Efficiency	1-5%	Consider increasing rebate spending and potentially target high-consumption customers.
2	Provide Rebates on Plumbing Fixtures and Devices	1-5%	Consider increasing rebate spending and potentially target high-consumption customers.
2	Provide Rebates for Turf Replacement	1-5%	Consider increasing rebate spending and potentially target high-consumption customers.
2	Implement or Modify Drought Rate Structure or Surcharge	5-10%	Consider implementing drought surcharge.
2	Other	1-10%	Some mandatory restrictions may start (e.g., limit the number of outdoor watering days).
3	Other	10-20%	Declare a call for mandatory conservation (up to 20%)



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No	Is the Supplier completing this table using the standard six levels? (yes/no)		
Shortage Level	Demand Reduction Actions	How much is this going to reduce the shortage gap? Include units used (volume type or percentage)	Additional Explanation or Reference (OPTIONAL)
3	Implement or Modify Drought Rate Structure or Surcharge	5-10%	Implement a drought surcharge matching mandatory conservation levels.
3	Other	2-5%	Encourage retailers to enforce excess use penalties.
3	Other	<1-3%	Decrease line flushing and maintenance.
4	Other	20-30%	Declare a call for mandatory conservation (up to 30%)
4	Increase Water Waste Patrols	2-5%	Request retailers and cities to increase enforcement of their water shortage contingency plans, which could include fines for repeated violations.
4	Moratorium or Net Zero Demand Increase on New Connections	0 (no net increase)	Consider new connection ban.
5	Other	30% or more	Declare a call for mandatory conservation (>30%)



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No	Is the Supplier completing this table using the standard six levels? (yes/no)		
Shortage Level	Demand Reduction Actions	How much is this going to reduce the shortage gap? Include units used (volume type or percentage)	Additional Explanation or Reference (OPTIONAL)
5	Increase Water Waste Patrols	2-10%	Water may only be available to meet health and safety needs. Urge retailers to enhance enforcement, or Zone 7 may support enforcement.
5	Landscape - Prohibit all landscape irrigation	10-20%	
<p>NOTES: Actions introduced in a lower stage will also be used in higher stages, unless otherwise noted. All demand management actions feed into conservation quantity at each stage.</p>			



9 DEMAND MANAGEMENT MEASURES

CWC §10631 (e)

(e) Provide a description of the (wholesale) supplier’s water demand management measures. This description shall include all of the following:

(1)(B) The narrative pursuant to this paragraph shall include descriptions of the following water demand management measures:

(ii) Metering.

(iv) Public education and outreach.

(vi) Water conservation program coordination and staffing support.

(vii) Other demand management measures that have a significant impact on water use as measured in gallons per capita per day, including innovative measures, if implemented.

(2) For an urban wholesale water supplier, as defined in Section 10608.12, (provide) a narrative description of the items in clauses (ii), (iv), (vi), and (vii) of subparagraph (B) of paragraph (1), and a narrative description of its distribution system asset management and wholesale supplier assistance programs.

This chapter of the UWMP provides a summary of past and planned DMM implementation for Zone 7, as well as an overview of the expected water savings. This chapter also provides important context for the State’s MCCWL regulation, which establishes new water use efficiency standards and performance requirements that extend beyond the SB X7-7 framework.

9.1 Demand Management Measures for Wholesale Agencies

As discussed in **Chapter 6**, Zone 7 provides treated water supply to its retailers on a wholesale basis. As a wholesale agency, Zone 7 actively implements the following DMMs:

- Metering;
- Public education and outreach;
- Water Conservation Program coordination and staffing support;
- Wholesale Supplier Assistance Programs; and
- Asset management.

For each DMM above, the current program is described herein, followed by a description of how the DMM was implemented over the previous five years and plans for continued implementation.

As a wholesaler, Zone 7 does not have any reporting requirements under the MCCWL regulation, but provides regional coordination of conservation programs in the Tri-Valley area. For detailed descriptions of the individual conservation programs implemented by the retailers, see the 2025 UWMPs for California Water Service (Cal Water), the City of Pleasanton (Pleasanton), the City of Livermore (Livermore), and the DSRSD.

Zone 7 is committed to supporting California’s long-term conservation framework by: (1) supporting the reduction in indoor water use to continue to make progress towards the 42 gallons per capita per day (GPCD) target by 2030 specified by the MCCWL regulation, and (2) maintaining or reducing the outdoor water use component of water demand in the Tri-Valley. To meet these goals, Zone 7’s conservation program has largely focused on public outreach and education and rebate programs, as described below. Proper metering also supports conservation efforts.



9.1.1 Metering

Zone 7’s water deliveries are fully metered and meters are verified annually. All turnout facilities except three wholesale meters (Cal Water Turnout #7, Cal Water Turnout #8, and Livermore Turnout #8) are fully equipped with Supervisory Control and Data Acquisition (SCADA) and security alarms and are maintained by Zone 7 mechanical, electrical, and instrumentation staff. Maintenance is performed per the water supply contract with the receiving wholesale customer.

Zone 7 has metered its wholesale and retail water deliveries over the past five years and plans to continue this effort into the future.

9.1.2 Public Education and Outreach

A description of Zone 7’s public education and outreach programs, the implementation over the past five years, and plans for continued implementation are provided below.

Zone 7 collaborates on water conservation programs, including public education and outreach, with its retailers through the Tri-Valley Water Conservation Task Force, which is discussed in further detail in **Section 9.1.3**.

Zone 7’s outreach is conducted mainly through social media, events/workshops, a website dedicated to water-wise gardening, and the Zone 7 website which contains:

- Links to educational resources on water conservation;
- Information on upcoming workshops and events;
- Details about rebate programs, including informational brochures and application forms; and
- Landscaping and gardening tips

Zone 7 uses social media platforms such as Facebook and YouTube. Zone 7’s public education and outreach programs focusing on water conservation and water awareness include the annual and periodic activities listed in **Table 9-1**. Implementation of these programs over the past five years is also summarized in **Table 9-1**.

Table 9-1 Zone 7 Public Education and Outreach Programs

Program	Summary	Implementation
Bay Qualified Water Efficient Landscaper (QWEL)	<p>QWEL is a WaterSense professional certification program that provides water conservation professionals and the landscape workforce with a thorough understanding of sustainable landscaping and efficient irrigation principles and practices.</p> <p>The California Water Efficiency Partnership (CalWEP) is currently hosting a regional QWEL training program—sponsored by ten Bay Area water providers, including Zone 7—which is taught using the newly updated QWEL curriculum in both English and Spanish.</p>	<p>In 2023, Zone 7 trained a total of 19 graduates who have passed the QWEL EPA certification test, all of whom either live or work in Zone 7’s service area.</p> <p>Additionally, in 2025, Zone 7 trained a total of 18 graduates.</p>



Program	Summary	Implementation
Home & Garden Shows	Zone 7 staff attended these public events in Pleasanton to host a booth and/or participate in discussions on water quality, conservation, drought-tolerant gardens, etc.	Zone 7 participated in the Fall Home & Garden Show in 2021 and 2022, and the San Francisco Flower and Garden Show in 2024.
Living Arroyos*	Living Arroyos is a unique community engagement opportunity that renews and enhances urban stream and riparian (streamside) habitats and reconnects people and the arroyos in their community. Working with volunteers, Living Arroyos educates the public about the value of the watershed and how best to protect it through waterwise and native landscaping and other means.	Zone 7 organized volunteer events focused on stream clean-up and enhancement with 100-300+ volunteers each year, except in 2020 due to the pandemic. Between 2021 and 2025, 36 events were held, installing about 270 plants and 3,570 acorns, and removing 5,500 gallons of invasive species and 11,300 gallons of trash.
Media Campaigns	<p>Zone 7 hosts annual campaigns, such as:</p> <ul style="list-style-type: none"> • Fix a Leak Week - coordinating with EPA's annual Fix a Leak Week in March. • Water Awareness Month - including support for the East Bay's Bringing Back the Natives Garden Tour. <p>Zone 7 also launches specific campaigns, as needed, to boost awareness of rebate programs, water supply conditions, drought mandates, etc.</p>	Zone 7 drives participation, boosts social media engagement and promotes relevant conservation campaigns and water-saving tips using a variety of digital, print and broadcast media. All conservation specific media campaigns have garnered a combined 32.7 million impressions between 2021 and 2025. Note, this included a massive <i>Drought Alert</i> campaign during a mandatory water conservation period. In 2025, Zone 7 launched a campaign to promote increased rebate rates for lawn conversion and smart controller rebates.
Public Workshops	Zone 7 hosted or co-sponsored workshops on various topics, including efficient irrigation and other water conservation topics.	<p>Various workshops are hosted by Zone 7 and the retailers with focus on water awareness and waterwise gardening:</p> <ul style="list-style-type: none"> • Zone 7 Open House with speakers and hands-on activities • 7 Water-Wise Gardening & Irrigation Webinars & Workshops • 5 Lawn Conversion Events, which are hands-on events that teach residents how to



Program	Summary	Implementation
		remove lawn and convert it to water-efficient landscaping
Schools Program	The Zone 7 Schools Program has grown steadily over the years with some challenges during the COVID-19 pandemic. The Schools Program provides standards-based water-science education for students in kindergarten through high school. The program currently reaches thousands of students annually across 400+ water academy lessons.	Zone 7 provides Tri-Valley teachers free classroom programs covering water conservation, as well as other water topics. The Schools Program typically reaches 4,000-12,000 kindergartens through twelfth grade students each year. Lessons were adapted to be virtual, and the program continued during the pandemic.
Water Conservation Art Contest	Zone 7 Water Agency, in partnership with the Tri-Valley’s retail water providers, held Tri-Valley Water Conservation Art Contests for K–12 students.	The contest’s theme was to create artwork on a conservation-related topic. In 2023, the focus was on native landscapes, and in 2025, it was on transforming lawns into water-efficient landscapes. In 2025, over 280 student projects were submitted. Winners were recognized at Zone 7 Board meetings.
Student Science Fair Water Projects*	Zone 7 participates in school science and engineering fairs. Middle and high school are recognized at the Livermore Science Odyssey with three winners in the water sciences category recognized by the Zone 7 Board and given awards.	Every year, hundreds of Tri-Valley students participate in science fairs. Students are recognized by the Zone 7 Board for researching and developing exceptional water-related projects .
Career Development Fairs*	Zone 7 participates in career development fairs at the high schools and nearby Las Positas College.	Every year, Zone 7 engages local high school and college students to discuss the types of jobs and career paths at water utilities and public agencies.
Tri-Valley Water-Wise Gardening Website	The website was especially designed to showcase sustainable, climate-appropriate, and drought tolerant shrubs, trees and grass that thrive in the Tri-Valley area.	Zone 7 maintains this website, which provides information on how to design, install, and maintain a water-wise landscape. Approximately 7,500 site visits were recorded in 2024.
Garden by Number Landscape Design	To support water-wise landscaping, Zone 7 provides “Garden by Number” landscape design templates (with associated plant lists) intended to make it easier for customers to plan and implement efficient landscape conversions.	Zone 7 has four different garden designs on its website with plant lists for each one.



Program	Summary	Implementation
Zone 7 Newsletter	Zone 7 issues regular newsletters to customers including messaging on water conservation, flood preparedness, water rates, public meetings, and more.	Zone 7 sends out this newsletter monthly or bi-monthly, depending on current topics and events. There have been approximately 36,498 individual newsletters sent, with an average open rate of 30.28%.
Zone 7 Website	Zone 7 provides information on rebates, including the option to submit applications online, tips for water saving, downloadable activity sheets and water-wise videos in the Conservation Zone.	In 2021, Zone 7 reorganized and redesigned the website, condensing all conservation and rebate pages into a Conservation Zone section. Approximately 74k users have visited the Conservation Zone section of the website, resulting in approximately 113.5k page views.
Water conservation videos	Zone 7 provides educational videos featuring a character, “Water Wise Wendy,” who teaches simple ways to save water at home and in the yard. They help residents learn practical conservation tips like fixing leaks and reducing outdoor water use. In 2025, a new “Conservation Vibes” campaign was launched to promote new increased rebate amounts.	There has been approximately 987k video views of all conservation videos combined on YouTube.
NOTES: Programs denoted with an asterisk indicate that the outreach effort is not explicitly focused on conservation, although it helps educate the community about Zone 7 Water Agency and the role of ensuring reliable water supply and flood protection, and may cover water conservation as a possible topic.		

Zone 7’s public outreach and education efforts are ongoing and will continue to support retailers with water conservation compliance and promoting reduced water use by enhancing awareness of water efficiency, as well as rebates and resources for water waste prevention. As described in the table above, Zone 7 developed a new conservation outreach campaign in 2025 with refreshed outreach materials, a social media campaign, and videos. These were to inform the community about increased rates for household and business landscape rebates and smart controller rebates, as well as to promote other conservation rebates.

9.1.3 Water Conservation Program Coordination and Staffing Support

A description of Zone 7’s water conservation program coordination and staffing support, the implementation over the past five years, and plans for continued implementation is provided below.

The Tri-Valley Water Task Force (Task Force) was formed in 2005 and generally consists of Zone 7 and retailer conservation staff, as well as public outreach staff. The Task Force meets about six to eight times a year, as needed, to discuss and coordinate current and future conservation programs, legislative activities related to conservation and water use efficiency, and coordination regarding public outreach, events, and training activities. The Task Force also discusses ongoing efforts to promote water



conservation as a way of life within the Tri-Valley. While Zone 7 is not directly required to comply with retail water use efficiency requirements, the agency supports its retailers in meeting these requirements through regional conservation efforts, including public outreach, education programs, and rebate initiatives. With Zone 7's Conservation Coordinator active in state-wide and regional organizations and committees, the Task Force also serves as a main venue for information/knowledge exchange among the retailers. During the recent drought, the Task Force led the coordination of drought response activities, with more active participation from management.

Zone 7 has designated staff to actively develop, promote, enforce, and maintain water conservation programs. Key staff duties include:

- Tracking of water conservation regulations and industry developments
- Developing and managing rebate programs, processing applications, and communicating with customers and retailers
- Supporting/promoting the Bay QWEL sessions for water efficient landscaper training
- Supporting water conservation workshops and events as needed
- Coordinating and managing grant programs
- Coordinating with the retailers' water conservation representatives through the Tri-Valley Water Conservation Task Force
- Participating in California Water Efficiency Partnership
- Developing/coordinating public outreach and education workshops
- Evaluating and enhancing water conservation efforts and programs as needed

Zone 7 has continued to coordinate conservation program activities with the Retailers through the Tri-Valley Water Conservation Task Force. Zone 7 also utilizes several regional, state, and federal resources to implement its program such as the EPA's WaterSense program, Alliance for Water Efficiency, California Water Efficiency Partnership, Integrated Regional Water Management Program, and DWR committees/workgroups etc.

Over the past five years, Zone 7 staff have implemented robust conservation efforts and programs. During this time period, Zone 7 has spent approximately \$19,000 to \$182,000 per year on conservation program-related efforts.

Implementation of this DMM is a vital element of Zone 7's Water Conservation Program and will therefore continue. While positions and duties may shift, and Zone 7 may hire additional conservation staff as needed, Zone 7 staff will continue to coordinate closely with retailers and other organizations on conservation efforts.

9.1.4 Asset Management

As water infrastructure assets age, renewal and replacement become critical. Zone 7 utilizes an asset management process that systematically prioritizes rehabilitation and replacement and supports water conservation by optimizing the maintenance, repair, and replacement of infrastructure to reduce leaks, improve efficiency, and ensure sustainable use of water resources. To maintain a reliable and high-quality water supply, Zone 7's asset management strategy focuses on core framework areas such as long-range planning, life-cycle costing, proactive operations and maintenance, long-term funding strategies, and capital replacement plans.

Zone 7's Asset Management Plan (AMP) formally summarizes its asset management process and strategy by forecasting near-term renewal needs and long-term funding requirements through fiscal year



2057/2058. The AMP can be accessed through Zone 7's website here: [Financial Documents - Zone 7 Water Agency](#).

Zone 7's FY 2026–27 Ten-Year Water System Capital Improvement Plan (CIP) identifies and prioritizes infrastructure investments that support long-term water supply reliability, operational efficiency, and system resilience—key components of effective demand management. The CIP includes projects to renew and replace infrastructure reaching the end of its useful life, improve system monitoring and control, upgrade treatment processes to address PFAS, and expand water supply to meet future customer needs. By reducing system losses, improving operational flexibility, and ensuring reliable delivery of both imported and local supplies, these capital investments ensure Zone can meet existing and future demands under changing conditions.

9.1.5 Wholesale Supplier Assistance Programs

Zone 7 offers several rebate programs in cooperation with three of its Retailers (Livermore, Pleasanton, and DSRSD). Cal Water administers its own statewide rebate conservation program. Zone 7 provides funding for the rebates and assists with the retailers' rebate administration, including follow-up with applicants. Zone 7 coordinates with its retailers to offer rebate programs to promote water efficiency. After making water efficient improvements, applicants can receive a rebate to recover eligible associated costs.

Along with three of its Retailers (DSRSD, Livermore, and Pleasanton), Zone 7 currently jointly offers four rebate programs to encourage indoor and outdoor water savings: (1) Water-Efficient Landscape Conversion, (2) Smart Irrigation Controllers, (3) Pool Covers, and (4) High-Efficiency Clothes Washers. Cal Water oversees their own statewide conservation program and offers conservation programs within the City of Livermore. These programs can reduce the cost for customers to increase water efficiency, thereby reducing water demand. Each program is discussed below.

9.1.5.1 Water-Efficient Landscape Conversion

Customers who remove large sections of irrigated turf and convert the area to an approved water-wise landscape (e.g., drought-tolerant/low-water-use plantings and other qualifying materials) may qualify for a rebate. Effective October 1, 2025, Zone 7 increased the rebate rate for landscape conversions. The rebate is \$2 per square foot, up to \$3,000 for residential properties (single-family and multi-family) and up to \$20,000 for commercial properties (including industrial, institutional, and HOA [homeowner association] common areas). Projects require pre-approval; customers submit an application with a plant list and design for review prior to beginning work and may be subject to site visits/inspections before and after installation.

9.1.5.2 Smart Irrigation Controllers

Smart irrigation controllers (also referred to as weather-based/smart controllers) can reduce outdoor water use by automatically adjusting irrigation schedules using local weather data and/or soil moisture inputs. Effective October 1, 2025, Zone 7 increased the rebate rates for smart controllers. Zone 7 offers rebates covering 50% of the controller cost, up to \$125 for residential properties, and 50% of the cost up to \$3,000 for commercial properties (including industrial, institutional, and HOA common areas). Eligible controllers must be on EPA WaterSense's approved product list, and applications are submitted after installation (generally with proof of purchase and installation documentation).

From 2022-2023, Zone 7 and DSRSD worked on a pilot project to study the effectiveness of smart controllers. Twenty-six irrigation controllers were replaced for over a thousand homes. Total household water use was measured before and after the replacement, and the project demonstrated the effectiveness of smart controllers.



9.1.5.3 Pool Covers

Pool covers reduce evaporative losses and associated refill demand during warm months. Zone 7 and participating retailers offer a rebate of 50% of the pool cover cost, up to \$100, for qualifying purchases. Applications must be submitted within 60 days of purchase and typically require proof of purchase and a dated photo of the installed pool cover.

9.1.5.4 High-Efficiency Clothes Washers (HECW)

High-efficiency clothes washers reduce indoor water use relative to conventional models. Zone 7 and participating retailers offer rebates of up to \$200 for the purchase and installation of a qualifying ENERGY STAR® “Most Efficient” clothes washer (subject to program terms, including model eligibility and application timing).

9.1.5.5 Implementation over the Past Five Years

Over the past five years, Zone 7 coordinated with its retailers to provide \$372,800 in rebates for the above listed programs with 1,649 approved applications.

9.1.5.6 Plans for Continued Implementation

Zone 7 periodically updates its rebate conservation program based on market saturation conditions, funding availability, demand patterns, grant funding opportunities, regulations, and other factors. In 2025, Zone 7 conducted a comprehensive evaluation of its water conservation programs, and presented the results to its Board, including statistics on program successes. At this time, Zone 7 proposed increasing rebate rates for water-efficient landscapes and smart controllers to promote interest in these programs. Zone 7 will continue to periodically evaluate its conservation efforts and programs and make adjustments or enhancements as needed.

9.2 California Water Efficiency Partnership

Zone 7 is a participating member of the CalWEP, which was established in 2018 to combine expertise on California water issues, challenges, and opportunities and advance water efficiency both on the agency-wide and statewide level. CalWEP provides resources on multiple components of water efficiency and conservation program, including best practices, qualified vendors, and funding sources. CalWEP also provides resources for the retailers’ outreach and implementation of the MCCWL. CalWEP also provides opportunities for networking and partnerships to improve water efficiency and conservation.



10 PLAN ADOPTION, SUBMITTAL, AND IMPLEMENTATION

CWC §10621 (b)

Every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days before the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. The urban water supplier may consult with, and obtain comments from, any city or county that receives notice pursuant to this subdivision.

This chapter provides information on a public hearing, the adoption process for the UWMP and WSCP, the adopted UWMP and WSCP submittal process, plan implementation, and the process for amending the adopted UWMP or WSCP for Zone 7.

10.1 Inclusion of All 2025 Data

This UWMP includes water use and planning data for the entire calendar year of 2025, per the 2025 UWMP Guidebook.

10.2 Notice of Public Hearing

CWC §10642

Each urban water supplier shall encourage the active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of both the plan and the water shortage contingency plan. Prior to adopting either, the urban water supplier shall make both the plan and the water shortage contingency plan available for public inspection and shall hold a public hearing or hearings thereon. Prior to any of these hearings, notice of the time and place of the hearing shall be published within the jurisdiction of the publicly owned water supplier pursuant to Section 6066 of the Government Code. The urban water supplier shall provide notice of the time and place of a hearing to any city or county within which the supplier provides water supplies. Notices by a local public agency pursuant to this section shall be provided pursuant to Chapter 17.5 (commencing with Section 7290) of Division 7 of Title 1 of the Government Code. A privately owned water supplier shall provide an equivalent notice within its service area. After the hearing or hearings, the plan or water shortage contingency plan shall be adopted as prepared or as modified after the hearing or hearings.

Prior to adopting the Plan, Zone 7 held a public hearing to present information on its UWMP and WSCP on May 20, 2026.

Relevant entities were notified of the UWMP and WSCP review at least 60 days prior to the public hearing, including: (1) cities and counties, and (2) the public. These same entities were noticed again with the specific date, time and location of the hearing at least two weeks prior to the public hearing. The notice to the public, as specified in CGC §6066, and letters to relevant agencies can be found in **Appendix C**, respectively.

10.2.1 Notice to Cities and Counties

CWC §10631 (a) *A plan shall be adopted in accordance with this chapter that shall do all of the following:*

Urban water suppliers shall coordinate with local or regional land use authorities to determine the most appropriate land use information, including, where appropriate, land use information obtained from local or regional land use authorities, as developed pursuant to Article 5 (commencing with Section 65300) of Chapter 3 of Division 1 of Title 7 of the Government Code.



Table 10-1 lists the cities and counties that were notified. Copies of these letters are provided in **Appendix C**.

Table 10-1 Notification to Cities and Counties (DWR Table 10-1)

<input type="checkbox"/>	Supplier has notified more than 10 cities or counties in accordance with Water Code Sections 10621 (b) and 10642. 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.	
<input checked="" type="checkbox"/>	Supplier has notified 10 or fewer cities or counties. Complete the table below.	
City Name	60 Day Notice	Notice of Public Hearing
Dublin	Yes	Yes
Livermore	Yes	Yes
Pleasanton	Yes	Yes
San Ramon	Yes	Yes
County Name	60 Day Notice	Notice of Public Hearing
Alameda County	Yes	Yes
Contra Costa County	Yes	Yes
NOTES:		

10.2.2 Notice to the Public

Notification to the public and to cities and counties also provided instructions on how to view the UWMP and WSCP prior to the hearing, the revision schedule, and contact information of the UWMP and WSCP preparer. A copy of this notice is included in **Appendix C**.



10.3 Public Hearing and Adoption

CWC §10608.26

(a) In complying with this part, an urban retail water supplier shall conduct at least one public hearing to accomplish all of the following:

(1) Allow community input regarding the urban retail water supplier’s implementation plan for complying with this part.

(2) Consider the economic impacts of the urban retail water supplier’s implementation plan for complying with this part.

(3) Adopt a method, pursuant to subdivision (b) of Section 10608.20, for determining its urban water use target.

CWC §10621 (b)

Every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days before the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. The urban water supplier may consult with, and obtain comments from, any city or county that receives notice pursuant to this subdivision.

The deadline for public comments on the UWMP and WSCP was **May 20, 2026**, the date of the public hearing. The final Plan was formally adopted by Zone 7’s Board on **June 17, 2026**, and was submitted to the California DWR within 30 days of approval. **Appendix E** presents a copy of the signed Resolution of Plan Adoption. **Appendix C** contains the following:

- Letters sent to and received from various agencies regarding this Plan, and
- Correspondence between Zone 7 and participating agencies.

10.4 Plan Submittal

CWC §10621 (e)

(1) Each urban water supplier shall update and submit its 2025 plan to the department by July 1, 2026.

CWC §10635 (c)

The urban water supplier shall provide that portion of its urban water management plan prepared pursuant to this article to any city or county within which it provides water supplies no later than 60 days after the submission of its urban water management plan.

CWC §10644 (a)

(1) An urban water supplier shall submit to the department, the California State Library, and any city or county within which the supplier provides water supplies a copy of its plan no later than 30 days after adoption. Copies of amendments or changes to the plans shall be submitted to the department, the California State Library, and any city or county within which the supplier provides water supplies within 30 days after adoption.

