

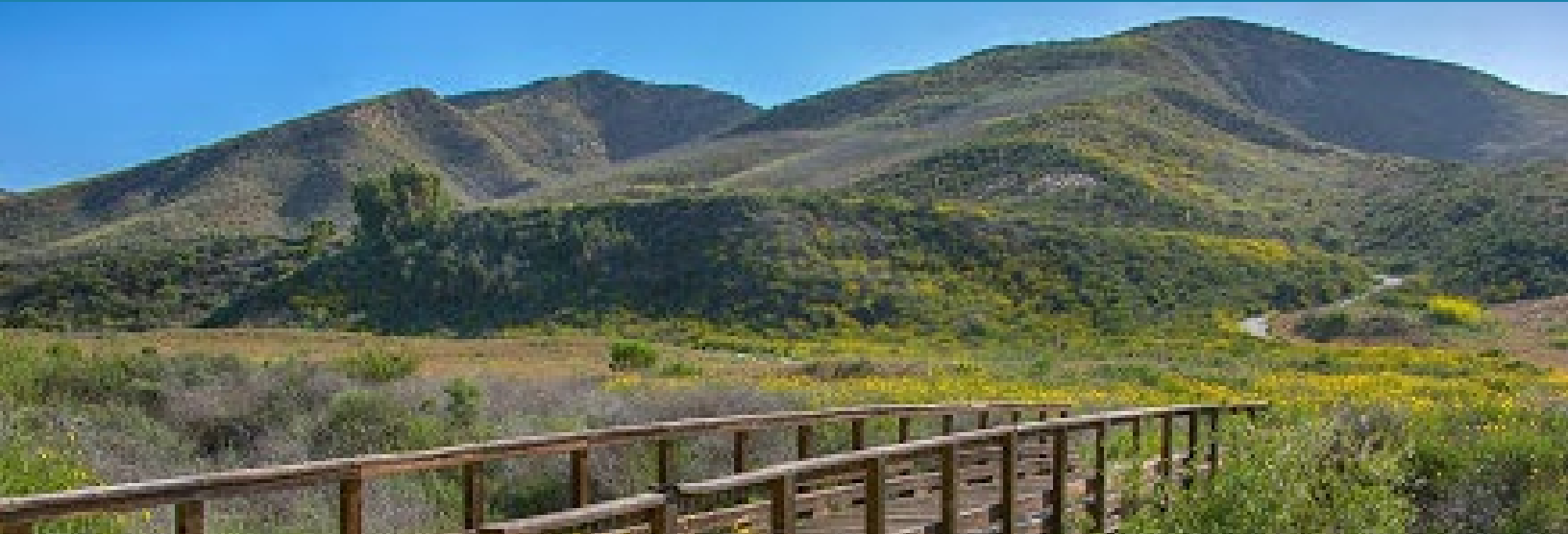
1 June 2021

Job #: 2044237\*00

# 2020 Water Shortage Contingency Plan

Waterworks District No. 8

City of Simi Valley



**City of Simi Valley**  
**Waterworks District No. 8**



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**2020 Water Shortage  
Contingency Plan**

**Waterworks District No. 8  
City of Simi Valley**

June 1, 2021

Prepared for

**Waterworks District No. 8  
City of Simi Valley**

500 West Los Angeles Avenue  
Simi Valley, California 93063

KJ Project No. 2044237\*00



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- B WWD8 Adoption of the 2020 WSCP
- C UWMP Guidebook Standardized Tables



## List of Acronyms

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Act	Urban Water Management Planning Act
BMPs	Best Management Practices
Calleguas	Calleguas Municipal Water District
DDW	State Water Resources Control Board Division of Drinking Water
District	Waterworks District 8
DMMs	Demand Management Measures
DWR	Department of Water Resources
ENSO	El Niño Southern Oscillation
EOC	Emergency Operations Center
EPA	Environmental Protection Agency
ERP	Emergency Response Plan
ET	evapotranspiration
GPCD	gallons per capita per day
HCF	hundred cubic feet
IWOP	Imported Water Outage Protocol (Calleguas)
MHMP	Multi-Hazard Mitigation Plan
MWD	Metropolitan Water District of Southern California
NIMS	National Incident Management System
PRV	Pressure reducing valve
RRA	Risk Resilience Assessment
SEMS	Standard Emergency Management System
SWP	State Water Project
UWMP	Urban Water Management Plan
VCMC	Ventura County Medical Center
VUSD	Ventura Unified School District
WSAP	Metropolitan Water District's Water Shortage Allocation Plan
WSCP	Water Shortage Event Contingency Plan
WSDM	Metropolitan Water District Water Supply and Drought Management Plan
WWD8	Waterworks District 8

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### DWR Checklist Table for WSCP

Water Code Section	Summary as Applies to UWMP	2020 WSCP Location
<b>Subject: Water Shortage Contingency Planning   2020 UWMP Guidebook Location: Chapter 8</b>		
10632(a)	Provide a water shortage contingency plan (WSCP) with specified elements below.	This WSCP is a stand-alone document and included in Appendix J of the UWMP
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.	WSCP Section 2, pages 2-1 to 2-5, Tables 2-1 and 2-2
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.	WSCP Section 2, pages 2-1 to 2-5, Tables 2-1 and 2-2
10632(a)(3)(A)	Define six standard water shortage levels of 10, 20, 30, 40, 50 percent shortage and greater than 50 percent 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.	WSCP Section 4, pages 4-1 to 4-4, Table 4-1 and Figure 4-1
10632(a)(3)(B)	Suppliers with an existing water shortage contingency plan that uses different water shortage levels must cross reference their categories with the six standard categories.	WSCP Section 4, page 4-1, Table 4-1 and Appendix A
10632(a)(4)(A)	Suppliers with water shortage contingency plans that align with the defined shortage levels must specify locally appropriate supply augmentation actions.	WSCP Section 4.1, page 4-1, Table 4-1 and Appendix A
10632(a)(4)(B)	Specify locally appropriate demand reduction actions to adequately respond to shortages.	WSCP Section 5.2, pages 5-2 and 5-3 Table 5-2
10632(a)(4)(C)	Specify locally appropriate operational changes.	WSCP Section 5.3, pages 5-3 to 5-5 Table 5-3
10632(a)(4)(D)	Specify additional mandatory prohibitions against specific water use practices that are in addition to state- mandated prohibitions as appropriate to local conditions.	WSCP Section 5.5, pages 5-9 and 5-10 Table 5-3
10632(a)(4)(E)	Estimate the extent to which the gap between supplies and demand will be reduced by implementation of the action.	WSCP Section 5.6, pages 5-10 to 5-15 Table 5-5
10632(a)(5)(A)	Suppliers must describe that they will inform customers, the public and others regarding any current or predicted water shortages.	WSCP Section 6, pages 6-1 and 6-2 Table 6-1
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.	WSCP Section 6, pages 6-1 and 6-2 Table 6-1
10632(a)(7)(A)	Describe the legal authority that empowers the supplier to enforce shortage response actions.	WSCP Section 4.4, page 4-4
10632(a)(7)(B)	Provide a statement that the supplier will declare a water shortage emergency per Water Code Chapter 3.	WSCP Section 4.4, page 4-4
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.	WSCP Sections 1.5 and 1.4, pages 1-2 and 1.3, Section 2.5.1, page 2-5
10632(a)(8)(A)	Describe the potential revenue reductions and expense increases associated with activated shortage response actions.	WSCP Section 8.1, pages 8-1 to 8-2, Table 8-1
10632(a)(8)(B)	Provide a description of mitigation actions needed to address revenue reductions and expense increases associated with activated shortage response actions.	WSCP Section 8.2, pages 8-2 to 8-4, Tables 8-2 and 8-3
10632(a)(8)(C)	Describe the cost of compliance with Water Code Chapter 3.3: Excessive Residential Water Use During Drought.	WSCP Section 8.3, page 8-4, Table 8-4
10632(a)(9)	Retail suppliers must describe the monitoring and reporting requirements and procedures that ensure appropriate data is collected, tracked, and analyzed for purposes of monitoring customer compliance.	WSCP Section 9, pages 9-1 and 9-2, Table 9-1

Water Code Section	Summary as Applies to UWMP	2020 WSCP Location
10632(a)(10)	Describe reevaluation and improvement procedures for monitoring and evaluation the water shortage contingency plan to ensure risk tolerance is adequate and appropriate water shortage mitigation strategies are implemented.	WSCP Section 1.8, page 1-4, Section 4.4, page 4-4
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.	WSCP Section 5.2, pages 5-2 and 5-3, Table 5-2, Section 5.5, page 5-9, and Appendix A



## Executive Summary

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This Plan addresses the requirements in the California Water Code Section 10632, which requires that every urban water supplier shall prepare and adopt a Water Shortage Contingency Plan (WSCP) as part of its Urban Water Management Plan (UWMP). This WSCP serves as a guide for the intended actions by Ventura County Waterworks District No. 8 (WWD8, District) during water shortage conditions to improve preparedness for droughts and other impacts on water supplies by describing the process used to address varying degrees of water shortages.

WWD8 has the authority to establish water shortage contingency plans to prepare to respond to water supply reductions due to drought conditions or unforeseen emergencies or supply disruptions. The Board of Directors of Ventura County Waterworks District No. 8 (Board), who also serve as Council Members for the City of Simi Valley, review and approve all water shortage contingency planning policies and programs including provisions to meet DWR 2020 Urban Water Management Planning Act and California Water Code regulations.

As a retailer of Calleguas Municipal Water District (Calleguas), who is a member agency of the Metropolitan Water District of Southern California (MWD), it is imperative for coordinated planning of water resources.

MWD's 2020 WSCP utilizes the Water Surplus and Drought Management Plan (WSDM Plan) and Water Supply Allocation Plan (WSAP) to guide its response to drought and intended actions during water shortage conditions. The WSCP outlines what water shortage management strategies or actions MWD will take when demand is likely to exceed supplies, such as utilizing surface and groundwater storage supplies, ceasing other deliveries, calling for demand reductions, and purchasing additional water. If supplies are still not sufficient, the WSAP is implemented. The WSAP provides the methodology by which supply will be allocated to each of MWD's retail and wholesale customers, and establishes surcharges for excess water use.

Calleguas' 2020 WSCP is consistent with MWD's WSDM Plan and WSAP. As supplies from MWD are reduced, Calleguas will take action to obtain additional supplies balanced with retailer demand reductions. Calleguas Ordinance No. 12 gives that agency the authority to implement actions and strategies to allocate supply depending on the supply reductions from MWD. Supply shortage conditions result from a unique mix of local, regional, and state-wide issues. The Calleguas WSCP identifies the strategy to manage shortages, and provides the flexibility to identify the needed supply or demand reduction percentages.

The intent of WWD8's 2020 WSCP is to follow MWD's and Calleguas' WSCPs. Coordination with wholesale agencies will allow WWD8 to account for shortages not only in their supplies, but in the supplies of Calleguas and MWD as well. WWD8's 2020 WSCP is included as an appendix to its 2020 UWMP, which will be submitted to the Department of Water Resources (DWR) by July 1, 2021. However, this WSCP was developed to serve as a stand-alone document, and can therefore be amended as needed without amending the UWMP.



## **Section 1: Introduction**

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This plan documents the Ventura County Waterworks District No. 8 (WWD8, District) Water Shortage Contingency Plan (WSCP) and Emergency Response Plan (ERP) per requirements of the Urban Water Management Act, Section 10632 of the California Water Code.

### **1.1 Policy of Water Efficiency**

The Simi Valley Municipal Code, Title 6 Sanitation and Health, Chapter 11 Ventura County Waterworks District No. 8 Water Conservation Program is included in Appendix A (current version as of Nov 25, 2020). Chapter 11 constitutes the District's Water Shortage Contingency Plan, which was developed through a series of ordinances approved by the WWD8 Board of Directors that provides a framework and guides District actions in the event of a water shortage emergency. Chapter 11 includes voluntary and mandatory stages to address a reduction in water supply that exceeds 50 percent. Prohibitions, penalties and financial impacts of shortages have been developed by the District and are summarized in Chapter 11 of the municipal code.

Governor Brown's Executive Order B-37-16, and the 2017 Framework Report entitled *Making Water Conservation a California Water of Life* established a new foundation for long-term improvements in water conservation and drought planning in California to adapt to climate change and the resulting longer and more intense droughts. Conservation as a way of life is central to WWD8's policy for water efficiency.

### **1.2 Declaration of Purpose of WSCP**

WWD8 has developed this WSCP to provide guidance if triggering events occur — whether from reduced supply, increased demand, or an emergency declaration — and identify corresponding actions to be taken during the various stages of a water shortage. The WSCP includes voluntary and mandatory stages which are intended to be fair to all water customers and users while having the least impact on business, employment and quality of life for residents.

The purpose of this WSCP is to:

1. Monitor and compare anticipated supplies and demands consistent with Water Code Section Water Code Section 10632(a)(2);
2. Keep water use within supply and delivery capability;
3. Define procedures to be used when supply cannot meet demand;
4. Familiarize all of WWD8's customers (residential, commercial, industrial, institutional/governmental and others) with procedures to be implemented when voluntary or mandatory water restrictions are in effect.

Using the procedures and protocols described in Section 2 (the Annual Assessment), the WWD8 Director of Public Works, or designated representative, shall keep the WWD8 Board of Directors informed of the conditions of water supply, system usage, delivery capacity, and the estimated water shortage stage (if any) and the enactment of initial restrictions or change to an appropriate stage in the WSCP.

### 1.3 Reduced Water Use During Water Shortage Events

This WSCP and other legal actions by WWD8 establish changes that may be imposed on water users during Water Shortage Events. Such events may be a lengthy drought that has limited imported water supplies, or an emergency condition brought about by an earthquake, fire, or other interruption in water delivery to the system. These actions are discussed in later sections of this WSCP.

### 1.4 Coordination with Other Agencies

WWD8 currently has three primary sources of water supply, as described in the 2020 UWMP:

1. **Imported water from Calleguas Municipal Water District:** Approximately 99 percent of water consumed in WWD8 service area is imported water. Under normal operations imported water received by WWD8 is exclusively State Water Project (SWP) water supplied by Calleguas Municipal Water District (Calleguas). WWD8 receives water from Calleguas based upon availability. Through wheeling agreements and temporary interconnections Calleguas can receive Colorado River water.
2. **Groundwater from the Gillibrand Basin:** WWD8 pumps from the Gillibrand Basin, a sub-basin to the Simi Groundwater Basin, using two wells (Wells 31D and 32) to meet less than 1% of water demand. The Gillibrand Basin is not adjudicated; however, a Groundwater Management Plan (Geoscience, 2007) has been developed and both users in the Basin, WWD8 and the P.W. Gillibrand Company, have agreed to abide by the estimated sustainable yield of 1,450 AFY evaluated as part of the plan (TODD, 2016).
3. **Recycled water:** WWD8 currently delivers recycled water from the Simi Valley Water Quality Control Plant to the Simi Valley Landfill, Simi Valley Public Services Center and one commercial property for irrigation. WWD8 is not currently planning to expand the existing recycled water distribution system beyond the existing use of 50 to 70 AFY of recycled water (approximately 0.5% of water consumed).

As a retailer of Calleguas, who is a member agency of the Metropolitan Water District of Southern California (MWD), it is imperative for coordinated planning of water resources. This will allow WWD8 to account for shortages not only in their supplies, but in the supplies of Calleguas and MWD.

WWD8 also sells water to Ventura County Waterworks District 17 and Las Virgenes Municipal Water District.

Coordination also will include state and county agencies within and adjacent to the WWD8 service area, such as County of Ventura, City of Simi Valley (City), Golden State Water Company, Las Virgenes Municipal Water District, local schools, state parks and others. In addition, WWD8 will also coordinate with land use jurisdictions in the City and County of Ventura, as-appropriate.



## 1.5 Coordination with City Departments and Other Entities

WWD8 coordinates with City departments and other entities to ensure that significant water users, such as City facilities and large parks, are being operated in a water efficient manner. Examples of coordination activities include:

- The City's Water Conservation and Energy Efficiency Programs include coordination with multiple City departments and integration for wide range of facilities.
- The City's Public Works Environmental Compliance staff coordinate with the Simi Valley Unified School District, by providing educational programs to teach students and school managers about water supply issues and how to reduce water usage.
- Periodically, key staff from the Department of Environmental Services, Public Works, City Manager's Office and WWD8 meet together and share information on near-term and long-term changes in supply and demand for water supply and wastewater treatment, differentiated into areas within the WWD8 and Golden State Water company service areas.
- Rancho Simi Parks and Recreation District, formed in 1961 for the specific purpose of providing parks and recreation activities to the community. Rancho Simi Parks and Recreation District partners with WWD8 to review and reduce the irrigation of over 50 parks in the City, two golf courses and other open space areas.

## 1.6 Plan Preparation, Adoption, Submittal and Availability

WWD8 began preparation of this WSCP in November 2020. The public hearing for the WSCP was noticed in 2 local newspapers (Ventura County Star), as prescribed in Government Code 6066, which included the time and place of the hearing (*Tentatively **May 17, 2021** at the City of Simi Valley City Hall, 2929 Tapo Canyon Road*), as well as the location where the plan was available for public inspection (on the City's website). Interested parties, including other local agencies, were notified of the public hearing.

The final draft of the WSCP was adopted by the Board of Directors of the Ventura County Waterworks by Resolution No. 2021-0XX (provided in Appendix B) and was submitted to the Department of Water Resources (DWR) within 30 days of approval. Additionally, the plan will be made available for public review per the requirements of the Water Code.

Starting in 2020, urban water suppliers are required to report and submit information related to the Water Shortage Contingency Plan in standardized tables developed by DWR. These standardized tables are provided as Appendix C of this document.

## 1.7 Relationship to the Urban Water Management Plan

Water Code Section 10632(a) requires that every urban water supplier prepare and adopt a WSCP as part of its UWMP. While the water shortage contingency plan is a stand-alone document it is updated and adopted in concert with the UWMP. The WSCP is informed by the analysis of water supply reliability, described in Section 6 of the UWMP, which presents the reliability assessment for the WWD8 service area during a normal water year, single dry year and multiple dry years.

The reliability of WWD8's supply is highly dependent on Calleguas and MWD cutbacks during periods of drought. As shown in Table 1-1 (from Draft UWMP, subject to revision), in the near term (2021 to 2025) the total anticipated supplies are greater than the anticipated gross water use demands.

