Stage 4 – Up to 40% Shortage:

During Stage 4, MWA may continue to rely on stored supplies, voluntary demand reduction, and reduced R-Cubed deliveries as appropriate. At this stage, MWA would evaluate regional supply conditions, operational constraints, and available management actions to preserve stored water assets and maintain reliability for essential regional needs.

Stage 5 – Up to 50% Shortage:

During Stage 5, MWA may implement more intensive regional supple management actions, including increased reliance on stored supplies, pursuit of alternative supplies, and continued operational coordination with retail agencies. MWA may also further reduce R-Cubed deliveries where appropriate and expand regional communication regarding shortage conditions and available response actions.

Stage 6 – Greater than 50% Shortage:

During Stage 6, MWA would implement emergency-level regional supply management actions necessary to address severe shortage conditions or catastrophic supply interruptions. These actions may include use of available stored supplies, pursuit of alternative supplies or transfers, operational adjustments to MWA facilities, reduction of R-Cubed deliveries, and close coordination with retail agencies, DWR, SWP contractors, and other regional partners to support continued water supply reliability for essential needs.

6.7.3.2 Summary of Monitoring Procedures and Implementation

MWA conducts an Annual Water Supply and Demand Assessment each year in accordance with CWC requirements. These assessments are prepared and submitted to DWR by July 1 and evaluate anticipated regional water supply and demand conditions over a rolling twelve-month period spanning July through June. The Annual Assessment serves as the primary mechanism for evaluating near-term supply reliability and determining whether implementation of one or more WSCP shortage stages may be warranted.

MWA has completed and submitted an Annual Assessment each year since 2022, as required by statute. While the results of these assessments are not included in this RUWMP, the methodology and demand assumptions applied are consistent with those presented in this chapter and in *Chapter 5 – Regional Water Service Reliability.* The Annual Assessment considers available regional supplies, projected demands, infrastructure capability, imported water availability, stored water assets, and other locally applicable factors that may influence water supply reliability.

Implementation of the WSCP relies on coordination among MWA staff, retail water suppliers, regional partners, stakeholders, and the public. During shortage conditions, MWA may

communicate regional supply conditions, shortage stage determinations, available response actions, and recommended coordination measures to retailer water suppliers, regional partners, stakeholders, and the public. This approach supports consistent messaging while allowing retail suppliers to implement customer-level shortage response actions within their respective service areas.

Sub-Chapter 6.8 – Water System Reliability and Drought Risk Assessment

MWA's water system reliability and drought risk assessment findings are presented in *Chapter 5 – Regional Water Service Reliability.* The reliability analysis is informed by the MWA-specific supply and operational information presented in this chapter, including imported water supply availability and reliability considerations described in Sub-Chapter 6.4, managed groundwater storage described in Sub-Chapter 6.5, and MWA's wholesale demand forecast for uses outside the participating retail supplier service areas described in Sub-Chapter 6.6. These MWA-specific inputs are combined with the regional supply characterization presented in *Chapter 3 – Regional Supply Characterization* and the regional water use forecast presented in *Chapter 4 – Water Use Characterization* to evaluate regional reliability under the UWMPA-required considerations. Chapter 5 integrates these assumptions to satisfy the applicable water system reliability and drought risk assessment requirements, including the Five-Year Drought Risk Assessment, normal year, single dry year, and five consecutive dry year analyses through 2050.

The results demonstrated in Chapter 5 demonstrate that the Mojave Region's water supply portfolio is capable of meeting the water uses in the Region in normal, single dry, and five consecutive dry years from 2025 through 2050.

Sub-Chapter 6.9 – Energy Intensity Analysis

Pursuant to CWC Section 10631.2, this sub-chapter summarizes energy use associated with MWA's water management operations to the extent such information is readily available. MWA's energy reporting differs from a traditional retail water supplier because the Agency does not generally operate a retail potable water distribution system or deliver water directly to end-use customers. Instead, MWA's primary operations consist of importing SWP supplies, conveying water to recharge locations, placing water into groundwater storage, and managing regional water supply reliability. Accordingly, the energy information presented in this sub-chapter focuses on MWA-controlled water management processes for which energy and water volume data are readily obtainable, including conveyance, recharge, recovery, and related operations, as applicable.

The principal exception to MWA's recharge-focused operating model is the Regional Recharge and Recovery Project, or R-Cubed, which stores imported supplies in the Floodplain Aquifer and, when needed, recovers and delivers that water through MWA-owned wells and pipelines directly to participating retail water suppliers. Because R-Cubed includes recovery and direct delivery components, its energy use is included in MWA's energy evaluation where data are readily available.

TABLE 6-11: ENERGY INTENSITY – TOTAL UTILITY APPROACH FOR MONTH YEAR THROUGH MONTH YEAR

Sum of All Water Management Processes	
Volume of Water Entering Process (acre-feet)	
Energy Consumed (kWh)	
Energy Intensity (kWh/acre-foot)	

Chapter 7.0 The City of Adelanto

This page is reserved for Chapter 7 – The City of Adelanto. The complete City of Adelanto retail specific chapter is included in the full 2025 Mojave RUWMP and is adopted separately by the City of Adelanto.

Chapter 8.0 County Service Area 64 Spring Valley Lake

This page is reserved for Chapter 8 – County Service Area 64 Spring Valley Lake. The complete County Service Area 64 Spring Valley Lake retail specific chapter is included in the full 2025 Mojave RUWMP and is adopted separately by the County of San Bernardino.

Chapter 9.0 County Service Area 70J Oak Hills

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APPENDICES

Sub-Chapter 9.1 – Introduction

San Bernardino County Department of Public Works, Special Districts County Service Area 70 Zone J Oak Hills (CSA 70J) is a special services district governed by the San Bernardino County Board of Supervisors and responsible for providing potable water and sewage collection services to the unincorporated community of Oak Hills. CSA 70J is situated in the Victor Valley High Desert Region and is bordered by the City of Hesperia to the east, the unincorporated community of Phelan to the west, the City of Victorville to the north, and the unincorporated area of Summit Valley to the southwest.

CSA 70 J is located approximately 35 miles northwest of the City of San Bernardino. Elevations within CSA 70J vary from 4,260 feet in the southwesterly portion to 3,470 feet in the northeasterly portion. The County's key planning objectives include responsible growth for its rural, suburban, agricultural, commercial, and industrial land uses, paired with economic development that attracts and maintains quality business and industry while being beneficial to its residents.

CSA 70J's water supply is sourced entirely from pumped groundwater from the Mojave River Groundwater Basin. Ensuring an adequate and reliable water supply for current and future customers is fundamental to the County's mission. Through its participation in the 2025 Mojave RUWMP (2025 RUWMP), CSA 70J supports coordinated, basin-wide planning. Regional conditions and assumptions are presented in the 2025 RUWMP regional chapters, while this chapter focuses on CSA 70J-specific system characteristics, demands, demand management measures, and reliability.

9.1.1 Background and Purpose

CSA 70J has ensured compliance with the Urban Water Management Plan Act (UWMPA) requirements for urban water suppliers through its participation in the 2025 RUWMP and preparation of this retail-specific chapter.[49] The UWMPA requires urban water suppliers to evaluate the adequacy of their water supplies to meet projected demands under average conditions, single dry years, and multiple dry year scenarios through a 20-year planning horizon. This chapter presents CSA 70J's evaluation of these requirements and demonstrates its ability to meet anticipated demands under normal and drought conditions.

The 2025 RUWMP, together with this retail-specific chapter, updates the CSA 70J 2020 Urban Water Management Plan (UWMP) and incorporates new data, analyses, and regulatory

[49] California Water Code Sections 10610 through 10657.

guidance issued since 2020 by the California Department of Water Resources (DWR) pursuant to the California Water Code (CWC). In addition to satisfying statutory requirements, the 2025 RUWMP serves as a comprehensive planning document describing existing and future water supplies, projected water demands, demand management progress, and actions necessary to maintain long-term supply reliability. The regional plan also documents cooperative efforts among participating agencies to efficiently manage shared resources and address future water needs across the RUWMP Planning Area.

9.1.2 Basis for Plan Preparation

CSA 70J operates a Public Water System as described in California Health and Safety Code Section 116275. CSA 70J is also classified as an Urban Water Supplier as described in CWC Section 10617, as it provides water for municipal purposes to more than 3,000 connections and supplies more than 3,000 acre-feet of water annually. These qualifications require the preparation and adoption of a UWMP every five years. Under CWC Section 10620 (d)(1), these requirements may be met through participation in a RUWMP, which CSA 70J and the other Urban Water Suppliers within the RUWMP Planning Area have elected to prepare collaboratively. Details of CSA 70J's Public Water System are provided in **Table 9-1**.

TABLE 9-1: PUBLIC WATER SYSTEM INFORMATION

Public Water System Number	Public Water System Name	Number of Municipal Connections
CA3610125	CSA 70J	~3,458

9.1.3 Coordination and Outreach

Preparation of the 2025 RUWMP involved coordination among the participating Urban Water Suppliers and the Mojave Water Agency (MWA), which serves as the region's wholesale water supplier. This coordination ensured consistency in assumptions, methodologies, and regional analyses. CSA 70J actively participated in this collaborative process through technical meetings, data sharing, and review of draft materials addressing both regional conditions and CSA 70J-specific operations.

As required by the UWMPA, CSA 70J coordinated with nearby agencies during development of this chapter to ensure consistency with related land use and water resource planning efforts, including City General Plans, Water Master Plans, and Specific Plans associated with anticipated development.

Consistent with CWC Section 10641, CSA 70J encouraged the active participation from a broad cross-section of the community representing diverse social, cultural, and economic interests within its service area during preparation of this chapter. Public notice of the plan's

availability and the scheduled public hearing was provided, and a public hearing was conducted prior to adoption to solicit input from customers, stakeholders, and interested parties.

Comprehensive documentation of the regional planning process, including interagency coordination, formal notifications provided in accordance with CWC Section 10621(b), stakeholder engagement, and outreach activities conducted on behalf of all participating agencies, is provided in *Sub-Chapter 1.3 Coordination and Outreach of Regional Chapter 1 - Introduction.*

9.1.3.1 Water Supplier Information Exchange

Compliance with CWC Section 10631 is described in Sub-Chapter 1.3 Coordination and Outreach of Regional Chapter 1 – Introduction.

9.1.4 RUWMP Adoption

CSA 70J held a public hearing regarding the 2025 RUWMP on June 23, 2026. Before the hearing, CSA 70J made a draft of the 2025 RUWMP available for public inspection at 385 North Arrowhead Avenue, San Bernardino, CA 92415, and on CSA 70J's website. Pursuant to CWC Section 10642, general notice of the public hearing was provided through publication of the hearing date and time in the local press as required under the UWMPA.

CSA 70J's elected body adopted this 2025 RUWMP on June 23, 2026. A copy of the 2025 RUWMP will be submitted to DWR, provided to the County and the California State Library, and posted onto the County's website.

CSA 70J plans to submit all required documentation related to the UWMPA through the DWR submittal website soon after adoption, including the on-line submittal of information associated with the following DWR Excel workbooks:

- "FINAL Submittal 2025 UWMP Tables – CSA 70J – 06.01.2026.xls"
- "Appendix F 2025 Checklist – CSA 70 J – 06.01.2026.xls"

9.1.5 Document Organization

This chapter is organized as follows:

- Sub-Chapter 9.2 Water Service and System Description
- Sub-Chapter 9.3 Population, Land Use, Economy, and Demographics
- Sub-Chapter 9.4 Water Supply and Infrastructure Characterization
- Sub-Chapter 9.5 Water Use Characterization
- Sub-Chapter 9.6 Water Conservation and Shortage Response
- Sub-Chapter 9.7 Water System Reliability and Drought Risk Assessment
- Sub-Chapter 9.8 Energy Intensity Analysis

Sub-Chapter 9.2 – Water Service and System Description

CSA 70J provides potable water service to the residents and businesses within its service area, depicted in **Figure 9-1**, which largely coincides with the Oak Hills unincorporated area and the southwestern portion of the City of Hesperia's sphere of influence.

Water service in CSA relies entirely on groundwater extracted from wells located throughout the service area. The CSA manages five active wells that tap into local aquifers to provide the community's water supply. Once extracted, water is treated to meet all applicable federal and state water quality standards and is either directed into the distribution system or stored in one of CSA 70J's 12 reservoirs, which collectively provide nearly four million gallons of storage. These reservoirs, as well as two de-sanding tanks, help ensure that the community has access to adequate water during periods of high demand, particularly in the summer months.

CSA 70J's water system encompasses an extensive distribution network designed to deliver water efficiently to homes, businesses, and fire protection systems. The system includes approximately 154 miles of distribution and transmission mains, six booster stations, and thousands of service connections. **Table 9-2** summarizes recent historical service connections by customer type, providing an overview of the composition of the CSA's customer base. The County also engages in regular inspection, maintenance, and replacement of system components to ensure long-term reliability and safety of the water supply.

FIGURE 9-1: CSA 70J'S SERVICE AREA

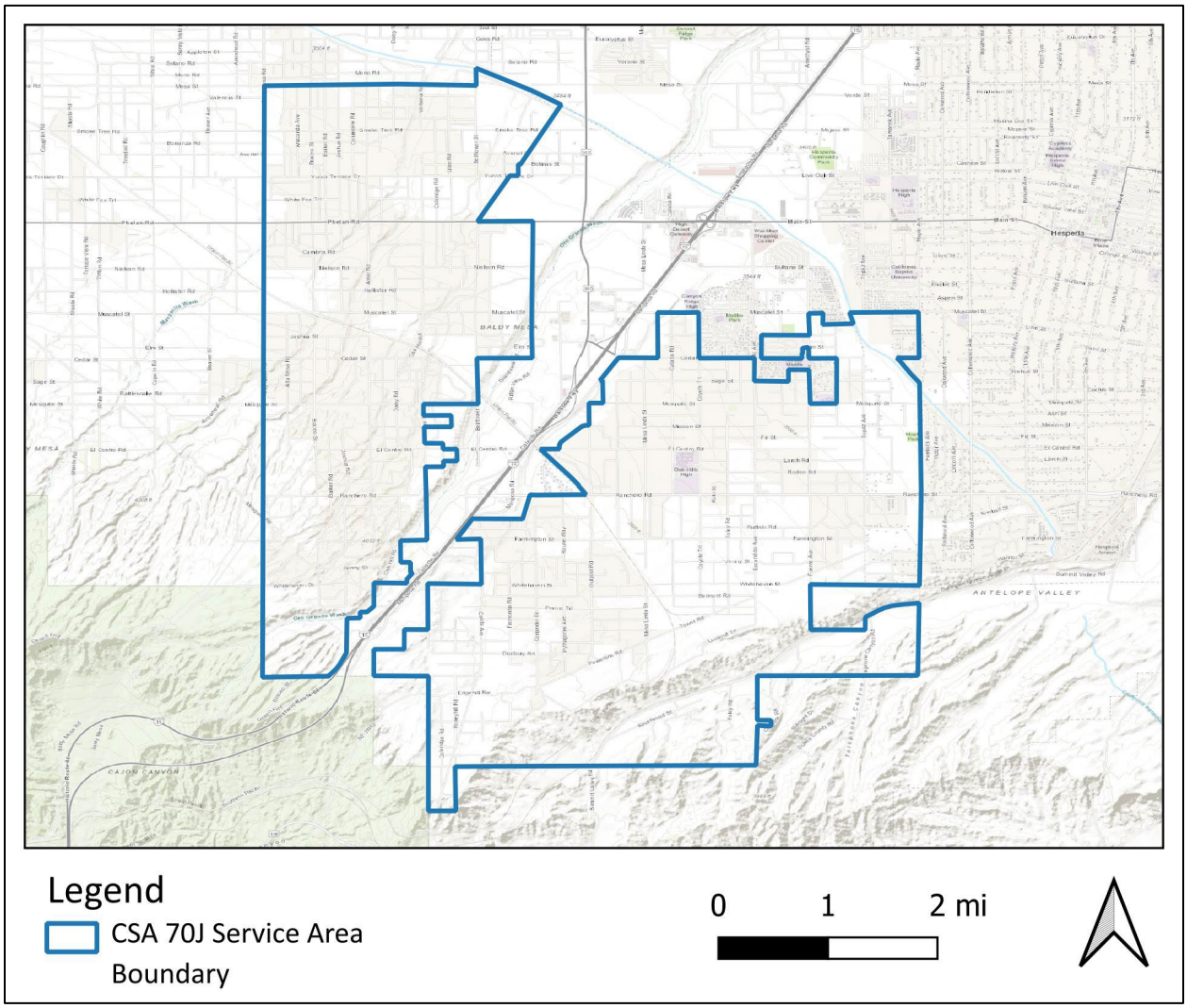

TABLE 9-2: CUSTOMER WATER SERVICE CONNECTIONS

Customer Class	2021	2022	2023	2024	2025
Single-Family Residential	3,314	3,356	3,374	3,409	3,430
Multi-Family Residential	1	1	1	1	1
Commercial/Industrial	28	26	25	24	26
Landscape Irrigation	0	0	0	0	1
Other	0	0	0	0	0
Total	3,343	3,383	3,400	3,434	3,458

9.2.1 Service Area Climate

Located in California's Mojave Basin Area, CSA 70J's service area experiences the climate characteristic of the High Desert. The region is highly arid due to the rain shadow effects of surrounding mountain ranges and is marked by hot summers and relatively cool winters. This results in low precipitation and pronounced diurnal temperature variations throughout the year. Average annual precipitation is minimal, with a 30-year average of 8.17 inches, occurring primarily as rainfall between December and March. Precipitation generally tapers off by May. While late summer monsoonal thunderstorms may contribute episodic precipitation, these events typically account for only a small portion of total annual precipitation. Although snowfall is rare, winter snowfall averages four inches annually. The annual average temperature is approximately 60 degrees Fahrenheit; however, the High Desert climate produces substantial seasonal extremes, with summer temperatures frequently exceeding 100 degrees and winter lows occasionally falling below freezing. Overall, CSA 70J's service area climate is generally consistent with climatic conditions across the RUWMP Planning Area. A more detailed discussion of the RUWMP Planning Area's climate characteristics is provided in *Sub-Chapter 2.1.5 Climate of Regional Chapter 2 – The Mojave Region*.

9.2.1.1 Climate Change

Climate change is driven by increasing concentrations of atmospheric carbon dioxide and other greenhouse gases, resulting in rising temperatures and greater hydrologic variability. These effects underscore the importance of considering climate change in this 2025 RUWMP. While the CWC does not prescribe specific climate change planning or management measures for retail water suppliers, it emphasizes that climate change is an appropriate consideration for general water management and planning. Accordingly, climate change is a critical factor in assessing the availability and reliability of water supplies, as well as future demand projections. A detailed discussion of climate change impacts on CSA 70J's water supplies and demands, as well as those of the RUWMP Planning Area at-large, is provided in *Sub-Chapter 2.1.5 Climate of Regional Chapter 2 – The Mojave Region*.

Sub-Chapter 9.3 – Population, Land Use, Economy, and Demographics

Service area population and land use projections are critical to developing a useful planning framework as population dynamics and growth are a primary influence on water use. These projections directly influence planning measures for system supply, delivery, infrastructure, and demand management. Similarly, understanding the service area's economic, social, and demographic trends provide valuable insight into water management and planning. This sub-chapter addresses these factors to provide a supportable basis for forecasting future water use.

9.3.1 Current Population and Historic Trends

Population estimates for the CSA are based on the population forecast prepared in 2020 by the Center for Economic Forecasting and Development at the University of California, Riverside (UCR Study), which was commissioned by MWA as part of the 2020 Urban Water Management Plan cycle. The UCR Study developed population estimates for the entire MWA service area as well as for individual retailer water supplies using a comprehensive economic and demographic modeling approach.

In 2023, as part of MWA's Master Plan development, the agency reviewed and refined the UCR Study population projections using updated information not available during the study's development, including 2020 Census data and other available demographic indicators, to ensure that near-term population levels and growth patterns were accurately represented. Where appropriate, adjustments were applied to align study estimates with observed population totals while maintaining the long-term growth trajectory established by the UCR Study.

Population projections for CSA 70J reflect these regionally refined UCR Study estimates and therefore align with those used by the other retailers participating in the 2025 RUWMP. This approach ensures that demand projections developed for participating parties are consistent with basin-wide planning assumptions and analyses. Detailed methodologies used to develop and refine the regional population projections included in the UCR Study are presented in *Sub-Chapter 2.1.6 Current and Projected Population of Regional Chapter 2 – The Mojave Region*.

CSA 70J serves the residential community of Oak Hills. Located in the High Desert, adjacent to the City of Hesperia, CSA 70J is an unincorporated community in San Bernardino County.

Compared to neighboring communities, CSA 70J is dominated by large, often multi-acre parcels, for single-family housing. Moreover, development has historically occurred incrementally rather than through large master-planned subdivisions, resulting in a dispersed pattern. These historical trends are likely to continue as CSA 70J experiences continued, albeit modest, growth in residential development. The population estimates presented in this sub-chapter provide the basis for the demand projections discussed in subsequent sub-chapters.

Table 9-3 presents the CSA's historical population while **Table 9-4** presents the CSA's population growth over the last decade.

TABLE 9-3: HISTORICAL POPULATION

1990	2000	2010	2015	2020	2025
3,328	5,652	9,467	9,851	10,162	10,356

TABLE 9-4: POPULATION GROWTH RATE 2015-2024

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Population	9,851	9,933	10,013	10,087	10,143	10,162	10,201	10,239	10,278	10,317
Growth Rate		0.83%	0.81%	0.74%	0.56%	0.19%	0.38%	0.37%	0.38%	0.38%

9.3.2 Projected Population

CWC Section 10631(a) requires urban retail water suppliers to evaluate projected service area populations while considering past growth rates, economic conditions, and anticipated land use changes. Coordination with local land use planning efforts helps ensure that anticipated development patterns are appropriately represented in long-term demand forecasting.

CSA 70J is dominated by low-density, single-family homes, often situated on multi-acre parcels. The projected population will be largely linked to the expansion of single-family homes as the rural community attracts more households. Population is projected to steadily increase over the planning horizon reflecting continued low-density residential development. By 2065, CSA 70J's population is projected to reach 11,500, but the annual growth rate over the 45-year period is only 0.29%. More broadly, incorporated areas served by municipal water providers within the RUWMP Planning Area are projected to accommodate a substantial share of future regional population growth relative to unincorporated areas as illustrated in *Sub-Chapter 2.1.6 Current and Projected Population of Regional Chapter 2 – The Mojave Region.*

Table 9-5 presents the CSA's projected population and associated growth rates through 2060.

TABLE 9-5: POPULATION FORECAST AND GROWTH RATE

	2025	2030	2035	2040	2045	2050	2055	2060
CSA 70J	10,356	10,554	10,721	10,876	11,021	11,153	11,275	11,387
Growth Rate		1.91%	1.58%	1.45%	1.33%	1.20%	1.09%	0.99%

9.3.3 Current and Projected Land Use

CSA 70J's service area is predominantly residential, characterized by very low- to medium-density development consistent with a rural living environment. Land uses are primarily single-family residential, supplemented by a limited number of public facilities and small-scale commercial uses. The area is among the higher-value communities in Victor Valley, largely due to its multi-acre parcel configurations. Consistent with the modest population projected for the service area, future development is expected to remain limited and primarily residential in nature, reflecting continued incremental infill and low-density expansion.

9.3.4 Economic Trends & Other Social and Demographic Factors

CSA 70J is a primarily residential service area whose economic and demographic characteristics generally reflect broader Inland Empire trends. Employment patterns also mirror regional trends, where many residents commute to jobs in neighboring Victorville, Hesperia, and the grater Inland Empire. Population growth with the CSA is expected to remain modest, consistent with its historic development patterns and regional growth dynamics. Aside from these localized characteristics, the CSA shares many of the economic, social, and demographic conditions present across the RUWMP Planning Area. Broader regional economic conditions that influence growth within the CSA are discussed *in Sub-Chapter 2.1.7.2 Economic Trends and Other Social and Demographic Factors of Regional Chapter 2 – The Mojave Region*.

