

## Water Conservation Guidance May 30, 2014

### Summary

In anticipation of intermittent and ongoing water shortages, the Department adopted Deputy Directive 13 in 1993 to establish water conservation as a continuing practice. This document sets forth a uniform statewide policy for water conservation for highway construction projects. Additional water conservation requirements for highway landscaping projects are covered in section 29 of the *Project Development Procedures Manual*. Water conservation must be addressed on all highway construction projects based on the severity of the water shortage by including water availability documentation in the *Information Handout* when required and including specifications that address water conservation in contracts.

### Water Conservation Categories

The Department has established the water conservation categories shown in the following table:

<b>Water Conservation Categories</b>	
Category	Description
Caltrans Water Conservation	Water use is not restricted but must be in compliance with Deputy Directive 13.
Voluntary Water conservation	At least one of the following actions occur: 1. Local water agency has requested water conservation of customers 2. State requires water conservation statewide.
Mandatory water rationing	At least one of the following actions occur: 1. Local water agency has implemented mandatory rationing 2. State requires mandatory water rationing statewide.
Severe public drinking water shortage	California Department of Public Health has identified severe public drinking water shortages. This department determines a public drinking water shortage exists if 60 days or less of drinking water supply is available. Information about areas that are under a severe public drinking water shortage is available at: <a href="http://www.cdph.ca.gov/certlic/drinkingwater/Pages/DroughtImpact_PublicDrinkingWaterSystems.aspx">http://www.cdph.ca.gov/certlic/drinkingwater/Pages/DroughtImpact_PublicDrinkingWaterSystems.aspx</a>

### Implementation

To ensure that water conservation is properly addressed in Caltrans projects revised standard specifications have been implemented and applicable new project specific standard special provisions must be included in projects. You must obtain the status of the current water use restrictions statewide and from the local water agency that supplies water in the project area to determine water conservation category that applies to a project.

To prevent project delays due to unavailability of water, water availability letters from purveyors of potable and nonpotable water will need to be provided in project *Information Handout* as shown under Design Guidance. Estimated Water Usage for Water Availability excel spreadsheet is provided for calculating the estimated amount of water needed for project construction. Provide in the request to the water purveyor the estimated water amount and time period for when the water will be required. Include copies of the request and response for water availability in the project files and to the resident engineer.

Water conservation must be addressed for all projects as described in the following tables based on the water conservation category for the area where the project is located.

**Water Conservation Requirements**  
**Category—Caltrans Water Conservation**

Division of Engineering Services—Office Engineer action required	District Office Engineer or Designer action required
<p>Include the following revised standard specifications (RSSs) in all contracts:</p> <ol style="list-style-type: none"> <li>1. RSS_5-1.20F—Adds a heading for irrigation water service charges.</li> <li>2. RSS_7-1.03—Deletes water for the prevention or alleviation of dust nuisance. The section 18 RSS includes water as a type of dust palliative. SSP 18-1 includes instructions to delete the water option under certain conditions.</li> <li>3. RSS_10-4—Adds general specifications for water usage.</li> <li>4. RSS_10-5—Moved general specifications for controlling dust from section 14 to section 10-5.</li> <li>5. RSS_13-4.03E—Limits vehicle washing.</li> <li>6. RSS_18—Replaces the dust palliative section with dust palliatives that include water, dust suppressants, and dust control binders.</li> <li>7. RSS_20-1.03A—Limits excessive runoff.</li> <li>8. RSS_20-1.03A—Requires watering plants under the California Model Water Efficient Landscape Ordinance and local water agency requirements.</li> <li>9. RSS_20-1.03A—Requires watering plants at night unless otherwise authorized.</li> <li>10. RSS_20-1.03C(1)—Requires immediate shutting off of water to broken supply lines, valves, or sprinkler assemblies and repairing irrigation systems within 24 hours after a malfunction or damage occurs. These requirements are from section 13.</li> <li>11. RSS_20-2.09C(1)—Requires reusing water from water flushing. This requirement is from section 13.</li> </ol>	None