**Table 1-1: Near Term Water Supply Reliability Assuming 5-Year Drought**

	2021	2022	2023	2024	2025
Gross Water Use	19,697	20,258	20,820	21,382	21,943
Total Supplies	20,618	21,353	22,087	22,822	23,557
Surplus/Shortfall w/o WSCP Action	921	1,095	1,267	1,440	1,614
<b><i>Planned WSCP Actions (use reduction and supply augmentation)</i></b>					
WSCP - supply augmentation benefit	0	0	0	0	0
WSCP - use reduction savings benefit	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Revised Surplus/(shortfall)	0	0	0	0	0
Resulting % Use Reduction from WSCP action	0%	0%	0%	0%	0%

Reformatted from UWMP Guidebook, Table 7-5 Five-Year Drought Risk Assessment Tables to address Water Code Section 10635(b)

## 1.8 Water Shortage Contingency Plan Refinement Procedures

WWD8 will convene the following departmental staff as needed to re-evaluate and improve procedures for systematically monitoring and evaluating the functionality of the WSCP in order to ensure shortage risk tolerance is adequate and appropriate water shortage mitigation strategies are implemented as needed:

- Engineering Staff
- Administrative Staff
- Operational Staff

The WSCP will be reviewed, revised and refined as appropriate and needed, following significant changes to WWD8's supply portfolio or significant changes to the water allocation plans of its supply agencies (e.g., Calleguas or MWD), but no less than every 5 years. The District Engineer will have the authority to approve changes in the WSCP.

## **Section 2: Annual Water Supply and Demand Assessment Procedures**

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New provisions in Water Code Section 10632.1 require that an urban water supplier such as WWD8, conduct an annual water supply and demand assessment (“Annual Assessment”), on or before July 1 of each year, to be submitted to DWR. An urban water supplier that relies on imported water from the State Water Project or the Bureau of Reclamation shall submit its Annual Assessment within 14 days of receiving its final allocations, or by July 1 of each year, whichever is later. The requirement to perform the Annual Assessment begins in July 2022. The procedures for performing the Annual Assessment are to be detailed in an urban suppliers’ Water Shortage Contingency Plan.

Droughts occur with unpredictable frequency, intensity and duration. Developing and maintaining a healthy water supply portfolio to serve its customers has always been an ongoing WWD8 priority, and the District wants to be prepared for drought and water shortages. WWD8 regularly monitors its water supplies and demands. The City of Simi Valley planning department calculates growth due to proposed development projects, while the WWD8 calculates the anticipated increase in water demand and then evaluates the impact on the current and future water supply. Water demands are reported to Calleguas, who supply approximately 99% of the District’s potable water. Calleguas, as an urban water wholesaler, will have defined actions to assess annual water supply and demand for retailers.

Currently the WWD8 Water Conservation Program Municipal Code requires adoption of a WWD8 Resolution to declare a water supply shortage level. Water supply projections and hydrologic conditions are significant components in deciding when a drought response is needed. The amount of the water supply shortage contributes to the severity of drought declared and the necessary level of response from WWD8 and customers.

The Annual Water Supply and Demand Assessment procedures, detailed in this section, will be used to determine if a water shortage is to be declared by the WWD8 Board of Directors.

### **2.1 Timeline for Conducting the Annual Assessment**

Table 2-1 provides targets for performing the Annual Assessment and outlines actions for a normal year and one year of drought. By starting to plan in December, WWD8 will get a snapshot of conditions and can start lining up the resources to mitigate supply and start outreach to customers to manage demand. Major actions are proposed in February, when an initial estimate of supply is made and compared to demand. A final annual assessment is proposed in May.

**Table 2-1: Timeline for Decision Making Process to Perform Annual Assessment.**

Target Date	Action
<b>Dec-Jan</b>	<ul style="list-style-type: none"> <li>• Monitor supply sources – review MWD weekly supply reports</li> <li>• Monitor demand trends</li> </ul>
<b>Feb</b>	<ul style="list-style-type: none"> <li>• Confirm anticipated weather (e.g., National Weather Service Climate Prediction Center, La Niña, US Drought Seasonal Outlook, Ventura County Watershed Protection District</li> <li>• Review MWD weekly supply reports</li> <li>• Confirm State Water Project (SWP) initial allocation</li> <li>• Prepare initial assessment of supplies (<i>Supply Table 1</i>)</li> <li>• Make initial assessment of unconstrained demand (<i>Demand Tables 1, 2, 3</i>)</li> <li>• Make initial estimate of shortage</li> </ul>
<b>Mar</b>	<ul style="list-style-type: none"> <li>• Review MWD weekly supply reports</li> <li>• Coordinate with Calleguas</li> </ul>
<b>Apr</b>	<ul style="list-style-type: none"> <li>• Start public outreach</li> <li>• Identify supplier efficiency actions</li> <li>• Confirm current SWP supply allocation</li> <li>• Coordinate with Calleguas to confirm assessment of supplies and identify any additional supply mitigations</li> <li>• Complete Draft Annual Assessment</li> <li>• Coordinate with neighboring retail water agencies and land use agencies regarding any necessary drought messaging</li> </ul>
<b>May</b>	<ul style="list-style-type: none"> <li>• Continue public outreach</li> <li>• Update Annual Water Assessment</li> <li>• Finalize Annual Water Assessment and submit to DWR</li> </ul>
<b>Jun-Sept</b>	<ul style="list-style-type: none"> <li>• Continue public outreach</li> <li>• If necessary, Board will adopt a resolution declaring a water shortage</li> <li>• WWD8 implement supply mitigations and demand reduction actions for water shortage stage</li> <li>• Monitor customer response to water shortage messaging and other actions</li> </ul>

## 2.2 Factors Affecting Demand and Supply

Weather affects the WWD8 in several ways. For many of the supplies the effects of weather are seen over the long-term and are reflected in snowpack and reservoir levels. To monitor factors affecting supply, WWD8 will closely monitor guidance and messaging from DWR, MWD, and supplier Calleguas. Weather may impact local resources supply in the near-term. However, WWD8's local resources are a minimal portion of the potable water supply. WWD8 can also look for weather patterns to estimate potential changes in customer demand.

- Potential for La Niña. ENSO (El Niño Southern Oscillation) is the warming and cooling of the ocean water along the Equator in the Eastern Pacific Ocean near South America. The warm phase is called El Niño and the cold phase is called La Niña. When the Eastern Pacific Ocean is 0.5 degrees Celsius above normal for 5 consecutive 3-month average periods, an El Niño is declared. When the Eastern Pacific Ocean is 0.5 degrees Celsius below normal for 5 consecutive 3-month average periods, a La Niña is declared. The El

Niño and La Niña are declared as Weak, Moderate, or Strong depending on how far from normal the water temperature gets. When the temperature is above 1.5 degrees Celsius, it is declared as strong. When the temperature is above 1.0 degrees Celsius, it is declared as Moderate. When the temperature is above 0.5 degrees Celsius, it is declared as Weak. The effect on Ventura County trends to be wetter with El Niños and drier with La Niñas. The National Weather Service Climate Prediction Center provides information on potential for La Niña conditions.

- US Drought Information Seasonal Outlook. The National Weather Service Climate Prediction Center provides information geographically on drought conditions and categorizes geographies as “Drought Persists”, “Drought Remains but Improves”, “Drought Removal Likely”, and “Drought Development Likely”.
- Department of Water Resources, California Data Exchange Center, Snow Water Equivalent. DWR data provides the average snowpack as of April 1<sup>st</sup> and percent of normal for this date. Imported water supplies are significantly affected by Sierra Mountains snowpack that replenish reservoirs connected to the State Water Project.
- Ventura County Watershed Protection District automated rainfall data by specific weather station location. Rainfall data may inform WWD8 demand trends.

## 2.3 Current Year Unconstrained Demand

DWR guidance for the Annual Assessment is to consider the expected water use in the upcoming year, based on recent water use, and before any projected response actions that a supplier may trigger under its Water Shortage Contingency Plan.

### 2.3.1.1 Land Use

In order to evaluate water demand, the City of Simi Valley Environmental Services Department, Planning Division, on behalf of WWD8, will examine current and projected land uses.

The current land use will comprise of residential and non-residential developments constructed through the end of the recent calendar year. The projected land uses will be based on the approved general plan (City of Simi Valley, 2012). A summarized total of existing land use within WWD8’s service area will be developed. The water demand will be calculated based on the summarized total of existing land use and design criteria set forth in WWD8’s Water Design and Construction Standards (City of Simi Valley, 2021).

The City of Simi Valley maintains a database of projects that are in the City’s planning process. The City will evaluate the database for projects that are either under Construction or have Planning Commission approvals. In coordination with City of Simi Valley Environmental Service, Planning Division, WWD8 will create a table of the “Under Construction and Approved Projects” to determine the anticipated to utilize water demand in the next 48 months.

### 2.3.1.2 Current Demand

WWD8 will create a table that will summarize the total water consumption (potable, recycled, and untreated) for each consumption category within the service area for the most recent complete calendar year, or on a 5-year or 10-year average, by month (*Demand Table 1*). Based on

anticipated weather, WWD8 may adjust *Demand Table 1* to assume an increase in current demands.

### 2.3.1.3 Potential Demand

WWD8 will create a table showing anticipated demands from “Under Construction and Approved Projects” (*Demand Table 2*). The calculations in *Demand Table 2* will use the most recently developed demand factors inclusive of water loss and including a contingency to account for annual demand variations that are likely to occur.

### 2.3.1.4 Total Near-Term Demands

Near-term water demands (*Demand Table 3*) will be the sum of the demands reflected in *Demand Table 1* plus *Demand Table 2*.

## 2.4 Assessing Supply in Current Year and One Dry Year

WWD8 will evaluate the local water sources available including: SWP supplies from Calleguas, extraction from the Gillibrand Groundwater Basin (a sub-basin to the Simi Groundwater Basin), and Recycled Water. Table 2-2 summarizes the factors to be considered.

**Table 2-2: Annual Assessment of Supply**

Source	Factors to be Evaluated in Current Year	Establishing Supply in Assumed Subsequent Dry Year
SWP Water (Calleguas) 99% of supply	<ul style="list-style-type: none"> <li>What is anticipated SWP Allocation for current calendar year</li> <li>Any constraints on supply due to infrastructure or water quality</li> <li>Any constraints on wheeling water to the WWD8 system</li> <li>Calleguas WSCP Actions/ MWD Water Supply Allocation Plan</li> </ul>	<ul style="list-style-type: none"> <li>What is anticipated SWP dry year allocation</li> <li>Any constraints on supply due to infrastructure or water quality</li> <li>Any constraints on wheeling water to the WWD8 system</li> </ul>
Gillibrand Groundwater Basin (a sub-basin to the Simi Groundwater Basin)	<ul style="list-style-type: none"> <li>Regulatory limitations</li> <li>Annual extractions past 10-years</li> <li>Any constraints on supply due to infrastructure or water quality</li> <li>Consider if supply would be managed differently if it is known subsequent year will be dry year</li> </ul>	<ul style="list-style-type: none"> <li>Regulatory limitations</li> <li>Annual extractions past 10-years</li> <li>Any constraints on supply due to infrastructure or water quality</li> </ul>
Recycled Water	<ul style="list-style-type: none"> <li>What is current annual recycled water production capability</li> <li>What is current annual demand + new demand occurring in current calendar year</li> </ul>	<ul style="list-style-type: none"> <li>What is current annual recycled water production capability</li> <li>What is current annual demand + new (18 months) demand</li> </ul>

Current Calendar Year is assumed to be the year in which the assessment is performed. If the annual assessment is due in July 2021, the data would project conditions from July 2021 to Dec 2021 (current year) and Jan 2022 to Dec 2022 (subsequent dry year).

Using Table 2-2 as a guide, WWD8 will develop a summary of each water source available in the upcoming year assuming the subsequent year will be a dry year. WWD8 will develop *Supply Table 1*, in which a quantified summary of each anticipated supply source is provided for the upcoming year, by month, assuming the subsequent year is a dry year.

## **2.5 Assessing Water Supply Reliability in the Annual Assessment**

WWD8 will compare *Supply Table 1* and *Demand Table 3* and determine if a supply shortage is anticipated, the level of shortage, and prepare if necessary to implement its water shortage contingency plan.

### **2.5.1 Coordination with Cities and Counties**

Should the Annual Assessment indicate a water shortage, the District will coordinate with the City of Simi Valley, the County of Ventura and unincorporated areas of Ventura county (e.g. Chatsworth Lake Manor area), as appropriate, for the possible proclamation of a local emergency as defined in Section 8558 of the Government Code.





## **Section 3: Water Supply Interruptions**

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Water supplies may be interrupted or reduced significantly in a number of ways, from events such as an earthquake that damages water delivery or storage facilities, a regional power outage, water system failures, fire, a chemical spill that affects water quality state restrictions or other causes.

This section of the Plan describes how WWD8 plans to respond to various types of water supply interruptions. Section 4 focuses on water shortages associated with droughts.

### **3.1 Actions to Prepare for Catastrophic Interruption**

As mentioned earlier, WWD8 has a water conservation program with procedures to mitigate for limited supply. In the event of a catastrophic event, WWD8 has up to 48 million gallons of potable water storage capacity in its 43 tanks throughout its water distribution system to address water supply interruptions. WWD8 also has numerous fuel-driven generators and is purchasing additional portable fuel-driven generators to provide back-up power supply to various pump stations serving higher elevation areas served by WWD8. WWD8 can also convey water supplies with the assistance of Fire Department pumpers connecting to different fire hydrants. In addition, WWD8 has and will coordinate with the City of Simi Valley Police Department in the event of an emergency.

Furthermore, as a retail entity to Calleguas and MWD, WWD8 benefits from the emergency planning efforts of these agencies. For example, Calleguas can distribute water stored in Lake Bard, local groundwater resources, and emergency sources from Los Angeles Department of Water and Power via the Colorado River Aqueduct in the event that the Calleguas supply from MWD is disrupted.

#### **3.1.1 Risk Resilience Assessment**

WWD8 has completed a Risk Resilience Assessment (RRA) Report (Carollo, 2021) to comply with the America's Water Infrastructure Act of 2018 (AWIA) that:

- Summarizes best practices for reducing risks,
- Identifies critical assets and their associated risks from malevolent threats and natural hazards, and
- Addresses the WWD8's level of resilience based on criteria developed by AWWA and the Environmental Protection Agency.

The RRA found that WWD8's operational resilience is very strong in most areas due to a focus on maintaining operations during the loss of a critical asset and the ability to work around operational issues (Carollo, 2021).

Two areas identified in the RRA to provide opportunities for potential for improvement include (1) an update to the existing Emergency Response Plan (ERP), which has not been reviewed in a number of years, and (2) implementation of National Incident Management System (NIMS) training to improve resilience for the organization and better understand the water systems integration with large-scale Emergency Center Operations.

### 3.1.2 Emergency Response Plan

The Act requires documentation of actions to be undertaken by the water supplier to prepare for, and implement during, a catastrophic interruption of water supplies. A catastrophic interruption constitutes a proclamation of a water shortage and could result from any event (either natural or man-made) that causes a water shortage severe enough to classify as a Stage IV, Stage V or Stage VI water supply shortage condition.

The City has an existing hazard mitigation plan and emergency operations plan, described in the following sections, that identify planned responses to emergency situations. By June 2021, WWD8 will be completing an updated Emergency Response Plan that will incorporate identified risks and recommended mitigation measures from the RRA Report. The ERP will detail actions necessary to minimize the impacts of supply interruptions due to catastrophic events and to coordinate emergency responses with other agencies in the area.

#### 3.1.2.1 Simi Valley 2015 Multi-Hazard Mitigation Plan

The City of Simi Valley's Multi-Hazard Mitigation Plan (City's 2015 MHMP) (City of Simi Valley, 2015) addresses the City's planned response to extraordinary emergency situations associated with natural disasters, technological incidents, and national security emergencies. The 2015 MHMP serves as a strategic planning tool for the reduction or prevention of injury and damage from natural hazards in Simi Valley.

The City's 2015 MHMP:

- Meets the requirements for the Disaster Mitigation Act of 2000 and was approved by FEMA in 2016;
- Documents the community's known hazards, capabilities, and vulnerabilities and identifies strategies to overcome those vulnerabilities;
- Includes findings and recommended mitigation actions intended to inform community members and public officials about the hazards in Simi Valley and possible ways to mitigate them; and
- Serves as a living document, to be continuously reviewed, updated and approved by the City Council every five years.

A copy of the City's 2015 MHMP can be obtained on the City of Simi Valley website:

<https://www.simivalley.org/departments/police-department/emergency-services/simi-valley-hazard-mitigation-planning>

#### 3.1.2.2 Simi Valley Emergency Operations Plan

The City of Simi Valley's Standard Emergency Management System (SEMS) Multi-Hazard Functional Plan (2001 Emergency Plan) (City of Simi Valley, 2001) describes the City's planned response to extraordinary emergency situations associated with natural disasters, technological incidents, and national security emergencies. The 2001 Emergency Plan includes three parts:

- **Part One – Basic Plan** – Contains overall organization and operational concepts relative to response and recovery, as well as an overview of potential hazards. The intended audience is the Emergency Operations Center (EOC) Management Team

- **Part Two – Emergency Organization Functions.** Describes the emergency response organization and emergency action checklists. Intended audience – EOC staff
- **Part Three – Supporting and Legal Documents** includes management, operations, planning, logistics and finance support, legal documents and related forms.

The City is in the process of updating the 2001 Emergency Operations Plan, incorporating updates from the RRA (Carollo 2021).

A copy of the 2001 Emergency Plan can be obtained on the City of Simi Valley website:

<https://www.simivalley.org/departments/police-department/emergency-services/emergency-plan>

### 3.1.2.3 Ventura County 2015 Multi-Hazard Mitigation Plan

In 2015, Ventura County also adopted a Multi-Hazard Mitigation Plan (Ventura County 2015 MHMP) (AECOM, 2015) to:

- (1) address the local mitigation planning requirements of the Disaster Mitigation Act of 2000 for Unincorporated Ventura County and other local participants; and
- (2) address the 510 Floodplain Management Planning activities of the Community Rating System for the Ventura County Watershed Protection District on behalf of Unincorporated Ventura County and the City of Oxnard.

A copy of the Ventura County 2015 MHMP can be obtained on the Ventura County flood information website: <http://www.vcfloodinfo.com/resources/ventura-county-hazards-mitigation-plan>

## 3.2 Seismic Risk Analysis

WWD8 owns and operates water distribution, treatment, and groundwater pumping facilities. The water distribution system is comprised of two separate systems – one for potable water and the other non-potable, for raw and recycled water. This section summarizes the 2020 seismic risk assessment of the non-storage water facilities and provides an update of the seismic vulnerability of the drinking water supply, treatment, storage, and distribution facilities and mitigation plan for the water system (Kennedy Jenks 2020).

### 3.2.1 WWD8 Seismic Evaluation and Mitigation

Over the years, WWD8 has performed numerous studies, repairs and projects to reduce and mitigate seismic risk, including but not limited to:

- 1994, Evaluation of Earthquake Damage to Water Reservoirs, prepared by ASL Consulting Engineers, July 1994.
- 1997, earthquake repairs were performed on five tanks, including piping modifications and repairing interior and exterior coating.
- 1999, seismic upgrades and repairs were performed on 13 tanks that were damaged during the 1994 Northridge Earthquake.

