



WATER SHORTAGE CONTINGENCY PLAN

LOS ANGELES COUNTY WATERWORKS DISTRICTS

LOS ANGELES COUNTY PUBLIC WORKS

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Alhambra, CA 91801



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Introduction

This Water Shortage Contingency Plan (WSCP) details how the Los Angeles County Waterworks Districts (Districts) respond in the event of a declared water emergency or water shortage conditions.

The provisions of this Plan shall apply to all persons, customers, and property utilizing water provided by the following Districts:

- Los Angeles County Waterworks District No. 21, Kagel Canyon (District 21).
- Los Angeles County Waterworks District No. 29, Malibu and the Marina del Rey Water System(District 29).
- Los Angeles County Waterworks District No. 36, Val Verde (District 36).
- Los Angeles County Waterworks District No. 37, Acton (District 37).
- Los Angeles County Waterworks District No. 40, Antelope Valley (District 40).

The terms “person” and “customer” as used in the Plan may include individuals, corporations, partnerships, associations, and all other legal entities.

This WSCP complies with California Water Code (CWC) Section 10632, which requires every urban water supplier to prepare and adopt a WSCP as part of its Urban Water Management Plan (UWMP). The California Urban Water Management Planning Act of 1983 requires urban water suppliers providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually to adopt and submit a UWMP. Section 10632.2 states, "An urban water supplier shall follow, where feasible and appropriate, the prescribed procedures and implement determined shortage response actions in its water shortage contingency plan, as identified in subdivision (a) of Section 10632, or reasonable alternative actions, provided that descriptions of the alternative actions are submitted with the annual water shortage assessment report pursuant to Section 10632.1." However, the CWC does not prohibit an urban water supplier from taking actions that are not specified in its WSCP, if needed, without having to formally amend its UWMP or WSCP.

Per CWC Section 10632.3, the State defers to the locally adopted WSCPs to the extent practicable upon the Governor's proclamation of a state of emergency under the California Emergency Services Act based on drought conditions. The Districts' WSCP provides guidance for managing water supplies, mitigating water shortages, improving preparedness for droughts, and other impacts to water supplies and ultimately enables the Districts to efficiently manage future response actions due to water shortages. This WSCP includes an analysis of the Districts' water supply reliability, an annual assessment of supply and demand, and a detailed breakdown of the standard water shortage levels for the Districts. Furthermore, it outlines the Districts' water shortage response actions, communication protocols, compliance and enforcement guidelines, legal authorities, financial consequences, monitoring and reporting procedures, and discusses future reevaluations of the WSCP.

Additionally, this WSCP incorporates portions of the Districts' existing Phased Water Conservation Plan (PWCP), which is Part 5 of the Rules and Regulations of the Los Angeles County Waterworks Districts and the Marina del Rey Water System (Rules and Regulations). A copy of the PWCP is provided in Appendix A of the WSCP. The Districts' PWCP was adopted in May 1991 and amended in June 2015. Lastly, the Districts' WSCP is included as Appendix D in its 2020 UWMP for the Los Angeles County Waterworks District No. 29, Malibu, and the Marina del Rey Water System ; and Appendix F for the Los Angeles County Waterworks District No. 40, Antelope Valley.

Section 1: Water Supply Reliability Analysis

Water supply reliability is a measure of a water system's expected success in managing water shortages. Reliability planning requires information about the following: (1) expected frequency and severity of shortages; (2) how additional water management is likely to affect the frequency and severity of shortages; and (3) how available contingency measures can reduce the impact of shortages when they occur. Section 10635 of the CWC requires that, "Every urban water supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the long-term total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and a drought lasting five consecutive water years."

1.1 Los Angeles County Waterworks District No. 29, Malibu, and the Marina del Rey Water System

District No. 29 purchases its entire water supply from the West Basin Municipal Water District (West Basin). Therefore, a reliable water supply is completely dependent on the availability of water from the District No. 29's wholesaler. The reliability of West Basin's supply can potentially be impacted by legal, environmental, water quality, and climatic factors. West Basin's contingency planning includes a comprehensive plan to provide reliable water supplies under average, single-dry, and multiple-dry year hydrology for current and projected supplies. Under single-dry and multiple-dry year conditions West Basin plans to meet its annual increases in demand by purchasing imported water supplies. West Basin does not anticipate any shortages and will be able to provide reliable water supplies under both single-dry year and multiple-dry year conditions. Any shortfall in supplies will be met through imported water from the Metropolitan Water District of Southern California, which manages its supply and demand balance through both their Water Surplus and Drought Management Plan and Water Supply Allocation Plan.

Additionally, West Basin anticipates 100 percent reliability by continuing to move forward with its Water Reliability 2020 (WR2020) Program. In 2009, West Basin developed and launched its WR2020 Program to communicate to the public West Basin's goal of increasing local water reliability by doubling recycled water production, doubling its water conservation efforts, expanding its water use efficiency programs, and introducing ocean-water desalination to its water portfolio. All West Basin's supply development programs fall under the umbrella of the WR2020 Program. West Basin is continuing to plan and invest in its WR2020 Program to reduce its dependence on imported water to mitigate future water shortages and allocation impacts on West Basin's customers. The expanded use of recycled water and introduction of ocean water desalination supplies coupled with additional conserved supplies through water use efficiency programs in West Basin's service area will continue to reduce the demand on imported water.