**Water Conservation Requirements**  
**Category—Voluntary Water Conservation**

Division of Engineering Services— Office Engineer action required	District Office Engineer or Designer action required	Design guidance
Publish the following special provisions (SSPs):	Include the SSPs for a project in the voluntary water conservation category under the following instructions:	<ol style="list-style-type: none"> <li>1. Use the Estimated Water Usage for Water Availability Request spreadsheet to calculate the estimated total water required for high-water-demand work portions and construction activities.</li> <li>2. Include an available nonpotable water source in the <i>Information Handout</i>. The use of potable water is a waste or unreasonable use of domestic water for construction activities under drought conditions. To conserve domestic water to avoid future shortages, nonpotable water should be used where it is available. Nonpotable water must be either (1) recycled water or (2) nonpotable water developed from other sources. Water availability documentation should include (1) a nonpotable source and (2) a local-water-agency potable source if available.</li> <li>3. Refer to the Dust Palliative Design Guidance for calculating the engineer's estimate for the lump sum cost for bid item 180106 Dust Palliative.</li> </ol>
Updated SSP 2-1.06B	If the project requires 100,000 gal or more of water for nonlandscaping work, insert <i>Water source information</i> in the 1st row.	
New SSP 5-1.02F	Should be used as a water conservation measure for landscape irrigation if a water meter is being installed. This SSP requires the Contractor to pay the water bill for landscape irrigation. Edit as necessary for project-specific requirements. Consult with HQ Landscape Design for use of this SSP.	
New SSP 17-1.02	Use for a project requiring 100,000 gal or more of water and where nonpotable water is readily available. This SSP requires the Contractor to use nonpotable water.	
New SSP 18-1	Use for a project (1) requiring 500,000 gal or more of water for earthwork or (2) requiring public traffic to drive on subgrade, aggregate subbase, or aggregate base. The revision clause for section 18-1.01A SSP deletes water as a dust palliative. The revision clauses for sections 18-1.03A and 18-1.04A requires the use of dust suppressants.	
New SSP 19-5.03C	Use for a project requiring 500,000 gal or more of water for earthwork. This SSP requires compaction without using water for areas requiring less than 90 percent compaction. (SSP 19-5.03A that included this requirement will be deleted.)	
Create the following bid items:	Include the following bid items for a project in the voluntary water conservation category under the following instructions:	
180106 Dust Palliative	Use for a project requiring 500,000 gal or more of water for earthwork.	
995200 Irrigation Water Service Charges	Use if the Contractor is to pay the water bill for landscape irrigation.	

**Water Conservation Requirements  
Category—Mandatory Water Rationing**

Division of Engineering Services—Office Engineer action required	District Office Engineer or Designer action required	Design guidance
<p>Perform the actions required for voluntary water conservation.</p>	<p>Include the following SSPs for a project in the mandatory water rationing category under the following instructions:</p> <p>SSP 2-1.06B. Use for all projects.</p> <p>SSP 5-1.02F. Use under the same instructions as for voluntary water conservation.</p> <p>SSP 17-1.02. Use unless (1) the project requires less than 100,000 gallons of water, (2) the nearest available nonpotable water source is more than 50 miles from the job site, and (3) a potable-water-source agency provides an availability letter.</p> <p>SSP 18-1. Use for all projects.</p> <p>SSP 19-5.03C. Use for a project that includes earthwork.</p>	<p>1. For a project that requires a large amount of water, such as grinding and grooving concrete pavement, consider delaying the project until the mandatory water rationing restriction is lifted.</p> <p>2. Include an available nonpotable water source in the <i>Information Handout</i>. The use of potable water is a waste or unreasonable use of domestic water for construction activities under severe drought conditions; therefore nonpotable water must be used. Nonpotable water must be either (1) recycled water or (2) nonpotable water developed from other sources. Water availability documentation should include (1) a nonpotable source and (2) a local-water-agency potable source if available.</p> <p>A project that requires less than 100,000 gallons of water with the nearest available nonpotable water source more than 50 miles from the job site is exception for requiring use of nonpotable water. For such a project, you may also use a potable water source if the potable-water-source agency provides an availability letter. Use the Estimated Water Usage for Water Availability Request spreadsheet to calculate the estimated total water required for high-water-demand work portions and construction activities. Include both a nonpotable and potable water source availability letter in the <i>Information Handout</i>.</p> <p>3. Consider in the engineers estimate for contract items requiring water that the cost of transporting nonpotable water based on the location of available nonpotable water may add additional cost.</p>

**Water Conservation Requirements**  
**Category—Severe Public Drinking Water Shortage**

Division of Engineering Services—Office Engineer action required	District Office Engineer or Designer action required	Design guidance
Perform the actions required for mandatory water rationing.	Perform the actions required for mandatory water rationing except use SSP 17-1.02 in all projects.	Perform the actions required for mandatory water rationing. Ensure the nonpotable water source included in the <i>Information Handout</i> does not affect the public drinking water source. An example is water from a nonpotable well is available for use and the well does not draw on the same source as for drinking water. Be aware that some nonpotable water may be used for ground water recharge; therefore do not provide that nonpotable water source in the <i>Information Handout</i> .