- 2010, the WWD8 Water Master Plan and 5-Year Capital Improvement Program Summary Table and CIP Projects identified priority seismic upgrades and repairs.
- 2011 and 2010, dive inspections were performed on various tanks
- 2015, Waterworks Facilities Assessment and Cost of Service Evaluation prepared by Carollo engineers, recommended a seismic evaluation a for 28 tanks and repairs to the foundation or confinement rings for a few of the tanks.
- 2020, Seismic Evaluation of the Waterworks Storage Tank System, currently being prepared by Kennedy Jenks, included geologic and structural focused site visits, seismic evaluations of 43 water storage reservoirs, 22 pump stations, 13 pressure reducing valve stations, 2 wells, and treatment plant, and recommended improvements.

The 2020 seismic risk assessment builds on these studies and provides a seismic evaluation and mitigation for steel tanks, pump stations, pressure reducing valves, and wells or well pump stations as described in the following sections.

### **3.2.1.1 Seismic Evaluation and Mitigation for Steel Tanks**

Geotechnical work was conducted for 43 above-ground potable water reservoirs located on 32 sites in the Simi Valley area, to classify sites for repair and retrofit needs. Design level earthquake values were identified for each tank evaluation, corresponding to the appropriate American Society of Civil Engineers design level earthquake.

A seismic evaluation was performed to identify seismic deficiencies and recommend strengthening measures for each of the welded steel tanks. Work included a written description for each tank summarizing the results of the interior and exterior inspections and condition assessments; and the findings of the desktop evaluation.

Many of the tanks were found to have deficiencies, due to one or more of the following:

- age of the tank
- code which was applicable at the time the tank was designed,
- dimensions of the tank diameter to height ratio,
- proximity to the Simi-Santa Rosa Fault

The tank structural and seismic evaluation investigated several mitigation concepts in order to bring the tanks within code compliance. These mitigation concepts included reduction of the maximum water level fill height, strengthening tank components, redefining the intended service requirements, and combinations of these.

WWD8 has prioritized tanks for repairs and replacement based on the likelihood and consequences of various types of damage.

### **3.2.2 Seismic Evaluation and Mitigation for Pump Stations, Pressure Reducing Valves, Wells or Well Pump Stations**

Seismic assessments were performed for the pump stations, pressure reducing valve (PRV) stations, wells, and well pump stations. Work included documentation of facility descriptions,

seismic deficiencies, seismic mitigation measures, seismic resistance and at-risk facilities. WWD8 is committed to tracking the condition of its facilities and implementing recommended repairs in order of the facility priority to the system.



## Section 4: Water Shortage Stages

WWD8 is reliant on imported water supplies to meet the majority of their customer demands (up to 99%). Thus, when WWD8 supplies are allocated or limited by Calleguas, MWD, or the State of California, or when its own evaluation of supply and demand conditions indicates the potential for shortage, WWD8 will enact water shortage supply stages that are increasingly restrictive, and promote conservation during times of low supplies.

The following sections define the water shortages stages and actions to prepare and respond to water shortage reductions, including catastrophic interruptions of service.

### 4.1 Six Standard Shortage Stages

As required by California Water Code Section 10632(a)(3)(A), this WSCP is framed around six standard water shortage stages, which correspond to progressive ranges of percent supply reductions from zero to more than fifty percent. Table 4-1 presents a crosswalk of the six water supply shortage stages, defined as stages I to VI, to the existing four-levels of water supply shortage levels for WWD8, as defined in the Water Shortage Contingency Plan described in the City of Simi Valley’s Municipal Code (included in Appendix A).

**Table 4-1: Water Supply Shortage Stages and Supply Reduction Goals and Conditions with Cross Walk to Existing Municipal Code Shortage Levels**

Shortage Stage	Municipal Code Shortage Level <sup>a</sup>	Percent Supply Reduction	Water Shortage Condition
I	1	Up to 10%	Minor Shortage
II	2	Up to 20%	Moderate Shortage
III	3 <sup>b</sup>	Up to 30%	Severe Shortage
IV		Up to 40%	Critical Shortage
V		Up to 50%	Emergency Shortage
VI	4	50% of More	Catastrophic Failure

Reformatted from UWMP Guidebook, Table 8-1, included in Appendix C.

<sup>a</sup> Reflect the permanent water conservation standards in the City’s Municipal Code that are intended to alter behavior related to water use efficiency at all times and during times of declared water shortage or declared water shortage emergency.

<sup>b</sup> The current Municipal Code Level 3 declaration of water supply shortage covers a 20% to up to 50% supply reduction. Additional granularity has been added to align with the Water Code defined stages III, IV and V.

Supporting stages and activities by MWD and Calleguas are summarized in the following subsections, and the remainder of this section focuses on WWD8 specific activities.

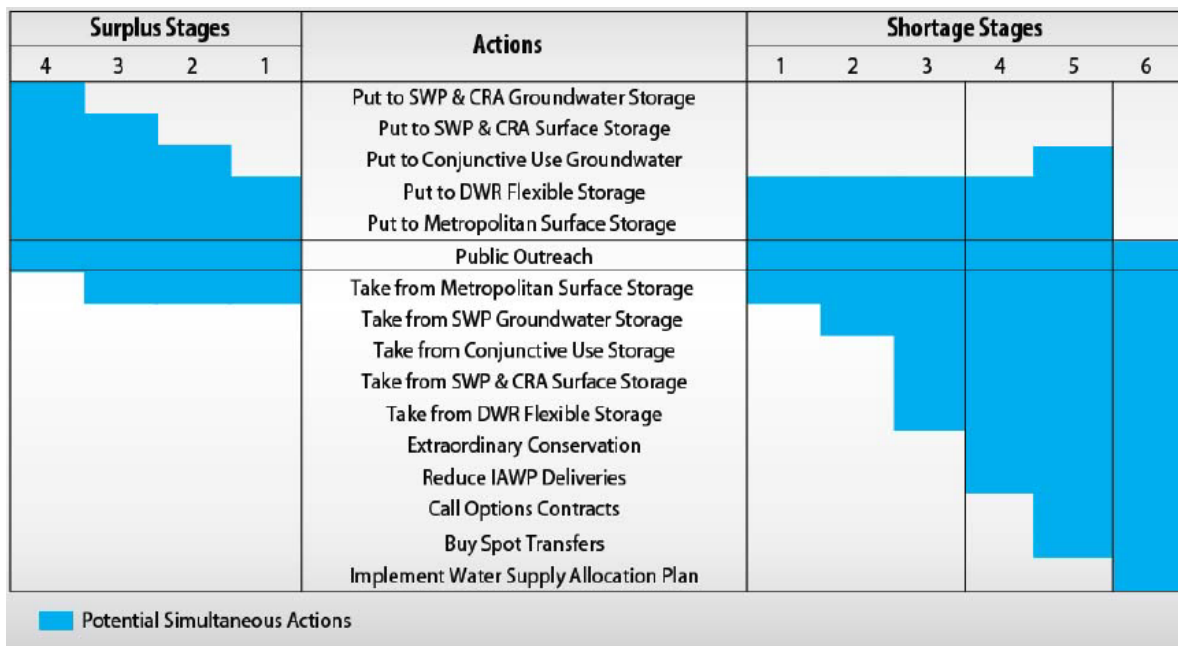
#### 4.1.1 MWD Defined Shortage Stages

MWD’s Water Surplus and Drought Management (WSDM) Plan defines six shortage management stages to guide resource management activities (MWD 2020). The stages are defined by the water balances in MWD’s storage programs and are not strictly defined by shortages in imported water supply. The six shortage management stages are depicted in Figure 4-1. When MWD must make net withdrawals from storage to meet demands, it is considered to

be “shortage”. Under most shortage stages MWD is still able to meet all end use demands for water. In Stages 1 through 3, demand is met by withdrawing water from storage. In stages 4 and 5 MWD may undertake additional shortage management steps such as calling for conservation, exercising water transfer options, or purchasing water. The overriding goal of the WSDM Plan is to avoid reaching Shortage Stage 6, an Extreme Shortage, however if shortage stage 6 is reached then the Water Supply Allocation Plan is enacted.

The Water Supply Allocation Plan is the established formula for allocating available water supplies to member agencies in the case of extreme water shortages within the Metropolitan service area. But as described above, shortage affecting water available to the District are not anticipated.

**Figure 4-1 MWD Resource Stages**



Source: Draft MWD 2020 UWMP

### 4.1.2 Calleguas Defined Shortage Stages

Calleguas’s 2020 WSCP defines six shortage levels, which mirror MWD’s 2020 WSCP. Calleguas’s 2020 WSCP includes an Imported Water Outage Protocol (IWOP) to identify District-wide actions in the event of a medium to long-term outage of imported water service, also defined as a Catastrophic Interruption in Water Supplies or Water Emergency (i.e., greater than 50% reduction in water supply). While Calleguas’s WSCP mirrors the MWD WSCP, the IWOP is intended to enhance Calleguas actions should a localized Catastrophic Interruption occur. The IWOP outlines methodologies being considered to ensure that Calleguas’ water supplies are distributed among its member purveyors in the event of a complete or partial outage of imported water. (California Data Collaborative, 2021)

For Stages I to V, MWD can meet service area demands using stored water, executing flexible supplies, executing demand reduction and implementing their Water Supply Allocation Plan. Calleguas does not foresee imposing allocations, except under MWD’s direction and according to their 2020 WSCP.



Under Stage VI, in the event of full interruption of imported water supplies from MWD due to catastrophic failure of system interconnection, Calleguas would implement the IWOP and take the following shortage response actions (Calleguas, 2021b):

- **Conduct Initial Assessment of Outage:** (increased communication and coordination with the District's Purveyors, assessment of CMWD Outage Supplies and Purveyor Local Supplies)
- **Make Call for Conservation:** "No Outdoor Water Use"
- **Determine if Imported Water Outage Protocol (IWOP) - Allocation should be Implemented** (based on system demand reductions and additional information on potential duration of the Outage Event)
- **Board Action to Implement Allocation System**

Calleguas anticipates the following reduction from the Stage VI shortage response:

- Dec. to May: Approx. 15% conservation (1st 4 months), 40% conservation after Lake Bard Water Filtration Plant (LBWFP) potable supply exhausted
- June to Nov.: Approx. 35% conservation (1st 4 months), 45% conservation after LBWFP potable supply exhausted
- Call for "No Outdoor Water Use" may bring immediate 40% to 60% reductions in overall demand, which would extend availability of outage supplies.

## 4.2 Shortage Response Actions

The Act requires an analysis of mechanisms for determining actual reductions in water use when WWD8's WSCP is in effect. A Water Supply Shortage exists when WWD8 supplies are allocated or constricted by Calleguas, MWD, or the State of California, when its own evaluation of supply and demand conditions indicates the potential for shortage or during a catastrophic event such as an earthquake or fire.

The water shortage conditions in Table 4-1 are based on the Annual Assessment, described in Section 2. Water usage will be monitored and reported as discussed in Section 9 to determine how effective the demand reduction actions are in meeting goals during a water shortage.

## 4.3 Historical Effectiveness of Shortage Response Actions

California experienced a persistent drought from the period of December 2011 through March 2017, with the period of late 2011 through 2014 being the driest in California history (PPIC, 2015). During this period, WWD8:

1. Declared a drought on May 12, 2014, (Resolution WWD-243) which enacted customer demand reduction to reduce customer demand by 10 percent by promoting voluntary conservation actions.
2. On July 21, 2014 (Resolution WWD-246), accelerated customer shortage response actions, which successfully reduced customer demands by 10 to 20 percent by enacting mandatory reductions.

3. On June 15, 2015 (Resolution WWD-252), further accelerated customer shortage response actions, which successfully reduced customer demands by 20 to 30 percent by enacting mandatory reductions.

Under normal conditions, WWD8 monitors sales and deliveries on a bimonthly basis. In addition, all water sales are metered and all meters read bimonthly, which is an important tool to determining the effectiveness of shortage response actions. Billing reports can also be reviewed to identify users who are not reducing water use, further supporting implementation of shortage response actions.

#### **4.4 Legal Authorities**

The Simi Valley Municipal Code<sup>1</sup>, Title 6 Sanitation and Health, Chapter 11 Ventura County Waterworks District No. 8 Water Conservation Program provides the legal authority for WWD8's Water Conservation Program, which aims to reduce water consumption within the jurisdiction of WWD8 through conservation, enable effective water supply planning, assure reasonable and beneficial use of water, prevent waste of water, and maximize the efficient use of water within WWD8's service area to avoid and minimize the effect and hardship of water shortage to the greatest extent possible. Article 1 establishes permanent water conservation standards intended to alter behavior related to water use efficiency at all times and further establishes water supply shortage response actions to be implemented during times of declared water shortage or declared water shortage emergency, with increasing restrictions on water use in response to worsening drought or emergency conditions and decreasing supplies.

California Water Code Division 1, Section 350, states:

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

The Annual Water Supply and Demand Assessment procedures, detailed in Section 2, will be used to determine if a water shortage is to be declared by the WWD8 Board of Directors.

The District Engineer has the authority to implement the plan once the shortage emergency is declared.

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<sup>1</sup> Simi Valley Municipal Code, updated through March 2020 and referenced herein, is available online at [https://library.municode.com/ca/simi\\_valley/codes/code\\_of\\_ordinances?nodeId=SIMI\\_VALLEYMUCO](https://library.municode.com/ca/simi_valley/codes/code_of_ordinances?nodeId=SIMI_VALLEYMUCO)

## Section 5: Water Shortage Response Actions

This section provides a nexus for WWD8’s actions, operational changes and mandatory prohibitions to respond to water shortages declared by DWR, MWD, and Calleguas, due to unforeseen catastrophic events, and in response to local supplies and demands in WWD8’s service area.

### 5.1 Supply Augmentation Actions

Because of WWD8’s dependency on imported water supply, there are not very many supply augmentation actions that can be taken. Table 5-1 below summarizes the planned supply augmentation actions that WWD8 could apply during different stages of shortage to stretch supplies. MWD and Calleguas augmentation actions are listed for completeness.

**Table 5-1: Supply Augmentation Actions**

Shortage Stage (% supply reduction)	WWD8 Actions to Stretch Supplies	Reduction in the shortage gap (AF) <sup>b</sup>	MWD and Calleguas Augmentation Actions
I (Up to 10%)	-No actions needed	0	MWD can meet service area demands using stored water, executing flexible supplies, implementing demand reduction and implementing the MWD Water Supply Allocation Plan.  Calleguas does not foresee imposing allocations, except under MWD’s direction and according to their 2020 WSCP.
II (Up to 20%)	-Decrease water distribution line flushing	20	
III (Up to 30%)	-All previous actions -Increase Tapo Canyon Treatment Plant water production <sup>a</sup>	400	
IV (Up to 40%)		600	
V (Up to 50%)	-Mobile recycled water fill station <sup>b</sup>	800	
VI (Up 50% of More)	-All previous actions	1,000	

Reformatted from UWMP Guidebook, Table 8-3, included in Appendix C

<sup>a</sup> Tapo Canyon Treatment Plant’s production capacity of 1 MGD would be used, as-needed to fill the shortage gap.

<sup>b</sup> A mobile recycled water fill station could be implemented in for dust control, watering of City Parks and potentially used as a residential fill station (estimated 30 AF volume)

## 5.2 Demand Reduction Actions

WWD8 has a variety of programs to manage and reduce water demand including water waste prohibitions, public education and outreach, monitoring and repairing system leaks, and improving irrigation efficiency within WWD8’s service area. In addition, WWD8 has worked cooperatively with Calleguas to take advantage of that agency’s water conservation programs. WWD8 customers may be eligible for many conservation programs, including residential rebates such as high-efficiency washing machine rebates, high efficiency toilets, weather-based irrigation controllers, soil moisture sensors, rain barrels, cisterns, and low-flow sprinkler nozzles. Additionally, commercial, industrial, and institutional customers may be eligible for a greater variety of efficient plumbing fixture rebates, customized water-saving incentive programs, landscape irrigation surveys and more.

Table 5-2 presents restrictions and prohibitions on end uses for each shortage stage as defined in the City Municipal Code (Appendix A). The benefits of the demand reduction actions and other operational changes are quantified in Section 5.4.

**Table 5-2: WWD8 Demand Reduction Actions**

Shortage Stage (% supply reduction)	Restrictions and Prohibitions on End Users <sup>a</sup> (What the customer can do to reduce demands)
I (Up to 10%)	<ul style="list-style-type: none"> <li>- No watering between 9 am and 5 pm</li> <li>- Watering limited to 15 minutes per station, per day</li> <li>- No irrigation of turf and ornamental landscape during and 48 hours after rainfall</li> <li>- Irrigation of ornamental turf on street medians is prohibited</li> <li>- No excessive water flow or runoff</li> <li>- No washing down hard or paved surfaces</li> <li>- Obligation to fix leaks, breaks, or malfunctions within 7 days</li> <li>- Recirculating water required for water fountains and decorative water features</li> <li>- Limits on washing vehicles</li> <li>- Drinking water served only upon request</li> <li>- Commercial lodging must provide option to decline daily linen service</li> <li>- No installation of single-pass cooling systems</li> <li>- No installation of non-recirculating water systems in commercial car wash and laundry systems</li> <li>- Restaurants are required to use water-conserving dish wash spray valves</li> <li>- Commercial car wash system requirements</li> </ul>
II (Up to 20%)	<p>All Previous Level Restrictions AND:</p> <ul style="list-style-type: none"> <li>- Outdoor Irrigation limited to no more than 3 days/week, 15 minutes per station from April through October, and no more than 2 days/week during the months of November through March.</li> <li>- Obligation to fix leaks, breaks, or malfunctions within 5 days</li> </ul>
III (Up to 30%)	<p>All Previous Level Restrictions AND:</p> <ul style="list-style-type: none"> <li>- Outdoor Irrigation limited to no more than 2 days/week, 15 minutes per station from April through October, and 1 day/week during the months of November through March.</li> <li>- Obligation to fix leaks, breaks, or malfunctions within 72 hours</li> <li>- Filling or re-filling ornamental lakes or ponds is prohibited, except needed to sustain aquatic life.</li> </ul>

Shortage Stage (% supply reduction)	Restrictions and Prohibitions on End Users <sup>a</sup> (What the customer can do to reduce demands)
IV (Up to 40%)	All Previous Level Restrictions AND: <ul style="list-style-type: none"> <li>- Outdoor Irrigation limited to no more than 1 day/week, 15 minutes per station</li> <li>- Obligation to fix leaks, breaks, or malfunctions within 48 hours</li> <li>- Moratorium on initial filling of ornamental lakes, ponds and decorative fountains</li> <li>- Re-filling of more than one foot per month and initial filling of residential swimming pools or outdoor spas is prohibited.</li> </ul>
V (Up to 50%)	All Previous Level Restrictions AND: <ul style="list-style-type: none"> <li>- OUTDOOR IRRIGATION LIMITED TO HAND-WATERING, no more than 15 minutes per area</li> <li>- Obligation to fix leaks, breaks, or malfunctions within 24 hours</li> <li>- No new service connections</li> <li>- No new annexations</li> </ul>
VI (Up 50% of More)	All Previous Level Restrictions AND: <ul style="list-style-type: none"> <li>- NO OUTDOOR IRRIGATION ALLOWED</li> <li>- Obligation to fix leaks, breaks, or malfunctions upon notice</li> <li>- Moratorium on initial filling of residential swimming pools and spas</li> </ul>

<sup>a</sup> Defined in City Municipal code.