Sub-Chapter 9.4 – Water Supply and Infrastructure Characterization

The CSA sources its water supplies primarily from groundwater. Through a municipal network of five active wells, the CSA pumps groundwater from the underlying Alto Subarea of the Mojave Basin Area. As discussed in *Regional Chapter 3 – Regional Water Supply Characterization,* the Mojave Basin Area (MBA) is an adjudicated basin administered by a court-appointed Watermaster. The aforementioned regional chapter describes the MBA's water supplies and related management structures and details. Generally, the CSA pumps groundwater that is recharged and managed by MWA.

9.4.1 Groundwater

Groundwater is the primary water supply source for all urban retail water suppliers within the MBA. CSA 70J, like many of MWA's other retail agencies, pumps groundwater from the adjudicated MBA, specifically the Alto Subarea. The basin is recharged through several means, including natural recharge from the Mojave River, lateral subsurface groundwater movement from the adjacent San Gabriel mountains, imported water from the State Water Project (managed by MWA), and other sources like irrigation runoff, return flows from septic systems and water delivery systems, and treated wastewater effluent. A detailed description of the MBA, Subareas, aquifer characteristics, adjudication, management areas, and other adjudicated basins is presented in *Sub-Chapter 3.1.1 Mojave Region Water Supply Sources of Regional Chapter 3 – Regional Water Supply Characterization.*

9.4.1.1 CSA 70J's Free Production Allowance

Under the Judgment governing the MBA, each producer is assigned a Free Production Allowance (FPA), representing the annual quantity of groundwater that may be extracted without replacement obligations. The CSA's FPA is based on historical production coupled with evaluation of groundwater conditions, as administered by MWA in its role as the Watermaster.

The CSA's FPA changes over time as the Watermaster assesses supply availability for all adjudicated purveyors against the long-term health and production safe yield of the MBA. The CSA's FPA has continued to be significantly reduced as a percentage of the Base Annual Production (BAP) number. CSA 70J's BAP is tracked as one entry in the Watermaster's annual report as: "San Bernardino County Service Area 70J". CSA 70J's BAP in water year 2025 was 1,015 acre-feet per year. The current 50.4% FPA of this source is 512 acre-feet. **Table 9-6**

presents the CSA's FPA for the most recent five-year period pursuant to the MBA Judgment. Detailed discussion of the adjudication framework and administration of production allowances is provided in *Regional Chapter 3 – Regional Water Supply Characterization*.

TABLE 9-6: LAST FIVE YEARS OF CSA 70J'S FPA SUPPLY (AFY)

Year	Base Annual Production	Percent FPA	FPA Supply
2021	1,015	55%	558
2022	1,015	50%	508
2023	1,015	53.3%	541
2024	1,015	50.4%	512
2025	1,015	50.4%	512

The 50.4% FPA represents a reduction that aligns with the long-term Production Safe Yield considered by the Watermaster. Accordingly, the CSA's projected FPA in a normal year, single dry year, and five consecutive dry years through 2030 is set at 50.4% as shown in **Table 9-7**.

TABLE 9-7: PROJECTED MOJAVE ADJUDICATION FPA FOR THE CSA THROUGH 2030 (AFY)

Year Type		Projected FPA
Normal		512
Single Dry-Year		512
Multi-Year Drought	2026 (1st Year)	512
	2027 (2nd Year)	512
	2028 (3rd Year)	512
	2029 (4th Year)	512
	2030 (5th Year)	512

Although the Production Safe Yield of the MBA appears to be stabilizing in the Alto Subarea, out of an abundance of caution the future FPA has been reduced to 50% to address long-term water supply planning options. **Table 9-8** presents the CSA's projected FPA in a normal year, single dry year, and five consecutive dry years from 2030 through 2050 at 50%.

TABLE 9-8: PROJECTED MOJAVE ADJUDICATION FPA FOR THE CSA THROUGH 2050 (AFY)

Projected FPA		2030	2035	2040	2045	2050
Normal		508	508	508	508	508
Single Dry-Year		508	508	508	508	508
Multi-Year Drought	Year 1	508	508	508	508	508
	Year 2	508	508	508	508	508
	Year 3	508	508	508	508	508
	Year 4	508	508	508	508	508
	Year 5	508	508	508	508	508

A summary of long-term reliability and other factors that will affect FPA such as hydrological and regulatory issues is provided in *Regional Chapter 3 – Regional Water Supply Characterization.*

9.4.1.2 Carryover Water Supplies

CSA 70J does not currently hold carryover water supplies as part of its overall water supply management in the Alto Subarea.[50] Although such supplies may become available in the future, they are not assumed to be available for purposes of this analysis and are therefore not included in the supply availability evaluation presented in this sub-chapter, in order to preserve a conservative assessment of water supply reliability.

9.4.1.3 Replacement and Make-up Water Supplies

The CSA has taken actions to augment its water supplies through the Watermaster's water replacement water supply program and by acquiring make-up water supplies. Replacement water supplies are those supplies acquired by the Watermaster in order to replace supplies pumped from the Basin that exceed the CSA's annual FPA from the Alto Subarea. Make-up water supplies, by contrast, are acquired to satisfy obligations under the Judgment to maintain flows from the Alto Subarea to downstream subareas when natural conditions and production patterns would otherwise result in a shortfall.

A detailed description of these programs, obligations, and administrative processes is provided in *Regional Chapter 3 – Water Supply Characterization.* **Table 9-9** summarizes the

[50] Water Year 2025 Watermaster Report, Appendix H.

quantities of replacement and make-up water supplied to the CSA during the most recent five-year period.

TABLE 9-9: LAST FIVE YEARS OF REPLACEMENT AND MAKE-UP WATER SUPPLIES (AFY)

Year	Water Acquisitions[51]
2021	1,287
2022	1,184
2023	1,009
2024	1,264
2025	1,267

9.4.2 Groundwater Quality

Groundwater produced by the CSA is obtained from wells completed in the Mojave River Groundwater Basin and is treated as necessary to meet all applicable federal and state drinking water standards prior to delivery to customers. Water quality within the basin is influenced by natural hydrogeologic conditions as well as localized land use and recharge patterns. The CSA routinely monitors groundwater quality in accordance with regulatory requirements to ensure the continued safety and reliability of its potable water supply.

Detailed information regarding the quality of water delivered to customers, including detected constituents, regulatory compliance status, and treatment practices, is provided annually in the CSA's Consumer Confidence Report (CCR). The most recent available report is the 2024 CCR, published in June 2025, which reflects water quality data from the 2024 calendar year in accordance with state reporting requirements that mandate annual preparation and distribution of CCRs by July 1 of the following year. The CCR summarizes monitoring results for the most recent reporting year and demonstrates compliance with primary drinking water standards established by the U.S. Environmental Protection Agency and the State Water Resources Control Board Division of Drinking Water (SWRCB). The CSA's most recent CCR is available through the CSA's website and provides the most current information on potable water quality conditions.[52]

While this section focuses on groundwater quality as it pertains to the CSA's supply sources, a broader discussion of water quality conditions throughout the Mojave Region, including

[51] Water Acquisitions calculated as (Verified Production – Base FPA) + Makeup Water Obligation
[52] CSA 70J 2024 CCR available at: https://specialdistricts.sbcounty.gov/wp-content/uploads/sites/54/70J_2024_Final.pdf

basin-wide characteristics, regulatory considerations, and regional management issues, is presented in *Sub-Chapter 3.1.2 of Regional Chapter 3 – Regional Water Supply Characterization.*

Table 9-10 presents a summary of groundwater quality constituents based on information reported in the CSA's 2024 CCR. The table reflects a subset of reported constituents and has been adopted for clarity and relevance to this UWMP.

TABLE 9-10: CSA 70J'S POTABLE WATER QUALITY

Water Quality Standards	Goal Level	Max Level	Range	Amount Detected
Primary Standards				
Lead (ppb)	0.2	15	N/A	ND
Copper (ppm)	0.3	1.3	N/A	ND
Total Coliform (# of positive samples)	0	1	N/A	0
Fecal Coliform or E. Coli (# of positive samples)	0	0	N/A	0
E.Coli (# of positive samples)	0	0	N/A	0
Nitrate as N (ppm)	10	10	1.7-2.7	2.29
Fluoride (ppm)	1	2	0.33-0.53	0.46
Arsenic (ppb)	0.004	10	4.0-5.4	4.85
Chromium – Total Cr (ppb)	(100)	50	ND-26	17.6
Hexavalent Chromium (pbb)[53]	0.02	10	16.9	10-26
Secondary Standards				
Odor Threshold (Units)	N/A	3	ND-1	1
Chloride (ppm)	N/A	500	8.2-10	9.13
Specific Conductance (umhos/cm)	N/A	1,600	200	190-220
Total Dissolved Solids/TDS (ppm)	N/A	1,000	135	110-150
Sulfate (ppm)	N/A	500	4.08	3.5-4.6
Federal Unregulated Contaminates				
pH (Lab)	N/A	N/A	8.78	8.7-8.8
Aggressive Index	N/A	N/A	11.86	11.81-11.90
Alkalinity, Total (as CaCO3) (mg/L)	N/A	N/A	74.5	68-84
Bicarbonate (HCO3) (mg/L)	N/A	N/A	71.5	64-81
Hardness, Total (as CaCO3) (mg/L)	N/A	N/A	15.8	14-17
Calcium (Ca) (mg/L)	N/A	N/A	6.3	5.5-7.0
Potassium (K) (mg/L)	N/A	N/A	0.58	1-1.5
Sodium (Na) (mg/L)	N/A	N/A	39	47

[53] The MCL for Hexavalent Chromium was established by the California State Water Board on October 1, 2024. CSA 70 J Oak Hills has naturally occurring Hexavalent Chromium that was detected at levels that exceed the MCL. While a water system the size of CSA 70 J Oak Hills is not considered in violation of the Hexavalent Chromium MCL until after October 1, 2027, the County is working to address this exceedance and comply with the MCL established by the Board.

9.4.3 Recycled Water Supplies

CSA 70J does not currently utilize recycled water as a water supply source and does not have the infrastructure necessary to do so. Implementation of recycled water within the CSA 70J service area would require construction of conveyance and distribution facilities to access recycled water from regional sources, such as the Victor Valley Wastewater Reclamation Authority (VVWRA) or subregional water reclamation facilities. At this time, CSA 70J has no plans to develop or utilize recycled water supplies.

9.4.4 Desalination Opportunities

The UWMPA requires urban water suppliers to evaluate potential opportunities for the use of desalinated water CWC Section 10631[i]. Based on current conditions, desalination is not considered a viable supply option for the CSA due to the absence of suitable source waters and the substantial cost associated with treatment, conveyance, and disposal. Therefore, the CSA has no plans to develop desalination facilities, and desalinated supplies are not incorporated into the supply projections presented in this sub-chapter.

9.4.5 Water Transfers and Exchanges

CSA 70J does not currently participate in water transfers or exchanges, including transfers of BAP or FPA within the Alto Subarea. The CSA's water supply portfolio is primarily managed through groundwater production in accordance with the MBA adjudication, supplemented through the purchase of replacement and make-up water. While transfer and exchanges may represent a potential mechanism to augment supplies under certain conditions, CSA 70J does not rely on such activities as part of its current or projected water supply strategy. Accordingly, no water supplies associated with transfers or exchanges are assumed in the analyses presented in this sub-chapter.

9.4.6 Supply Summary

Groundwater serves as CSA 70J's principal water supply source. These supplies, pumped from the Alto Subarea of the MBA, are generally sufficient to meet existing and future demands. The CSA's water supplies are aggregated into the historical managed groundwater system. Managed groundwater consists of supplies provided through the MBA, including make-up and replacement supplies as well as transfers and exchanges among producers. Under the MBA Judgment, producers in the Alto Subarea are able to meet their water supply requirements through production from the basin's managed groundwater system. This system incorporates the natural yield of the basin along with supplies made available through regional management actions, including imported water recharge managed by MWA, conservation, water reuse, and transfers of FPA among producers. Consistent with this framework, the CSA's total managed groundwater production for the

historical period represents the supply available to meet system demands. Total managed groundwater production from 2021 through 2025 is shown in **Table 9-11**.

TABLE 9-11: CSA 70J'S MANAGED GROUNDWATER PRODUCTION 2021-2025 (AFY)

Year	Groundwater Production
2021	1,794
2022	1,725
2023	1,633
2024	1,146
2025	1,742

Projected groundwater supplies are derived from the demand projections described in *Sub-Chapter 9.5 – Water Use Characterization*. Within the adjudicated Mojave Basin Area management framework, the CSA's groundwater production adjusts to meet water demands through the managed groundwater system. Accordingly, projected groundwater supplies for the planning horizon are shown in **Table 9-12** and **Table 9-13**.[54]

TABLE 9-12: CSA 70J'S PROJECTED MANAGED GROUNDWATER SUPPLY 2026–2030 (AFY)

Year Type		Managed Groundwater Production
Normal		1,795
Single Dry-Year		1,795
Multi-Year Drought	2026 (1st Year)	1,795
	2027 (2nd Year)	1,800
	2028 (3rd Year)	1,805
	2029 (4th Year)	1,810
	2030 (5th Year)	1,815

[54] The values presented in **Table 9-12** and **Table 9-13** have been rounded to reflect congruency with the projected demands presented in *Sub-Chapter 9.4 – Water Supply and Infrastructure Characterization*.

TABLE 9-13: CSA 70J'S PROJECTED MANAGED GROUNDWATER SUPPLY THROUGH 2050 (AFY)

Managed Groundwater Production		2030	2035	2040	2045	2050
Normal		1,815	1,835	1,855	1,875	1,890
Single Dry-Year		1,815	1,835	1,855	1,875	1,890
Multi-Year Drought	Year 1	1,815	1,835	1,855	1,875	1,890
	Year 2	1,820	1,840	1,860	1,875	1,895
	Year 3	1,820	1,845	1,860	1,880	1,895
	Year 4	1,825	1,845	1,865	1,885	1,900
	Year 5	1,830	1,850	1,870	1,885	1,900

9.4.7 Delivery System Details

The CSA's potable water system conveys groundwater produced from wells located throughout the service area to storage and distribution facilities that deliver water to customers. Extracted groundwater is conveyed to one of the CSA's storage reservoirs, which collectively provide approximately four million gallons of storage before being distributed through the pressurized potable water system. The distribution system consists of more than 154 miles of pipeline, and approximately 3,458 service connections.

Sub-Chapter 9.5 – Water Use Characterization

Understanding water use characteristics is essential for the CSA to reliably and cost-effectively manage its water supplies and meet the needs of customers within its service area. This sub-chapter characterizes the CSA's retail customer water needs – current and forecast over the next few decades. Characteristics regarding how water use varies amongst different land use classifications, throughout the year, and under differing hydrologic conditions, help to bolster that understanding.

A thorough characterization and analysis provides a realistic prediction of future water use based upon the CSA's past and current water use, in addition to considerations of anticipated growth, new regulations, climate change conditions and trends in customer water use behaviors. The analysis presented in this sub-chapter utilizes the water use forecast methodology presented in *Sub-Chapter 4.1 of Regional Chapter 4 – Water Use Characterization* which examines each water use sector for a variety of factors before aggregating the information into a comprehensive projection of customer water use that becomes the foundation for integration with the CSA's water supplies, presented in *Sub-Chapter 9.4 – Water Supply and Infrastructure Characterization*, to assess long-term water system reliability, presented in *Sub-Chapter 9.7 – Water System Reliability and Drought Risk Assessment*.

As discussed in *Regional Chapter 1 – Introduction*, there have been no legislative changes to the UWMPA since the adoption of the CSA's 2020 UWMP; however, updates to annual water use reporting have been implemented. These include Urban Water Use Objective (UWUO) reports, and monthly drought and conservation reporting to the Safe and Affordable Funding for Equity and Resilience (SAFER) portal that are consolidated annually into an auto-generated Clearinghouse Annual Inventory Report (CAIR).

This section is organized as follows:

- Current Customer Water Use – This subsection presents actual water use data reflecting the CSA's residential and non-residential customers for 2022 through 2025 as well as distribution system losses for this same period.

- Compliance with Urban Water Use Objectives and past urban water use efficiency efforts – This subsection documents the derivation of the CSA's UWUO, comparison to the CSA's actual water use, UWUO reporting process, and past urban water use efficiency efforts, including the CSA's 2020 GPCD target.
- Forecasting Customer Use – This subsection presents the derivation and results of future water use forecasts for potable and non-potable water within the CSA's service area and estimation of distribution system losses. This subsection also estimates the variations in customer water use the CSA should expect during years with low rainfall as well as discusses longer-term climate change considerations.
- Forecasting Water Use for DRA and Annual Assessment – This subsection focuses on the subset of the customer water use forecast that is necessary for completing the five-year Drought Risk Assessment (DRA) and defining the "unconstrained demand" for purposes of the CSA's annual water supply and demand assessment.
- Projecting Disadvantaged Community Water Use – This subsection presents the estimated water use necessary to meet lower income households, pursuant to CWC Section 10631.1.

9.5.1 Current Customer Water Use

As described in *Sub-Chapter 9.2 – Water Service and System Description*, the CSA provides water service to approximately 3,458 service connections within its service area. Under normal operating conditions, customers are served groundwater supplies pumped from wells located throughout the CSA and treated to meet all applicable state and federal drinking water standards. Information regarding the CSA's current customers, recent water use patterns, and expected trends in water demand provides the basis for developing the water use forecasts presented in this 2025 RUWMP. Furthermore, annual records of actual water use provides the basis for determining the CSA's compliance with its UWUO, reported annually to DWR beginning in January of 2024.

9.5.1.1 Customer Water Use 2022 - 2025

Recent customer water use data assists the CSA in understanding water use trends, effects of any temporary use restrictions imposed during the most recent prolonged drought and recovery from such temporary restrictions, effects of long-term demand management measures, and other pertinent water use factors relevant to its forecast of future water use. The CSA is also required to quantify past customer water use pursuant to CWC Section 10631(d)(1). The CSA records potable water use within five primary categories:

- Single-Family Residential
- Multi-Family Residential
- Commercial and Institutional
- Irrigation

Table 9-14 presents the CSA's past customer potable water use by customer classification for 2022-2025 in acre-feet.

TABLE 9-14: POTABLE CUSTOMER USE 2022–2025 (VALUES IN ACRE-FEET) [55]

	Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Single-Family Residential	2022	98	98	97	97	114	114	160	160	165	165	124	124	1,515
	2023	73	73	82	82	113	113	128	128	140	140	101	101	1,275
	2024	93	93	77	77	94	94	160	160	152	152	122	122	1,396
	2025	96	96	90	90	116	116	163	163	163	163	112	112	1,481
Multi-Family Residential	2022	0	0	0	0	0	0	0	0	0	0	0	0	2
	2023	0	0	0	0	0	0	0	0	0	0	0	0	2
	2024	0	0	0	0	0	0	0	0	0	0	0	0	2
	2025	0	0	0	0	0	0	0	0	0	0	0	0	2
Commercial Institutional	2022	5	5	8	8	13	13	25	25	0	0	0	0	103
	2023	2	2	3	3	14	14	21	21	20	20	9	9	139
	2024	3	3	3	3	14	14	21	21	19	19	13	13	148
	2025	2	2	5	5	14	14	14	14	19	19	7	7	124
Landscape Irrigation	2022	0	0	0	0	0	0	0	0	0	0	0	0	0
	2023	0	0	0	0	0	0	0	0	0	0	0	0	0
	2024	0	0	0	0	0	0	0	0	0	0	0	0	0
	2025	0	0	1	1	0	0	0	0	0	0	0	0	3
Total Metered Deliveries	2022	103	103	105	105	127	127	185	185	165	165	124	124	1,619
	2023	76	76	85	85	127	127	150	150	160	160	111	111	1,416
	2024	96	96	80	80	108	108	181	181	172	172	135	135	1,546
	2025	98	98	96	96	131	131	177	177	182	182	120	120	1,610

[55] Monthly water use is presented in whole acre-feet; therefore, values less than 1 acre foot may appear as zero in individual months but are included in the reported annual totals.

The single-family residential and multi-family residential classifications continue to represent the primary components of the CSA's water service, accounting for approximately 92% of the CSA's annual potable water demand. When compared to previous use data, these water use characteristics have remained relatively consistent throughout the last 10 years, reflecting the CSA's predominantly residential service area and the continued prevalence of low-density single-family housing.

9.5.1.2 Existing Distribution System Losses

Distribution system water losses (also known as "real losses") are the physical water losses from the CSA's water distribution system up to the point of delivery to the customer's system (e.g., up to the residential water meter).

Since 2016, the CSA has been required to quantify its distribution system losses using the American Water Works Association Method (AWWA). An electronic copy of the audit in Excel format is to be submitted to DWR by October 1 of each year for the prior year's estimated system losses, using DWR's online submittal tool pursuant to California Code of Regulations (CCR) Section 638.5. Although the AWWA-based audit remains in effect as the primary tool for monitoring distribution system losses, mandated water loss reductions are on the horizon with the SWRCB's April 1, 2023 adoption of volumetric water loss performance standards. Pursuant to CCR Section 996, the SWRCB will require suppliers to reduce real loss by January 1, 2028 to no greater than the real water loss standard calculated in its 2027 audit. After 2028, the CSA shall assess compliance every three years as an average of recent losses. Additionally, the CSA will be required to evaluate apparent losses and submit an inventory of apparent losses should average losses exceed the real water loss standard.

Consistent with DWR's 2025 UWMP guidance, distribution system losses are reported using values submitted through DWR's Water Loss Audit Program. **Table 9-15** summarizes the CSA's reported losses for 2021, 2023, and 2024. 2025 data was not available at the time this 2025 RUWMP was prepared due to the reporting schedule associated with the AWWA water loss audit process.

TABLE 9-15: DISTRIBUTION SYSTEM LOSS 2021-2024

2021	2023	2024
12.2%	2.0%	13.1%
	Average:	9.1%

Due to the dynamic functions of a pressurized potable water distribution system, the estimated annual distribution system loss as a percentage of water entering the system will vary year-to-year and month to month. On average, however, the CSA's distribution system loss represents about 9.1% of water entering the system.

9.5.1.3 Water Loss Control Standard

CWC Section 10608.34 required the SWRCB to develop water loss control and performance standards (Real Water Loss Standards) applicable to urban retail water suppliers. The Real Water Loss Standard for the CSA was developed using information submitted as part of the CSA's annual water loss reporting to the State, specifically for the period 2017 through 2020. The resulting Real Water Loss Standard is 758 gallons per mile of the distribution system (i.e., mains) per day. The resulting Real Water Loss Standard as an average percent of total water supplied is 8.4%. Using the information from the same period, the average "apparent" water loss averaged 1.4% (of total water supplied). The total water loss estimate as a percentage of total water supplied is 9.7%, although recent AWWA audits discussed above show losses closer to 9%.

9.5.2 Compliance with Water Use Targets and Objectives

This subsection examines the CSA's derivation and compliance with state-mandated water use targets and objectives. The Water Conservation Act of 2009, also known as SB X7-7, introduced water conservation targets that served as a valuable measure of progress through 2020 and beyond.

9.5.2.1 Compliance with 2020 Urban Water Use Target

SB X7-7, also known as the Water Conservation Act of 2009, introduced sustainable water use and demand reduction legislation requiring the CSA to make incremental progress in reducing per capita water use. Specifically, urban water retailers were tasked with achieving a 10% reduction in per capita water use by December 31, 2015, and a 20% reduction by December 31, 2020. Beyond 2020, although reporting on compliance is no longer required, this target remains valuable as a baseline for the CSA to measure progress on achieving water efficiency goals.