West Basin does not anticipate any shortages as it is actively diversifying its water supply portfolio, maintaining imported water reliability, and developing local resources, as well as furthering existing water conservation efforts. West Basin has available supply to meet the expected demand for the District.

1.2 Los Angeles County Waterworks District No. 40, Antelope Valley

District No. 40's supply portfolio consists of approximately 60 to 70 percent of imported water from the Antelope Valley–East Kern Water Agency (AVEK), and 30 to 40 percent of groundwater produced from the District No. 40's wells. As the third largest California State Water Project (SWP) Contractor and wholesaler, AVEK is a regional water agency that supplements Antelope Valley groundwater supplies with surface water supplies and delivers water to municipalities, ranchers, and agricultural water users. District No. 40 is AVEK's largest municipal customer and purchases its entire imported water supply from AVEK.

AVEK is entitled to receive Table A water from the Department of Water Resources (DWR), which refers to the maximum amount of water a contractor can receive annually and is used by DWR for allocating SWP supplies and costs among the contractors. Although AVEK has a set maximum annual allocation of SWP Table A water at 144,844 acre-fee per year (AFY), they typically receive an average of 58 percent of this allocation, or 84,000 AFY of which District 40 typically receives 70 percent. SWP water supplies have been a historically variable source of imported water for AVEK due to constant fluctuations in climate and precipitation, limited reliability of its conveyance system (primarily restrictions with the Bay Delta system), regulatory/legislative restrictions, and operational conditions and is particularly unreliable during dry years. To maximize and ensure reliability in the region, AVEK has the Westside and Eastside Water Banks within its service area and has participated in various exchange programs with other SWP contractors. The Westside Water Bank allows for an estimated total storage of up to 150,000 acre-feet (AF). The Eastside Water bank allows for a total storage of 5,700 AF. Any unused Table A water made available by AVEK to District No. 40 can potentially be stored during normal years and purchased from AVEK during dry years when SWP Table A supplies and groundwater will not meet demands. During years where AVEK is allocated at least half of their maximum SWP allocation, AVEK may store any excess supplies not used by District No. 40 and any other AVEK customers.

Groundwater continues to be an important resource within the Antelope Valley Region. With a future of anticipated continued urban growth, increased agricultural demand, and limits on the fluctuating supply of imported water, the demand for water will only continue to increase. District No. 40's ability to produce groundwater is subject to the Antelope Valley Groundwater Cases Judgment, which includes District No. 40's annual groundwater rights. If District No. 40 pumps more than its entitlement under the Judgment in an emergency situation, there could be financial and operational consequences. These rights include 6,789 AFY of the native safe yield, 55 percent of the unused Federal reserve right, and imported water return flows, which consists of 39 percent of the previous 5-year average of imported water used by District No. 40. Additionally, under a separate lease agreement with AVEK, District No. 40 can lease a percentage of groundwater rights allocated to AVEK, up to 2,600 AFY.

District No. 40 currently owns and operates 56 wells. Some locations within District No. 40 face groundwater quality issues, where they contain high amounts of arsenic and nitrates resulting in those wells being inoperable or operated on blending plans with imported water to meet water quality requirements. According to District No. 40's 2020 UWMP, the overall groundwater quality in the basin is good and considered to be generally suitable for domestic, agricultural, and industrial uses. District No. 40 plans to continue to utilize groundwater to supply approximately 30 to 40 percent of its demands.

To improve resiliency, District No. 40 is planning to construct additional wells to be able to recover carryover water. District No. 40 is planning to secure sites for new groundwater wells and collaborate with other agencies in the Antelope Valley to improve water supply resiliency for the region. The new sites of these wells are planned to be in locations within District No. 40 containing the lowest amounts of arsenic and nitrates. The projected water supply from AVEK and District No. 40 wells matches the expected demand.

Section 2: Annual Water Supply and Assessment Procedures

The annual water supply and demand assessment (Annual Assessment) is conducted by the Districts staff annually on or before July 1 of each year beginning with the first annual water supply and demand assessment due by July 1, 2022. The Annual Assessment Report is submitted to DWR with information for anticipated shortage, triggered shortage response actions, compliance and enforcement actions, and communication actions consistent with this WSCP. Per the CWC Sections 10632(2)(A) and 10632(2)(B), the Districts must prepare a WSCP that includes "the written-process that [they] will use each year to determine [their] water supply" and "the key data inputs and assessment methodology used to evaluate [their] water supply reliability for the current year and one dry year."

To meet these requirements, the Districts will conduct an annual water supply and demand assessment as follows.

2.1 Decision-Making Process

The Districts will assess its water supply reliability by examining the Districts available water supplies and expected demands. Steps for the decision-making process are outlined below.