As described in Table 5-2, prohibitions and restrictions on water features that are artificially supplied with water, such as ornamental lakes, ponds and decorative fountains are treated differently from swimming pools and spas, as defined in Section 115921 of the Health and Safety Code.

### 5.3 Operational Changes

Once a shortage stage is declared, WWD8 has a toolbox of shortage response actions that can be implemented through operational changes, as listed in Table 5-3. These operational actions will be supported by communication protocols (discussed in Section 6), enforcement actions (discussed in Section 7) and monitoring and reporting efforts (discussed in Section 9) activities appropriate at each shortage stage level.

**Table 5-3: WWD8 Operational Changes to Support Shortage Response Actions**

Shortage Stage (% supply reduction)	Operational Actions to Support Shortage Response Actions (What WWD8 will do once each Stage is declared)
I (Up to 10%)	<ul style="list-style-type: none"> <li>- Public Information (ongoing)</li> <li>- Promote water conservation classes and events on City/District calendar, <a href="http://www.simivalley.org/calendar">www.simivalley.org/calendar</a></li> <li>- Promote water conservation and resources available on City/District webpage, <a href="http://www.simivalley.org/waterconservation">www.simivalley.org/waterconservation</a></li> <li>- Promote water conservation and resources on social media @SimiValleyH2O</li> <li>- Promote water conservation hotline, (805) 583-6420, for inquiries and reports of water waste</li> <li>- Promote water conservation email, <a href="mailto:waterconservation@simivalley.org">waterconservation@simivalley.org</a>, for inquiries and reports of water waste</li> <li>- Personnel dedicated to education and water waste enforcement</li> <li>- Host free turf removal, and design and maintenance of sustainable water-efficient</li> </ul>

Shortage Stage (% supply reduction)	Operational Actions to Support Shortage Response Actions (What WWD8 will do once each Stage is declared)
	landscape classes - Sponsor local waterwise gardening website, www.venturacountygardening.com - Offer Alliance for Water Efficiency's online home waterworks water calculator for indoor and outdoor water use - Implement City/District turf removal and water use efficiency projects - Offer K-12 School educational programs, including classroom curriculum, presentations, and field trips - Explore inter-agency Partnerships such as natural gas and electric service providers - System water audits, leak detection, and repair to reduce system water loss
II (Up to 20%)	- Continue Stage I Actions - Collaboration with Golden State Water Co. to align Stage II actions - Initiate Level II Shortage Messaging - Printed water bills/envelopes and online payment portal - Printed and Online Simi Valley Acorn News advertisements - City Neighborhood Council Meeting presentations - Mayor/District Chair "State of the City" presentation - Simi Valley Chamber of Commerce presentations - Community Events such as Simi Valley Street Fair - Guest Speaker Presentations to Community Groups/Assoc. - Collaborate with Service Organization such as Simi Valley Youth Council - Personnel dedicated to education and water waste enforcement
III (Up to 30%)	- Continue Stage II Actions - Collaboration with Golden State Water Co. to align Stage III actions - Initiate Customer Water Billing Level III Shortage Messaging - Printed and Online Simi Valley Acorn News advertisements in color - Initiate Local Radio and TV Public Service Announcements - Expand Community Outreach Events - Expand Guest Speaker Presentations to Community Groups/Assoc. - Expand Collaboration with Service Organizations - Implement Door Hanger Notices - Conduct Needs Assessment to Fully Implement / Finish Automated Metering Infrastructure (AMI) and Customer Information Portal
IV (Up to 40%)	- Continue Stage III Actions - Collaboration with Golden State Water Co. to align Stage IV actions - Initiate Customer Water Billing Level IV Shortage Messaging - Request local Radio and TV Interviews - Initiate local Radio Advertisements - Printed and Online Simi Valley Acorn News Advertisements, full-page in color - Increase Water Billing Frequency e.g. bimonthly to monthly - Expand Implementation, Training and Administration of AMI System - Initiate Purchase and Installation of Customer Information Portal - Implement or Modify Emergency Drought Rate Structure or Surcharge (as-appropriate)
V (Up to 50%)	- Continue Stage IV Actions - Collaboration with Golden State Water Co. to align Stage V actions - Initiate Customer Water Billing Level V Shortage Messaging



Shortage Stage (% supply reduction)	Operational Actions to Support Shortage Response Actions (What WWD8 will do once each Stage is declared)
VI (Up 50% of More)	<ul style="list-style-type: none"> <li>- Continue Stage V Actions</li> <li>- Collaboration with Golden State Water Co. to align Stage VI actions</li> <li>- Initiate Customer Water Billing Level VI Shortage Messaging- Work with other water districts to exercise mutual aid assistance (as-appropriate)</li> </ul>

## 5.4 Benefits of Shortage Response Actions

As discussed above, supply augmentation actions, demand reduction actions and operational changes will help WWD8 reduce the “gap” between supplies and demands. This section estimates the benefits of the shortage response actions as a result of District actions, including:

- Public Information
- Enforcement
- Restrictions on Non-Essential Water Uses
- Pricing (Note: to increase rates during periods of extended drought, this would require a Prop 218 process to re-evaluate current rate structure)

### 5.4.1 Landscape Restrictions on Non-Essential Water Uses

The City’s Municipal Code (Appendix A) focuses on curtailing water waste and non-essential water use. Outdoor water use, including washing sidewalks and watering ornamental landscapes is targeted. These uses are typically considered to be discretionary or nonessential, are highly visible, and therefore relatively easy to monitor, and often are a substantial component of water demand, particularly during the summer months when drought conditions are likely most severe.

Given the significance and visibility of lawn watering as the predominant component of seasonal use, best management practices in drought contingency plans typically prescribe time-of-use and other restrictions on lawn watering. This often involves placing water users on a schedule which allows for staggered lawn watering days, as well as restrictions on the times during the day when lawns can be watered. Multi-family dwellings and commercial properties are also required to install a separate irrigation water meter based on the latest Waterworks Standards. This will allow WWD8 to restrict watering landscaped areas during shortages.

The American Waterworks Association (AWWA) estimates that voluntary outdoor water use limits can result in a water savings of up to 10 percent and mandatory outdoor water limits can achieve up to a 56 percent reduction in outdoor water use (AWWA 2008, AWWA 2011). Specifically, case studies found that:

- Restricting water use to every third day reduced water use by 22 percent.
- Restricting water use to twice a week reduced water use by 33 percent.
- Restricting water use to once a week saved 56 percent.

There have not been detailed studies on outdoor water use in the WWD8 service area. However, a comparison of low water use months, when water use is assumed to be primarily indoor use

(January, February and March) with high-water use months when outdoor water use is greatest has been used to estimate the percent of outdoor water demand. Based on this comparison, the percent outdoor use for the following categories is estimated:

- Single family and multi-family homes = 32 percent outdoor use
- Commercial accounts = 29 percent outdoor use
- Institutional/Governmental = 13 percent outdoor use
- Landscape meters = 100 percent outdoor use

Based on 2013 to 2020 data, the sum of outdoor water use in each of the above categories makes up approximately 45 percent of the WWD8 demand (approximately 8,750 AFY):

- Outdoor water restrictions, such as limiting watering to specific times, eliminating excess runoff, and not irrigating during and 48 hours after rainfall could save **10 percent** of outdoor water use or about **875 AFY**.
- Restricting water use to twice a week could reduce outdoor water use by up to **33 percent** or about **2,890 AFY**.
- Restricting water use to once a week could reduce outdoor water use by up to **56 percent** or about **4,900 AFY**.

## 5.4.2 Public Information

Without exception, experience has shown that a well-informed public is generally more willing to heed requests to voluntarily conserve or alter water use patterns, and will be more likely to comply if mandatory water use restrictions become necessary. DWR estimates that public information campaigns have alone reduced demand in the range of 5 to 20 percent, depending on the time, money, and effort spent (DWR 2008). Public information supports voluntary and mandatory measures by educating and convincing the public that a critical water shortage exists and provides information on how water is used and how they can help. The DWR Drought Guidebook highlights that when the public perceives the drought to be severe, they changed behaviors (such as flushing the toilet less often).

The information provided to the public should include a description of the conditions that will trigger implementation of shortage stages as well as a description of what the plan entails (restrictions, enforcement provisions, etc.). It is also advisable to provide practical “consumer” information that will help water users comply with the plan. For example, information about restrictions on lawn watering might be accompanied with information about proper lawn watering practices.

A water savings of **2 to 10 percent** would mean that WWD8 could reduce overall demand by an additional **390 AFY to 1,950 AFY**, respectively through an effective public communication.

## 5.4.3 Enforcement

A study examining the effectiveness of drought management programs in reducing residential water-use (Virginia Polytechnic Institute 2006) showed considerable variation in the effectiveness of drought management programs and highlighted the importance of public information and



enforcement. Results, shown in Table 4-3, indicate that overall reductions in residential water-use ranged from **0 to 7 percent** for voluntary restrictions and from **0 to 22 percent** for mandatory restrictions. The observed differences were statistically attributed to information efforts for voluntary restrictions and both information and enforcement efforts for mandatory restrictions.

The analysis highlights the key role that public outreach and information plays in the success of drought response actions. As summarized in Table 5-4:

- **Voluntary restriction programs** with little to moderate levels of information dissemination had no appreciable effect on water-use. Voluntary restriction programs with active promotional efforts, however, reduced water-use by an estimated 7 percent from what would have otherwise occurred without any restriction program. Thus, for voluntary restrictions, only the most intense programs had even a moderate level of success in reducing water-use.
- **Mandatory restriction programs** without a significant enforcement component broadly mirrored the outcomes achieved by the voluntary programs. Programs with mandatory restrictions that invested minimal effort in information dissemination did not appreciably reduce residential water-use. Programs with no active enforcement efforts but with moderate to high levels of informational dissemination achieved 6 and 12 percent reductions in water-use, respectively. These estimated reductions are similar to those achieved by voluntary programs with aggressive informational campaigns.

For example, the experience the City of Santa Cruz had implementing its Drought Contingency Plan and successfully reaching its reduction goals supports the importance of a strong public information program. Analysis of the implementation program identified the key ingredient to its success was "the public's understanding, awareness, and belief that the City was confronted with a true water shortage problem. Media coverage of water problems across California reinforced the situation. Without that sense of a real and imminent problem, it's likely the level of cooperation and willingness demonstrated by the community in making changes they did might have been considerably reduced." (Santa Cruz, 2010)

Delivering accurate and timely information to water users, news media and local governments with updates on conditions, restrictions, and helpful contact information is key.

**Table 5-4: Drought Program Management Variables Effect on Residential Water-Use**

Classification	Estimated change in Water-Use	Statistically Different than no effect?
<b>Voluntary Restrictions</b>		
Little or no information disseminated	-2%	No
Moderate level of information	-2%	No
Aggressive information dissemination	-7%	Yes
<b>Mandatory Restrictions</b>		
Low information and low enforcement	-5%	No
Moderate information and low enforcement	-6%	Yes
Aggressive information and low enforcement	-12%	Yes
Low information and moderate enforcement	-4%	No
Moderate information and enforcement	-9%	Yes
Aggressive information and moderate enforcement	-15%	Yes
Moderate information and aggressive enforcement	-20%	Yes
Aggressive information and enforcement	-22%	Yes

Source: Virginia Polytechnic Institute 2006

Since landscape restrictions are already accounted for (in Section 5.4.1), voluntary and mandatory restrictions are assumed to apply to all other non-landscape uses. With voluntary restrictions and aggressive information dissemination, it is assumed WWD8 would achieve **5 percent** water savings, or about **540 AFY**. With mandatory restrictions and aggressive information dissemination and enforcement it is assumed WWD8 could achieve up to **15 percent** water savings or about **1,620 AFY**.

#### **5.4.4 Leak, Breaks and Malfunctions**

Leaks represent water wasted with no intended use or purpose, and can be the result of breaks, malfunctions or long term inefficiencies in the system. On average, leaks can account for more than 6 percent of a facility's total water use (EPA 2017).

Unfortunately, leaks often go undetected, particularly if a facility is not routinely monitoring its water use. WWD8 addresses leaks in the WWD8 Municipal Code by requiring that customers fix leaks, breaks, or malfunctions within a specified period of time, depending on the drought stage.

WWD8 does not currently have the ability to track and enforce indoor leaks, however this could be achieved in the future with full implementation of an AMI system with a customer information portal. Assuming implementation of these infrastructure and software updates, the obligation to fix leaks, breaks or malfunctions could potentially achieve **6 percent** water savings of indoor use, or about **650 AFY**, which is assumed to be achievable in Stages V and VI,

### 5.4.5 Drought Surcharge Rates

Past studies reveal that water use decreases when utilities install water meters and impose commodity charges, based on the amount of water used. AWWA estimates that water use decreases between 15 to 40 percent when customers are charged a commodity rate rather than a flat rate that is not based on the amount of water used (AWWA 2008). This indicates that customers are price sensitive and will adjust habits to reduce their cost of water. The actual extent that increasing rates during a drought can result in decreased water use is uncertain.

AWWA studies indicate that the effectiveness of pricing to reduce water use is very dependent on the affluence of the water utility customer base. As a rule of thumb, AWWA estimates that marginal price increases in water (up to 10 percent) reduce water use by 1.5 to 7 percent; price increases greater than 10 percent are necessary to achieve water use reductions greater than 10 percent (AWWA 2008).

Based on AWWA data it is assumed that water use reductions of **10 to 15 percent** will be achieved with drought rates, representing **1,735 AFY to 2,600 AFY** of reduced water use by WWD8 customers.

In California, an increase rates during periods of extended drought would require a Prop 218 process to re-evaluate current rate structure.

## 5.5 Additional Mandatory Restrictions

The State, through the State Water Board, adopted drought emergency conservation regulations in July 2014. The Board expanded, updated, extended, and readopted the emergency regulations several times and in the prohibitions on wasteful water use practices were in place until November 25, 2017.

As directed by Executive Order B-40-17, the State Water Board is conducting a rulemaking to put in place permanent prohibitions on wasteful water use practices. This rulemaking is part of the broader legislation, *Making Water Conservation a California Way of Life*.

The specific outcome of the permanent prohibitions cannot be known at this time. The emergency conservation regulations in effect through November 2017 included the following prohibitions:

- Application of potable water to outdoor landscapes in a manner that causes runoff such that water flows onto adjacent property, non-irrigated areas, private and public walkways, roadways, parking lots, or structures;
- The use of a hose that dispenses potable water to wash a motor vehicle, except where the hose is fitted with a shut-off nozzle or device attached to it that causes it to cease dispensing water immediately when not in use
- The application of potable water to driveways and sidewalks
- The use of potable water in a fountain or other decorative water feature except where the water is part of a recirculating system
- The application of potable water to outdoor landscapes during and within 48 hours after measurable rainfall

- The serving of drinking water other than upon request in eating or drinking establishments
- Irrigation with potable water of ornamental turf on public street medians.

The emergency conservation regulations further required that:

- The irrigation with potable water of landscapes outside of newly constructed homes and buildings in a manner inconsistent with regulations or other requirements established by the California Building Standards Commission and the Department of Housing and Community Development
- Commercial, industrial, and institutional properties shall limit outdoor irrigation of ornamental landscapes or turf with potable water to no more than two days per week.

WWD8's water use restrictions are consistent with the State's prohibitions to prevent water waste. However, dependent on the declared drought stage, WWD8 may have restrictions and requirements in addition to those of the State such as:

- Limiting outdoor irrigation of ornamental landscape or turf with potable water to certain hours and to certain days of the week (all customer types, not just Commercial, Industrial, or Institutional properties)
- Prohibiting all outdoor irrigation with potable water
- Prohibiting use of water in fountains unless water is recirculated
- Prohibiting re-filling of more than one foot per month and initial filling of residential swimming pools or outdoor spas.

## **5.6 Anticipated Reduction from Shortage Response Actions**

Table 5-5 summarizes the anticipated water use reductions from WWD8's planned shortage response actions by stage.

