



1999

# Ecosystem Restoration Projects



CALFED  
BAY-DELTA  
PROGRAM

## Directed Programs - Approved February 1999

Map #	Project Title	Amount Funded
1	Battle Creek Salmon and Steelhead Restoration Project (Fish Passage)	\$28,000,000
2	Lower Butte Creek Project: Phase II - Preliminary Engineering and Environmental Analysis (Fish Passage)	\$775,000
3	ACID Fish Passage Improvement Project, Phase III (Fish Passage/Fish Screen)	\$10,506,000
4	Prospect Island Monitoring Project (Habitat Restoration)	\$915,000
5	Lower Western Stone project (Habitat Restoration)	\$130,000
6	Phase 1: Robinson/Gallo Project - Ratzlaff Reach Site (Habitat Restoration)	\$1,633,000
7	Special Run Pool 10 Restoration (Habitat Restoration)	\$165,000
8	Mining Reach Restoration Project No. 2 - MJ Ruddy Segment (Habitat Restoration)	\$3,332,000
9	Cost share with NRCS easements. 4 on the Tuolumne and 5 on the San Joaquin (Habitat Restoration)	\$1,545,000
10	East Delta Corridor Habitat Study Cosumnes River Feasibility Study (Habitat Restoration)	\$400,000
11	East Delta Corridor Habitat Study Mokulumne River Feasibility Study (Habitat Restoration)	\$400,000
12	McCormack-Williamson Tract's Wildlife-Friendly Levee Management Program (Habitat Restoration)	\$860,000
13	Assessment of Ecological and Human Health Impacts of Mercury in the Bay-Delta Watershed (Water Quality)	\$3,800,000
		<b>\$52,461,000</b>

# 1999 Proposals Recommended For Funding

Prop. No.	Project Title	Applicant Organization	Recommended Amt.
99-A105	Fish Passage Improvement Project at the Red Bluff Diversion Dam	Tehama-Colusa Canal Authority	\$1,000,000
99-A109	Fish Treadmill Developed Fish Screen Criteria for Native Sacramento-San Joaquin Watershed Fishes	Wildlife, Fish, & Conservation Biology, UC Davis	\$1,036,821
99-A117	Improve the Upstream Ladder & Barrier Weir @ Coleman Nat'l Fish Hatch. in Battle Creek	US Fish & Wildlife Service	\$1,663,400
99-B106	East Delta Habitat Corridor (Georgianna Slough)	Habitat Assessment & Restoration Team, Inc.	\$1,100,000
99-B124	Lake Red Bluff Riparian Area Restoration & Education Support Project	The California Conservation Corps	\$29,114
99-B127	Reintroduction of Endangered Soft Bird's Beak to Restored Habitat - Suisun	University of California at Davis, Dept of Environmental Science & Policy, Wetland Research Lab	\$148,627
99-B130	Development of an Implementation Plan for Lower Yuba River Anadromous Fish Habitat Restoration	Surface Water Resources, Inc	\$171,100
99-B131	YUBA TOOLS: Collaborative Watershed Mgmt for Flood Control	Yuba Watershed Council & SYRCL	\$216,150
99-B146	Species and Community Profiles of the San Francisco Bay Area Wetlands Ecosystem Goals Project	Friends of the San Francisco Estuary	\$44,000
99-B156	South Napa River Tidal Sough and Floodplain Restoration Project	City of American Canyon	\$1,520,000
99-B158	Sacramento River Discovery Center	Sacramento River Discovery Center	\$38,400
99-B161	Riparian Corridor Acquisition and Restoration Assessment	US Bureau of Land Management	\$2,175,000
99-B169	Understanding Tidal Marsh Restoration Processes and Patterns	University of New Orleans, Office of Res. & Sponsored Programs	\$1,042,246
99-B190	Linked Hydrogeomorphic Ecosystem Models to Support Adaptive Mgmt Cosumnes-Mokelumne Paired Basin	University of California, Davis Center for Integrated Watershed Science & Mgmt	\$1,546,016
99-C118	Biological Ag Systems in Cotton-BASIC- Reducing Synthetic Pesticides & Fertilizers in the No. SJ Vly	Sustainable Cotton Project (SCP)	\$460,000
99-C121	Douglas/Long Canyon Paired - Watershed Project	Placer County Water Agency - PCWA	\$83,600

