

CALFED Cooperative Agreement Executive Summary

Project Background

The CALFED Bay-Delta Program is a cooperative effort among state and federal agencies and the public to ensure a healthy ecosystem, reliable water supplies, good quality water, and stable levees in California's Bay-Delta system.

The Water Use Efficiency (WUE) Element, consisting of agricultural, urban, water recycling and managed wetlands components, is one of several CALFED program elements. The WUE Element is based on defined objectives and recognizes that incentive-driven, locally created water use efficiency actions are powerful tools for instituting meaningful changes in water management practices. The ultimate goal of the WUE Element is to develop water use efficiency programs and assurances that contribute to CALFED goals and objectives, have broad stakeholder acceptance, foster efficient water use, and help support a sustainable economy and ecosystem.

Council Background

A key foundation for the urban component is the California Urban Water Conservation Council's (Council) Memorandum of Understanding Regarding Urban Water Conservation in California (MOU), a broadly supported agreement specifying 14 urban water conservation Best Management Practices (BMPs). The MOU is implemented by the Council, a non-profit organization consisting of urban water suppliers, environmental organizations and other interested parties.

The Council was created in 1991 to oversee the MOU, which sets forth BMPs for the efficient use of water in urban areas of the state. In becoming signatories to the MOU, Council members agree to implement the 14 BMPs and comply with all requirements of the MOU. Members submit bi-annual progress reports to the Council, which reports annually to the State Water Resources Control Board.

The mission of the California Urban Water Conservation Council is to improve water use efficiency statewide.

The Council and the MOU that created it represent a unique approach to urban water conservation through collaboration between water agencies, regulators, public interest groups, and other interested organizations. The approach relies on a consensus partnership to simultaneously improve the



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state of the art in urban water conservation while moving forward on recognized BMPs in a timely and cost-effective manner. The Council supports the water conservation efforts of its member organizations through assistance in implementing the BMPs, collaborative research and development among the membership, and through monitoring and evaluation of the urban water conservation programs and activities undertaken by the membership. A special interest of the Council is the overall integration of urban water conservation BMPs into the planning and management of California's water resources.

What are BMPs?

Best Management Practices (BMPs) are conservation programs or measures that signatory water suppliers have agreed to implement in the manner according to the timeframe specified in the text of the MOU. They include the following:

1. **Residential Water Surveys** – Indoor and outdoor audits of residential water use and distribution of water-saving devices.
2. **Residential Plumbing Retrofits** – Distribution or installations of water-saving devices in pre-1992 residences.
3. **System Water Audits** – Unaccounted-for water calculated annually, and distribution system audits as required.
4. **Metering with Commodity Rates** – Metering of consumption and billing by volume.
5. **Large-Landscape Conservation** – ET-based water budgets for large-landscape irrigators.
6. **High-Efficiency Clothes Washers** – Rebates for efficient washing machines.
7. **Public Information** – Public information to promote water conservation.
8. **School Education** – Provision of educational materials and services to schools.
9. **Industrial, Commercial and Institutional Conservation** – Programs to increase water use efficiency in ICI sectors.
10. **Wholesale Agency Assistance** – Support by wholesalers for conservation programs of retail water suppliers.

- 11. Conservation Pricing** – Uniform or increasing block rate structure, volume-related sewer charges, and service cost recovery.
- 12. Conservation Coordinator** – Designation of staff coordinator of agency conservation programs.
- 13. Water Waste Prohibition** – Enforced prohibition of wasteful use of water.
- 14. Residential ULFT Replacement** – Programs promoting replacement of high-water-using toilets with ultra-low-flow toilets.

Project Purpose

The CALFED Bay-Delta Program (CALFED) Record of Decision (ROD) included the following commitment: “By the end of 2002, CALFED Agencies will implement a process for certification of water suppliers’ compliance with the terms of the Urban Memorandum of Understanding (MOU).” Implementation of an urban MOU certification program will necessitate resolution of outstanding issues related to program balance and technical/operational uncertainties. The tasks developed as part of this project was designed to constitute the critical final steps necessary to fulfill the ROD commitment.

The CALFED agencies investment in voluntary urban Water Use Efficiency incentive grant programs was intended to motivate water suppliers and water users to institute practices that are locally cost effective, along with those that are not locally cost effective but can effectively and efficiently address regional or statewide objectives. Such practices were targeted at achieving region-specific, CALFED program benefits related to water quality, quantity and in-stream flow/timing. CALFED program benefits refer to public benefits to the Bay-Delta that either have been or will be identified through the CALFED program.

This Cooperative Agreement was entered into between the U.S. Bureau of Reclamation, Mid-Pacific and Lower Colorado Regions (USBR), the California Department of Water Resources (DWR), and the Council to provide technical assistance to urban water suppliers to implement the first four years of the CALFED incentive-driven Water Use Efficiency Program. The Tasks undertaken by the Council under the terms of this Cooperative Agreement were designed to assist USBR, DWR, and the other CALFED agencies in developing a program of technical and financial incentives for water use efficiency in the urban sector.

