

California Bay-Delta Program

Water Use Efficiency Program Multi-Year Program Plan (Years 6-9)

(State FYs 2005-06 to 2008-09, Federal FYs 2006-09)

Implementing Agencies:
Department of Water Resources
State Water Resources Control Board
United States Bureau of Reclamation
Natural Resources Conservation Service

March 28, 2005

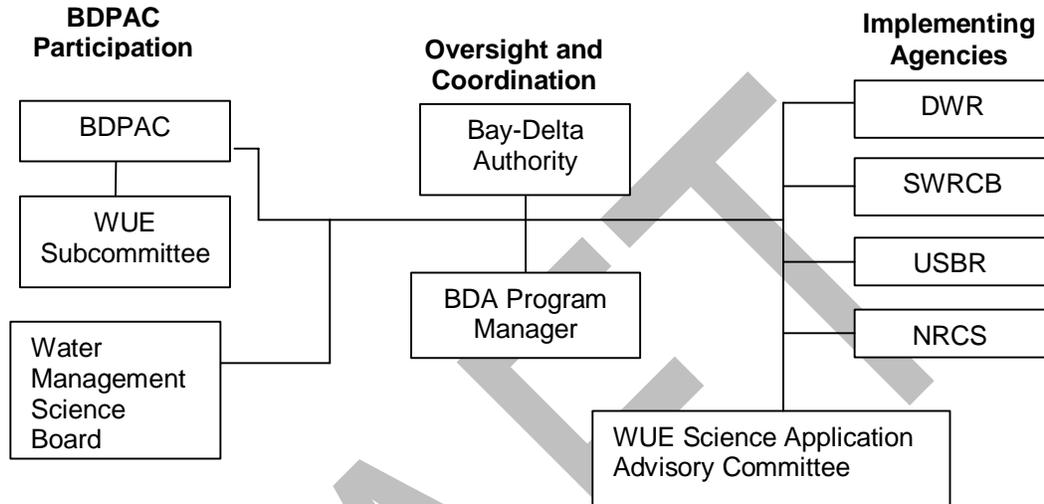


The Senate Bill 1653, the California Bay-Delta Act, requires the California Bay-Delta Authority (CBDA) to annually review and approve, and if appropriate recommend modifications to multi-year program plans and long-term expenditure plans for CALFED Programs (Category A as defined in ROD) as a part of the annual state budget proposal. For federal agencies, the process essentially remains a voluntary process. CBDA may recommend to implementing agencies modifications to the Program Plan. Implementing agencies have final decision-making authority for their programs and budgets. Water Use Efficiency Program Multi-Year Program Plan is prepared to report on the progress made in implementing CALFED ROD Water Use Efficiency Program Plan as well as major activities planned by Water Use Efficiency implementing agencies for years 2005-06 to 2008-09, Years 6 to 9. Year 6-9 Plan includes the ROD goals and objectives, the accomplishments of the implementing agencies in Year 5, and reasons for any delays in program commitments. The Plan also includes implementing agencies planned activities for years 6 through 9 including description of the activity, funding amounts and funding sources, and the schedule of the planned activities. The accomplishments and major activities are reported for agricultural and urban water conservation, water recycling and water desalination by WUE tasks as defined by the 10-Year Finance Plan. The Program Plan contents are shown in the sidebar. Activities of CALFED implementing agencies that contribute to CALFED objectives are included in this program plan, including activities that are not classified as Category A.

Plan Contents:

- Program Structure
- Goals, Objectives, and Performance Measures
- Accomplishments in Year 5
- Major Activities planned for Years 6 to 9
- Schedules
- Public Involvement and Outreach
- Integrating Science, Environmental Justice, and Tribal Relations Programs
 - Science
 - Environmental Justice
 - Tribal Relation
 - Cross Program Relationships
- Funding Tables
 - Funding by Tasks
 - State, Federal, and Local Funding
- Geographic Distribution of Projects

Program Structure



Agency/Committee	Roles and Responsibilities
California Bay-Delta Authority	Co-Lead agency on Science & Monitoring and Quantifiable Objectives Lead agency on Water Measurement, Certification, and Oversight & Coordination Convener of WUE Subcommittee and Water Management Science Board.
Bay-Delta Public Advisory Committee	BDPAC reviews the Program Plans and makes recommendations to the CBDA for approval.
WUE Subcommittee	The Subcommittee reviews the WUE Plan and is engaged in the development of the Program Plan, makes recommendation to the BDPAC on approval of the Plan.
Department of Water Resources	Co-Lead agency on Science & Monitoring and Quantifiable Objectives. Lead agency on Agricultural Loans, Agricultural Grants, Urban Loans, Urban Grants, Agricultural Technical Assistance, Urban Technical Assistance, and Water Recycling Technical Assistance. Convener of the WUE Science Application Advisory Committee.
U.S. Bureau of Reclamation	Co-Lead agency on Science & Monitoring, Quantifiable Objectives, Agricultural Grants, Urban Grants, Agricultural Technical Assistance, Urban Technical Assistance, Water Recycling Grants, and Water Recycling Technical Assistance. Lead agency on Managed Wetlands Grants and Managed Wetlands Technical Assistance.
State Water Resources Control Board	Co-Lead agency on Science & Monitoring activities. Lead agency on Water Recycling Loans, Water Recycling Grants, and Water Recycling Research Grants.
Natural Resources Conservation Service	Co-Lead agency on farm agricultural Technical Assistance
Water Management Science Board	Water Management Science Board is a 16 member panel for the ALFED Water Management Programs to provide overarching review and coordination of program strategies, plans, and specific issues of strategic importance for program elements that contribute to water supply reliability.
Science Application Advisory Committee	Science Application Advisory Committee is a committee formed by DWR to oversee application of science in WUE programs and projects. The committee membership consists of interested stakeholders and agency experts. SAAC will provide input in the following areas: quantify performance of local WUE projects, reduce uncertainty through scientific methods, employ adaptive management, articulate conceptual models.

Goals, Objectives, and Performance Measures

Goals and Objectives

The goal of the Water Use Efficiency (WUE) Program is to advance the implementation of cost-effective water conservation and recycling practices throughout the State that contribute to California Bay-Delta Program water supply reliability, water quality, and ecosystem restoration goals. These practices include agricultural water conservation, urban water conservation, water desalination, water recycling, and managed wetlands water management.

The CALFED Record of Decision (ROD) (pages 59-64) identified several WUE commitments which fall into four broad implementation categories (WUE Program Plan, 2000):

- **Assurances, Science, Monitoring, and Evaluation**

Provide credible assurances to policy-makers and stakeholders that the WUE Program is being implemented aggressively and in accordance with the ROD. Assurances are structured to ensure that appropriate efficiency measures are implemented. These assurances include limiting access to CALFED benefits and conditions on new storage facilities.

- Support and inform sound water management decisions.
- Verify results of WUE actions.
- Develop quantified performance measures (including agricultural quantifiable objectives).
- Engage in adaptive management.

- **Conservation Projects**

- Facilitate implementation of WUE actions at the local level – by cities, water suppliers, and farmers.
- Use state and federal grants to help local entities implement WUE practices that are not locally cost effective but still contribute to California Bay-Delta objectives.
- Use state low interest loans to help local entities overcome financial barriers to WUE implementation.
- Develop partnerships with local and regional entities to: (1) assess the costs, benefits, and feasibility of potential WUE projects; (2) determine the best approach to implement WUE actions; (3) effectively prepare grant and loan applications; and (4) comply with WUE reporting requirements (e.g. related to urban water conservation certification).

- **Technical Assistance**

- Provide technical assistance to help local entities overcome technical hurdles in water conservation and water recycling and desalination projects.
- Support scientific research, public awareness on water conservation water desalination and water recycling production and use.
- Support development of water conservation and water desalination technologies and implementation of projects.

- **Oversight and Coordination**
 - Provide guidance to WUE implementing agencies in interpreting the ROD.
 - Employ methods of informal communications, such as staff-level meetings and conference calls with agency staff for dissemination and exchange of information.
 - Engage in formal communications as necessary, such as reports to the California Bay-Delta Authority, the Bay-Delta Public Advisory Committee, and the WUE Subcommittee.

Performance Measures Progress and Planned Activities

Performance measures are intended to help determine progress toward reaching our stated goals. The WUE Program Element facilitates local water conservation and recycling actions that support CALFED water quality, water supply reliability, and ecosystem goals. As such, performance measures for the WUE Program seek to link the outcome of local conservation and recycling actions to progress toward these three CALFED goals. These measures are still work in progress and implementing agencies roles and responsibilities will be determined as the performance measure is fully developed.

Work to date on WUE Performance Measures has included foundational work on Quantifiable Objectives for agricultural water conservation, tracking of financial project inputs, and initial estimates of regional water conservation. More work needs to be done in articulating conceptual models of WUE activities that state the linkages between project objectives and CALFED goals.

Put simply, through the use of performance measures, the WUE element will seek to clearly state why water conservation and recycling projects are important to CALFED and whether they are effective.