**Table 5-5: Demand Reduction Actions**

Shortage Level	Demand Reduction Actions (DWR Dropdown List)	Simi Valley Municipal Code Demand Reduction Actions	Estimate Volume Reduction (AF)	Additional Explanation or Reference (optional)
1	Landscape - Other landscape restriction or prohibition	<ul style="list-style-type: none"> <li>- No watering between 9 am and 5 pm</li> <li>- Watering limited to 15 minutes per station, per day</li> <li>- No excessive water flow or runoff</li> <li>- No irrigation of turf and ornamental landscape during and 48 hours after rainfall</li> <li>- Irrigation of ornamental turf on street medians is prohibited</li> </ul>	875	Assumes savings of 10% for outdoor use during Stage I for limitations on timing, no excess runoff, etc (AWWA 2008, 2011)
1	Other - Prohibit use of potable water for washing hard surfaces	<ul style="list-style-type: none"> <li>- No washing down hard or paved surfaces</li> </ul>	40	Assumes savings of 0.5% of outdoor use
1	Expand Public Information Campaign	<ul style="list-style-type: none"> <li>- Targeted Messaging to customers</li> </ul>	390	Assume additional savings of 2% during Stage I and II (DWR, 2008) through effective public communication
1	Other	<p>Enforcement of all demand reductions actions listed below:</p> <ul style="list-style-type: none"> <li>- Limits on washing vehicles</li> <li>- Drinking water served only upon request</li> <li>- Commercial lodging must provide option to decline daily linen service</li> <li>- No installation of single-pass cooling systems</li> <li>- No installation of non-recirculating water systems in commercial car wash and laundry systems</li> <li>- Restaurants are required to use water-conserving dish wash spray valves</li> <li>- Commercial car wash system requirements</li> </ul>	540	Assumes savings of 5% on non-landscape uses during Stage I for voluntary and other restrictions, assuming aggressive information dissemination (Virginia Polytechnic Institute, 2006)
		<b>Subtotal Stage I:</b>	<b>1,845</b>	<b>(10% reduction goal = 1,735 AFY)</b>

Shortage Level	Demand Reduction Actions (DWR Dropdown List)	Simi Valley Municipal Code Demand Reduction Actions	Estimate Volume Reduction (AF)	Additional Explanation or Reference (optional)
2	Landscape - Other landscape restriction or prohibition	- All Stage I landscape restrictions - Outdoor Irrigation limited to no more than 3 days/week, 15 minutes per station from April to October, and no more than 2 days/week October to April	2,890	Assumes savings of 33% for outdoor use during Stage II for restricting water use to twice a week, limitations on timing, no excess runoff, etc (AWWA 2008, 2011)
2	Other - Prohibit use of potable water for washing hard surfaces	- No washing down hard or paved surfaces	40	Assumes savings of 0.5% of outdoor use
2	Expand Public Information Campaign	- Targeted Messaging to customers - Notify top water users in each customer class, e.g. residential, and CII - Increase frequency of customer meter readings and production meter readings	390	Assume additional savings of 2% during Stage I and II (DWR, 2008) through effective public communication
2	Other	Enforcement of all demand reductions actions in Stage I	1,080	Assumes savings of 10% on non-landscape uses during Stages II and III for mandatory restrictions, assuming aggressive information dissemination (Virginia Polytechnic Institute, 2006)
		<b>Subtotal Stage II:</b>	<b>4,400</b>	<b>(20% reduction goal = 3,470 AFY)</b>
3	Landscape - Other landscape restriction or prohibition	- All Stage II landscape restrictions - Outdoor Irrigation limited to no more than 2 days/week, 15 minutes per station from April to October, and 1 day/week from October to April	4,900	Assumes savings of 56% for outdoor use during Stage III to VI for restricting water use to once a week, limitations on timing, no excess runoff, etc (AWWA 2008, 2011)
3	Other - Prohibit use of potable water for washing hard surfaces	- No washing down hard or paved surfaces	40	Assumes savings of 0.5% of outdoor use

Shortage Level	Demand Reduction Actions (DWR Dropdown List)	Simi Valley Municipal Code Demand Reduction Actions	Estimate Volume Reduction (AF)	Additional Explanation or Reference (optional)
3	Expand Public Information Campaign	<ul style="list-style-type: none"> <li>- Targeted Messaging to customers</li> <li>- Notify top water users in each customer class, e.g. residential, and CII</li> <li>- Increase frequency of customer meter readings and production meter readings</li> </ul>	980	Assume additional savings of 10% during Stage III and IV (DWR, 2008) through effective public communication
3	Other	<p>Enforcement of all demand reductions actions in Stage II plus demand reductions actions listed below:</p> <ul style="list-style-type: none"> <li>- Limits on filling ornamental lakes, ponds and decorative fountain - topped off no more than once per month</li> </ul>	1,080	Assumes savings of 10% on non-landscape uses during Stages II and III for mandatory restrictions, assuming aggressive information dissemination (Virginia Polytechnic Institute, 2006)
		<b>Subtotal Stage III:</b>	<b>7,000</b>	<b>(30% reduction goal = 5,205 AFY)</b>
4	Landscape - Other landscape restriction or prohibition	<ul style="list-style-type: none"> <li>- All Stage III landscape restrictions</li> <li>- Outdoor Irrigation limited to no more than 1 day/week, 15 minutes per station</li> </ul>	4,900	Assumes savings of 56% for outdoor use during Stage III to VI for restricting water use to once a week, limitations on timing, no excess runoff, etc (AWWA 2008, 2011)
4	Other - Prohibit use of potable water for washing hard surfaces	<ul style="list-style-type: none"> <li>- No washing down hard or paved surfaces</li> </ul>	40	Assumes savings of 0.5% of outdoor use
4	Expand Public Information Campaign	<ul style="list-style-type: none"> <li>- Targeted Messaging to customers</li> <li>- Notify top water users in each customer class, e.g. residential, and CII</li> <li>- Increase frequency of customer meter readings and production meter readings</li> </ul>	980	Assume additional savings of 10% during Stage III and IV (DWR, 2008) through effective public communication
4	Implement or Modify Drought Rate Structure or Surcharge	<ul style="list-style-type: none"> <li>- Initiate implementation of an Emergency Drought Rate Structure, Budget-based Tiered Rate Structure, Surcharge and/or Excessive Water Use Penalties</li> </ul>	1,950	Assumes savings of 10% during Stage IV (AWWA 2008)



Shortage Level	Demand Reduction Actions (DWR Dropdown List)	Simi Valley Municipal Code Demand Reduction Actions	Estimate Volume Reduction (AF)	Additional Explanation or Reference (optional)
4	Other	Enforcement of all demand reductions actions in Stage III plus demand reductions actions listed below: - Limits on filling residential swimming pools and spas - topped off no more than once per month - Decrease water distribution line flushing - Targeted Messaging to customers; Notify top XX water users in each customer class, e.g. residential, and CII - Increase frequency of customer meter readings and production meter readings	1,080	Assumes savings of 10% on non-landscape uses during Stages II and III for mandatory restrictions, assuming aggressive information dissemination (Virginia Polytechnic Institute, 2006)
<b>Subtotal Stage IV:</b>			<b>8,950</b>	<b>(40% reduction goal = 6,940 AFY)</b>
5	Landscape - Other landscape restriction or prohibition	- All Stage III landscape restrictions - OUTDOOR IRRIGATION LIMITED TO HAND-WATERING, no more than 15 minutes per area	4,900	Assumes savings of 56% for outdoor use during Stage III to VI for restricting water use to once a week, limitations on timing, no excess runoff, etc (AWWA 2008, 2011)
5	Other - Prohibit use of potable water for washing hard surfaces	- No washing down hard or paved surfaces	40	Assumes savings of 0.5% of outdoor use
5	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	- Obligation to fix leaks, breaks, or malfunctions within 24 hours	530	Assumes savings of 6% of indoor use (EPA 2017). Only applies once AMI and customer portal is in place (Stage V and VI)
5	Expand Public Information Campaign	- Targeted Messaging to customers - Notify top water users in each customer class, e.g. residential, and CII - Increase frequency of customer meter readings and production meter readings	1,950	Assume additional savings of 20% during Stage V and VI (DWR, 2008) through effective public communication



Shortage Level	Demand Reduction Actions (DWR Dropdown List)	Simi Valley Municipal Code Demand Reduction Actions	Estimate Volume Reduction (AF)	Additional Explanation or Reference (optional)
5	Implement or Modify Drought Rate Structure or Surcharge	- Advance implementation of an Emergency Drought Rate Structure, Budget-based Tiered Rate Structure, Surcharge and/or Excessive Water Use Penalties	2,930	Assumes savings of 15% during Stage V-VI (AWWA 2008)
5	Other	Enforcement of all demand reductions actions in Stage IV plus demand reductions actions listed below:	1,620	Assumes savings of 15% on non-landscape uses during Stages IV and VI for mandatory restrictions, assuming aggressive information dissemination (Virginia Polytechnic Institute, 2006)
		<b>Subtotal Stage V:</b>	<b>11,970</b>	<b>(50% reduction goal = 8675 AFY)</b>
6	Landscape - Other landscape restriction or prohibition	- All Stage III landscape restrictions - NO OUTDOOR IRRIGATION ALLOWED	4,900	Assumes savings of 56% for outdoor use during Stage III to VI for restricting water use to once a week, limitations on timing, no excess runoff, etc (AWWA 2008, 2011)
6	Other - Prohibit use of potable water for washing hard surfaces	- No washing down hard or paved surfaces	40	Assumes savings of 0.5% of outdoor use
6	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	- Obligation to fix leaks, breaks, or malfunctions within 24 hours	530	Assumes savings of 6% of indoor use (EPA 2017). Only applies once AMI and customer portal is in place (Stage V and VI)
6	Expand Public Information Campaign	- Targeted Messaging to customers - Notify top water users in each customer class, e.g. residential, and CII - Increase frequency of customer meter readings and production meter readings	1,950	Assume additional savings of 20% during Stage V and VI (DWR, 2008) through effective public communication
6	Implement or Modify Drought Rate Structure or Surcharge	- Implement preferred Emergency Drought Rate Structure, Budget-based Tiered Rate Structure, Surcharge and/or Excessive Water Use Penalties	2,930	Assumes savings of 15% during Stage V-VI (AWWA 2008)

Shortage Level	Demand Reduction Actions (DWR Dropdown List)	Simi Valley Municipal Code Demand Reduction Actions	Estimate Volume Reduction (AF)	Additional Explanation or Reference (optional)
6	Other	Enforcement of all demand reductions actions in Stage V plus demand reductions actions listed below:	1,620	Assumes savings of 15% on non-landscape uses during Stages IV and VI for mandatory restrictions, assuming aggressive information dissemination (Virginia Polytechnic Institute, 2006)
		<b>Subtotal Stage VI:</b>	<b>11,970</b>	<b>(&gt;50% reduction goal = &gt;8,675 AFY)</b>

**NOTES:**

Reformatted from UWMP Guidebook, Table 8-2, included in Appendix C

Volumes represent the maximum potential reduction that could be achieved based on the percentages provided in cited literature and WWD8's landscape and non-landscape use.

## **Section 6: Communication Protocols**

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Successful implementation of this Water Shortage Contingency Plan will require coordination with agencies that supply WWD8 water and with customers that rely on WWD8 supplies.

### **6.1 Coordination with Agencies that Supply WWD8**

As a retailer of Calleguas, who is a member agency of the MWD, it is imperative for coordinated planning of water resources. This will allow the WWD8 to account for shortages not only in their supplies, but in the supplies of Calleguas and MWD as well.

WWD8 works cooperatively with Calleguas, meeting regularly for monthly purveyor meetings, or as needed, to confirm the availability of water supplies to WWD8's service area. As a member agency that receives SWP water from the MWD, Calleguas serves as a conduit to relay information on the status of MWD water supplies to WWD8.

### **6.2 Neighboring Retail Water Agencies and Land Use Agencies**

The purpose of meeting with neighboring water agencies and land use agencies is to ensure that residents in WWD8 are receiving consistent messages about the drought, drought severity, and are aware of the actions they can take to reduce demand. Key agencies would include the City of Simi Valley, Calleguas Municipal Water District, County of Ventura Resource Management Agency, County of Ventura Water and Sanitation Department, Golden State Water Company and Las Virgenes Municipal Water District.

All the agencies listed above participate in the Association Water Agencies Ventura County (AWAVC), the members are known to each other. There is a water issues committee that meets on the 3<sup>rd</sup> Tuesday of each month that could be a starting point to coordinate the development of a common message to the community about the drought and to find opportunities to share costs (e.g., share costs of radio announcements and newspaper advertisements). A special drought committee could also be set up as the drought progresses, to refine the drought messaging to further address any common misconceptions or common customer questions.

Goals of coordination may include, but not be limited to:

- Identification of opportunities to share public outreach costs
- Development of common brochures
- Development of common website messages
- Refinement of drought messaging based on customer response
- Determination of the need for proclamation of local emergency

### **6.3 Customer Outreach**

Customer participation is a key element in responding to a supply shortage. While general media coverage of a drought is likely to increase awareness, WWD8 regularly participates in public outreach to further expand water conservation efforts. WWD8 regularly communicates water

resource, use and conservation progress via water bills, websites, social media, highway signs, guest speaking, group presentations, news advertisements and articles and numerous other activities, such as outreach campaigns. Furthermore, WWD8 promotes water conservation material from MWD, Calleguas, and other agencies to further distribute water conservation materials. Table 6-1 describes communication protocols and procedures to be used by WWD8 for outreach to customers to reduce demand during each defined shortage stage.

**Table 6-1: Communication Protocols and Procedures to Support Shortage Response Actions**

Shortage Stage	Percent Supply Reduction	Communication Protocols and Procedures (Outreach to customers when each Stage is declared)
I	Up to 10%	<ul style="list-style-type: none"> <li>- Declaration and notification of water supply shortage I by resolution, and adoption at a public meeting in accordance with state law.</li> <li>- Notification of supply shortage in Public Newspaper</li> </ul>
II	Up to 20%	<ul style="list-style-type: none"> <li>- Declaration and notification of water supply shortage II by resolution, and adoption at a public meeting in accordance with state law.</li> <li>- Notification of supply shortage in Public Newspaper</li> <li>- Advertisement in Local Public Newspaper</li> <li>- Targeted Messaging to customers</li> <li>- Notify top 5 water users in each customer class, e.g. residential, and CII</li> </ul>
III	Up to 30%	<ul style="list-style-type: none"> <li>- Declaration and notification of water supply shortage III by resolution, and adoption at a public meeting in accordance with state law.</li> <li>- Notification of supply shortage in Public Newspaper</li> <li>- Advertisement in Local Public Newspaper</li> <li>- Targeted Messaging to customers</li> <li>- Notify top 10 water users in each customer class, e.g. residential, and CII</li> </ul>
IV	Up to 40%	<ul style="list-style-type: none"> <li>- Declaration and notification of water supply shortage IV by resolution, and adoption at a public meeting in accordance with state law.</li> <li>- Notification of supply shortage in Public Newspaper</li> <li>- Advertisement in Local Public Newspaper</li> <li>- Targeted Messaging to customers</li> <li>- Notify top 15 water users in each customer class, e.g. residential, and CII</li> </ul>
V	Up to 50%	<ul style="list-style-type: none"> <li>- Declaration and notification of water supply shortage V by resolution, and adoption at a public meeting in accordance with state law.</li> <li>- Notification of supply shortage in Public Newspaper</li> <li>- Advertisement in Local Public Newspaper</li> <li>- Targeted Messaging to customers</li> <li>- Notify top 20 water users in each customer class, e.g. residential, and CII</li> </ul>
VI	50% of More	<ul style="list-style-type: none"> <li>- Declaration and notification of water supply shortage VI by resolution, and adoption at a public meeting in accordance with state law.</li> <li>- Notification of supply shortage in Public Newspaper</li> <li>- Advertisement in Local Public Newspaper</li> <li>- Targeted Messaging to customers</li> <li>- Notify top 25 water users in each customer class, e.g. residential, and CII</li> </ul>

## **Section 7: Enforcement**

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The Act requires an analysis of mandatory enforcement, prohibitions, penalties, and consumption reduction methods against specific water use practices which may be considered excessive during water shortages. The Board has the authority to adopt an ordinance enacting specific prohibitions or penalties on end users. In order to enact or rescind any prohibitions or penalties, staff would seek approval from the Board, or the District Engineer, depending on what stage WWD8 is in and what action is required based on changing hydrologic conditions or state mandated policies.

WWD8's water use reduction ordinance, which prohibits the waste of water, is reflected in the City Municipal Code. WWD8 can levy fines on customers who are found to be in violation of WWD8's Water Shortage Contingency Plan. Enforcement of restrictions shall be in accordance with City of Simi Valley Municipal Code, Title 6 Sanitation and Health, Chapter 11 Ventura County Waterworks District No. 8 Water Conservation Program, Article 1, Section 6-11.112 – Enforcement (Appendix A).

When WWD8 determines that more severe water shortage conditions are no longer in effect, mandatory conservation measures will not be in force.

### **7.1 Civil Enforcement of the Water Waste Prohibition**

Prohibited actions and penalties for violating the Water Shortage Contingency Plan are specified in the Municipal Code.

#### **7.1.1 Civil Penalties**

WWD8 has established the following civil penalties associated with violations of the Water Shortage Contingency Plan are specified in the Municipal Code:

- For the first violation of any of the provisions of the code, a written notice is issued by mail or in person.
- If a customer receives a second violation within 12 months, WWD8 can levy a fine of 100 dollars on the customer.
- Should the customer make a third violation within the same 12-month period, it is punishable by fine of 250 dollars.
- Fourth and subsequent violations are punishable by a fine of 500 dollars.
- In addition to any fines and penalties, WWD8 may take further actions such as installation of a water flow restrictor device or disconnecting service at the customer's expense.

See Appendix A - Section 6-11.112(a) to (c) for additional detail.

### **7.1.2 Notices**

The District will give notice of each violation to the customer at the premises at which the violation occurred. For a first, second or third violation, the District may give written notice of the fact of such violation to the customer by mail or personal delivery.

See Appendix A - Section 6-11.112(d)(1) for additional detail.

### **7.1.3 Hearings and Appeals**

A customer may appeal the Notice of Violation by filing a written notice of appeal with WWD8, at which point a hearing on the appeal will be scheduled and upon outcome the appropriate steps would be taken to prevent the unauthorized use of water.

See Appendix A - Section 6-11.112(d)(1) to (3) for additional detail.

## **7.2 Potential Future Penalties or Surcharges**

WWD8 may consider implementation of financial actions to further encourage or enforce water saving behaviors. These may include, but not be limited to:

- Implementation or Modification of an Emergency Drought Rate Structure or Surcharge
- Implementation of Budget-based Tiered Rate Structure
- Implementation of Excessive Water Use Penalties

Financial mitigation actions are further discussed in Section 8.

## **7.3 Criminal Enforcement**

The District may choose to take actions for violations of the water use restrictions, which may be prosecuted as a misdemeanor prosecution.

See Appendix A - Section 6-11.205 for additional detail.

## Section 8: Financial Consequences of Actions during Shortages

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Water purveyors face significant financial challenges during droughts. During periods of reduced consumption, revenue from water sales decline while expenses remain relatively constant. A reduction in construction activities can also reduce water service connection fees collected. While at the same time, as consumption decreases, some expenditures are expected to increase, such as; staff costs for community education, enforcement of ordinances, monitoring and evaluation of water use, drought planning, and dealing with customer questions and complaints, which are expected to rise. Operations and maintenance costs may also increase because of the need to identify and quickly repair all water losses.

WWD8 recognizes the financial impacts of reduced customer deliveries and connections during droughts. It is for this reason that WWD8 uses a rate structure that accounts for all overhead, operating and labor costs of WWD8 and has established reserves to help the District through extended droughts and emergencies. The following sections describe potential revenue reductions, expense increases, mitigation actions and the cost of compliance with reducing residential water use during drought.

### 8.1 Revenue Reductions and Expense Increases

WWD8 has structured its rates into two main components:

- 1) **Fixed Service Charge** has been set with the intent of covering fixed costs (meter infrastructure, billing, administration). The fixed service charge is meant to provide a fixed amount of income to WWD8 independent of water consumption. Currently approximately 26 percent of WWD8's revenue comes from the fixed service charge (Raftelis 2019).
- 2) **Non-Fixed Water Sales** are incurred based on a cost per unit consumed by the customer and is meant to recover the City's variable costs for providing water service. This commodity charge sends the customer a price signal and rewards customers who conserve water. Currently approximately 74 percent of WWD8's revenue comes from the non-fixed water sales, which are subject to seasonal and annual fluctuation (Raftelis 2019).

While WWD8 has significant avoidable costs (when the utility does not sell water it does not purchase water from Calleguas) there are fixed costs that are incurred regardless of water sales. In a drought WWD8 revenues are impacted by reduced water sales but the fixed meter charge makes it possible for WWD8 to continue to cover overhead and operating activities. Pumping costs are covered through a flexible charge based on the customer's pressure zone. A decrease in consumption would impact revenue from water sales but not from fixed charges. Table 8-1 summarizes the potential impacts to revenues under each drought stage.



