Proposed Recommendation: Inclusion of "Avoided Cost of Water Supplies" in Urban Water Management Plans Submitted by Urban Water Suppliers with over 20,000 Connections (12/16/13)

The avoided cost of water is the combination of current and future costs that a utility can avoid through the implementation of demand reduction programs and is a critical metric for assessing the cost effectiveness of conservation and efficiency programs. The ITP recommends that DWR include guidance for calculating the avoided cost of water in the 2015 UWMP Guidebook and that the UWMP Act be revised to require water suppliers with 20,000 or more connections to include estimates of the avoided cost of water in their urban water management plans.

Background:

The UWMP Act requires urban water suppliers to describe, in their UWMPs, existing and planned sources of water supplies, the reliability of those supplies, current and projected water use, current and planned DMMs, as well as water supply programs and projects to meet the projected water demand. In selecting water supply programs and projects, water suppliers consider many factors including supply availability and reliability, water quality and cost. Calculating the avoided cost of water helps water suppliers evaluate demand management programs and measures and compare demand management measures and supply options in comparable terms. Water suppliers using this approach and considering the other locally important factors can choose water management programs and measures that best fit their service areas. The calculating and reporting of avoided cost not only benefits water suppliers, but are also useful in indentifying regional and statewide trends.

Various government agencies and non-government organizations (NGOs) have developed a number of resources and tools for use by water suppliers in calculating the avoided cost of water. The American Water Works Association Manual of Practice, Manual 50, *Water Resources Planning*, adopted by peer utility members from around the United States, presents a method for reviewing the costs of various sources that make up an integrated water supply portfolio (compared on a $/Acre-Foot basis), and includes water conservation as a supply alternative to be included in the evaluation. The monetary value of water conservation savings is based upon the avoided cost of water.

The California Urban Water Conservation Council (CUWCC) has two peer reviewed tools available:

a. An avoided cost calculator originally developed with support from the US Environmental Protection Agency; and
b. A least cost planning model for California urban water suppliers[1].

These CUWCC tools take into account future capital costs as well as current and future operating costs that may be avoided as a result of conservation and efficiency measures.[2]

[1] Least Cost Planning Demand Management Decision Support System, or simply the "DSS Model".

In addition, other NGOs, such as the Pacific Institute and the Alliance for Water Efficiency, have developed similar tools, and consulting firms also provide spreadsheet calculations based on these tools. Furthermore, the California Public Utilities Commission (CPUC) now has under development a robust avoided cost tool for water, the goal of which is to provide a user friendly interface that produces reliably accurate results. These tools and resources can serve as references for DWR in developing the UWMP Guidebook.

Recommended Action

The ITP recommends that DWR include guidance and methodologies on calculating the present value of the avoided cost of water in the 2015 and subsequent UWMP Guidebooks. The guidance should include an overview and assessment of the methods and tools available to calculate avoided costs, including the avoided cost of purchased water where such purchases are part of a present or future supply portfolio, and provide general parameters for the use of the tools and methodologies. The ITP further recommends that the UWMP Act be amended to require water suppliers with more than 20,000 connections, using the DWR guidance, to provide an estimate of the avoided costs in their urban water management plans.

Recommendation on Statutory Language:

Add the following new subsection shown in underlined and italicized text to Section 10631 of the Water Code:

"(__) Urban water suppliers with 20,000 or more service connections shall include an estimate of the present value of the avoided cost of water supplies, derived from the application of methodologies accepted by the Department of Water Resources as outlined in the department's urban water management plan guidebook.

[2] The avoided cost calculator tool also complements the use of the CUWCC's Cost Effectiveness Calculator, which was based on the AWWA publication *Water Conservation for Small and Medium-Sized Utilities*, which allows agencies to determine the benefits of implementing individual water efficiency measures.