The following is a description of progress to date and activities planned to develop the various components of Performance Measures. Although most WUE practitioners agree on a broad list of Metrics, their associated units and the CALFED Goals, there has been very little progress on most of the other components of WUE Performance Measures. In year 6 WUE science will address Indicators, Targets, Objectives and Conceptual Models.

Metrics: Metrics are data that are used to make statements about the direction and magnitude of an associated Indicator or Target. As Table 1 illustrates, Metrics, and their associated units, are defined for individual and grouped projects. Although a potential list of Metrics is drafted, more work needs to be done to gain buy-in from the CALFED Science Program and WUE implementers at the local, state, and federal agencies. The System-Wide Metrics in Table 1 are built using information from all CALFED programs that contribute to it. For example the volume of surface water diversions is collected for all diversions (agriculture and urban) in the Bay-Delta area whereas the project-related Metric includes only information from WUE projects that agencies are specifically involved in. A more complete list of WUE and System-Side Metrics and associated Indicators are expected to be produced through topic specific work teams (agriculture and urban/recycling) convened between February and June 2005.

Indicators: An Indicator is a marker that is used to show targeted change. Explicit indicators have not been developed for the WUE element. However when Indicators are developed they will be used to show what is expected to change along with the direction of change. Indicators can be expressed on a project specific level or in aggregate by river reach, river and system-wide. Examples of element

specific indicators include the decrease in a river diversion or the increase in the use of recycled water that results from a WUE project. A system-wide indicator is the increase in regional groundwater storage. An initial set of indicators will be developed concurrently with Metrics between February and June 2005.

Conceptual Models: Conceptual Models link the Indicators to Objectives and Goals. Most of the WUE work is based on implied conceptual models because explicit models have not been articulated. When Conceptual Models are articulated they will illustrate how various Indicators are stitched together to show progress toward an Objective and how the Objective links to a CALFED Goal. For example with ecosystem restoration as a Goal and increased river flow with reduced water temperatures as objectives, the Indicators of decrease in diversion and associated thermal benefit represent the contribution that WUE is making. For this example there are many other Indicators (storage's cold water pool, project operations, ecosystem program improvements to river bank etc) that must be included. An initial set of Conceptual Models will be developed during year 6 with completion set for June 2006.

Targets: Targets are the expected amount of change for a given Indicator. For example using a decrease in diversions as an Indicator, the amount of desired change is the Target.

The estimates of water conservation performance in the ROD came with a specific caveat against being used as targets. As such, past WUE targets have focused on how many grant dollars have been awarded. In addition the ROD called for completion of the WUE Year-4 Comprehensive Evaluation Report, a technical study that will estimate past and expected performance (costs and benefits) of water conservation and recycling activities in California. This report expected in August 2005 will create Targets that are expected to include volumetric (e.g. acre-feet of water conserved) as well as monetary components and will be divided among agricultural and urban conservation and urban wastewater recycling. This analysis will provide estimates of how much water can be conserved and recycled through 2030 under several state funding levels. Where possible the Targets will be divided into contributions toward water supply ("real water conservation"), in-stream flows, and water quality. After the study is released by the Authority, the WUE Subcommittee under the Bay-Delta Public Advisory Committee will work with Bay-Delta Authority and Implementing Agency staff to recommend the appropriate level of conservation and recycling to be reflected in revised targets.

For Agricultural WUE the development of the Targeted Benefits and Quantifiable Objectives and Agricultural Assurances represent initial efforts at establishing Targets from a programmatic point. This initial effort needs to be refined so that the Quantifiable Objectives include a time component that states how much of a Quantifiable Objective can be achieved by a given date.

Assessment: Because of limited progress on Indicators, Targets and Conceptual Models no formal Assessment is expected until year 7. Through the completion of the ROD-specified WUE Comprehensive Review a set of informal Targets will be available. It is expected that this information will inform the development of definitive Targets. This analysis is expected to be completed by August 2005.

Table 1. Metrics Associated with Program Performance

Metric	Units	Who is collecting data	Where is data housed?	Associated Indicator ²	Associated Goal ¹
<i>Project-Related Metrics</i>					
Studies, Science, Education and Oversight and Coordination	Varies	TBD	TBD	TBD	ER, WQ, WSR
Volume of AG water conservation from rerouted flow	AF/yr	Grant recipients for individual projects & DWR for all projects	TBD	Decrease in diversions and return flows at project locations. Aggregated by region and statewide.	ER, WQ, WSR
Volume of AG water conservation from reduced irrecoverable loss	AF/yr	Grant recipients for individual projects & DWR for all projects		Decrease in demand at project locations. Aggregated by region and statewide.	WSR
Change in water quality from AG water conservation	varies	Grant recipients for individual projects & DWR for all projects		Decrease in constituent loading at project locations. Aggregated by region and statewide.	ER, WQ
Volume of URBAN water conservation from rerouted flow	AF/yr	Grant recipients for individual projects & DWR for all projects		Decrease in diversions and return flows at project locations. Aggregated by region and statewide.	ER, WQ, WSR
Volume of URBAN water conservation from reduced irrecoverable loss	AF/yr	Grant recipients for individual projects & DWR for all projects		Decrease in demand at project locations. Aggregated by region and statewide.	WSR
Change in water quality from URBAN water conservation	varies	Grant recipients for individual projects & DWR for all projects		Decrease in constituent loading at project locations. Aggregated by region and statewide.	ER, WQ
Volume of desalinated water conservation from irrecoverable losses.	AF/yr	Grant recipients for individual projects & DWR for all projects		Increase in the amount of water generated at project locations. Aggregated by region and statewide.	WSR
Volume of recycled water conservation from irrecoverable losses.	AF/yr	Funding recipients for individual projects & SWRCB for all projects		Increase in the amount of recycled water delivered at project locations. Aggregated by region and statewide.	WSR

¹ Indicators should help determine progress toward one of the four CALFED goals: Ecosystem Restoration (ER), Levee System Integrity (LS), Water Quality (WQ) and Water Supply Reliability (WSR).

² The listed Indicators are samples, an initial set will be developed between February and June 2005.

<i>System-Wide Metrics³</i>					
Administrative (\$, counts, type etc)	TBD	TBD	TBD	TBD	TBD
Volume of groundwater extracted	AF/mo	DWR through groundwater assessments		Water table level consistent with prediction (model)	WSR, WQ, ER
Volume of surface water diversions	AF/mo	Unknown		Improved accuracy of diversion baseline aggregated by basin and statewide.	WSR, WQ, ER
Volume of water deliveries	AF/mo	Unknown		Improved accuracy of delivery baseline aggregated by basin and statewide.	WSR, WQ, ER
Volume of water consumption (evapotranspiration)	AF/mo	DWR		Improved accuracy of water consumption baseline aggregated by basin and statewide.	WSR, WQ, ER
Volume of surface water return flow	AF/mo	Unknown		Improved accuracy of surface water return flow baseline aggregated by basin and statewide.	WSR, WQ, ER
Volume of per capita water use	g/c/d	Unknown		Improved accuracy of per capita baseline aggregated by basin and statewide.	WSR
Volume of water flowing to salt sinks	AF/mo	Unknown		Improved accuracy of water flowing to salt sinks baseline aggregated by basin and statewide.	WSR, WQ
Volume of water flowing through streams	AF/mo	Unknown		Baseline aggregated by basin and statewide.	

³ System-Wide Metrics are based on input from WUE and other CALFED elements. At this time there is insufficient understanding of which elements are collecting portions of this metric. This will be addressed as part of the WUE Performance Measures process.

Accomplishments

CBDA and implementing agencies in Year 5 of the California Bay-Delta Program accomplished the following Year 5 Major Activities: science, water measurement, agricultural and urban technical assistance and grants, water desalination and recycling technical assistance and grants. Any delays in Year 5 Major Activities are also identified. Year 5 is defined for state agencies as July 2004 through June 2005 and for federal agencies as October 2004 through September 2005. The accomplishments reported include activities that are projected to be completed by June 2005:

Urban Conservation Projects

Loans- None

Grants

Proposal Solicitation Package was developed for DWR's Proposition 50 Chapter 7 funding. The eligible projects are urban water conservation projects. The PSP was released for public comment and submitted to the WUE Subcommittee and BDPAC, and CBDA for endorsement. The PSP was released on November 15, 2004 and proposals were due by January 11, 2005. It is expected that funding awards will be announced in May, 2005. 110 proposals were received by DWR for review and selection. Originally this PSP was scheduled for release in 2003 but was delayed due to request for including private entities as eligible for funding for the program and budget approval delays. The funding for the Year 5 was re-appropriated from previous fiscal year. Program implementation reflects beneficiary pays approach including local cost share for implementation projects.

Led by DWR with participation by SWRCB, NRCS, USBR, CBDA.

DWR continues to manage projects funded under Proposition 13 and SB 23. The project progress reports are being reviewed by DWR staff.

Led by DWR.

Agricultural Conservation Projects

Loans-

No loan applications were submitted to DWR.

