

California High-Speed Rail Authority



RFP No.: HSR 14-32

**Request for Proposal for Design-Build
Services for Construction Package 4**

**Book IV, Part C.8 – Water Conservation
Guidance**

**CHSRA Water Conservation Guidance (DRAFT)
2015 (Rev 4)**

Water Conservation Guidance

Summary

In anticipation of intermittent and ongoing water shortages due to drought, the Authority adopted a Water Conservation Policy to establish water conservation as a continuing practice. In accordance with this policy, this document sets forth uniform program wide requirements for water conservation during design and construction of high-speed rail projects. Water conservation must be addressed on all high-speed rail construction projects based on the severity of the water shortage as determined by the Water Conservation Category determination below:

Water Conservation Categories

Water use is not restricted but must be in compliance with these CHSRA Water Conservation Guidelines. The Authority has established the following water conservation categories:

Water Conservation Categories	
Category	Description
1. Water Conservation	At least one of the following actions must occur: 1. Local water agency has requested water conservation of customers 2. State requires water conservation statewide.
2. Mandatory Water Rationing	At least one of the following actions must occur: 1. Local water agency has implemented mandatory rationing 2. State requires mandatory water rationing statewide.
3. Severe Public Drinking Water Shortage	California State Water Resources Control Board 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: http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/DroughtIm pact_PublicDrinkingWaterSystems.shtml

Implementation

To ensure that water conservation is properly addressed minimum water conservation requirements are described in this guidance document. A Water Conservation Plan shall be prepared that clearly describes how water conservation measures will be incorporated in the design and construction of the project and compliant with the required Water Conservation category.

The Contractor must obtain the status of the current water use restrictions statewide and from the local water agencies that supply water in the project area to determine the water conservation category that applies to a project or location.

To mitigate project delays due to unavailability of water, the Contractor should determine water availability from purveyors of potable and non-potable water that will need to be obtained and take this into account during the planning and execution of the work.

The following tables describe the minimum requirements based on the water conservation category for the area where the project is located.

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Water Conservation Requirements (for Design Build Contracts)

CHSRA Standard Water Conservation Requirements

Action required
<p>The following requirements apply for all Water Conservation Categories:</p> <ol style="list-style-type: none">1. Reference to water conservation measures and Caltrans Standards for dust control are included in the CHSRA Design Criteria section 1.8.2 and 14.5.3.3.2. Use efficient fixtures in facilities and temporary offices, such as Energy Star or Water Sense certified products.3. Use non-potable water to the extent available for appropriate uses such as allaying dust (including, for example, retaining and treating concrete wash water on site).4. Strategies for addressing equipment and temporary system maintenance to avoid leaks.5. Strategies for reducing runoff and increasing ground water re-charge.6. Include water conservation measures such as limited vehicle washing, limiting runoff, use of non-potable water, etc.7. Include the use of palliatives for dust control minimizing the use of water and consider deleting the water option under certain conditions.8. Require watering plants under the California Model Water Efficient Landscape Ordinance and local water agency requirements.9. Require watering plants at night unless otherwise authorized.10. Require 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.11. Wherever possible for permanent or temporary irrigation, use non-potable water suitable for landscape irrigation12. Require reusing water from water flushing.

Additional Watering Requirements (applicable for all Water Conservation Categories)

Watering shall consist of developing a water supply and furnishing all water required for the work and applying all water.

Water for use in the work shall, depending on the Water Conservation Category, be potable or non-potable. Non-potable water shall consist of reclaimed waste water or non-potable water developed from other sources.

If the Contractor uses reclaimed waste water in the work, the sources and discharge of reclaimed waste water shall meet the California Department of Health Services water reclamation criteria and the Regional Water Quality Control Board requirements. The Contractor shall obtain either a waste water discharge permit or a waiver from the Regional Water Quality Control Board. Copies of permits or waivers from the Regional Water Quality Control Board shall be delivered to the Authority before using reclaimed waste water in the work.

Non-potable water, if used, shall not be conveyed in tanks or drain pipes which will be used to convey potable water. There shall be no connection between non-potable water supplies and potable water supplies. Non-potable water supply, tanks, pipes and any other conveyances of non-potable water shall be labeled:

- **NONPOTABLE WATER**
- **DO NOT DRINK**

Water Conservation Requirements (for Design Build Contracts)

Category 1 – Water Conservation

Action required
<p>The following additional requirements apply for the Water Conservation Category:</p> <ol style="list-style-type: none">1. The use of potable water is a waste and unreasonable use of domestic water for construction activities under drought conditions. To conserve domestic water and to avoid future shortages, non-potable water should be used where it is available. Non-potable water must be either (1) recycled water or (2) non-potable water developed from other sources.2. Calculate the estimated total water required for high-water-demand work portions and construction activities based on the design, quantity, and schedule information available to facilitate planning and execution.3. Where non-potable water is readily available, non-potable water is required.4. For a project requiring public traffic to drive on subgrade, aggregate subbase, or aggregate base, require use of dust palliative instead of water.5. For earthwork, require compaction without using water for areas requiring less than 90 percent compaction if approved by a geotechnical engineer.6. Include any specific requirements imposed by the State Water Resources Control Board or local agency, not addressed elsewhere.7. Contractor retains risk for water availability.

Category 2 – Mandatory Water Rationing

Action required
<p>The following additional requirements apply for the Mandatory Water Rationing Category:</p> <ol style="list-style-type: none">1. Perform all actions required for the Water Conservation category.2. Use non-potable water unless (1) the nearest available non-potable water source is more than 50 miles from the required location, and (2) a potable-water-source agency provides an availability letter.3. Require the use of dust palliative instead of water for all conditions.4. Comply with all local and statewide mandatory water rationing restrictions.5. Contractor retains risk for water availability.

Category 3 – Severe Public Drinking Water Shortage

Action required
<p>The following additional requirements apply for the Severe Public Drinking Water Shortage Category:</p> <ol style="list-style-type: none">1. Perform all actions required for the Mandatory Water Rationing category.2. Use non-potable water in all cases, unless authorized otherwise.3. Ensure the non-potable water source does not affect the public drinking water source. An example is where water from a non-potable well is available for use and the well does not draw on the same source as for drinking water. Be aware that some non-potable water may be used for ground water recharge4. Contractor retains risk for water availability.

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