**Table 8-1: Estimated Revenue Impacts of Reduced Water Demand**

DWR Shortage Stage	Demand Reduction	Estimated Non-Fixed (Water Sales) <sup>2</sup> (million)	Estimated Fixed (Non-Rate) <sup>3</sup> (million)	Annual Revenue Reduction <sup>4</sup> (\$ million)	% Decrease in Water Base Revenue
Normal <sup>1</sup>	0%	\$32.2	\$14.1		
I	Up to 10%	\$29.0	\$14.1	-\$3.2	-7%
II	Up to 20%	\$26.4	\$14.1	-\$5.8	-13%
III	Up to 30%	\$24.3	\$14.1	-\$7.9	-17%
IV	Up to 40%	\$22.5	\$14.1	-\$9.7	-21%
V	Up to 50%	\$21.0	\$14.1	-\$11.2	-24%
VI	50% of More	\$19.6	\$14.1	-\$12.6	-27%

<sup>1</sup> Water base revenue based on FY 2021 budget, for normal year, and reduced by percentage

<sup>2</sup> Based on FY 2021 budget of projected water use charges for a normal year, and reduced by percent supply reduction in shortage years.

<sup>3</sup> Based on FY 2021 budget of projected meter services charges for a normal year, and remains constant in shortage years.

<sup>4</sup> Calculated as Normal Year Non-Fixed and Fixed revenues (\$46.3 M) less estimated Non-Fixed and Fixed revenues at each shortage stage.

The water purchases, utility costs and chemical costs are not a linear function of the water usage reduction. As noted early, WWD8's costs to purchase water would proportionally decrease as demands decrease, thus, in order to provide an estimate of the costs to WWD8, it is assumed that if there is a ten percent reduction in usage, there will also be a ten percent reduction in associated costs. Thus, the deficit in the overall budget due to a reduction in non-fixed water sales would not impact the overall budget by the percentages shown in Table 8-1.

Increased costs associated with staff costs for community education, enforcement of ordinances, monitoring and evaluation of water use, drought planning, and dealing with customer questions and complaints are estimated to be less than 2% of the total budget.

## 8.2 Mitigation Actions

It is imperative that WWD8 has adequate reserves to cover operating and emergency repair expenses during extended droughts and natural disasters. For this reason, WWD8 completed a Water Cost of Service and Rate Study (Raftelis 2019) to develop a ten-year Financial Plan and rate design. The Study resulted in five additional years of revenue and rate adjustments to meet WWD8's goals to establish fair and equitable rates that:

- Proportionately allocated the costs of providing service in accordance with California Constitution Article XIII D, Section 6 (commonly referred to as Proposition 218);
- Meet WWD8's financial needs in terms of operational expenses, capital investment to maintain the water system, and cash reserves;
- Maintain affordable charges for customers and incentivize conservation;
- Provide revenue stability and financial sufficiency in times of water supply shortage, mandatory conservation, or reduced water demand; and
- Are easy for customers to understand and easy for WWD8 staff to implement and update in the future.



In addition, WWD8 maintains financial reserves to provide a basis to cope with fiscal emergencies such as revenue shortfalls, asset failure and natural disasters, among other things. WWD8's financial reserve policy and FY 2020 targets are summarized in Table 8-2.

**Table 8-2: Financial Reserves Policies**

Reserve	Policy	FY 2020 Target <sup>1</sup>
Operating Reserve	90 days of annual O&M expenses	\$10.6
Capital R&R Reserve	One year of annual average CIP expenditures	\$4.9
Rate Stabilization Reserve	5 percent of annual Commodity Charge revenue	\$1.5
	<b>Total Reserves</b>	<b>\$17.0</b>

<sup>1</sup> Source: Water Cost of Service and Rate Study (Raftelis, 2019)

A reduction in water revenue would be primarily offset by the reduced costs of water purchases and could be additionally mitigated through deferral or avoidance of capital fund expenditures or use of the capital R&R Reserve fund. This would meet short-term cash flow needs, although it should only be considered on a short-term basis.

The Rate Stabilization Reserve can be particularly useful during a re-occurring drought to deal with reduced water sales that impact revenues. The intent is for an amount equal to a percentage of annual volumetric rate revenue to be set aside to be utilized during revenue shortfalls, to smooth out rate impacts, or to forego implementation of temporary shortage charges.

A summary of potential measures to overcome revenue and expenditure impacts is provided in Table 8-3.

**Table 8-3: Measures to Overcome Revenue Impacts During Shortage**

Measure	Summary of Effects
Use of Financial Reserve Funds	Use of reserves may provide short-term rate stabilization, but would require delays in capital expenditures and rebuilding of reserves after the water shortage.
Re-evaluate Capital Expenditure Plans	Delay major construction projects for facilities as well as upgrades and replacements.
Consider implementation of an Emergency Drought Rate Structure or Surcharge	To increase revenues during periods of extended drought. This would require a Prop 218 process to re-evaluate current rate structure.
Explore Implementation of Budget-based Tiered Rate Structure	To increase revenues during periods of extended drought. This would require a Prop 218 process to re-evaluate current rate structure.
Define and Implement Excessive Water Use Penalties	To increase revenues during periods of extended drought.

It should be noted that expenditure impacts could be reduced 2-10 percent during mandatory conservation efforts because of the reduction in costs associated with the treatment and delivery of potable water. Rate adjustments could also be employed either solely or in conjunction with

capital expenditure reductions. In California, an increase of rates during periods of extended drought would require a Prop 218 process to re-evaluate current rate structure.

### 8.3 Cost of Compliance

Overall, the cost of compliance with reducing residential water use during drought can be estimated as shown in Table 8-4

**Table 8-4: Estimated Cost of Compliance by Stage**

Stage	Annual Revenue Reduction <sup>1</sup> (million)	Reduced Imported Water Purchases <sup>2</sup> (million)	Ancillary Costs <sup>3</sup> (million)	Net Cost of Compliance <sup>4</sup>	Mitigation Action <sup>5</sup>
I	-\$3.2	\$3.2	\$3.0	\$3.0	Use financial reserves and re-evaluate capital expenditures
II	-\$5.8	\$5.8	\$3.2	\$3.2	
III	-\$7.9	\$7.9	\$3.5	\$3.5	
IV	-\$9.7	\$9.7	\$3.7	\$3.7	Consider implementation of financial actions to increase revenues
V	-\$11.2	\$11.2	\$3.9	\$3.9	
VI	-\$12.6	\$12.6	\$4.0	\$4.0	

<sup>1</sup> See Table 8-1.

<sup>2</sup> Assume that expenditures for imported water purchases decrease by the same amount as reduced revenues

<sup>3</sup> Estimated as a percent of non-fixed water sales to reflect increased costs for expanded public outreach campaigns, increased meter reading, operational and administrative support during each drought stage to implement demand reduction actions.

<sup>4</sup> Calculated sum of annual revenue reduction plus reduced imported water purchased plus ancillary costs.

<sup>5</sup> Implementation of an action to increase revenues may require a Prop 218 process (as discussed in Table 8-3).

## Section 9: Monitoring and Reporting

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Certain aspects of water conservation can be readily monitored and evaluated, such as metered water use and production quantities. Other aspects such as public education are more difficult to measure in terms of effectiveness. Additionally, weather patterns make it more difficult to compare one year's water demand and conservation results with another year's usage.

When severe shortages occur and some degree of mandatory reduction is required, a program's effectiveness can be judged directly by water billings. In these cases, targeted results must be met and even reluctant customers will, on the whole, meet the goals. Specific methods to evaluate effectiveness of water conservation programs to be employed by WWD8 are:

1. Monitoring of Metered Water Usage – This will determine how much has been used. Compiling statistics to track usage of customer groups to determine trends is currently being done through the water billing computer system. Meter readings/billings can be compared and analyzed to determine the effectiveness of conservation for all customer classes.
2. Monitoring Production Quantities – In normal water supply conditions, production figures are recorded daily by the District's automated system. The Water Production Supervisor and the Production Lead monitor the accuracy of the monthly production totals. The totals are incorporated into the monthly water supply report to the State's Drinking Water Information Clearinghouse portal.

To verify that conservation reduction goals are being met, production and metered usage reports will be provided to District Engineer and the District Manager during each stage of the conservation period. Water production figures will be compared to previous year production figures for the same time period to ascertain if conservation goals are being reached. Results will be posted on the Simi Valley website, as appropriate.

Additional actions available to WWD8 include:

1. Transition of remaining customer water meters to "smart meters" and investment in automated system to improve customer interface to allow more timely monitoring by customer of water use patterns. The District has already installed smart meters for about 80% of customers; however, there is currently no interface or portal system to engage customers in real-time to respond to water use and adjustments.
2. Provide incentives to property owners to install sub-meters in multi-family structures for resident/property owners to track water usage.

Table 9-1 lists specific monitoring and reporting methods for each shortage stage that can be used to measure the effectiveness of reducing the shortage gap. As the stages progress into a greater percent supply reduction needed, the monitoring and reporting will increase in frequency, intensity and resources.

**Table 9-1: Monitoring and Reporting to Support Shortage Response Actions**

<b>Shortage Stage (% supply reduction)</b>	<b>Monitoring and Reporting Methods (How to measure effectiveness of reducing the shortage gap)</b>
I (Up to 10%)	<ul style="list-style-type: none"> <li>- Water-Use Monitoring Mechanisms</li> <li>- Prepare and review monthly Potable Water Use Report</li> </ul>
II (Up to 20%)	All Previous Monitoring and Reporting Methods AND: <ul style="list-style-type: none"> <li>- Run and review monthly Waterview Reports</li> <li>- Run and review AMI Reports</li> <li>- Increase frequency of monitoring customer use</li> <li>- Increase frequency of monitoring water delivered by Calleguas as imported water turnouts</li> </ul>
III (Up to 30%)	All Previous Monitoring and Reporting Methods AND: <ul style="list-style-type: none"> <li>- Increase frequency of monitoring customer use</li> <li>- Increase frequency of monitoring water delivered by Calleguas as imported water turnouts</li> </ul>
IV (Up to 40%)	All Previous Monitoring and Reporting Methods AND: <ul style="list-style-type: none"> <li>- Increase frequency of monitoring customer use</li> <li>- Increase frequency of monitoring water delivered by Calleguas as imported water turnouts</li> </ul>
V (Up to 50%)	All Previous Monitoring and Reporting Methods AND: <ul style="list-style-type: none"> <li>- Increase frequency of monitoring customer use</li> <li>- Increase frequency of monitoring water delivered by Calleguas as imported water turnouts</li> </ul>
VI (Up 50% of More)	All Previous Monitoring and Reporting Methods AND: <ul style="list-style-type: none"> <li>- Increase frequency of monitoring customer use</li> <li>- Increase frequency of monitoring water delivered by Calleguas as imported water turnouts</li> </ul>

## Section 10: References

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- American Water Works Association (AWWA), 2011. Drought Preparedness and Response. Manual of Water Supply Practices, M60.
- AWWA. 2008. Forecasting Urban Demand. Second Edition.
- AECOM, 2015. 2015 Ventura County Multi-Hazard Mitigation Plan (MHMP)  
<http://www.vcfloodinfo.com/resources/ventura-county-hazards-mitigation-plan>
- Carollo Engineers (Carollo), 2021. Risk Resilience Assessment Report. Draft December 2020 (to be updated with final date)
- Carollo, April 2015, Final Report Waterworks Facilities Assessment and Cost of Service Evaluation.
- California Department of Water Resources (DWR). 2008. Preparing for California's Next Drought : Changes Since 1987-92.
- California Data Collaborative, 2021. Imported Water Outage Protocol – Allocation Framework & Public Outreach. Prepared for Calleguas Municipal Water District. 1 February 2021.
- Calleguas, 2021a. Draft 2020 Urban Water Management Plan. Prepared for Purveyor Review on February 2021.
- Calleguas, 2021b. Draft 2020 Water Shortage Contingency Plan. Included as Appendix K of the 2020 UWMP. Prepared for Purveyor Review on February 2021.
- City of Santa Cruz Water Department, Water Conservation Office, December 2010. The 2009 Water Shortage An Evaluation of Water Management Strategies, Actions, and Results.
- Environmental Protection Agency (EPA) 2017. WaterSense at Work – Best Management Practices for Commercial and Institutional Facilities.  
[https://www.epa.gov/sites/production/files/2017-02/documents/watersense-at-work\\_final\\_508c3.pdf](https://www.epa.gov/sites/production/files/2017-02/documents/watersense-at-work_final_508c3.pdf)
- Geoscience Support Services, Inc. (Geoscience), 2007. Groundwater Management Plan Gillibrand Groundwater Basin, prepared for Ventura County Waterworks District No. 8 – City of Simi Valley and P.W. Gillibrand Co. Accessed at:  
[http://www.water.ca.gov/groundwater/docs/GWMP/SC14\\_VenturaCountyWaterworksGillibrandGroundwaterBasinGWMP\\_May2007.pdf](http://www.water.ca.gov/groundwater/docs/GWMP/SC14_VenturaCountyWaterworksGillibrandGroundwaterBasinGWMP_May2007.pdf)
- Kennedy Jenks, 2020. Draft VCWWD#8 Seismic Evaluation of the Water Works Storage Tank System.
- Metropolitan Water District of Southern California (MWD), 2020. Final Draft 2020 UWMP. December 2020.

- Public Policy Institute of California (PPIC), 2015. Ellen Hanak; Jeffrey Mount; Caitrin Chappelle "California's Latest Drought". <https://www.ppic.org/publication/californias-latest-drought/>
- Raftelis, 2019. Water Cost of Service and Rate Study. Prepared for Ventura County Waterworks District No.8. October 25, 2019.
- TODD Groundwater (TODD), 2016. Characterization and Groundwater Supply Assessment for Simi Valley Basin. Prepared for Ventura County Waterworks District No.8. March, 2016.
- Ventura County Waterworks District No.8 (WWD8), 2021. Ventura County Waterworks District No. 8 Water Design and Construction Standards (currently being updated)
- Virginia Polytechnic Institute and State University Blacksburg, Virginia, 2006. The Effectiveness of Drought Management Programs in Reducing Residential Water-Use in Virginia. <http://water.ky.gov/wa/Documents/AdditlDroughtResources/VirginiaStudyonDroughtProgramEffectiveness.pdf>
- City of Simi Valley, 2015. City of Simi Valley Multi-Hazard Mitigation Plan 2015. <https://www.simivalley.org/departments/police-department/emergency-services/simi-valley-hazard-mitigation-planning>
- City of Simi Valley, 2012. Simi Valley 2030 General Plan Update. Prepared by City of Simi Valley June 2012. <https://www.simivalley.org/home/showpublisheddocument?id=6861>
- City of Simi Valley, 2001. Standard Emergency Management System (SEMS) Multi-Hazard Functional Plan (Emergency Plan) <https://www.simivalley.org/departments/police-department/emergency-services/emergency-plan>

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## **Appendix A: WWD8 Water Conservation Program**

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The Simi Valley Municipal Code, Title 6 Sanitation and Health, Chapter 11 Ventura County Waterworks District No. 8 Water Conservation Program is included herein and available online: [https://library.municode.com/ca/simi\\_valley/codes/code\\_of\\_ordinances?nodeld=SIMI\\_VALLEYMUCO](https://library.municode.com/ca/simi_valley/codes/code_of_ordinances?nodeld=SIMI_VALLEYMUCO). Language, amendments and editors notes herein are based on the current version as of Nov 25, 2020.

### **Simi Valley Municipal Code, Title 6, Chapter 11**

#### **VENTURA COUNTY WATERWORKS DISTRICT NO. 8 (VCWWD) WATER CONSERVATION PROGRAM**

#### **Article 1.**

#### **Ventura County Waterworks District No. 8 Water Conservation Program**

##### **6-11.101 - Purpose and intent.**

- (a) The purpose of this article is to establish a Water Conservation Program that will reduce water consumption within the jurisdiction of VCWWD through conservation, enable effective water supply planning, assure reasonable and beneficial use of water, prevent waste of water, and maximize the efficient use of water within VCWWD's service area to avoid and minimize the effect and hardship of water shortage to the greatest extent possible.
- (b) This article establishes permanent water conservation standards intended to alter behavior related to water use efficiency at all times and further establishes four (4) levels of water supply shortage response actions to be implemented during times of declared water shortage or declared water shortage emergency, with increasing restrictions on water use in response to worsening drought or emergency conditions and decreasing supplies.

*(§ 4, Ord. WWD-08, eff. May 11, 2009 as amended by § 1, Ord. No. WWD-15, eff. April 24, 2017)*

##### **6-11.102 - Definitions.**

The following words and phrases whenever used in this article have the meaning defined in this section:

- (a) "City" means City of Simi Valley.
- (b) "City Council" means the City Council of the City of Simi Valley.
- (c) "Person" means any natural person or persons, corporation, public or private entity, governmental agency or institution, including all agencies and departments of VCWWD, or any other user of water provided by VCWWD.
- (d) "Landscape irrigation system" means an irrigation system with pipes, hoses, spray heads, or sprinkling devices that are operated by hand or through an automated system.
- (e) "Single pass cooling systems" means equipment where water is circulated only once to cool equipment before being disposed.
- (f) "Potable water" means water which is suitable for drinking.
- (g) "Public area" means land owned in fee or easement by a public agency.

- (h) "Recycled water" means the reclamation and reuse of non-potable water for beneficial use as defined in Title 22 of the California Code of Regulations.
- (i) "Weather Based Irrigation Controller" means electronic irrigation controller that utilizes sensors and real-time weather-based information in determining evapotranspiration (ET) and allowing efficient water management.
- (j) "VCWWD" means the Ventura County Waterworks District No. 8.
- (k) "District Board" means the Board of Directors of the Ventura County Waterworks District No. 8.
- (l) "District" means the Ventura County Waterworks District No. 8.

(§ 4, Ord. WWD-08, eff. May 11, 2009 as amended by § 1, Ord. No. WWD-15, eff. April 24, 2017)

### **6-11.103 - Application.**

- (a) To the extent authorized by law, this article shall apply to all customers and property within the service area of VCWWD.
- (b) The provisions of this article do not apply to uses of water necessary to protect public health and safety or for essential government services, such as police, fire, and other similar emergency services.
- (c) The provisions of this article do not apply to the use of recycled water, with the exception of Section 6-11.104(a).
- (d) The provisions of this article do not apply to the use of water by commercial nurseries and commercial growers to sustain plants, trees, shrubs, crops, or other vegetation intended for commercial sale.
- (e) This article is intended solely to further the conservation of water. It is not intended to implement any provision of federal, State, or local statutes, ordinances, or regulations relating to protection of water quality or control of drainage or runoff.

(§ 4, Ord. WWD-08, eff. May 11, 2009)

### **6-11.104 - Permanent water conservation requirements—Prohibition against waste.**

The following water conservation requirements are effective at all times and are permanent. Violations of this section will be considered waste and an unreasonable use of water.