2.2 Data and Methodologies

The Districts collect key data inputs for the Annual Assessment including water supplies and unconstrained customer demands as described below.

2.2.1 Evaluation Criteria

The Districts will evaluate current year available supply and one dry year available supply, which will consider hydrological and regulatory conditions. The methodology for determining the available supply from each water source is as follows:

- Imported Water: The type of water year for West Basin and AVEK is determined before May 1 of each year. West Basin and AVEK can then determine water allocations for District Nos. 29 and 40, respectively. District No. 40 will determine available supply based on AVEK's allocation.
- Groundwater: District No. 40 will analyze historical production, groundwater rights, and carry over water.

2.2.2 Quantify Supplies Needed

- Water Supply: The available water supply by source is estimated for the current year and one subsequent dry year.
- Quantify each source of water supply and provide descriptive text of each source.
- Quantify current year available supply by source, considering hydrological and regulatory conditions in the current year.
- Quantify available supply by source for one subsequent dry year.

- Considerations for water supply availability estimates by source:
 - The existing infrastructure capabilities and plausible constraints as they impact the Districts' ability to deliver supplies to meet expected customer water use needs in the coming year should be considered.
 - Hydrological and regulatory conditions in the current year.
 - Specific locally applicable factors that can influence or disrupt each supply source.

2.2.3 Estimate Unconstrained Customer Demands

- Current year unconstrained demand is estimated, considering weather, growth, and other influencing factors such as policies to manage current supplies to meet demand objectives in future years, as applicable.
- Unconstrained customer demand does not include demand reductions that may occur as a result of the Districts implementing any special shortage response actions that may be necessary.

2.2.4 Supply Evaluation Criteria and Infrastructure Considerations

Evaluation criteria is determined by the supply source conditions and factors that impact the condition of the supply source. The Annual Assessment is based on evaluating the key data inputs to determine the water supply reliability. Although an actual shortage may occur at any time during the year, shortage conditions can usually be forecasted by West Basin and AVEK on or about May 1 each year.

Supply source evaluations are based on applying the following criteria:

- Imported Water:
 - Infrastructure issues (repairs, construction, environmental mitigation, new projects, etc.)
 - System distribution capabilities
 - Water quality
 - SWP availability
- Groundwater:
 - Capacity of active wells on-line
 - Groundwater levels
 - Groundwater quality

Section 3: Six Standard Water Shortage Levels

The Districts' PWCP defines ten water supply condition phases. In compliance with Section 10632(a)(3)(B) of the CWC, a crosswalk analysis was performed on the PWCP to determine 6 standard shortage levels that correspond to the new requirements by DWR. A summary is provided in Table 3-1 below. The 6th standard shortage level is new to the WSCP and represents a shortage of supplies greater than 50 percent. The Districts will implement the appropriate water shortage level based on the Districts' current water supply conditions as listed in the 6 levels defined in Table 3-2 in accordance to Section 10632(a)(3)(A). The County of Los Angeles Board of Supervisors, as the governing body for the Districts, may determine the appropriate level and implement rate changes and conservation surcharges. Regardless of the water supply availability or service conditions within the Districts, the Board of Supervisors may set water conservation goals and modify level declarations as necessary to align with regional or State water conservation policies, agreements or declarations, or legal requirements.

Table 3-1 WSCP Crosswalk Analysis			
2015 UWMP Stage			2020 WSCP Level
Stage	Percent Supply Reduction¹ <i>Numerical value as a percent</i>	Water Supply Condition² <i>(Narrative description)</i>	Shortage Level
Phase I shortage	5%	District engineer determines over consumption of water, loss of pressure in a system, breakdown, drought conditions or any similar occurrence	Level 1
Phase II shortage	10%	Board of Supervisors determines that the Districts will suffer a 10% shortage of supplies	
Phase III shortage	15%	Board of Supervisors determines that the Districts will suffer a 10%–15% shortage of supplies	Level 2
Phase IV shortage	20%	Board of Supervisors determines that the Districts will suffer a 15%–20% shortage of supplies	
Phase V shortage	25%	Board of Supervisors determines that the Districts will suffer a 20%–25% shortage of supplies	Level 3
Phase VI shortage	30%	Board of Supervisors determines that the Districts	

		will suffer a 25%–30% shortage of supplies	
Phase VII shortage	35%	Board of Supervisors determines that the Districts will suffer a 30%–35% shortage of supplies	Level 4
Phase VIII shortage	40%	Board of Supervisors determines that the Districts will suffer a 35%–40% shortage of supplies	
Phase IX shortage	45%	Board of Supervisors determines that the Districts will suffer a 40%–45% shortage of supplies	Level 5
Phase X shortage	50%	Board of Supervisors determines that the Districts will suffer a 45%–50% shortage of supplies	
N/A	>50	Board of Supervisors determines that the Districts will suffer a 50% or greater shortage of supplies	Level 6
¹ One stage in the WSCP must address a water shortage of 50 percent.			
² Water supply condition shortage as percent of current normal year supplies.			