(2) The plan, or amendments to the plan, submitted to the department pursuant to paragraph (1) shall be submitted electronically and shall include any standardized forms, tables, or displays specified by the department.

This UWMP and WSCP were submitted to DWR within 30 days of adoption and by the 1 July 2026 deadline. The submittal was done electronically through Water Use Efficiency Data Portal, an online submittal tool. The adopted UWMP and WSCP were also sent to the California State Library and to the cities and counties listed in **Table 10-1** no later than 30 days after adoption.



10.5 Public Availability

CWC §10645

(a) Not later than 30 days after filing a copy of its plan with the department, the urban water supplier and the department shall make the plan available for public review during normal business hours.

(b) Not later than 30 days after filing a copy of its water shortage contingency plan with the department, the urban water supplier and the department shall make the plan available for public review during normal business hours.

On or about **April 15, 2026**, an electronic version of the draft UWMP and WSCP were made available for public review by visiting: **[insert agency or SharePoint link]**

10.6 Amending an Adopted UWMP or Water Shortage Contingency Plan

CWC §10644 (b)

If an urban water supplier revises its water shortage contingency plan, the supplier shall submit to the department a copy of its water shortage contingency plan prepared pursuant to subdivision (a) of Section 10632 no later than 30 days after adoption, in accordance with protocols for submission and using electronic reporting tools developed by the department.

If the UWMP or WSCP are amended, each of the steps for notification, public hearing, adoption and submittal will also be followed for the amended document.



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Appendix A.
Reduced Delta Reliance



ZONE 7 WATER AGENCY

Reduced Reliance on the Delta

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Reduce Reliance on the Delta

Zone 7 Water Agency

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The purpose of this document is to demonstrate compliance with the Sacramento-San Joaquin Delta Reform Act of 2009. The Sacramento-San Joaquin Delta Reform Act of 2009 is described below, followed by an analysis of Zone 7 Water Agency’s (Zone 7) reduced reliance in accordance with State protocols and expected outcomes for reduced reliance on the Delta.

1 SACRAMENTO-SAN JOAQUIN DELTA REFORM ACT OF 2009

Under the Sacramento-San Joaquin Delta Reform Act of 2009, state and local public agencies proposing a “covered action” in the Sacramento-San Joaquin Delta (Delta) must submit a written certification of consistency to the Delta Stewardship Council as to whether the covered action is consistent with applicable Delta Plan policies. Covered actions include a multi-year water transfer, conveyance facility, or new diversion that involves transferring water through, exporting water from, or using water in the Delta. Anyone may appeal a certification of consistency, and if the Delta Stewardship Council grants the appeal, the covered action may not be implemented until the agency proposing the covered action submits a revised certification of consistency, and either no appeal is filed, or the Delta Stewardship Council denies the subsequent appeal.

An urban water supplier that anticipates participating in or receiving water from a proposed covered action is required to provide information in their 2015 and subsequent Urban Water Management Plans (UWMPs) that can then be used in the covered action process to demonstrate consistency with Delta Plan Policy WR P1, Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance (WR P1).

WR P1 details what is needed for a covered action to demonstrate consistency with reduced reliance on the Delta and improved regional self-reliance. WR P1 subsection (a) states that:

- (a) Water shall not be exported from, transferred through, or used in the Delta if all of the following apply:*
 - (1) One or more water suppliers that would receive water as a result of the export, transfer, or use have failed to adequately contribute to reduced reliance on the Delta and improved regional self-reliance consistent with all of the requirements listed in paragraph (1) of subsection (c);*
 - (2) That failure has significantly caused the need for the export, transfer, or use; and*
 - (3) The export, transfer, or use would have a significant adverse environmental impact in the Delta.*

WR P1 subsection (c)(1) further defines what adequately contributing to reduced reliance on the Delta means in terms of (a)(1) above.

- (c)(1) Water suppliers that have done all the following are contributing to reduced reliance on the Delta and improved regional self-reliance and are therefore consistent with this policy:*
 - (A) Completed a current Urban or Agricultural Water Management Plan (Plan) which has been reviewed by the California Department of Water Resources for compliance with the applicable requirements of Water Code Division 6, Parts 2.55, 2.6, and 2.8;*
 - (B) Identified, evaluated, and commenced implementation, consistent with the implementation schedule set forth in the Plan, of all programs and projects included in the Plan that are locally cost effective and technically feasible which reduce reliance on the Delta; and*
 - (C) Included in the Plan, commencing in 2015, the expected outcome for measurable reduction in Delta reliance and improvement in regional self-reliance. The expected outcome for measurable reduction in Delta reliance and improvement in regional self-reliance shall be reported in the Plan as the reduction in the amount of water used, or in the percentage of water used, from the Delta watershed. For the purposes of reporting, water efficiency is considered a new source of water supply, consistent with Water Code section 1011(a).*



The analysis and documentation provided below include all of the elements described in WR P1(c)(1) that need to be included in a water supplier’s UWMP to support a certification of consistency for a future covered action. Including this document as an appendix in the 2015 and subsequent Urban Water Management Plans fulfills the requirements of WR P1 subsection (c)(1) Paragraph A.

2 REDUCED RELIANCE ANALYSIS

The data used in this analysis represent the regional efforts of Zone 7 to serve its customers in the Tri-Valley, including municipal and industrial (M&I) retailers (California Water Service, Dublin San Ramon Services District, City of Livermore, and City of Pleasanton), M&I direct retail customers, and untreated water customers. The analysis was coordinated with Zone 7’s retailers as part of the UWMP coordination process as described in the 2025 UWMP. In accordance with UWMP requirements, Zone 7’s retailers report their demand and supply data for their respective service areas in their respective UWMPs. This appendix reports demands on Zone 7 and supplies served by Zone 7. The retailers report their other sources of supplies used to supplement Zone 7 supplies in their UWMPs as applicable (e.g., recycled water, groundwater pumped by the retailer). Zone 7 provided the info presented here to the retailers so they can appropriately represent the nature of their wholesale supplies from Zone 7, and those supplies’ contributions to reduced Delta reliance.

The methodology used to determine Zone 7’s reduced Delta reliance and improved regional self-reliance is consistent with the approach detailed in Appendix C of Department of Water Resources’ (DWR) Urban Water Management Plan Guidebook 2025 (Guidebook Appendix C) issued in January 2026, including the use of narrative justifications for the accounting of supplies and the documentation of specific data sources. General assumptions include:

- All data were obtained from the current 2025 UWMP or previously adopted UWMPs and represent average or normal water year conditions.
- All analyses were conducted at the wholesale level, focusing on Zone 7’s demands and sources of supplies served to the Tri-Valley.
- As described in Chapter 6 of the 2025 UWMP, Zone 7 is currently pursuing a number of water supply and storage alternatives to bolster water system reliability while reducing reliance on the Delta. The future projects described in Chapter 6 and the demand management measures described in Chapter 9 fulfill the requirements of WR P1 subsection (c)(1) Paragraph B. For the purposes of the 2025 UWMP, a representative future water supply portfolio was selected; that portfolio is reflected in this analysis.

Tables 1 through 4 present the analysis of Zone 7’s reduced Delta reliance using DWR’s spreadsheet tool and fulfill the requirements of WR P1 subsection (c)(1) Paragraph C. Descriptions of the various inputs of the analysis are provided below:

- **Baseline (2010) and 2015-2050 Conditions** – The analysis uses a normal water year representation of 2010 as the baseline, which is consistent with the approach described in DWR’s Guidebook. Data for the 2010 baseline were taken from the 2010 UWMP (Table 9-11). To evaluate conditions relative to the baseline, actual conditions for 2015, 2020, and 2025 from Table 4-1 of the corresponding UWMPs are presented. Normal year projections for 2030 through 2050 from the 2025 UWMP are then subsequently used. In its 2025 UWMP, Zone 7 does not include operational storage—groundwater recharge and State Water Project (SWP) carryover—in its current or projected demands. To maintain consistency with baseline and 2015 conditions, operational storage has been added to actual (2025) and projected (2030-2050) demands presented in Zone 7’s 2025 UWMP.
- **Service Area Water Demands with Water Use Efficiency Accounted For** – These values reflect Zone 7’s actual and projected water use, including water placed in storage as applicable.



Section 2
REDUCED RELIANCE ANALYSIS

- **Non-Potable Water Demands** – This item includes untreated water demands, raw water losses, and water placed in storage.
- **Water Supplies Contributing to Regional Self-Reliance**
 - **Water Use Efficiency** – This amount is calculated by DWR’s spreadsheet tool based on Zone 7’s baseline demand, actual demands, and expected future demands. The value shown is the reduction in per capita water demand from the baseline (2010) multiplied by the projected population for each. Because the Tri-Valley has successfully reduced potable water demands over time, conserved water is contributing significantly to Zone 7’s regional self-reliance.
 - **Conjunctive Use Projects** – Zone 7’s use of operational storage in the Main Basin is included here. The Main Basin is recharged with SWP water and local Arroyo Valle water. This water is locally available for use during normal operations, drought, and emergencies.
 - **Local and Regional Water Supply and Storage Projects** – This includes actual use and future projected use of local Arroyo Valle water.
 - **Other Programs and Projects that Contribute to Regional Self-Reliance** – As discussed in Chapter 6 of the 2025 UWMP, Zone 7 has included Sites Reservoir (2,185 acre-feet per year [AFY] of average yield) as a representative future supply. As stated in a letter from the Delta Stewardship Council to the Sites Project Authority on May 2, 2018, “Sites Reservoir would be located upstream from the Delta, outside the legal Delta boundary” and “does not meet the definition of a covered action”; consequently, Sites Reservoir has been categorized as a water supply contributing to regional self-reliance.
- **Water Supplies from the Delta Watershed**
 - **CVP/SWP Contract Supplies** – Zone 7 derives a large portion of its supplies from the SWP system, as reflected in the analysis.
 - **Other Water Supplies from the Delta Watershed** – SWP carryover water and actual recovered water from the Kern County groundwater banks delivered through the Delta have been included here. Note that future projections do not include water from the banks because that supply is not part of normal year operations.



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REDUCED RELIANCE ANALYSIS

Table 1 Optional Calculation of Water Use Efficiency (DWR Table C-1)

Service Area Water Use Efficiency Demands (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045	2050 (Optional)
Service Area Water Demands with Water Use Efficiency Accounted For	66,200	47,900	55,040	56,000	71,500	86,300	89,300	91,100	91,000
Non-Potable Water Demands	20,000	22,500	16,110	21,470	35,100	47,100	48,100	48,100	48,100
Potable Service Area Demands with Water Use Efficiency Accounted For	46,200	25,400	38,930	34,530	36,400	39,200	41,200	43,000	42,900

Total Service Area Population	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045	2050 (Optional)
Service Area Population	216,000	238,600	265,811	267,000	288,000	310,000	330,000	339,000	341,000

Water Use Efficiency Since Baseline (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045	2050 (Optional)
Per Capita Water Use (GPCD)	191	95	131	115	113	113	111	113	112
Change in Per Capita Water Use from Baseline (GPCD)		(96)	(60)	(75)	(78)	(78)	(79)	(78)	(79)
Estimated Water Use Efficiency Since Baseline		25,634	17,924	22,578	25,200	27,106	29,383	29,508	30,036



Section 2
REDUCED RELIANCE ANALYSIS

Table 2 Calculation of Service Area Water Demands Without Water Use Efficiency (DWR Table C-2)

Total Service Area Water Demands (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045	2050 (Optional)
Service Area Water Demands with Water Use Efficiency Accounted For	66,200	47,900	55,040	56,000	71,500	86,300	89,300	91,100	91,000
Reported Water Use Efficiency or Estimated Water Use Efficiency Since Baseline		25,634	17,924	22,578	25,200	27,106	29,383	29,508	30,036
Service Area Water Demands without Water Use Efficiency Accounted For	66,200	73,534	72,964	78,578	96,700	113,406	118,683	120,608	121,036



Section 2
REDUCED RELIANCE ANALYSIS

Table 3 Calculation of Supplies Contributing to Regional Self-Reliance (DWR Table C-3)

Water Supplies Contributing to Regional Self-Reliance (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045	2050 (Optional)
Water Use Efficiency	-	25,634	17,924	22,578	25,200	27,106	29,383	29,508	30,036
Water Recycling									
Stormwater Capture and Use									
Advanced Water Technologies									
Conjunctive Use Projects	9,200	2,000	12,000	7,520	20,000	30,000	30,000	30,000	30,000
Local and Regional Water Supply and Storage Projects	7,100	2,860	8,700	8,000	4,000	4,000	4,000	4,000	4,000
Other Programs and Projects that Contribute to Regional Self-Reliance					2,185	2,185	2,185	2,185	2,185
Water Supplies Contributing to Regional Self-Reliance	16,300	30,494	38,624	38,098	51,385	63,291	65,568	65,693	66,221
Service Area Water Demands without Water Use Efficiency (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045	2050 (Optional)
Service Area Water Demands without Water Use Efficiency Accounted For	66,200	73,534	72,964	78,578	96,700	113,406	118,683	120,608	121,036
Change in Regional Self Reliance (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045	2050 (Optional)
Water Supplies Contributing to Regional Self-Reliance	16,300	30,494	38,624	38,098	51,385	63,291	65,568	65,693	66,221
Change in Water Supplies Contributing to Regional Self-Reliance		14,194	22,324	21,798	35,085	46,991	49,268	49,393	49,921



Section 2
REDUCED RELIANCE ANALYSIS

Percent Change in Regional Self Reliance (As Percent of Demand w/out WUE)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045	2050 (Optional)
Percent of Water Supplies Contributing to Regional Self-Reliance	24.6%	41.5%	52.9%	48.5%	53.1%	55.8%	55.2%	54.5%	54.7%
Change in Percent of Water Supplies Contributing to Regional Self-Reliance		16.8%	28.3%	23.9%	28.5%	31.2%	30.6%	29.8%	30.1%



Section 2
REDUCED RELIANCE ANALYSIS

Table 4 Calculation of Reliance on Water Supplies from the Delta Watershed (DWR Table C-4)

Water Supplies from the Delta Watershed (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045	2050 (Optional)
CVP/SWP Contract Supplies	51,400	16,100	16,100	26,320	36,574	36,574	36,574	36,574	36,574
Delta/Delta Tributary Diversions									
Transfers and Exchanges	4,645	380	7,100	-	-	-	-	-	-
Other Water Supplies from the Delta Watershed		26,560	11,800	9,160	7,000	9,000	10,000	10,000	10,000
Total Water Supplies from the Delta Watershed	56,045	43,040	35,000	35,480	43,574	45,574	46,574	46,574	46,574

Service Area Water Demands without Water Use Efficiency (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045	2050 (Optional)
Service Area Water Demands without Water Use Efficiency Accounted For	66,200	73,534	72,964	78,578	96,700	113,406	118,683	120,608	121,036

Change in Supplies from the Delta Watershed (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045	2050 (Optional)
Water Supplies from the Delta Watershed	56,045	43,040	35,000	35,480	43,574	45,574	46,574	46,574	46,574
Change in Water Supplies from the Delta Watershed		(13,005)	(21,045)	(20,565)	(12,471)	(10,471)	(9,471)	(9,471)	(9,471)



Section 2
REDUCED RELIANCE ANALYSIS

Percent Change in Supplies from the Delta Watershed (As a Percent of Demand w/out WUE)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045	2050 (Optional)
Percent of Water Supplies from the Delta Watershed	84.7%	58.5%	48.0%	45.2%	45.1%	40.2%	39.2%	38.6%	38.5%
Change in Percent of Water Supplies from the Delta Watershed		-26.1%	-36.7%	-39.5%	-39.6%	-44.5%	-45.4%	-46.0%	-46.2%



3 EXPECTED OUTCOMES FOR REDUCED RELIANCE ON THE DELTA

As stated in WR P1(c)(1)(C), the policy requires that, commencing in 2015, UWMPs include expected outcomes for measurable reduction in Delta reliance and improved regional self-reliance. WR P1 further states that those outcomes shall be reported in the UWMP as the reduction in the amount of water used, or in the percentage of water used, from the Delta.

The following provides a summary of the near-term (2030) and long-term (2050) expected outcomes for Zone 7's Delta reliance and regional self-reliance based on the assumptions described in the previous section and DWR's analysis tool. The results show that Zone 7 is measurably reducing reliance on the Delta and improving regional self-reliance, based on the percentage of Zone 7's water supplies from the Delta Watershed.

Expected Outcomes for Regional Self-Reliance

- Near-term (2030) – Normal water year regional self-reliance is expected to increase by approximately 35,100 AFY from the 2010 baseline (see Table 3). Conserved water and conjunctive use project water are the major sources of this increase.
- Long-term (2050) – Normal water year regional self-reliance is expected to increase by approximately 49,900 AFY from the 2010 baseline (see Table 3). Conserved water and conjunctive use project water are major contributors to this increase, supplemented by Sites Reservoir and local surface water.

Expected Outcomes for Percent of Water Supplies from the Delta Watershed

- Near-term (2030) – Normal water year reliance on supplies from the Delta watershed is expected to decrease by 40 percent relative to the 2010 baseline (see Table 4).
- Long-term (2050) – Normal water year reliance on supplies from the Delta watershed is expected to decrease by 46 percent relative to the 2010 baseline (see Table 4).

Appendix B.
UWMP Checklist

Retail (x = required)	Wholesale (x = required)	Order	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	Relevant Submittal Table	2025 UWMP Location
x	x	1	Chapter 1	10615	A plan shall describe and evaluate sources of supply, reasonable and practical efficient uses, reclamation and demand management activities.	Introduction and overview	n/a	Chapter 1
x	x	1	Chapter 1	10630.5	Each plan shall include a simple description of the Supplier's plan including water availability, future requirements, a strategy for meeting needs, and other pertinent information. Additionally, a Supplier may also choose to include a simple description at the beginning of each chapter.	Plan preparation	n/a	Executive Summary
x	x	2.1	Section 2.1	10620(b)	Every person that becomes a Supplier shall adopt UWMP within one year after it has become a Supplier.	Plan preparation	n/a	Section 2.1
x	x	2.5	Section 2.5	10644	Supplier shall report if this UWMP is an individual UWMP and whether the Supplier belongs to a regional UWMP or regional alliance.	Plan preparation	2-2	Section 2.2
x	x	2.5	Section 2.5	10644	Supplier shall report whether the data is in fiscal or calendar years and the units of measure used for reporting water volumes.	Plan preparation	2-3	Section 2.3
x	x	2.4	Section 2.4	10642	Provide supporting documentation that the Supplier has encouraged active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan and contingency plan.	Plan preparation	n/a	Section 2.4.2 & 2.4.4
x	x	2.4	Section 2.4.2	10620(d)(3)	Coordinate the preparation of its plan with other appropriate agencies in the area, including other Suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.	Plan preparation	n/a	Section 2.4.2
n/a	x	2.4	Section 2.4.1	10631(h)	Wholesale Suppliers will provide their Suppliers with identification and quantification of the existing and planned sources of water available from the Wholesale Supplier to the Supplier during various water year types.	Plan preparation	2-4 W	Section 2.4.1
x	x	3	Chapter 3.0	10631(a)	Describe the Supplier service area.	System description	n/a	Section 3.1
x	x	3.3	Section 3.3	10631(a)	Describe the climate of the Supplier's service area.	System description	n/a	Section 3.4
x	x	3.4	Section 3.4.1	10631(a)	Provide the current and projected service area populations for 2030, 2035, 2040, 2045 and optionally 2050.	System description	3-1	Section 3.3
x	x	3.4	Section 3.4.2	10631(a)	Describe other social, economic, and demographic factors affecting the Supplier's water management planning.	System description	n/a	Section 3.3.1
x	x	3.5	Section 3.5	10631(a)	Describe the land uses within the service area... include the current and projected land uses within the existing or anticipated service area affecting the Supplier's water management planning. Describe the land uses within the service area.	System description and baselines	n/a	Section 3.2
x	Optional	4.2	Sections 4.2.3 and 4.2.4	10631(d)(1)	Quantify past, current, and projected water use, identifying the uses among water use sectors.	System water use	4-1 and 4-2	Section 4.1, 4.2
x	Optional	4.3	Section 4.3.1	10631(d)(3)(A)	Report the distribution system water loss for each of the five years preceding the plan update.	System water use	4-5	Section 4.1.1
x	x	4.2	Section 4.2.5.6	10635(b)	Demands under climate change considerations must be included as part of the drought risk assessment.	System water use	n/a	Section 4.2.3 & Section 4.3
n/a	x	5.1	Section 5.1	10608.36	Wholesale Suppliers shall include an assessment of present and proposed future measures, programs, and policies to help their Retail Suppliers achieve targeted water use reductions.	Baselines and targets	n/a	Section 5.1 & Section 9.1
x	x	6.1	Section 6.1	10631(b)(2)	When multiple sources of water supply are identified, describe the management of each supply in relationship to other identified supplies.	System supplies	n/a	Section 6.2
x	x	6.1	Sections 6.1 and 6.2	10631(b)(1)	Provide a discussion of anticipated supply availability under a normal, single dry year, and a drought lasting five years, as well as more frequent and severe periods of drought, including changes in supply due to climate change.	System supplies	n/a	Section 7.3
x	x	6.2	Section 6.2.2	10631(b)(4)(C)	Indicate whether groundwater is an existing or planned source of water available to the Supplier. If groundwater is identified as an existing or planned source of water... (include) a detailed description and analysis of the location, amount and sufficiency of groundwater pumped by the Supplier for the past five years.	Water supplies and recycled water	6-1	Section 6.2.2
x	x	6.2	Section 6.2.2	10631(b)(4)(A)	Indicate whether a groundwater sustainability plan or groundwater management plan has been adopted by the Supplier or if there is any other specific authorization for groundwater management. Include a copy of the plan or authorization.	System supplies	n/a	Section 6.2.2.1
x	x	6.2	Section 6.2.2	10631(b)(4)(B)	Describe the groundwater basin.	System supplies	n/a	Section 6.2.2.1
x	x	6.2	Section 6.2.2	10631(b)(4)(B)	Indicate if the basin has been adjudicated and include a copy of the court order or decree and a description of the amount of water the Supplier has the legal right to pump.	System supplies	n/a	Section 6.2.2.1
x	x	6.2	Section 6.2.2	10631(b)(4)(B)	For unadjudicated basins... (include) information as to whether DWR has identified the basin as a high- or medium-priority basin in the most current official departmental bulletin...	Water supplies and recycled water	n/a	Section 6.2.2.1
x	x	6.2	Section 6.2.2	10631(b)(4)(B)	For unadjudicated basins... describe efforts by the Supplier to coordinate with sustainability or groundwater agencies to achieve sustainable groundwater conditions.	Water supplies and recycled water	n/a	Section 6.2.2.1
x	x	6.2	Section 6.2.2.	10631(b)(4)(C)	If groundwater is identified as an existing or planned source of water... (include) a detailed description and analysis of the location, amount and sufficiency of groundwater pumped by the Supplier for the past five years.	System supplies	n/a	Section 6.2.2.5
x	x	6.2	Section 6.2.2	10631(b)(4)(D)	Provide a detailed description and analysis of the amount and location of groundwater that is projected to be pumped.	System supplies	6-9	Section 6.2.2.6 & Section 6.2.10
x	x	6.1	Section 6.1	10631(b)	Identify and quantify the existing and planned sources of water available for 2025, 2030, 2035, 2040, 2045 and optionally 2050.	System supplies	6-8 and 6-9	Section 6.2.10
x	x	6.2	Section 6.2.7	10631(c)	Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.	System supplies	n/a	Section 6.2.8
x	x	6.2	Section 6.2.5	10633(b)	Describe the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.	System supplies (recycled water)	6-3	Section 6.2.6.2
x	x	6.2	Section 6.2.5	10633(c)	Describe the recycled water currently being used in the Supplier's service area.	System supplies (recycled water)	6-4	Section 6.2.6.3
x	x	6.2	Section 6.2.5	10633(d)	Describe and quantify the potential uses of recycled water and provide a determination of the technical and economic feasibility of those uses.	System supplies (recycled water)	6-4	Section 6.2.6 & Section 6.2.9.1.2
x	x	6.2	Section 6.2.5	10633(e)	Describe the projected use of recycled water within the Supplier's service area at the end of 5, 10, 15, and 20 years, and describe the actual use of recycled water in comparison to uses previously projected.	System supplies (recycled water)	6-4 and 6-5	Section 6.2.6.3
x	x	6.2	Section 6.2.5	10633(f)	Describe the actions that may be taken to encourage the use of recycled water and the projected results of these actions in terms of acre-feet of recycled water used per year.	System supplies (recycled water)	6-6	N/A (Table 6-6 only for retailers)
x	x	6.2	Section 6.2.5	10633(g)	Provide a plan for optimizing the use of recycled water in the Supplier's service area.	System supplies (recycled water)	n/a	Section 6.2.6.1 & Section 6.2.9.1.2
x	x	6.2	Section 6.2.6	10631(g)	Describe desalinated water project opportunities for long-term supply.	System supplies	6-7	Section 6.2.7