Grants

Proposal Solicitation Package was developed for DWR's Proposition 50 Chapter 7 funding. The eligible projects are agricultural water conservation projects. The PSP was released for public comment and submitted to the WUE Subcommittee and BDPAC, and CBDA for endorsement. The PSP was released on November 15, 2004 and proposals were due by January 11, 2005. It is expected that funding awards will be announced during May, 2005. 60 proposals were received by DWR for review and selection. Originally this PSP was scheduled for release in 2003 but was delayed due to request for including private entities as eligible for funding for the program and budget approval delays. The funding for the Year 5 was re-appropriated from previous fiscal year. Program implementation reflects beneficiary pays approach including local cost share for implementation projects.

Led by DWR with participation by SWRCB, NRCS, USBR, CBDA.

Approximately \$1million was awarded for water conservation grants and cooperative agreements.

Led by USBR.

Developed and provided a report for an on-farm WUE incentive program. This report was based on 6 regional meetings that were held to gather producers technical assistance and financial incentives needs. The report also included an evaluation of existing programs for on farm technical and financial incentives of key agencies. Original due date was May 2003; however changes on concept delayed delivery to April 2005.

Led by Natural Resources Conservation Service (NRCS).

NRCS continues to implement the Environmental Quality Incentives Program (EQIP) (Category B), which provides cost share incentive payments to encourage installation of water conservation practices. Funding available in EQIP for on farm implementation is based on prior year estimates of EQIP practice cost share expenditures that complement CALFED WUE Agricultural Water Conservation goals. FY2005 estimate of \$5,000,000 is based on FY2004 final estimated expenditures and FY2005 initial allocations.

Led by Natural Resources Conservation Service (NRCS).

Water Recycling Projects

Loans. None.

Grants

SWRCB Water Conservation and Recycling Loans and Grants accomplishments for FY 2004-2005 are as follows:

- a. A grant to the WaterReuse Foundation was approved in 2003 for a water recycling research program. For the period July 2004 through January 2005, \$255,000 from this grant were approved for 5 projects. Led by SWRCB.
- b. For the period July 2004 through January 2005, approved 5 grants totaling \$345,000 for facilities planning studies for water recycling projects using funds from Proposition 13 (2000 bond issue). Led by SWRCB.
- c. Amended Water Recycling Funding Guidelines to include requirements for Proposition 50 (2002 bond issue) grant funding for construction of water recycling projects. Guidelines were released for public comment, workshops were held, and CBDA endorsed the guidelines before adoption by the SWRCB. The Legislature has appropriated \$42 million for water recycling projects. Adopted a Competitive Project List of potential water recycling projects and accepted funding applications in January 2005 for Category 1 projects which are those that benefit the Delta. Grant applications qualifying for Proposition 50 funding were reviewed and approved for construction of water recycling projects. Implementation of this program incorporates a state funding share of 25 percent of eligible costs up to a maximum of \$4 million.

Led by SWRCB.

In Fiscal Year 2004, USBR Southern California Area Office provided financial and technical assistance for water conservation, water recycling, and desalination. A total of \$14.9 million was awarded for Title XVI projects.

Led by USBR.

Research Grants

Included in the Grants.

Desalination Implementation

Developed and released to public a Proposal Solicitation Package (PSP) for DWR's Water Desalination Grant Program. This Water Desalination Grant Program is implementing Chapter 6(a) of Proposition 50 (Water Code Section 79545(a)). The objective of this grant fund is to assist local public agencies with the development of local potable water supplies through brackish water and oceanwater desalination. This cycle of funding is worth \$25 million. The PSP was released for public comment and submitted to the WUE Subcommittee and BDPAC, and CBDA for endorsement. Forty four proposals were received by January 18, 2005. Selection will be made by May 2005. Originally this PSP was scheduled for release in 2003 but was delayed due to budget approval delays. The funding for the Year 5 was re-appropriated from previous fiscal year. Led by DWR with participation from USBR, DHS and CBDA.

Desalination Research

Included in Desalination Implementation.

DRAFT

Technical Assistance, Assurances, Science, Oversight and Coordination

Urban Technical Assistance

Provided technical assistance to the California Urban Water Conservation Council, provided staff support to the CBDA Urban Water Use Measurement Staff Work Group. Supported CUWCC to conduct workshops and presentations throughout California on using the *Guidebook for Implementation of Senate Bill 610 and Senate Bill 221* (Water Supply Assessment and Water Supply Verification) to implement those bills. Continued to work with the California Urban Water Conservation Council on development of a guidebook which was published in January 2005 for water suppliers preparation of the 2005 Urban Water Management Plans required by the Urban Water Management Planning Act. In cooperation with CUWCC held nine workshops statewide to assist water suppliers in preparation of Urban Water Management Plan. Also, worked on evapotranspiration controllers and published water use efficiency leaflets on landscape irrigation. Prepared urban water use efficiency strategy for the Water Plan update. Led by DWR.

Agricultural Technical Assistance

Continued progress in agricultural water management planning and implementation of efficient water management practices in partnership with the California Agricultural Water Management Council. Provided financial and technical support to the Agricultural Council through the Three-way Cooperative Agreement. Refined and developed a more user friendly and web-based Water Management Planning tool, as well as refined and completed a Model Water Management Plan. Continued integration and incorporation of Quantifiable Objectives into Water Management Planning and Implementation process. Furthermore, through the cooperative agreement existing Net Benefit Analysis was refined and completed. Increased agricultural signatory membership to 60 agricultural water suppliers signatories. Agricultural Water Management Council staff met with several potential signatories, conducted meetings and workshops as their outreach activities. Agricultural Water Management Council started publication of "Best Management" newsletter. Completed general audits of 29 Water Management Plans and detailed audit of 5 Water Management Plans that have been endorsed by the Council. Continued administrative support to the Agricultural water Management Council. Prepared agricultural water use efficiency strategy for Water Plan Update. (led by DWR)

Led by DWR with participation by USBR and CBDA.

Monitored two new Mobile Laboratories. Though still in their infancy, the two labs have conducted 23 pump tests and 60 irrigation system evaluations. Provided assistance to existing Mobile Laboratories to provide assistance outside their service area. The intent of these evaluations is to show agencies that do not currently have mobile laboratories the benefits of the labs and encourage them to establish their own labs.

Led by DWR.

Reprinted and disseminated several water use efficiency brochures, articles and published the Water Conservation News semi-annually (<http://www.owue.water.ca.gov/>).

Led by DWR.

Assisted local agricultural water agencies to install three new California Irrigation Management Information System (CIMIS) weather stations. Collected, processed, analyzed, and disseminated CIMIS data to the public through the CIMIS web page. Provided trouble-shooting and technical assistance in maintaining the system and resolve problems with DWR and cooperator owned CIMIS weather stations.

Partnered with the University of California Cooperative Extension to conduct 11 workshops on irrigation scheduling and promoting CIMIS. Participated in several workshops throughout the state to inform the public about the CIMIS program, how to utilize CIMIS data, assist in agricultural and urban runoff reduction, and how to become a CIMIS cooperator. Managed 2 Proposition 13 ET controller projects.

Partnered with the CA Urban Water Conservation Council to promote and initiate the non-ideal site program. This program is designed to assist the urban water agencies with water management, runoff reduction, and best management practices (BMP) implementation. Participated in CUWCC Landscape subcommittee.

Contracted with University of California Davis to develop ETo zone maps for California using remote sensing and spatial interpolation methods, updating daily, and to be made available to the public through the CIMIS web page. Released a new CIMIS web page to facilitate the increased demand for data, technical information, and water management tools. Began Beta testing new data acquisition platforms to provide more frequent CIMIS data updates.

Reprinted new State ETo zone maps for distribution. Continued submitting publications to California Agricultural Technology Institute, Water Conservation News, and a scientific paper to the ASCE Journal.

Installed weather station for DWR operations and climate data monitoring of the Jones Tract incident.

Initiated investigation into the net radiation estimation used by CIMIS.

Led by DWR.

Developed user guides: Monitoring and Assessment of Canal Lining Water Savings, Monitoring and Assessment of On-Farm Improvements, Monitoring and Assessment of Spillage Reduction intended with estimation of benefits of projects in water use efficiency.

Led by USBR with participation by DWR, NRCS and CBDA.

The Southern California Area Office also spends about \$1 million for water use efficiency activities.

Led by USBR.

Develop Standard Criteria for evaluating agricultural and urban water management plans. Will be completed in 2005.

Led by USBR.

In Summer of 2004, completed Refuge Water Management Plan Criteria. Regional Criteria were developed for evaluating Water Management Plans for the Sacramento River Contractors.

Led by USBR with participation by CBDA.

Facilitated technical assistance to water suppliers and water users through the Water Conservation Field Services program (see Loans and Grants, above).

Led by USBR.

Provided technical assistance to growers throughout the state for the adoption of new irrigation equipment and improved water management techniques. In addition, local contracts with four Resource Conservation Districts were signed to provide technical assistance on irrigation water management to recipients of incentive payments for sprinkler and micro-irrigation systems.

Led by NRCS.