Table 3-1: Crosswalk Analysis

Table 3-2 (DWR Submittal Table 8-1)

WSCP Levels

Shortage Level		
	Percent Shortage Range ¹ <i>Numerical value as a percent</i>	Water Shortage Condition <i>(Narrative description)</i>
1	Up to 10%	District engineer determines over consumption of water, loss of pressure in a system, breakdown, drought conditions or any similar occurrence; Board of Supervisors determines that the Districts will suffer a 10% shortage of supplies
2	Up to 20%	Board of Supervisors determines that the Districts will suffer a 10%–20% shortage of supplies
3	Up to 30%	Board of Supervisors determines that the Districts will suffer a 20%–30% shortage of supplies
4	Up to 40%	Board of Supervisors determines that the Districts will suffer a 30%–40% shortage of supplies
5	Up to 50%	Board of Supervisors determines that the Districts will suffer a 40%–50% shortage of supplies
6	>50%	Board of Supervisors determines that the Districts will suffer a shortage of supplies greater than 50%

¹ One stage in the WSCP must address a water shortage of 50 percent.

Table 3-1: WSCP levels.

Section 4: Shortage Response Actions

4.1 Demand Reduction

The Districts' Water Waste Ordinance include mandatory prohibitions on water uses.

Demand reduction by the Districts is accomplished through various actions in response to shortage levels. Demand reduction measures are actions taken by the Districts and its customers to reduce water demand within the service area. DWR categorizes the various types of demand reduction actions. Categories include public information campaigns, landscape and Commercial, Industrial, Institutional (CII) restrictions, and others. Table 4-1 summarizes the Districts demand reduction actions in accordance with Section 10632(a) (4) (B) and (a)(4)(E). Any Restrictions placed on the Districts by the State of California take precedent over water use restrictions outlined in Table 4-1.

Table 4-1 (DWR Table 8-2): Demand Reduction Actions			
Shortage Level	Demand Reduction Actions	How much is this going to reduce the water use?	Additional Explanation or Reference
Level 1	Enforcement of the County's Water Waste Ordinances, such as:	5% - 10%	
	Potable water shall not be used for washing hard surfaces, such as pavement, roadways, concrete, and sidewalks, except for public health and safety exceptions.		
	No person shall water or cause to be watered any lawn or landscaping more than once a day		
	No person shall water or cause to be watered any lawn or landscaping to such an extent that causes runoff due to incorrectly directed or maintained sprinklers or excessive watering.		
	Hoses must have an automatic shut-off nozzle for car washing and outdoor hand watering of plants and trees.		
	Customers must repair water leaks, breaks, and malfunctions in a timely manner.		
	Restaurants shall only serve water upon request.		
	Hotel and lodging establishments must offer an option for customers to opt-out of linen service to reduce laundry water use.		

	No person shall use potable water to clean, fill, or maintain levels in decorative fountains, ponds, lakes, or other similar aesthetic structures.		
	Initiate a public information campaign		
Level 2	All measures from Level 1	5% - 10%	
	Expand public information campaign		
	Limit landscape irrigation to specific days a week during certain hours of the day for an allotment time period.	8%-10%	Suggested irrigation times: before 10AM and after 6PM (10mins/station)
Level 3	All measures from Level 1 and Level 2	5% - 10%	
	Limit landscape irrigation to specific days a week during certain hours of the day for an allotment time period.	10%-15%	Suggested irrigation times: before 10AM and after 6PM (10mins/station)
	Prohibit the use of potable water for the irrigation of ornamental turf.		
	Prohibit the use of potable water for construction.	2%-4%	Voluntary at the discretion of the District Engineer
Level 4	All measures from previous shortage levels	17% - 30%	
	Limit landscape irrigation to specific days a week during certain hours of the day for an allotment time period.	15% - 20%	Suggested irrigation times: before 10AM and after 6PM (10mins/station)
	No New meters to provide construction water service shall not be issued	2%-4%	Voluntary at the discretion of the District Engineer
Water Service letters will be issued with the condition that permanent metered service to any newly created lot will be prohibited until restrictions are lifted.			
Level 5	All measures from previous shortage levels	34%-54%	
	Existing meters providing construction water service shall be removed.	2%-4%	
Level 6	All measures from previous shortage levels		
	No outdoor irrigation. Hand or drip irrigation is allowed only to preserve trees.		
	No new permanent meters shall be installed.		

Table 4-1: Demand Reduction Actions

PWCP

The Districts' PWCP outlines a moratorium for demand increase on new connections and the Districts' conservation rate surcharge when necessary.

Water Waste Ordinance

The Water Waste Ordinance found in Title 11 of the Code of Ordinances for Los Angeles County, Part 4 – Water Conservation Requirements for the Unincorporated Los Angeles County Area (11.38) outlines water prohibitions, irrigation prohibitions, leak prohibitions, prohibitions for car wash facilities and public eateries, and decorative fountains (County of Los Angeles 2015 Los Angeles County-Code of Ordinances. "Water Waste Ordinance").