Retail (x = required)	Wholesale (x = required)	Order	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	Relevant Submittal Table	2025 UWMP Location
x	x	6.2	Section 6.2.10	10631(f)	Describe the expected future water supply projects and programs that may be undertaken by the water Supplier to address water supply reliability in average, single-dry, and for a period of drought lasting five consecutive water years.	System supplies	6-7	Section 6.2.9
x	x	6.3	Section 6.3 and Appendix O	10631.2(a)	The UWMP must include energy information, as stated in the code, that a Supplier can readily obtain.	System suppliers, energy intensity	O-1A, O-1B, O-1C, and O-2	Section 6.3
x		7.1	Section 7.1	10634	Provide information on the quality of existing sources of water available to the Supplier and the manner in which water quality affects water management strategies and supply reliability.	Water supply reliability assessment	n/a	Section 7.1.2, Section 7.1.1.1.2, Section 7.1.1.2
x	x	7.2	Section 7.2	10635(a)	Service Reliability Assessment: Assess the water supply reliability during normal, dry, and a drought lasting five consecutive water years by comparing the total water supply sources available to the Supplier with the total projected water use over the next 20 years.	Water supply reliability assessment	7-2, 7-3, and 7-4	Section 7.3
x	x	7.2	Section 7.2.3	10620(f)	Describe water management tools and options to maximize resources and minimize the need to import water from other regions.	Water supply reliability assessment	n/a	Section 7.4
x	x	7.3	Section 7.3	10635(b)	Provide a drought risk assessment as part of information considered in developing the demand management measures and water supply projects.	Water supply reliability assessment	n/a	Section 7.5
x	x	7.3	Section 7.3	10635(b)(1)	Include a description of the data, methodology, and basis for one or more supply shortage conditions that are necessary to conduct a drought risk assessment for a drought period that lasts five consecutive years.	Water supply reliability assessment	n/a	Section 7.5.1
x	x	7.3	Section 7.3	10635(b)(2)	Include a determination of the reliability of each source of supply under a variety of water shortage conditions.	Water supply reliability assessment	n/a	Section 7.5.2
x	x	7.3	Section 7.3	10635(b)(3)	Include a comparison of the total water supply sources available to the Supplier with the total projected water use for the drought period.	Water supply reliability assessment	7-5	Section 7.5.3
x	x	7.3	Section 7.3	10635(b)(4)	Include considerations of the historical drought hydrology, plausible changes on projected supplies and demands under climate change conditions, anticipated regulatory changes, and other locally applicable criteria.	Water supply reliability assessment	n/a	Section 7.5.1
x	x	8	Chapter 8	10632(a)	Provide a water shortage contingency plan (WSCP) with specified elements below.	Water shortage contingency planning	n/a	Appendix D
x	x	8	Chapter 8	10632(a)(1)	Provide an analysis of water supply reliability (from Guidebook Chapter 7) in the WSCP.	Water shortage contingency planning	n/a	Appendix D, Section 1
x	x	8.2	Section 8.2	10632(a)(2)(A)	Provide the written decision-making process and other methods that the Supplier will use each year to determine its water reliability.	Water shortage contingency planning	n/a	Appendix D, Section 2.2
x	x	8.2	Section 8.2	10632(a)(2)(B)	Provide data and methodology to evaluate the Supplier's water reliability for the current year and one dry year pursuant to factors in the code.	Water shortage contingency planning	n/a	Appendix D, Section 2.1
x	x	8.3	Section 8.3	10632(a)(3)(A)	Define six standard water shortage levels of 10%, 20%, 30%, 40%, 50% shortage, and greater than 50% shortage. These levels shall be based on supply conditions, including percent reductions in supply, changes in groundwater levels, changes in surface elevation, or other conditions. The shortage levels shall also apply to a catastrophic interruption of supply.	Water shortage contingency planning	n/a	Appendix D, Section 3
x	x	8.3	Section 8.3	10632(a)(3)(B)	Suppliers with an existing WSCP that uses different water shortage levels must cross reference their categories with the six standard categories.	Water shortage contingency planning	8-1	Appendix D, Section 3
x	x	8.4	Section 8.4	10632(a)(4)(A)	Suppliers with WSCPs that align with the defined shortage levels must specify locally appropriate supply augmentation actions.	Water shortage contingency planning	8-2	Appendix D, Section 4.1
x	x	8.4	Section 8.4	10632(a)(4)(B)	Specify locally appropriate demand reduction actions to adequately respond to shortages.	Water shortage contingency planning	8-3	Appendix D, Section 4.2
x	x	8.4	Section 8.4	10632(a)(4)(C)	Specify locally appropriate operational changes.	Water shortage contingency planning	8-2	Appendix D, Section 4.4
x	x	8.4	Section 8.4	10632(a)(4)(D)	Specify additional mandatory prohibitions against specific water use practices that are in addition to State-mandated prohibitions are appropriate to local conditions.	Water shortage contingency planning	Table 8-3	Appendix D, Section 4.3
x	x	8.4	Section 8.4	10632(a)(4)(E)	Estimate the extent to which the gap between supplies and demand will be reduced by implementation of the action.	Water shortage contingency planning	8-2 and 8-3	Appendix D, Table 3 and Table 4
x	x	8.4	Section 8.4.6	10632.5	The UWMP shall include a seismic risk assessment and mitigation plan.	Water shortage contingency plan	n/a	Appendix D, Section 4.7
x	x	8.5	Section 8.5	10632(a)(5)(A)	Suppliers must describe that they will inform customers, the public and others regarding any current or predicted water shortages.	Water shortage contingency planning	n/a	Appendix D, Section 5
x	x	8.5	Section 8.5	10632(a)(5)(B), 10632(a)(5)(C)	Suppliers must describe that they will inform customers, the public and others regarding any shortage response actions triggered or anticipated to be triggered and other relevant communications.	Water shortage contingency planning	n/a	Appendix D, Section 5
x	x	8.7	Section 8.7	10632(a)(7)(A)	Describe the legal authority that empowers the Supplier to enforce shortage response actions.	Water shortage contingency planning	n/a	Appendix D, Section 6
x	x	8.7	Section 8.7	10632(a)(7)(B)	Provide a statement that the Supplier will declare a water shortage emergency per Water Code Chapter 3. <i>Water Shortage Emergencies</i> .	Water shortage contingency planning	n/a	Appendix D, Section 6
x	x	8.7	Section 8.7	10632(a)(7)(C)	Provide a statement that the Supplier will coordinate with any city or county within which it provides water for the possible proclamation of a local emergency.	Water shortage contingency planning	n/a	Appendix D, Section 6
x	x	8.8	Section 8.8	10632(a)(8)(A)	Describe the potential revenue reductions and expense increases associated with activated shortage response actions.	Water shortage contingency planning	n/a	Appendix D, Section 7
x	x	8.8	Section 8.8	10632(a)(8)(B)	Provide a description of mitigation actions needed to address revenue reductions and expense increases associated with activated shortage response actions.	Water shortage contingency planning	n/a	Appendix D, Section 7
x	x	8.10	Section 8.10	10632(a)(10)	Describe reevaluation and improvement procedures for monitoring and evaluation the WSCP to ensure risk tolerance is adequate and appropriate water shortage mitigation strategies are implemented.	Water shortage contingency planning	n/a	Appendix D, Section 8
x	x	8.12	Section 8.12	10632(c)	Make available the WSCP to customers and any city or county where it provides water within 30 days after adoption of the plan.	Water shortage contingency planning	n/a	Appendix D, Section 9
n/a	x	9.2	Sections 9.2	10631(e)(2)	Wholesale Suppliers shall describe specific demand management measures listed in code, their distribution system asset management program, and Supplier assistance program.	Demand management measures	n/a	Section 9.1
x	x	10.2	Section 10.2.1	10621(b)	Notify, at least 60 days prior to the public hearing, any city or county within which the Supplier provides water that the Supplier will be reviewing the UWMP and considering amendments or changes to the plan.	Plan adoption, submittal, and implementation	10-1	Section 10.2 & Appendix C
x	x	10.4	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	n/a	Section 10.4
x	x	10.2	Sections 10.2.2, 10.3, and 10.5	10642	Provide supporting documentation that the Supplier made the UWMP and WSCP available for public inspection, published notice of the public hearing, and held a public hearing about the UWMP and WSCP.	Plan adoption, submittal, and implementation	n/a	Section 10.5

Retail (x = required)	Wholesale (x = required)	Order	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	Relevant Submittal Table	2025 UWMP Location
x	x	10.2	Section 10.2.2	10642	The Supplier is to provide the time and place of the hearing to any city or county within which the Supplier provides water.	Plan adoption, submittal, and implementation	10-1	Section 10.2.1
x	x	10.3	Section 10.3.2	10642	Provide supporting documentation that the UWMP and WSCP has been adopted as prepared or modified.	Plan adoption, submittal, and implementation	n/a	Section 10.3
x	x	10.4	Section 10.4	10644(a)	Provide supporting documentation that the Supplier has submitted their UWMP to the California State Library.	Plan adoption, submittal, and implementation	n/a	Section 10.4
x	x	10.4	Section 10.4	10644(a)(1)	Provide supporting documentation that the Supplier has submitted their UWMP to any city or county within which the Supplier provides water no later than 30 days after adoption.	Plan adoption, submittal, and implementation	n/a	Section 10.4
x	x	10.4	Sections 10.4.1 and 10.4.2	10644(a)(2)	The UWMP, or amendments to the UWMP, submitted to DWR shall be submitted electronically.	Plan adoption, submittal, and implementation	n/a	Section 10.4
x	x	10.7	Section 10.7.2	10644(b)	If revised, submit a copy of the WSCP to DWR within 30 days of adoption.	Plan adoption, submittal, and implementation	n/a	Section 10.6
x	x	10.5	Section 10.5	10645(a)	Provide supporting documentation that, not later than 30 days after filing a copy of its UWMP with DWR, the Supplier has or will make the plan available for public review during normal business hours.	Plan adoption, submittal, and implementation	n/a	Section 10.5
x	x	10.5	Section 10.5	10645(b)	Provide supporting documentation that, not later than 30 days after filing a copy of its WSCP with DWR, the Supplier has or will make the plan available for public review during normal business hours.	Plan adoption, submittal, and implementation	n/a	Section 10.5
x	x	10.6	Section 10.6	10621(c)	If Supplier is regulated by the Public Utilities Commission, include its plan and contingency plan as part of its general rate case filings.	Plan adoption, submittal, and implementation	n/a	n/a

Appendix C.
Agency and Public Notices

UWMP 2025 Stakeholder Email Distribution List

Pleasanton	<ul style="list-style-type: none"> • Rita Di Candia, rdicandia@cityofpleasantonca.gov • Siew-Chin Yeong, syuong@cityofpleasantonca.gov • Todd Yamello, tyamello@cityofpleasantonca.gov
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From: Bijoor, Neeta

Sent: Friday, March 6, 2026 3:16 PM

Subject: Notice of Preparation of Zone 7's 2025 Urban Water Management Plan and Water Shortage Contingency Plan

Notice of Preparation of the 2025 Urban Water Management Plan and Water Shortage Contingency Plan

Zone 7 Water Agency (Zone 7) is a water wholesaler serving Pleasanton, Livermore, and Dublin in Alameda County, and the Dougherty Valley area of San Ramon in Contra Costa County. Zone 7 sells treated water to four retailers: City of Pleasanton, City of Livermore, Dublin San Ramon Services District and California Water Service Company.

Zone 7 is currently in the process of updating its existing Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP). The UWMP is a planning document which reports, describes, and evaluates water deliveries and uses, water supply sources, and conservation efforts. The WSCP provides a plan for response to various water supply shortage conditions.

Zone 7 is coordinating with water management agencies, relevant public agencies, and other water suppliers (including the four retailers) as part of this process. Drafts of the 2025 UWMP and WSCP will be posted on the Zone 7 website for public review and comment, followed by a public hearing in May 2026. The updated 2025 UWMP and WSCP are required to be submitted to the California Department of Water Resources by July 1, 2026.

Questions or comments regarding preparation of the 2025 UWMP and WSCP may be directed to Lillian Xie at lxie@zone7water.com.



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Livermore, CA 94551
(925) 454-5000

NOTICE OF AVAILABILITY & NOTICE OF PUBLIC HEARING 2025 Urban Water Management Plan, Water Shortage Contingency Plan, and Consistency with Delta Plan Policy WR P1

Zone 7 Water Agency (Zone 7) is a water wholesaler serving over 270,000 people in Pleasanton, Livermore, and Dublin in Alameda County, and the Dougherty Valley area of San Ramon in Contra Costa County. Zone 7 sells treated water to four retailers: City of Pleasanton, City of Livermore, Dublin San Ramon Services District, and California Water Service Company.

Zone 7 has updated its Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP), which are required to be submitted to the California Department of Water Resources by July 1, 2026. The 2025 UWMP is a planning document that reports, describes, and evaluates water deliveries and uses, water supply sources, and conservation efforts. The UWMP also demonstrates consistency with Delta Plan Policy WR P1, "Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance" (Cal. Code Regs., tit. 23, § 5003). The WSCP provides a plan for response to various water supply shortage conditions.

Materials: These plans are posted for review on Zone 7's website, <https://www.zone7waterca.gov/reports-planning-documents>, under Water Supply/Reliability. A limited number of paper copies are available, on a first-come, first-served basis, at Zone 7's main office in Livermore; contact Jennifer Heller (jheller@zone7water.com) to make arrangements for pick-up (24-hour notice is required).

Public Hearing: Zone 7's Board of Directors will hold a public hearing at their regularly scheduled meeting on Wednesday, May 20, 2026, at 7 p.m. to take public comment on the Public Draft 2025 UWMP and WSCP. The meeting will be held at 100 North Canyons Parkway, Livermore, CA 94551 or may be viewed online. Meeting details will be posted on Zone 7's website at least 72 hours prior to the meeting. The Board will consider adoption of the 2025 UWMP and WSCP at their regularly scheduled Wednesday, June 17, 2026 meeting at 7 p.m.

Public Comments: Public comments may be submitted via email to jheller@zone7water.com, by mail at 100 N Canyons Parkway, Livermore, CA 94551, or provided directly at the public hearing. Written comments may be submitted from Wednesday, April 15, 2026 through Wednesday, May 13, 2026. All comments must be received by Zone 7 by the close of the public hearing on Wednesday, May 20, 2026.

Questions or comments regarding preparation of the UWMP and WSCP may be directed to Jennifer Heller, jheller@zone7water.com.

Appendix D.
Water Shortage Contingency Plan



ZONE 7 WATER AGENCY

Water Shortage Contingency Plan

DRAFT | April 2026
EKI C20037.04



Water Shortage Contingency Plan

Zone 7 Water Agency

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INTRODUCTION

Zone 7 Water Agency (referred as “Zone 7”) has prepared this Water Shortage Contingency Plan (WSCP) following California Water Code (CWC) Section 10632 in conjunction with the 2025 Urban Water Management Plan (UWMP). Zone 7 is a water wholesaler, meaning it sells water to other agencies that then sell it to individual water users. Zone 7 provides water to four agencies, also known as water retailers: California Water Service (CalWater), the City of Pleasanton (Pleasanton), the City of Livermore (Livermore), and the Dublin San Ramon Water Services District (DSRSD). Additionally, Zone 7 serves treated water to a small number of direct retail customers and untreated water for agriculture. Zone 7 supplies water to approximately 270,000 people throughout the Livermore-Amador Valley, also called the Tri-Valley Area, in Alameda County, California, with a small subset of DSRSD in Contra Costa County.

In 2018, the California State Legislature (Legislature) enacted two policy bills, (Senate Bill [SB] 606 [Hertzberg] ¹ and Assembly Bill [AB] 1668 [Friedman] ²) (2018 Water Conservation Legislation), to establish a new foundation for drought planning to adapt to climate change and the resulting longer and more intense droughts in California. The 2018 Water Conservation Legislation set new requirements for water shortage contingency planning.

Water shortages occur when the available water supplies cannot meet the normally expected customer water demands, such as for human consumption, sanitation, fire protection, and other beneficial uses. This can be due to several reasons, such as drought, catastrophic events, regulatory action constraints, and natural and manmade disasters. This WSCP addresses events that are foreseeable and unforeseeable, further discussed in **Section 1.2**.

This WSCP helps Zone 7 meet multiple water supply and reliability goals. This plan supports Strategic Goal F – Effective Operations and advances Strategic Plan Initiative #17 – Update the Emergency Preparedness Program. Zone 7’s goal is to maintain a highly reliable Municipal and Industrial (M&I) water supply system to meet existing and future demands under various water supply conditions. Zone 7’s Water Supply Reliability Policy (Resolution 13-4230), adopted on October 17, 2012 and included as an attachment in **Appendix A** to this WSCP. This WSCP describes Zone 7’s strategic plan in preparation for and responses to water shortages, including water shortage stages and associated shortage response actions. This WSCP provides a guide for Zone 7 to proactively prevent catastrophic service disruptions and has been updated to be consistent with the 2018 Water Conservation Legislation requirements. As part of this WSCP, Zone 7’s communication protocols, legal authorities, financial impacts, and WSCP refinement process are described.

This WSCP is meant to be dynamic so that staff may assess response action effectiveness and adapt to different types of emergencies and shortage events. Refinement procedures to this WSCP are provided to allow Zone 7 to modify this WSCP outside of the UWMP process. The following sections correspond to the requirements in the Department of Water Resources’ (DWR) 2025 UWMP Guidebook

¹ https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180SB606.

² https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180AB1668.



1 WATER SUPPLY RELIABILITY ANALYSIS

1.1 Quantitative Analysis

Chapters 6 and 7 of Zone 7's 2025 UWMP present Zone 7's water supply sources and reliability, respectively. Zone 7 uses an advanced water supply management model implemented in RiverWare (CADWES 2026)³, a water systems modeling software that simulates water system availability, operations, and infrastructure planning at a monthly timescale. Findings show Zone 7 can reliably meet its projected demands through 2050 in normal and single dry year hydrologic conditions, with some potential shortages during five consecutive dry years, which can be addressed with this WSCP.

1.2 Types of Water Shortages

Future water supplies and demands are only partially predictable, shaped by both foreseeable and unforeseeable events. Some events, such as droughts, are recurring phenomena that tend to develop over time and can be anticipated to a degree, although their severity, duration, and frequency remain uncertain and not fully predictable. Other events are inherently difficult to predict, such as earthquakes or infrastructure failures. Drought most commonly triggers water shortage events and the use of this plan, although this WSCP can be utilized for unforeseeable events as well.

Drought and expected water shortages are often driven by a combination of interconnected factors. These include State Water Project (SWP) allocations and storage levels; local hydrology affecting Lake Del Valle (LDV) water storage and Arroyo Valle water supply; other agencies' actions; and previous storage and pumping in the Main Basin, which comprises the majority of Zone 7's local groundwater. Water shortages may also be driven, not by water supply availability alone, but by lack of safe drinking water supplies. Contributing factors include Sacramento-San Joaquin Delta (Delta) water quality or contaminants in the Main Basin. Droughts are likely to last on the order of months to years.

Potential unforeseeable events triggering a water shortage for Zone 7 include seismic events affecting Zone 7 or SWP facilities; changing environmental or regulatory requirements; the occurrence of threatened/endangered species near the Banks Pumping Plant in the Delta; or infrastructure malfunctions leading to outages at treated water production, Delta, or South Bay Aqueduct (SBA) facilities. While some unforeseeable events may lead to short periods of water shortages (hours to days), other events could lead to longer shortages (months to years).

While the examples of shortage events described here are not all encompassing, they provide a sample of what this WSCP aims to prepare for. Additionally, not all events may be strictly foreseeable or unforeseeable, but proactive planning through this WSCP and related measures can ensure Zone 7 is prepared to address different types of water shortage events.

2 ANNUAL WATER SUPPLY AND DEMAND ASSESSMENT PROCEDURES

As of July 1, 2022, water suppliers are required to submit an Annual Water Supply and Demand Assessment (AWSDA) in accordance with CWC §10632.1, and an Annual Water Shortage Assessment report. Zone 7 plans to satisfy both requirements via its Annual Review of the Sustainable Water Supply (ARSWs), which Zone 7 has been producing since it adopted an updated Water Supply Reliability Policy in 2012. In addition to the ARSWs, Zone 7 also prepares and updates its Water Supply Operations Plan

³ <https://riverware.org/>.



Section 2 Annual Water Supply and Demand Assessment Procedures

(WSOP) over the course of the year. The WSOP is a more detailed plan focused on the current year, but it also informs the longer-term outlook of the ARSWS.

Zone 7's ARSWS covers near-term planning of water supplies over the upcoming five years and includes the following:

- An estimate of the current annual demand for treated and untreated water, as well as a five-year projection (including water losses and water conservation), as detailed in **Section 2.1.1**.
- A description and quantification of available water supplies to Zone 7 at the beginning of the calendar year and projected water supplies over the next five years, discussed further in **Section 2.1.2**.
- A comparison of current and projected water demand with the available water supplies to determine if a water shortage condition is anticipated, discussed in **Section 2.2**.
- A review of water supply programs (to maintain long-term service reliability) and existing infrastructure and capabilities.
- A discussion of water conservation requirements and other long-term supply programs needed to meet Zone 7 treated and untreated water demands for multiple-dry year conditions, as specified in Zone 7's UWMP.

2.1 Key Data Inputs and Assessment Methodology

The State requires that the ARSWS evaluate supplies and demands for, at a minimum, the current year and one subsequent dry year. Zone 7 provides a five-year outlook, assuming the last three years are of average conditions. Planned water supply sources and quantities, and water demand types and quantities are described in Chapters 6-7 and Chapter 4 of the UWMP, respectively. Quantities and analysis for the ARSWS will be reasonably consistent with the UWMP and any differences will be explained, as needed.

2.1.1 Demand Assessment

Each year, Zone 7 develops annual water demand projections for the next five years as a first step towards assessing annual supply and demand conditions. Zone 7's demand consists of four key components: retailer demand, which makes up the majority of total demand; direct customers (<1%); untreated water for agricultural customers; and losses (about 1%). To calculate total demand, Zone 7 utilizes historic demand data, future projections, and retailer delivery requests. Every year, Zone 7 receives M&I treated water delivery requests from its retailers for the next five years. These requests are adjusted based on current usage trends, local weather conditions, water year type, anticipated new demands, population changes, pending policy changes, infrastructure capacities and constraints, and retailer groundwater pumping. The adjusted demand projections are then used for the ARSWS. Zone 7 estimates demand for direct customers and agricultural customers based on recent trends and data.

Zone 7 measures and tracks monthly deliveries to its customers, with data for retailers and untreated demands collected since 1990 and 1975, respectively. Zone 7 uses this data to continually track and update demand projections throughout the year.

Additionally, Zone 7 contextualizes five-year demand projections using long-term future demand studies, the most recent of which was conducted for 2025, projecting out to 2050.

2.1.2 Supply Assessment

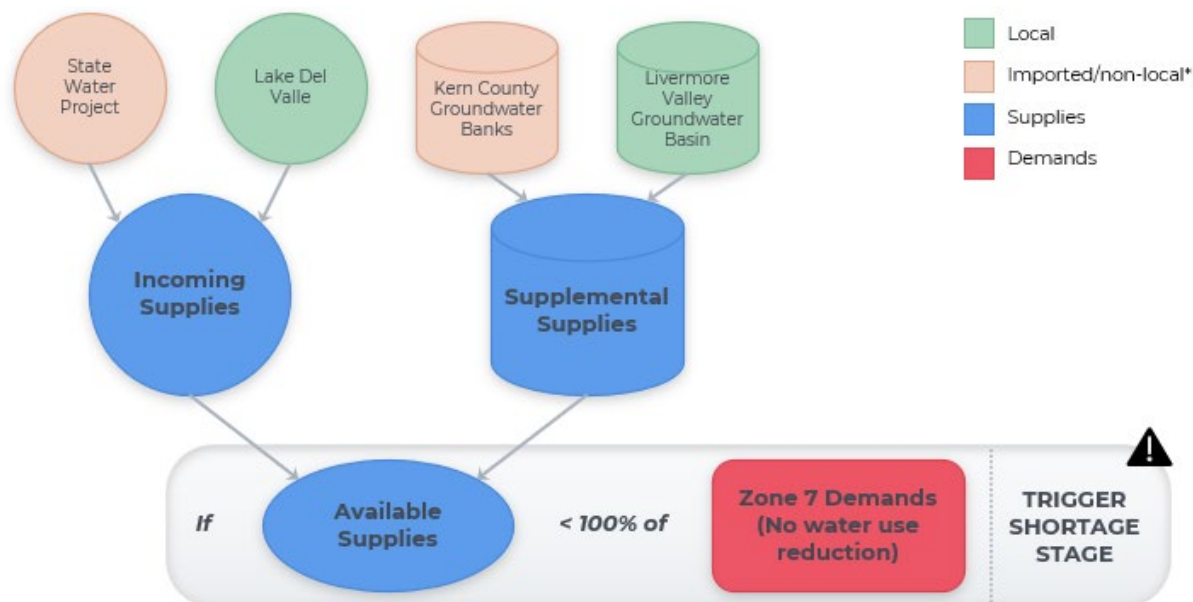
As shown in **Figure 1**, Zone 7's available water stems from two main sources: incoming supplies (from the SWP and LDV), which are based on weather conditions in a given year, and supplemental supplies, largely based on water storage from previous years. Both incoming and supplemental supplies are delineated into two categories: local and imported water.

Section 2
Annual Water Supply and Demand Assessment Procedures

For incoming supplies, monitoring starts on October 1 at the beginning of the new water year. Zone 7 tracks weather locally and across California, focused on the Northern Sierras where much of the SWP water originates. Zone 7 tracks precipitation, temperature, and snowpack data. DWR conducts multiple snow surveys throughout the wet season, focused on estimating snowpack and available water as a fraction of the average on April 1, when snowpack has historically peaked. Locally, Zone 7 measures how much streamflow is available via precipitation in multiple streams, including Arroyo Valle and Arroyo Mocho, as well as local storage in LDV. LDV is operated by DWR and water rights are split between Zone 7 and Alameda County Water District (ACWD). Between 2016 and 2025, average annual supply for Zone 7 was about 4,000 AFY.

Zone 7 closely monitors SWP conditions, which, on average, provide about 90% of Zone 7’s treated water supplies, with the largest supply coming from Table A. Zone 7 has a Table A allocation of 80,619 AFY, although the actual amount varies annually based on hydrologic conditions and water availability. DWR typically announces an initial SWP allocation for the current water year in December, which then can increase as winter progresses, and is typically finalized in May or June. Other factors impacting SWP availability include:

- Delta water quality;
- Occurrence of threatened and endangered species near the Banks Pumping Plant in the Delta;
- Outages at Delta and SBA facilities; and
- Risk from seismic events, changing regulatory requirements, and climate change.