Recycling Technical Assistance

Continued to provide technical, biophysical, and engineering-oriented knowledge on water recycling and desalination issues; conducted 9 workshops and meetings with technical presentations; responded to policy makers, legislators, and regulators on issues related to water recycling and desalination; responded to public questions and inquiries regarding water recycling and desalination permitting process; participated in the Southern California Water Recycling Project Initiative II; provided staffing and technical support to help implement the Recycled Water Task Force's recommendations; Participated in the Water Use Efficiency grant application reviews. Completed 4 research projects with local agencies and University of California Davis to fill in knowledge gap in optimizing the energy needs in the treatment and use of recycled water, final reports are being prepared. Published DWR water facts # 23 on Water Recycling. In collaboration with local water agency, published three technical papers on recycled water production and use.

Led by DWR.

Continued to provide technical knowledge on water recycling, including response to questions from policy makers, regulators, state and local agencies and the public on permitting issues; public health regulations; and types, locations, and amounts of water reuse occurring. Continued participation on Department of Health Services Recycled Water Committee.

Led by SWRCB.

In Federal Fiscal Year 2005 - it is expected that the Southern California Area Office will award \$10.5 million in Title XVI Programs.

Led by USBR

Schedule: September 2005

Water Desalination Technical Assistance

Participated in the preparation and the implementation of the California Desalination Task Force pursuant to AB 2717; participated in the California Water Plan Update processes by providing technical support related to water recycling and desalination; helped increase public awareness on the importance of water recycling issues and projects; improved the Water Recycling and Desalination Web site- www.owue.water.ca.gov/recycle.

DWR Water Desalination program provided technical assistance in developing the Water Desalination PSP. Led by DWR.

The Southern California Area Office has provided technical assistance to Long Beach Water Department for the Seawater Desalination Pilot Plant.

Led by USBR.

Managed Wetlands Technical Assistance

Working with the Interagency Task Force to establish criteria for Refuge Water Management Plans.

Led by USBR.

Assurances

Urban Certification

Urban water conservation BMP certification will be discussed at the WUE Subcommittee meeting in February and funding has been made available from DWR's Proposition 50 to CBDA to support further development of urban certification process.

Led by CBDA with participation by DWR, USBR, and SWRCB.

Quantifiable Objectives

Made progress on the development of WUE element performance measures, through review of on-going science activities including the incorporation of Quantifiable Objectives into agricultural water management plans, and participation in Water Management Science Board in January of 2005.

Led Jointly by DWR and CBDA with participation by USBR and SWRCB.

Water Measurement

CBDA, assisted by implementing agencies, developed an Implementation Approach for implementing appropriate water use measurement included descriptions of necessary legislation and administrative actions. The implementation Approach was developed in an open stakeholder process and was discussed at the WUE Subcommittee meetings. The Staff Proposal: Implementation Approach for Agricultural and Urban Water Use Measurement was approved by the Bay-Delta Authority at their April 2004 meeting (Resolution 04-04-01).

In accordance with the Authority's direction, CBDA staff drafted legislation consistent with the Implementation Approach. The creation of this draft fulfilled a ROD commitment. This ROD commitment was scheduled for completion during the 2003 legislative session but was delayed due to process and staff resources.

Led by CBDA with participation by DWR, NRCS and USBR.

Science and Monitoring

DWR provided for the proposal and implementation process be accessible to all agencies involved in water use efficiency activities and for incorporating more scientific measures into the program. DWR, CBDA, and SWRCB were participants in science and economic review of Proposition 50 WUE proposals. DWR, USBR, and DHS are participants in water desalination Agency Team reviewing and selecting proposals.

Incorporated concepts from the Science Application Advisory Committee (SAAC) into the 2004 WUE Proposal Solicitation Package (PSP) to improve the monitoring and evaluation of WUE projects. Water conservation proposals received by DWR under the Proposition 50 grant PSP are reviewed by economic and science panels and science and economic scores are considered in calculating proposal's total score and ranking. Proposals are required to have a monitoring and assessment plan allowing for future assessment and evaluation of the effectiveness and benefits of CALFED funding of water conservation projects.

Led by DWR with participation by Reclamation and CBDA.

Developed the Terms of Reference for the Water Management Science Board and recruited 16 members. First meeting was held in January 2005 where work teams on modeling, water use efficiency and water quality were formed.

Led by CBDA with participation by Department of Water Resources (DWR), US Bureau of Reclamation, and State Water Resources Control Board (SWRCB).

Oversight and Coordination

CBDA made progress in evaluating the future WUE costs and performance through development of the ROD specified Year 4 WUE Evaluation report. The Report will be released in August 2005.

Provided guidance to WUE agencies in interpreting the ROD and facilitated communications. Convened the WUE Subcommittee to the BDPAC. Led by CBDA.

In Year 4, CBDA published Final Report of the Independent Review Panel on Appropriate Measurement of Agricultural Water Use. CBDA staff also prepared Staff Definition of Appropriate Urban Water Use Measurement. These actions completed a ROD commitment.

CBDA, DWR, SWRCB, USBR, NRCS are participants in CALFED WUE Agency Team in reviewing and selecting the Proposition 50 water conservation projects.

Previous Year's activities:

Major activities planned for Year 5 included the Year 4 Comprehensive Review, the 2004 agricultural and urban WUE PSP, the SWRCB PSP and USBR funding for water recycling and water conservation. Other major activities included the implementation of the Recycled Water Task Force Report, guidance on practical application of science concepts, technical assistance to agricultural and urban water users, and CBDA oversight. Progress was made on all the major activities planned for Year 5, while most activities are on schedule, some are behind schedule.

Tasks accomplished :7

The following ROD commitments were accomplished during year 5:

- Creation and implementation of the Water Management Science Board,
- Developed legislation to implement Appropriate Water Use Measurement,
- Release of agricultural and urban WUE and desalination grant solicitation packages.
- Environmental Justice and Tribal Relations. The program includes public involvement including public workshops EJ and Tribes.
- Developed Water Recycling Funding Guidelines.
- Completed Refuge Water Management Plan criteria.
- Completed Regional Criteria for the Sacramento River Contractors.

Tasks on schedule: 7

- The Central Valley Project Improvement Act (CVPIA) required the development of Standard Criteria to evaluate water conservation plans. These criteria were to be evaluated every three years. The first criteria were established in 1993. Since then they have been revised in 1996, 1999, and 2002. Reclamation is currently in the process of revising the criteria for 2005.
- Agricultural and urban technical assistance, loans, grants,
- Development of appropriate water use measurement strategy,
- Year 4 Comprehensive Evaluation,
- Water recycling loans and grants,
- Oversight and coordination.
- Water use measurement legislation. This activity was delayed due to legislative process. A draft legislation was prepared and SB 866 is sponsored by Senator Kuehl This activity will continue in Year 6.

Tasks behind schedule: 3

- Urban BMP certification: This activity was delayed due to lack of resources. The activity will be planned for Year 6.
- Performance measures: This activity was delayed due to lack of resources. More specific Performance Measure information including Metrics, Indicators are included in Year 6 Plan.
- Targets: Revision of targets and development of targets were delayed until after Year 4 Comprehensive Evaluation is completed. The Targets will be visited in Year 6.

Major Activities

CBDA and implementing agencies have a number of major activities underway. Some of these activities are required by the ROD and were identified in the WUE Implementation Program Plan. Major activities include DWR's continuing work on the water use efficiency and water desalination 2004 Proposition 50 Proposal Solicitation Package (PSP) and 2005 agricultural and urban WUE grant PSP, Water Desalination grant PSP, the SWRCB Proposal Solicitation Package and Reclamation funding for water recycling and water conservation and NRCS 's Environmental Quality Incentives Program (EQIP) (Category B) and other technical assistance for on-farm water management. Other major activities include the, implementation of the Recycled Water Task Force Report, practical application of science concepts, technical assistance to agricultural and urban water users, and CBDA oversight. Priority is given to activities that are expected to meet the ROD commitment. The Major Activities reported are priorities for funding. Funding for Year 6 is sufficient to provide for high priority activities. But after Proposition 50 funding is used up, no funding is presently available to support future water conservation projects. Six DWR positions are currently funded by Proposition 50 to support WUE programs. The Water Use Efficiency finance element of the CBDA 10-Year Finance Plan outlines the funding needs for years 5 to 14 (source: CBDA 10-Year Finance Plan, December 2004). The funding target for the ten year planning period is \$3.15 billion or an average of \$315 million per year. The funding target allocation by task included in Finance Plan. According to the Finance Plan, the state and federal funding for the WUE will be 35%, roughly 50% each and the local match will be 65%. The Finance Plan public share is flexible and will be adjusted over time to reflect the state and federal fiscal realities. Future funding information, to the extent available, is provided. The future funding levels are uncertain or unavailable and compared to Finance Plan funding levels, there will be a gap in funding. However, the gap in funding is not specified due to unavailability of future funding information.

The Activities planned for Year 6 is consistent with the Program tasks and ROD objectives and commitments contained in the ROD. Program implementation reflects beneficiary pays approach including local cost share for implementation projects.

As a part of implementing the major activities, agencies monitor and to the extent available report back annually on the funds spent, activities undertaken and the results. The monitoring will be part of the Major Activities and the report will be included in the Accomplishments of the annual Program Plan. The precise timing of this assessment will be determined by agencies.