<b>Prop. No.</b>	<b>Project Title</b>	<b>Applicant Organization</b>	<b>Recommended Amt.</b>
99-D113	Chronic Toxicity of Environmental Contaminants in Sacramento Splittail: A Biomarker Approach	UC Davis, Dept of Animal Science	\$673,684
99-D116	Assessment of Pesticide Effects on Fish & Their Food Resources in the Sac-SJ Delta	UC Berkeley, Regents of the University of California	\$1,875,561
99-D119	Determination of the Causes of Dissolved Oxygen Depletion in the SJ River	CA Dept of Water Resources, Environmental Services Offices	\$866,408
99-D123	Dissolved Organic Carbon Release from Delta Wetlands, Part 1	US Geological Survey, Calif State University, MS 6129	\$1,392,669
99-E101	An Evaluation of the Potential Impacts of the Chinese Mitten crab on the Benthic Comm. in the Delta	CA Department of Water Resources,	\$147,799
99-E103	Effects of Introduced Species of Zooplankton & Clams on the B-D Food Web	San Francisco State University: Romberg Tiburon Center	\$726,930
99-E104	Assessing Ecological & Economic Impacts of the C. Mitten crab	UC Berkeley, Regents of the University	\$149,429
99-E116	Purple Loosestrife Prevention, Detection & Control Actions for the Sac/SJ River Delta System	CA Dept of Food & Ag, Integrated Pest Control Branch	\$127,473
99-F102	Health Monitoring of Hatchery & Natural Fall-run Chinook in SJ River	US Fish & Wildlife Service, California - Nevada Health Center	\$37,860
99-F103	Central Valley Steelhead Genetic Evaluation	CA Dept of Fish & Game, WRB	\$70,636
99-F106	Development of a comprehensive Imple. Plan for a Statistically Designed Marking & Recovery	CA Dept of Fish & Game	\$75,951
99-G100	Estuary Action Challenge Environmental Education Project	Earth Island Institute/Estuary Action Challenge	\$50,000
99-G103	Water Challenge 2010 Exhibit	US Army Corps of Eng, San Francisco Bay Model Visitor Center	\$50,500
99-G104	The Learning Watershed Project	American River Watershed Institute	\$55,250
99-G106	Traveling Film Festival & Exhibit/McCormack-Williamson Restoration Film	Independent Documentary Group (IDG Films)	\$50,000
99-G107	River Studies Center Exhibits & Programs	San Joaquin River Parkway & Conservation Trust	\$68,415
99-G117	1999/2000 Bay-Delta Education Program	Water Education Foundation	\$32,300
99-G119	Watershed Educational Training	Colusa County Resource Conservaton District	\$13,000

## Directed Programs for Approval - June 1999

### Flood Control Bypass Habitat Directed Program

Proj. #	Project Title	Applicant/Organization	Amt Requested
99-B189	Inundation of a Section of the Yolo Bypass to Restore Sacramento Splittail and other Native Species	Natural Heritage Institute	820,679

### Nonnative Invasive Species Directed Program

Proj. #	Project Title	Applicant/Organization	Amt Requested
99-DA14	Nonnative Invasive Species Advisory Council	Fish and Wildlife Service	50,000
99-DA15	Reducing the Risk of Importation and distribution of non-native Invasive Species through Outreach and Education	UC Davis	105,466
99-DA16	Zebra Mussel Detection and Outreach Program	DWR	100,000
99-DA17	Purple Loosestrife Prevention, Detection and Control in the Sacramento and San Joaquin Delta and Associated Hydrologic Units	CA Dept of Food and Ag	201,306
99-DA18	Introduced Spartina Eradication Project	CA Coastal Conservancy	250,000
99-DA19	Practical Guidebook to Prevent and Control for Nonnative Invasive Plants in Shallow Water Habitats of the Bay-Delta Ecosystem	SFEI	76,750
99-DA20	Effects of Introduced Clams on the Food Supply of Bay-Delta Fishes	San Francisco State	100,490
		<b>Total</b>	<b>884,012</b>

## **Summary of Integration Panel 1999 Proposal Selection Process**

The 1999 CALFED Integration Panel (IP) is composed of 21 individuals representing a broad diversity of scientific disciplines, agencies and stakeholders (see Attachment A). The Integration Panel deliberated five days during June 1 through June 7 to select a recommended funding package of approximately \$18.7 million. See Attachment B for copy of the Integration Panel protocols which guided the deliberations.

In developing the 1999 Proposal Solicitation Package (PSP), the Integration Panel modified the scoring process used to rank proposals to better establish a systematic approach in ranking and selecting proposals for funding. This process consisted of two parts, Technical Review Panel (TRP) scoring and IP ranking. Revisions to previous years' TRP scoring process worked extremely well. This year, all of the TRPs relied heavily on a written set of objective criteria tailored to each topic area. Proposals were scored high, medium or low for each of seven criteria as described in the PSP. Within each category, two criteria were double weighted with the emphasis criteria varying depending on the category. Each TRP meeting was facilitated to ensure equitable scoring and a consistent use of the criteria.