* NOTE: Imported/non-local water includes SWP Table A water, SWP carryover, SWP Article 21 water, pre-negotiated transfers, etc.

Figure 1. Supply Shortage Determination

Zone 7 tracks water availability for multiple storage sources. Locally, Zone 7 mainly uses groundwater aquifers for water storage. Zone 7 has about 254,000 AF of capacity in the Livermore Valley Groundwater Basin (called the “Main Basin”) divided into operational storage (126,000 AF) and reserve storage that is below historical lows (128,000 AF). The amount of groundwater utilized annually varies significantly between wet and dry years, with larger volumes used during dry years. Groundwater availability can be impacted by contamination events or facility outages, as well as by pumping constraints. In the past five



Section 2
Annual Water Supply and Demand Assessment Procedures

years, Zone 7 has installed two per- and polyfluoroalkyl substances (PFAS) treatment facilities, with a third expected to be built over the next three years, to address contamination in its aquifer.

Zone 7 has multiple non-local storage supplies available. This includes carryover water (Article 12e or 56c water), which is unused Table A water, which Zone 7 can store in SWP’s San Luis Reservoir, when there is available storage. Zone 7 aims to carry over about 10,000 AFY. Zone 7 also participates in multiple non-local water banking programs, located in Kern County. These banking programs are currently with the Semitropic Water Storage District and Cawelo Water District, although additional partnerships are being explored. These programs hold water previously stored from Zone 7’s surface water supplies during wet years and provide a storage source during drought years. Water put into Semitropic and Cawelo have contractual constraints via 10% and 50% losses, respectively. As of January 1, 2026, the banking programs hold about 106,000 AF.

Other factors impacting water supply include regulatory conditions, infrastructure capacity constraints or changes, and capital improvement project implementation.

2.2 Decision-Making Process

Zone 7’s decision-making process surrounding water shortages undergoes a cyclical process approximately following the water year from October 1 through September 30, as shown in the timeline in **Table 1**. The first half of the water year (October-April) is focused on monitoring supplies, demands, hydrologic conditions, and storage for the current water year. This is the wet season in California, and the amount of precipitation and water availability determines if there is a water shortage for the remainder of the year. During this period, Zone 7 partakes in various operational procedures, such as submitting 5-year delivery requests to DWR, preparing a preliminary WSOP, planning for groundwater banking or recovery, and finalizing transfer requests and agreements.

Table 1 Schedule of Annual Sustainability Report and Water Supply Operations Plan Activities

Schedule	Activities
October to November	Start of new water year. Track supply, demand, hydrologic conditions, and storage for current water year. Submit 5-Year Delivery request to DWR. Prepare Preliminary WSOP.
November to mid-April	Monitor water supply, demand, and hydrologic condition trends.
Mid-December to mid-February	Revise Preliminary WSOP & present to Water Resources Committee of Zone 7 Board. Gives preview of water supply conditions and initiates planning for any potential actions.
January to mid-April	Coordinate with DWR and groundwater banks to plan for any banked water recovery, if needed. Get approval from Executive Management.
January to April	Finalize standing water transfer requests and agreements. New agreements require Zone 7 Board approval.
Mid-March to mid-April	Prepare ARSWS, compiling summaries of both water supplies and demands based on current conditions and predicted future conditions.



Section 2
Annual Water Supply and Demand Assessment Procedures

Schedule	Activities
April Zone 7 Board Meeting	Present findings and recommendations from ARSWS, including determinations and recommendations. The Zone 7 Board adopts resolution/s approving determinations and actions, as appropriate.
April - June	Executive Management arranges for water transfers, if needed.
April - June	If water shortage emergency exists, prepare recommendations on shortage determination and actions based on ARSWS. Executive Management prepares and presents resolution/s approving determinations and actions to the Zone 7 Board.
Late April to May	Update the WSOP based on latest information.
May to July	Water shortage regulations or other actions go into effect.
June	Present the WSOP to the Water Resources Committee.
July to December	Update the WSOP, as needed.

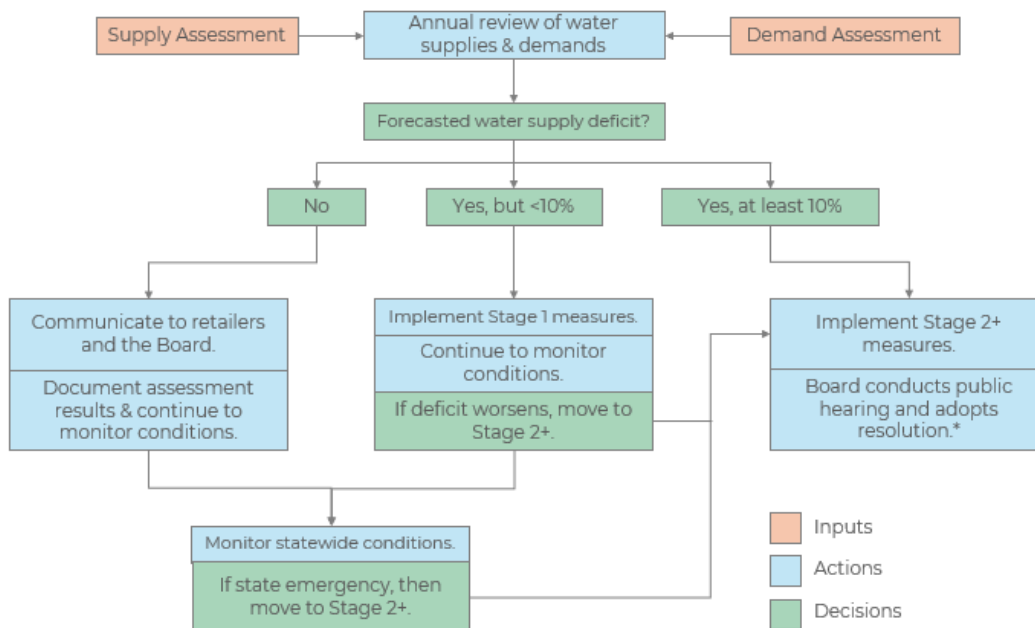
Between mid-March and mid-April, Zone 7 prepares its ARSWS, involves compiling summaries of current and projected demands (**Section 2.1.1**) and supplies (**Section 2.1.2**) to ensure that supplies can meet demands. If supplies are projected to fall short, the ARSWS evaluates what supply-augmentation actions may be taken. If, even with supply augmentation efforts, there is expected to be a water supply deficit, then Zone 7 staff quantify how much that deficit is expected to be. The ARSWS results and related recommendations are presented at the April Zone 7 Board Meeting. The 2025 ARSWS is included as **Appendix A** of this WSCP.

If the ARSWS forecasts a water supply deficit, Zone 7 staff implement various management measures based on the size of the forecasted deficit. As shown in **Figure 2**, if the deficit is greater than 10%, Zone 7 implements Stage 2 or greater measures, which require a public hearing and Zone 7 Board meeting to adopt a resolution. If the deficit is 10% or less, Zone 7 may adopt a resolution declaring the associated water shortage stage and relevant actions. A sample resolution is provided in **Appendix B**. If there is no forecasted deficit, monitoring continues. If a state drought emergency is declared, then Zone 7 may also adopt a resolution and declare a drought emergency. These follow-on steps to the ARSWS occur from April to June.

From July to the start of the new water year, conditions are monitored and the WSOP is updated, as needed. This is an iterative process where supply and demand conditions are monitored, typically monthly but more frequently if needed, and additional actions and adjustments are made.



Section 3
Six Standard Water Shortage Stages



* NOTE: A resolution could declare a drought at any stage. At Stage 2 and above, mandatory water use reductions are likely. At Stage 4 and above, a drought emergency would also be declared.

Figure 2. Flowchart for Declaring a Water Shortage

3 SIX STANDARD WATER SHORTAGE STAGES

DWR’s 2025 UWMP Guidebook provides six standard water shortage levels that correspond to progressive reductions of up to 10, 20, 30, 40, 50, and greater than 50 percent from normal conditions. Zone 7 utilizes these standard water shortage levels (also called “stages”), for stages 1-4. Then, Zone 7 combines stages 5 and 6, since a shortage greater than 40% would require extreme measures. **Table 2** lists Zone 7’s five drought shortage stages, as well as how they map to DWR’s standard drought stages.

Table 2 Water Shortage Contingency Plan Levels (DWR Table 8-1)

Supplier Uses the Standard Six Levels of Water Shortage. The supplier will not complete this table.			
Standard Shortage Levels	Percent Shortage Range	Supplier’s Shortage Levels	Percent Shortage Range
1	Up to 10%	1	Up to 10%
2	Up to 20%	2	Up to 20%
3	Up to 30%	3	Up to 30%
4	Up to 40%	4	Up to 40%
5	Up to 50%	5	> 40%
6	>50%	5	> 40%

NOTES:



4 SHORTAGE RESPONSE ACTIONS AND EFFECTIVENESS

Each shortage stage corresponds to additional actions water suppliers should implement to meet the severity of the impending shortages, as defined by CWC §10632 (a)(4). For each of the water shortage levels, **Table 3** and **Table 4** summarizes the severity of the drought conditions and the relevant actions to be utilized at each stage. As needed, Zone 7 may choose to implement certain actions at earlier water shortage stages. Certain response actions, such as public outreach and enforcement, support the effectiveness of other response actions and do not have a quantifiable effect on their own. While these actions tend to build on each other logically during a drought, during unexpected water shortage emergencies and disruptions in supply, the order and procedures will be modified as needed.

Zone 7's water system is fully metered, from production to retailer turnouts. Records of water deliveries to each retailer are prepared daily and can be used to track the effectiveness of Zone 7's response actions. Water production and water use can be compared to the previous year, previous month, or previous week. Water use can also be compared by retailer. This continuous monitoring allows Zone 7 to evaluate its demand reduction efforts in real-time and adjust its shortage response actions accordingly.

Additionally, Zone 7's suite of response actions depends on the time of the year the event occurs, the water supply sources available, and the condition of its water system infrastructure. In general, Zone 7 plans to use a balanced and dynamic approach, adapting its response actions to close the gap between water supplies and water demand and meet the water use goals associated with the declared water shortage stage.



Section 4
Shortage Response Actions and Effectiveness

Table 3 Water Shortage Stages and Supply Augmentations (DWR Table 8-2)

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	How much is this going to reduce the shortage gap? Include units used (volume type or percentage)	Additional Explanation or Reference (OPTIONAL)
1	Transfers	3000 AF	Utilize pre-negotiated transfers, like the Sutter Extension
2	Transfers	1000-4000 AF (up to full shortage gap)	Seek additional transfers beyond pre-negotiated transfer/exchange program.
5	Stored Emergency Supply	1-3% (or as needed)	Bring in bottled water or emergency supplies as needed
<p>NOTES: Actions introduced in a lower stage will also be used in higher stages, unless otherwise noted.</p>			



Section 4
Shortage Response Actions and Effectiveness

Table 4 Water Shortage Stages and Demand Reduction Actions (DWR Table 8-3)

No	Is the Supplier completing this table using the standard six levels? (yes/no)		
Shortage Level	Demand Reduction Actions	How much is this going to reduce the shortage gap? Include units used (volume type or percentage)	Additional Explanation or Reference (OPTIONAL)
1	Other	0-10%	Declare 10% voluntary conservation target.
1	Expand Public Information Campaign	1-5%	Expand public information on Zone 7 conservation rebate programs and voluntary restrictions.
1	Provide Rebates for Landscape Irrigation Efficiency	1-5%	Promote Zone 7 rebate programs for DSRSD, Livermore, and Pleasanton.
1	Provide Rebates on Plumbing Fixtures and Devices	1-5%	Promote Zone 7 rebate programs for DSRSD, Livermore, and Pleasanton.
1	Provide Rebates for Turf Replacement	1-5%	Promote Zone 7 rebate programs for DSRSD, Livermore, and Pleasanton.
1	Other	1-5%	Consider voluntary restrictions, e.g., limit irrigation to specific times of day, require shut-off nozzles for hoses, etc.
2	Other	0-10%	Declare a call for mandatory conservation (up to 10%)



Section 4
Shortage Response Actions and Effectiveness

No	Is the Supplier completing this table using the standard six levels? (yes/no)		
Shortage Level	Demand Reduction Actions	How much is this going to reduce the shortage gap? Include units used (volume type or percentage)	Additional Explanation or Reference (OPTIONAL)
2	Expand Public Information Campaign	1-5%	Continue public information campaign and outreach/education efforts.
2	Provide Rebates for Landscape Irrigation Efficiency	1-5%	Consider increasing rebate spending and potentially target high-consumption customers.
2	Provide Rebates on Plumbing Fixtures and Devices	1-5%	Consider increasing rebate spending and potentially target high-consumption customers.
2	Provide Rebates for Turf Replacement	1-5%	Consider increasing rebate spending and potentially target high-consumption customers.
2	Implement or Modify Drought Rate Structure or Surcharge	5-10%	Consider implementing drought surcharge.
2	Other	1-10%	Some mandatory restrictions may start (e.g., limited the number of outdoor watering days).
3	Other	10-20%	Declare a call for mandatory conservation (up to 20%)



Section 4
Shortage Response Actions and Effectiveness

No	Is the Supplier completing this table using the standard six levels? (yes/no)		
Shortage Level	Demand Reduction Actions	How much is this going to reduce the shortage gap? Include units used (volume type or percentage)	Additional Explanation or Reference (OPTIONAL)
3	Implement or Modify Drought Rate Structure or Surcharge	5-10%	Implement a drought surcharge matching mandatory conservation levels.
3	Other	2-5%	Encourage retailers to enforce excess use penalties.
3	Other	<1-3%	Decrease line flushing and maintenance.
4	Other	20-30%	Declare a call for mandatory conservation (up to 30%)
4	Increase Water Waste Patrols	2-5%	Request retailers and cities to increase enforcement of their water shortage contingency plans, which could include fines for repeated violations.
4	Moratorium or Net Zero Demand Increase on New Connections	0 (no net increase)	Consider new connection ban.
5	Other	30% or more	Declare a call for mandatory conservation (>30%)



Section 4
Shortage Response Actions and Effectiveness

No	Is the Supplier completing this table using the standard six levels? (yes/no)		
Shortage Level	Demand Reduction Actions	How much is this going to reduce the shortage gap? Include units used (volume type or percentage)	Additional Explanation or Reference (OPTIONAL)
5	Increase Water Waste Patrols	2-10%	Water may only be available to meet health and safety needs. Urge retailers to enhance enforcement, or Zone 7 may support enforcement.
5	Landscape - Prohibit all landscape irrigation	10-20%	
NOTES: Actions introduced in a lower stage will also be used in higher stages, unless otherwise noted. All demand management actions feed into conservation quantity at each stage.			



4.1 Supply Augmentation

Chapter 6 of Zone 7's 2025 UWMP describes Zone 7's normal water supply portfolio, as well as dry-year and emergency supplies. Zone 7's local and non-local groundwater storage is largely intended to provide water supply during drought years or during definable water shortage events. These supply augmentation options are already included in the ARSWS as needed to close the gap between supplies and demands, so they are not counted again as a potential shortage response.

As shown in **Table 3**, in Stages 1 and 2, supply augmentation efforts focus on existing and additional transfer and exchange programs, such as the Sutter Extension. Beyond Stage 2, additional transfers and exchanges may be harder to secure. In Stage 5, an additional supply augmentation strategy includes importing bottled water or emergency supplies, as needed.

4.2 Demand Reduction

Since Zone 7 is a wholesaler, it works closely with its retailers to request demand reductions, recommend demand reduction strategies, and aid enforcement. Up to Stage 2, Zone 7's demand reduction requests to its retailers may be voluntary or mandatory, depending on conditions. At Stage 3 and higher, Zone 7 will likely require its retailers to reduce demands up to the applicable shortage percentage. In Stage 1, voluntary conservation aims to reduce demand by up to 10%. For Stages 2 and higher, conservation aims to reduce demands by up to 10% less than the maximum shortage level at that stage. **Table 4** also lists some potential recommendations for residential and commercial water use restrictions, which are typically enforced by the retailers.

Demand reduction actions also give direction on expanding conservation-focused rebate programs, implementing drought surcharges and/or overuse fines, and encouraging temporary new connection bans. Since Zone 7 is a wholesaler, it can implement drought surcharges for its retailers, which would then pass along the surcharges to direct customers.

4.3 Additional Mandatory Restriction

As a wholesaler, Zone 7 does not have direct authority to institute water use prohibitions. Zone 7 will support mandatory restrictions imposed by its retailers on their customers and coordinate with its retailers to provide consistent public outreach messaging.

4.4 Operational and Miscellaneous Actions

Operational and miscellaneous measures include a range of additional actions to minimize supply losses. Operational actions include evaluating the timing of maintenance activities and decreasing line flushing to avoid wasting water. They also include tracking and projecting relevant conditions and data, such as reporting on reservoir levels weekly (Stage 1), daily (Stage 4), or hourly (Stage 5).

Miscellaneous actions include financial actions, such as looking for supplemental funding (Stage 2), utilizing reserve funds (Stage 3+), and developing a budget code to track water shortage labor hours and expenditures (Stage 5). Miscellaneous actions also include tracking State actions and developing a community water waste hotline and online reporting system.

4.5 Communication and Outreach Actions

Communication and outreach actions focus broadly on three areas: informing and educating the public; coordinating with retailers, Alameda County, the cities, and other relevant agencies; and declaring



Section 4 Shortage Response Actions and Effectiveness

drought reductions and/or a drought emergency. More information on communication and outreach measures is discussed in **Section 5**.

4.6 Emergency Response Plan

Zone 7's water shortage stages apply to both foreseeable and unforeseeable water supply shortage conditions. The latter includes catastrophic water shortage conditions, which are addressed in Zone 7's Emergency Response Plan (ERP). The ERP outlines preparation, response, and recovery procedures associated with unforeseeable incidents such as water supply contamination, earthquake, infrastructure failure, and other events.

Zone 7 has an Emergency Operations Center (EOC) and EOC Staff made up of personnel representing different skills and disciplines within Zone 7. The EOC Staff would respond in the event of a natural or man-made emergency.

If imported water deliveries from the Delta are interrupted, Zone 7 plans to meet its water demands with existing facilities using groundwater and Zone 7's share of water stored in Lake Del Valle. Retailers with groundwater pumping capacity—Pleasanton and Cal Water—may be asked to increase their groundwater pumping, if possible. Deliveries to Zone 7's retailers would be reduced as necessary if supplies are insufficient. In coordination with the retailers, Zone 7 would declare a water shortage emergency. The retailers' WSCPs and the associated voluntary and mandatory water consumption reductions would go into effect. Under this scenario, most of Zone 7's untreated water customers reliant on the imported water from the Delta would receive no water.

Zone 7 has emergency generators (both portable and dedicated) at strategic locations in preparation for any regional power outage. These generators would allow both the Del Valle Water Treatment Plant and the Patterson Pass Water Treatment Plant to continue operating even under a power outage. Assuming no interruptions in surface water supply, Zone 7 would be able to provide service to all treated water contractors. If warranted by demand, Zone 7 would also operate groundwater wells and pump stations, some of which have either a dedicated generator in place (Valley Pump Station) or have the necessary hook-ups to receive power from a portable generator. If the power failure were to occur during high demand season (i.e., summer months), Zone 7 may be unable to meet hourly peak demands throughout the transmission system. Zone 7 would work closely with the retailers to manage demands to minimize impacts.

Water storage, treatment, and pumping facilities have been constructed to meet earthquake safety standards and are inspected regularly. Zone 7 also participates in the Water/Wastewater Agency Response Network (WARN) and the California Utilities Emergency Association (CUEA), two statewide utility assistance organizations focused on emergency response.

4.7 Seismic Risk Assessment and Mitigation Plan

CWC §10632.5(a) requires that UWMPs include a seismic risk assessment and mitigation plan to assess and mitigate a water system's seismic vulnerabilities. Local Hazard Mitigation Plans (LHMPs) may be incorporated in this UWMP to meet this requirement if they address seismic risk. Zone 7's current Hazard Mitigation Plan was adopted by the Board on October 16, 2024, and addresses seismic risk and is incorporated into this UWMP by reference. The 2023 LHMP was submitted to the Federal Emergency Management Agency (FEMA), which found it in conformance with Title 44 Code of Federal Regulations Part 201.6 Local Mitigation Plans. The 2023 LHMP is available on Zone 7's [website](https://www.zone7waterca.gov/sites/main/files/file-attachments/2024.zone_7.hazardmitigationplan.final_.pdf?1731102830) at:

https://www.zone7waterca.gov/sites/main/files/file-attachments/2024.zone_7.hazardmitigationplan.final_.pdf?1731102830



Earthquakes are common, relatively well-tracked, and studied in California. While California experiences hundreds of earthquakes each year, most are below 3.0 on the Richter Scale (i.e., magnitude 3.0) and cause minimal damage. The United States Geological Survey (USGS) roughly defines strong earthquakes (which can cause moderate damage to structures) as measuring greater than 5.0 on the Richter Scale, while major earthquakes measure more than 7.0 on the Richter Scale. In California, strong earthquakes occur every two to three years, and major earthquakes occur once a decade.

The San Andreas, Calaveras, Greenville, and Hayward faults are in the vicinity of Zone 7. A 2016 report by the USGS estimated the probabilities for magnitude-6.7 (or larger) earthquakes on major fault lines in the San Francisco Bay Area by the year 2043. The Hayward Fault has a 33 percent chance of one or more earthquakes of magnitude-6.7 or larger by 2043, while the Calaveras Fault has a 26 percent chance of one or more such earthquakes in that timeframe. The Greenville fault has a 16 percent chance of one or more earthquakes of magnitude-6.7 or larger by 2043. According to the 2023 LHMP, a local earthquake has the potential to impact 62 Zone 7 facilities, including pipelines and treatment plants. As such, the Hazard Mitigation Plan high level evaluation conceptualized seismic resilience improvement projects as a potential mitigation action for further consideration. Additionally, several other conceptual mitigation actions that address multi-hazards (including earthquakes) were included, such as mutual aid agreements, procuring redundant supplies, and identification of system processes which have no redundancies. Moreover, Zone 7's 2025 Emergency Response Plan identifies other conceptual hazard mitigation actions for earthquakes including structural upgrades or retrofits for existing facilities, ensuring all new facilities and pipelines are built to current seismic standards, a pipeline inspection program, and earthquake response training.

5 COMMUNICATION PROTOCOLS

In the event of a current or predicted water shortage, Zone 7 must inform its customers, the general public and interested parties, and local, regional, and state entities. Communication protocols for foreseeable and unforeseeable events are provided in this section. In any event, timely and effective communication must occur for an appropriate response to the event. Key Zone 7 staff are provided cell phones, emergency radios, and agency email accounts to communicate internally and externally.

5.1 Communication during Drought

Communication with Zone 7's retailers, Tri-Valley cities, additional public agencies, the public, and the Counties of Alameda and Contra Costa is essential during drought. Communication with the public must be clear and consistent across retailers to effectively inform and educate customers and the public.

In all stages of a water shortage, a resolution is passed to declare the stage of the drought and the related actions. This dictates the messaging and necessary outreach efforts.

At all water shortage stages, Zone 7 leads public information and education efforts to ensure clear, concise messaging. This will include some or all of the following options:

- public meetings,
- press releases,
- digital newsletters,
- postings on Zone 7's website,
- social media posts and digital advertising (e.g., Google, newspaper ads, boosted Facebook posts, YouTube, NextDoor),
- newspaper ads, and
- public service radio announcements.



Section 6 Legal Authorities

Staff also keep interest lists for specific interest groups and community members for targeted messaging.

Zone 7 will also ramp up outreach and education efforts for rebate programs, which Zone 7 coordinates for Livermore, Pleasanton, and DSRSD, as discussed in Chapter 9 of the UWMP. Cal Water coordinates its own rebate programs.

Additionally, in Stage 2 and greater, Zone 7 will begin regular meetings with retailers and other relevant agencies, as well as an internal drought coordination team. The goal of more regular coordination is to ensure messaging across agencies is clear, as well as to provide more frequent status updates.

When supplies are insufficient, Zone 7 can ask its retailers to reduce demands. Specific compliance and enforcement mechanisms are at the discretion of the retailers. Zone 7 is committed to working with and supporting its retailers in implementing water shortage response actions.

In addition to communication during declared drought conditions, Zone 7 also communicates proactively when a water shortage is anticipated based on the AWSDA. When the AWSDA indicates a potential or predicted shortage, Zone 7 coordinates early outreach with retailers and regional partners to share supply outlooks, discuss potential response actions, and align messaging in advance of any formal drought stage declaration (see **Figure 2**).

5.2 Communication for Unforeseeable Events

A water shortage may occur during unforeseeable events such as earthquakes, fires, infrastructure failures, civil unrest, and other catastrophic events. Zone 7's ERP provides specific communication protocols and procedures to convey water shortage contingency planning actions during these events. Zone 7 may trigger any of these communication protocols at any water shortage stage, depending on the event.

In general, communications and notifications should proceed along the chain of command. Notification decisions will be made under the direction of the Incident Commander, while internal and external communications will be managed by the Public Information Officer (PIO). All Zone 7 staff are provided their communication responsibilities. The ERP provides a list of relevant contacts to notify at the local, regional, and state level.

The PIO is the official spokesperson for Zone 7 and is responsible for interfacing with the public, media, other agencies, and stakeholders. The PIO maintains a list of contacts to disseminate information to the public, typically via radio, television, newspapers, or social media. Zone 7 may also elect to make telephone calls to certain types of facilities (e.g., day care centers, homeless centers, hospitals) as appropriate.

