

ITP – Proposed Recommendation: Inclusion of Urban Water Supplier’s “Avoided Cost of Water” Proposal 5.2 b (12/3/13)

Potential amendments to §10631 of the Urban Water Management Planning Act and the accompanying DWR UWMP Guidebook for the calculation and display of the avoided cost of water deliveries from efficiency/conservation programs.

The Independent Technical Panel on Demand Management Measures (ITP) recommends that the Urban Water Management Planning Act be revised to require urban water suppliers serving a population of over 50,000 to calculate and display the supplier’s “avoided cost of water” within their UWMP.

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 \$/AF 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, which is simply the monetary benefits of reduced or avoided operation and maintenance costs and any avoided infrastructure costs due to various water conservation and efficiency measures being implemented over time.

Without knowing the “avoided cost of water” from efficiency programs, it is difficult to know how conservation falls within the cost range of supply options, although using an existing source of supply more efficiently is often the least cost option for a utility. Thus, understanding the avoided cost of water is an essential pre-requisite for assessing the cost-effectiveness of conservation and efficiency programs and assessing their place in a portfolio of water supply resources. This concept is widely adopted and applied in the energy sector as well.

The Act (at 10631(b) and (h)) already requires water suppliers to enumerate all water supplies, projects, and programs needed to meet total projected water use. The cost and timing of such investments can be entered into an avoided cost or cost effectiveness model, and when combined with estimated operating costs and an appropriate discount rate, will provide the present value of water savings that may be achieved with conservation measures.

Avoided cost information is first and foremost useful to the water agencies themselves for their local planning efforts. To support this effort, NGOs and government agencies have developed a number of resources and tools for use by water suppliers. For example, the 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 suppliers¹. These CUWCC tools take into account future capital costs as

¹ Least Cost Planning Demand Management Decision Support System, or simply the “DSS Model”.

well as current and future operating costs that may be avoided as a result of conservation and efficiency measures.² 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 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 be referenced in DWR's UWMP Guidebook.

Recognizing that calculating avoided costs is best practice for urban water supplier planners, some smaller and medium size utilities may be challenged for staff time and resources to provide the calculations for the UWMP process. As a result, the requirement to report on this metric can be limited to the larger water agencies in the state. This is not to say that smaller agencies would not benefit from understanding their avoided cost of water, but only that it is not the Panel's intent to burden small agencies that are not already making this calculation. Therefore, we recommend that the requirement be limited to those agencies serving a population of greater than 50,000 people. This would represent water deliveries to approximately 26 million Californians, or about 74% of the population served by a public water supplier. The calculation and reporting of avoided cost will not only benefit each water supplier subject to the Act, but will also be useful in identifying regional and statewide trends.

Under current law, the UWMPA requires a cost effectiveness analysis for any DMM not implemented. Reporting the avoided cost of water is an even simpler approach for water agencies to show the rational basis of their supply choices and DMMs. This proposal is an important complement to any proposal from the Panel to remove cost-effectiveness determinations from the DMM section of the Act.

Recommendations for Administrative Action: DWR's UWMP Guidebook should enable smaller water retailers to develop and voluntarily report simplified estimates of their avoided cost of water based on a set of system characteristics and regional parameters, to be developed with assistance from the CUWCC and CPUC as part of future guidance updates.

To ensure consistency in reporting, DWR should require larger suppliers to use DWR-accepted methodology. The Guidebook, when updated in consultation with the CUWCC, should provide an overview and assessment of the methods and tools available to calculate avoided costs, and provide guidance for quality control and ease of use.

Recommended statutory language: Add the following new subsection to Section 10631 of the Water Code:

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.

“() Urban water suppliers serving populations greater than 50,000 shall include an estimate of the present value of the avoided cost of water, derived from the application of methodology accepted by the Department of Water Resources as outlined in the department’s urban water management plan guidebook.