- (a) *Limits on watering hours.* Watering or irrigating of lawn, landscape, or other vegetated area with potable water is prohibited between the hours of 9:00 a.m. and 5:00 p.m. on any day, except by use of a hand-held bucket or similar container, a hand-held hose equipped with a positive self-closing water shut-off nozzle or device, or for very short periods of time for the express purpose of adjusting or repairing an irrigation system. This provision shall not apply to commercial nurseries and irrigation systems using weather based irrigation controllers.
- (b) *Limit on watering duration.* Watering or irrigating of lawn, landscape, or other vegetated area with potable water using a landscape irrigation system or a watering device that is not continuously attended is limited to no more than fifteen (15) minutes of watering per day per station. This subsection does not apply to landscape irrigation systems that use high efficiency devices such as low flow drip irrigation, stream rotator sprinklers and/or soil-moisture sensor systems or weather based irrigation controllers.
- (c) *No excessive water flow or runoff.* Watering or irrigating of any lawn, landscape, or other vegetated area in a manner that causes or allows excessive water flow or runoff onto an adjoining sidewalk, driveway, street, alley, gutter, or ditch is prohibited.

- (d) *No washing down hard or paved surfaces.* Washing down hard or paved surfaces, including but not limited to sidewalks, walkways, driveways, parking areas, tennis courts, patios, or alleys, is prohibited except when necessary to alleviate safety or sanitary hazards, and then only by use of a hand-held bucket or similar container, a hand-held hose equipped with a positive self-closing water shut-off device, a low-volume, high-pressure cleaning machine equipped to recycle any water used, or a low-volume high-pressure water broom. The discharge of pollutants to the storm drain system is prohibited pursuant to Section 6-12.201 of this Code.
- (e) *Obligation to fix leaks, breaks or malfunctions.* Excessive use, loss or escape of water through breaks, leaks, or other malfunctions in the water user's plumbing or distribution system for any period of time after such escape of water should have reasonably been discovered and corrected, and in no event more than seven (7) days after receiving notice from VCWWD, is prohibited.
- (f) *Recirculating water required for water fountains and decorative water features.* Operating a water fountain or other decorative water feature that does not use re-circulated water is prohibited.
- (g) *Limits on washing vehicles.* Using water to wash or clean a vehicle, including but not limited to any automobile, truck, van, bus, motorcycle, boat, or trailer, whether motorized or not, is prohibited, except by use of a hand-held bucket or similar container or a hand-held hose equipped with a positive self-closing water shut-off nozzle or device. This subsection does not apply to any commercial car washing facility.
- (h) *Drinking water served upon request only.* Eating or drinking establishments, including but not limited to a restaurant, hotel, cafe, cafeteria, bar, or other public place where food or drinks are sold, served, or offered for sale, are prohibited from providing drinking water to any person unless expressly requested.
- (i) *Commercial lodging establishments must provide guests option to decline daily linen services.* Hotels, motels, and other commercial lodging establishments must provide customers the option of not having towels and linen laundered daily. Commercial lodging establishments must prominently display notice of this option in each bathroom using clear and easily understood language.
- (j) *No installation of single pass cooling systems.* Installation of single pass cooling systems is prohibited in buildings requesting new water service.
- (k) *No installation of non-recirculating water systems in commercial car washes and laundry systems.* Installation of non-recirculating water systems is prohibited in new commercial conveyor car washes and new commercial laundry systems.
- (l) *Restaurants required to use water conserving dish wash spray valves.* New and existing food preparation establishments, such as restaurants or cafes, are required to use water conserving dish wash spray valves.
- (m) *Commercial car wash systems.* Effective on January 1, 2010, all commercial conveyor car wash systems must have installed operational recirculating water systems or must have secured a waiver of this requirement from VCWWD.
- (n) All water users are prohibited from irrigating turf or ornamental landscapes with potable water during and forty-eight (48) hours after measurable rainfall.
- (o) Irrigation of ornamental turf on street medians is prohibited.

(§ 4, Ord. WWD-08, eff. May 11, 2009, as amended by § 1, Ord. No. WWD-09, eff. June 15, 2009; § 1, Ord. No. WWD-14, eff. May 4, 2015; § 1, Ord. No. WWD-15, eff. April 24, 2017)

### **6-11.105 - Declaration of water supply shortages.**

The Board of Directors of VCWWD will declare a water supply shortage when supplies, due to drought or other water supply conditions are allocated by the VCWWD's wholesaler, Calleguas Municipal Water

District, or otherwise constricted by the State of California, or when its own evaluation of supply and demand conditions indicates the potential for shortage.

*(§ 1, Ord. No. WWD-15, eff. April 24, 2017)*

*Editor's note— Ord. No. WWD-15, § 1, adopted April 24, 2017, effective April 24, 2017, repealed the former §§ 6-11.105—6.11.108, and enacted new §§ 6-11.105—6-11.110 as set out herein. The former §§ 6-11.105—6-11.108 pertained to level 1 water supply shortage; level 2 water supply shortage; level 3 water supply shortage (emergency condition) and procedures for determination—notification of water supply shortage, respectively and derived from Ord. No. WWD-08, effective May 11, 2009; Ord. No. WWD-10, effective October 12, 2009 and Ord. No. WWD-14, effective May 4, 2015.*

### **6-11.106 - Level 1 water supply shortage.**

A Level 1 water supply shortage will be declared when a water supply shortage or threatened shortage exists and a consumer demand reduction, up to ten (10%) percent, is requested to make more efficient use of water and to appropriately respond to existing water conditions. Upon the declaration by the Board of Directors of VCWWD of a Level 1 water supply shortage condition, VCWWD will call for the Level 1 voluntary reductions, in addition to the permanent conservation measures identified in section 6-11.104.

*(§ 1, Ord. No. WWD-15, eff. April 24, 2017)*

*Editor's note— See editor's note at § 6-11.105*

### **6-11.107. - Level 2 water supply shortage.**

- (a) A Level 2 water supply shortage will be declared when a water supply shortage or threatened shortage exists and a mandatory consumer demand reduction, up to twenty (20%) percent, is necessary to make more efficient use of water and to appropriately respond to existing water conditions. Upon the declaration by the Board of Directors of VCWWD of a Level 2 water supply shortage condition, VCWWD will implement the mandatory Level 2 conservation measures identified in this section.
- (b) *Additional water conservation measures.* In addition to the prohibited uses of water identified in Section 6-11.104, the following water conservation requirements apply during a declared Level 2 water supply shortage:
  - (1) *Limits on watering days.* Watering or irrigating of lawn, landscape, or other vegetated area is limited to three (3) days per week on a schedule established and posted by VCWWD. During the months of November through March, irrigating of lawn, landscape, or other vegetated area with potable water is limited to no more than two (2) days per week on a schedule established and posted by VCWWD. Watering, as described herein, includes watering performed by irrigation systems controlled by a soil-moisture sensor system, weather based irrigation controller, drip irrigation and other low-flow irrigation mechanisms, or other irrigation methods.
  - (2) *Obligation to fix leaks, breaks, or malfunctions.* All leaks, breaks, or other malfunctions in the water user's plumbing or distribution system must be repaired within seventy-two (72) hours of notification by VCWWD unless other arrangements are made with VCWWD.

*(§ 1, Ord. No. WWD-15, eff. April 24, 2017)*

*Editor's note— See editor's note at § 6-11.105*

### 6-11.108. - Level 3 water supply shortage.

- (a) A Level 3 water supply shortage will be declared when a water supply shortage or threatened shortage exists and a mandatory consumer demand reduction, up to fifty (50%) percent, is necessary to make more efficient use of water and to appropriately respond to existing water conditions. Upon the declaration by the Board of Directors of VCWWD of a Level 3 water supply shortage condition, VCWWD will implement the mandatory Level 3 conservation measures identified in this section.
- (b) *Additional water conservation measures.* In addition to the prohibited uses of water identified in Sections 6-11.104 and 6-11.107, the following additional water conservation requirements apply during a declared Level 3 water supply shortage:
  - (1) *Limits on watering days.* Watering or irrigating of lawn, landscape or other vegetated area with potable water is limited to two (2) days per week on a schedule established and posted by VCWWD. During the months of November through March, watering or irrigating of lawn, landscape or other vegetated area with potable water is limited to no more than once per week on a schedule established and posted by VCWWD. Watering, as described herein, includes watering performed by irrigation systems controlled by a soil-moisture sensor system, weather-based irrigation controller, drip irrigation and other low-flow irrigation mechanisms, or other irrigation methods.
  - (2) *Obligation to fix leaks, breaks, or malfunctions.* All leaks, breaks, or other malfunctions in the water user's plumbing or distribution system must be repaired within forty-eight (48) hours of notification by VCWWD unless other arrangements are made with VCWWD.
  - (3) *Limits on filling ornamental lakes or ponds.* Filling or re-filling ornamental lakes or ponds is prohibited, except to the extent needed to sustain aquatic life, provided that such animals have been actively managed within the water feature prior to declaration of a supply shortage level under this article.

(§ 1, Ord. No. WWD-15, eff. April 24, 2017)

*Editor's note— See editor's note at § 6-11.105*

### 6-11.109. - Level 4 water supply shortage.

- (a) A Level 4 water supply shortage condition is also referred to as an "emergency" condition. A Level 4 water supply shortage will be declared when a water shortage emergency exists mandatory reduction in consumer demand of fifty (50%) or more is necessary to maintain sufficient water supplies for public health and safety. Upon the declaration of a Level 4 water supply shortage condition by VCWWD, VCWWD will implement the mandatory Level 4 conservation measures identified in this section.
- (b) *Additional water conservation measures.* In addition to the prohibited uses of water identified in Sections 6-11.104 through 6-11.108, the following water conservation requirements apply during a declared Level 4 water supply shortage emergency:
  - (1) *No watering or irrigating.* Watering or irrigating of lawn, landscape, or other vegetated area with potable water is prohibited. This restriction does not apply to the following categories of use:
    - (i) Maintenance of vegetation, including trees and shrubs, that are watered using a hand-held bucket or similar container, hand-held hose equipped with a positive self-closing water shut-off nozzle or device;
    - (ii) Maintenance of existing landscape necessary for fire protection;
    - (iii) Maintenance of existing landscape for soil erosion control;
    - (iv) Maintenance of plant materials identified to be rare or essential to the well-being of protected species;

- (v) Maintenance of landscape within active public parks and playing fields, day care centers, golf course greens, and school grounds, provided that such irrigation does not exceed two (2) days per week according to the schedule established in Section 6-11.108(b)(1) and time restrictions in Section 6-11.104(a) and (b);
  - (vi) Actively irrigated environmental mitigation projects.
- (2) *Obligation to fix leaks, breaks, or malfunctions.* All leaks, breaks, or other malfunctions in the water user's plumbing or distribution system must be repaired within twenty-four (24) hours of notification by VCWWD unless other arrangements are made with VCWWD.
  - (3) *New potable water service.* Except for the resetting or turn-on of meters to provide continuation of water service or the restoration of service that has been interrupted for a period of one year or less, no new potable water service will be provided, no new temporary meters or permanent meters will be provided, and no statements of immediate ability to serve or provide potable water service (such as will-serve letters, certificates, or letters of availability) will be issued, except under the following circumstances:
    - (i) A valid, unexpired building permit has been issued for the project;
    - (ii) The project is necessary to protect the public health, safety, and welfare; or
    - (iii) The applicant provides substantial evidence of an enforceable commitment that water demands for the project will be offset prior to the provision of a new water meter(s) to the satisfaction of VCWWD.
  - (4) *Discontinue service.* VCWWD, in its sole discretion, may discontinue service to customers who willfully violate provisions of this section.
  - (5) *No new annexations.* Upon the declaration of a Level 4 water supply shortage condition, VCWWD will suspend consideration of annexations to its service area. This subsection does not apply to boundary corrections and annexations that will not result in any increased use of water.
  - (6) *Limits on filling residential swimming pools and spas.* Re-filling of more than one foot per month and initial filling of residential swimming pools or outdoor spas with potable water is prohibited.

(§ 1, Ord. No. WWD-15, eff. April 24, 2017)

*Editor's note— See editor's note at § 6-11.105*

#### **6-11.110. - Procedures for determination—Notification of water supply shortage.**

- (a) *Declaration and notification of water supply shortage.* The existence of Level 1, Level 2, Level 3 or Level 4 water supply shortage conditions shall be declared by resolution of VCWWD adopted at a regular or special public meeting held in accordance with State law. The mandatory conservation requirements applicable to Level 1, Level 2, Level 3 or Level 4 conditions will take effect on the tenth day after the date the shortage level is declared. Within five (5) days following the declaration of the shortage level, VCWWD will publish a copy of the resolution in a newspaper used for publication of official notices.
- (b) *Determination of compliance with this article.* Violations and compliance with the provisions set forth in this article shall, to the extent authorized by law, be determined by VCWWD.

(§ 1, Ord. No. WWD-15, eff. April 24, 2017)

*Editor's note— See editor's note at § 6-11.105*



### 6-11.111 - Hardship waiver.

- (a) *Undue and disproportionate hardship.* If, due to unique circumstances, a specific requirement of this article would result in undue hardship to a person using water or to property upon which water is used that is disproportionate to the impacts to water users generally or to similar property or classes of water users, then the person may apply for a waiver to the requirements as provided in this section.
- (b) *Written finding.* The waiver may be granted or conditionally granted only upon a written finding of the existence of facts demonstrating an undue hardship to a person using water or to property upon which water is used that is disproportionate to the impacts to water users generally or to similar property or classes of water use due to specific and unique circumstances of the user or the user's property.
  - (1) *Application.* Application for a waiver must be on a form prescribed by VCWWD and accompanied by a non-refundable processing fee in an amount set by VCWWD resolution.
  - (2) *Supporting documentation.* The application must be accompanied by photographs, maps, drawings, and other information, including a written statement of the applicant.
  - (3) *Required findings for waiver.* An application for a waiver will be denied unless VCWWD finds, based on the information provided in the application, supporting documents, or such additional information as may be requested and on water use information for the property as shown by water use records all of the following:
    - (i) That the waiver does not constitute a grant of special privilege inconsistent with the limitations upon other residents and businesses;
    - (ii) That because of special circumstances applicable to the property or its use, the strict application of this article would have a disproportionate impact on the property or use that exceeds the impact to residents and businesses generally;
    - (iii) That the authorizing of such waiver will not be of substantial detriment to adjacent properties and will not materially affect the ability of VCWWD to effectuate the purpose of this article and will not be detrimental to the public interest; and
    - (iv) That the condition or situation of the subject property or the intended use of the property for which the waiver is sought is not common, recurrent, or general in nature.
  - (4) *Approval authority.* The District Manager or designee must act upon any completed waiver application no later than ten (10) days after submittal and may approve, conditionally approve, or deny the waiver. The applicant requesting the waiver must be promptly notified in writing of any action taken. Unless specified otherwise at the time a waiver is approved, the waiver will apply to the subject property during the period of the mandatory water supply shortage condition. The decision of the District Manager or designee will be final.

(§ 4, Ord. WWD-08, eff. May 11, 2009 as amended by § 1, Ord. No. WWD-15, eff. April 24, 2017)

*Editor's note— Ord. No. WWD-15, § 1, adopted April 24, 2017, effective April 24, 2017, renumbered § 6-11.109 as 6-11.111.*

### 6-11.112 - Enforcement.

- (a) No customer of VCWWD shall make, cause, use, or permit the use of water in a manner contrary to any provision of this article. Each customer shall be guilty of a separate offense for each day during which such violation of this article occurred.
- (b) *Criminal enforcement.* Any violation of the water use restrictions set forth in this article may be prosecuted as a misdemeanor and is punishable as provided in Chapter 2 of Title 1 of this Code.

- (c) *Civil enforcement.* Any violation of the water use restrictions set forth in this article may be subject to penalties and fines as set forth below:
- (1) *First violation.* The VCWWD may issue an Initial Notice of Violation/Warning and deliver a copy of the ordinance codified in this article by mail or in person.
  - (2) *Second violation.* A second violation within the preceding twelve (12) calendar months is punishable by a fine in an amount set forth by resolution adopted by the VCWWD.
  - (3) *Third violation.* A third violation within the preceding twelve (12) calendar months is punishable by a fine in an amount set forth by resolution adopted by the VCWWD.
  - (4) *Fourth and subsequent violations.* A fourth and any subsequent violation is punishable by a fine in an amount set forth by resolution adopted by the VCWWD.
  - (5) *Water flow restrictor.* In addition to any fines and penalties, VCWWD may install, upon its customers, a water flow restrictor device of approximately one gallon per minute capacity for services up to one and one-half inch size and comparatively sized restrictors for larger services for violations of mandatory water use restrictions set forth in this article after forty-eight (48) hours' written notice of intent.
  - (6) *Disconnecting service.* In addition to fines and penalties, and the installation of a water flow restrictor, VCWWD may disconnect its customers' water service after five (5) calendar days' written notice of intent for continued violations of mandatory water use restrictions set forth in this article.
  - (7) *Cost of flow restrictor and disconnecting service.* A person or entity that violates this article is responsible for payment of VCWWD's charges for installing and/or removing any flow restricting device and for disconnecting and/or reconnecting service per the VCWWD's Schedule of Service Charges then in effect. Such charges must be paid to VCWWD before the device is removed or the water service is reconnected. Nonpayment will be subject to the same remedies as nonpayment of basic water rates.
- (d) *Notice and hearing for civil enforcement.*
- (1) A notice of violation by mail or personal delivery shall be issued at least ten (10) calendar days before taking civil enforcement action. Such notice must describe the violation and the date by which corrective action must be taken. A customer may appeal the Notice of Violation by filing a written notice of appeal with VCWWD no later than the close of business on the day before the date scheduled for enforcement action. Any Notice of Violation not timely appealed will be final. Upon receipt of a timely appeal, a hearing on the appeal will be scheduled, and VCWWD will mail written notice of the hearing date to the customer at least ten (10) calendar days before the date of the hearing.
  - (2) Pending receipt of a written appeal or pending a hearing pursuant to an appeal, VCWWD may take appropriate steps to prevent the unauthorized use of water as appropriate to the nature and extent of the violations and the current declared water level condition.
  - (3) All appeal hearings shall be conducted before the District Manager or designee. The District Manager or designee shall be the final decision maker on all appeals.

*(§ 4, Ord. WWD-08, eff. May 11, 2009, as amended by § 1, Ord. WWD-09, eff. June 15, 2009 and § 1, Ord. No. WWD-15, eff. April 24, 2017)*

*Editor's note— Ord. No. WWD-15, § 1, adopted April 24, 2017, effective April 24, 2017, renumbered § 6-11.110 as 6-11.112.*



## **Article 2.**

### **City Water Conservation Program**

#### **6-11.201 - Purpose and intent.**

- (a) The purpose of this article is to establish a Water Conservation Program that will reduce water consumption within the City through conservation, enable effective water supply planning, assure reasonable and beneficial use of water, prevent waste of water, and maximize the efficient use of water within the City to avoid and minimize the effect and hardship of water shortage to the greatest extent possible.
- (b) This article establishes permanent water conservation standards intended to alter behavior related to water use efficiency at all times.