To maintain the security of Zone 7's water system, the ERP is maintained as a confidential document and may not be incorporated in this UWMP.

6 LEGAL AUTHORITIES

Zone 7 has the legal authority to create, manage, and activate emergency plans and carry out the responsibilities of those plans under the California Emergency Services Act, which authorizes all political subdivisions of the state (i.e., special districts, cities, and counties) to conduct emergency operations. Zone 7 Board Resolution 95-1777 describes the process for declaration of an agency emergency by the General Manager, with subsequent ratification by the Zone 7 Board no later than ten days after such declaration.

In a duly noticed meeting, the Zone 7 Board will determine whether a water shortage emergency condition exists and, if so, how severe the emergency is and what regulations and restrictions should be



enforced in response. Zone 7 shall declare a water shortage emergency in accordance with CWC Chapter 3 Division 1.

Water Code Section Division 1, Section 350

...The governing body of a distributor of a public water supply...shall declare a water shortage emergency condition to prevail within the area served by such distributor whenever it finds and determines that the ordinary demands and requirements of water consumers cannot be satisfied without depleting the water supply of the distributor to the extent that there would be insufficient water for human consumption, sanitation, and fire protection.

When a water shortage is determined, Zone 7 will coordinate interdepartmentally, with the region’s water service providers, and with Alameda and Contra Costa counties for the possible proclamation of a local emergency in accordance with the California Government Code, California Emergency Services Act (Article 2, Section 8558).

A water shortage emergency declaration triggers communication protocols described in **Section 5** and compliance and enforcement actions described in **Section 4**.

7 FINANCIAL CONSEQUENCES OF WSCP

The Agency anticipates both revenue losses and increased costs during water shortages. Revenue losses stem from reduced water sales driven by conservation or limited supply. Increased costs may include higher water transfer expenses and infrastructure improvements.

Conservation poses a direct risk to Zone 7’s revenue stability, as approximately 55% of the Agency’s revenue is derived from volume-based water usage. To mitigate this risk, the Agency utilizes long-term financial planning, implements regular moderate adjustments to rates and fees, and maintains financial reserves. In addition, the Board may authorize a water shortage surcharge to offset revenue impacts.

7.1 Use of Financial Reserves

The Agency maintains reserves for operational costs, capital needs, debt obligations, and emergencies under its Reserve Policy (amended June 18, 2025).

The Reserve for Economic Uncertainties protects against fluctuations in water use, imported water costs, and unforeseen events. As of June 30, 2025, the Reserve for Economic Uncertainties is funded at its target level of \$5.2 million.

In June 2025, the Agency established the Water Reliability Reserve to support emerging water supply and reliability needs, such as transfer purchases, drought response measures, and regional/state project participation. This fund does not carry a minimum requirement as the reserve is intended to maintain agility and flexibility in addressing water supply challenges and opportunities as they arise. As of June 30, 2025, the Water Reliability Reserve is funded at \$9.8 million.

Use of these reserves may be authorized by the Board during a declared water shortage stage, as defined in this plan.

7.2 Drought Rate Structures and Surcharges

If a declared water shortage results in reduced revenues, reserves alone may not be able to maintain fiscal stability. The Board has the authority to implement a water shortage surcharge aligned with the declared water shortage stages, as shown in **Table 5** below.



A Board adopted surcharge becomes effective on the first day of the month following 30 days after adoption and sunsets after six months unless extended or modified.

Table 5 Water Shortage Surcharges

Water Shortage Stage	Demand Reduction Target	Water Shortage Surcharge per Hundred Cubic Feet (ccf)
1	Up to 10%	Not Applicable
2	Up to 20%	\$0.15
3	Up to 30%	\$0.49
4	Up to 40%	\$0.95
5	>40%	\$1.57

7.3 Other Measures

Zone 7 annually reviews its capital budget and re-prioritizes projects, as necessary, given current and forecasted resources, needs, and funding availability. Zone 7 also continuously evaluates federal and state grant opportunities, whenever possible.

In some cases, projects may be accelerated or deferred. For example, from 2021-2022, Zone 7 accelerated the construction of the Stoneridge PFAS Treatment Plant, the Valley Pump Station, and replacement of electrical switchgears at multiple wells throughout the Wells & Mocho Groundwater Demineralization Plant (MGDP) Electrical Replacement project in response to the drought. All of these projects improved available water supply and reliability, as Zone 7 is highly dependent on local groundwater supplies during drought.

Zone 7 will continue to evaluate its capital budget and pursue grant opportunities where possible to meet demands and overcome future impacts to revenue and expenditures.

8 WSCP REFINEMENT PROCEDURES

This WSCP is an adaptive management plan. It is subject to refinement as needed to ensure that Zone 7’s shortage response actions and mitigation strategies are effective and produce the desired results. Zone 7 may adjust its response actions and modify its WSCP based on feedback from monitoring and enforcement efforts. Zone 7 will also seek input from staff, its retailers, and the public regarding the effectiveness of its WSCP and ideas for improvements.

When a revised WSCP is proposed, the revised WSCP will undergo the process described in **Section 9** for adoption by the Zone 7 Board and distribution to Alameda County, Contra Costa County, Zone 7’s retailers, and the general public.

9 PLAN ADOPTION, SUBMITTAL, AND AVAILABILITY

This WSCP is adopted concurrently with Zone 7’s 2025 UWMP, by separate resolution. Prior to adoption, a duly noticed public hearing was conducted. A copy of this WSCP will be submitted to DWR within 30 days of adoption.



Section 9
Plan Adoption, Submittal, and Availability

No later than 30 days after adoption, copies of this WSCP will be available at Zone 7's offices. A copy will also be provided to Alameda County, Contra Costa County, and Zone 7's retailers. An electronic copy of this WSCP will also be available for public review and download on Zone 7's website.

Appendix A.

2025 Annual Review of the Sustainable Water Supply

ORIGINATING SECTION: Office of The General Manager

CONTACT: Sal Segura/Valerie Pryor

AGENDA DATE: May 20, 2025

SUBJECT: 2025 Annual Review of the Sustainable Water Supply Report

SUMMARY:

- To support its mission to deliver safe, reliable, efficient, and sustainable water, Zone 7 Water Agency (Zone 7) has been managing water supplies. This Annual Review of the Sustainable Water Supply Report assesses Zone 7's ability to provide a sustainable water supply for the next five years to support Strategic Plan Goal B - Reliable Water Supply and Infrastructure, and also to implement Initiative #5 - develop a diversified water supply plan and implement supported projects and programs.
- Zone 7's Water Supply Reliability Policy requires the preparation of an Annual Review of the Sustainable Water Supply Report to summarize available water supply, compare current water demand with available water supplies, and discuss water conservation requirements to meet Municipal and Industrial water demands for drought conditions.
- Based on the projected operations plan, available surface water supplies will be sufficient to meet water demands and replenish Zone 7's water storage reserves in the local groundwater basin.
- Staff presented a Preliminary Water Supply Operations Plan for 2025 to the Board in February 2025, reflecting the latest supply and demand conditions for Zone 7's feasible operational scenarios.
- Zone 7 staff will continue to monitor both state and local hydrologic conditions and adjust operations and projections accordingly.
- Staff concluded that Zone 7 will be able to deliver 100% of projected demands over the next five years, assuming average conditions in 2028 and 2029. As discussed in this Annual Review of the Sustainable Water Supply Report, Zone 7 is able to meet demands without mandatory conservation under expected conditions.

FUNDING:

None requested at this time.

RECOMMENDED ACTION:

Information only.

ATTACHMENT(S):

Annual Review of the Sustainable Water Supply Report 2025

ANNUAL REVIEW OF THE SUSTAINABLE WATER SUPPLY REPORT 2025

BACKGROUND

To support its mission to deliver safe, reliable, efficient, and sustainable water, Zone 7 Water Agency (Zone 7) has been managing water supplies. This Annual Review of the Sustainable Water Supply Report assesses Zone 7's ability to provide a sustainable water supply for the next five years to support Strategic Plan Goal B - Reliable Water Supply and Infrastructure, and also to implement Initiative #5 - develop a diversified water supply plan and implement supported projects and programs.

In addition, on October 17, 2012, Zone 7 adopted the Water Supply Reliability Policy (Resolution 13-4230, see Attachment A), which requires an annual review of sustainable water supplies (Annual Review). This Annual Review of the Sustainable Water Supply Report covers the following topics:

- Key hydrologic and water supply conditions
- Projected water demands for the next five years
- Projected water supplies for the next five years
- Comparison of supplies and demands for the next five years
- Programs necessary to continue meeting water demands going forward

SUMMARY OF FINDINGS

Water Year 2024 (October 1, 2023–September 30, 2024) followed an abnormally wet 2023 in California. The year started with mild expectations and an initial State Water Project allocation of 10% in December 2023. Following a slate of atmospheric rivers, conditions gradually improved to moderate hydrologic conditions. Locally, a significant amount of runoff prompted DWR to make flood releases from Lake Del Valle in mid-February to manage the water level. In all, approximately 11,000 acre-feet (AF) were released for flood control during the month of February. Additionally, the State Water Project made a total of four allocation increases and announced an allocation of 40% in March. Together with a healthy supply of SWP carryover from 2023, this provided Zone 7 with sufficient surface water to meet all deliveries and store water both locally and in Kern County water banks.

In 2024, Zone 7 maximized surface water supplies, artificially recharged over 6,000 AF, produced less than 4,000 AF of groundwater, stored 10,000 AF in the Kern Storage and Recovery Programs, and carried over 9,200 AF in San Luis Reservoir for later use.

Under current 2025 calendar year conditions, Zone 7's planned incoming supplies for 2025 consist of the following:

- 32,200 AF based on a 40% State Water Project (SWP) Table A allocation
- 5,000 AF of Lake Del Valle local water captured in 2025 as of April 1

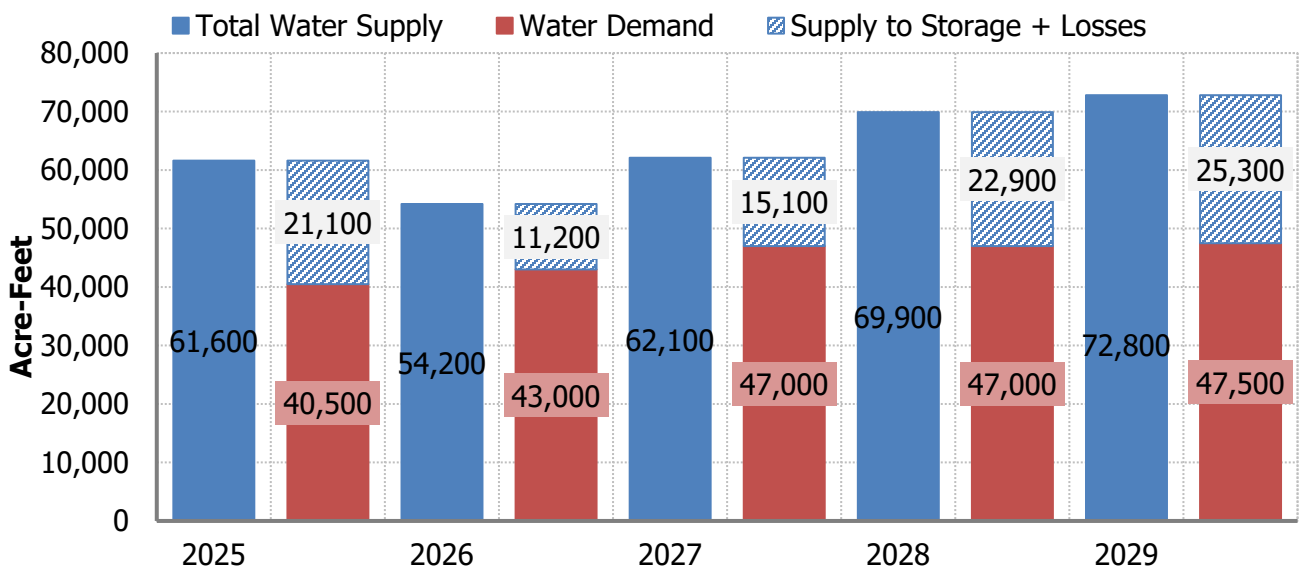
Given existing conditions and above normal incoming supplies, Zone 7 plans to draw from storage as follows:

- 9,200 AF of SWP carryover from 2024 stored in San Luis Reservoir
- 8,600 AF of Lake Del Valle local water captured in 2024, and
- 6,000 AF from the Livermore Valley Groundwater Basin.

Planned 2025 incoming water supplies, combined with withdrawal from various stored supplies, result in a total of 61,600 AF that could be used to meet customer demands of 40,500 AF; note that this is based on treated customer demand projections including substitute for the City of Pleasanton’s groundwater pumping quota through 2029 (with current deliveries trending 10% below 2025 delivery requests) and untreated water demands. It is projected that no water will be used to artificially recharge the local groundwater basin as its storage condition is 100% of its capacity. An estimated 5,000 AF will be carried over in Lake Del Valle for use in 2026. A portion of the remaining water will be unavailable as operational system losses (DWR and Zone 7 losses; 1,000 AF). As part of the water management strategy, the remaining supplies (approximately 15,000 AF) will be retained in San Luis Reservoir for use in 2026 as SWP Carryover.

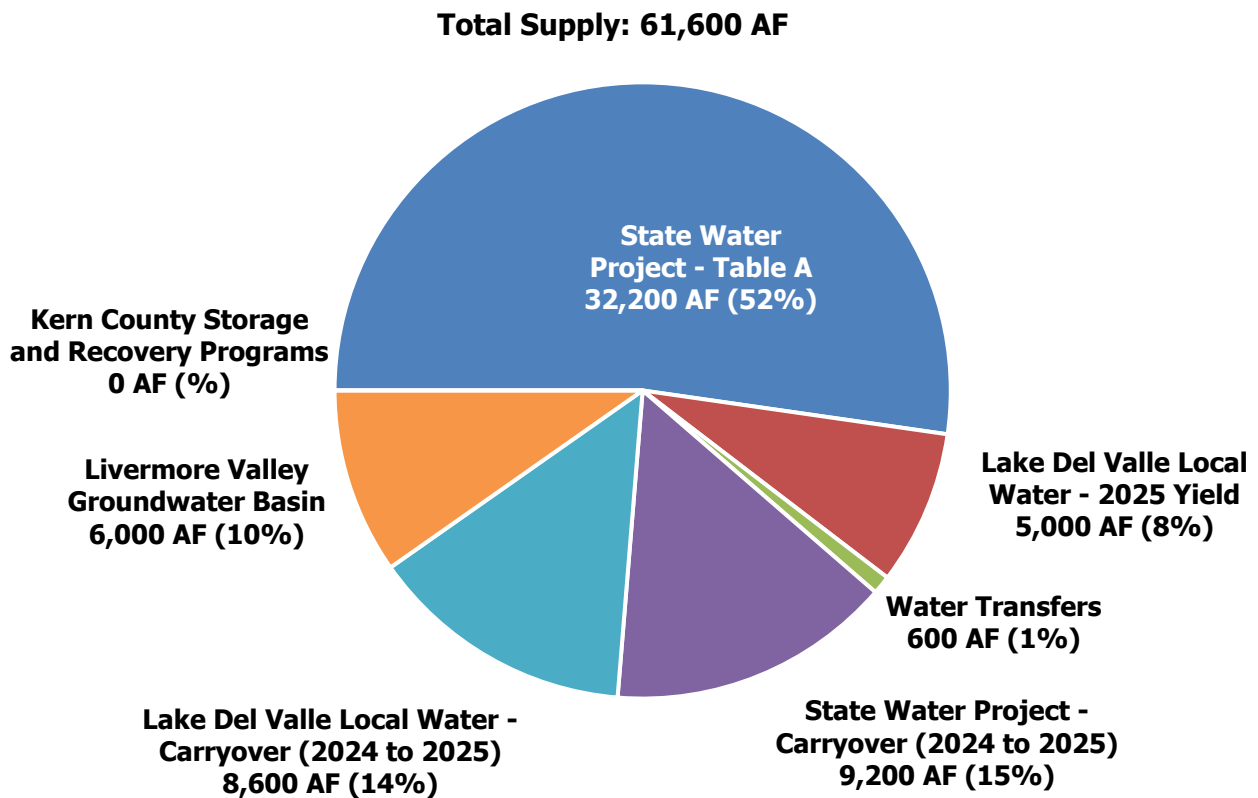
As shown in Figure 1, a comparison of projected water supply and demand indicates that Zone 7 can deliver projected demands, even if conditions are critically dry in 2026 and dry in 2027. Zone 7 also expects to meet demands over 2028 and 2029, assuming average hydrologic conditions in those years.

Figure 1: Water Supplies versus Demands Based on Delivery Requests



Based on the projected operations plan, the available surface water supply will be sufficient to meet water demands and allow the replenishment of Zone 7’s water storage reserves in the local groundwater basin. Figure 2 below shows how Zone 7 anticipates meeting demands with its water supply portfolio during 2025.

Figure 2: Expected 2025 Water Supply Portfolio to Meet Demands



Zone 7 has been evaluating several potential future water supply and storage options to bolster long-term water supply reliability (Delta Conveyance Project, Chain of Lakes Conveyance System, Potable Reuse and Sites Reservoir). A number of planned capital projects (new wells, the Chain of Lakes Conveyance System, and reliability intertie) will increase water supply reliability, and the completed Chain of Lakes will help bolster the reliability of Zone 7’s water supply system in the distant future. Furthermore, these projects will help optimize the long-term yield of Lake Del Valle local water, a key source of incoming supplies, and the use of the local groundwater basin for storage and recovery.

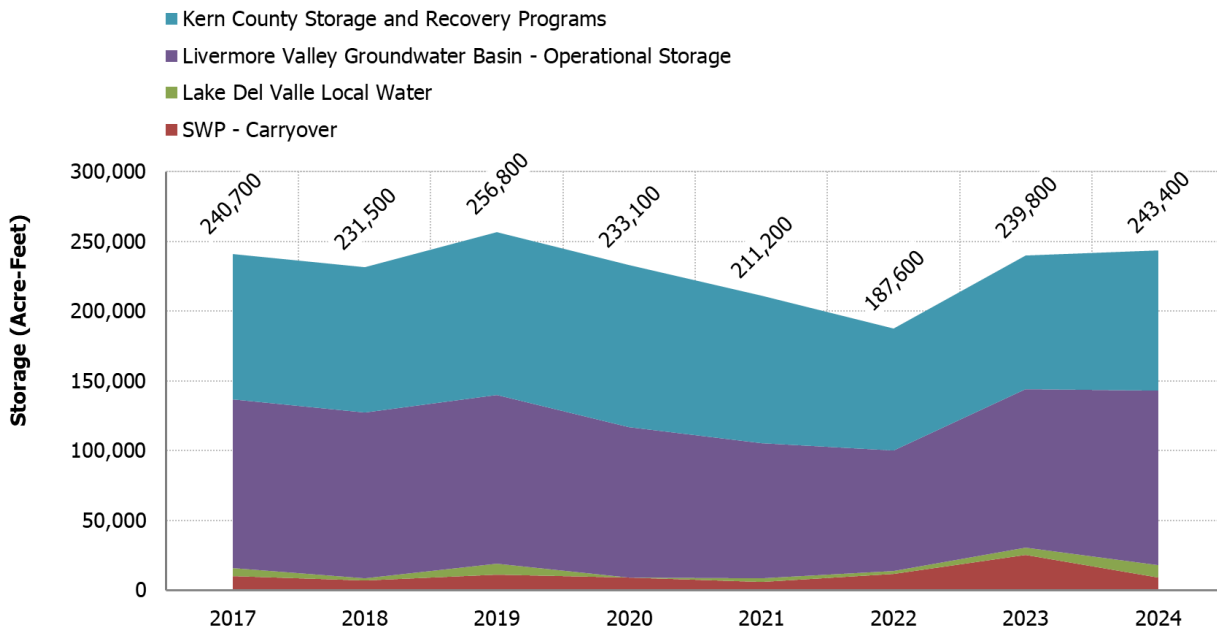
Zone 7 will continue to monitor local and statewide hydrologic conditions, adjust operations as necessary to optimize use of available resources, remain prepared for another single or multi-year drought, and continue to coordinate with the local water supply retailers, untreated water customers, and the Department of Water Resources (DWR).

KEY HYDROLOGIC AND WATER SUPPLY CONDITIONS

INITIAL STORAGE CONDITIONS (JANUARY 1, 2025)

Zone 7 started 2025 with a SWP carryover of 9,200 AF, 8,600 in Lake Del Valle local water carryover, Livermore Valley Groundwater Basin storage of 125,000 AF above the Minimum Thresholds set in the Livermore Valley Alternative Groundwater Sustainability Plan, and 100,600 AF of water stored in the Kern County Storage and Recovery Programs (Semitropic Water Storage District [Semitropic] and Cawelo Water District [Cawelo]). Zone 7's storage portfolio at the beginning of 2025 had about 243,400 AF, as shown in Figure 3 below.

Figure 3: Historical Water Supply Storage Conditions, End of Year Storage Balances



RESERVOIR CONDITIONS

As of April 1, 2025, storage in Oroville Reservoir was at 3.02 million acre-feet (MAF), or 88% of capacity. Oroville Reservoir collects runoff from the Feather River watershed in Northern California, a main source of supply for the SWP. San Luis Reservoir, the main reservoir for the SWP south of the Delta, was at 1.77 MAF, or 89% of capacity as of April 1.

Most of Zone 7's SWP carryover (9,200 AF) stored in San Luis Reservoir this year has been used or remains in storage and will be delivered to Zone 7 this year.

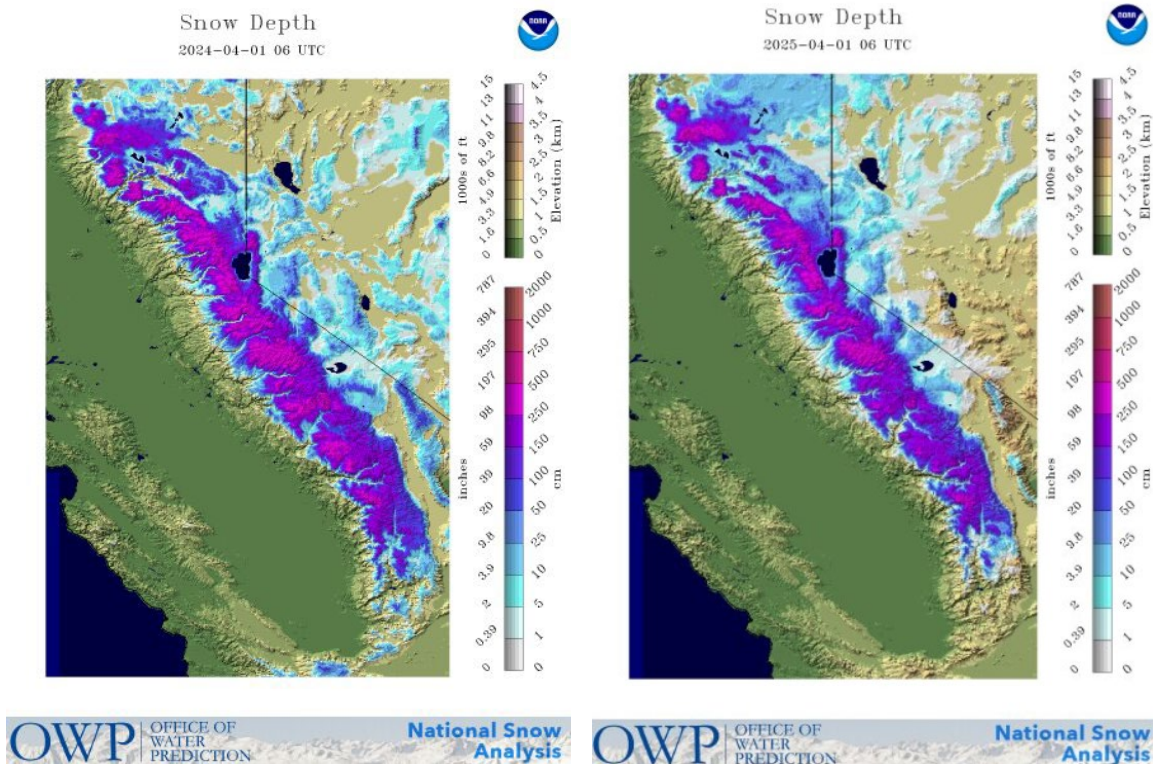
SIERRA SNOWPACK AND PRECIPITATION (APRIL 1, 2025)

The statewide Sierra snowpack on April 1, 2025, was estimated at about 96% of average (see Attachment B), compared to 110% at the same time last year. April 1 is normally when the snowpack level peaks before the spring melt begins. The snowpack in Northern California is the main source of supply for the SWP during the spring and summer. Figure 4 presents a comparison of snow depths in the Sierras in April 2024 versus those in April 2025. The

comparison of snow depth is very similar between 2024 and 2025 although 2024 had a higher snow water content.

Northern Sierra precipitation, which is a key factor in SWP allocation, was 52.3 inches as of April 1, 2025 or 118% of average (Attachment B). This is about 9.5 inches (22%) greater than it was a year ago.