Landscape irrigation prohibitions are enforced in all levels and become progressively restrictive in terms of allowable watering times, then days, then types of plants allowed. Runoff and water waste are always prohibited under the Water Waste Ordinance.

CII water use prohibitions are enforced with the Water Waste Ordinance. Eating establishments may serve drinking water only at customer request. Lodging establishments should wash linens daily only, upon customer request.

Use of water in ornamental fountains, ponds, lakes, or other similar-aesthetic features shall be prohibited unless the water is recirculated. This is outlined in the Water Waste Ordinance.

Expand Public Information Campaign

Outreach campaigns and public education play a crucial role in demand reduction. The Districts' Public Information Program includes several different methods to engage with customers, such as web-based publications, bill inserts, and public outreach events. The Districts also work closely with their wholesalers, West Basin and AVEK, to expand their public information and water conservation efforts.

Provide Rebates

The Districts provide rebates on plumbing fixtures and devices for items, such as high-efficiency clothes washers, weather-based sprinkler controllers, and rotary sprinkler nozzles. Rebates for landscape irrigation efficiency that includes removing grass and replacing it with drought-tolerant landscaping are also available to customers of the Districts through its Cash for Grass Program.

Decrease line flushing

At Level 1, the Districts will decrease line flushing activities and reduce fire-flow testing to an as-needed basis. These operations will temporarily be suspended until it is determined that the severity of the water supply condition may be reduced.

4.2 Supply Augmentation

Supply augmentation methods and other actions describe the Districts' method of acquiring additional water supply at corresponding shortage levels. Table 4-2 summarizes the Districts' supply increase actions by identifying the water shortage level that triggers the augmentation method in accordance to Section 10632(a)(4)(A).

Table 4-2 (DWR Table 8-3): Supply Augmentation and Other Actions

Shortage Level	Supply Augmentation Methods and Other Actions by Water Suppliers	How much is this going to reduce the shortage gap?	Additional Explanation or Reference
Level 1	No Action	N/A	
	Increase Groundwater Pumping	Varies	
	Stored Emergency Supply	Up to 40,000 AF	Pump Stored water
	Purchase Stored Emergency Supply	Up to 87,000 AF	Purchase Banked water
	Imported Water Emergency Supply	Varies	Use interconnections with other Agencies
level 2	No Action	N/A	
	Increase Groundwater Pumping	Varies	
	Stored Emergency Supply	Up to 40,000 AF	Pump Stored water
	Purchase Stored Emergency Supply	Up to 87,000 AF	Purchase Banked water
	Imported Water Emergency Supply	Varies	Use interconnections with other Agencies
Level 3	No Action	N/A	
	Increase Groundwater Pumping	Varies	
	Stored Emergency Supply	Up to 40,000 AF	Pump Stored water
	Purchase Stored Emergency Supply	Up to 87,000 AF	Purchase Banked water
	Imported Water Emergency Supply	Varies	Use interconnections with other Agencies
Level 4	No Action	N/A	
	Increase Groundwater Pumping	Varies	
	Stored Emergency Supply	Up to 40,000 AF	Pump Stored water
	Purchase Stored Emergency Supply	Up to 87,000 AF	Purchase Banked water
	Imported Water Emergency Supply	Varies	Use interconnections with other Agencies
Level 5	No Action	N/A	
	Increase Groundwater Pumping	Varies	
	Stored Emergency Supply	Up to 40,000 AF	Pump Stored water
	Purchase Stored Emergency Supply	Up to 87,000 AF	Purchase Banked water

	Imported Water Emergency Supply	Varies	Use interconnections with other Agencies
Level 6	No Action	N/A	
	Increase Groundwater Pumping	Varies	
	Stored Emergency Supply	Up to 40,000 AF	Pump Stored water
	Purchase Stored Emergency Supply	Up to 87,000 AF	Purchase Banked water
	Imported Water Emergency Supply	Varies	Use interconnections with other Agencies
<p>NOTES:</p> <p>a. Quantities shown indicate amounts available. Actual use will vary depending on shortage level and expected demands</p> <p>Supply Augmentation that require increase in pumping volumes is dependent upon available capacities at that time.</p> <p>Not all actions may be implemented/required at each shortage level. It is at the discretion of the District Engineer to decide which actions to implement depending on the shortage level.</p>			

Table 4-2: Supply Augmentation and Other Actions

The selection of the supply augmentation method will be determined on a real-time basis depending on the supply and demand assessment at the discretion of the Districts.

4.3 Operational Changes

In order to address water shortage response actions in this WSCP, the following operational changes can be implemented in response to water shortage levels. The Districts' operational changes include the following at all water shortage levels:

- *Customer notifications* – Convey water shortage messaging through the Districts' website, door hangers, monthly bill inserts, e-mail blasts, and text messaging alerts.
- *Customer Information System* – Increase monitoring, analysis, and tracking of customer water usage and rates. Business Operations staff will increase their reporting on customers in certain tiers and water usage will be monitored more closely.

More details and information on programs can be found in Section 8 of the Districts UWMP.