Urban Conservation Projects

Loans- None

Grants

Continue to work on the 2004 WUE PSP including negotiating contracts with grantees and execution of contracts and contract management. Issue the Proposition 50 WUE PSP for 2005. The draft PSP will be released for public comment and a final draft prepared based on the comments. Urban water use efficiency implementation as well as research and development projects are eligible for funding. The funding for FY 05-06 is about \$16 million for urban projects. Proposals will be reviewed and selected based on the criteria outlined in the PSP document. Draft PSP will be issued, workshops will be held for public comment and review and approval will be obtained from WUE Subcommittee and BDPAC and

CBDA. Efforts will be made to include tribes and incorporate Environmental Justice in the development and implementation of the PSPs. Continue to strive for a balance between making the proposal and implementation process as accessible as possible to all agencies involved in water use efficiency and incorporating more scientific measures into the program.

Grant funding ends in 2006-07 and program will discontinue unless new grant funds become available. The planned grant dollars are not sufficient to meet ROD objectives.

Funding: DWR's Proposition 50 WUE funding, approximately \$16 million in urban grants

Schedule: Contracts issued by 2006 and 2007

Lead Agency: Led by DWR with participation by CBDA, SWRCB, NRCS, and USBR.

In Fiscal Year (FY) 2006, USBR's Mid-Pacific Region water conservation staff is expected to award grants in contracts and grants for urban water conservation for MP Region.

Funding: \$1.97 million in FY 05-06

Schedule: Ongoing.

In Fiscal Year (FY) 2006, USBR's Lower Colorado Regional water conservation staff is expected to award grants in contracts and grants for agriculture and urban water conservation in the form of grants and cooperative agreements.

Funding: \$0.8 million

Schedule: September 2006

Agricultural Conservation Projects

Loans:

The Proposition 13 loan will be available for agricultural water conservation projects. This loan program is managed by DWR Division of Planning and Local Assistance in Sacramento.

Funding: \$8.2 million of Proposition 13 in FY 05-06.

Led by DWR.

Grants:

Continue to work on the 2004 WUE PSP including negotiating contracts with grantees and execution of contracts and contract management. Issue the Proposition 50 WUE PSP for 2005. The draft PSP will be released for public comment and a final draft prepared based on the comments. Agricultural water use efficiency implementation as well as research and development projects are eligible for funding. The funding for FY 05-06 is about \$16 million for agriculture projects. Proposals will be reviewed and selected based on the criteria outlined in the PSP document. Draft PSP will be issued, workshops will be held for public comment and review and approval will be obtained from WUE Subcommittee and BDPAC and CBDA. Efforts will be made to include tribes and incorporate Environmental Justice in the development and implementation of the PSPs. Continue to strive for a balance between making the proposal and implementation process as accessible as possible to all agencies involved in water use efficiency and incorporating more scientific measures into the program.

Grant funding ends in 2006-07 and program will discontinue unless new grant funds become available. The planned grant dollars are not sufficient to meet ROD objectives.

Funding: DWR's Proposition 50 WUE funding, approximately \$16 million in grants and

Schedule: Contracts issued by 2006 and 2007

Lead Agency: Led by DWR with participation by CBDA, SWRCB, NRCS, and USBR.

In Fiscal Year (FY) 2006, USBR's Mid-Pacific Region water conservation staff is expected to award grants in contracts and grants for agricultural water conservation for MP Region.

Funding: \$3.97 million in FY 05-06

Schedule: December 2005

NRCS completed a Final Report for the CALFED WUE on-farm incentive program which was presented to the partner agencies and WUE subcommittee for their review and refinement. Anticipated products from the review range from accelerated funding and increased coordination for existing programs to development of a new state funded program for on farm financial incentives.

Funding: As available

Schedule: As scheduled for WUE Subcommittee and interagency review.

Lead Agency: Led by NRCS with participation by CBDA.

NRCS continues to implement the Environmental Quality Incentives Program (EQIP) (Category B), which provides cost share incentive payments to encourage installation of water conservation practices. Funding available in EQIP for on farm implementation is based on prior year estimates of EQIP practice cost share expenditures that complemented CALFED WUE Agricultural Water Conservation goals. FY2006-FY2007 estimate is based on FY2004 final estimated expenditures and FY2005 initial allocations. No estimate is provided for beyond FY2007 because the 2002 Farm bill will be up for reauthorization in FY2007.

Funding: \$5,000,000

Schedule: Annual Budget Authorization by Congress

Lead Agency: Led by NRCS.

Water Recycling Projects

Loans. See also Grants section.

Grants

SWRCB major activities for FY 2005-06 through FY 2008-09 are as follows:

Continue administering grants and loans from Proposition 50 (grants), State Revolving Fund (loans), 1984 Bond Law (loans), and Proposition 13 (2000 bond issue, grants and loans) for planning and construction of water recycling projects. Under criteria in the CALFED Bay-Delta Program Programmatic Record of Decision, these programs are classified as Category B funding programs except for funds authorized by Proposition 50, which is a Category A funding source. Led by SWRCB, participation by CBDA for Proposition 50 funding.

Funding: The Legislature appropriated \$42.2 million in FY 2003-04 from Proposition 50 for grants for construction of water recycling projects. Loan repayments from previous loans under the 1984, 1988, 1996 and 2000 (Proposition 13) Bond Laws are available to continue loans and grants for planning and

construction of water recycling projects. The State Revolving Fund can be used for water recycling projects, but there is no set allocation for this purpose. Proposition 13 funds under existing contract will be administered for additional research proposals. A small amount of additional research funds will become available from loan repayments.

Schedule: Ongoing.

Lead Agency: Led by SWRCB with participation by CBDA.

In Fiscal Year 2006, the President's Budget indicates a total of \$8.8 million will be spent towards recycling programs, \$8.5 million in southern California.

Funding: \$8.8 million

Research Grants

SWRCB major activities for FY 2005-06 through FY 2008-09 is to continue water recycling research projects.

Funding: Up to 3 percent of loan repayments from Proposition 13 loans may be used for water recycling research.

Schedule: ongoing

Lead Agency: Led by SWRCB.

DWR will continue to support feasibility studies of the water recycling.

Funding: Grant funding of \$280,000 of Proposition 204 per year in FY 05-06 and 06-07 plus \$20,000 of Proposition 204 for grant administration per year.

Lead Agency: Led by DWR with participation by CBDA, SWRCB, and USBR.

SWRCB develop a cost/benefit tracking system for all SWRCB-funded water recycling projects on a Geographical Information System (GIS) data layer to demonstrate quantity of recycled water delivered and quantity of State and local water augmented due to the delivery of recycled water. A project tracking database has been developed to incorporate administrative data, including some factors useful to document water recycling projects. A GIS viewer has been developed that will allow data layers to be added on water recycling projects when location data are available. Water recycling project data need to be added to the project tracking database and additional data tracking needs to be developed to incorporate project performance data.

Funding: Administration funds for the State Revolving Fund and from various bond issues.

Schedule: Ongoing

Lead Agency: SWRCB.

Desalination Implementation

Continue to work on the 2004 Desalination PSP including negotiating contracts with grantees and execution of contracts and contract management. Develop a Proposal Solicitation Package for the Water Desalination funds under Chapter 6 (a) of the Proposition 50. In FY 05-06, \$21.2 million funding including \$234,000 for program administration is available for implementation of research and development for ocean water and brackish water desalination projects. A draft PSP will be released for

public comment and will be submitted to WUE Subcommittee and BDPAC and CBDA for review And approval. Grant funding ends in 2005-06 and program will discontinue. The planned grant dollars are not sufficient to meet ROD WUE objectives.

Funding: \$21.2 Million in Proposition 50 Water Desalination grants and \$234,000 of Proposition 50 Water Desalination for grant administration in FY 05-06

\$229,000 per year for FY06-07 to 09-10 and \$180,000 for 10-11 and \$131,000 for 11-12.

Schedule: FY 05-06 and beyond.

Lead Agency: Led by DWR with participation by DHS, CBDA.

Desalination Research

Included in Desalination Implementation above.

Technical Assistance, Assurances, Science, Oversight and Coordination

Urban Technical Assistance

- Landscape training,
- Promote California Friendly Landscape
- Manage Proposition 13 and 50 contracts
- Support BMP 5 in coordination with CUWCC
- Disseminate information on landscape water conservation
- Distribution system water audit and leak detection
- Assist with new mobile labs
- Assist urban agencies with irrigation scheduling
- Evaluate and research potential BMPs
- Develop protocol for estimating environmental benefit of BMP implementation
- Review about 400 Urban Water Management Plans and provide technical assistance
- Publish articles in Water Conservation News and brochures
- Development and management of Urban Water Management Plan database
- Participate in Commercial, Industrial, and Institutional water conservation through workshops, conferences, and outreach
- Support urban technical assistance projects through grants through technical assistance grants. Also manage Proposition 50 2004 projects.

Funding: Total of \$0.948 million of Prop 50 funds in technical assistance grants. \$1,056,000 for staff support for technical assistance in 05-06 and 06-07. Also, \$213,000 of Proposition 50 WUE and \$6,000 of Urban ERPA per year for urban water conservation project grant program administration (see also urban projects) in FY 05-06 and 06-07

A total of \$989,000 in 07-08..