Figure 4: Statewide Snowpack in the Sierra Nevada: 2024 versus 2025

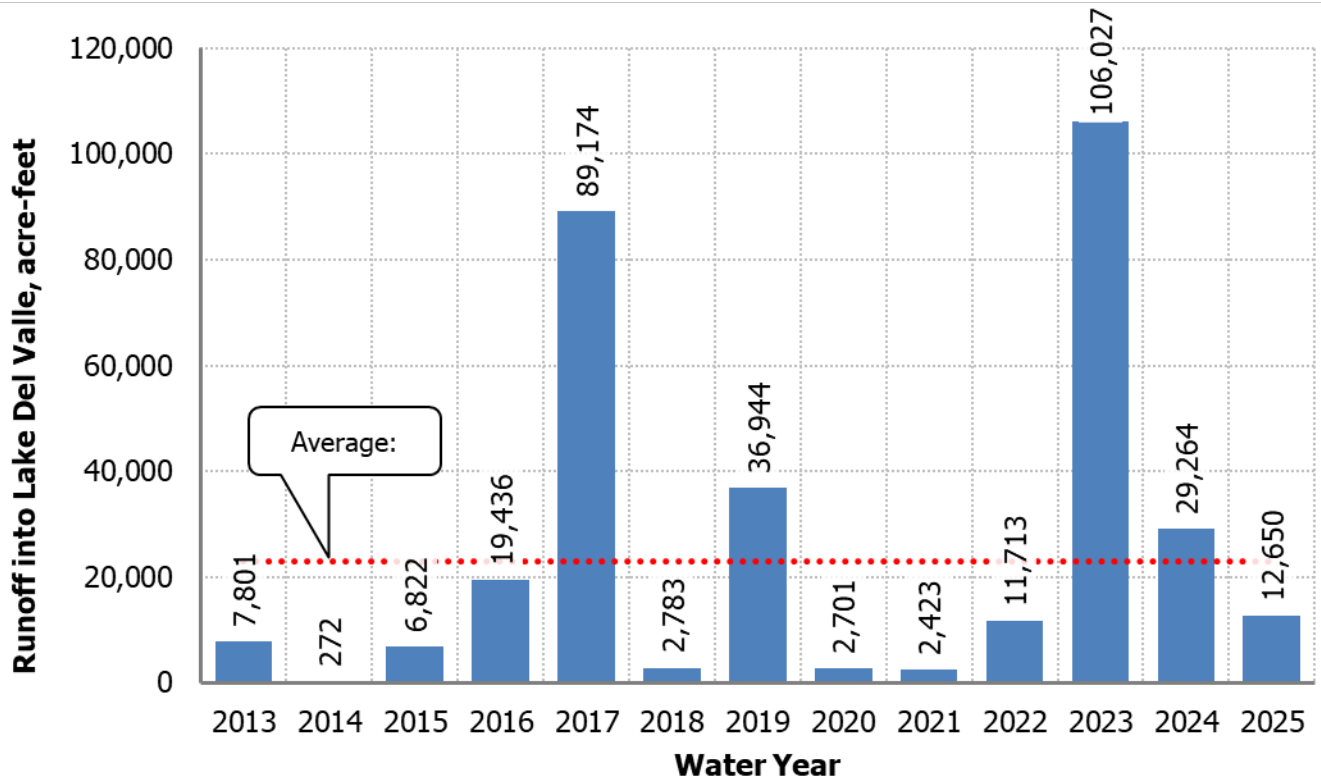


(Source: National Weather Service Remote Sensing Center, www.noahrs.noaa.gov/nsa)

LOCAL RUNOFF AND PRECIPITATION IN 2025

The Tri-Valley area has experienced significantly less runoff this year compared to the same time last year. Figure 5 shows that as of April 1, 2025, runoff into Lake Del Valle is 55% of average (12,600 AF compared to 23,000 AF). No flood releases have been made this year. Locally captured water is split with the Alameda County Water District (ACWD) and stored in the lake for future use in accordance with Zone 7 and ACWD's water rights permit. Based on DWR accounting, Zone 7 has about 13,400 AF of local water stored in Lake Del Valle as of April 1, 2025. The local precipitation total is at 79% of the average year-to-date at Livermore Airport Station for April 1, 2025 (Attachment B).

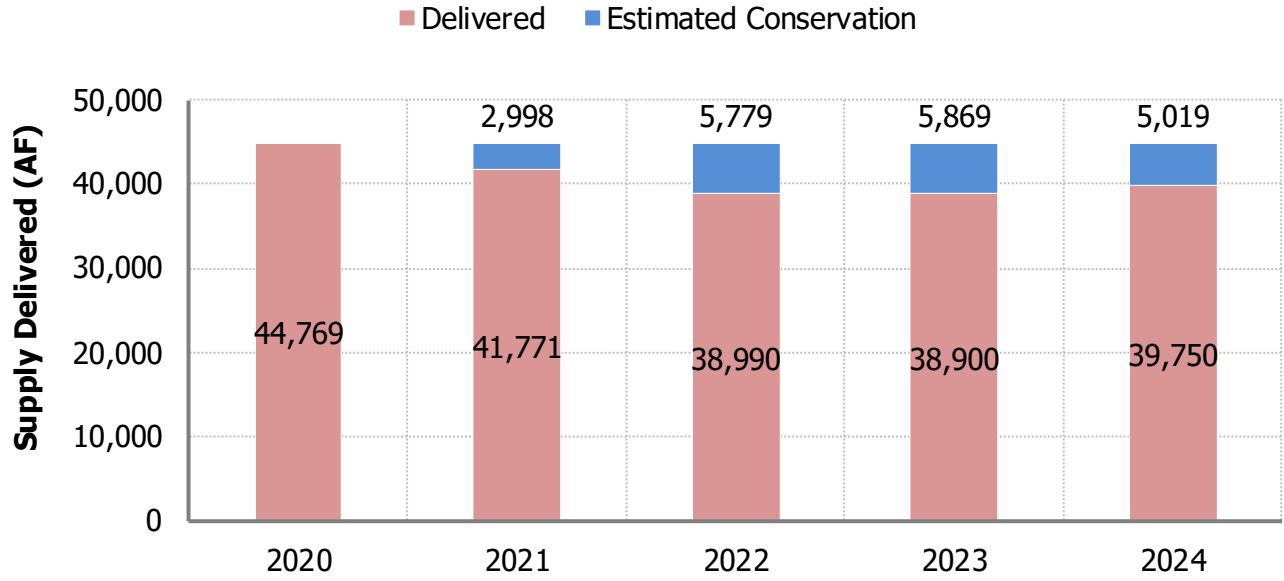
Figure 5: Runoff into Lake Del Valle (USGS Stream Gauge Arroyo Valle Below Lang Canyon)



CONSERVATION IN THE TRI-VALLEY

On September 1, 2021, the Zone 7 Board called for 15% mandatory conservation for treated water customers in preparation for a potential third dry year in 2022 (Resolution No. 21-67). This requirement was rescinded in April of 2023 and replaced with a 5% voluntary conservation target. Since rescinding the mandatory conservation action, water demand has been slow to rebound to baseline levels. Figure 6 shows water use and conservation between 2021 and 2024 relative to 2020. A cumulative amount of about 20,000 AF was conserved during this period by Tri-Valley treated and untreated water customers (relative to 2020). Water supply conservation preserves supplies and supports Zone 7's ability to meet retailer demands in current and subsequent years.

Figure 6: Conservation in the Tri-Valley (2020 Baseline)



2025 SWP TABLE A ALLOCATION: 40% AS OF APRIL 1, 2025

As per Zone 7’s water supply contract with DWR, Zone 7 can receive up to 80,619 AF of SWP Table A water in any given year; the percent of this amount Zone 7 actually receives is called the “Table A” allocation. The 2025 SWP Table A allocation is 40% as of April 1, 2025, equivalent to 32,200 AF for Zone 7. A final Table A allocation is expected in May.

ANNUAL REVIEW OF THE SUSTAINABLE WATER SUPPLY REPORT ASSUMPTIONS

In a normal year, the Annual Review of the Sustainable Water Supply Report uses the retailers’ delivery requests in the analysis. Given average precipitation conditions in 2025, this report reflects retailer demands corresponding to a moderate water consumption decrease in the first two years, as water usage has thus far been slow to rebound from the recent drought. It should be noted that the current 30-year water supply contracts for all four retailers are currently undergoing the contract renewal process. This report presumes those contracts will be renewed.

To illustrate Zone 7’s ability to meet treated and untreated water demands, the analysis assumes below-normal conditions¹ (equivalent to 2009 conditions) in 2025, followed by critically dry conditions in 2026, continuing dry conditions in 2027 and normal conditions in 2028-2029. The demand trend of this Annual Review of the Sustainable Water Supply Report is reflective of the historic nature of the recent drought and its anticipated long-term effects. For this Annual Review of the Sustainable Water Supply Report, projected average conditions are consistent with the 53% average Table A allocation or 42,700 AF for the existing conditions scenario in DWR’s 2023

¹ Designations of hydrologic conditions are based on the Sacramento Valley Water Year Index: <https://cdec.water.ca.gov/reportapp/javareports?name=WSIHIST>

Delivery Capability Report². Lake Del Valle local water supply is expected to yield on average 5,500 AF per year to reflect climate change conditions. Each year, Zone 7 typically strives to carry over to the following year 10,000 AF in SWP facilities (“SWP Carryover”). Any water captured locally in Lake Del Valle is also typically carried over into the following year, whenever possible. Reserving water for future years is used as a prudent water management practice given the uncertainty and variability of hydrologic conditions from year to year.

PROJECTED WATER DEMANDS: NEXT FIVE YEARS

Each year, Zone 7 receives Municipal and Industrial (M&I) treated water delivery requests from the retailers for the next five years (Table 1 and Figure 7), which are normally used in the Annual Review of the Sustainable Water Supply Report. Zone 7 estimates demands for direct customers and untreated water customers based on recent trends. Note that while the Annual Review of the Sustainable Water Supply Report typically uses retailer treated water delivery requests in the analysis, as noted above, retailer demands have been adjusted in 2025 and 2026 to reflect the current water usage trends. Retailer demands are assumed to progressively increase to delivery requests by 2027. This demand assumption includes providing 3,500 AF of treated water supply to the City of Pleasanton through 2029 in place of its groundwater pumping quota. Figure 8 shows untreated water demand projections used in the analysis.

As shown in Table 1, in addition to customer deliveries, demands also include system losses and water planned to go into storage for future use.

Table 1: Actual and Projected Five-Year Demands (Customer Deliveries), Water Planned for Storage, and System Losses

DEMANDS/PLANNED FOR STORAGE ^a Acre-Feet	ACTUAL	PROJECTIONS				
	2024	2025	2026	2027	2028	2029
<i>Hydrologic Year Equivalent</i>	<i>2009</i>	<i>2018</i>	<i>1977</i>	<i>2018</i>	<i>Average</i>	<i>Average</i>
<i>Table A Allocation</i>	<i>40%</i>	<i>40%</i>	<i>10%</i>	<i>30%</i>	<i>53%</i>	<i>53%</i>
Customer Deliveries						
Treated Water Demand ^b	35,400	36,000	37,000	41,500	42,000	42,500
Untreated Water Demand ^c	4,350	4,500	6,000	5,500	5,000	5,000
To Storage						
State Water Project - Carryover (Current to Following Year)	9,200	15,100	10,000	10,000	10,000	10,000
Lake Del Valle Local Water - Carryover	8,600	5,000	0	4,000	8,000	8,000
Livermore Valley Groundwater Basin Groundwater Recharge	6,150	0	0	0	4,100	6,500
Semitropic Storage	0	0	0	0	0	0
Cawelo Storage	10,000	0	0	0	0	0
System Losses						
Groundwater Production (Disposal to brine)	200	200	400	400	100	100
Delta Carriage Water or Napa Repayment	1,200	200	300	300	0	0
Treated Water System Losses	0	200	200	200	200	200
Lake Del Valle Evaporation Losses	700	400	300	200	500	500
State Water Project - Carryover Spill	0	0	0	0	0	0
Total	75,800	61,600	54,200	62,100	69,900	72,800

Notes

² The 2023 Delivery Capability Report projections were used for the average SWP Table A estimate and for equivalent hydrologic conditions: <https://data.cnra.ca.gov/dataset/finaldcr2023/resource/92356681-957a-48ee-97c4-529d25b9dbb2>

- (a) Demands were rounded to the nearest 100 acre-feet.
- (b) Treated Water Demand = Municipal and Industrial (M&I) demands. Demands include retailer demands (including groundwater pumping quota (GPQ) for Dublin San Ramon Services District and City of Pleasanton) and direct retail through 2029. Incorporates 10% conservation relative to 2024 delivery requests for 2025 and 2026.
- (c) Zone 7's untreated water demand is used primarily for agricultural and golf course irrigation; projections are based on recent past usage and projected hydrologic conditions.

Figure 7: Historical and Projected Five-Year Treated Water Demands Based on Delivery Requests

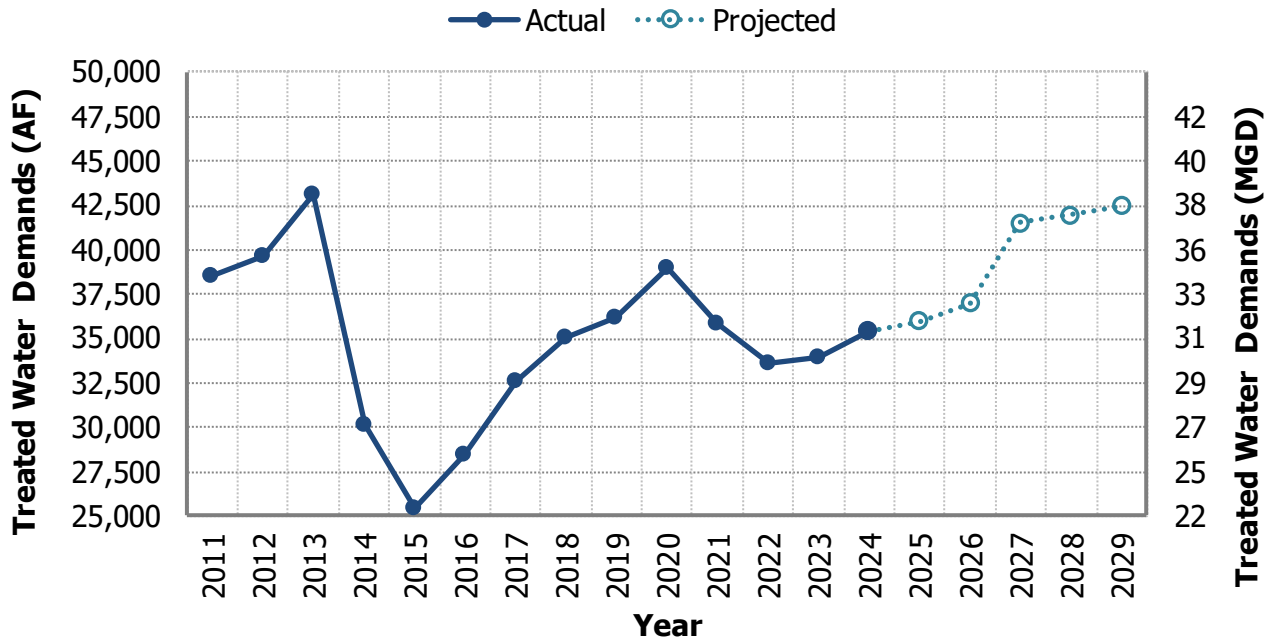
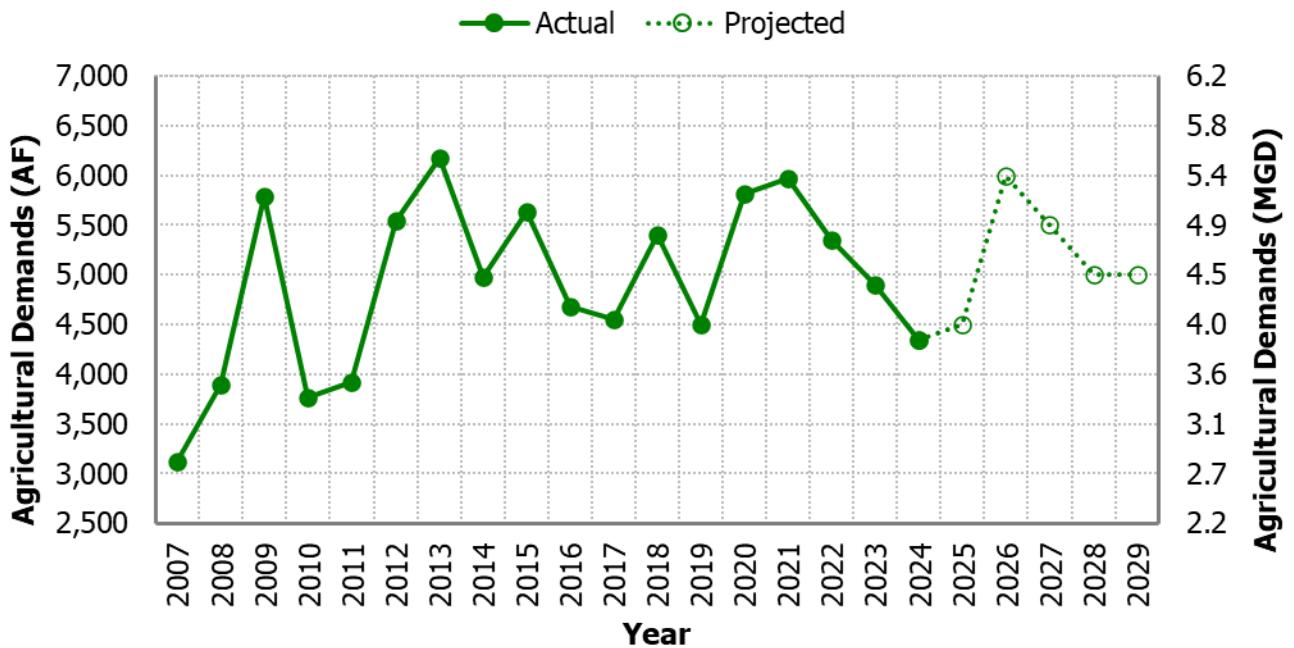


Figure 8: Historical and Projected Untreated Water Demands



The State of California has passed several recent pieces of legislation which focus on water conservation such as SB 1157 which sets Indoor Residential Water Use Standards, SB 606/AB 1668 which is referred to as the Making Conservation a California Way of Life legislation, and recently AB 1572 which phases in a ban on potable water irrigation of non-functional turf. Future demands will therefore reflect a combination of water conservation and population growth in the Tri-Valley. Zone 7 will continue to work closely with the retailers to verify demands and track the effects of conservation. The 2020 Tri-Valley Municipal and Industrial Water Demand Study has been completed to improve long-term demand estimates.³ Zone 7 is currently conducting another assessment of demands to update this study.

PROJECTED WATER SUPPLIES: NEXT FIVE YEARS

INCOMING SUPPLIES

Each year, Zone 7 receives water from its contract with DWR for imported SWP Table A water⁴ and its local water right permit on Arroyo Valle (Lake Del Valle Local Water). This year, Zone 7 expects less than 500 AF from the Yuba Accord program. Starting in 2025, Zone 7 has the option to purchase water from Sutter Extension Water District up to 3,500 AF as necessary to shore up supplies. There are currently no plans to purchase water from this source in 2025.

Table 2 presents the expected yields in 2025 and estimates for 2026-2029.

WATER FROM STORAGE

Zone 7 currently stores surplus water in various storage facilities, including the Livermore Valley Groundwater Basin, San Luis Reservoir, Lake Del Valle, and Kern County Storage and Recovery Programs (Semitropic and Cawelo) to help meet water demands as needed during dry years. Water is withdrawn from storage when needed to supplement that year's incoming supply to meet demands. Water may also be shifted from one type of storage to another as part of water management; in 2022, for example, water was withdrawn from storage and a portion was subsequently redeposited into storage in other locations to meet operational needs. As of the time of this report, Zone 7 continues monitoring water supply conditions and allocation projection to determine whether to store water outside of its service area in the current water year.

³ 2020 Tri-Valley Municipal and Industrial Water Demand Study:
https://www.zone7water.com/sites/main/files/file-attachments/2020_tri-valley_demand_study.pdf?1627595774

⁴ This includes Table A or SWP carryover from the previous year; the latter is discussed in the next section.

Table 2: Projected Supply Sources: Incoming Supplies and Water from Storage

SUPPLY SOURCES Acre-Feet	ACTUAL	PROJECTIONS				
	2024	2025	2026	2027	2028	2029
<i>Hydrologic Year Equivalent</i>	<i>2009</i>	<i>2018</i>	<i>1977</i>	<i>2018</i>	<i>Average</i>	<i>Average</i>
<i>Table A Allocation</i>	<i>40%</i>	<i>40%</i>	<i>10%</i>	<i>30%</i>	<i>53%</i>	<i>53%</i>
Incoming Supplies						
State Water Project (SWP) - Table A	32,250	32,200	8,100	24,200	42,700	42,700
Lake Del Valle Local Water - Current Year Capture	9,550	5,000	2,000	4,000	8,000	8,000
Yuba Accord/Dry Year Transfer Program	0	600	1,000	1,000	0	0
SWP/Other Water Transfer	0	0	2,000	5,000	0	0
From Storage						
State Water Project - Carryover (Previous to Current Year)	25,200	9,200	15,100	10,000	10,000	10,000
Lake Del Valle Local Water - Carryover	5,000	8,600	5,000	0	4,000	8,000
Livermore Valley Groundwater Basin	3,600	5,800	7,500	9,500	5,000	4,000
Groundwater Brine Disposal	200	200	400	400	200	100
Semitropic Banked Water (Pumpback/Exchange)	0	0	9,000	6,000	0	0
Cawelo Banked Water	0	0	4,100	2,000	0	0
Total	75,800	61,600	54,200	62,100	69,900	72,800

Notes:

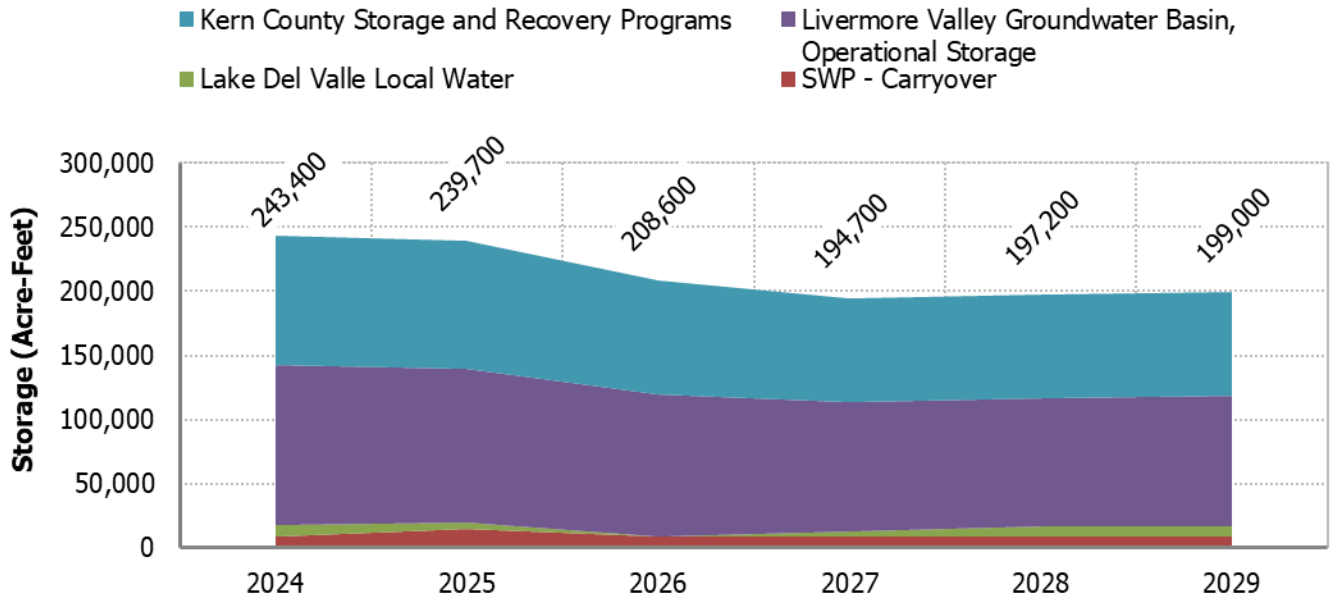
- (a) See Zone 7's 2022 Water Supply Status Report Update for more details about Zone 7 supplies: https://www.zone7water.com/sites/main/files/file-attachments/draft_zone_7_2022_wse_update_2025.03.pdf?1680823418
- (b) Zone 7 plans to obtain water transfers as needed, subject to availability.

Table 3 and Figure 9 summarize the total water in storage available as of the end of 2024, and projected storage levels over 2025 through 2029. Storage projections show a decrease of about 50,000 AF over the next five years from the end of 2024 through the end of 2029 based on assumed hydrologic conditions and demands. This trend is a preliminary estimate based on projected deposits and withdrawals from the various storage categories. For example, while it accounts for 10% groundwater loss from local storage activities, it does not account for the natural influx to storage that occurs in the local groundwater basin due to rainfall runoff. The declining storage trend could be mitigated through additional water transfers. Staff will monitor conditions to determine the appropriate amounts of water transfers in future years.

Table 3: End-of-Year Storage Balances (Actual and Projected)

	ACTUAL	PROJECTIONS				
End of Year Storage Balance (Acre-Feet)	2024	2025	2026	2027	2028	2029
SWP - Carryover	9,200	15,100	10,000	10,000	10,000	10,000
Lake Del Valle Local Water	8,600	5,000	0	4,000	8,000	8,000
Livermore Valley Groundwater Basin - Operational Storage	125,000	119,000	111,100	101,200	99,700	101,500
Kern County Storage and Recovery Programs	100,600	100,600	87,500	79,500	79,500	79,500
TOTAL STORAGE	243,400	239,700	208,600	194,700	197,200	199,000

Figure 9: End-of-Year Storage Balances (Actual and Projected)



COMPARISON OF SUPPLY AND DEMAND: NEXT FIVE YEARS

As shown in Table 4, Zone 7 can deliver water to supply 100% of customer demands based on adjusted retailer demand levels for 2025 and 2026, with demands expected to ramp up to delivery request levels by 2027 based on assumed hydrology.