The CSA's 2020 GPCD target was established in the 2020 UWMP as 176 GPCD, derived as the "gross water use" divided by the population during a defined baseline period, and reduced pursuant to one of four methods defined under CWC Section 10608.20(b). The CSA's calculation of their actual 2020 GPCD used the same methodology: "Gross water" was defined as total water production measured and reported based upon well production records. This value, divided by the CSA's estimated population in 2020, resulted in a

compliance value of 142 GPCD. Because this value was less than the CSA's established target, the CSA was determined to be in compliance with CWC Section 10608.24(b).

Although not required by the UWMPA, in 2025, the CSA was determined to have an actual GPCD of 154, calculated using the same methodology presented above.

9.5.2.2 Urban Water Use Objective Compliance

In 2018, the California Legislature passed Senate Bill 606 and Assembly Bill 1668, directing the SWRCB to adopt standards to encourage more efficient urban water use. This legislation, known as "Making Conservation a California Way of Life," was adopted in 2024, establishing individualized UWUO for each urban retail water supplier. In contrast to the SB X7-7 per capita targets, this legislation functions as a water budget tailored to a supplier's service area, considering residential indoor use, residential and commercial outdoor use based on local evapotranspiration and irrigable landscape area, water loss, and bonus incentives for potable reuse. In addition to the volumetric UWUO, the regulation establishes performance measures for commercial, industrial, and institutional (CII) sectors. The standards become progressively more stringent through 2040. The CSA submitted required annual reports to the SWRCB in 2024 and 2025.

9.5.3 Forecasting Customer Use

Future water use within the CSA's service area is projected using a regionally consistent forecasting methodology developed as part of the 2025 RUWMP. As described in Sub-Chapter 4.1.2 Forecasting Regional Water Use Future of Regional Chapter 4 – Water Use Characterization, this methodology integrates population and land use projections, historical water use trends, and demand management assumptions to estimate future water demands across participating agencies.

Consistent with this approach, the CSA's future water use projections reflect both anticipated changes in customer demand and continued implementation of water use efficiency measures. Forecasts are developed by considering existing customer use characteristics, projected growth in population and service connections, and expected changes in per capita water use over the planning horizon.

The results of this regional forecasting framework, as applied to the CSA, are presented in the following subsections and corresponding tables.

9.5.3.1 Existing Customer Future Use

Future water use associated with the CSA's existing customer base is projected based on current potable water use characteristics and representative GPCD values. As described in *Subsection 9.5.2.1*, the CSA's current GPCD, derived from recent water production and

population data, reflects the combined water use of all customer sectors, including both residential and non-residential demands.

The methodology used to develop the representative GPCD value for existing customers is fully described in *Sub-Chapter 4.1.2 Forecasting Regional Water Use of Regional Chapter 4 – Water Use Characterization*. In general, this approach utilizes total annual potable water production divided by the corresponding service area population to establish a baseline GPCD value representative of current conditions.

For purposes of projecting future demand associated with existing customers, the CSA has assumed that current water use levels will remain constant over the planning horizon. This assumption reflects observed demand conditions within the CSA's service area, where water use has stabilized following prior conservation efforts, regulatory requirements, and long-term demand management measures. As such, existing customer demand is considered "hardened" and no additional reductions in per capita water use have been applied to this customer group.

Accordingly, the CSA's existing customer demand is projected to remain at approximately 1,788 acre-feet per year, based on a representative GPCD of 154, for the duration of the planning horizon. Because the representative GPCD is derived from total potable water production, it inherently includes distribution system losses; therefore, no separate adjustment for the CSA's representative loss percentage, as described in the prior subsection, has been applied to the existing customer demand projections.

9.5.3.2 New Customer Future Use

Future water use associated with new customers is projected using a regionally consistent forecasting methodology developed as part of the 2025 RUWMP as described in *Sub-Chapter 4.1.2 Forecasting Regional Water Use of Regional Chapter 4 – Water Use Characterization*. This approach applies representative water use factors to projected population growth to estimate incremental demand associated with new development within the CSA's service area.

Unlike existing customer demand, which is based on observed production, the new customer forecast is developed by aggregating the individual components of the CSA's GPCD to reflect anticipated water use characteristics for future growth and development. These components distinguish between residential indoor and outdoor use, as well as non-residential demands, and are applied to projected population growth to estimate future demand.

For the CSA, the representative GPCD components applied to new customers are as follows:

- Indoor Residential Use: 47 GPCD
- Outdoor Residential Use: 48 GPCD
- Total Non-Residential Use: 24 GPCD

- Total Use: 119 GPCD

As with the existing customer demand GPCD, the resulting new GPCD represents total potable water production. However, the composition of this GPCD differs for new customers, as residential indoor water use is reduced over time to reflect compliance with applicable UWUO indoor standards, while outdoor residential and non-residential (CII) components are assumed to remain constant. The specific implementation schedule and applicable indoor water use standards are described in *Sub-Chapter 4.1.2 Forecasting Regional Water Use of Regional Chapter 4 – Water Use Characterization*. Accordingly, the aggregate GPCD applied to new customers declines over the planning horizon as indoor efficiency requirements are incrementally achieved. Because the representative GPCD is based on total potable water production, it inherently includes distribution system losses; therefore, no separate adjustment for the CSA's representative loss percentage has been applied to new customer demand projections.

Table 9-16 presents the resulting combined existing and future customer water use forecast, with values rounded to the nearest five acre-feet, which serves as the basis for evaluating the CSA's ability to meet projected demands under normal and drought conditions as described in *Sub-Chapter 9.7 – Water System Reliability and Drought Risk Assessment*.

TABLE 9-16: FORECAST FUTURE WATER USE (AFY)

2025	2030	2035	2040	2045	2050
1,790	1,815	1,835	1,855	1,875	1,890

9.5.3.3 Adjusting Water Use Forecasts for Single Dry and Multiple Dry Conditions

The water use forecast presented in **Table 9-16** represents expected water needs under normal climatic conditions. In some regions, adjustments to this forecast may be warranted under drier conditions to reflect increased irrigation resulting from reduced rainfall. However, within the High Desert climate of the RUWMP Planning Area, urban water use is not typically influenced by variations in rainfall. Landscape and agricultural irrigation demands are not dependent on precipitation to meet water needs; therefore, reduced rainfall does not result in increased water use as it might in more temperate or rainfall-dependent regions. Accordingly, no adjustments have been made to the forecast to account for single dry or

multiple dry year conditions. The values presented in **Table 9-16** represent unconstrained demand and are assumed to be consistent across all hydrologic year types. [56]

9.5.3.4 Climate Change Considerations

Incorporating climate change considerations into water use analysis can help inform long-term planning by identifying potential shifts in demand patterns, such as increased landscape irrigation associated with hotter and drier conditions. However, within the High Desert climate of the RUMWP Planning Area, baseline conditions are already characterized by low precipitation and high evapotranspiration rates. As a result, near-term climate change is not expected to materially alter water use behavior or increase demand beyond levels already reflected in existing conditions. Accordingly, no adjustments have been made to the water use forecast to account for climate change. While long-term climate change may incrementally increase evapotranspiration, such effects are expected to be nominal relative to current conditions. The CSA will continue to evaluate potential climate-related impacts in future UWMP updates and through ongoing regional water planning efforts.

9.5.4 Forecasting Water Use for DRA and Annual Assessment

This subsection presents the subset of the CSA's customer water use forecast that is used to evaluate short-term water supply reliability under drought and operational planning conditions. Specifically, this subsection supports two related, but distinct analyses required under California Water Code: the five-year Drought Risk Assessment (DRA) and the Annual Water Supply and Demand Assessment (Annual Assessment).

The DRA evaluates projected water demand over a five-year planning horizon under a sequence of dry conditions to assess potential supply shortfalls. The Annual Assessment, by contrast, is conducted each year and evaluates water supply and demand conditions over a rolling twelve-month period spanning July through June, incorporating both current year conditions and near-term projections. Together, these analyses rely on a consistent representation of "unconstrained demand" derived from the CSA's long-term water use forecast presented in the preceding subsections. The following subsections describe the methodology and results used to develop water demand projections for each of these planning efforts.

[56] California Water Code Section 10632(a)(2) states water suppliers should use "unconstrained demand" when performing their annual water supply and demand assessment. This reflects the expected demand prior to implementing shortage response actions as detailed in a Water Shortage Contingency Plan.

9.5.4.1 Projecting Water Use for Five Year Drought Risk Assessment

The DRA requires the CSA to evaluate water supply reliability over a five-year planning horizon under a sequence of dry conditions. Consistent with CWC Section 10635 and guidance provided in the 2025 UWMP Guidebook, this assessment is based on a projection of "unconstrained demand" representing anticipated customer water use absent shortage response actions.

For the purposes of the DRA, the CSA's projected water demands are derived directly from the long-term water use forecast described in the preceding subsections. This forecast incorporates projected changes in population, service connections, and per capita water use, as well as the effects of ongoing water use efficiency measures and regulatory requirements. Because the DRA is intended to evaluate baseline system reliability, no additional demand reductions associated with the CSA's Water Shortage Contingency Plan (WSCP) are applied.

Projected demands for the DRA are derived from the CSA's long-term water use forecast developed for the 2025 RUWMP and the CSA's retail-specific chapter and are expressed on an annual basis for each of the five years within the planning horizon. No additional adjustments are applied; the annual values reflect the same underlying methodology and assumptions used to develop the five-year planning increment forecasts presented elsewhere in this sub-chapter. These demand projections reflect total potable water demand, including residential, commercial, institutional, and other customer uses, as well as distribution losses. The demand projections used for the DRA are consistent with those used in the Annual Assessment to ensure alignment in the CSA's evaluation of water supply reliability across planning timeframes.

Table 9-17 presents the CSA's projected unconstrained water demands for the DRA period (2026-2030), with values rounded to the nearest five acre-feet. These values form the basis for the reliability analysis presented in *Sub-Chapter 9.7 – Water System Reliability and Drought Risk Assessment*.

TABLE 9-17: FORECAST DRA WATER USE FOR 2026 THROUGH 2030 (AFY)

2026	2027	2028	2029	2030
1,795	1,800	1,805	1,810	1,815

9.5.4.2 Projecting Water Use for Annual Assessments

The CSA conducts an Annual Water Supply and Demand Assessment each year in accordance with CWC requirements. These assessments are prepared and submitted to DWR by July 1 and evaluate anticipated water supply and demand conditions over a rolling twelve-month period spanning July through June.

The CSA has completed and submitted an Annual Assessment each year since 2022, as required by statute. While the results of these assessments are not included in this UWMP, the methodology and demand assumptions applied are consistent with those presented in this sub-chapter.

9.5.5 Projecting Disadvantaged Community Water Use

Pursuant to CWC Section 10631.1, urban retail water suppliers are required to include projected water use for lower income households in their UWMPs. Per California Health and Safety Code Section 50079.5, a lower income household is defined as one with an income below 80 percent of the area median income, adjusted for family size. For the purposes of the CSA's sub-chapter within the 2025 RUWMP, a portion of the CSA's service area is recognized as a Disadvantaged Community, and median income assumptions are consistent with those presented in *Sub-Chapter 2.1.7.2 Economic Trends and Other Social and Demographic Factors of Regional Chapter 2 – The Mojave Region*.[57] Accordingly, the water use forecast presented in **Table 9-17** is inclusive of disadvantaged community water use.

[57] California Department of Water Resources, Disadvantaged Communities Mapping Tool, available at: https://gis.water.ca.gov/app/dacs/

Sub-Chapter 9.6 – Water Conservation and Shortage Response

Pursuant to CWC Sections 10631(e) and 10632, this sub-chapter summarizes the CSA's demand management measures and water shortage response framework. These efforts support efficient use of available water supplies and provide the foundation for managing water use under both normal and shortage conditions.

The CSA has historically implemented a range of demand management measures aimed at improving water use efficiency, reducing long-term demand, and supporting compliance with applicable State requirements. These measures include ongoing programs, policies, and regional coordination efforts designed to manage existing customer use and guide future water use patterns.

This sub-chapter also highlights key components of the CSA's Water Shortage Contingency Plan (WSCP), including shortage levels, response actions, monitoring procedures, and communication strategies. The WSCP establishes the framework through which the CSA evaluates water supply conditions and implements staged response actions during periods of constrained supply. No substantive changes have been made to the CSA's 2020 WSCP, and the shortage levels, response actions, monitoring procedures, and communication protocols described therein remain applicable; however, water supply reliability information has been updated and is presented in the 2025 RUWMP and this chapter, reflecting current data, assumptions, and planning conditions.

A complete description of the CSA's WSCP, including detailed implementation procedures and supporting documentation, is provided in Appendix 9a.

9.6.1 Demand Management Measures

The CSA has implemented a comprehensive set of demand management measures (DMMs) to promote the efficient use of water and support long-term water supply reliability. These measures are consistent with the requirements of CWC Section 10631(e) and are designed to reduce water use, improve system efficiency, and support compliance with State urban water use objectives.

The CSA is a member of the Alliance for Water Awareness and Conservation (AWAC), a regional partnership of water agencies within the Mojave Water Agency service area focused on promoting water conservation, public outreach, and coordination of demand management efforts. Through its participation in AWAC and collaboration with regional partners, the CSA leverages shared resources and consistent messaging to enhance the effectiveness of its conservation programs.

The CSA will continue to implement and refine its DMMs to support efficient water use and meet applicable regulatory requirements. Additional information regarding recent and planned demand management activities is provided in the following subsections.

9.6.1.1 Foundational Demand Management Measures

CSA 70J's foundational DMMs consist of established policies, programs, and operational practices that support efficient water use and long-term system reliability. These measures are consistent with the framework presented in the CSA's 2020 UWMP and reflect the characteristics of the service area, which is predominantly residential, low-density, and largely composed of single-family homes on large parcels.

Water Waste Prevention Ordinances

The CSA enforces water waste prevention requirements through County ordinances and operational policies that prohibit inefficient water use practices, including excess runoff, irrigation during inappropriate times, and other avoidable losses. These requirements establish the regulatory framework for reducing unnecessary water use and are implemented through monitoring, customer communication, and enforcement actions as necessary.

Metering

All potable water service connections within the CSA are metered. Metering enables accurate measurement of customer water use, supports volumetric billing, and provides the data necessary for system monitoring, demand forecasting, and regulatory reporting. Meters are read on a bi-monthly basis, and customers are billed accordingly. This approach ensures that water use is directly tied to consumption and supports customer awareness of water use patterns.

Conservation Pricing

The CSA utilizes a six-tiered metered rate structure designed to promote efficient water use. The rate structure includes a fixed facility charge based on meter size and a volumetric charge that increases with higher levels of water use. The structure is applied across customer classes and serves as a primary mechanism for encouraging efficient water use within the CSA's service area.

Public Education and Outreach

The CSA implements public education and outreach programs to promote water conservation and inform customers about efficient water use practices. These efforts include coordination with regional partners, such as participation in the AWAC, which provides consistent conservation messaging across MWA's service area. Public outreach activities include the distribution of conservation materials, customer communication regarding water use practices, and participation in community and school-based education efforts where applicable. These programs are designed to increase awareness of water use efficiency and support long-term behavioral changes among customers.

Programs to Assess and Manage Distribution System Losses

The CSA conducts ongoing operational and maintenance activities to assess and manage real water losses within the distribution system. These efforts include routine system inspections, leak detection, infrastructure maintenance, and timely repair of identified issues.

Conservation Program Coordination and Staffing Support

The CSA implements its DMMs through County staff and coordination with regional partners. Participation in regional conservation programs allows the CSA to leverage shared resources, technical expertise, and outreach materials

9.6.1.2 Recent DMM Activities

In recent years, the CSA has continued to implement targeted conservation programs through its customer rebate program, with a focus on improving indoor and outdoor water use efficiency. From 2021 through 2025, the CSA offered rebates for high-efficiency plumbing fixtures, including toilets, showerheads, and faucets, as well as weather-based irrigation controllers. Over this period, high-efficiency toilet replacements represented the most widely utilized measure. These programs are administered by the CSA in coordination with regional partners and reflect a continued emphasis on cost-effective, customer-driven actions that reduce water use. Collectively, these rebate programs complement the CSA's foundational demand management measures by directly reducing both indoor and outdoor water demand and supporting long-term water use efficiency objectives.

9.6.1.3 Planned DMM Activities

At this time, the CSA does not anticipate implementing new demand management programs beyond those currently in place. The CSA's existing DMMs provide a comprehensive framework for promoting efficient water use and will continue to be implemented and refined as necessary to meet evolving regulatory requirements and operational needs. The CSA remains committed to efficient and responsible use of water resources and will continue to evaluate opportunities to enhance existing programs, incorporate new technologies, and improve program effectiveness over time. This includes ongoing efforts to reduce system losses, expand metering and data capabilities, and support customer awareness and

conservation practices. Consistent with applicable State requirements, including UWUO provisions, the CSA will continue to monitor water use and adjust its demand management approach as needed to support long-term water use efficiency and regulatory compliance.

9.6.2 Water Shortage Contingency Plan

The CSA has adopted a Water Shortage Contingency Plan (WSCP) in accordance with CWC Section 10632. The WSCP establishes a structured framework for managing water supply shortages through defined shortages levels, corresponding response actions, and ongoing monitoring of water supply and demand conditions. The WSCP is designed to ensure that the CSA can respond effectively to a range of water shortage conditions, from minor supply constraints to more severe drought scenarios. The plan identifies stages of water shortage based on severity of supply conditions and outlines the actions the CSA may implement to reduce demand, manage available supplies, and maintain essential public health and safety services.

The WSCP also incorporates procedures for evaluating water supply reliability, including coordination with the CSA's Annual Water Supply and Demand Assessment, which serves as the primary mechanism for identifying and responding to changing water supply conditions on an ongoing basis. Public communication and outreach are integral components of the WSCP and are used to inform customers of water supply conditions, required conservation actions, and applicable restrictions during shortage events. The following subsections summarize key components of the CSA's WSCP, including shortage levels, response actions, and monitoring and implementation procedures.

9.6.2.1 Summary of Water Shortage Levels and Response Actions

The CSA 70J WSCP establishes a series of defined water shortage levels that correspond to increasing degrees of supply constraint, associated demand reduction targets, and specific response actions. This staged framework enables the CSA to implement proportional measures to manage water use and maintain essential public health and safety services during periods of reduced supply.

While the CWC defines six standardized shortage levels, the CSA utilizes a four-stage shortage framework that is cross-referenced to the State's standard levels for consistency. The CSA shortage levels are associated with progressively higher demand reduction targets and increasingly restrictive response actions as conditions intensify. The general framework of shortage levels and representative response actions is summarized below:

- Stage 1 – Up to 10% Shortage (Drought Watch):

Increased public awareness and voluntary conservation measures, including expanded outreach, water use surveys, system efficiency actions, and initial limitations on outdoor irrigation practices.

- Stage 2 – Up to 40% Shortage (Drought Alert):

  Implementation of additional conservation measures and mandatory water use restrictions, including expanded irrigation limitations, prohibitions on non-essential water uses, leak repair requirements, and enhanced participation in rebate and efficiency programs.

- Stage 3 – Up to 50% Shortage (Drought Critical Condition):

  Expansion of mandatory restrictions, including further reductions in irrigation frequency, increased enforcement, restrictions on vehicle washing and decorative water features, and intensified conservation and monitoring efforts.

- Stage 4 – Greater than 50% Shortage (Drought Emergency):

  Implementation of emergency response measures necessary to protect public health and safety, including significant restrictions on outdoor water use, potential moratoriums on new connections, increased system monitoring, and other actions as determined by the CSA.

Response actions are implemented cumulatively, such that measures adopted at lower shortage levels remain in effect as higher levels are enacted. As water supply conditions change, the CSA may transition between water shortage levels based on ongoing evaluation of supply availability, customer demand, infrastructure conditions, and applicable State requirements. Additional detail regarding specific shortage levels, response actions, and implementation procedures is provided in the CSA's WSCP

9.6.2.2 Summary of Monitoring Procedures and Implementation

CSA 70J's WSCP includes procedures for monitoring water supply and demand conditions and implementing appropriate response actions based on observed and anticipated conditions. These procedures ensure that shortage response actions are timely and commensurate with the severity of supply constraints. CSA 70J monitors key indicators of water supply reliability, including groundwater conditions in the Alto Subarea, production capacity, customer demand, infrastructure constraints, and applicable State mandates. This information is used to evaluate supply availability and inform decisions regarding the initiation, modification, and termination of water shortage stages.

The CSA's Annual Water Supply and Demand Assessment serves as the primary mechanism for evaluating near-term water supply reliability and determining whether a water shortage level should be implemented. Additional detail regarding the Annual Assessment is provided in *Subsection 9.5.4 Forecasting Water Use for DRA and Annual Assessment of Sub-Chapter*

9.5 – Water Use Characterization. Implementation of the WSCP includes coordination among County staff and communication with customers, local agencies, and regional partners. When a water shortage stage is implemented, the CSA provides public notification of applicable conservation measures and restrictions. Water use is monitored through metered consumption and production data to evaluate the effectiveness of response actions and ensure demand reduction targets are achieved.

Sub-Chapter 9.7 – Water System Reliability and Drought Risk Assessment

This sub-chapter evaluates the reliability of the CSA's water supplies to meet projected demands under a range of hydrologic conditions, consistent with CWC Sections 10631 (c) and 10635. The analysis integrates the water supply characterization presented in *Sub-Chapter 9.4 – Water Supply and Infrastructure Characterization* with the water use projections developed in *Sub-Chapter 9.5 – Water Use Characterization* to assess the CSA's ability to meet customer demands during normal, single dry, and multiple dry year conditions.

The reliability analysis considers the availability of the CSA's water supplies, including groundwater production and supplemental supplies, in relation to projected customer demands over the planning horizon. This evaluation is intended to identify potential supply shortfalls and assess the CSA's capacity to maintain reliable water service under varying conditions. In addition to the long-term reliability analysis, this sub-chapter incorporates the CSA's Drought Risk Assessment, which evaluates water supply reliability over a five-year planning horizon under a sequence of dry conditions.

The results of this analysis provide the basis for evaluating the CSA's water supply reliability and inform the implementation of the CSA's WSCP, as described in *Sub-Chapter 9.6 – Water Conservation and Shortage Response*.

9.7.1 Five Year Drought Risk Assessment

The DRA evaluates the CSA's ability to meet projected water demands over a five-year planning horizon under a sequence of dry conditions. This assessment provides a forward-looking evaluation of water supply reliability and is intended to identify potential supply-demand imbalances under extended drought scenarios. Projected water demands for the DRA as based on the CSA's unconstrained demand forecast described in *Sub-Chapter 9.5 – Water Use Characterization* and are expressed on an annual basis over the five-year planning period. These demands reflect anticipated customer use absent implementation of shortage response actions.

Available water supplies are evaluated based on the CSA's managed groundwater supplies, which include groundwater production, replacement water, and make-up water, as described in *Sub-Chapter 9.4 – Water Supply and Infrastructure Characterization*. Under the

terms of the MBA adjudication, the CSA has discretion in managing its groundwater production and associated supplemental supplies, allowing it to adjust its supply portfolio to meet projected demands during dry conditions.

The DRA compares projected water demands to available supplies to evaluate the CSA's capacity to meet customer needs over the five-year period. **Table 9-18** presents the results of this analysis, including projected demands, available supplies, and any resulting surplus or shortage for each year of the DRA planning horizon, with values rounded to the nearest five acre-feet.

TABLE 9-18: FIVE YEAR DROUGHT RISK ASSESSMENT (AFY)

	2026	2027	2028	2029	2030
Supply	1,795	1,800	1,805	1,810	1,815
Demand	1,795	1,800	1,805	1,810	1,815
Difference	0	0	0	0	0

9.7.2 Long Term Service Reliability

The UWMPA directs urban water purveyors to analyze water supply reliability in a normal, single dry, and five consecutive dry years over a 20-year planning horizon. The 2025 UWMP Guidebook recommends extending that period to twenty-five (25) years to provide a guiding document for future land use and water supply planning through the next UWMP cycle. The CSA's long-term service reliability reflects the recommended 25-year planning horizon anticipating a normal, single dry, and five consecutive dry years from 2025 – 2050.