Schedule: Ongoing assistance

Lead Agency: Led by DWR.

Urban CIMIS supervisory activities

(See Agricultural Technical Assistance- CIMIS)

Led by DWR.

Through the Water Conservation Field Services Program (WCFSP), USBR will provide technical assistance to its urban contractors. These efforts can be seen through agreements with California Polytechnic State University San Luis Obispo's Irrigation Training and Research Center, California Farm Water Coalition, Fresno State Center for Irrigation Technology, Universities of California- Riverside, California State Universities San Bernardino and Chico, and the Water Education Foundation's Project Water Education for Teachers. Led by USBR.

Funding: Included in the water conservation budget

Schedule: Ongoing

Agricultural Technical Assistance

DWR provide ongoing assistance to agricultural water suppliers by providing information to implement efficient water management practices and help local agencies in their efforts to prepare Water Management Plans and biannual progress reports through Agricultural Water Management Council and by providing brochures, bulletins, and holding workshops. Review and Evaluate Agricultural Water Management Plans.

Technical assistance for agricultural water management planning and implementation

Review and evaluate AWMP

Review and evaluate 10 water management plans

Review and Evaluate 10 biannual progress reports provide technical assistance, data, information to the agricultural water management suppliers who develop Water Management Plan.

Conduct two meetings/workshops per year for water districts by each DWR Districts partners

Continue managing the 3-way cooperative agreement and partnership with USBR on tasks identified in the cooperative agreement

Assist Ag. Council to develop a data base containing water management plans information

Prepare articles on implementation of Efficient Water Management Practices to be published in WC News or in the Council's Best Management Practices.

Continue assisting Ag. Council to incorporate QOs in the Water Management Planning, Net Benefit Analysis, and the Model water Management Plan

Assist with Water Plan Update

Assist with the development of agricultural water use efficiency strategy for the California Water Plan

Update

Assist with new mobile labs

Statewide information on irrigated acreage and water conservation

Support agricultural technical assistance through technical assistance grants. Also manage Proposition 50 2004 projects.

Funding: \$Total funding of \$0.948 million of Proposition 50 WUE technical assistance grants in 05-06 and 06-07. \$ 725,000 in 05-06 and 06-07, 07-08 and 08-09. \$206,000 of Proposition 50 WUE per year for agriculture water conservation grant program administration (see agricultural grant) in FY 05-06 and 06-07.

Schedule: Ongoing assistance

California Irrigation Management Information System

Operate and maintain over 125 California Irrigation Management Information System stations statewide and disseminate data to the public. Assist local water agencies to install three new California Irrigation Management Information System (CIMIS) weather stations. Collect, process QC/QA, and disseminate CIMIS data to the public through the CIMIS web page and provide technical assistance.

Provide state wide operations maintenance, calibration, and technical assistance, in resolving problems with DWR and cooperator owned CIMIS weather stations. Provide assistance for installing 3 weather towers for the Salton Sea Authority investigation.

Manage Bryte Lab activities and equipment repair and calibrations.

Update maintenance and operation files.

Provide local technical assistance on the use of CIMIS and efficient irrigation scheduling. Continue outreach activities at conferences, workshops, and educating foreign dignitaries and scientists.

Refine the new CIMIS web page to facilitate the increased demand for data, technical information, and water management tools. Implement new reporting methods from the CIMIS web page.

Implement new data acquisition platforms to provide more frequent CIMIS data updates.

Manage 3 Proposition 13 ET controller workshops and 3 proposition 50 contracts. Participate on the review panels for prop 50.

Continue investigations into CIMIS ETo estimation of net radiation, moving the net radiometers from UC Davis to remote locations. Publish scientific paper on the investigation. Possibly look into surface Renewal as a way of developing crop and landscape coefficients.

Partner with the CA Urban Water Conservation Council to promote and initiate the non-ideal site program. This program is designed to assist the urban water agencies with water management, runoff reduction, and best management practices (BMP) implementation. Participate in the CUWCC Landscape Sub Committee, AB 2717 Technical Advisory Subcommittees, Sustainable Building Task Force Technical Advisory subcommittees, and Irrigation Association ET controller investigations.

Contract with University of California Davis to further refine daily ETo zone maps for California using remotely sensed data and spatial interpolation methods, and to be made available to the public through the CIMIS web page.

Continue submitting articles to CATI and the Water Conservation News and other media.

Update the CIMIS Urban & Agricultural Resource Books.

Funding: \$929,000 in 05-06 and beyond

Led by DWR.

Through the Water Conservation Field Services Program (WCFSP), USBR will provide technical assistance to its agricultural contractors. These efforts can be seen through agreements with California Polytechnic State University San Luis Obispo's Irrigation Training and Research Center, California Farm Water Coalition, Fresno State Center for Irrigation Technology, Universities of California- Riverside, California State Universities San Bernardino and Chico, and the Water Education Foundation's Project Water Education for Teachers.

Led by USBR.

Funding: Included in the water conservation budget,

Schedule: Ongoing

Continue to provide technical assistance to producers throughout the state for the adoption of new and improved water management techniques.

Led by NRCS.

Recycling Technical Assistance

Water Recycling Technical Assistance

Continue to provide technical, biophysical, and engineering-oriented knowledge on water recycling. In collaboration with stakeholders, initiate efforts to:

- Develop guidelines for water recycling regulation and permitting requirements.
- Identify potential water recycling projects.
- Develop user friendly water quality guidelines for recycled water use in agriculture.
- Help implement the Recycled Water Task Force's recommendations.
- Inform policy makers, legislators, and regulators of water recycling opportunities and impediments.
- Increase public awareness and disseminate knowledge and information on the safe use of recycled water through research, publications and participation in technical and outreach meetings.
- Coordinate with federal, State, and local agencies to advance local and regional water recycling.
- Publish technical appears and articles in the WCN on water recycling.

Funding: \$348,000 for technical assistance per year in 05-06 and 06-07

\$120,000 in 07-08 and 08-09.

Schedule:05-06 and beyond

Lead agency: DWR

Continue to provide technical knowledge on water recycling, including response to questions from policy makers, regulators, state and local agencies and the public on permitting issues; public health regulations; and types, locations, and amounts of water reuse occurring. Continue participation on Department of Health Services Recycled Water Committee. Provide assistance to implement

recommendations of the Recycled Water Task Force.

Funding: Administration funds from various bond issues.

Schedule: Ongoing

Lead Agency: SWRCB

Water Desalination Technical Assistance

Water Desalination Technical Assistance

Continue to provide technical, biophysical, and engineering-oriented knowledge on water desalination. In collaboration with stakeholders, initiate efforts to:

- Develop guidelines for water desalination regulation and permitting requirements.
- Identify potential water desalination projects.
- Develop user friendly planning guidelines for desalination projects.
- Help implement the Desalination Task Force's recommendations.
- Inform policy makers, legislators, and regulators of desalination opportunities and impediments.
- Increase public awareness and disseminate knowledge and information on technical advancements on desalination technologies.
- Coordinate with federal, State, local agencies and other stakeholders to advance local and regional water desalination.
- Publish articles in the WCN about desalination.

Funding: Total of \$84,000 per year in 05-06 and 06-07

\$19,000 of Proposition 50 Water Desalination in 07-08 and 08-09.

Schedule: FY 05-06 and beyond.

Managed Wetlands Technical Assistance

Through the Water Conservation Field Services Program (WCFSP), USBR will provide technical assistance to its refuge contractors. These efforts can be seen through agreements with California Polytechnic State University San Luis Obispo's Irrigation Training and Research Center, California Farm Water Coalition, Fresno State Center for Irrigation Technology, Universities of California- Riverside, California State Universities San Bernardino and Chico, and the Water Education Foundation's Project Water Education for Teachers. Led by USBR.

Funding: included in the water conservation budget

Schedule: Ongoing

Assurances

Performance Measures:

Facilitate the evaluation of programmatic performance of the WUE element by developing WUE performance measures, including quantitative goals for the WUE program and indicators of the progress towards achieving those goals. Staff will also monitor the performance of WUE projects through credible methods that estimate the cost and performance of WUE projects. Performance may be measured by the volume of water conserved or recycled or through other qualitative or quantitative means.

Funding: DWR's total funding is \$52,000 in 05-06 and 06-07.

\$20,000 in 07-08 and 08-09.

Schedule: 2005-06 and beyond

Lead Agency: Led by CBDA with participation by DWR, SWRCB, USBR, NRCS.

Urban Certification

Activities for implementing certification of urban water conservation BMP compliance have not been determined [as of 02/18/05].

Funding: DWR's funding is \$45,000

Lead Agency: Led by CBDA with participation by DWR, SWRCB, and USBR.

Quantifiable Objectives

Development, refinement, and evaluation of Quantifiable Objectives. The WUE Subcommittee at its February 2005 meeting agreed to form a workgroup to focus on the Quantifiable Objectives concept and develop a strategy for utilization of QOs in the future activities of the Water Use Efficiency program. [PLACE HOLDER FOR ADDITIONAL INFORMATION FOLLOWING THE APRIL 12 MEETING OF THE QO WORKGROUP- is the emphasis on QO adequate, effective, realistic and or appropriate]

Funding: \$100,000 per year

Lead Agency: CBDA with participation by DWR, SWRCB, NRCS, and USBR

Water Measurement

Continue to follow the direction of the Bay-Delta Authority and assist implementing agencies in implementing the administrative actions call out in the Implementation Approach for water use measurement (CBDA Resolution 04-04-01). Also continue to work with the Governor's office and the Legislature to enact the legislative components of the Implementation Approach.