In preparing to select proposals for funding, the IP reviewed and considered all 226 proposals. Each IP member reviewed 11 proposals in their entirety and reviewed executive summaries for all proposals. The IP used the criteria presented in the PSP as a basis for integration, and supplemented funding recommendations with a narrative justification for their decisions. The criteria outlined in the PSP included: 1) the proposal's ability to meet the funding priorities and implementation guidelines, 2) the system-wide ecosystem benefits of the proposal, and 3) compatibility with non-ecosystem CALFED objectives.

Project discussion and selection took into consideration:

- ◆ the proposal's consistency with technical scoring criteria
- ◆ integration within categories and across categories, looking for projects which complemented each other
- ◆ integration over time, which projects had been previously funded, the status of previous approvals, and what had been learned
- ◆ linkages to focused actions identified in the PSP
- ◆ integration with potential future actions or programs such as CALFED Stage 1 actions

- ◆ geographic integration
- ◆ balance between research and implementation
- ◆ integration with other CALFED Programs
- ◆ integration with other programs such as CVPIA
- ◆ consideration of the total cost of any individual project

The selection of projects from the 1999 PSP were considered in context with the Directed Programs which were approved for funding in February 1999, and together provide a balanced and integrated funding package.

The IP reviewed a large number of valuable proposals. A concerted effort was made by the IP to select projects which would not have any barriers to implementation (such as lack of progress on phased work already funded, permit obstacles, and performance to date of principle investigators) and that were important to fund in 1999.

## **Projects Recommended by the Integration Panel for 1999 PSP Funding**

The 34 recommended projects were individually scored by Technical Review Panels and met a variety of integration criteria. Narrative descriptions by funding category for each recommended project follow. The narratives describe the rationale and basis used by the Integration Panel in its selection process.

### **Fish Passage/Fish Screens**

The three recommended fish passage/fish screen projects contribute to ecosystem restoration, threatened and endangered species recovery, and contribute to improved water supply reliability. Each of the projects continue previously funded efforts that included CVPIA, Department of Water Resources, and Category III (Restoration Coordination) funding sources.

#### **A105 – Fish Passage Improvement Project at Red Bluff Diversion Dam (RBDD)**

Applicant:	Tehama-Colusa Canal Authority
Amount Requested:	\$2,574,000
Amount Recommended:	\$1,000,000

The gates are up at RBDD for approximately 8 months per year to protect the endangered winter-run chinook salmon. A long-term goal for anadromous fisheries is to eliminate the need to lower the gates. This would provide unobstructed upstream and downstream passage year-round for all runs of chinook and other anadromous fish. This proposal on the main stem Sacramento River continues previously funded Phase I feasibility analysis. The Integration Panel strongly supported the public participation process associated with this proposal, and supported partial funding to move the effort through the alternative selection and environmental permitting in process (Tasks 1, 2, and 3, up to the EIR process) with the condition of including the City of Red Bluff and boating interests. It was recommended by the Integration Panel that the implementation planning phase not be funded at this time due to limited funds. The IP also encouraged additional cost sharing.

**A109 – Fish Treadmill-Developed Fish Screen Criteria for Native Sacramento-San Joaquin Watershed Fishes**

Applicant: UC Davis, Wildlife, Fish and Conservation Biology  
Amount Requested: \$1,036,821  
Amount Recommended: \$1,036,821

UC Davis proposes to continue work on a device which forces fish to handle two flow vectors, one through the screen and one along the screen. These data will be used to develop or verify fish screen protective criteria for such key fish as delta smelt, splittail, salmon and steelhead. The work is particularly important for delta smelt in that there are no technically based screen criteria for this species. Any new CALFED fish screens, e.g. at Tracy, the intake to Clifton Court Forebay, will need to protect delta smelt. Funding this proposal at the full amount will allow the Davis researchers, guided by an advisory committee of agency staff and stakeholders, to complete the matrix of delta smelt tests. The tests will also include juvenile American shad to ensure that 1970 results from a smaller version of the treadmill are comparable.

**A117 – Improve the Upstream Ladder and Barrier Weir at Coleman Hatchery**

Applicant: US Fish and Wildlife Service  
Amount Requested: \$1,663,400  
Amount Recommended: \$1,663,400

CALFED has approved funding a \$28 million dollar Directed Program to restore naturally spawning steelhead and salmon runs to Battle Creek. Improvements to this fish barrier on Battle Creek near the hatchery are essential for this major

restoration program. Without the weir, hatchery salmon and steelhead may dominate the wild populations above the hatchery. The Integration Panel agreed to fully fund the proposed project with the stipulation that, before final design and construction, preliminary designs be approved by CALFED.

## **Habitat Restoration**

Nine diverse projects were recommended under this category including floodplain restoration and planning, endangered species recovery, and projects to better understand ecological processes. Many of the acquisition projects were high cost and, with limited funds, the Integration Panel chose to fund more, lower cost projects. There was discussion that modeling projects were hindered by the scoring criteria for habitat restoration and in the future should be under a separate category.