Table 4: Comparison of Supplies and Demands: Next Five Years

SUPPLIES VS DEMANDS Acre-Feet	ACTUAL	PROJECTIONS				
	2024	2025	2026	2027	2028	2029
<i>Hydrologic Year Equivalent</i>	2009	2018	1977	2018	Average	Average
<i>Table A Allocation</i>	40%	40%	10%	30%	53%	53%
Incoming Supplies ^(a)	41,800	37,800	13,100	34,200	50,700	50,700
Water Supply from Storage ^(b)	34,000	23,800	41,100	27,900	19,200	22,100
Total Water Supply	75,800	61,600	54,200	62,100	69,900	72,800
Customer Deliveries ^(c)	39,750	40,500	43,000	47,000	47,000	47,500
Supply to Storage ^(d)	33,950	20,100	10,000	14,000	22,100	24,500
System Losses ^(e)	2,100	1,000	1,200	1,100	800	800
% of Demand Delivered (Customer Deliveries)	100%	100%	100%	100%	100%	100%
TOTAL STORAGE	243,400	239,700	208,600	194,700	197,200	199,000

Notes:

- (a) From Table 2: SWP - Table A, Lake Del Valle Local Water, and water transfers.
- (b) From Table 2: SWP - Carryover, Lake Del Valle Local Water - Carryover, Livermore Valley Groundwater Basin, and Semitropic/Cawelo.
- (c) From Table 1: Treated and Untreated Water Demands.
- (d) From Table 1: Water stored in Lake Del Valle and SWP as carryover, Livermore Valley Groundwater Basin recharge, and water stored in Semitropic/Cawelo.
- (e) Operational losses: storage losses, evaporation, other system losses.

PROGRAMS NECESSARY TO MEET WATER DEMANDS GOING FORWARD

The Annual Review of the Sustainable Water Supply Report indicates that Zone 7 has enough water supplies to meet projected water demands over the next five years based on current projected demands (reflecting 10% decreased usage for retailers for 2025 and 2026) and assumed hydrology. To achieve long-term water supply reliability through buildout while accounting for hydrologic uncertainties, Zone 7 has been evaluating several potential future water supply and storage options.

The 2022 Water Supply Evaluation Update (WSE) Update analyzed several portfolios containing a combination of the following water supply and storage alternatives:

- Annual Water Transfers
- Bay Area Regional Desalination Project
- Delta Conveyance Project
- Chain of Lakes Conveyance System
- Los Vaqueros Expansion (LVE)
- Potable Reuse
- Sites Reservoir

The 2022 WSE Update found that simulated portfolios containing more new water supply and storage projects performed better than portfolios with fewer new water supply and storage projects at reducing Zone 7's shortage risk. No single project would effectively reduce the shortage risk enough to meet Zone 7's reliability goals. The LVE project was terminated in 2024 and removed from Zone 7's water supply portfolio. Zone 7's water supply risk model shows that remaining portfolio components without LVE are sufficient to address the long-term water supply reliability. Zone 7 continues to track and evaluate potential water supply and storage alternatives and will utilize the water supply risk model to evaluate the alternatives further as more information becomes available. Additionally, Zone 7 is updating the water supply risk model to better represent Zone 7's water supply system in preparation for future analyses.

Zone 7 also continues to evaluate and optimize the long-term local water yield from the Arroyo Valle. A number of planned capital projects (new wells, the Chain of Lakes Conveyance System, and reliability intertie) will help bolster the reliability of Zone 7's water supply system. The reconveyance of the lakes in the Chain of Lakes for Zone 7's operation continues to be a component of Zone 7's long-term reliability.

Zone 7 staff will also continue to monitor local and statewide conditions, adaptively modify operations as necessary to optimize use of available resources, remain prepared for continuing drought conditions, and continue to coordinate regularly with its local water supply retailers, untreated water customers, and with DWR. In June 2025, staff will provide an updated Operations Plan to the Water Resources Committee; this plan will reflect the latest actual supply and demand conditions and Zone 7's most feasible operational scenario for the remainder of 2025.

This Annual Review of the Sustainable Water Supply Report indicates that Zone 7 is able to

meet demands without mandatory conservation. To promote conservation, Zone 7 will continue to implement rebates and public outreach programs in partnership with the retailers.

ATTACHMENTS:

- A. Water Supply Reliability Policy
- B. Latest Hydrologic Conditions

Attachment A

Water Supply Reliability Policy

ZONE 7

ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

BOARD OF DIRECTORS

RESOLUTION NO 13-4230

INTRODUCED BY DIRECTOR QUIGLEY
SECONDED BY DIRECTOR STEVENS

Water Supply Reliability Policy

WHEREAS, the Zone 7 Board of Directors desires to maintain a highly reliable Municipal and Industrial (M&I) water supply system so that existing and future M&I water demands can be met during varying hydrologic conditions; and

WHEREAS, the Board has an obligation to communicate to its M&I customers and municipalities within its service area the ability of Zone 7's water supply system to meet projected water demands; and

WHEREAS, the Board on August 18, 2004 adopted Resolution No. 04-2662 setting forth its Reliability Policy for Municipal & Industrial Water Supplies; and

WHEREAS, the Board desires to revise the Reliability Policy to reflect recent data, analysis, and studies.

NOW, THEREFORE, BE IT RESOLVED that the Board hereby rescinds Resolution No. 04-2662 adopting the August 18, 2004 Reliability Policy for Municipal & Industrial Water Supplies; and

BE IT FURTHER RESOLVED that the Board hereby adopts the following level of service goals to guide the management of Zone 7's M&I water supplies as well as its Capital Improvement Program (CIP):

Goal 1. Zone 7 will meet its treated water customers' water supply needs, in accordance with Zone 7's most current Contracts for M&I Water Supply, including existing and projected demands as specified in Zone 7's most recent Urban Water Management Plan (UWMP), during normal, average, and drought conditions, as follows:

- At least 85% of M&I water demands 99% of the time
- 100% of M&I water demands 90% of the time

Goal 2: Provide sufficient treated water production capacity and infrastructure to meet at least 80% of the maximum month M&I contractual demands should any one of Zone 7's major supply, production, or transmission facilities experience an extended unplanned outage of at least one week.

BE IT FURTHER RESOLVED that to ensure that this Board policy is carried out effectively, the Zone 7 General Manager will provide a water supply status report to the Board every five years with the Zone 7 Urban Water Management Plan that specifies how these goals will be, or are being, achieved.

If the General Manager finds that the goals cannot be met during the first five years of the Urban Water Management Plan, then the Board will hold a public hearing within two months of the General Manager's finding to consider remedial actions that will bring Zone 7 into substantial compliance with the stated level of service goals. Remedial actions may include, but are not limited to, voluntary conservation or mandatory rationing to reduce water demands, acquisition of additional water supplies, and/or a moratorium on new water connections. After reviewing staff analyses and information gathered at the public hearing, the Board shall, as expeditiously as is feasible, take any additional actions that are necessary to meet the level of service goals during the following five-year period; and

BE IT FURTHER RESOLVED that the Zone 7 General Manager shall prepare an Annual Review of the Sustainable Water Supply Report which includes the following information:

- (1) An estimate of the current annual average water demand for M&I water as well as a five-year projection based on the same information used to prepare the UWMP and CIP;
- (2) A Summary of available water supplies to Zone 7 at the beginning of the calendar year;
- (3) A comparison of current water demand with the available water supplies; and
- (4) A discussion of water conservation requirements and other long-term supply programs needed to meet Zone 7 M&I water demands for single-dry and multiple-dry year conditions, as specified in the Zone 7's UWMP.

A summary of this review will be provided to M&I customers.

Definitions

Level of Service for Annual Water Supply Needs—the level of service is the percent of existing or projected water demand that Zone 7's water supply system can meet during two key conditions: (1) during various hydrologic conditions and (2) during unplanned outages of major facilities.

Capital Improvement Program (CIP)—the CIP is Zone 7's formal program for developing surface and ground water supplies, along with associated infrastructure, including import water conveyance facilities, surface water treatment plants, groundwater wells, and M&I water transmission system to meet projected water demands.

Normal conditions—conditions that most closely represent median runoff or allocation from all normally contracted or available water supplies from the historic record.

Average conditions—conditions that most closely represent the average runoff or allocation from all normally contracted or legally available water supplies from the historic record.

Drought conditions—conditions that most closely represent reduced runoff or allocation level from the historic record from all normally contracted or legally available water supplies, including both single-dry and multiple-dry year conditions.

Single-dry year condition—a condition that most closely represents the lowest yield over a one-year period from the historic record from all normally contracted or legally available supplies.

Multiple-dry year condition—a condition that most closely represents three or more consecutive dry years from the historic record that represent the lowest yields from all normally contracted or legally available supplies.

Available water supplies—consist solely of (1) water supplies that Zone 7 has contracted for (e.g., listed under Schedule A of the State Water Contract, dry-year water options, special contracts with other water districts, etc.) and (2) water actually stored in surface and subsurface reservoirs.

Maximum Month—the largest monthly average water use.

ADOPTED BY THE FOLLOWING VOTE:

AYES: DIRECTORS FIGUERS, GRECI, MACHAEVICH, PALMER, QUIGLEY, RAMIREZ HOLMES STEVENS

NOES: NONE

ABSENT: NONE

ABSTAIN: NONE

I certify that the foregoing is a correct copy of a Resolution adopted by the Board of Directors of Zone 7 of the Alameda County Flood Control and Water Conservation District on October 17, 2012.

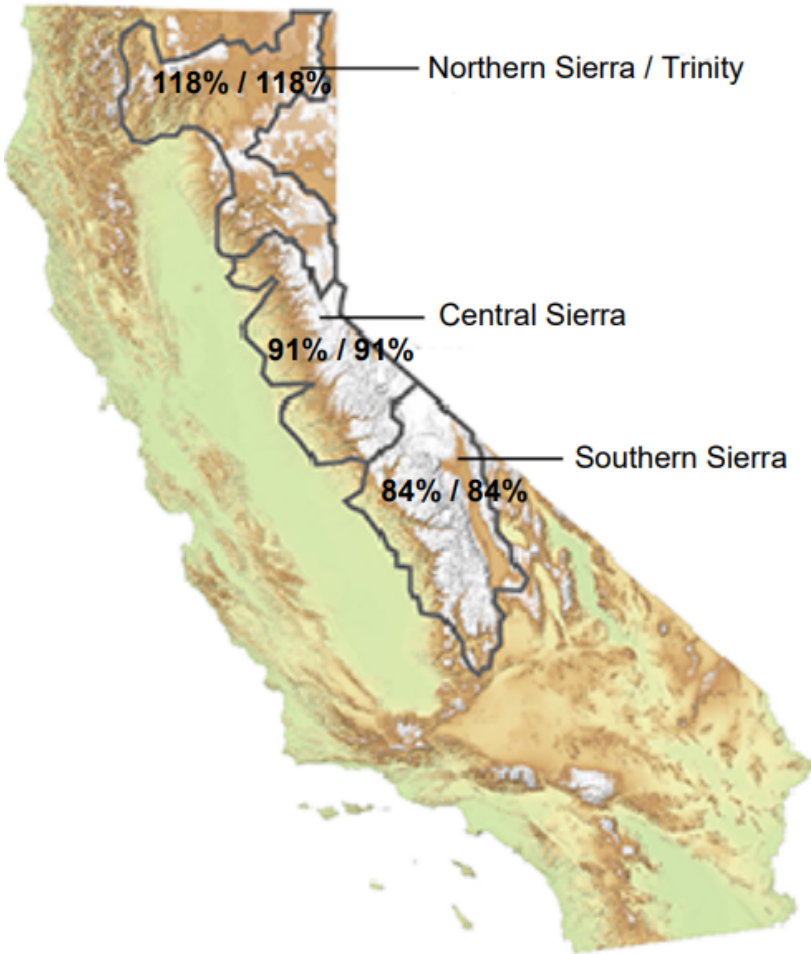
By 
President, Board of Directors

Attachment B

Hydrologic Conditions

Figure 10: California Snow Water Content as of April 1, 2025

% of April 1 Average / % of Normal for This Date



NORTH	
Data as of April 1, 2025	
Number of Stations Reporting	27
Average snow water equivalent (Inches)	30.6
Percent of April 1 Average (%)	118
Percent of normal for this date (%)	118

CENTRAL	
Data as of April 1, 2025	
Number of Stations Reporting	52
Average snow water equivalent (Inches)	25.3
Percent of April 1 Average (%)	91
Percent of normal for this date (%)	91

SOUTH	
Data as of April 1, 2025	
Number of Stations Reporting	26
Average snow water equivalent (Inches)	18.9
Percent of April 1 Average (%)	84
Percent of normal for this date (%)	84

STATE	
Data as of April 1, 2025	
Number of Stations Reporting	105
Average snow water equivalent (Inches)	25.1
Percent of April 1 Average (%)	96
Percent of normal for this date (%)	96

Statewide Average: 96% / 96%

Figure 11: Northern Sierra Precipitation as of April 1, 2025

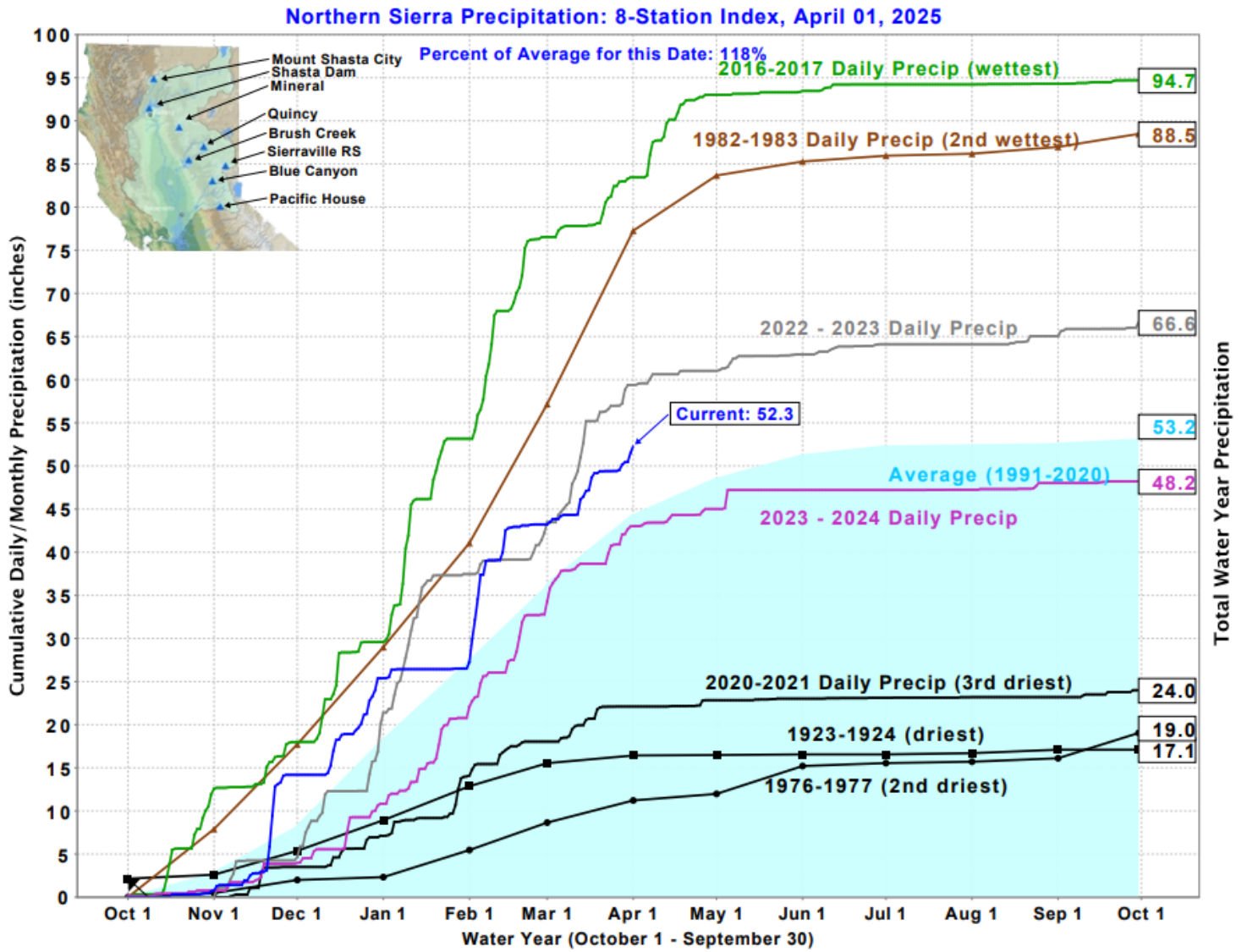


Figure 12: California Reservoir Conditions as of April 1, 2025

CURRENT CONDITIONS: MAJOR WATER SUPPLY RESERVOIRS:31-MAR-2025

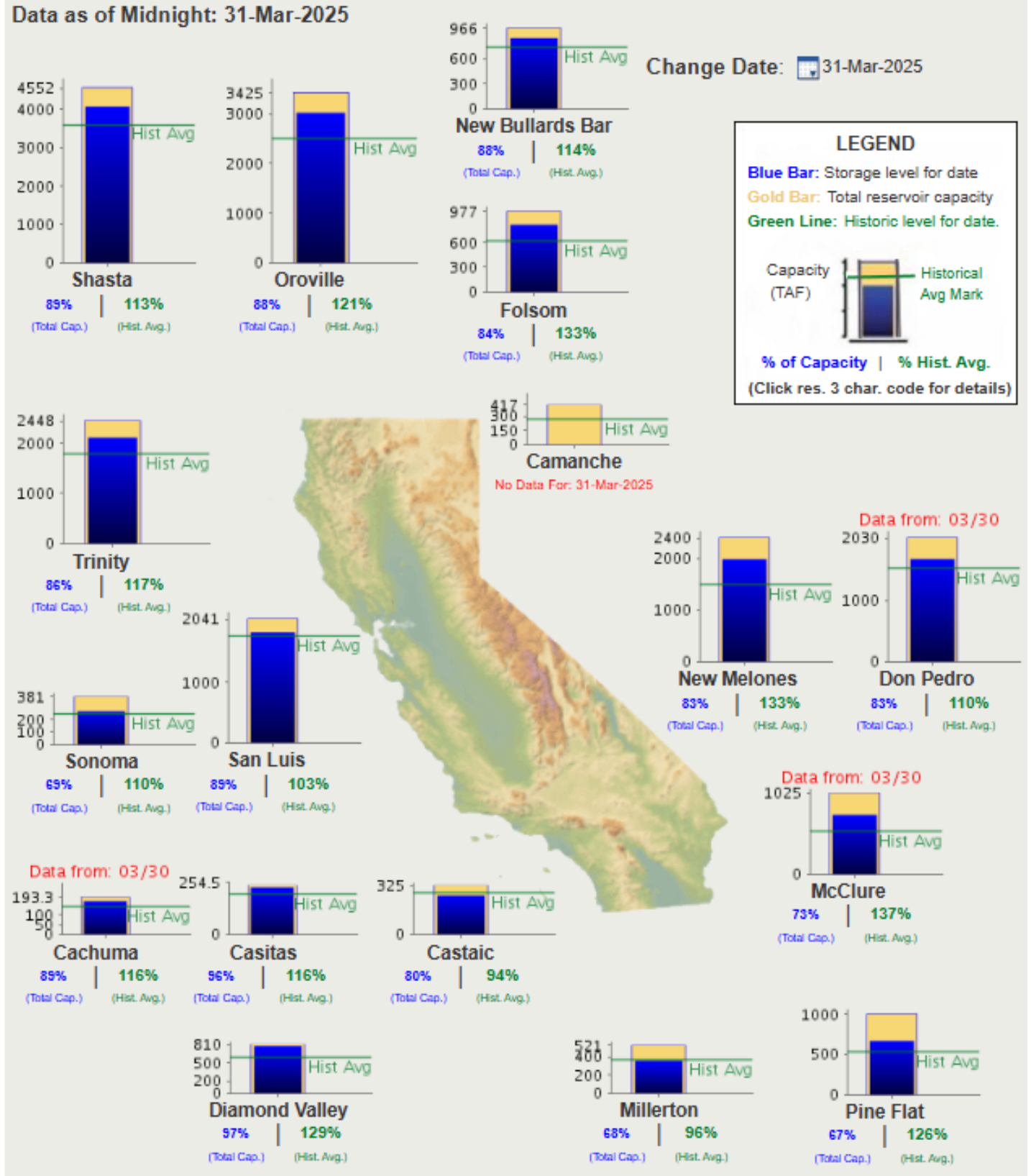
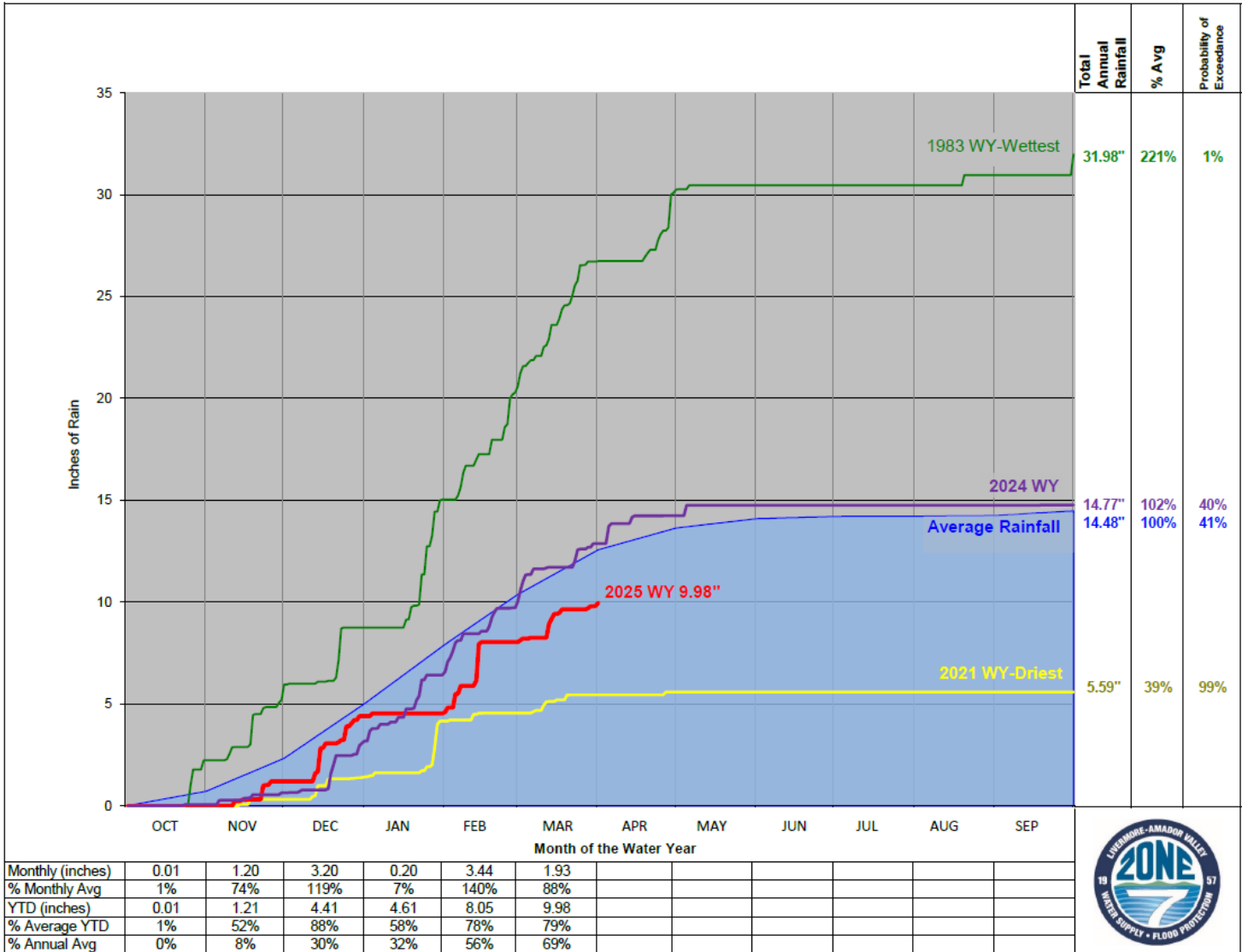


Figure 13: Local Rainfall (Livermore Station KLVK) as of April 1, 2025



Appendix B.

Sample Resolution to Adopt Water Shortage Stage

ZONE 7
ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
BOARD OF DIRECTORS

RESOLUTION NO

INTRODUCED BY
SECONDED BY

DECLARATION OF A STAGE X WATER SHORTAGE EMERGENCY

WHEREAS, the California Urban Water Management Planning Act (“Act”) requires urban water suppliers to adopt an Urban Water Management Plan every five years; and

WHEREAS, Zone 7 adopted its 2025 Urban Water Management Plan in accordance with the provisions of the Act on June 17, 2026; and

WHEREAS, a required component of the Urban Water Management Plan is a Water Shortage Contingency Plan, which establishes criteria and guidelines for operations and water conservation during a water shortage condition; and

WHEREAS, on [Date] the Zone 7 Board was presented with the Annual Review of Sustainable Water Supply (“Annual Sustainability Report”); and

WHEREAS, the Annual Sustainability Report determined that Zone 7 can only deliver XX% of expected water demands in 20XX due to [cite conditions: e.g., critically dry conditions]. ***And/Or***

WHEREAS, on X/XX/20XX, the Governor of the State of California declared a drought state of emergency [asking/requiring] residents to reduce water use by XX%. ***And/Or***

WHEREAS, on X/XX/20XX, the Department of Water Resources announced a X% allocation from the State Water Project. ***And/Or***

WHEREAS, the Board has determined that water shortage emergency conditions exist within the Zone 7 service area due to [cite event: e.g., drought or supply disruption from the Delta due to an earthquake]; and

WHEREAS, the Water Shortage Contingency Plan in the 2025 Urban Water Management Plan adopted by the Board on June 17, 2026 identifies stages of water shortages and demand reduction targets, water supply conditions and required actions associated with each stage.