9.7.2.1 Normal and Single Dry Conditions 2030 – 2050

The following analysis evaluates the CSA's availability to meet projected water demands under normal and single dry year conditions for the 2030 through 2050 planning horizon. This evaluation compares available water supplies to projected customer demands to assess the CSA's capacity to reliably meet water needs under varying hydrologic conditions. Under both normal and single dry year conditions, the CSA's supplies are managed within the framework of the MBA adjudication, which provides flexibility in balancing groundwater production and supplemental supplies. As a result, available supplies are sufficient to meet projected demands throughout the planning horizon.

Table 9-19 presents the results of the normal and single dry year reliability analyses, including projected demands, available supplies, and resulting surplus or shortage for each timestep from 2030 through 2050. Values are rounded to the nearest five acre-feet.

TABLE 9-19: NORMAL AND SINGLE DRY YEAR WATER SUPPLY AND DEMAND THROUGH 2050 (AFY)

Normal Year	2030	2035	2040	2045	2050
Supply	1,815	1,835	1,855	1,875	1,890
Demand	1,815	1,835	1,855	1,875	1,890
Difference	0	0	0	0	0

Single Dry Year	2030	2035	2040	2045	2050
Supply	1,815	1,835	1,855	1,875	1,890
Demand	1,815	1,835	1,855	1,875	1,890
Difference	0	0	0	0	0

9.7.2.2 Five Consecutive Dry Years 2030 – 2050

The following analysis evaluates the CSA's ability to meet projected water demands over a five-year period of consecutive dry conditions for the 2030 through 2050 planning horizon. This assessment provides a more conservative evaluation of water supply reliability by examining the potential effects of extended drought conditions on available supplies. Under multiple dry year conditions, the CSA continues to manage its supplies within the framework of the MBA adjudication, which allows for flexibility in balancing groundwater production and supplemental supplies. This managed approach enables the CSA to adjust its supply portfolio over time to meet projected demands, even during extended periods of drought.

Table 9-20 presents the results of the multiple dry year reliability analysis, including projected demands, available supplies, and any resulting surplus or shortage for each year of the five-year dry sequence. Values are rounded to the nearest five acre-feet.

Together, the available supplies, when paired against projected demand conditions, demonstrate that the CSA has sufficient supplies to meet water demands under five consecutive dry year conditions through 2050.

TABLE 9-20: FIVE CONSECUTIVE DRY YEARS WATER SUPPLY AND DEMAND THROUGH 2050 (AFY)

		2030	2035	2040	2045	2050
Year 1	Supply	1,815	1,835	1,855	1,875	1,890
	Demand	1,815	1,835	1,855	1,875	1,890
	Difference	0	0	0	0	0
Year 2	Supply	1,820	1,840	1,860	1,875	1,895
	Demand	1,820	1,840	1,860	1,875	1,895
	Difference	0	0	0	0	0
Year 3	Supply	1,820	1,845	1,860	1,880	1,895
	Demand	1,820	1,845	1,860	1,880	1,895
	Difference	0	0	0	0	0
Year 4	Supply	1,825	1,845	1,865	1,885	1,900
	Demand	1,825	1,845	1,865	1,885	1,900
	Difference	0	0	0	0	0
Year 5	Supply	1,830	1,850	1,870	1,885	1,900
	Demand	1,830	1,850	1,870	1,885	1,900
	Difference	0	0	0	0	0

9.7.3 Annual Reliability Assessment

Each year, the CSA considers current supply and demand conditions and performs an Annual Water Supply and Demand Assessment pursuant to CWC Section 10632.1 to evaluate real time or near-term circumstances that are different than the DRA scenario. This assessment evaluates actual current water supply and use conditions for a prescribed 12-month forecast (July through the following June). Procedures for conducting the Annual Assessment are contained in the CSA's Water Shortage Contingency Plan. The CSA has conducted the assessment as required by the CWC and will continue this planning exercise to provide a reliability assessment for then-current conditions regarding supplies and expected (unconstrained) demands.

9.7.4 Water Supply Reliability Summary

The CSA's water supply portfolio is capable of meeting the water uses in its service area in normal, single dry, and five consecutive dry years from 2025 through 2050.

Sub-Chapter 9.8 – Energy Intensity Analysis

Pursuant to CWC Section 10631.2, the CSA evaluates the energy intensity of its water supply and distribution system. Entergy intensity is defined as the amount of energy used to extract, treat, and deliver water to customers and is typically expressed in kilowatt-hours per acre-foot (kWh/AF). The CSA's water supply portfolio is primarily comprised of locally produced groundwater. As a result, energy use is largely associated with groundwater extraction and distribution within the CSA's service area, rather than long-distance conveyance or advanced treatment processes.

The CSA continues to monitor energy use associated with its water system operations and will evaluate opportunities to improve operational efficiency where feasible. Total energy intensity is reported in **Table 9-21**.

TABLE 9-21: ENERGY INTENSITY – TOTAL UTILITY APPROACH FOR DEC 2024 THROUGH JAN 2026

Sum of All Water Management Processes	
Volume of Water Entering Process (acre-feet)	1,863
Energy Consumed (kWh)	2,855,620
Energy Intensity (kWh/acre-foot)	1,533

Chapter 10.0 Golden State Water Company – Barstow System

This page is reserved for Chapter 10 – Golden State Water Company – Barstow System. The complete Golden State Water Company – Barstow System retail specific chapter is included in the full 2025 Mojave RUWMP and is adopted separately by the Golden State Water Company.

Chapter 11.0 HESPERIA WATER DISTRICT

This page is reserved for Chapter 11 – Hesperia Water District. The complete Hesperia Water District retail specific chapter is included in the full 2025 Mojave RUWMP and is adopted separately by the City of Hesperia.

Chapter 12.0 Hi-Desert Water District

This page is reserved for Chapter 12 – Hi-Desert Water District. The complete Hi-Desert Water District retail specific chapter is included in the full 2025 Mojave RUWMP and is adopted separately by Hi-Desert Water District.

Chapter 13.0 Joshua Basin Water District

This page is reserved for Chapter 13 – Joshua Basin Water District. The complete Joshua Basin Water District retail specific chapter is included in the full 2025 Mojave RUWMP and is adopted separately by Joshua Basin Water District.

Chapter 14.0 LIBERTY UTILITIES – APPLE VALLEY

This page is reserved for Chapter 14 – Liberty Utilities – Apple Valley. The complete Liberty Utilities – Apple Valley retail specific chapter is included in the full 2025 Mojave RUWMP and is adopted separately by Liberty Utilities – Apple Valley.

Chapter 15.0 Phelan Piñon Hills Community Services District

This page is reserved for Chapter 15 – Phelan Piñon Hills Community Services District. The complete Phelan Piñon Hills Community Services District retail specific chapter is included in the full 2025 Mojave RUWMP and is adopted separately by Phelan Piñon Hills Community Services District.

Chapter 16.0 Victorville Water District

This page is reserved for Chapter 16 – Victorville Water District. The complete Victorville Water District retail specific chapter is included in the full 2025 Mojave RUWMP and is adopted separately by the City of Victorville

Appendix 1 – Notices

August 27, 2025

Notice of Intent to Prepare a Regional Urban Water Management Plan for the Mojave Region

This notice is to inform you that the urban water suppliers within the greater Mojave region are preparing a 2025 Regional Urban Water Management Plan (UWMP) pursuant to the California Water Code (CWC). All wholesale and retail urban water suppliers serving more than 3,000 customer connections are required to prepare an UWMP every five (5) years. The following urban water suppliers are collectively preparing this Regional UWMP:

City of Adelanto Water District
County Service Area 64
County Service Area 70 J
Helendale Community Services District
Hesperia Water District
Hi-Desert Water District
Golden State Water Company – Barstow System
Joshua Basin Water District
Liberty Utilities – Apple Valley Water Company
Mojave Water Agency
Phelan Piñon Hills Community Services District
Victorville Water District

The purpose of a Regional UWMP is to allow the urban water suppliers to coordinate and efficiently address the State's requirements as mandated in the CWC through a regional representation of water supply reliability. While the Regional UWMP will provide overarching and consistent information on water supplier reliability, each urban retail supplier will also update its unique Water Shortage Contingency Plan (WSCP), tailored to its specific service area and operations. Each urban supplier will separately adopt the Regional UWMP and its unique WSCP by July 1, 2026.

In accordance with CWC Section 10642, which encourages "active involvement of diverse social, cultural, and economic elements of the populations" in preparing a UWMP, the public will, at a minimum, have the opportunity to participate in the planning process through public hearings anticipated to occur in April or May of 2026 as part of each urban supplier's adoption process. A draft copy of the 2025 Regional UWMP will be made available for review prior to hearings, providing an opportunity for (1) Community input regarding water supply reliability; (2) Consideration of the economic impacts of complying with CWC status governing the Regional UWMP; and (3) Discussion of each agency's WSCP.

Detailed information, including contacts for each agency, future public hearing notices, schedules, and draft plan materials, will be available at the Mojave Water Agency's website at https://www.mojavewater.org/basin-management/regional-planning/urban-water-management-plan/, or at similar links hosted by each urban retail water supplier.

Questions regarding this notice or the 2025 Regional UWMP process may be directed to the appropriate retail agency using the contact information found on the website.

NOTICE OF PUBLIC HEARINGS

ON THE 2025 MOJAVE REGIONAL URBAN WATER MANAGEMENT PLAN

NOTICE IS HEREBY GIVEN that the Mojave Water Agency (MWA) and the ten urban water suppliers participating in the 2025 Mojave Regional Urban Water Management Plan (2025 RUWMP), as listed in **Table 1**, will hold public hearings to receive comments on the proposed 2025 RUWMP, including each participating agency's specific chapter contained within the 2025 RUWMP and each agency's Water Shortage Contingency Plan (WSCP).

The 2025 RUWMP is a regional planning document prepared collaboratively by MWA and participating urban water suppliers within the Mojave Region in accordance with the California Urban Water Management Planning Act.

The 2025 RUWMP includes:

- Regional chapters addressing Region-wide water supplies, water demands, and water service reliability;
- A chapter addressing MWA's role as the Region's wholesale water supplier, including its water supply and management responsibilities; and
- Retailer-specific chapters for each participating urban water supplier.

Each retailer-specific chapter addresses conditions within the respective agency's service area, including water service and system description, population and land use, water supply and infrastructure, water use characterization, water conservation and shortage response, and water system reliability. Each participating agency's WSCP describes the actions that may be implemented to respond to water shortage conditions and maintain water service reliability within its service area.

The urban water suppliers participating in the 2025 RUWMP, along with their respective public hearing dates and proposed dates to consider adoption, are presented in **Table 1.**

TABLE 1: PARTICIPATING AGENCIES AND HEARING INFORMATION

Agency	Public Hearing	Adoption
Hesperia Water District	June 2nd 2026	
Hi-Desert Water District	June 3rd 2026	
Joshua Basin Water District	June 3rd 2026	
Golden State Water Company - Barstow	May 27th 2026	
Liberty Utilities - Apple Valley	June 4th 2026	
San Bernardino County Service Area 64	June 23rd 2026	
San Bernardino County Service Area 70J	June 23rd 2026	
Phelan Pinion Hills CSD	June 10th 2026	
City of Adelanto Water District	June 10th 2026	
Mojave Water Agency	June 11th 2026	
Victorville Water District	June 16th 2026	

Each participating agency will hold its own public hearing to consider adoption of the 2025 RUWMP as it applies to its service area, including the applicable regional chapters, its respective retailer-specific chapter, its WSCP and all applicable appendices. MWA will separately consider adoption of the entirety of the 2025 RUWMP and its WSCP.

Draft documents will be made available in advance of each agency's public hearing in accordance with applicable noticing requirements. At the time of the hearing, all interested parties may appear and provide comments.

Hesperia Water District

The Hesperia Water District will hold a public hearing as follows:

Date: May 19, 2026

Time: 6:30 PM

Location: City Council Chambers 9700 Seventh Ave., Hesperia CA, 92345

Copies of the draft 2025 RUWMP, including the Hesperia Water District retailer-specific chapter and the District's WSCP and applicable appendices, will be available for public review at 9700 Seventh Ave., Hesperia CA, 92345 during regular business hours and online at https://hesperia.legistar.com/Calendar.aspx

Hi-Desert Water District

The Hi-Desert Water District will hold a public hearing as follows:

Date: June 3, 2026

Time: 4:00 PM

Location: 55439 29 Palms Highway Yucca Valley, CA 92284

Copies of the draft 2025 RUWMP, including the Hi-Desert Water District retailer-specific chapter and the District's WSCP and applicable appendices, will be available for public review at 55439 29 Palms Highway Yucca Valley, CA 92284 during regular business hours and online at www.hdwd.com

Joshua Basin Water District

The Joshua Basin Water District will hold a public hearing as follows:

Date: June 3, 2026

Time: 5:00 PM

Location: 61750 Chollita Road Joshua Tree CA 92252

Copies of the draft 2025 RUWMP, including the Joshua Basin Water District retailer-specific chapter and the District's WSCP and applicable appendices, will be available for public review at 61750 Chollita Rd., Joshua Tree, CA during regular business hours and online at www.jbwd.com

Golden State Water Company – Barstow

Golden State Water Company – Barstow will hold a public hearing as follows:

Date: May 27, 2026

Time: 11:00 AM

Location: https://us06web.zoom.us/j/81445290033?pwd=UijEvrIofbbXI4bRWJDhDO3PRaXi0J.1
Passcode: 757372

Copies of the draft 2025 RUWMP, including the Golden State Water Company – Barstow retailer-specific chapter and the Company's WSCP and applicable appendices, will be available for public review online at https://www.gswater.com/

Liberty Utilities – Apple Valley

Liberty Utilities – Apple Valley will hold a public hearing as follows:

Date: June 4, 2026

Time: 9:00 AM

Location: https://teams.microsoft.com/meet/284381397435981?p=HKnYB1DhSKyacIZB6S
Passcode: uc3Ee7km

Copies of the draft 2025 RUWMP, including the Liberty Utilities – Apple Valley retailer-specific chapter and Liberty Utilities – Apple Valley WSCP and applicable appendices, will be available for public review online at https://libertyutilities.com/

San Bernardino County Service Area 64

The San Bernardino County Service Area 64 will hold a public hearing as follows:

Date: June 23, 2026

Time: 10:00 AM

Location: 385 North Arrowhead Avenue, First Floor, San Bernardino, CA, 92415

Copies of the draft 2025 RUWMP, including the San Bernardino County Service Area 64 retailer-specific chapter and the CSA's WSCP and applicable appendices, will be available for public review at 385 North Arrowhead Avenue, First Floor, San Bernardino, CA, 92415 during regular business hours and online at https://sanbernardino.legistar.com/Calendar.aspx

San Bernardino County Service Area 70J

The San Bernardino County Service Area 70J will hold a public hearing as follows:

Date: June 23, 2026

Time: 10:00 AM

Location: 385 North Arrowhead Avenue, First Floor, San Bernardino, CA, 92415

Copies of the draft 2025 RUWMP, including the San Bernardino County Service Area 70J retailer-specific chapter and the CSA's WSCP and applicable appendices, will be available for public review at 385 North Arrowhead Avenue, First Floor, San Bernardino, CA, 92415 during regular business hours and online at https://sanbernardino.legistar.com/Calendar.aspx

Phelan Pinion Hills Community Services District

The Phelan Pinion Hills Community Services District will hold a public hearing as follows:

Date: June 10, 2026

Time: 5:00 PM

Location: 4176 Warbler Road, Phelan, CA 92371

Copies of the draft 2025 RUWMP, including the Phelan Pinion Hills Community Services District retailer-specific chapter and the CSD's WSCP and applicable appendices, will be available for public review at 4176 Warbler Road, Phelan, CA 92371 during regular business hours and online at www.pphcsd.org

City of Adelanto Water District

The City of Adelanto Water District will hold a public hearing as follows:

Date: June 10, 2026

Time: 11:00 AM

Location: Stadium - Conference Room 12000 Stadium Way Adelanto, CA, 92301

Copies of the draft 2025 RUWMP, including the City of Adelanto Water District retailer-specific chapter and the District's WSCP and applicable appendices, will be available for public review at 11600 Air Expressway Adelanto, CA 92301 during regular business hours and online at https://adelantoca.gov/services/water_sewer/index.php

Mojave Water Agency

The Mojave Water Agency will hold a public hearing as follows:

Date: June 11, 2026

Time: 9:30 AM

Location: MWA Board Room 13846 Conference Center Drive Apple Valley, CA 92307

Copies of the draft 2025 RUWMP and the Agency's WSCP and applicable appendices, will be available for public review at 13846 Conference Center Drive Apple Valley, CA 92307 during regular business hours and online at https://www.mojavewater.org/about-mwa/agency-calendar/meetings/

Victorville Water District

The Victorville Water District will hold a public hearing as follows:

Date: June 16, 2026

Time: 6:00 PM

Location: City Hall 14343 Civic Drive Victorville, CA 92392

Copies of the draft 2025 RUWMP, including the Victorville Water District retailer-specific chapter and the District's WSCP and applicable appendices, will be available for public review at City Hall 14343 Civic Drive Victorville, CA 92392 during regular business hours and online at https://www.victorvilleca.gov/Government/City-Departments/City-Clerk/Agendas-Meetings-Minutes

NOTICE OF PUBLIC HEARINGS
ON THE 2025 MOJAVE REGIONAL URBAN WATER MANAGEMENT PLAN

NOTICE IS HEREBY GIVEN that the Mojave Water Agency (MWA) and the ten urban water suppliers participating in the 2025 Mojave Regional Urban Water Management Plan (2025 RUWMP), as listed below, will hold public hearings to receive comments on the proposed 2025 RUWMP, including each participating agency's specific chapter contained within the 2025 RUWMP and each agency's Water Shortage Contingency Plan (WSCP). The 2025 RUWMP is a regional planning document prepared collaboratively by MWA and participating urban water suppliers within the Mojave Region in accordance with the California Urban Water Management Planning Act.

The 2025 RUWMP includes:

- Regional chapters addressing Region-wide water supplies, water demands, and water service reliability;
- A chapter addressing MWA's role as the Region's wholesale water supplier, including its water supply and management responsibilities; and
- Retailer-specific chapters for each participating urban water supplier.

Each retailer-specific chapter addresses conditions within the respective agency's service area, including water service and system description, population and land use, water supply and infrastructure, water use characterization, water conservation and shortage response, and water system reliability. Each participating agency's WSCP describes the actions that may be implemented to respond to water shortage conditions and maintain water service reliability within its service area. The urban water suppliers participating in the 2025 RUWMP, along with their respective public hearing dates are presented below.

Each participating agency will hold its own public hearing to consider adoption of the 2025 RUWMP as it applies to its service area, including the applicable regional chapters, its respective retailer-specific chapter, its WSCP and all applicable appendices. MWA will separately consider adoption of the entirety of the 2025 RUWMP and its WSCP. Draft documents will be made available in advance of each agency's public hearing in accordance with applicable noticing requirements. At the time of the hearing, all interested parties may appear and provide comments.

Hesperia Water District
The Hesperia Water District will hold a public hearing as follows:
Date: May 19, 2026
Time: 6:30 PM
Location: City Council Chambers 9700 Seventh Ave., Hesperia CA, 92345
Copies of the draft 2025 RUWMP, including the Hesperia Water District retailer-specific chapter and the District's WSCP and applicable appendices, will be available for public review at 9700 Seventh Ave., Hesperia CA, 92345 during regular business hours and online at https://hesperia.legistar.com/Calendar.aspx

Hi-Desert Water District
The Hi-Desert Water District will hold a public hearing as follows:
Date: June 3, 2026
Time: 4:00 PM
Location: 55439 29 Palms Highway Yucca Valley, CA 92284
Copies of the draft 2025 RUWMP, including the Hi-Desert Water District retailer-specific chapter and the District's WSCP and applicable appendices, will be available for public review at 55439 29 Palms Highway Yucca Valley, CA 92284 during regular business hours and online at www.hdwd.com

Joshua Basin Water District
The Joshua Basin Water District will hold a public hearing as follows:
Date: June 3, 2026
Time: 5:00 PM
Location: 61750 Chollita Road Joshua Tree CA 92252
Copies of the draft 2025 RUWMP, including the Joshua Basin Water District retailer-specific chapter and the District's WSCP and applicable appendices, will be available for public review at 61750 Chollita Rd., Joshua Tree, CA during regular business hours and online at www.jbwd.com

Golden State Water Company – Barstow
Golden State Water Company – Barstow will hold a public hearing as follows:
Date: May 27, 2026
Time: 11:00 AM
Location: https://us06web.zoom.us/j/81445290033?pwd=UijEvrIofbbXI4bRWJDhDO3PRaXi0J.1 Passcode: 757372
Copies of the draft 2025 RUWMP, including the Golden State Water Company – Barstow retailer-specific chapter and the Company's WSCP and applicable appendices, will be available for public review online at https://www.gswater.com/

Liberty Utilities – Apple Valley
Liberty Utilities – Apple Valley will hold a public hearing as follows:
Date: June 4, 2026
Time: 9:00 AM
Location: https://teams.microsoft.com/meet/284381397435981?p=HKnYB1DhSKyacIZB6S Passcode: uc3Ee7km
Copies of the draft 2025 RUWMP, including the Liberty Utilities – Apple Valley retailer-specific chapter and Liberty Utilities – Apple Valley WSCP and applicable appendices, will be available for public review online at https://libertyutilities.com/

San Bernardino County Service Area 64
The San Bernardino County Service Area 64 will hold a public hearing as follows:
Date: June 23, 2026
Time: 10:00 AM
Location: 385 North Arrowhead Avenue, First Floor, San Bernardino, CA, 92415
Copies of the draft 2025 RUWMP, including the San Bernardino County Service Area 64 retailer-specific chapter and the CSA's WSCP and applicable appendices, will be available for public review at 385 North Arrowhead Avenue, First Floor, San Bernardino, CA, 92415 during regular business hours and online at https://sanbernardino.legistar.com/Calendar.aspx

San Bernardino County Service Area 70J
The San Bernardino County Service Area 70J will hold a public hearing as follows:
Date: June 23, 2026
Time: 10:00 AM
Location: 385 North Arrowhead Avenue, First Floor, San Bernardino, CA, 92415
Copies of the draft 2025 RUWMP, including the San Bernardino County Service Area 70J retailer-specific chapter and the CSA's WSCP and applicable appendices, will be available for public review at 385 North Arrowhead Avenue, First Floor, San Bernardino, CA, 92415 during regular business hours and online at https://sanbernardino.legistar.com/Calendar.aspx

Phelan Pinion Hills Community Services District
The Phelan Pinion Hills Community Services District will hold a public hearing as follows:
Date: June 10, 2026
Time: 5:00 PM
Location: 4176 Warbler Road, Phelan, CA 92371
Copies of the draft 2025 RUWMP, including the Phelan Pinion Hills Community Services District retailer-specific chapter and the CSD's WSCP and applicable appendices, will be available for public review at 4176 Warbler Road, Phelan, CA 92371 during regular business hours and online at www.pphcsd.org

City of Adelanto Water District
The City of Adelanto Water District will hold a public hearing as follows:
Date: June 10, 2026
Time: 11:00 AM
Location: Stadium - Conference Room 12000 Stadium Way Adelanto, CA, 92301
Copies of the draft 2025 RUWMP, including the City of Adelanto Water District retailer-specific chapter and the District's WSCP and applicable appendices, will be available for public review at 11600 Air Expressway Adelanto, CA 92301 during regular business hours and online at https://adelantoca.gov/services/water_sewer/index.php

Mojave Water Agency
The Mojave Water Agency will hold a public hearing as follows:
Date: June 11, 2026
Time: 9:30 AM
Location: MWA Board Room 13846 Conference Center Drive Apple Valley, CA 92307
Copies of the draft 2025 RUWMP and the Agency's WSCP and applicable appendices, will be available for public review at 13846 Conference Center Drive Apple Valley, CA 92307 during regular business hours and online at https://www.mojavewater.org/about-mwa/agency-calendar/meetings/

Victorville Water District
The Victorville Water District will hold a public hearing as follows:
Date: June 16, 2026
Time: 6:00 PM
Location: City Hall 14343 Civic Drive Victorville, CA 92392
Copies of the draft 2025 RUWMP, including the Victorville Water District retailer-specific chapter and the District's WSCP and applicable appendices, will be available for public review at City Hall 14343 Civic Drive Victorville, CA 92392 during regular business hours and online at https://www.victorvilleca.gov/Government/City-Departments/City-Clerk/Agendas-Meetings-Minutes
May 13, 20, 27 2026
LYRK0516190

Appendix 2 – Reduced Delta Reliance

Appendix 2
Mojave Region Delta Reliance

This Appendix provides the Delta Reliance assessment for the Mojave Water Agency (MWA) and the RUWMP participating retail water service agencies located within the Mojave Region. These retail agencies in the Mojave Region covered by this RUWMP assessment include: Liberty Utilities – Apple Valley Water Company, City of Adelanto Water District, San Bernardino County Service Area 64, San Bernardino County Service Area 70J, Golden State Water Company – Barstow System, Hesperia Water District, Hi-Desert Water District, Joshua Basin Water District, Phelan Piñon Hills Community Services District, and Victorville Water District. These retail agencies are subject to the minimum threshold requirements of the Urban Water Management Planning Act (UWMP Act) and work with MWA on managing regional water supplies as described more thoroughly in the 2025 RUWMP. Additional entities that are not currently subject to the UWMP Act but may subject to the UWMP Act in the future and that rely upon water supplies derived from MWA's and the retail agencies' management are also considered in this assessment. Last, this assessment is consistent with all applicable water management activities within the Region including the Mojave Basin Area Adjudication Judgement, the Warren Valley Basin Judgment, and the Ames/Reche Groundwater Storage and Recovery Program Management Agreement.