4.4 Additional Mandatory Restrictions

Additional mandatory restrictions, such as limitations on irrigation water use, car washing, and water feature restrictions, have been included in Table 8-2 in accordance to Section 10632(a)(4)(D).

More information can be found in the specific ordinances. The Water Conservation Regulation is found in Part 5 of the Rules and Regulations. The Water Waste Ordinance is found in Part 4 of Chapter 11 of the Code of Ordinances for Los Angeles County.

4.5 Emergency Response Plan

In the event of a catastrophe (earthquake, regional power outage, or any other emergency that results in a water supply interruption), the District will take the following measures to prevent water shortages: (1) use the emergency interconnections (District No. 29: Las Virgenes Municipal Water District/Los Angeles Department of Water and Power; District No. 40: Quartz Hill Water District/Palmdale Water District); (2) implement the WSCP; and (3) enforce the Water Waste Ordinance. In addition, the Districts also have an Emergency Response Plan (ERP), which was updated in 2021. The Districts maintain this ERP to address responding to catastrophic supply interruptions as well as other emergencies. The Districts also have back-up power available in the form of portable diesel, natural gas, and propane generator units for water supply facilities in order to continue supplying water to customers, communicating with the power company, activating emergency connections, continuing water quality monitoring, and issuing boil water advisories if necessary. In the event of an emergency, the Districts will implement its ERP.

The Districts' ERP also addresses scheduled and planned disruptions to supply. Such disruptions in supply will occur when demand is lowest (time of year) and when alternate supply is available.

The Districts utilize an emergency organizational structure and chain of command in response to all emergencies within or affecting its service area. The ERP defines the emergency management positions.

The Districts have also implemented a feature to contact customers of critical notifications via text messaging and e-mail, which allows all Districts customers to be reached within 90 minutes.

In an emergency event, response actions for all levels of the WSCP will be in place in addition to the Districts' ERP procedures. The ERP is not included in this document due to security reasons.

4.6 Seismic Risk Assessment and Mitigation Plan

The Districts have completed its own seismic risk assessment as part of the America's Water Infrastructure Act of 2018 (CWC Section 10632.5) through the Risk and Resilience Assessment (RRA). The RRA was completed by the Districts in 2020 and it includes a seismic risk assessment component for the Districts water supply facilities, such as wells, pump stations, and storage tanks. The RRA assesses the vulnerability of these facilities and provides a mitigation plan to address these vulnerabilities. Detailed information is found in the Districts' 2020 RRA, but it is not included as an Appendix because it is a privileged and confidential document.

The District has also considered seismic mitigation for its water supply from the SWP. The following discusses how DWR would mitigate seismic interruption to the SWP's water supply (District No. 40 2015 UWMP).

4.7 Shortage Response Action Effectiveness

To monitor the reduction in water usage during the implementation of this WSCP at any water shortage level, supply and demand data would be collected and analyzed more frequently by the Districts' Business Operations Unit. The Districts billing system and water meter readings are collected and billed on a bimonthly basis. The Districts are currently in the process of converting all water meters to an Advanced Metering Infrastructure (AMI) system. Once fully complete, this technology can allow the Districts to monitor near real-time water usage data and could track water usage more precisely. AMI data can be used to assist in quantifying water use reductions associated with the various response actions at different water shortage levels. Because the District has yet to complete the meter replacements and infrastructure needs for the AMI conversion, water savings cannot be directly quantified at this time.

For each shortage response action, estimates by what amount the gap was reduced in a quantitatively value were provided in Table 4-2 . Values correspond with the water shortage level percent reduction in supply.

Section 5: Communication Protocols

The Districts' communication plan will provide customers information regarding the WSCP, its implementation, and water shortage allocations/actions. The Districts will also coordinate with the Board of Supervisors and other key audiences (outlined below) to ensure efficient water management during water supply shortage levels. The communication plan strives to:

- Educate customers regarding
 - Water supplies and sources
 - Water shortage conditions
 - Local and State regulations
- Explain proposed actions and how those actions are to be implemented
- Motivate customers to increase conservation by:
 - Participating in water-saving programs/rebates
 - Following specific water-conservation guidelines
- Maintain open communication with key audiences and customers.

Customer specific information will include, but not be limited to:

- Current or predicted shortages
- Restrictions on water use
- Water-saving tips
- Water Conservation Surcharges
- Compliance and enforcement information
- Shortage response actions

In addition, as outlined in Section N of the PWCP, "each customer will be notified on his or her bill as to what the target quantity and the base quantity will be for the applicable billing period."

Collaboration with key audiences is an essential part of the success of the communication plan specifically during water shortage periods. The frequency and extent of the collaboration, outreach, and notification will increase with each increasing shortage level. The Districts' water conservation and water resources management staff regularly interact and coordinate with key audiences, including constituents and governing agencies to ensure outreach and notification efforts are consistent with the varying levels of drought periods.