In 2003, DWR added Task 17 for \$195,000 bringing the total grant award to \$1,695,000. This task for the Council was to assist the DWR's Office of Water Use Efficiency and CALFED in the preparation of a Year 4 Comprehensive Report for the CALFEFD Water Use Efficiency Program. Additionally, USBR granted a two-year no-cost extension to enable the Council to complete several tasks that were delayed due to extensive stakeholder input and the need by water utilities for more time to engage in the projects.

Task Summary

Task 1 – CALFED Certification Support

Provide certification support for proposed BMP Certification program that will involve certifying: 1) that a water supplier has implemented all locally cost-effective BMPs pursuant to the MOU; or 2) that a water supplier has provided the appropriate information to corroborate an exemption from implementing a BMP pursuant to the MOU.

Task 2 – BMP Certification Technical Assistance

Provide technical assistance to water agencies for the proposed BMP Certification Program.

Task 3 - BMP Reporting Database

Provide technical assistance for the Council's BMP Reporting Database and sought to achieve 100% reporting by water agencies. Provide access to the Department of Water Resources (DWR) and the U.S. Bureau of Reclamation, Lower Colorado Region (USBR).

Task 4 – BMP Savings Software

Develop a software program to estimate water savings of BMP activity reported to the Council database. Provide annual water savings and cost analysis of BMP activity conducted.

Task 5 – Maintain BMP Reporting Website

Maintain the BMP Reporting Database website and build successive reporting year forms for BMP reporting.

Task 6 – Cost Effectiveness Technical Assistance

Provide technical assistance to water agencies to determine BMP cost-effectiveness, using Council spreadsheet tools.

Task 7 – Research Potential Best Management Practices (PBMPs)

Evaluate and research Potential Best Management Practices (PBMPs).

Task 8 – Update Costs and Savings Study

Prepare publication updates to BMP Costs and Savings Report adding new research on BMPs and PBMPs.

Task 9 – CUWCC Website

Continue development of the Council's website with additional technical content on BMP implementation.

Task 10 – BMP 5 Technical Assistance

Provide technical assistance and training on BMP 5, Large-Landscape conservation and implementation, including providing expert assistance in the field for water agencies developing programs.

Task 11 – Environmental Impacts of BMPs

Develop and refine protocol for estimating the environmental benefits of implementing BMPs.

Task 12 – Avoided Costs

Conduct detailed analysis of avoided cost of water calculation options and refine definitions of avoided cost.

Task 13 – Revenue Impacts of Conservation

Review existing studies conducted to date on estimating the revenue impacts of conservation and provide guidance to water agencies on how to manage these impacts.

Task 14 – UWMP Support – Conservation

Provide support to water agencies in preparing urban water management plans to assist them in integrating water efficiency into overall water supply planning.

Task 15 – BMP Exemption Assistance

Provide technical assistance to water agencies for the implemented BMP exemption process.

Task 16 – Conservation Training with Amy Vickers

Provide conservation training for DWR staff, USBR staff, and water agency staff based on the *Handbook of Water Use and Conservation*, to include a minimum of 5 days of instruction with the author.

Task 17 - Year 4 Report for CALFED WUE

Assist DWR's Office of Water Use Efficiency and CALFED in the preparation of a Year 4 Comprehensive Report for the CALFEFD Water Use Efficiency Program.

Objective and Benefits

The objective of this Cooperative Agreement was to achieve the expected benefits of:

1. Broader urban water supplier participation in the Council, including the preparation of comprehensive and consistent Urban Water Management Plans and BMP reporting.
2. Increased implementation and refinement of locally cost-effective urban water conservation BMPs.
3. Timely achievement of the Tasks outlined in the CALFED Water Use Efficiency Program Budget Change Proposal.
4. Demonstrate DWR's, USBR's, and other CALFED agencies commitment to water use efficiency to help alleviate expected water shortages.
5. To assist USBR's urban contractors in meeting the water conservation provisions of the Reclamation Reform Act of 1982 and the Central Valley Project Improvement Act (CVPIA).

Summary of Major Accomplishments

The Council undertook a number of technical assistance, training, reporting, evaluating and model development tasks under this Cooperative Agreement. Between May 2002 and April 2005, the Council fielded 1,987 technical assistance requests from member agencies, state/federal agencies, and the general public on all aspects of water use efficiency and the proposed certification process. The aggregate, gross acre feet of water savings since 1999 by Council members was calculated to be \$1.3 million acre feet as of June 30, 2004. The following represents some of the major accomplishments:

Technical Assistance to CALFED Agencies

- The Council assisted the CALFED Bay-Delta Authority (CBDA) in the development of a *Staff Proposal for Urban Water Conservation Certification* outlining the major components of the certification process.
- The administrative draft *ALAEA Protocol*, the administrative draft *Exemption Protocol*, and the administrative draft of the *Financing Options Report* were delivered to the CBDA Water Use Efficiency Subcommittee in January 2005 for review and consideration.
- The Council provided technical support to DWR in completing the *Guidebook for Implementation of Senate Bill 610 and Senate Bill 221 of 2001*.
- Provided technical support to the DWR in the development, dissemination and review of Urban Water Management Plan technical documents including the review checklists and the *Guidebook to Assist Water Suppliers in the Preparation of a 2005 Urban Water Management Plan*.
- Developed a model for the CALFED Bay Delta Authority to assist in the development and analysis of water savings data and recommendations for the Year 4 Report.