A.1 Delta Reform Act and Certification of Consistency

The Delta Reform Act of 2009 required state and local agencies to prepare a written certification of consistency with Delta Plan policies before initiating a covered action in the Delta.1 The written certification of consistency must be submitted to the Delta Stewardship Council and include detailed findings as to whether the covered action is consistent with applicable Delta Plan policies.2 The submitted certification of consistency may be appealed by any person and the Delta Stewardship Council may grant the appeal to address contested issues.3 In short, water suppliers that anticipate participating in a proposed covered action must comply with the requirements of the Delta Reform Act.

[1] California Water Code section 85057.5.
[2] California Water Code section 85225.
[3] California Water Code section 85225.10-85225.25.

Proposed covered actions may include a conveyance facility or a new diversion that involves transferring water through, exporting water from, or using water in the Delta. For urban purveyors that may participate in a proposed covered action, should provide information in their Urban Water Management Plans (UWMP) that can be used to demonstrate consistency with the Delta Plan. Specifically, the urban purveyors need to demonstrate consistency with Delta Plan Policy WR P1 – Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance (WR P1).4 WR P1 subsection (a) states that:

> *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. WR P1 subsection (c)(1) states:

> *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*

[4] Cal. Code Regs., tit. 23 section 5003.

(C) Included in the Plan, commencing with 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 in this RUWMP Appendix includes 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 proposed covered action.

A.2 Expected Outcomes for Reduced Delta Reliance and Regional Self Sufficiency

The expected outcomes for this Delta reliance and improved regional self-reliance assessment were developed using guidance described in Appendix C of DWR's Urban Water Management Plan Guidebook 2025, issued in January 2026 (Guidebook 2025), which generally reflected the guidebook issued in March 2021 (Guidebook 2020). The data used in this assessment represent the total regional efforts of MWA and the retail agencies and were developed as part of a region-wide coordination process to prepare the 2025 Regional Urban Water Management Plan (RUWMP). Table 1 shows the expected outcomes for reduced Delta reliance within the Mojave Region.

TABLE 1: EXPECTED OUTCOMES FOR REDUCED RELIANCE ON THE DELTA

Year	2010	2015	2020	2025	2030	2035	2040	2045	2050
Total Water Supplies from the Delta Watershed	34.2%	34.2%	31.0%	26.1%	24.6%	23.5%	22.9%	22.3%	21.7%
Change in Water Supplies from the Delta Watershed		-0.1%	-3.3%	-8.2%	-9.6%	-10.7%	-11.4%	-12.0%	-12.5%

The methodology for demonstrating reduced reliance on the Delta is consistent with DWR's Guidebook 2020 and Guidebook 2025. MWA calculated its expected outcomes for reduced Delta reliance by measuring its current and anticipated water use against a baseline condition. MWA chose 2010 normal water year as its baseline. Data for the 2010 baseline

were taken from relevant regional planning documents. MWA then assessed its Delta Reliance against the 2010 baseline for years 2015 through 2050.

The analysis uses normal water year demands to assess the supplies that would be used in the future. In addition, because WR P1 considers water use efficiency savings as a source of supply, prior the UWMP Act water conservation mandates (e.g. 20% by 2020) and more recent requirements that help support water use efficiency quantification in the Region.[5] Table 2 shows the Region's water demands without water use efficiency and the reported water use efficiency.

TABLE 2: DEMANDS WITHOUT WATER USE EFFICIENCY

Total Service Area Water Demands (Acre-Feet)	2010	2015	2020	2025	2030	2035	2040	2045	2050
Water Demands with Water Use Efficiency	145,066	138,009	129,595	121,700	123,400	125,000	126,500	128,800	130,700
Reported Water Use Efficiency	-	17,735	38,571	72,800	77,112	81,378	85,682	89,024	92,557
Water Demands without Water Use Efficiency	145,066	155,744	168,166	194,500	200,512	206,378	212,182	217,824	223,257

MWA and the participating retail urban water suppliers must also report the expected outcomes for measurable improvement in regional self-reliance. Given water management within the Region as described throughout the 2025 RUWMP, Table 3 shows the expected outcomes for supplies contributing to regional self-reliance for the Region as a whole.

[5] In 2018, the California Legislature passed Senate Bill 606 and Assembly Bill 1668, directing the SWRCB to adopt standards to encourage more efficient urban water use. This legislation, known as "Making Conservation a California Way of Life," was adopted in 2024, establishing individualized Urban Water Use Objectives for each urban retail water supplier. In contrast to the SB X7-7 per-capita targets, this legislation functions as a water budget tailored to a supplier's service area, considering residential indoor use, residential and commercial outdoor use based on local evapotranspiration and irrigable landscape area, water loss, and bonus incentives for potable reuse. In addition to the volumetric UWUO, the regulation establishes performance measures for commercial, industrial, and institutional sectors. The standards become progressively more stringent through 2040.

The data presented in this section demonstrate the expected outcomes for reduced Delta reliance and regional self-sufficiency. The information has been noticed and presented in accordance with applicable law.

TABLE 3: SUPPLIES CONTRIBUTING TO REGIONAL SELF-RELIANCE

Water Supplies Contributing to Regional Self-Reliance	2010	2015	2020	2025	2030	2035	2040	2045	2050
Water Use Efficiency	0	17,735	38,571	72,800	77,112	81,378	85,682	89,024	92,557
Water Recycling	62,000	47,825	52,536	47,495	49,699	50,930	52,172	53,559	53,560
Conjunctive Use Projects	54,045	57,349	57,349	57,349	57,349	57,349	57,349	57,349	57,350
Water Supplies Contributing to Regional Self-Reliance	116,045	122,909	148,456	177,644	184,160	189,658	195,203	199,932	203,466
Service Area Water Demands without Water Use Efficiency	2010	2015	2020	2025	2030	2035	2040	2045	2045
Service Area Water Demands without Water Use Efficiency	145,066	155,744	168,166	194,500	200,512	206,378	212,182	217,824	223,257
Change in Regional Self Reliance (Acre-Feet)	2010	2015	2020	2025	2030	2035	2040	2045	2045
Water Supplies Contributing to Regional Self-Reliance	116,045	122,909	148,456	177,644	184,160	189,658	195,203	199,932	203,466
Change in Water Supplies Contributing to Regional Self-Reliance		6,864	32,411	61,599	68,115	73,613	79,158	83,887	87,421
Percent Change in Regional Self Reliance	2010	2015	2020	2025	2030	2035	2040	2045	2045
Water Supplies Contributing to Regional Self-Reliance	80.0%	78.9%	88.3%	91.3%	91.8%	91.9%	92.0%	91.8%	91.1%
Change in Water Supplies Contributing to Regional Self-Reliance		-1.1%	8.3%	11.3%	11.9%	11.9%	12.0%	11.8%	11.1%

Appendix 3 – MWA Regional DWR 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	Chapter 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 6	6.4, 6.6, 6.7
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	Chapter 6	Beginning of each sub-chapter
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	Chapter 6	6.1
x	n/a	2.5	Section 2.5	10644	Supplier shall report the Public Water Systems number, volume of delivered water, and number of connections that are included in this UWMP.	Plan preparation	2-1		
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	Chapter 6	6.1
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	Chapter 6	6.1
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	Chapter 6	6.1
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	Chapter 6	6.1
x	n/a	2.4	Section 2.4.1	10631(h)	Retail Suppliers will include documentation that they have provided their Wholesale Supplier(s)—if any—with water use projections from that source.	Plan preparation	2-4 R		
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	Chapters 3 and 6	3.1, 6.4
x	x	3	Chapter 3.0	10631(a)	Describe the Supplier service area.	System description	n/a	Chapter 6	6.2
x	x	3.3	Section 3.3	10631(a)	Describe the climate of the Supplier's service area.	System description	n/a	Chapter 6	6.2
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	Chapter 6	6.3
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	Chapter 6	6.3
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	Chapter 6	6.3
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	Chapter 4	n/a
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	Chapter 6	n/a
x	n/a	4.3	Section 4.3.2	10631(d)(3)(C)	Retail Suppliers shall provide data to show the distribution loss standards were met.	System water use	4-6		
x	n/a	4.2	Section 4.2.5.4	10631.1(a)	Include projected water use needed for lower income housing projected in the service area of the Supplier.	System water use	4-3		
x	n/a	4.2	Section 4.2.5.3	10631(d)(4)(A)	In projected water use, include estimates of water savings from adopted codes, plans, and other policies or laws.	System water use	4-3		
x	n/a	4.2	Section 4.2.5.3	10631(d)(4)(B)	Provide citations of codes, standards, ordinances, or plans used to make water use projections.	System water use	4-3		
x	n/a	4.2	Section 4.2.5.3	10631(d)(4)(B)(ii)	To the extent that a Supplier reports the information described in subparagraph (A), an urban water Supplier shall… Indicate the extent that the water use projections consider savings from codes, standards, ordinances, or transportation and land use plans. Water use projections that do not account for these water savings shall be noted of that fact.	System water use	4-3		
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	Chapter 5	n/a
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	Chapter 4	n/a
x	n/a	5.2	Section 5.2	10608.4	Retail Suppliers shall report on their compliance in meeting their water use targets. Reporting requirements will vary depending on whether the Supplier: - Was considered an urban retail water supplier in 2020, - Met its 2020 target in 2020, or - Was part of a merger or consolidation since 2020. Chapter 5 Subsections 5.2.1, 5.2.2, and 5.2.3 address each of these situations.	Baselines and targets	5-1		
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	Chapters 3 and 4	n/a
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	Chapter 6	6.4
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	Chapter 3	n/a
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	Chapter 2	n/a
x	x	6.2	Section 6.2.2	10631(b)(4)(B)	Describe the groundwater basin.	System supplies	n/a	Chapter 2	n/a
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	Chapter 2	n/a
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	n/a	n/a
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	n/a	n/a
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	Chapters 3 and 6	6.5
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	Chapters 3 and 6	6.5
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	Chapter 3	n/a
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	Chapter 3	n/a
x	n/a	6.2	Section 6.2.5	10633(a)	Describe the wastewater collection and treatment systems in the Supplier's service area with quantified amount of collection and treatment and the disposal methods.	System supplies (recycled water)	6-2		
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	Chapter 3	n/a
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	Chapter 3	n/a
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	Chapter 3	n/a
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	Chapter 3	n/a
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	Chapter 3	n/a
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	Chapter 3	n/a
x	x	6.2	Section 6.2.6	10631(g)	Describe desalinated water project opportunities for long-term supply.	System supplies	6-7	Chapter 3	n/a

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	Chapter 6	6.4
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	Chapter 6	6.9
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	Chapter 6	6.5
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	Chapter 6	6.5
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	Chapter 6	6.5
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	Chapter 6	6.8
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	Chapter 6	6.5
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	Chapter 6	6.5, 6.8
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	Chapter 6	6.5
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	Chapter 6	6.5, 6.8
x	x	8	Chapter 8	10632(a)	Provide a water shortage contingency plan (WSCP) with specified elements below.	Water shortage contingency planning	n/a	Chapter 6	6.7
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	Chapter 6	6.7
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	Chapter 6	6.7
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	Chapter 6	6.7
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	Chapter 6	6.7
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	Chapter 6	6.7
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	Chapter 6	6.7
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	Chapter 6	6.7
x	x	8.4	Section 8.4	10632(a)(4)(C)	Specify locally appropriate operational changes.	Water shortage contingency planning	8-2	Chapter 6	6.7
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	Chapter 6	6.7
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	Chapter 6	6.7
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	Chapter 6	6.7
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	Chapter 6	6.7
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	Chapter 6	6.7
x	n/a	8.6	Section 8.6	10632(a)(6)	Retail Supplier must describe how it will ensure compliance with and enforce provisions of the WSCP.	Water shortage contingency planning	n/a		
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	Chapter 6	6.7
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. *Water Shortage Emergencies*.	Water shortage contingency planning	n/a	Chapter 6	6.7
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	Chapter 6	6.7
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	Chapter 6	6.7
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	Chapter 6	6.7
x	n/a	8.8	Section 8.8	10632(a)(8)(C)	Retail Suppliers must describe the cost of compliance with Water Code Chapter 3.3, *Excessive Residential Water Use During Drought*.	Water shortage contingency planning	n/a		
x	n/a	8.9	Section 8.9	10632(a)(9)	Retail Suppliers must describe the monitoring and reporting requirements and procedures that ensure appropriate data are collected, tracked, and analyzed for purposes of monitoring customer compliance.	Water shortage contingency planning	n/a		
x	x	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	Chapter 6	6.7
x	n/a	8.11	Section 8.11	10632(b)	Analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas.	Water shortage contingency planning	n/a		
x	x	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	Chapter 6	6.7
x	n/a	9.1	Sections 9.1	10631(e)(1)	Retail Suppliers shall provide a description of the nature and extent of each demand management measure implemented over the past five years. The description will address specific measures listed in code.	Demand management measures	n/a		
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	Chapter 6	6.7
x	n/a	10	Chapter 10	10608.26(a)	Retail Suppliers shall conduct a public hearing to discuss adoption, implementation, and economic impact of water use targets (recommended to discuss compliance).	Plan adoption, submittal, and implementation	n/a		
x	x	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	Chapter 6	6.1
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, 202 6.	Plan adoption, submittal, and implementation	n/a	Chapter 6	6.1
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	Chapter 6	6.1
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	Chapter 6	6.1
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	Appendicies	n/a
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	Chapter 6	6.1
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	Appendicies	n/a
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	Chapter 6	6.1
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	Appendicies	n/a

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	Appendicies	n/a
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	Appendicies	n/a
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	Appendicies	n/a

APPENDIX 4 – MWA WSCP

Mojave Water Agency
Water Shortage Contingency Plan

Mojave Water Agency

Water Shortage Contingency Plan

This Water Shortage Contingency Plan (WSCP) addresses the plan preparation requirements in Water Code Section 10632 of the Urban Water Management Planning Act (The Act). The WSCP is incorporated into the 2025 Urban Water Management Plan (UWMP) and used by Mojave Water Agency (MWA) to respond to water shortage contingencies in the MWA service area as they may arise.

MWA provides wholesale water to retail agencies within its service area. The retail agencies are the direct purveyor of water service to retail customers. As such, MWA relies on a coordinated approach to water shortage management with the retail water agencies within its service area. MWA's efforts in Water Shortage Contingency Planning are focused on maintaining and augmenting groundwater supplies in order to mitigate against extended drought conditions and catastrophic water outages. And because MWA is a wholesale urban water supplier, elements that pertain only to retail water suppliers are not addressed in this WSCP.[1] This chapter will address all aspects of MWA's WSCP actions and address specific outage scenarios that MWA's water management actions alleviate.

Section 10631 of the Urban Water Management Plan Act lists the following required elements for wholesale water purveyors:

1. An analysis of water supply reliability
2. Procedures for conducting an annual water supply and demand assessment
3. Six standard water shortage levels corresponding to progressive ranges of up to 10, 20, 30, 40, and 50 percent shortages and greater than 50 percent shortage and the shortage response actions that align with the defined shortage levels.
4. Communication protocols and procedures
5. A description of legal authorities
6. A description of financial consequences
7. Reevaluation and improvement procedures
8. Special Water Feature Distinction (10632(b))

[1] Water Code sections 10632(a)(6), 10632(a)(8)(C), and 10632(a)(9) apply exclusively to retail urban purveyors.

9. Plan Adoption, Submittal, and Availability

This WSCP is a stand-alone plan that may be adopted independently from the UWMP and may be amended or refined and readopted as needed over coming months and years independently from the UWMP.

1.1 Water Supply Reliability Analysis

Mojave Water Agency is a special act district created in 1960 under Chapter 97 of the California Water Code Water Appendices. MWA service area covers 4,900 square miles in San Bernardino County and delivers water for regional groundwater management that is used by numerous retail water purveyors, ten of which are required to prepare an UWMP under the Urban Water Management Planning Act. Regional water supplies consist of naturally recharged groundwater, return flows, wastewater imports and imported State Water Project supplies. These supplies are discussed in greater detail in Chapter 4.

The water demands in the MWA service area currently serve a population approaching 600,000 people that is expected to grow to nearly 700,000 people by 2065.[2] MWA's service area demand analysis includes both the population assessment and relevant land use information provided by each retail provider. In short, the MWA service area demands are set to increase from 121,250 acre-feet per year in 2030 to over 126,000 acre-feet per year in 2045. Moreover, MWA's regional demands projection for 2050 exceed 127,270 acre-feet. These long-term demands are included in the 2025 UWMP in order to improve long-term water management and planning actions. These demands are discussed in detail in Chapter 6.

MWA has sufficient available regional supplies to meet the regional demands through 2050. These supplies include not only the sources noted above, but also stored water within the SWP system and groundwater storage within the MWA service area. In concert with the supplies noted above, these stored supplies allow MWA to provide reliable water supplies to retail agencies in dry year conditions. Accordingly, as shown in Chapter 4, MWA has reliable water supplies available to meet normal, single dry, and five consecutive dry year water demands through 2065.

[2] *Mojave Water Agency Population Forecast, 2020 Edition*, August 2020, UC Riverside School of Business Center for Economic Forecasting and Development

1.2 Annual Water Supply and Demand Assessment Procedures

The WSCP describes MWA's procedural methodology for managing shortages and developing its Annual Water Supply and Demand Assessment (Annual Assessment). The Annual Assessment will be submitted to DWR by July 1 each year with the first Annual Assessment due July 1, 2022. The Annual Assessment examines MWA's anticipated water reliability for the current year and one additional dry year to determine what, if any, water shortages stages may be triggered during the required period. The Annual Assessment will be used by MWA decisionmakers to prepare for and initiate implementation of any needed response actions, as well as to inform customers, the general public, interested parties, and local, regional, and state government entities to prepare for such required actions, if necessary.

1.2.1 Analytical and Decision-making Processes

MWA plans to conduct its Annual Assessment according to the following timeline and process:

By February 1 Initial data collection, analysis, and coordination with retail agencies

By March 1 Preliminary Draft Annual Assessment subject to internal review

By April 1 Draft Annual Assessment and results briefing for MWA decision-makers

By May 1 Approval of Annual Assessment to MWA Decision-makers

By June 1 Public Release of Annual Assessment and Public Notifications

By July 1 Submit Annual Assessment to DWR in advance of July 1 deadline

MWA will prepare its Annual Assessment using the following key data and analytical methods:

- Prepare supply estimates for each water source for the analysis period.
- Update unconstrained regional demand and estimate anticipated actual water use for the analysis period.
- Update infrastructure assessment, including estimated water supply production capability on a monthly basis for the analysis period.
- Identify and quantify any locally applicable factors that may influence or disrupt supplies during the analysis period.

For the purposes of conducting the Annual Assessment, MWA's definition of "dry year" mimics characteristics of 2021-2022 water year where SWP allocation was 5%.

1.2.2 Submittal Procedure

MWA will submit its Annual Assessment to DWR via email by July 1 each year. At the time of DWR submittal, MWA will also notify all retail water agencies, the public, and other stakeholders concerning the results of the Annual Assessment and where it is available for review.

1.3 Six Standard Water Shortage Stages and Shortage Response Actions

The WSCP requires water suppliers to adopt six water shortage stages, which correspond to progressively severe water shortage conditions (up to 10%, 20%, 30%, 40%, 50%, and greater than 50% percent shortage) as compared to the normal reliability condition. These water shortage stages have been standardized to allow for a consistent regional and statewide approach to conveying the relative severity of water supply shortage conditions. Changes in supply availability will trigger an appropriate water shortage stage. MWA will then implement the response actions as specified below.

The WSCP is required to identify locally appropriate shortage response actions that align with the defined shortage stages and include demand reduction actions, supply augmentation actions, system operational changes, and mandatory prohibitions against specific water use practices that are in addition to state-mandated prohibitions and appropriate to the local conditions. For each response action the WSCP is to provide an estimate of the extent to which the gap between supplies and demand will be reduced by implementation of the action.

MWA has grouped the actions to be taken during a water shortage condition into six stages, providing flexibility to address water shortages up to and exceeding the 50 percent shortage level condition. The following is an overview of the staged response MWA could follow during a given water shortage condition including sequential Stages (1-6) based on shortage severity, relative supply conditions for each stage, and percent shortage reduction levels. MWA will adopt the six standard water shortage stages for this 2025 WSCP as shown in Table 1 below.