Key audiences include, but are not limited to the following:

- Single-family homeowners and tenants
- Multi-family property owners and tenants
- Commercial/industrial/governmental businesses

- Homeowner Associations:
 - Zuma Mesa Property Owners
 - Horizon Hills Property Owners Association
 - Malibu La Costa Owners Association
- School Districts and other educational institutions
- Construction contractors
- Community based organizations and community councils
- State, Federal, and local representatives
 - State Water Resources Control Board
- General public
- Antelope Valley Watermaster
- Los Angeles County Board of Supervisors
- Internal Los Angeles County Public Works staff
 - Los Angeles County Waterworks District
- Media networks
- Local Water Supply Agencies, Cities, and other County Departments:
 - Los Angeles County Sanitation Districts
 - Big Rock Mutual Water Company
 - City of Lancaster
 - City of Palmdale
 - Palmdale Water District
 - AVEK
 - Quartz Hill Water District
 - City of Malibu
 - West Basin
 - Los Angeles Department of Water and Power
 - Santa Clarita Valley Water Agency
- Member agencies/Partnerships:
 - American Water Works Association
 - Association of California Water Agencies
 - Big Rock Mutual Water Company
 - California Water Efficiency Partnership
 - National Ground Water Association
 - Southern California Water Committee
 - Urban Water Institute, Inc.
 - WaterReuse Association
 - California Urban Water Conservation Council
- Additional Vendors:
 - General Pump Company

The following Communication strategies and outreach methods will be implemented during each of the water supply conditions:

Table 5-1 Communication Protocols				
Shortage Level	Percent Shortage Range	Communication Strategy	Customer Outreach Methods	Other Key Audiences Outreach Methods
1, 2, and 3	Up to 30%	<p>Provide updates on shortage conditions and any status changes.</p> <p>Promote available water conservation rebates and assistance.</p>	<p>Social media (Twitter), water-saving tips on the website (dpw.lacounty.gov/), customer e-mail blasts, bill inserts defining specific water target quantity, and community events.</p>	<p>Memos and e-mail communications to provide updated information about restrictions and conservation methods.</p>
4 and 5	Up to 50%	<p>Provide updates on shortage conditions and any status changes.</p> <p>Increase outreach.</p> <p>Increase promoting available water conservation rebates and assistance.</p>	<p>Social media (Twitter), water-saving tips on the website (dpw.lacounty.gov/), customer e-mail blasts, bill inserts defining specific water target quantity, and community events.</p>	<p>Memos and e-mail communications to provide updated information about restrictions and conservation methods.</p>
6	>50%	<p>Provide updates on shortage conditions and any status changes.</p> <p>Specialized outreach and agency communication.</p> <p>Water for essential use only.</p>	<p>Social media (Twitter), water-saving tips on the website (dpw.lacounty.gov/), customer e-mail blasts, bill inserts defining specific water target quantity, and community events.</p>	<p>Memos and e-mail communications to provide updated information about restrictions and conservation methods.</p>

Table 5-1: Communication Protocols

Section 6: Compliance and Enforcement

6.1 Relief from Compliance/Violations/Hearings

The information required by CWC Section 10632 is included in Sections M, O, and P of the Districts' PWCP.

Section 7: Legal Authorities

The description of the legal authority that empowers the Districts to implement and enforce the PWCP is described in Section C of the PWCP.

Section 8: Financial Consequences of the Water Shortage Contingency Plan

The implementation of the WSCP could result in a significant short-term reduction in the Districts revenue. The Districts sources of funding are structured into four categories: Service Charge, Facility Surcharge, Water Quantity Charge, and Standby Charge. The Service Charge is a fixed connection charge based on the size of the meter. The Facility Surcharge and Water Quantity Charge are based on the actual quantity of water used. The Standby Charge is assessed on all properties and is included on the property owner's tax bill. A reduction in water sales will affect only the revenues from the Water Quantity Charge and Facility Surcharge. The Districts' Service Charge and Standby Charge are intended to provide adequate revenue for the Districts to ensure continuous operations and maintenance functions regardless of reductions in water sales. However, if water sales do affect the operation and maintenance revenues, the Districts have the following measures to reduce such an impact:

- Extra revenues contributed by the conservation surcharge from customers who do not comply with the conservation targets.
 - Implementing conservation surcharges can be an effective way to mitigate falling revenues due to reduction in water use. In addition, conservation surcharges have been shown to reduce water demand. Implementation of surcharges are described in detail in the Districts' PWCP.
 - The conservation target is a percentage of the quantity used during a "base" billing period set by the Board of Supervisors. Water use up to the target quantities shall be billed at the established quantity charge or normal charge. Water use exceeding target quantities shall be subject to conservation surcharges in addition to the established quantity charge or normal charge.
- Delayed capital improvement projects if necessary, the Board of Supervisors can authorize the transfer of funds for capital improvement projects from the Districts' Accumulative Capital Outlay Fund to the Districts' General Fund.
- Increased water rates. In the event the first two options are not sufficient, the Board of Supervisors would have to consider increases to water rates to meet operational needs. Any such increase would have to be approved by the Board of Supervisors pursuant to the Proposition 218 and Public Hearing process.