Technical Assistance to Water Suppliers

- The Council held a Strategic Planning Retreat that led to the development of its updated Strategic Plan for 2003-2005; the main topic of this retreat was the urban water supplier certification process proposed in the CALFED Record of Decision, implementing the deliverables from this Cooperative Agreement, and providing technical assistance to water suppliers in preparation for certification.

- To improve wholesale agency assistance efforts relating to the proposed urban certification framework, the Council revised BMP 10 relating support by wholesalers for conservation programs of retail water suppliers.
- 100% of Group 1 Signatories and USBR Contractors were contacted at least once per reporting cycle; there has been a marked improvement in reporting by USBR contractors from the 2001/2002 reporting period to the 2003/2004 reporting period.
- Working with USBR, the Council identified the following agencies to participate in the BMP 5 (large landscape conservation) Pilot Program: El Dorado Irrigation District, Lake Arrowhead Community Service District, Elsinore Valley Municipal Water District, Goleta Water District, and Montecito Water District. These agencies will receive assistance in using a new, internet based tool to track landscape water use.

Training Workshops

- The Council hosted eight (8) cost-effectiveness workshops.
- The Council hosted two workshops on the *Revenue Impacts of Conservation*.
- The Council updated the training curriculum and materials and hosted eleven (11) workshops.
- The Council facilitated, coordinated, and hosted ten (10) workshops throughout California to assist Water Suppliers in understanding both new and existing requirements for preparation of a 2005 Urban Water Management Plan.
- The Council facilitated and coordinated eight (8) workshops on implementing SB 221/SB 610 with DWR utilizing the *Guidebook for Implementation of Senate Bill 610 and Senate Bill 221 of 2001: to assist water suppliers, cities, and counties in integrating water and land use planning*.
- A training workshop for water conservation and planning professionals was held in Sacramento from September 22-25, 2004. A supplemental seminar for water policy and planning leaders was held at DWR on September 26, 2006 with facilitated discussion led by Amy Vickers, a noted expert in the field of water conservation and author of *Handbook of Water Use and Conservation*.

Model Development

- Cost-effectiveness models (spreadsheet tools) were developed and training was provided on use of the models as part of the biannual Cost-Effectiveness workshops.
- A *Framework for Analysis* was developed to guide development of the methodology and model for the Environmental Benefits and Avoided Costs of Water Use Efficiency tasks.

Research and Evaluation

- All existing PBMPs were evaluated by the PAC to determine the most appropriate candidates for research in the first phase (“Year One”) of this project. The following PBMPs were evaluated in Year One:
 - ◆ Weather Based Irrigation Controllers
 - ◆ Pre-Rinse Spray Valves for the Food Service Industry
 - ◆ X-ray Film and Photo Processors
 - ◆ Steam Sterilizers for the Medical Industry
- The following PBMPs were evaluated in Year Two:
 - ◆ High Efficiency Toilets (1.3 gallons per flush or less)
 - ◆ High-Efficiency Urinals (0.5 gallons per flush or less)
 - ◆ Building Cooling Systems
 - ◆ Commercial Laundry Facilities
 - ◆ Submetering for Multi-Family Housing.
- The first and second revisions of the *BMP Costs and Savings Study* were drafted and posted to the Council’s website and distributed to interested members. The first revision included a new section on Program Cost Accounting to guide Conservation Coordinators in development of BMP program budgets and cost-effectively planning programs. The second revision updated most sections with new information on field testing data and local water supplier evaluations on water savings and program planning.

Outline of this Report

Each task contains its own section with a description of the task and deliverables along with a summary of major accomplishments for each of the first three years of this Cooperative Agreement. These tasks are summarized in Table 2 at the end of this Executive Summary along with the *Annual Billing Summary by Task*. Following each task summary are the deliverables for each project and other supporting documentation, presentations, and memoranda. Included at the end of this Executive Summary is "Table 2" from the contract that provides additional details on each subtask and deliverable along with an "Annual Billing Summary by Task." The fourth binder in this Annual Report contains the technical assistance logs for each year of this grant for the period from May 1, 2002 through April 30, 2005.

(Note: attachments noted in the detailed Task Summary are not included with the materials posted on the web but may be found in their respective areas on the website.)