Table 1: Shortage Stages and Response Actions

Shortage Stage	Shortage Percentage	Shortage Response	
1	Up to 10%	• Access Stored Supplies, as needed • Access Flexible Supplies, as needed • Implement Voluntary Demand Reduction	• 0-100% met by Storage • 0-100% met by Flexible Supplies • 0-10% met by communicating voluntary demand reduction
2	10%-20%	• Access Stored Supplies, as needed • Access Flexible Supplies, as needed • Implement Voluntary Demand Reduction • Reduce R^3 Deliveries	• 0-100% met by Storage • 0-100% met by Flexible Supplies • 0-20% met by communicating voluntary demand reduction • 0-20% through reduced R^3 deliveries
3	20%-30%	• Access Stored Supplies, as needed • Access Flexible Supplies, as needed • Implement Voluntary Demand Reduction • Reduce R^3 Deliveries	• 0-100% met by Storage • 0-100% met by Flexible Supplies • 0-30% met by communicating voluntary demand reduction • 0-30% through reduced R^3 deliveries
4	30%-40%	• Access Stored Supplies, as needed • Access Flexible Supplies, as needed • Implement Voluntary Demand Reduction • Reduce R^3 Deliveries	• 0-100% met by Storage • 0-100% met by Flexible Supplies • 0-30% met by communicating voluntary demand reduction • 0-30% through reduced R^3 deliveries
5	40%-50%	• Access Stored Supplies, as needed • Access Flexible Supplies, as needed • Implement Voluntary Demand Reduction • Reduce R^3 Deliveries	• 0-100% met by Storage • 0-100% met by Flexible Supplies • 0-30% met by communicating voluntary demand reduction • 0-30% through reduced R^3 deliveries
6	More than 50%	• Access Stored Supplies, as needed • Access Flexible Supplies, as needed • Implement Voluntary Demand Reduction • Reduce R^3 Deliveries	• 0-100% met by Storage • 0-100% met by Flexible Supplies • 0-30% met by communicating voluntary demand reduction • 0-30% through reduced R^3 deliveries

Stage 1 (up to 10 percent shortage) – When Stage 1 is implemented, voluntary water conservation is encouraged. The drought situation is explained to the public and governmental bodies. MWA explains the possible subsequent water shortage stages in order to forecast possible future actions for the retail agencies. The activities performed by MWA during this stage include, but are not limited to:

- Implementation of all Voluntary Water Conservation Measures to a level addressing up to 10% water conservation savings.
- Public information campaign consisting of distribution of literature, speaking engagements, website updates, bill inserts, and conversation messages printed in local newspapers.
- Educational programs in area schools.
- Initiating a Conservation Hotline, a toll-free number with trained Conservation Representatives to answer customer questions about conservation and water use efficiency.
- Access stored supplies to address supply deficits, as needed
- Access alternative water supplies to address supply deficits, as needed

Stage 2 (11 - 20 percent shortage) – When Stage 2 is implemented, voluntary water conservation is strongly encouraged. MWA coordinates actions with regional retail water purveyors. The drought situation is explained to the public and governmental bodies. MWA explains the possible subsequent water shortage stages in order to forecast possible future actions for the customer base. The activities performed by MWA during this stage include, but are not limited to:

- Implementation of all Voluntary Water Conservation Measures to a level addressing up to 20% water conservation savings.
- Public information campaign consisting of distribution of literature, speaking engagements, website updates, bill inserts, and conversation messages printed in local newspapers.
- Educational programs in area schools.
- Expanding the Conservation Hotline, a toll-free number with trained Conservation Representatives to answer customer questions about conservation and water use efficiency.
- Access stored supplies to address supply deficits, as needed
- Access alternative water supplies to address supply deficits, as needed

- Reduce R3 deliveries as appropriate with retail agencies

Stage 3 (21 - 30 percent shortage) – When Stage 3 is implemented, voluntary water conservation is strongly encouraged and demand reduction measures are repeatedly communicated. MWA coordinates actions with regional retail water purveyors and emphasizes MWA's ability to assist with supply re-allocation. The seriousness of the drought situation is explained to the public and governmental bodies. MWA explains the possible subsequent water shortage stages in order to forecast possible future actions for the customer base. The activities performed by MWA during this stage include, but are not limited to:

- Implementation of all Voluntary Water Conservation Measures to a level addressing up to 30% water conservation savings.
- Aggressive public information campaign consisting of distribution of literature, speaking engagements, website updates, bill inserts, and conversation messages printed in local newspapers.
- Educational programs in area schools.
- Expanding the Conservation Hotline, a toll-free number with trained Conservation Representatives to answer customer questions about conservation and water use efficiency.
- Access stored supplies to address supply deficits, as needed
- Access alternative water supplies to address supply deficits, as needed
- Reduce R3 deliveries as appropriate with retail agencies

Stage 4 (31 - 40 percent shortage) – When Stage 4 is implemented, voluntary water conservation is strongly encouraged and demand reduction measures are repeatedly communicated. MWA coordinates actions with regional retail water purveyors and assesses opportunities for supply reallocation among participating retail water purveyors. The seriousness of the drought situation is explained to the public and governmental bodies. MWA explains the possible subsequent water shortage stages in order to forecast possible future actions for the customer base. The activities performed by MWA during this stage include, but are not limited to:

- Implementation of all Voluntary Water Conservation Measures to a level addressing up to 30% water conservation savings.
- Aggressive public information campaign consisting of distribution of literature, speaking engagements, website updates, bill inserts, and conversation messages printed in local newspapers.

- Educational programs in area schools.
- Expanding the Conservation Hotline, a toll-free number with trained Conservation Representatives to answer customer questions about conservation and water use efficiency.
- Access stored supplies to address supply deficits, as needed
- Access alternative water supplies to address supply deficits, as needed
- Reduce R3 deliveries as appropriate with retail agencies

Stage 5 (41 - 50 percent shortage) – When Stage 5 is implemented, voluntary water conservation is stressed to all regional purveyors and demand reduction measures are repeatedly communicated. MWA coordinates actions with regional retail water purveyors and assesses opportunities for supply reallocation among participating retail water purveyors. The dire situation caused by the water shortage is explained to the public and governmental bodies. MWA explains the possible subsequent water shortage stages in order to forecast possible future actions for the customer base. The activities performed by MWA during this stage include, but are not limited to:

- Implementation of all Voluntary Water Conservation Measures to a level addressing up to 30% water conservation savings.
- Aggressive public information campaign consisting of distribution of literature, speaking engagements, website updates, bill inserts, and conversation messages printed in local newspapers.
- Educational programs in area schools.
- Expanding the Conservation Hotline, a toll-free number with trained Conservation Representatives to answer customer questions about conservation and water use efficiency.
- Access stored supplies to address supply deficits, as needed
- Access alternative water supplies to address supply deficits, as needed
- Reduce R3 deliveries as appropriate with retail agencies

Stage 6 (greater than 50 percent shortage) – When Stage 6 is implemented, voluntary water conservation is stressed to all regional purveyors and demand reduction measures are repeatedly communicated. MWA coordinates actions with regional retail water purveyors and assesses opportunities for supply reallocation among participating retail water purveyors. The emergency situation caused by the water shortage is explained to the public and governmental bodies. MWA explains conditions leading to supply reductions to all retail purveyors. The activities performed by MWA during this stage include, but are not limited to:

- Implementation of all Voluntary Water Conservation Measures to a level addressing up to 30% water conservation savings.
- Aggressive public information campaign consisting of distribution of literature, speaking engagements, website updates, bill inserts, and conversation messages printed in local newspapers.
- Educational programs in area schools.
- Expanding the Conservation Hotline, a toll-free number with trained Conservation Representatives to answer customer questions about conservation and water use efficiency.
- Access stored supplies to address supply deficits, as needed
- Access alternative water supplies to address supply deficits, as needed
- Reduce R3 deliveries as appropriate with retail agencies

1.3.1 Supply Augmentation Actions

The following water supply augmentation actions may be used as response actions for the appropriate Water Shortage Stage. MWA may access its stored water sources in various locations inside and outside its service area. This storage occurs as carryover water in the SWP as well as groundwater storage within the MWA Service Area. These stored supplies may be transferred or exchanged with other purveyors that can assist in providing water supplies to MWA's service area. In addition, MWA will work with the California Department of Water Resources (DWR) to access supplies that may be made available in the statewide conveyance systems. Lastly, MWA may take additional supply augmentation actions that become available during the identified water shortage condition like acquiring water from other entities through transfers or exchanges that may be delivered into MWA's service area.

1.3.2 Operational Changes

The following water system operational changes may be used as response actions for the appropriate Water Shortage Stage. MWA may use its water storage and conveyance facilities to expedite water acquisitions, transfers, and exchanges that may alleviate identified water shortage conditions. MWA will assess the utility associated with full operational capacity at its R^3 facility and coordinate operational actions with retail agencies that will help address water shortage conditions. Moreover, where operational flexibility exists in MWA's six turnouts from the East Branch of the State Water Project, MWA may exercise operational options to facilitate water shortage mitigation actions.

1.3.3 Emergency Response Plan for Catastrophic Water Shortages

This section identifies actions to be undertaken by MWA to prepare for, and implement during, a catastrophic interruption of water supplies. A catastrophic interruption could result from natural and man-made events that causes a water shortage severe enough to trigger a Stage 1-6 water supply shortage condition. In addition, MWA's SWP water supplies are conveyed through the California Aqueduct system operated by DWR, and DWR has created several emergency plans to address catastrophic outages. This section addresses the catastrophic outage scenarios and relevant actions that MWA will undertake should a catastrophic outage occur.

Earthquakes are an issue of concern in the Mojave Basin region. The southern portion of the San Andreas Fault borders the western edge of Mojave Water Agency's Service Area and an earthquake on that fault could significantly impact water service and infrastructure. The California Department of Water Resources (DWR) has noted that an earthquake could damage the California Aqueduct conveyance system through structural damage or electrical failures which could potentially halt water deliveries to MWA. In short, an earthquake may create regional turmoil that could impact local infrastructure or cause power outages for extended periods of time.

DWR has a contingency California Aqueduct outage plan for restoring the California Aqueduct to service should a major break occur because of an earthquake or other catastrophic reason. DWR estimates that a major break in the California Aqueduct would take approximately four months to repair. Although extended water supply shortages may manifest for MWA's imported water supplies, the retail agencies and MWA have alternative water supplies available to meet fundamental customer demands. Retail agencies have access to managed groundwater throughout the MWA Service Area and MWA has stored imported water supplies that could be used to meet crisis conditions. Local effects of a catastrophic outage on local water systems may require additional cooperative efforts among regional water purveyors.

In addition to earthquakes, the SWP could experience other emergency outage scenarios. Past examples include slippage of aqueduct side panels into the California Aqueduct near Patterson in the mid-1990s, the Arroyo Pasajero flood event in 1995 (which also destroyed part of Interstate 5 near Los Baños), flood damage to the East Branch of the Aqueduct in 2015, and historic subsidence and leakage repairs needed along the Main Branch and East Branch of the Aqueduct since the 1980s, and potential for further subsidence issues being identified as recently as 2025. All of these outages were short-term in nature (on the order of weeks to several months), and DWR's Operations and Maintenance Division worked diligently to devise methods to keep the Aqueduct in operation and continue SWP deliveries while repairs were

made. Thus, the SWP contractors generally experienced no interruption in total annual deliveries but local actions to mitigate the outage were implemented.

It is important to note that all of MWA's SWP imported supply is used to replenish groundwater recharge facilities. These groundwater augmentation efforts insulate regional purveyors against an outage of the SWP system. As noted in Chapter 4, MWA has over 200,000 acre-feet of stored water available for extraction and use in the MWA service area. Combining this stored water with other stored supplies by the local retail agencies as well as the existing groundwater supplies in the region, MWA and its wholesale member agencies may sustain water supplies in a catastrophic outage of the SWP delivery systems. Even an interruption in SWP supplies for several months would not provide any immediate threat to potable water deliveries from groundwater production wells.

MWA developed its Regional Recharge and Recovery Project, known as "R³," to increase flexibility in its water system. The R³ project is a basin management tool and conjunctive use project that distributes stored water via groundwater wells pumping from the Mojave Basin to local retail water purveyors. This groundwater pumping production is done to benefit each of the retail water agencies and in lieu of pumping from other groundwater production facilities of these retail agencies. This groundwater management project allows water to be pumped in a portion of the basin to be used in lieu of other groundwater production in other portions of the basin so that the various areas of the basin can be actively managed. The R^3 project includes groundwater recharge facilities, groundwater production wells, booster pumps, storage reservoirs, interconnections to the retail customer water system, water meters, and chlorination facilities. The R^3 facilities provide redundant capacity to the retail agencies during catastrophic outage events. Although MWA may stop deliveries in the R^3 facilities to the retail agencies at any time, the facilities may help provide water supplies during crisis conditions. In short, working in parallel with the retail agencies, the R^3 facilities can be used to supplement the facilities that each retail water agency may have to handle catastrophic outages.

The R^3 facilities also have a separate Emergency Response Plan (ERP).[3] This ERP identifies emergency procedures, response actions, and responsible personnel that would be activated in the event of an emergency with the R^3 facilities. Specifically, the ERP addresses responses to leaks or service interruptions, low pressure, power outage, contamination, and physical destruction of the R^3 facilities.[4] Accordingly, MWA's R^3 ERP provides an additional buffer against emergency and catastrophic outage that may impact Statewide, regional, or local water distribution and treatment facilities.

[3] R^3 System Emergency/Disaster Response Plan Update 2019, Mojave Water Agency.
[4] ERP at 2-3.

The area's water sources are generally of good quality, and no insurmountable problems resulting from industrial or agricultural contamination are foreseen. If contamination did result from a toxic spill or similar problematic event, the contamination would be isolated and should not significantly impact the total water supply in the region. In addition, such an event would be addressed in the retailers' emergency response plan as well as the R^3 ERP.

1.3.4 SWP Emergency Outage Scenarios

There are numerous events that could result in significant outages and potential interruption of service. Examples of possible nature-caused events include a levee breach in the Delta near the Harvey O. Banks Pumping Plant, a flood, an earthquake event that severely damages the California Aqueduct along its San Joaquin Valley traverse, or an earthquake event along the East Branch of the California Aqueduct. Such events could impact some or all SWP contractors south of the Delta.

The response of DWR, MWA, and other SWP contractors to such events would be highly dependent on the type and location of any such event. In typical SWP operations, water flowing through the Delta is diverted at the SWP's main pumping facility, located in the southern Delta, and is pumped into the California Aqueduct. During the relatively heavier runoff period in the winter and early spring, Delta diversions generally exceed SWP contractor demands, and the excess is stored in San Luis Reservoir. The SWP California Aqueduct terminal reservoirs, such as Pyramid and Castaic Lakes, are also replenished during these periods. During the summer and fall, when diversions from the Delta are generally more limited and less than contractor demands, releases from San Luis Reservoir are used to make up the difference in deliveries to contractors. The SWP share of storage capacity at San Luis Reservoir is 1,062,000 AF.

MWA receives its SWP deliveries through the East Branch of the California Aqueduct. The other contractors receiving deliveries from the East Branch are Metropolitan Water District, Antelope Valley-East Kern Water Agency, Palmdale Water District, Crestline-Lake Arrowhead Water Agency, Desert Water Agency, San Gabriel Valley Municipal Water District, San Bernardino Valley Municipal Water District, San Gorgonio Pass Water Agency, and Coachella Valley Water District. The East Branch has two terminal reservoirs, Silverwood Lake and Lake Perris, which were designed to provide emergency storage and regulatory storage (i.e., storage to help meet peak summer deliveries) for several of the East Branch contractors. However, MWA does not have contract rights to storage capacity in those reservoirs. Silverwood Lake is within the MWA service area and releases from the lake flow into the primary groundwater basins within the MWA service area. In addition to SWP storage south of the Delta in San Luis Reservoir and the terminal reservoirs, a number of contractors have stored water in groundwater banking programs in the San Joaquin Valley and more recently

along the East Branch, and many also have surface and groundwater storage within their own service areas.

Three scenarios that could impact the delivery to MWA of its SWP supply or other supplies delivered to it through the California Aqueduct are described below. For each of these scenarios, it was assumed that an outage of six months could occur. MWA's ability to meet demands during the worst of these scenarios is presented following the scenario descriptions.

Scenario 1: Levee Breach near the Sacramento-San Joaquin Delta

The California Department of Water Resources (DWR) has estimated that in the event of a major earthquake in or near the Delta, regular water supply deliveries from the SWP could be interrupted for up to three years, posing a substantial risk to the California business economy. Accordingly, a post-event strategy has been developed which would provide necessary water supply protections. The plan has been coordinated through DWR, the Army Corps of Engineers (Corps), Bureau of Reclamation, California Office of Emergency Services (Cal OES), the Metropolitan Water District of Southern California, and the State Water Contractors. Full implementation of the plan would enable resumption of at least partial deliveries from the SWP in less than six months.

DWR Delta Flood Emergency Management Plan ("Emergency Pathway"). DWR has developed the Delta Flood Emergency Management Plan to provide strategies for a response to Delta levee failures, which addresses a range of failures up to and including earthquake-induced multiple island failures during dry conditions when the volume of flooded islands and saltwater intrusion are large. Under such 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 pre-positioning of emergency construction materials at existing and new stockpiles and warehouse sites in the Delta, and development of tactical modeling tools (DWR Emergency Response Tool) to predict levee repair logistics, water quality conditions, and 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, regularly conduct simulated 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 an overall Cal OES structure. Cal OES is preparing its Northern California Catastrophic Flood Response Plan that incorporates the DWR Delta Flood Emergency Management Plan. These agencies utilize a unified command structure and response and

recovery framework. DWR and the Corps, through a Delta Emergency Operations Integration Plan, would integrate personnel and resources during emergency operations.

Levee Improvements and Prioritization. The DWR Delta Levees Subvention Program has prioritized, funded, and implemented levee improvements along the emergency freshwater pathway and other water supply corridors in the central and south Delta region. These efforts have been complementary to the DWR Delta Flood Emergency Management Plan, which along with use of pre-positioned emergency flood fight materials in the Delta, relies on pathway and other levees providing reasonable seismic performance to facilitate restoration of the freshwater pathway after a severe earthquake. Together, these two DWR programs have been successful in implementing a coordinated strategy of emergency preparedness for the benefit of SWP and CVP export systems. Moreover, levee improvements along the pathway and Old River levees consisting of crest raising, crest widening, landside slope fill and toe berms meet the needs of local reclamation districts and substantially improve seismic stability to reduce levee slumping and create a more robust flood-fighting platform. Many urban water supply agencies have participated or are currently participating in levee improvement projects along the Old and Middle River corridors.

Scenario 2: Complete Disruption of the California Aqueduct in the San Joaquin Valley

The 1995 flood event at Arroyo Pasajero demonstrated vulnerabilities of the California Aqueduct (the portion that traverses the San Joaquin Valley from San Luis Reservoir to Edmonston Pumping Plant). Should a similar flood event or an earthquake damage this portion of the California Aqueduct, deliveries from San Luis Reservoir could be interrupted. DWR has informed the SWP contractors that a four-month outage could be expected in such an event. MWA's assumption is a six-month outage.

Arroyo Pasajero is located downstream of San Luis Reservoir and upstream of the primary groundwater banking programs in the San Joaquin Valley. Assuming an outage at a location near Arroyo Pasajero that resulted in the California Aqueduct being out of service for six months, supplies from San Luis Reservoir would not be available to those SWP contractors located downstream of that point. This would include MWA.

Scenario 3: Complete Disruption of the East Branch of the California Aqueduct

The East Branch of the California Aqueduct begins at a bifurcation of the California Aqueduct south of Edmonston Pumping Plant, which pumps SWP water through and across the Tehachapi Mountains. From the point of bifurcation, the East Branch is an open canal. If a major earthquake (e.g., an event similar to or greater than the 1994 Northridge Earthquake)

were to damage a portion of the East Branch, deliveries could be interrupted. The exact location of such damage along the East Branch would be key to determining emergency operations by DWR and the East Branch SWP contractors. Specifically, MWA's six turnouts on the system could all be differently impacted, and some potentially not impacted at all. For this scenario, it was assumed that the East Branch would suffer a single-location break and deliveries of SWP water from north of the Tehachapi Mountains or of contractor water stored in groundwater banking programs in the San Joaquin Valley would not be available. It was also assumed that Silverwood and Perris dams would not be damaged by the event and that water in Silverwood and Perris Lakes would be available to the East Branch SWP contractors.

In any of these three SWP emergency outage scenarios, DWR and the SWP contractors would coordinate operations to minimize supply disruptions. Depending on the particular scenario or outage location, some or all of the SWP contractors south of the Delta might be affected. But even among those contractors, potential impacts would differ given each contractor's specific mix of other supplies and available storage. During past SWP outages, the SWP contractors have worked cooperatively to minimize supply impacts among all contractors. Past examples of such cooperation have included certain SWP contractors agreeing to rely more heavily on alternate supplies, allowing more of the outage-limited SWP supply to be delivered to other contractors, and exchanges among SWP contractors, allowing delivery of one contractor's SWP supply or other water to another contractor, with that water being returned after the outage was over.

Of these three SWP outage scenarios, the scenario of an East Branch outage along with no delivery of stored water from Silverwood Lake presents the worst-case scenario for MWA. In this scenario, MWA and retail agencies would continue to rely solely on local managed groundwater supplies (native water, natural recharge, return flow, and stored imported water).

Seismic Risk Assessment and Hazard Mitigation Plan

Beginning January 2020, CWC Section 10632.5 mandates urban water suppliers include in their UWMP a seismic risk assessment and mitigation plan to assess the vulnerability of each of the various facilities of a water system and mitigate those vulnerabilities. This requirement can be met by submittal of a copy of the most recent adopted local hazard mitigation plan (LHMP) or multi-hazard mitigation plan under the federal Disaster Mitigation Act of 2000 (Public Law 106-390) if the local hazard mitigation plan or multi-hazard mitigation plan addresses seismic risk. MWA has submitted a copy of the San Bernardino County Multi-

Jurisdictional Hazard Mitigation Plan, approved by the Federal Emergency Management Agency (FEMA) on December 3, 2022 (HMP).[5]

The fundamental hazards identified in this plan include Earthquake, Wildfire, Flood, Drought, Terrorism and Climate Change. The HMP addresses the vulnerabilities associated with these items, the other plans and financial issues that impact implementation of the HMP, as well as a comprehensive mitigation strategy. Accordingly, the HMP is incorporated by reference into MWA's WSCP.

1.4. Communication Protocols

MWA will engage in specific communication protocols in developing and implementing the WSCP and coordinate with the Regional Water Purveyors and neighboring public agencies to communicate water shortage conditions. MWA will seek to engage customers and provide notice with locally relevant actions that further the water shortage response actions. These actions may include:

- Publishing information on MWA's website.
- Establishing a telephone hotline.
- Coordinating through direct correspondence with local agencies on water supply management
- Preparing social media posts to communicate MWA actions.
- Advertising actions on other local audio and video media.
- Coordinating voluntary and mandatory water shortage condition activities with other local agencies.

Taken together, these communication actions will result in a more effective implementation of MWA's WSCP.

1.5 Legal Authorities

MWA is empowered to implement and enforce its water shortage response actions specified in this section through the following legal authorities: California Water Code Water Appendix, Chapter 97, the Mojave Basin Area Adjudication, and the Warren Valley Judgment. MWA has authorities to manage water supplies in its service area, including management of SWP supplies and R^3 facilities. MWA's role as Watermaster under the Mojave Basin Area Adjudication empower it with the authorities to address excessive water use among

[5] https://oes.sbcounty.gov/wp-content/uploads/sites/110/2024/06/HMP-2022.pdf

participating agencies. The Warren Valley Judgment addresses unauthorized or excessive use issues among the participating agencies. However, MWA does not have direct authority to limit groundwater pumping within its service area.

1.6 Financial Consequences of WSCP

MWA has assessed the financial conditions associated with developing and delivering water supplies within its service area boundary. As shown in Chapter 4, MWA has developed alternative water supplies that can be accessed to continue water deliveries during extended dry conditions. Accordingly, although MWA may experience minor financial fluctuations due to water shortage conditions, the redundancy in its water storage systems as well as its coordinated approach to managing dry conditions with the retail agencies will insulate MWA from significant financial consequences. Therefore, this WSCP does not anticipate that implementation of MWA's WSCP will create financial conditions that are detrimental to MWA.

1.7 Re-evaluation and Improvement Procedures

MWA will continually review and assess its procedures for implementing the WSCP. Specifically, MWA will use the monitoring and reporting protocols identified above as a quality assurance and quality control measure to understand the effectiveness of water shortage activities. These re-evaluation and improvement procedures will include developing reports, memoranda, and presentations that assess the effectiveness of water shortage actions and the WSCP. These protocols will be continually assessed and updated by MWA management staff.

1.8 Special Water Feature Distinction

MWA's water shortage response actions focus on health and safety issues and working with retail agencies to manage available supplies. MWA will work with the retail agencies on communicating and implementing those agencies' special water feature distinction issues that may arise during critical water shortage conditions.

1.9 Plan Adoption, Submittal, and Availability

The WSCP has been adopted, submitted, and is available as required by the Urban Water Management Planning Act. As a stand-alone document, the WSCP is also subject to separate adoption, submittal, and availability processes, and whenever it is separately amended or revised in the future. MWA has followed all applicable law in adopting the WSCPs. The current adopted WSCP for the shall be available to its customers and to the to all

local agencies in Mojave Water Agency's service area within San Bernardino County no less than 30 days before its adoption. A copy of the current WSCP is available for public inspection during business hours at www.mojavewater.org and is available for download at www.mojavewater.org/planning.html

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APPENDIX 9A – CSA 70J WSCP

Water Shortage Contingency Plan

Final

JUNE 2021

COUNTY OF SAN BERNARDINO DEPARTMENT OF PUBLIC WORKS
SPECIAL DISTRICTS COUNTY SERVICE AREA 70J OAK HILLS

WSC

COUNTY OF SAN BERNARDINO DEPARTMENT OF PUBLIC WORKS - SPECIAL DISTRICTS COUNTY SERVICE AREA 70J

2021 Water Shortage Contingency Plan

JUNE 2021

Prepared by Water Systems Consulting, Inc.