Section 9: Monitoring and Reporting

The Districts intends to monitor the effectiveness of each shortage response action in the future by collecting data from customer meters. Data from the Districts' water supply and demand is collected and analyzed on a bimonthly basis and readings are compiled into annual summaries. The base quantity of a customer with a meter size of one and one-half (1-1/2) inches or larger shall be determined by the amount of water used on the customer's premises during the corresponding billing period of a base period to be defined by the Board of Supervisor. For meter sizes of one (1) inch or less, a base quantity shall be the average of the water usage for all similar sized meters during the corresponding billing period of a base period to be defined by the Board of Supervisors. Excessive water use is reported on the customer's bimonthly bills and is compared to target conservation goals as well as compared to normal year conditions. If water conservation goals are not met, the Districts may implement additional shortage response actions.

Section 10: Water Shortage Contingency Plan Refinement Procedures

The WSCP will be reevaluated and refined every 5 years in accordance with the UWMP, or at the discretion of the Districts. The evaluation will include assessing the effectiveness of the water shortage response actions for each demand level. The evaluation will compare the expected percent demand reduction against actual reductions, as well as assessing the communication and outreach protocols and refining the WSCP accordingly.

Section 11: Special Water Distinction Feature

Per Section 10632(b) of the CWC, the Districts are required to "analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas." It is the Districts' policy that recycled water be used for nonpotable uses wherever its use is financially and technically feasible and consistent with legal requirements. As such, nonpool and nonspa water features may use or be able to use recycled water when it is available, whereas pools and spas must use potable water for health and safety reasons.

Response, enforcement, and monitoring actions for pools and spas are consistent with the other potable water end uses discussed in this WSCP. As for nonpool and nonspa water features, such as ornamental fountains, ponds, lakes, or other similar-aesthetic features, the use of water is prohibited unless the water is recirculated as outlined in this WSCP and Chapter 11.38 of the Code of Ordinances of the Los Angeles County.

To satisfy the requirements set forth in Section 10632(b) of the CWC, the following water features have been analyzed and defined:

Artificial Lake: A human-made lake, pond, lagoon, or other body of water that is used wholly or partly for landscape, scenic, or noncontact recreational purposes. (Chapter 6 of the Rules and Regulations).

Ornamental Fountains: An ornamental structure in a pool or lake from which one or more jets of water are pumped into the air. (General Definition).

11.1 Los Angeles County Waterworks District No. 29, Malibu, and the Marina del Rey Water System

The use of recycled water within District No. 29 is currently limited to landscape irrigation at Pepperdine University. However, District No. 29 is committed to working with the City of Malibu to identify creative solutions for using recycled water when it becomes available in the area consistent with existing regulations and subject to available funding.

11.2 Los Angeles County Waterworks District No. 40, Antelope Valley

The use of recycled water within District No. 40 is currently limited to landscape irrigation at institutional locations, refilling lakes at Apollo Park, and commercial uses. However, District No. 40 does not produce or treat recycled water, nor does it operate the recycled water distribution system. The Los Angeles County Sanitation District Nos. 14 and 20 produce and treat the recycled water while the Cities of Lancaster and Palmdale operate the recycled water distribution system. District No. 40 currently does not plan on using recycled water in the future.

Section 12: Plan Adoption, Submittal, and Availability

Since the early 1980s, Section 10632 of the CWC has required urban water suppliers to prepare and adopt a WSCP as part of its UWMP. The goal of developing a WSCP is to prepare in advance a response for various water shortage conditions that could be caused by dry years, natural forces, system interruptions or failure, chronic maintenance deferral, dropping groundwater levels, or regulatory action.

Prior to adoption of an UWMP and subsequent WSCP, Section 10642 of the CWC requires that the water supplier make the plans available for public inspection and hold a public hearing. Notice of the time and place of the hearing must be published pursuant to Government Code 6066, which states that the publication of the notice shall be once a week for 2 successive weeks with at least 5 intervening days. The notice must also be provided to any city within which the supplier provides water supplies.

The public hearing was held pursuant to Section 10642 of the CWC. Notice of the time and place of the hearing were published pursuant to Government Code 6066 and were provided to the City of Malibu, as well as the Cities of Lancaster and Palmdale. Following review and approval from the County of Los Angeles County Counsel, the Board of Supervisors adopted the resolution approving the 2020 UWMP for District Nos. 29 and 40 and the WSCP. The Notices of Public Hearing were as to form.

Following adoption from the Board of Supervisors, the 2020 UWMP for District Nos. 29 and 40 and the WSCP were submitted to DWR for review and approval. Upon approval, DWR will submit reports to the State Legislature summarizing the status of the plans. This WSCP can be periodically amended independently of the UWMP on an as-needed basis. If an amendment is needed to the WSCP, the same process of review, public hearings, approval, and adoption will be followed.

Lastly, the submitted and approved plans will be available to the public and the Cities of Malibu, Lancaster, and Palmdale on the Districts' website pursuant to Section 10635(c) of the CWC no later than 30 days after they have been submitted to DWR.

Districts' Website: (<https://dpw.lacounty.gov/wwd/web/Publications/WMP.aspx>)

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