Funding:

Schedule: December 2005-06 and beyond.

Lead Agency: Led by CBDA with participation by DWR, SWRCB, NRCS, and USBR.

Science and Monitoring

Periodically convene the WUE Science Application Advisory Committee to provide advice on conducting science and evaluation tasks. DWR anticipate that there will be meetings of SAAC in year 6 to review the DWR's WUE project funding process and discuss previously WUE-funded project results. DWR will incorporate science review in its PSP process and will continue to monitor the agricultural, urban and water desalination projects results and analyze data. DWR staff will participate in the WUE Subcommittee and attend Water Management Science Board meetings.

Funding: DWR's \$170,000 in 05-06 and 06-07

Total of \$140,000 per year in 07-08 and 08-09

Schedule: 2005-2006 and beyond

Lead Agency: Led by DWR with participation by CBDA, SWRCB, NRCS, and USBR.

Oversight and Coordination

Evaluate past and future WUE cost and performance. The primary deliverable for this activity is the completion of the ROD specified Comprehensive Evaluation of Year 4 WUE Evaluation. The results of this evaluation will be used by policy-makers to determine not only the continued level of funding for future WUE projects but for the future funding of other water management actions (such as surface storage) as well.

Funding: ROD completion date was December 2004, new completion date is August 2005. Delays are due to staff resources. .

Lead Agency: Led by CBDA with participation by DWR, USBR, NRCS, and SWRCB.

Convene the Water Management Science Board and affiliated work teams to provide independent scientific advice and review. This panel was convened in 2005.

Funding: DWR's funding is \$30,000 in 05-06 and 06-07

\$10,000 per year in 2007-08 and 08-09.

Schedule: 2005-06 and beyond

Lead Agency: Led by CBDA with participation by DWR, SWRCB, NRCS, and USBR.

Continue to convene WUE Subcommittee and Water Management Science Board meetings. Continue to provide guidance in interpreting the ROD to participating agencies to meet the goals and objectives of the WUE program. Led by CBDA.

Funding: 120,000

Schedule: Ongoing meeting schedule etc?

Prepare Elements of Urban Water Conservation Certification Legislation Complete the definition of appropriate measurement and draft water measurement legislation.

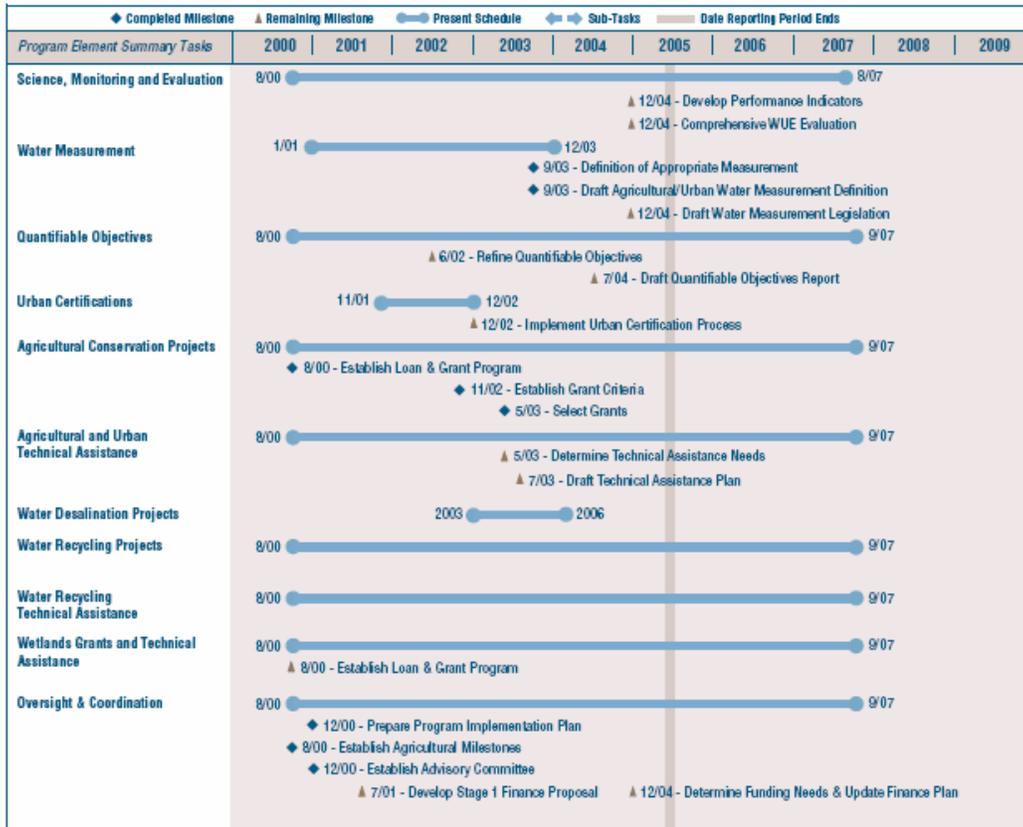
Funding:

Schedule: 2006

Schedule

WATER USE EFFICIENCY

The focus of CALFED's Water Use Efficiency program is to support local water conservation and recycling projects that can contribute to the Bay-Delta solution. CALFED Agencies provide financial support through grants and loans and technical support through technical assistance programs. To assure the public of high water use efficiency, CALFED agencies are investing in scientifically-based performance measures including agricultural quantifiable objectives. Efforts to establish appropriate water measurement and urban water conservation certification are integral parts of these assurances.



Public Involvement and Outreach

All planning and implementation tasks including water use measurement, Year 4 Comprehensive Evaluation, urban certification, performance measures and PSP development and proposal selection process included public involvement through a transparent process by holding public workshops and workgroups and presentation at the WUE Subcommittee and BDPAC, and CBDA meetings. CBDA and implementing agencies will continue to adhere to public participation process in its planned Major Activities in Year 6, as applicable. Implementing agencies are committed to provide an opportunity for input and engage the stakeholders in discussions of future year priorities, and take into consideration the stakeholders' comments in developing future WUE activities, as appropriate.

DWR's PSP process involves adequate public notice and public workshops in various parts of the State and PSP release and draft recommended projects are made public at a public workshop and publicized by press release. Proposal selection is done through stakeholder involvement including their participation in proposal review and scoring. A draft listing of recommended projects for funding will be brought to the April 2005 BDPAC and CBDA joint meeting.

CALFED agencies and CBDA are welcome to actively participate in the NRCS State Technical Advisory Committee to advise the State Conservationist on technical and other programmatic needs. The State Technical Advisory has nearly 300 members representing a broad cross section of agencies, producer groups, tribes, and other interested parties. SWRCB encouraged public comment on its draft amendment of the Water Recycling Funding Program Guidelines and its draft Competitive Project List of Proposition 50 funding applications for water recycling projects. Public meetings were held for receipt of public comments on draft documents. Staff met with potential applicants and attended public meetings to explain program requirements for prospective applicants.

USBR's Criteria for the Development of Refuge Water Management Plans and the Regional Criteria for Evaluating Water Management Plans for the Sacramento River Contractors were both established in a public process. Both criteria were noticed in the Federal Register and open to the public for comments. Now final, both documents are available at: <http://www.Usbr.gov/mp/watershare/>. In 2005 USBR will revise the Standard Criteria for Evaluating Water Management Plans. As with previous revisions, the revision of the Standard Criteria will be a public process.

The WUE Subcommittee at its February 2005 meeting agreed that there is a need for crafting a comprehensive and integrated public outreach not only on future PSPs but also on the important role of water use efficiency in meeting future water supply needs in California.

Integrating Science, Environmental Justice, and Tribal Relations Programs

The CALFED Record of Decision (ROD) recognized that there are significant overlaps between California Bay-Delta Program Elements and called for an integrated approach to addressing Program goals. Program managers have met to discuss, and will continue to work together to implement a coordinated scientific integration process.

The WUE element is integrated with Ecosystem Restoration and Water Quality through the Quantifiable Objectives. The Quantifiable Objectives provide a first-order estimate of the WUE potential that irrigated agriculture can make toward in-stream flow and timing needs of the anadromous fish restoration goals. For example, Program PSP objectives include projects that will result in water quantity, in-stream flow and timing benefits and water quality benefits.

Science:

Workshops were held to review modeling used for the Year 4 Comprehensive Evaluation.

In Year 5 WUE PSP relied on science and economic peer review and coordination with CBDA consultants. DWR in coordination with CBDA WUE program staff have developed a protocol to apply science in implementation of DWR Proposition 50 agricultural and urban water conservation grant program. DWR developed guidelines for the 2004 PSP which requires applicants to apply science in the development of their proposals and applications are reviewed for scientific merit, technical feasibility, test of assumptions, and costs and benefits. DWR has economic, science and technical review panels for its grant funding programs. Stakeholders are participating in the review of proposals. DWR's technical assistance program for recycling, desalination, and water conservation also utilize peer review process. DWR staff will continue to coordinate its science and economic evaluation of Proposition 50 projects within DWR and with CBDA.