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Water Shortage Contingency Plan

This WSCP was prepared in conjunction with CSA 70J's 2020 Urban Water Management Plan (UWMP) and is a standalone document that can be modified as needed. This document is compliant with the California Water Code (CWC) Section 10632 and incorporated guidance from the State of California Department of Water Resources (DWR) UWMP Guidebook 2020 (State of California Department of Water Resources, 2021) and the American Water Works Association (AWWA) Manual of Water Supply Practices (M60) Drought Preparedness and Response (American Water Works Association (AWWA), 2019).

The WSCP addresses several types of water supply shortages that could potentially impact CSA 70J and its customers:

- Long-term supply shortages due to prolonged drought, contamination, destruction of critical water supply facilities, etc.
- Short-term water supply shortages due to natural or man-made catastrophic emergencies or production capacity limitations.

1.1 Water Supply Reliability Analysis

This section is consistent with CWC Section 10632(a)(1) and describes the key findings of the water supply reliability analysis conducted pursuant to CWC Section 10635, which is presented in **Chapter 7** of CSA 70J 2020 UWMP. As part of the 2020 UWMP, water suppliers must perform long-term (2025-2045) water service reliability assessment to evaluate reliability under normal, single dry year, and five-year consecutive dry year periods and a short-term (2021-2025) Drought Risk Assessment (DRA) to evaluate reliability under a five-year consecutive dry year period. Water supply reliability reflects CSA 70J's ability to meet the water needs of its customers with water supplies under varying conditions. The analysis considers plausible hydrological and regulatory variability, infrastructure capacity, climate conditions, and other factors that affect CSA 70J water supply and demand.

CSA 70J expects to meet demands under all water year scenarios while continuing to promote conservation. Supply is not anticipated to change between normal and dry years due to ongoing conservation efforts in the region and the storage of SWP water in wet years. In addition, the long-term average of the basin includes dry periods. It is anticipated that this supply volume will be available to meet CSA 70J's demands under foreseeable conditions.

The DRA analyzes historical data to allow CSA 70J to view patterns and more reliably determine if there could be any water shortages within a given time frame. The DRA looks at historical consumption data by customer class, populated from billing records, and historical supply data by source from production reports. Next, future demand and supply estimates for the planning period are analyzed to determine if there are any gaps between supply and demand. As mentioned above, CSA 70J does not anticipate a supply shortage.

CSA 70J has water rights to the adjudicated Alto Subbasin. The Basin's groundwater supply is replenished by the Mojave Water Agency (MWA) purchasing imported water from the State Water Project SWP when available and recharging the aquifer with recycled water and captured surface runoff into the Basin. Since CSA 70J's only current source of water is the Alto Subbasin, CSA 70J is committed to promoting conservation to improve resiliency and subsequent reliability as described in **Chapter 7**.

1.2 Annual Water Supply and Demand Assessment

As established by CWC Section 10632.1, urban water suppliers must conduct an Annual Water Supply and Demand Assessment (Annual Assessment) and submit an Annual Water Shortage Assessment Report to DWR. The Annual Assessment is an evaluation of the short-term outlook for supplies and demands to determine whether the potential for a supply shortage exists and whether there is a need to trigger a WSCP shortage level and response actions to maintain supply reliability. Beginning by July 1, 2022, and every year after, CSA 70J must prepare their Annual Assessment and submit an Annual Water Shortage Assessment Report to DWR. The annual report should disclose the approved anticipated shortage level, triggered shortage response actions, compliance and enforcement actions, and communication actions that will be implemented to mitigate the shortage identified in the Annual Assessment.

1.2.1 Key Data Inputs and Evaluation Criteria

Key data inputs and their sources for the Annual Assessments are summarized in **Table 1-1** and described in detail in **Section 8.2.2**.

Evaluation criteria that can be used to determine and declare severity of supply shortages may include any, or combinations, of the following:

- Historic rainfall- reflects changes to supply due to changes in groundwater recharge
- Water levels within the Alto Subbasin- reflects status of groundwater conditions
- Existing infrastructure capabilities and plausible constraints- reflects limited production and distribution capacity due to a variety of factors potentially including, but not limited to man-made or natural catastrophic events
- Customer demands- reflects current year and one projected single dry year conditions for comparison to available supplies
- State mandates- reflects State orders and mandatory compliance with water use efficiency standards
- Other locally applicable evaluation criteria as necessary

Supply shortages due to any combination of drought or groundwater conditions affect many users of the basin and surrounding region, not just CSA 70J customers. A shortage emergency may be declared when it is demonstrated that conditions threaten the ability to provide water for public health, safety, and welfare of the community. Furthermore, compliance with State mandates for water use efficiency can be declared during drought or in preparation for future droughts, such as in response to the Governor's drought declarations in the 2012-2016 drought with a subsequent Executive Order B-37-16 and related legislation for Making Conservation a California Way of Life.

Short-term and long-term supply shortages may be caused by constrained production capacity or natural or man-made catastrophic emergencies and include, but are not limited to, the following events: power outages, winter storms, wildfires, earthquakes, structural failures, contamination, and bomb threats. These types of emergencies may limit immediate ability to provide adequate water service to meet the requirements for human consumption, sanitation, and fire protection. Impacts of such emergencies vary in duration; thus, consumption reduction measures and prohibitions may differ for short-term and long-term shortages.

Table 1-1. Key Data Inputs for the Annual Assessment

KEY DATA INPUT	SOURCE
Rainfall	Monthly rainfall data. Rainfall sources for CSA 70J include the Victorville station.
Groundwater conditions	Production data, static water levels, input from the Board or Director.
Infrastructure capabilities and plausible constraints	Production data, input from the Board or Director.
Customer demands	Customer billing data, 2020 UWMP projections, input from the Board or Director.
State mandates	Executive Orders from the Governor, State Water Resources Control Board orders and policies, input from the Board or Director.

1.2.1.1 Production Capacity

Infrastructure capabilities and overall production will be analyzed to determine if a possible outage or deficiency may occur or continue in the coming year due to a variety of factors potentially including, but not limited to man-made or natural catastrophic events. This may include well replacement, evaluation of wells for possible contamination, and others. If CSA 70J determines there are limitations to production capacity, a shortage level declaration and subsequent demand reductions may be required.

1.2.1.2 State Mandates

As described previously, compliance with State mandates for water use efficiency can be declared during drought or in preparation for future droughts, such as in response to the Governor's drought declarations in the recent drought with a subsequent Executive Order B-40-17 and related legislation for Making Conservation a California Way of Life. CSA 70J may consider State mandates and mandatory compliance with water use efficiency standards in determining water shortage levels.

1.2.2 Annual Assessment Procedures

CSA 70J will perform the Annual Assessment between April and May, or on a more frequent basis if necessary. Steps to conduct the Annual Assessment are as follows:

1. Director or other staff gather the key inputs, compile historical data, and analyze potential supply and demand gaps.
2. Director or other staff provide insight on demand trends, water supply conditions, and production capacity.
3. A hydrogeologist may be consulted to provide additional groundwater condition information.
4. Director or other staff will determine a recommended level of conservation required, if any, that will then be brought to the Board for approval. Director is authorized to declare and rescind Level 1 but shall provide notice to the Board for Levels 2-4
5. The Director or Board will declare the level of conservation required at the implementation or termination of each level and the declaration shall remain in effect until the Director or Board so otherwise declares.
6. The declaration shall be published at least once in a newspaper of general circulation.
7. CSA 70J will develop and/or implement appropriate communication protocols and applicable response actions.
8. The Annual Assessment starts in 2022 with the first Annual Assessment Report due to DWR by July 1, 2022.

1.3 Six Standard Water Shortage Levels

This section is consistent with CWC Section 10632(a)(2) and describes water shortage levels implemented by CSA 70J. New to the CWC, water suppliers must now adopt six standard water shortage levels. Shortage levels indicate the gap between supply and demand compared to normal year conditions. DWR standardized six shortage levels to provide a consistent regional and statewide approach to measure water supply shortage conditions. The six shortage levels correspond to 10-, 20-, 30-, 40-, 50-percent, and greater than 50 percent shortage compared to the normal reliability conditions. However, a water supplier may use its own shortage levels if a crosswalk is included relating its existing shortage levels to the six standard levels.

CSA 70J currently has a four-level water shortage contingency plan adopted in the Special Districts Drought Ordinance No. 15-04 (**Appendix I**), which consists of mandatory water waste prohibitions in all four levels. The ordinance details water conservation action items for Level 1 to achieve up to 15% reduction, up to 40% reduction for Level 2, up to 50% reduction for Level 3, and greater than 50% reduction for Level 4. The water shortage levels and a summary of criteria for each are presented below in **Table 1-2**.

At each conservation level the consumers will be informed that a supply reduction is required, and steps will be implemented so that the percent reduction is achieved.

The priorities for use of available water for this shortage contingency plan are:

1. Health and Safety – interior residential and firefighting;
2. Commercial, Industrial and Municipal (in-office use) – maintain jobs and economic base;
3. Existing Landscape – especially trees and shrubs;
4. New Demand – project under construction when shortage is declared

Consumers will be notified of the specific percentage reductions requested at each level of shortage as presented in **Table 1-2**. If further water usage reduction beyond the request of 10 percent is warranted, CSA 70J staff will inform consumers of the need for greater conservation. If reduction goals cannot be met by Ordinance SD 15-04, the County Board of Supervisors must take appropriate actions (after public hearings) which are supported by thorough engineering evaluations.

The duration of the declaration of any conservation level shall remain in effect until such time as another level is declared or the current level is rescinded.

Table 1-2. Water Shortage Contingency Plan Levels

DWR Table 8-1

SHORTAGE LEVEL	PERCENT SHORTAGE RANGE (NUMERICAL VALUE AS A PERCENT)	WATER SUPPLY CONDITION
1	0-15%	Drought Watch
2	15-40%	Drought Alert
3	40-50%	Drought Critical Condition
4	>50%	Drought Emergency

1.3.1 Water Shortage Levels Crosswalk

As described previously, CWC Section 10632(a)(3)(A) includes six standard water shortage levels corresponding to progressive ranges of up to 10, 20, 30, 40, and 50 percent shortages and greater than 50 percent shortage. If the supplier's water shortage levels do not correspond with the six standard levels, then a crosswalk between the supplier's levels and the standard levels is required for compliance. The crosswalk between CSA 70J's four levels and the standard water shortage levels is shown in **Figure 1-1**.

CSA 70J Shortage Stage	Percent Shortage Range
1	0 - 15%
2	15 - 40%
3	40 - 50%
4	>50%

Standard WSCP Level	Percent Shortage Level
1	10%
2	20%
3	30%
4	40%
5	50%
6	>50%

Figure 1-1. Water Shortage Levels Crosswalk

1.4 Shortage Response Actions

This section is in accordance with CWC Section 10632(a)(4) and 10632.5(a) and describes the response actions that may be implemented or considered for each level with emphasis to minimize social and economic impacts to the community. CSA 70J expects to mitigate supply shortages through a variety of response actions including demand reduction actions, conservation, operational changes, outreach, and if necessary, mandatory prohibitions.

This WSCP identifies various actions to be considered by CSA 70J during water shortage conditions. In the event of a water shortage emergency, CSA 70J will evaluate the cause of the emergency to help inform which response actions should be implemented. Depending on the nature of the water shortage, CSA 70J can elect to implement a combination of response actions to mitigate the shortage and reduce gaps between supply and demand. It should be noted that all actions listed for Level 1 apply to Levels 2, 3, and 4. Likewise, Level 2 actions apply to Levels 3 and 4, and Level 3 actions apply to Level 4. If necessary, CSA 70J may adopt additional actions that are not listed here. The following section discusses the potential response actions for each of CSA 70J's four water supply shortage levels.

1.4.1 Demand Reduction

In the event of a water supply shortage, CSA 70J may implement mandatory compliance measures to induce water conservation. The Special Districts Drought Ordinance No. 15-04 includes prohibitions on various wasteful water uses during a declared water supply shortage (**Appendix I**). These restrictions are implemented at various levels and are listed in **Table 1-3**. Additionally, during a Level 4 water supply shortage, the Board may impose any water rationing requirement that it deems appropriate to protect public health, safety, welfare, comfort, and convenience.

Table 1-3. Demand Reduction Actions

DWR Table 8-2

SHORTAGE LEVEL	DEMAND REDUCTION METHODS AND OTHER ACTIONS BY WATER SUPPLIER	HOW MUCH IS THIS GOING TO REDUCE THE SHORTAGE GAP?[1]	ADDITIONAL EXPLANATION OR REFERENCE	PENALTY, CHARGE, OR OTHER ENFORCEMENT[2]
1	Offer Water Use Surveys	0-1%		No
1	Provide Rebates on Plumbing Fixtures and Devices	0-1%	Customers shall be encouraged to install and use water saving devices such as rain sensors, low-flow showerheads, faucet aerators and sprinkler and irrigation watering valves; low-flow or waterless toilets; high-efficiency, low water use washing machines and dishwashers; and automated irrigation timers and/or controllers as well as other available water retrofit kits.	No
1	Decrease Line Flushing	0-1%		No
1	Reduce System Water Loss	0-5%	Increased meter reading for timely leak detection and repair	No
1	Expand public Information Campaign	0-5%	Community Outreach and Messaging. See Section 8.5 for more information	No
1	Improve Customer Billing	0-3%		No
1	Landscape - Limit landscape irrigation to specific days	0-1%	Outdoor irrigation is limited to 4-days per week	Yes
2	Provide Rebates for Landscape Irrigation Efficiency	0-1%	Expanded/Enhanced Rebate Programs	No
2	Provide Rebates for Turf Replacement	0-1%		No
2	Landscape - Limit landscape irrigation to specific times	0-5%	Watering, sprinkling, aerial watering or irrigating of any landscaped or vegetated areas, including lawns, trees, shrubs, grass, ground cover, plants, vine gardens, vegetables, flowers, or other landscaping shall only occur between the hours of 9:00 p.m. and 6:00 a.m. during the high use season (April 1 through October 31 of each year). in the low use season (November 1 through March 31), such watering shall only occur between the hours of 8:00 a.m. and 3:00 p.m. Commercial and Industrial use shall only occur between the hours of 9:00 p.m. and 6:00 a.m. year-round. These restrictions shall not apply to hand-held hose or drip irrigation systems.	Yes

SHORTAGE LEVEL	DEMAND REDUCTION METHODS AND OTHER ACTIONS BY WATER SUPPLIER	HOW MUCH IS THIS GOING TO REDUCE THE SHORTAGE GAP?[1]	ADDITIONAL EXPLANATION OR REFERENCE	PENALTY, CHARGE, OR OTHER ENFORCEMENT[2]
2	Landscape - Limit landscape irrigation to specific days	0-1%	Outdoor irrigation shall be limited to 3-days or 2-days per week, with specific days of the week to be designated by the Director.	Yes
2	Landscape - Other landscape restriction or prohibition[3]		The application of potable water to outdoor landscapes during and within 48 hours after measurable rainfall is prohibited	Yes
2	Other - Prohibit use of potable water for washing hard surfaces[3]		There shall be no hose washing of sidewalks, walkways, driveways, parking areas, patios, porches, verandas, tennis courts, or other paved, concrete, or other hard surface areas.	Yes
2	Water Features - Restrict water use for decorative water features, such as fountains[3]		Potable water shall not be used in fountains or other decorative water features, except where the water is a part of a recirculating system.	Yes
2	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	0-1%	No person shall permit water to leak from any facility or plumbing fixture on his/her premises. Upon receiving notice of the existence of any such leak, the water Customer shall identify the source of the . water, and within 48 hours, stop the source by turning off the valve that supplies the water, and within 7 days, evaluate the extent of, and repair or correct the problem. Broken sprinklers shall be repaired within 24 hours of notification.	Yes
2	Landscape - Restrict or prohibit runoff from landscape irrigation[3]		Use of water for any purpose, which results in flooding or run-off, such that water flows onto adjacent property, non-irrigated areas, private and public walkways, parking lots, structures, in gutters, driveways or streets, is prohibited. Sprinklers and irrigation systems shall be adjusted to avoid overspray. Customers shall avoid the use of sprinklers for any type of irrigation during high winds.	Yes
2	Landscape - Other landscape restriction or prohibition[3]		There shall be no irrigation with potable water of ornamental turf on public street medians.	Yes
2	Other - Prohibit use of potable water for construction and dust control	0-1%	Water for construction purposes, including but not limited to debrushing of vacant land, compaction of fills and pads, trench backfill, and other construction uses, shall use recycled or non-potable water when available and water application must be attended at all times.	Yes
2	CII - Restaurants may only serve water upon request	0-1%	The serving of drinking water other than upon request in eating or; drinking establishments, including but not limited to restaurants, hotels, cafes, cafeterias, bars or other public places where food and drink are served and/or purchased is prohibited.	Yes
2	CII - Lodging establishment must offer opt out of linen service	0-1%	Hotels and motels shall provide guests with the option of choosing not to have towels and linens laundered daily. Hotels and motels shall	Yes

SHORTAGE LEVEL	DEMAND REDUCTION METHODS AND OTHER ACTIONS BY WATER SUPPLIER	HOW MUCH IS THIS GOING TO REDUCE THE SHORTAGE GAP?[1]	ADDITIONAL EXPLANATION OR REFERENCE	PENALTY, CHARGE, OR OTHER ENFORCEMENT[2]
			prominently display notice of this option in each guestroom using clear and easily understood language.	
2	Other	0-1%	Water used for cooling systems must be recycled to the extent possible.	No
2	Pools and Spas - Require covers for pools and spas	0-1%	Evaporation resistant covers are encouraged for all swimming pools and hot tubs.	No
2	Landscape - Other landscape restriction or prohibition	0-5%	Customers are strongly encouraged to convert lawns to drought tolerant, low water use or native plants, incorporating the principals of Xeriscaping	No
2	Other	0-1%	Winterizing pipes and valves to prevent leaks and breakage is strongly encouraged.	No
2	Other	0-1%	Home Owner Associations (HOAs) are strongly encouraged to adopt and enforce water use restrictions in their rules and regulations	No
3	Increase Water Waste Patrols	0-5%		No
3	Landscape - Limit landscape irrigation to specific days	0-5%	Outdoor irrigation shall be limited to 1-day per week, with specific days of the week to be designated by the Director.	Yes
3	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water	0-1%	Washing of automobiles, trucks, trailers, boats, airplanes, and other types of mobile equipment is prohibited unless conducted at a commercial car or other facility wash utilizing recycling systems. The only exception to this prohibition is where the public health, safety, and welfare of the public is contingent upon frequent vehicle cleaning, such as garbage trucks and vehicles used to transport food and perishables	Yes
3	Water Features - Restrict water use for decorative water features, such as fountains	0-1%	The use of fountains or other decorative water features is prohibited unless necessary as habitat for aquatic pets, in which case recirculating water shall be permitted.	Yes
3	Other water feature or swimming pool restriction		Draining and refilling of private swimming pools is prohibited unless necessary for public health and safety and approved by the Director.	Yes
4	Implement or Modify Drought rate Structure or Surcharge	0-1%	Due to reduction in consumption, the rate paid by the customer will be less because less water is being used.	No
4	Increase Frequency of Meter Reading	0-5%	Increase the frequency of meter reading in order to monitor the limited supply more closely. This will allow CSA 70J to identify potential problems in the system and allow the water supplier to fix the problem faster than if a bi-monthly check of the water meter was conducted.	No

SHORTAGE LEVEL	DEMAND REDUCTION METHODS AND OTHER ACTIONS BY WATER SUPPLIER	HOW MUCH IS THIS GOING TO REDUCE THE SHORTAGE GAP?[1]	ADDITIONAL EXPLANATION OR REFERENCE	PENALTY, CHARGE, OR OTHER ENFORCEMENT[2]
4	Moratorium or Net Zero Demand Increase on New Connections	0-5%	Will-serve letters may no longer be issued, if the Board of Supervisors finds that there exists insufficient water supply to serve new connections.	No
4	Landscape - Other landscape restriction or prohibition	0-5%	All residential, commercial and industrial outdoor irrigation is prohibited except as determined on a case-by-case basis by the Director.	Yes

Notes:

1. Reduction in the shortage gap is estimated and can vary significantly.
2. Refer to Section 8.6 for Penalties for Water Wastage
3. Theses restrictions will be made mandatory in the revised 2021 Drought Ordinance.

1.4.2 Supply Augmentation

Given the consistent supply of groundwater through pumping, CSA 70J has no immediate plan to augment supply. During dry years, CSA 70J can extract more groundwater as needed while abiding by any safe yield restrictions on the basin. This volume of additional extracted groundwater can vary significantly depending on need.

1.4.3 Operational Changes

During shortage conditions, operations may be affected by demand reduction responses. Operational changes to address a short-term water shortage may be implemented based on the severity of the reduction goal. CSA 70J will maximize its groundwater supply by implementing operational strategies and demand reduction measures.

As part of the Annual Assessment process, CSA 70J will consider their operational procedures at the time of a shortage to identify changes that can be implemented to address water shortage on a short-term basis, including but not limited to:

- Expansion of public information campaign to educate and inform customers of the water shortage emergency and required water savings.
- Decrease line flushing to only on a compliant basis.
- Use water patrols and increase frequency of meter reading by recruiting staff from other departments if necessary.
- Offer water use surveys.
- Implementing or modifying drought rate structure or surcharge or water emergency tiered pricing, pursuant to the requirements of Proposition 218 and in accordance with California Law
- Prohibit any new permits for hydrant-construction or temporary construction meters.
- Monitoring construction meters and fire hydrant meters for efficient water use in the event that a meter identified wastes water.
- Moratorium on issuing any new building permit unless the: (a) Project is found by the Board or Director to be necessary for public health, safety. (b) Project will use recycled water for construction. (c) Project will not result in a net increase in non-recycled water use. (d) Project has adequate Conservation Offsets
- Suspending the consideration of annexation to its service area unless the annexation increases the water supply available more than the anticipated demands of the property to be annexed.
- Reducing overhead in the short-term and mid-term by deferring non-critical CIP and major maintenance expenditures, and in the long-term by adjusting operational and staffing levels and retail water rate structures to incorporate the reality of lower retail water sales than previously anticipated.
- Decrease in the level or, if need be, even a total interruption in the expenditures for the agency's facility replacement program. Non-critical replacement projects will have little or no impact on the agency or its customers and would only extend the master planned replacement schedule.

1.4.4 Additional Mandatory Restrictions

Executive Order B-40-17 presents permanent restrictions that are in place at all times despite the enacted stage of a supplier's WSCP. CSA 70J has five restrictions listed as required in Drought Stage 2, however this will be updated to be mandatory at all times in the revised Drought Ordinance planned for fall 2021.

Permanent restrictions prohibit the wasteful use of water including:

- Hosing off sidewalks, driveways, and other hardscapes.
- Washing automobiles with hoses not equipped with a shut-off nozzle.

- Using non-recirculated water in a fountain or other decorative water feature.
- Watering lawns in a manner that causes runoff, or within 48 hours after measurable precipitation.
- Irrigating ornamental turf on public street medians.

1.4.5 Emergency Response Plan

In addition to long-term shortages caused by droughts, other emergency situations could result in a temporary water shortage situation resulting from earthquake, fire, or other disasters affecting the power supply or the distribution system, and thus CSA 70J's ability to provide potable water.