*(§ 4, Ord. 1142, eff. June 16, 2009)*

#### **6-11.202 - Definitions.**

The following words and phrases whenever used in this article have the meaning defined in this section:

- (a) "City" means City of Simi Valley.
- (b) "City Council" means the City Council of the City of Simi Valley.
- (c) "Person" means any natural person or persons, corporation, public or private entity, governmental agency or institution, including all agencies and departments of City, or any other user of water.
- (d) "Landscape irrigation system" means an irrigation system with pipes, hoses, spray heads, or sprinkling devices that are operated by hand or through an automated system.
- (e) "Single pass cooling systems" means equipment where water is circulated only once to cool equipment before being disposed.
- (f) "Potable water" means water which is suitable for drinking.
- (g) "Public area" means land owned in fee or easement by a public agency.
- (h) "Recycled water" means the reclamation and reuse of non-potable water for beneficial use as defined in Title 22 of the California Code of Regulations.
- (i) "Smart Controller" means electronic irrigation controller that utilizes sensors and real-time weather-based information in determining evapotranspiration (ET) and allowing efficient water management.
- (j) "VCWWD" means the Ventura County Waterworks District No. 8.
- (k) "Golden State" means the Golden State Water Company.

*(§ 4, Ord. 1142, eff. July 16, 2009)*

### 6-11.203 - Application.

- (a) To the extent authorized by law, this article shall apply to all customers and property in the City.
- (b) The provisions of this article do not apply to uses of water necessary to protect public health and safety or for essential government services, such as police, fire, and other similar emergency services.
- (c) The provisions of this article do not apply to the use of recycled water, with the exception of Section 6-11.204(a).
- (d) The provisions of this article do not apply to the use of water by commercial nurseries and commercial growers to sustain plants, trees, shrubs, crops, or other vegetation intended for commercial sale.
- (e) This article is intended solely to further the conservation of water. It is not intended to implement any provision of federal, state, or local statutes, ordinances, or regulations relating to protection of water quality or control of drainage or runoff.

(§ 4, Ord. 1142, eff. July 16, 2009)

### 6-11.204 - Permanent water conservation requirements—Prohibition against waste.

The following water conservation requirements are effective at all times and are permanent. Violations of this section will be considered waste and an unreasonable use of water.

- (a) *Limits on Watering Hours.* Watering or irrigating of lawn, landscape or other vegetated area with potable water is prohibited between the hours of 9:00 a.m. and 5:00 p.m. on any day, except by use of a hand-held bucket or similar container, a hand-held hose equipped with a positive self-closing water shut-off nozzle or device, or for very short periods of time for the express purpose of adjusting or repairing an irrigation system. This provision shall not apply to commercial nurseries and irrigation systems using smart controllers.
- (b) *Limit on Watering Duration.* Watering or irrigating of lawn, landscape, or other vegetated area with potable water using a landscape irrigation system or a watering device that is not continuously attended is limited to no more than fifteen (15) minutes of watering per day per station. This subsection does not apply to landscape irrigation systems that exclusively use very low-flow drip type irrigation systems when no emitter produces more than two (2) gallons of water per hour, stream rotor sprinklers that meet a seventy (70%) percent efficiency standard, or irrigation systems using smart controllers.
- (c) *No Excessive Water Flow or Runoff.* Watering or irrigating of any lawn, landscape, or other vegetated area in a manner that causes or allows excessive water flow or runoff onto an adjoining sidewalk, driveway, street, alley, gutter, or ditch is prohibited.
- (d) *No Washing Down Hard or Paved Surfaces.* Washing down hard or paved surfaces, including, but not limited to, sidewalks, walkways, driveways, parking areas, tennis courts, patios, or alleys, is prohibited except when necessary to alleviate safety or sanitary hazards, and then only by use of a hand-held bucket or similar container, a hand-held hose equipped with a positive self-closing water shut-off device, a low-volume, high-pressure cleaning machine equipped to recycle any water used, or a low-volume high-pressure water broom.
- (e) *Obligation to Fix Leaks, Breaks or Malfunctions.* Excessive use, loss, or escape of water through breaks, leaks, or other malfunctions in the water user's plumbing or distribution system for any period of time after such escape of water should have reasonably been discovered and corrected, and in no event more than seven (7) days after receiving notice from VCWWD or Golden State Water Company, is prohibited.

- (f) *Re-circulating Water Required for Water Fountains and Decorative Water Features.* Operating a water fountain or other decorative water feature that does not use re-circulated water is prohibited.
- (g) *Limits on Washing Vehicles.* Using water to wash or clean a vehicle, including, but not limited to, any automobile, truck, van, bus, motorcycle, boat, or trailer, whether motorized or not, is prohibited, except by use of a hand-held bucket or similar container or a hand-held hose equipped with a positive self-closing water shut-off nozzle or device. This subsection does not apply to any commercial car washing facility.
- (h) *Drinking Water Served Upon Request Only.* Eating or drinking establishments, including but not limited to a restaurant, hotel, cafe, cafeteria, bar, or other public place where food or drinks are sold, served, or offered for sale, are prohibited from providing drinking water to any person unless expressly requested.
- (i) *Commercial Lodging Establishments Must Provide Guests Option to Decline Daily Linen Services.* Hotels, motels, and other commercial lodging establishments must provide customers the option of not having towels and linen laundered daily. Commercial lodging establishments must prominently display notice of this option in each bathroom using clear and easily understood language.
- (j) *No Installation of Single Pass Cooling Systems.* Installation of single pass cooling systems is prohibited in buildings requesting new water service.
- (k) *No Installation of Non-recirculating Water Systems in Commercial Car Washes and Laundry Systems.* Installation of non-recirculating water systems is prohibited in new commercial conveyor car washes and new commercial laundry systems.
- (l) *Restaurants Required to Use Water Conserving Dish Wash Spray Valves.* New and existing food preparation establishments, such as restaurants or cafes, are required to use water conserving dish wash spray valves.
- (m) *Commercial Car Wash Systems.* Effective on January 1, 2010, all commercial conveyor car wash systems must have installed operational re-circulating water systems or must have secured a waiver of this requirement from VCWWD or Golden State Water Company.

(§ 4, Ord. 1142, eff. July 16, 2009)

### **6-11.205 - Enforcement.**

Any violation of the water use restrictions set forth in this article may be prosecuted as a misdemeanor and is punishable as provided in Chapter 2 of Title 1 of this Code.

(§ 4, Ord. 1142, eff. July 16, 2009)



## **Appendix B: WWD8 Adoption of the WSCP**

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RESOLUTION NO. WWD-283

A RESOLUTION OF THE BOARD OF DIRECTORS OF  
VENTURA COUNTY WATERWORKS DISTRICT NO. 8  
ADOPTING THE 2020 URBAN WATER MANAGEMENT  
PLAN AND 2020 WATER SHORTAGE CONTINGENCY  
PLAN

WHEREAS, the California Legislature enacted Assembly Bill 797 (Water Code Section 10610 et. Seq., known as the Urban Water Management Planning Act) during the 1983-1984 Regular Session, and as amended subsequently, which mandates that every supplier providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre feet of water annually prepare an Urban Water Management Plan (UWMP), the primary objective of which is to plan for the conservation and efficient use of water; and

WHEREAS, the California Water Code Section 10632, requires that every urban water supplier shall prepare and adopt a Water Shortage Contingency Plan (WSCP) as part of its Urban Water Management Plan; and

WHEREAS, Ventura County Waterworks District No. 8 (District) is an urban supplier of water providing water to over 90,000 customers; and

WHEREAS, the Plan shall be periodically reviewed at least once every five years, and the District shall make any amendments to the Plan which are indicated by the review; and

WHEREAS, the Plan must be adopted by July 1, 2021, after public review and hearing, and filed with the California Department of Water Resources within thirty days of adoption; and

WHEREAS, the District has, therefore, prepared and circulated for public review the 2020 Urban Water Management Plan and 2020 Water Shortage Contingency Plan and properly noticed the public hearing regarding the UWMP and WSCP that was conducted by the Board of Directors on May 17, 2021.

NOW, THEREFORE, THE BOARD OF DIRECTORS OF VENTURA COUNTY WATERWORKS DISTRICT NO. 8 DOES HEREBY RESOLVE AS FOLLOWS:

SECTION 1. The 2020 Urban Water Management Plan and 2020 Water Shortage Contingency Plan is hereby adopted and ordered filed with the District Secretary.

SECTION 2. The District Manager is hereby authorized and directed to file the UWMP update and WSCP with the California Department of Water Resources by July 1, 2021.

SECTION 3. The District Manager is hereby authorized to promote the implementation of the Water Conservation Programs as detailed in the adopted 2020 Urban Water Management Plan and 2020 Water Shortage Contingency Plan, including recommendations to the District’s Board of Directors regarding necessary procedures, rules, and regulations to carry out effective and equitable water conservation programs;

SECTION 4. The District Secretary shall certify to the adoption of this resolution and shall cause a certified resolution to be filed in the Office of the District Secretary.

PASSED and ADOPTED this 17<sup>th</sup> day of May 2021.

**Attest:**

DocuSigned by:  
*Lucy Blanco*  
2C09E360D6CF450...  
Lucy Blanco, District Secretary

DocuSigned by:  
*Keith L. Mashburn*  
531FA02D0F746436...  
Keith L. Mashburn, Chair of the Ventura County Waterworks District No. 8

**Approved as to Form:**

DocuSigned by:  
*Lonnie J. Eldridge*  
6FE880C613FF47F...  
Lonnie J. Eldridge, District Counsel

**Approved as to Content:**

DocuSigned by:  
*Brian Paul Gabler*  
5B40FE61851E455...  
Brian P. Gabler, District Manager

DocuSigned by:  
*Ronald K. Fuchiwaki*  
D2439F3A57D548A...  
Ronald K. Fuchiwaki,  
Public Works Director



CERTIFICATION

I, District Secretary of the Ventura County Waterworks District No. 8, hereby certify that the foregoing is a full, true, and correct copy of Resolution No. WWD-283 which was regularly introduced and adopted by the Board of Directors of Ventura County Waterworks District No. 8, at a regular meeting thereof held on the 17<sup>th</sup> day of May 2021, by the following vote of the Board of Directors:

AYES: Directors Litster, Luevanos, Judge, Vice-Chair Cavanaugh and Chair Mashburn

NAYS: None

ABSENT: None

ABSTAINED: None

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of the City of Simi Valley, California, dated May 19, 2021.

DocuSigned by:  
*Lucy Blanco*

2C09E360D6CF450...

Lucy Blanco  
District Secretary



## Appendix C: Standardized Tables

DRAFT Submittal Table 8-1 Water Shortage Contingency Plan Levels		
Shortage Level	Complete Both	
	Percent Shortage Range <sup>1</sup> <i>Numerical value as a percent</i>	Water Shortage Condition <i>(Narrative description)</i>
1	Up to 10%	<b>Minor Shortage;</b> corresponds to Simi Valley Municipal Code Level 1 water supply shortage where a threatened shortage exists and a consumer demand reduction, up to ten (10%) percent, is requested to make more efficient use of water and to appropriately respond to existing water conditions.
2	Up to 20%	<b>Moderate;</b> corresponds to Simi Valley Municipal Code Level 2 water supply shortage where a threatened shortage exists and a mandatory consumer demand reduction, up to twenty (20%) percent, is necessary to make more efficient use of water and to appropriately respond to existing water conditions.
3	Up to 30%	<b>Severe Shortage;</b> corresponds to the start of Simi Valley Municipal Code Level 3 water supply shortage where a threatened shortage exists and a mandatory consumer demand reduction, up to thirty (30%) percent, is necessary to make more efficient use of water and to appropriately respond to existing water conditions.
4	Up to 40%	<b>Critical Shortage;</b> corresponds to the middle of Simi Valley Municipal Code Level 3 water supply shortage where a threatened shortage exists and a mandatory consumer demand reduction, up to forty (40%) percent, is necessary to make more efficient use of water and to appropriately respond to existing water conditions.
5	Up to 50%	<b>Emergency Shortage;</b> corresponds to the end of Simi Valley Municipal Code Level 3 water supply shortage where a threatened shortage exists and a mandatory consumer demand reduction, up to fifty (50%) percent, is necessary to make more efficient use of water and to appropriately respond to existing water conditions.
6	>50%	<b>Catastrophic Failure;</b> corresponds to Simi Valley Municipal Code Level 4 water supply shortage where a water shortage emergency exists mandatory reduction in consumer demand of fifty (50%) or more is necessary to maintain sufficient water supplies for public health and safety.
<sup>1</sup> One stage in the Water Shortage Contingency Plan must address a water shortage of 50%.		
NOTES:		

**DRAFT Submittal Table 8-2: Demand Reduction Actions**

Shortage Level	Demand Reduction Actions <i>Drop down list</i>	Shortage Gap Volume (AFY)	Additional Explanation or Reference <i>(optional)</i>	Penalty, Charge, or Other Enforcement? <i>Drop Down List</i>
1	Landscape - Other landscape restriction or prohibition	875	Assumes savings of 10% for outdoor use during Stage I for limitations on timing, no excess runoff, etc (AWWA 2008, 2011)	Yes
1	Other - Prohibit use of potable water for washing hard surfaces	40	Assumes savings of 0.5% of outdoor use	Yes
1	Other	540	Assumes savings of 5% on non-landscape uses during Stage I for voluntary and other restrictions, assuming aggressive information dissemination (Virginia Polytechnic Institute, 2006)	Yes
2	Landscape - Other landscape restriction or prohibition	2,890	Assumes savings of 33% for outdoor use during Stage II for restricting water use to twice a week, limitations on timing, no excess runoff, etc (AWWA 2008, 2011)	Yes
2	Other - Prohibit use of potable water for washing hard surfaces	40	Assumes savings of 0.5% of outdoor use	Yes
2	Expand Public Information Campaign	390	Assume additional savings of 2% during Stage I and II (DWR, 2008) through effective public communication	Yes
3	Landscape - Other landscape restriction or prohibition	4,900	Assumes savings of 56% for outdoor use during Stage III to VI for restricting water use to once a week, limitations on timing, no excess runoff, etc (AWWA 2008, 2011)	Yes
3	Other - Prohibit use of potable water for washing hard surfaces	40	Assumes savings of 0.5% of outdoor use	Yes
3	Expand Public Information Campaign	980	Assume additional savings of 10% during Stage III and IV (DWR, 2008) through effective public communication	Yes
3	Other	1,080	Assumes savings of 10% on non-landscape uses during Stages II and III for mandatory restrictions, assuming aggressive information dissemination (Virginia Polytechnic Institute, 2006)	Yes
4	Landscape - Other landscape restriction or prohibition	4,900	Assumes savings of 56% for outdoor use during Stage III to VI for restricting water use to once a week, limitations on timing, no excess runoff, etc (AWWA 2008, 2011)	Yes
4	Other - Prohibit use of potable water for washing hard surfaces	40	Assumes savings of 0.5% of outdoor use	Yes
4	Expand Public Information Campaign	980	Assume additional savings of 10% during Stage III and IV (DWR, 2008) through effective public communication	Yes
4	Implement or Modify Drought Rate Structure or Surcharge	1,950	Assumes savings of 10% during Stage IV (AWWA 2008)	Yes

DRAFT Submittal Table 8-2: Demand Reduction Actions				
Shortage Level	Demand Reduction Actions <i>Drop down list</i>	Shortage Gap Volume (AFY)	Additional Explanation or Reference <i>(optional)</i>	Penalty, Charge, or Other Enforcement? <i>Drop Down List</i>
4	Other	1,080	Assumes savings of 10% on non-landscape uses during Stages II and III for mandatory restrictions, assuming aggressive information dissemination (Virginia Polytechnic Institute, 2006)	Yes
5	Landscape - Other landscape restriction or prohibition	4,900	Assumes savings of 56% for outdoor use during Stage III to VI for restricting water use to once a week, limitations on timing, no excess runoff, etc (AWWA 2008, 2011)	Yes
5	Other - Prohibit use of potable water for washing hard surfaces	40	Assumes savings of 0.5% of outdoor use	Yes
5	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	530	Assumes savings of 6% of indoor use (EPA 2017). Only applies once AMI and customer portal is in place (Stage V and VI)	Yes
5	Expand Public Information Campaign	1,950	Assume additional savings of 20% during Stage V and VI (DWR, 2008) through effective public communication	Yes
5	Implement or Modify Drought Rate Structure or Surcharge	2,930	Assumes savings of 15% during Stage V-VI (AWWA 2008)	Yes
5	Other	1,620	Assumes savings of 15% on non-landscape uses during Stages IV and VI for mandatory restrictions, assuming aggressive information dissemination (Virginia Polytechnic Institute, 2006)	Yes
	Landscape - Other landscape restriction or prohibition	4,900	Assumes savings of 56% for outdoor use during Stage III to VI for restricting water use to once a week, limitations on timing, no excess runoff, etc (AWWA 2008, 2011)	Yes
	Other - Prohibit use of potable water for washing hard surfaces	40	Assumes savings of 0.5% of outdoor use	Yes
6	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	530	Assumes savings of 6% of indoor use (EPA 2017). Only applies once AMI and customer portal is in place (Stage V and VI)	Yes
6	Expand Public Information Campaign	1,950	Assume additional savings of 20% during Stage V and VI (DWR, 2008) through effective public communication	Yes
6	Implement or Modify Drought Rate Structure or Surcharge	2,930	Assumes savings of 15% during Stage V-VI (AWWA 2008)	Yes
6	Other	1,620	Assumes savings of 15% on non-landscape uses during Stages IV and VI for mandatory restrictions, assuming aggressive information dissemination (Virginia Polytechnic Institute, 2006)	Yes

NOTES: Volumes represent the maximum potential reduction that could be achieved based on the percentages provided in cited literature and WWD8's landscape and non-landscape use.

Table 8-3: Supply Augmentation and Other Actions			
Shortage Level	Supply Augmentation Methods and Other Actions by Water Supplier <b>Drop down list</b> <i>These are the only categories that will be accepted by the WUE data online submittal tool</i>	How much is this going to reduce the shortage gap? <i>Include volume units used.</i>	Additional Explanation or Reference <i>(optional)</i>
2	Decrease Line Flushing	20	- Decrease water distribution line flushing
3	New recycled water	30	- Expand recycled water use
3	Other actions (describe)	500	- Increase Tapo Canyon Treatment Plant water production (local groundwater)
4	Other actions (describe)	600	- Increase Tapo Canyon Treatment Plant water production (local groundwater)
5	Other actions (describe)	800	- Increase Tapo Canyon Treatment Plant water production (local groundwater)
6	Other actions (describe)	1,000	- Increase Tapo Canyon Treatment Plant water production (local groundwater)
NOTES: A mobile recycled water fill station could be implemented in for dust control, watering of City Parks and potentially used as a residential fill station (estimated 30 AF volume). Tapo Canyon Treatment Plant's production capacity of 1 MGD would be used, as-needed to fill the shortage gap.			