WHEREAS, current conditions warrant declaration of a Stage X water shortage which requires a XX% [voluntary/mandatory] reduction in water use.

NOW, THEREFORE BE IT RESOLVED, the Board hereby declares a Stage X water shortage and actions applicable to Stage X are, put into effect immediately.

ADOPTED BY THE FOLLOWING VOTE:

AYES:

NOES:

ABSENT:

ABSTAIN:

I certify that the foregoing is a correct copy of a resolution adopted by the Board of Directors of Zone 7 of the Alameda County Flood Control and Water Conservation District on [DATE]

By _____
President, Board of Directors

Appendix E.

UWMP and WSCP Adoption

Appendix F.

Additional Information for the State Water Contractors

Lowest SWP Water Supply Allocation

DWR's 2023 Delivery Capability Report indicates that the modeled single dry year SWP water supply allocation is 4% and the draft 2025 Delivery Capability Report indicates 6% under the existing conditions. Historically the lowest SWP allocations were at 5% in 2014, 2021 and 2022. Due to extraordinarily dry conditions in 2021 and 2022, the initial 2022 SWP allocation was a historically low 0% of Table A Amounts, was later increased to 5% in March 2022, the lowest ever final total SWP water supply allocation. Historic dry conditions led to the low SWP water supply allocations in 2021 and 2022. Such conditions, although possible, likely have a low probability of occurrence. The draft 2025 Delivery Capability Report, which takes into account into the recent changes in the climate, indicates 11% probability of annual SWP Table A deliveries between 0 – 500 TAF, which translates to allocations of 12% or less.

Each year by October 1, SWP contractors submit their requests for SWP supplies for the following calendar year. By December 1, DWR estimates the available water supply for the following year and sets an initial supply allocation based on: the total of all contractors' requests, current reservoir storage, forecasted hydrology through the next year, and target reservoir storage for the end of the next year. The most uncertain of these factors is the forecasted hydrology. In setting water supply allocations, DWR uses a conservative 90% hydrologic forecast, where nine out of ten years will be wetter and one out of ten years drier than assumed. DWR re-evaluates its estimate of available supplies throughout the runoff season of winter and early spring, using updated reservoir storage and hydrologic forecasts, and revises SWP supply allocations as warranted. Since most of California's annual precipitation falls in the winter and early spring, by the end of spring the supply available for the year is much more certain, and in most years DWR issues its final SWP allocation by this time. While most of the water supply is certain by this time, runoff in the late fall remains somewhat variable as the next year's runoff season begins. A drier than forecasted fall can result in not meeting end-of-year reservoir storage targets, which means less water available in storage for the following year.

California is known to experience the highest inter-annual variability in hydrology across the entire United States. While droughts occur, with science-based adjustments to regulatory requirements and better water management to take advantage of the wetter periods that occur even in drought years, SWP water supply reliability is expected to improve. Thus, the assumption for SWP contractors is that a 5% allocation represents the "worst-case" scenario. However, Zone 7 is utilizing 2043 conditions using the 50% level-of-concern to add an additional safety margin, leading to a 2% allocation being used for the single dry year "worst-case" scenario.

Coordinated Operations Agreement (COA)

The Coordinated Operation Agreement (COA) was originally signed in 1986 and defines how the state and federal water projects share the available water supply and the obligations including senior water right demands, water quality, and environmental flow requirements imposed by regulatory agencies. The agreement calls for periodic review to determine whether updates are needed in light of changed conditions. After completing a joint review process, DWR and Reclamation agreed to an addendum to the COA in December 2018, to reflect water quality regulations, biological opinions and hydrology updated since the agreement was signed.

The COA Addendum included changes to the percentages for sharing responsibilities for in basin uses, sharing available export capacity, and the periodic review process. The 1986 Agreement required CVP to meet 75% of the in basin uses and the SWP to meet 25%. The COA Addendum now distinguishes responsibility based on water year type and CVP responsibilities range from 80% in wet years to 60% in critical years. SWP responsibility ranges from 20% in wet years to 40% in critical years. Additionally, the COA Addendum changed sharing export capacity. Previously, export capacity was shared 50% to CVP and 50% to SWP. The COA addendum changed this formula to be 65% CVP and 35% SWP during balanced conditions in the Delta and 60% CVP and 40 % SWP during excess conditions. Overall, based on modeling, these change results in an approximately 115,000 AFY on average reduction in long-term SWP supplies.

Finally, the 2018 COA Addendum updated the periodic review process to require review of the COA Agreement and Addendum every 5 years.

Delta Conveyance Project

Consistent with Executive Order N-10-19, in early 2019, the state announced a new single tunnel project, which proposed a set of new diversion intakes along the Sacramento River in the north Delta for SWP. In 2019 the California Department of Water Resources (DWR) initiated planning and environmental review for a single tunnel Delta Conveyance Project (DCP) to protect the reliability of State Water Project (SWP) supplies from the effects of climate change and seismic events, among other risks. On December 21, 2023, DWR certified the Environmental Impact Report and approved the DCP selecting “Bethany Reservoir Alignment” for further engineering, design and permitting. DWR received the Incidental Take Permit for the DCP from the California Department of Fish and Wildlife in February 2025. DWR is in the process of obtaining change in point of diversion permit from the State Water Resources Control Board to add the two proposed DCP diversion intakes to the SWP water rights. In October 2025, DWR certified that DCP is consistent with the Delta Plan. DWR is continuing with the design refinements, environmental planning and permitting through 2026-27 including resolving appeals on its Delta Plan certification. DCP will potentially be operational in 2045 following extensive planning, permitting and construction.

DWR estimates of SWP supply reliability in its draft 2025 Delivery Capability Report are based on existing facilities, and do not include the proposed DCP. Since this UWMP uses DWR’s draft 2025 Delivery Capability Report to estimate SWP supplies at 2043, any changes in SWP supply reliability that would result from the proposed DCP are not included in this UWMP. Most recent estimates from DWR indicate that DCP is expected to increase SWP Delta exports by about 467,000 acre-feet per year on a long-term average under current climate conditions.

B. F. Sisk Dam Raise and San Luis Reservoir Expansion

U. S. Bureau of Reclamation (Reclamation) and San Luis & Delta Mendota Water Authority (SLDMWA) are proposing to raise Sisk Dam and increase storage capacity in San Luis Reservoir. The proposed 10-foot dam raise is in addition to the ongoing 12-foot raise of Sisk Dam to improve dam safety and would expand San Luis Reservoir storage by 130 TAF. The final EIR and the Record of Decision were issued in October 2023 and estimated that the SWP exports could potentially reduce by about 23 TAF per year on average under the preferred alternative. This project is currently undergoing design, environmental planning and permitting.

DWR estimates of SWP supply reliability in its draft 2025 Delivery Capability Report are based on existing facilities, and do not include this project.

Sites Reservoir

Sites Reservoir is a proposed new 1,500,000 acre-feet off-stream storage reservoir in northern California near Maxwell. Sacramento River flows will be diverted during excess flow periods and stored in the off-stream reservoir and released for use in the drier periods. Shown in Figure 6-4, Sites Reservoir is expected to provide water supply, environmental, flood and recreational benefits. The proponents of Sites Reservoir include 30 entities including several individual SWP Public Water Agencies (PWAs). Sites Reservoir is expected to provide approximately 205 TAF (Sites Reservoir Final EIR/EIS, Table 5-30, Alternative 3) of additional deliveries on average to participating agencies under existing conditions. Sites Reservoir is currently undergoing environmental planning and permitting. Sites Reservoir project filed a water rights petition and is expected to receive a water right permit in 2026 from the State Water Resources Control Board.

DWR estimates of SWP supply reliability in its draft 2025 Delivery Capability Report are based on existing facilities, and do not include the proposed Sites Reservoir.

SWP Water Supply Estimates

DWR prepares a biennial SWP Delivery Capability Report (DCR) to assist SWP contractors and local planners in assessing the availability of supplies from the SWP. DWR issued its most recent update, the draft 2025 DCR, in December 2025. In this update, DWR provided SWP supply estimates for SWP contractors to use in their planning efforts, including for use in their 2025 UWMPs. The draft 2025 DCR includes DWR's estimates of SWP water supply availability under both existing (2025) and future conditions (2043).

DWR's estimates of SWP deliveries are based on the CalSim 3 computer model that simulates monthly operations of the SWP and Central Valley Project systems. Key inputs to the model include the facilities included in the system, hydrologic inflows to the system, regulatory and operational constraints on system operations, and contractor demands for both CVP and SWP water. In conducting its model studies, DWR must make assumptions regarding each of these key inputs.

In the draft 2025 DCR for its model study under existing conditions, DWR assumed: existing facilities, hydrologic inflows to the model based on 100 years of adjusted historical inflows (1921 through 2021) incorporating recent changes to climate, current regulatory and operational constraints including 2018 COA Amendment, 2024 biological opinions and 2024 SWP Incidental Take Permit, and SWP contractor demands at maximum Table A Amounts. The long-term average allocation reported in the draft 2025 DCR for the existing conditions study provides an appropriate estimate of the SWP water supply availability under current conditions.

To evaluate SWP supply availability under future conditions, the draft 2025 DCR included three model studies representing hydrologic and sea level rise conditions at 2043. The future condition studies used all of the same model assumptions as the study under existing conditions, but reflected changes expected to occur from climate change, specifically, projected temperature and precipitation changes centered around 2043 (2028 to 2057) and sea level rise. The three risk-informed climate scenarios (50%, 75%, and 95% level of concern) for the year 2043 included in the draft 2025 DCR provide explicit

representation of climate change uncertainties and improved transparency and information for local planners. The level of concern is defined based on projected climate-informed system performance levels of April-to-July unimpaired runoff (Eight River Index) in the Delta watershed. The 50% level of concern scenario represents a middle-of-the-road or central tendency future at 2043 for the SWP. The 75% level of concern scenario represents a worse than average future for the SWP and 95% level of concern represents much worse. In other words, a 95% level of concern scenario depicts a future condition in which 95% of model-informed climate outcomes result in better SWP system reliability. For the long-term planning purposes of this UWMP, the long-term average allocations reported for the 50% level of concern 2043 study from the draft 2025 DCR is the most appropriate estimate of average future SWP water supply availability. The 75% and 95% level of concern studies can be used to further understand the sensitivity of the water supply portfolio to the projected changes in the future SWP supplies.

Water Quality Control Plan/Health Rivers and Landscapes/Voluntary Agreements

The State Water Board is responsible for adopting and updating the Water Quality Control Plan for the San Francisco Bay/Sacramento–San Joaquin Delta Estuary (Bay-Delta Plan), which establishes water quality control objectives and flow requirements needed to provide reasonable protection of beneficial uses in the watershed. The State Water Board has been engaged for many years in updating the Bay Delta Plan.

The Bay-Delta Plan is being updated through phases. Phase 1 is updated the Bay-Delta Plan objectives for the San Joaquin River and its major tributaries and the southern Delta salinity objectives. Phase 2 is updating the objectives for the Sacramento River and Delta and their major tributaries. (Plan amendments). On December 12, 2018, through State Water Board Resolution No. 2018-0059, the State Water Board adopted the Phase 1 Plan amendments and Final SED establishing the Lower San Joaquin River flow objectives and revised southern Delta salinity objectives. On February 25, 2019, the Office of Administrative Law approved the Plan amendments. This plan requires an adaptive range of 30-50 percent of the unimpaired flow to be maintained from February through June in the Stanislaus, Tuolumne, and Merced Rivers, with a starting point of 40 percent of the unimpaired flow. During this same time period, the flows at Vernalis on the San Joaquin River, as provided by the unimpaired flow objective, are required to be no lower than a base flow of 1,000 cubic feet per second (cfs), with an adaptive range between 800 and 1,200 cfs, inclusive. The plan also updated the south Delta salinity standards for protecting agricultural beneficial uses. While this part of the plan was updated, there is ongoing litigation challenging the updated plan and has not yet been implemented.

The State Water Board is also considering Phase 2 Plan amendments focused on the Sacramento River and its tributaries, Delta eastside tributaries (including the Calaveras, Cosumnes, and Mokelumne rivers), Delta outflows, and interior Delta flows. State Water Board staff are recommending an adaptive range of 45-65 percent unimpaired flow objective with a starting point of 55 percent. Once the State Water Board adopts Phase 2 Plan amendments, the Board will assign implementation responsibility in both Phase 1 and 2. At this time, the potential impacts to the SWP are unknown but this implementation approach would have a large impact on water users, including SWP PWAs, in the Phase 2 planning area.

The State and several water users proposed an alternative to the staff recommendation for the Phase 2 Bay-Delta Plan update in 2018, known as the Program for Implementing Healthy Rivers and Landscapes

(HRL) (previously called Voluntary Agreements). The HRL offers an alternative to the State Water Board staff's flow only approach. The HRL, if agreed to by the State Water Board, would be concurrently implemented with the unimpaired flow approach (for non-HRL participants) and would become the Program of Implementation for the Plan amendments. The State Water Board staff included the HRL as an alternative in their draft Program of Implementation. The HRL will be implemented through enforcement agreements. The HRL includes flow commitments, and funding for flow commitments, habitat actions, and a robust science program. The HRL provides an opportunity to combine flow and habitat actions to protect fish and wildlife beneficial uses of water, while providing certainty for water users. It also offers a chance to avoid years of hearings and litigation and to instead begin implementation of the updated Bay-Delta Water Quality Control Plan upon adoption by the State Water Board.

If the HRL is adopted by the State Water Board, one of the key operational requirements for spring outflow in the 2024 SWP Incidental Take Permit will be replaced and aligned with the flow commitments in the HRL. The draft 2025 Delivery Capability Report assumed that this would occur and hence shows minor improvements in the SWP allocations compared to the 2023 Delivery Capability Report.

SWP Subsidence Impacts

The SWP facilities including the California Aqueduct (Aqueduct) were designed to account for residual natural subsidence in the San Joaquin Valley. However, as noted in the State Water Project Delivery Capability Report 2023 Addendum – Impacts of Subsidence (DCR Subsidence Addendum) released by DWR in May 2025, the overdesign capacity of the Aqueduct to account for subsidence has been exhausted because of historical and ongoing natural and human-induced subsidence. DWR has implemented operating criteria to minimize impacts on the delivery capability because of the reductions in conveyance capacity resulting from subsidence. The DCR Subsidence Addendum modeling indicates that even with these adaptations, 2023 levels of subsidence reduce the long-term average delivery capability of the SWP by 3%. Without arresting and preventing ongoing subsidence and implementing infrastructure improvements, the report estimates that the long-term average delivery capability of the SWP could be reduced by 18% to 87% by 2043, assuming current subsidence trends continue into the future. The estimates of delivery capability presented in the DCR Subsidence Addendum contain a high degree of uncertainty associated with the subsidence trends given the actions related to the Sustainable Groundwater Management Act in the vicinity of the Aqueduct, and DWR is implementing additional studies to improve understanding of this uncertainty.

More importantly, DWR is currently working to implement infrastructure improvement projects to avoid the near-term reductions in the delivery capability forecasted for 2043. The projects include Check 17 Gate Removal, Pools 17-18 Liner Raise, Pools 20-21 Liner Raise, Pool 24 Liner Raise, and Pool 31 Liner Raise. These projects collectively will raise 42 miles of concrete liner at critically subsided locations along the Aqueduct to prevent water supply reductions forecasted for 2043. These near-term projects have been prioritized to begin construction between 2026 and 2028 to maximize the risk reduction. With these improvement projects implemented DWR expects the risk to the delivery capability forecasted in the DCR Subsidence Addendum will be significantly reduced. Concurrently, DWR is also in the planning phases of implementing long-term improvements to restore the original design conveyance capacity and original operating criteria of the Aqueduct through 2085. Accordingly, DWR has recommended using the 2025 Draft DCR to support long-term planning efforts and not the DCR Subsidence Addendum.

Biological Opinions and Incidental Take Permit for State Water Project

In September 2021, USBR and DWR reinitiated consultation with NMFS and USFWS on the Coordinated Long-term Operations of the Central Valley Project (CVP) and State Water Project (SWP) due to anticipated modifications to the proposed action that may cause effects to ESA-listed species and/or designated critical habitat not analyzed in the 2019 biological opinions. In late 2024, the U.S. Fish and Wildlife Service (FWS) and National Marine Fisheries Service (NMFS) issued new Biological Opinions for the Long-Term Operation of the Central Valley Project (CVP) and State Water Project (SWP).

Additionally, in late 2024, the California Department of Fish and Wildlife (DFW) issued to DWR a new Incidental Take Permit for the Long-Term Operation of the SWP pursuant to the California Endangered Species Act (CESA) with regards to state-protected white sturgeon¹ and state- and federally-protected delta smelt, longfin smelt, winter-run Chinook and spring-run Chinook. The operational restrictions in the federal 2024 Biological Opinions and the state Incidental Take Permit were consistent in 2024. In December 2025, Bureau of Reclamation issued a revised Record of Decision (ROD) that adopted modified operational requirements for the CVP, called "Action 5". Some of the operational restrictions in the Action 5 differ from those in the 2024 state Incidental Take Permit for the SWP.

In 2025, DWR received two state Incidental Take Permit amendments to its 2024 state permit, but there continues to be some misalignment between state and federal operation plans. DWR and Reclamation are committed to minimizing potential misalignments and relying on existing mechanisms for accounting under the state and federal Coordinated Operations Agreement (COA) to minimize any redirected water supply impacts.

Currently, there is no litigation challenging the 2024 biological opinions or the modification to the ROD that adopted Action 5 for CVP operations. Certain federal water contractors filed litigation challenging the state Incidental Take Permit. The previous legal challenges to the 2019 Biological Opinions have been dismissed.

Emergency Freshwater Pathway Description (Sacramento-San Joaquin Delta)

It has been estimated by the California Department of Water Resources (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), Bureau of Reclamation (Reclamation), California Office of Emergency Services (Cal OES), the Metropolitan Water District of Southern California and the State Water Contractors.

DWR Delta Flood Emergency Management Plan. The Delta Flood Emergency Management Plan (DWR, 2018) provides strategies for response to Delta levee failures, up to and including earthquake-induced multiple island failures during dry conditions when the volume of flooded islands and salt water intrusion are large, resulting in curtailment of export operations. Under these severe conditions, the plan includes a strategy to establish an emergency freshwater pathway from the central Delta along Middle River and Victoria Canal to the export pumps in the south Delta. The plan includes the prepositioning of emergency construction materials at existing and new stockpile and warehouse sites in the Delta, and development of tactical modeling tools (DWR Emergency Response Tool) to predict levee

¹ Candidate species under CESA and currently being evaluated for listing under CESA.

repair logistics, timelines of levee repair and suitable water quality to restore exports. The Delta Flood Emergency Management Plan has been extensively coordinated with state, federal and local emergency response agencies. DWR, in conjunction with local agencies, the Corps and Cal OES, conduct tabletop and field exercises to test and revise the plan under real time conditions.

DWR and the Corps provide vital Delta region response to flood and earthquake emergencies, complementary to Cal OES operations. These agencies perform under a unified command structure and response and recovery framework. The Northern California Catastrophic Flood Response Plan (Cal OES, 2018) incorporates the DWR Delta Flood Emergency Management Plan. The Delta Emergency Operations Integration Plan (DWR and USACE, 2019) integrates personnel and resources during emergency operations.

Pathway Implementation Timeline. The Delta Flood Emergency Management Plan has found that using pre-positioned stockpiles of rock, sheet pile and other materials, multiple earthquake-generated levee breaches and levee slumping along the freshwater pathway can be repaired in less than six months. A supplemental report (Levee Repair, Channel Barrier and Transfer Facility Concept Analyses to Support Emergency Preparedness Planning, M&N, August 2007) evaluated among other options, the placement of sheet pile to close levee breaches, as a redundant method if availability of rock is limited by possible competing uses. The stockpiling of sheet pile is vital should more extreme emergencies warrant parallel and multiple repair techniques for deep levee breaches. Stockpiles of sheet pile and rock to repair deep breaches and an array of levee slumping restoration materials are stored at DWR and Corps stockpile sites and warehouses in the Delta.

Emergency Stockpile Sites and Materials. DWR has acquired lands at Rio Vista and Stockton as major emergency stockpile sites, which are located and designed for rapid response to levee emergencies. The sites provide large loading facilities, open storage areas and new and existing warehousing for emergency flood fight materials, which augment existing warehousing facilities throughout the Delta. The Corps maintains large warehousing facilities in the Delta to store materials for levee freeboard restoration, which can be augmented upon request of other stockpiles in the United States. Pre-positioned rock and sheet pile are used for closure of deep levee breaches. Warehoused materials for rapid restoration of slumped levees include muscle (k-rail) walls, super sacks, caged rock containers, sand bags, stakes and plastic tarp. Stockpiles will be augmented as materials are used.

Emergency Response Drills. Earthquake-initiated multiple island failures will mobilize DWR and Corps resources to perform Delta region flood fight activities within an overall Cal OES framework. In these events, DWR and the Corps integrate personnel and resources to execute flood fight plans through the Delta Emergency Operations Integration Plan (DWR and USACE, 2019). DWR, the Corps and local agencies perform emergency exercises focusing on communication readiness and the testing of mobile apps for information collection and dissemination. The exercises train personnel and test the readiness of emergency preparedness and response capabilities under unified command, and provide information to help to revise and improve plans.

Levee Improvements and Prioritization. The DWR Delta Levees Subventions and Special Projects Programs have funded, and Delta Reclamation Districts have implemented, levee improvements along the emergency freshwater pathway and other water supply corridors in the central and south Delta. These efforts are complementary to the Delta Flood Emergency Management Plan, which along with pre-positioned emergency flood fight materials, assists in timely pathway restoration after a seismic

event. These programs have been successful in implementing a coordinated strategy of emergency preparedness to the benefit of SWP and CVP export systems.

Urban agencies, including Metropolitan, Contra Costa Water District, East Bay Municipal Utility District, and others have participated in levee improvement projects along or near the Old and Middle River corridors.

SWP Adaptation Strategy

In August 2025, California Department of Water Resources (DWR) released the State Water Project Adaptation Strategy (Report) to reduce risk to the State Water Project (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. The five strategies were organized into four adaptation portfolios for evaluation in the Report.

The Report concluded that continued maintenance, repair and additional restoration of the aging SWP infrastructure are first-priority measures regardless of future changes in climate. In terms of future SWP investments, the Report finds that the Delta Conveyance Project is the single most effective strategy on its own, and it amplifies the benefits of other strategies. Forecast-Informed Reservoir Operations at Oroville is a safe and effective low-cost strategy that provides relatively small improvements in the SWP water supply. South-of-Delta storage augmentation is a promising strategy, especially in combination with the Delta Conveyance Project, that can help improve the SWP drought resilience. The Report shows that implementation of a portfolio of strategies will result in greater adaptation than the sum of its parts.

SWP Seismic Resiliency

DWR's SWP seismic resiliency efforts are managed within the SWP Dam Safety Program. The Dam Safety Program was established in 2018. Sixteen Dam Safety Program initiatives were established with input from external industry experts and recommendations from the 2017 Oroville Spillway incident reports. The initiatives aimed to set internal roles, responsibilities, and expectations for implementing standardized procedures for inspections, including inspection frequency, documentation, and reporting. A key component of the SWP Dam Safety Program is the use of Potential Failure Mode Analysis, including seismic risks, to prioritize projects based on risk, which aligns with dam safety industry best practices and Federal Energy Regulatory Commission guidelines. In 2023 DWR completed its first Dam Safety Program

audit, which is to be performed every five years. The audit determined that DWR's program is on par with their peers and they are a leader in some areas.

DWR is conducting Seismic Walkdowns of all SWP plants. A Seismic Walkdown consists of visual assessment of vulnerable components and review of design drawings and documents. The first Seismic Walkdown was performed at Hyatt Powerplant in Oroville, as recommended by the Dam Safety Director's Safety Review Board. Of the 30 items identified for further analysis, only two will require an anchorage retrofit/redesign at Hyatt Powerplant. Seismic Walkdowns have also been completed at Devil Canyon Power Plant and Pearblossom Pumping Plant.

The most prominent seismic project DWR is implementing is the joint USBR/DWR Sisk Dam Safety of Dam Project corrective action which will result in major seismic stability improvements. Construction of the Sisk Dam modifications began in 2022 and is expected to be completed in 2032. Other prominent SWP Dam Safety Projects being implemented are Oroville Dam Coreblock and Grout Gallery Piezometers, Parish Camp Saddle Dam Raise, Del Valle Dam Conservation Outlet Works Seismic Stability Investigation, and Castaic Dam Low-level Gate Dogging and New Outlet Works Planning Study.

DWR has also developed several plans and instructions related to post-earthquake response that contain instructions for initial observation, validation inspections, and technical assessments. DWR operates and relies on 112 seismic stations across the SWP for its seismic warning system. Additionally, DWR partnered with California Office of Emergency Services (CalOES) and the operators of the California Integrated Seismic Network (USGS, Berkeley Seismological Laboratory, Caltech) to update its seismic warning system. Since 2021 DWR has replaced 51 seismic stations and obsolete communication modems and plans to replace the remaining stations by 2029. The SWP also has 13 seismic switches to prevent loss of water and reduce impacts downstream of the switch if triggered by ground acceleration greater than 0.1g, the commonly used pseudostatic acceleration factor for seismic design of SWP plants. Overall, DWR is engaged in extensive seismic resiliency efforts to protect the SWP.