For a major emergency such as an earthquake, Southern California Edison (Edison) has declared that in the event of an outage, power would be restored within a 24-hour period. For example, following the 1994 Northridge earthquake, Edison was able to restore power within 19 hours. Edison experienced extensive damage to several key power stations yet was still able to recover within a 24-hour timeframe. It is possible, although highly unlikely, that severe damage to southern California electric utility infrastructure could cause outages lasting four to five days.

CSA 70J has backup power supply in place at critical locations throughout the distribution system to provide minimum health and safety water supply to its customers during this type of an outage.

In the event of a natural or human caused disaster that could affect CSA 70J's ability to provide potable water for up to thirty (30) days, the following measures would be implemented as needed:

- CSA 70J's Precautionary Boil Water Notification Program would be activated. The notice would be provided to local radio stations and newspapers. CSA 70J's emergency services would be contacted to broadcast messages throughout neighborhoods. Customers would be notified of supplemental sources of water for cooking and drinking.
- Irrigation uses of water would immediately be prohibited. Enforcement would occur through CSA 70J emergency services.
- Local bottled water companies would be contacted to begin deliveries of potable water tanks to selected sites within CSA 70J. The trucks would be manned by CSA 70J personnel to distribute water for drinking purposes.
- A public information program would be initiated. A member of CSA 70J staff would appear on local television and provide daily reports to the local newspaper and radio stations. Members of CSA 70J staff would speak to local service clubs and Chamber of Commerce.

1.4.6 Seismic Risk Assessment and Mitigation Plan

Disasters, such as earthquakes, can and will occur without notice. CSA 70J certified with the EPA that their RRA was compliant with all AWIA requirements on June 30, 2020, and will certify their ERP on December 31, 2021, meeting all federal deadlines. The RRA and ERP contain confidential information related to infrastructure risk and response measures, and therefore is used as an internal document only and located at the County.

1.4.7 Shortage Response Action Effectiveness

Water use is determined by meter records, which are read and recorded bi-monthly. All of CSA 70J's customers are metered. CSA 70J will use these devices to monitor CSA 70J's actual reductions in water use during enacted shortage levels compared to normal year conditions as decided by the Director. This data allows CSA 70J to determine the effectiveness of the implemented shortage response actions. If reduction goals are not being met, the Board or Director can make the necessary decisions for corrective action to be taken.

1.5 Communication Protocols

This section is in accordance with CWC Section 10632(a)(5) and describes the communication protocols and procedures to inform customers, the public, and state and local officials of any current or predicted water shortages. When a shortage level is enacted or changed, a notice is published in the local the newspaper and the Special District's website updated. Based on the severity of the shortage condition, CSA 70J may also advertise on the local radio, publish especial publications, post billboards throughout the service area, hang door tags, or send mail notifications to all its customers. This WSCP includes a staged plan to outline and provide guidance for efficient communication of declaration of a shortage level, inform restrictions, and provide updates during a water shortage emergency shown in **Table 1-4**.

Table 1-4. Communication Protocol During Water Shortage Conditions

LEVEL	ACTION[1]
1	Information posted on the Special District's website
1	Increased messaging with the utility bill (message printed on front and back of bill, flier insert with bill, message printed on front and back of envelope)
2	Increased paid advertising – print, online, radio, TV, streaming, social media, movie theatres, buses, etc.
2	Signage in all public facilities to reduce water usage, such as kitchens and bathrooms.
2	Letters, postcards, and fliers mailed to residents and businesses impacted by water use regulations.
2	Outreach materials and drought notices mailed to the hospitality industry including restaurants and lodging.
2	Fliers posted in public places such as libraries and neighborhood centers.
2	Targeted outreach and technical assistance to highest water users in each classification.
2	Assemble and promote the speaker's bureau for water shortage presentations for neighborhood groups, gardening clubs, HOAs, churches, senior centers, neighborhood associations, business associations, community groups, property management companies, etc.

Note:

1. If a water shortage progresses through multiple levels, all measures in the previous level(s) are implemented in addition to current level actions.

1.6 Compliance and Enforcement

This section is in accordance with CWC Section 10632(a)(6) and describes the compliance and enforcement provisions. All the restrictions and prohibitions on end uses are associated with enforcement measures as outlined below. This system is based on the progressive number of violations of the user. Failure to comply with the provisions shall constitute a misdemeanor punishable under CWC Section 377. The fines for each violation are noted below in **Table 1-5**. Fines and penalties collected shall be used to offset any state-imposed fines and penalties and water conservation education and the drought response programs.

Table 1-5. Penalties for Water Wastage

VIOLATION[1]	PENALTY[2]
First	Written Warning - Notice of Violation and Warning of Penalties – a written warning accompanied by a copy of this ordinance, delivered by U.S. Mail and/or hung on customer's door.
Second	$100 or attendance and successful completion of a "Water Conservation Education Course" within thirty days of the violation notice. Course must be approved by the Director.
Third	$200
Fourth	$300 and fee for installation of flow restricting device by the Special Districts Department during the duration of drought declaration.
Fifth	$500 and termination of service for such period as determined to be appropriate under the circumstances.

Note:

1. Violations are counted and enforced within a one-year period from the first violation.
2. Customer shall be responsible for payment of charges for installing and/or removing any flow restricting device and for disconnecting and/or reconnecting service. Such charges shall be paid prior to the removal of the flow restrictor or reconnection of service, whichever the case may be.

1.7 Legal Authorities

County of San Bernardino Ordinance No. SD 15-04 addresses droughts, outages, and shortages, and includes a water shortage contingency plan (**Appendix I**). The adoption resolution providing the Board with authority to enact each level of the WSCP is included in **Attachment 1** of this document.

CSA 70J shall coordinate with any city or county within which it provides water supply services for the possible proclamation of a local emergency, as defined in Section 8558 of the Government Code.

When a WSCP Stage 2 or greater is implemented, CSA 70J will inform the following cities and counties:

- Town of Apple Valley
- City of Victorville
- City of Hesperia
- County of San Bernardino

1.8 Financial Consequences of WSCP

The majority of operating costs for most water agencies are fixed rather than a function of the amount of water sold. As a result, when significant conservation programs are undertaken, it is frequently necessary to raise water rates because the revenue generated is based on lower total consumption while the revenue required is basically fixed.

CSA 70J has structured rates in a way that customers pay a fixed "water availability" charge based on meter size and separately pay a usage charge based on metered usage. The intention behind this structure is to appropriately allocate rates according to the costs, whether fixed or variable. This results in less of an impact to CSA 70J's budget if water sales decrease dramatically. CSA 70J anticipates reduced revenue while implementing the WSCP due to decreased water use by its customers and additional costs associated with implementing water use restrictions and associated reduction actions. CSA 70J would make up for declining revenues by reducing operating and maintenance expenses, deferring some capital improvement projects until after the drought situation improves, deferring the purchase of computers, upgrades, publications, and using the funds held in reserve for replacement of facilities. With the reduced per capita water consumption due to enactment of the WSCP, it will also reduce water replenishment payment obligations to the Mojave Basin Area Watermaster.

1.8.1 Use of Financial Reserves

In the event that revenue declines were severe enough that operating expenses could not realistically be reduced to meet revenues, CSA 70J has built financial reserves that can be utilized for a limited time to cover expenses. The goal of CSA 70J is not to rely on the financial reserves and that steps will be taken to charge the customers an appropriate amount for water consumption in order to avoid paying for expenses out of financial reserves.

1.9 Monitoring and Reporting

This section is in accordance with CWC Section 10632(a)(9) and describes the reporting requirements and monitoring procedures to implement the WSCP and track and evaluate the response actions effectives. As described in **Section 8.2**, CSA 70J intends to track its supplies and project demands on an annual basis, and if supply conditions described in **Table 1-2** are projected, CSA 70J will enact their WSCP. Monitoring demands is essential to ensure the WSCP response actions are adequately meeting reductions and decreasing the supply/demand gap. This will help to analyze the effectiveness of the WSCP or identify the need to activate additional response actions.

The water savings from implementation of the WSCP will be determined based on monthly production reports which will be compared to the supply from prior months, the same period of the prior year, and/ or the allocation. At first, the cumulative consumption for the various sectors (e.g., residential, commercial, etc.) will be evaluated for reaching the target demand reduction level. Then if needed, individual accounts will be monitored. Weather and other possible influences may be accounted for in the evaluation.

1.10 WSCP Refinement Procedures

This section is consistent with CWC Section 10632 (a)(10). The WSCP is best prepared and implemented as an adaptive management plan. CSA 70J will use results obtained from the monitoring and reporting program to evaluate any needs for revisions. The WSCP is used to provide guidance to the Board, Director, staff, and the public by identifying response actions to allow for efficient management of any water shortage with predictability and accountability.

To maintain a useful and efficient standard of practice in water shortage conditions, the requirements, criteria, and response actions need to be continually evaluated and improved upon to ensure that its shortage risk tolerance is adequate, and the shortage response actions are effective and up to date based on lessons learned from implementing the WSCP. Potential changes to the WSCP that would warrant an update include, but are not limited to, any changes to shortage level triggers, changes to the shortage level structure, and/or changes to the response actions. Any prospective changes to the WSCP would need to be presented at a public hearing, staff would obtain any comments and adopt the updated WSCP. The steps to formally amend the WSCP are discussed in **Section** Error! Reference source not found..

Potential refinements will be documented and integrated in the next WSCP update. If new response actions are identified by staff or public, these could be advertised as voluntary actions until these are formally adopted as mandatory.

1.11 Special Water Feature Distinction

The CWC Section 10623 (b) now requires that suppliers analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas, as defined in subdivision (a) of Section 115921 of the Health and Safety Code. However, CSA 70J does not have any such known water features at this time.

1.12 Plan Adoption, Submittal, and Availability

This section was completed pursuant to CWC Section 10632(a)(c). Because the WSCP is a standalone document that can be updated as needed, **Table 1-6** describes the general steps to adopt and submit an updated or amended WSCP.

This 2020 WSCP was presented for adoption to the Board at the June 22, 2021 Board of Supervisors meeting. Notifications were sent to all necessary Cities, Counties, and Districts 60 days prior to the June 22, 2021 public board meeting. To comply with the notice to the public, CSA 70J published notices in the local newspaper two weeks in advance with 5 days between publications. Copies of the 60-day notices and public hearing newspaper notices are provided in **Appendix J**. The WSCP was also made available in advance of the public hearing.

The WSCP was formally adopted as Item 129 at the Board Meeting held on June 22, 2021, included in **Attachment 1**. The WSCP was made available to all staff, customers, and any affected cities, counties, or other members of the public at Special District's office and online within 30 days of the adoption date.

The WSCP was submitted to DWR via the WUE Data Portal at the same time as the 2020 Urban Water Management Plan, but no later than July 1st, 2021. A copy of the 2020 UWMP and WSCP were submitted to the California State Library within 30 days of adoption. Electronic and/or hard copies were provided to all relevant cities and counties within or effected by CSA 70J's service area within 30 days of adoption.

Table 1-6. Processes and Steps to Adopt, Submit, and Implement the WSCP

STEP	TASK	DESCRIPTION	TIMEFRAME
1	Notice to cities and counties	Notify cities and counties within the service area that the WSCP is being updated. It is recommended that the notice includes: 1. Time and place of public hearing. 2. Location of the draft Plan, latest revision schedule, and contact information of the Plan preparer.	At least 60 days before public hearing. * If desired, advance notices can be issued without providing time and place of public hearing.

STEP	TASK	DESCRIPTION	TIMEFRAME
2	Publish Plan	Publish the draft WSCP in advance of public hearing meeting on Special District's website	At least 2 weeks before public hearing.
3	Notice to the public	Publish two notifications of the public hearing in a local newspaper notice at least once a week for two consecutive weeks, with at least 5 days between publications. This notice must include: 1. Time and place of hearing. 2. Location of the draft WSCP.	At least 2 weeks before public hearing. * Include a copy of public notices in plan.
4	Public hearing and optional adoption	Host at least one public hearing before adopting the WSCP to: 1. Allow for community input. 2. Consider the economic impacts for complying with the Plan.	Public hearing date * Adoption can be combined as long as public hearing is on the agenda before adoption
5	Adoption	Before submitting the WSCP to DWR, the governing body must formally adopt it. An adoption resolution must be included, as an Appendix or as a web address indicating where the adoption resolution can be found online.	At public hearing or at a later meeting. *The WSCP can be adopted as prepared or as modified after the hearing.
6	Plan submittal	Submit the adopted or amended WSCP via the WUE Data Portal within 30 days of adoption or by July 1, if updated with the UWMP five-year cycle.	Within 30 days of adoption or by July 1st, whichever comes first.
7	Plan availability	Submit a CD or hardcopy of the adopted WSCP to the California State Library within 30 days of adoption. California State Library Government Publications Section Attention: Coordinator, Urban Water Management Plans P.O. Box 942837 Sacramento, CA 94237-0001 Provide a copy (hardcopy or electronic) of the adopted WSCP to any cities and counties within the service area. Make the WSCP available to the public by posting the Plan on website or making a hardcopy available for public review during normal business hours.	Within 30 days after adoption
8	Other - Notification to Public Utilities Commission	For water suppliers regulated by the California Public Utilities Commission (CPUC) submit UWMP and WSCP as part of the general rate case filing.	

Attachment 1: 2021 WSCP Adoption Item 129

REPORT/RECOMMENDATION TO THE BOARD OF SUPERVISORS OF THE BOARD GOVERNED COUNTY SERVICE AREAS AND RECORD OF ACTION

June 22, 2021

FROM

BRENDON BIGGS, Director, Department of Public Works – Special Districts

SUBJECT

Public Hearing Regarding 2020 Urban Water Management Plan for County Service Area 70 Zone J Oak Hills

RECOMMENDATION(S)

Acting as the governing body of County Service Area 70 Zone J Oak Hills:

1. Conduct a public hearing to consider the 2020 Urban Water Management Plan.
2. Adopt the 2020 Urban Water Management Plan on file with the Department of Public Works-Special Districts.
3. Direct the Department of Public Works – Special Districts to submit the adopted 2020 Urban Water Management Plan to the California Department of Water Resources.

(Presenter: Brendon Biggs, Director, 387-7906)

COUNTY AND CHIEF EXECUTIVE OFFICER GOALS & OBJECTIVES

Ensure Development of a Well-Planned, Balanced, and Sustainable County.
Provide for the Safety, Health and Social Service Needs of County Residents.

FINANCIAL IMPACT

Approval of this item will not result in the use of Discretionary General Funding (Net County Cost) or the need for any budget adjustments for County Service Area 70 Zone J Oak Hills (CSA 70J).

BACKGROUND INFORMATION

The Department of Public Works - Special Districts (Department), through its Water and Sanitation Division, is the water retailer for CSA 70J. The California Water Code, Division 6, Part 2.6, contains the Urban Water Management Planning Act, which requires water retailers to develop an Urban Water Management Plan (UWMP) for any water service area having 3,000 or more water service connections. CSA 70J's water service area has approximately 3,371 water service connections. Updated Urban Water Management Plans are required every five years. The 2015 Urban Water Management Plan was brought to the board for adoption on November 14, 2017 due to the state releasing the update guide-book late to water suppliers.

The focus of the UWMP is to identify water supply needs over a 20-year projection period. This requires determining water demand characteristics and how demand will be met in various hydrologic year types (normal, multiple dry, critical dry), describing all water supply sources and their supply outlooks, projecting water quality problems, and developing and implementing Best Management Practice measures for water conservation as well as preparing a contingency plan in case of water shortages. The UWMP must conform to the requirements of the Urban Water

Management Guide-Book including details of all sanitary sewer overflows that may occur in an agency's wastewater collection system according to the Urban Water Management Planning Act and all subsequent legislation.

CSA 70J currently operates under Ordinance No. SD-15-04 establishing water conservation measures, which support the water shortage contingency element of the UWMP.

The requirement for a public meeting and the availability of a draft copy of the UWMP were properly posted and the required 60-day notice was sent to stakeholders on April 22, 2021. Adoption of the UWMP for CSA 70J will authorize the Department to submit the UWMP to the California Department of Water Resources by July 1, 2021.

PROCUREMENT
Not applicable.

REVIEW BY OTHERS
This item has been reviewed by County Counsel (Dawn Martin, Deputy County Counsel, 387-5455) on May 27, 2021; Finance (Tom Forster, Administrative Analyst, 387-4635) on June 1, 2021; and County Finance and Administration (Matthew Erickson, County Chief Financial Officer, 387-5423) on July 6, 2021.

Record of Action of the Board of Supervisors
Board Governed County Service Areas

Hearing Opened
Public Comment: None
Hearing Closed

APPROVED

Moved: Col. Paul Cook (Ret.) Seconded: Joe Baca, Jr.
Ayes: Col. Paul Cook (Ret.), Janice Rutherford, Dawn Rowe, Curt Hagman, Joe Baca, Jr.

Lynna Monell, CLERK OF THE BOARD

BY Lynna Monell
DATED: June 22, 2021

COUNTY OF SAN BERNARDINO
BOARD GOVERNED
COUNTY SERVICE AREAS

cc: File - SDD/CSA 70 Zone J w/ attachments
JLL 06/24/2021

Appendix 9B – CSA 70J DWR 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	Retail Chapter 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 9	9.4, 7.6
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	Chapter 9	Beginning of each sub-chapter
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	Chapter 9	9.1
x	n/a	2.5	Section 2.5	10644	Supplier shall report the Public Water Systems number, volume of delivered water, and number of connections that are included in this UWMP.	Plan preparation	2-1	Chapter 9	9.2, 9.5
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	Chapter 9	9.1
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	Chapter 9	9.1
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	Chapter 9	9.1
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	Chapter 9	9.1
x	n/a	2.4	Section 2.4.1	10631(h)	Retail Suppliers will include documentation that they have provided their Wholesale Supplier(s)—if any—with water use projections from that source.	Plan preparation	2-4 R	Chapter 9	9.1
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	Chapter 3	n/a
x	x	3	Chapter 3.0	10631(a)	Describe the Supplier service area.	System description	n/a	Chapter 9	9.2
x	x	3.3	Section 3.3	10631(a)	Describe the climate of the Supplier's service area.	System description	n/a	Chapter 9	9.2
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	Chapter 9	9.3
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	Chapter 9	9.3
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	Chapter 9	9.3
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	Chapter 9	9.5
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	Chapter 9	9.5
x	n/a	4.3	Section 4.3.2	10631(d)(3)(C)	Retail Suppliers shall provide data to show the distribution loss standards were met.	System water use	4-6	Chapter 9	9.5
x	n/a	4.2	Section 4.2.5.4	10631.1(a)	Include projected water use needed for lower income housing projected in the service area of the Supplier.	System water use	4-3	Chapter 9	9.5
x	n/a	4.2	Section 4.2.5.3	10631(d)(4)(A)	In projected water use, include estimates of water savings from adopted codes, plans, and other policies or laws.	System water use	4-3	Chapter 9	9.5
x	n/a	4.2	Section 4.2.5.3	10631(d)(4)(B)	Provide citations of codes, standards, ordinances, or plans used to make water use projections.	System water use	4-3	Chapter 9	9.5
x	n/a	4.2	Section 4.2.5.3	10631(d)(4)(B)(ii)	To the extent that a Supplier reports the information described in subparagraph (A), an urban water Supplier shall… Indicate the extent that the water use projections consider savings from codes, standards, ordinances, or transportation and land use plans. Water use projections that do not account for these water savings shall be noted of that fact.	System water use	4-3	Chapter 9	9.5
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	Chapter 9	9.5
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	Chapter 9	9.5
x	n/a	5.2	Section 5.2	10608.4	Retail Suppliers shall report on their compliance in meeting their water use targets. Reporting requirements will vary depending on whether the Supplier: - Was considered an urban retail water supplier in 2020, - Met its 2020 target in 2020, or - Was part of a merger or consolidation since 2020. Chapter 5 Subsections 5.2.1, 5.2.2, and 5.2.3 address each of these situations.	Baselines and targets	5-1	Chapter 9	9.5
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	Chapter 9	8.4
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	Chapter 9	9.4
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	Chapter 9	8.4
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	Chapter 3	n/a
x	x	6.2	Section 6.2.2	10631(b)(4)(B)	Describe the groundwater basin.	System supplies	n/a	Chapter 2	n/a
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	Chapter 2	n/a
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	n/a	n/a
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	n/a	n/a
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	Chapter 2	n/a
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	Chapter 9	9.4
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	Chapter 9	8.4
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	Chapter 9	9.4
x	n/a	6.2	Section 6.2.5	10633(a)	Describe the wastewater collection and treatment systems in the Supplier's service area with quantified amount of collection and treatment and the disposal methods.	System supplies (recycled water)	6-2	Chapter 9	9.4
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	n/a	n/a
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	n/a	n/a
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	n/a	9.4
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	n/a	n/a
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	n/a
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	n/a	n/a
x	x	6.2	Section 6.2.6	10631(g)	Describe desalinated water project opportunities for long-term supply.	System supplies	6-7	Chapter 9	9.4

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	Chapter 9	9.4
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	Chapter 9	9.8
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	Chapter 9	9.4
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	Chapter 9	9.7
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	Chapter 9	9.4
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	Chapter 9	9.5
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	Chapter 9	9.5
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	Chapter 9	9.7
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	Chapter 9	9.7
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	Chapter 9	9.7
x	x	8	Chapter 8	10632(a)	Provide a water shortage contingency plan (WSCP) with specified elements below.	Water shortage contingency planning	n/a	Chapter 9	9.6
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	Chapter 9	9.6
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	Chapter 9	9.7
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	Chapter 9	9.7
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	Chapter 9	9.6
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	n/a	n/a
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	Chapter 9	9.6
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	Chapter 9	9.6
x	x	8.4	Section 8.4	10632(a)(4)(C)	Specify locally appropriate operational changes.	Water shortage contingency planning	8-2	Chapter 9	9.6
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	Chapter 9	9.6
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	Chapter 9	9.6
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	Chapter 9	9.6
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	Chapter 9	9.1
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	Chapter 9	9.6
x	n/a	8.6	Section 8.6	10632(a)(6)	Retail Supplier must describe how it will ensure compliance with and enforce provisions of the WSCP.	Water shortage contingency planning	n/a	Chapter 9	9.6
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	Chapter 9	9.6
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. *Water Shortage Emergencies*.	Water shortage contingency planning	n/a	Chapter 9	9.6
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	Chapter 9	9.6
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	Chapter 9	9.6
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	Chapter 9	9.6
x	n/a	8.8	Section 8.8	10632(a)(8)(C)	Retail Suppliers must describe the cost of compliance with Water Code Chapter 3.3, *Excessive Residential Water Use During Drought*.	Water shortage contingency planning	n/a	Chapter 9	9.6
x	n/a	8.9	Section 8.9	10632(a)(9)	Retail Suppliers must describe the monitoring and reporting requirements and procedures that ensure appropriate data are collected, tracked, and analyzed for purposes of monitoring customer compliance.	Water shortage contingency planning	n/a	Chapter 9	9.6
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	Chapter 9	9.6
x	n/a	8.11	Section 8.11	10632(b)	Analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas.	Water shortage contingency planning	n/a	Chapter 9	9.6
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	Chapter 9	9.6
x	n/a	9.1	Sections 9.1	10631(e)(1)	Retail Suppliers shall provide a description of the nature and extent of each demand management measure implemented over the past five years. The description will address specific measures listed in code.	Demand management measures	n/a	Chapter 9	9.6
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	Chapter 9	9.6
x	n/a	10	Chapter 10	10608.26(a)	Retail Suppliers shall conduct a public hearing to discuss adoption, implementation, and economic impact of water use targets (recommended to discuss compliance).	Plan adoption, submittal, and implementation	n/a	Chapter 9	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	Chapter 9	9.1
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, 202 6.	Plan adoption, submittal, and implementation	n/a	Chapter 9	9.1
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	Chapter 9	9.1
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	Chapter 9	9.1
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	Appendicies	n/a
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	Chapter 9	9.1
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	Appendicies	n/a
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	Chapter 9	9.1
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	Appendicies	n/a

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	Appendicies	n/a
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	Appendicies	n/a
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	Appendicies	n/a