In year 6 it is anticipated that the Water Management Science Board along with its associated WUE work team will take a more active role in peer review, address unknowns, performance assessment and planning. The WMSB convened in 2005 will provide overarching review and coordination of program strategies, plans, and specific issues of strategic importance for program elements that contribute to water supply reliability. WUE is one of the program elements.

NRCS is a science based agency with an interdisciplinary approach to natural resource conservation. NRCS welcomes and accepts peer involvement through the State Technical Guide Committee which has numerous sub-committees dealing with emerging issues in resource conservation.

Funding for agency science activities are reported under the Major Activities (science and monitoring) part of the Plan.

The Authority and BDPAC have indicated keen interest in Performance Measures for the 11 program elements. The science program has been working with the other program elements to create

performance measures. Performance measures translate program goals and objectives into measurable benchmarks of success. Performance measures range from relatively simple metrics (such as project expenditures) to complex cross program assessments (such as water supply reliability). As such, current work on Performance Measures includes counting the simple metrics and laying the technical and scientific groundwork that will allow us to perform more complex assessments later. The Performance Measures outlined in this Plan will be further discussed at the WUE Subcommittee and the PM work groups and the roles and responsibilities will be determined. Agency funding for performance measures is reported under Performance Measure part of the Major Activities.

Environmental Justice:

WUE was the first CBDA Program to consider and incorporate EJ perspectives in the PSP process. This process was shared with the State Water Resources Control Board in the implementation of a PSP, and continues to guide WUE's EJ commitments. WUE will also undertake more interaction and coordination between WUE and EJ subcommittees. DWR incorporated EJ perspective in its 2004 Water Desalination and WUE PSPs by not requiring a local cost share from disadvantaged communities. DWR has and will continue to take steps in reaching to such communities when holding workshops on grants and technical assistance programs. The SWRCB gave priority funding preference to disadvantaged communities (as defined by average household income) in the allocation of Proposition 50 funding for water recycling projects. Staff continues to work with the EJ Coordinator and the Subcommittee is striving to conduct the following activities:

- Integrate Environmental Justice principles and relevant EJ work plan tasks into the multi-year program plan.
- Continue to ensure integration of Environmental Justice goals and objectives into the WUE Subcommittee's activities.
- The WUE Subcommittee chair(s) and/or Program Manager will attend Environmental Justice Subcommittee meetings, as appropriate, based on the agenda.
- Include EJ community representatives in future grant and loan selection committees.
- Continue to include EJ criteria in proposal solicitation and selection criteria.
Strive to have at least one joint meeting of the WUE and EJ Subcommittee each year.
- Coordinate with EJ Subcommittee to conduct technical assistance workshops in minority and low income communities to advertise Proposal Solicitation Packages and facilitate proposal submissions from a wider and more diverse population.

Tribal Relations:

The following items should help foster more meaningful tribal input and participation on issues or concerns of the tribes.

- Tribal Water Programs (Clean Water Act 106, 319H, etc.)
Majority of California Tribes have developed USEPA Tribal Environmental Programs that have extensive water protection, water conservation and water quality programs that should be taken into consideration during Water Use Efficiency project planning and implementation.
- Tribal Rep's on BDPAC advisory committee
The tribes have been involved with CALFED for a number of years. There are currently two tribal BDPAC members. The input of these members serving on the BDPAC should be made available to all tribes with the assistance of the CBDA's Tribal Coordinator.
- Grant opportunities/educational outreach
Agencies through Tribal Coordinator will notify tribal governments of grant opportunities that provide water-use efficiency. CBDA Tribal coordinator in coordination with DWR, SWRCB, and USBR held local workshops for tribes in four locations throughout the State. These workshops were designed to inform tribes about water conservation, water desalination, and other funding programs. Agencies will continue to hold workshops or make efforts to ensure tribal participation in workshops for its future PSPs. The first NRCS CA Tribal Summit was held in Sacramento February 24, 2004. Seventeen different tribal representatives met to hear about technical and other services available from NRCS. After seeing a presentation on technical and financial assistant programs, tribal representatives met directly with Assistants STCs for Field Operations to schedule site visits and begin the conservation planning process with NRCS. Tribal participants heard from CALFED representatives on February 25, the second day of the interactive workshop. Additional workshops will be held if needed. Partners: Cortina Rancheria and Tribal CALFED.

Cross-Program Relationships

WUE cross-program integration begins with the program elements' objectives. WUE objectives tier from the California Bay-Delta Program's water supply reliability, water quality, levee system integrity, and ecosystem restoration. Consistent with this approach, the WUE element continues to coordinate with the following programs, through CBDA Oversight and Coordination and by communicating to implementing agencies:

Ecosystem Restoration – Staff continues to coordinate with the ERP as needed. This includes meetings with State and Federal agencies, the California Water Plan, and interested stakeholders to develop uniform data collection and reporting procedures. In addition coordination between ERP and WUE is important for updating Quantifiable Objectives for in-stream flow and water quality objectives. The agricultural element of WUE is coordinating with the Environmental Water Program to pursue in-stream flow benefits on Deer Creek.

Storage, and Conjunctive Use and Conveyance Staff continues to coordinate with the surface storage investigations, Conveyance, and Conjunctive Use elements as needed. This includes meetings with State and Federal agencies, the California Water Plan, and interested stakeholders to develop uniform data collection and reporting procedures. A specific ongoing effort with the Storage Element is participation in Common Assumptions. Integration with Storage occurs through the Common Assumptions effort. The year 4 Comprehensive Review is providing surface storage investigators with conservation quantities and recoverable flows that can address their modeling objectives.

Water Quality – Staff continues to coordinate with the Drinking Water Quality Program as needed. This includes meetings with State and Federal agencies, the California Water Plan, and interested stakeholders to develop uniform data collection and reporting procedures. In addition coordination between DWQ and WUE is important for the updating Quantifiable Objectives for water quality objectives.

Environmental Water Account- In addition to water savings, implementation of efficiency measures may provide water quality and flow timing benefits. CALFED has identified a set of Quantifiable Objectives – numeric targets of water savings, water quality and flow timing benefits – to meet CALFED goals. Water quality and timing benefits may be local, regional, and/or statewide and could benefit EWA objectives of protecting at-risk fish. Staff continues to coordinate with the EWA as needed to establish possible benefits from implementation of WUE to EWA. This includes meetings with involved agencies and stakeholders to communicate and consider the EWA and WUE objectives and goals in planning, data collection, program implementation and evaluation.

Transfer- Water transfer can provide financial assistance to support implementation of water use efficiency measures. The WUE Program will coordinate with Water Transfer. DWR's Water Use Efficiency and Water Transfers Program are now managed in a single office, Office of Water Efficiency and Transfers.

Watershed- WUE program will collaborate with Watershed Program to support implementation of water use efficiency programs and projects in various watersheds of interest to both programs.

Funding Tables:

Water Use Efficiency (\$ in millions)	Yr 6	Yr 7	Yr 8	Yr 9	Total
State	\$67.98	\$51.8	\$44.9	\$19.4	\$175.8
Federal	\$15.54				\$14.7
Local(assume 50% match)	\$83.52	\$88.0	\$81.0	\$18.5	\$290.5
Water User					\$0.0
Available Funding Total	\$167.04	\$139.8	\$125.9	\$37.9	\$481.0
Finance Plan Targets	\$305.3	\$325.3	\$325.3	\$325.3	\$1,281.2
Unmet Needs	\$138.26	\$185.5	\$199.4	\$287.4	\$800.2

Water Use Efficiency (\$ in millions)	Yr 6	Yr 7	Yr 8	Yr 9	Total
Urban Conservation Projects		\$25.0	\$25.0	\$11.8	\$86.8
Loans					
Grants	\$19.37				
Agricultural Conservation Projects		\$16.6	\$16.7	\$16.7	\$66.7
Loans	\$8.2				
Grants	\$21.37				
Water Recycling	\$	\$75.1	\$75.1	\$6.4	\$231.7
Loans					
Grants	\$8.8				
Research Grants	\$0.28				
Desalination Implementation	\$21.2				\$20.0
Desalination Research		\$20.0	\$6.0		\$46.0
Tech Assistance, Science, Oversight and Coordination	\$4.3	\$3.1	\$3.1	\$3.1	\$15.3
Agricultural Technical Assistance					
Recycling Technical Assistance					
Urban Technical Assistance					
Managed Wetlands Tech Assistance					
Urban Certifications					
Science & Monitoring					
Water Measurement					
Quantifiable Objectives					
Available Funding Total	\$83.52	\$139.8	\$125.9	\$38.0	\$466.5
Finance Plan Targets	\$305.3	\$325.3	\$325.3	\$325.3	\$1,281.2
Unmet Needs	\$138.26	\$185.5	\$199.4	\$287.3	\$814.7

Geographical Distribution of Activities

Geographical Distribution of Projects