### **B106 – East Delta Habitat Corridor (Georgiana Slough)**

Applicant:	Habitat Assessment and Restoration Team, Inc.
Amount Requested:	\$1,100,000
Amount Recommended:	\$1,100,000

This tidal marsh and riparian restoration project will improve habitat conditions along 14 miles of Georgiana Slough. The Integration Panel found this project to have several important ecological linkages that would support ecosystem restoration, endangered species, and contribute to improved water supply reliability. This is a focused action as requested in the 1999 PSP. In addition, the DEFT team identified habitat improvement in Georgiana Slough to be a high priority action to improve survival of juvenile chinook salmon and would contribute to habitat restoration acreages being developed for CALFED Stage 1 Implementation. This project also fits well the ERP proposed efforts to improve habitat corridors in the Delta.

### **B124 – Lake Red Bluff Riparian Area Restoration and Education Support Project**

Applicant:	California Conservation Corps
Amount Requested:	\$29,114
Amount Recommended:	\$29,114

This project constructs a boardwalk in a heavily used portion of Sacramento River riparian land adjacent to Red Bluff. The Integration Panel supported this project because it protects a small area of riparian vegetation and it had an educational component that would contribute to improved understanding of the value of riparian systems and the value of the riparian habitat on the Sacramento River.

**B127 – Reintroduction of Soft Bird’s Beak to Restored Habitat**

Applicant: UC Davis Wetland Research Laboratory  
Amount Requested: \$148,627  
Amount Recommended: \$148,627

This project reintroduces the endangered plant, soft bird’s beak, to its historic range within Suisun Marsh. The Integration Panel observed that proposals directly linked to restoration of listed plant species have not previously been funded or available for consideration. This project integrates well with habitat restoration projects in the Suisun Bay, has important benefits to the ERP and Multi-Species Conservation Strategy, and may set a standard for addressing other listed plant species. This project, if successful, could set a propagation methodology by which other rare, threatened, and endangered plant populations could be expanded.

**B130 – Development of an Implementation Plan for Lower Yuba River Anadromous Fish Habitat**

Applicant: Surface Water Resources, Inc.  
Amount Requested: \$171,100  
Amount Recommended: \$171,100

This project develops a local-level, multi-agency, consensus-based implementation plan to restore Yuba River anadromous fish habitat. This project addresses an important area for spring-run chinook salmon, fall-run chinook salmon, steelhead, and other anadromous fish species. Restoration projects on the lower Yuba River have not been considered previously by the Integration Panel and this project will provide an implementation plan developed by a diverse group of experts representing interested state and federal resource agencies, the Yuba County Water Agency, and environmental groups. This will contribute to ecosystem restoration and assist the Department of Fish and Game, the U.S. Fish and Wildlife Service, and CALFED in near term and long implementing actions to protect and restore anadromous fish species.

The Integration Panel has recommended funding a project in the Local Watershed Stewardship category (see 99-B131) that will integrate well with ongoing upper watershed efforts funded by CALFED and the lower Yuba River implementation plan. This implementation planning project for the lower Yuba River will fill a gap by identifying all possible measures to be considered for those species below in the lower reaches of the river.

**B146 – Species and Community Profiles of the San Francisco Bay Area Wetlands Ecosystem Goals Project**

Applicant: The Friends of the San Francisco Estuary  
Amount Requested: \$44,000  
Amount Recommended: \$44,000

This project will prepare the Bay Area Wetlands Ecosystem Goals Project's final design and maps and provide for printing and distribution. The Integration Panel agreed to fund this proposal to complete an important effort related to the development of habitat restoration goals for San Francisco Bay. The species and community profiles will add greatly to our understanding and justification for restoring tidally influenced and nearby transitional habitats for a diverse assemblage of aquatic and terrestrial species. Publication of this volume will contribute to the Ecosystem Restoration Plan (ERP) and have a strong link to the CALFED Multi-Species Conservation Strategy.

**B156 – South Napa River Tidal Slough and Floodplain Restoration Project**

Applicant: The City of American Canyon  
Amount Requested: \$1,520,000  
Amount Recommended: \$1,520,000

This project restores 453 acres, purchased from the Port of Oakland with 1998 CALFED funding, to tidal marsh. This project provides numerous connections to other CALFED projects in the Napa River and the North Bay.

**B161 – Riparian Corridor Acquisition and Restoration Assessment**

Applicant: U.S. Bureau of Land Management  
Amount Requested: \$2,175,000  
Amount Recommended: \$2,175,000

This project protects five miles of Sacramento River frontage, four and one-half miles of Battle Creek frontage, and one mile of Anderson Creek frontage through conservation easements and fee title acquisitions of 1,920 acres. It was the second highest rated project from the TRPs. The Integration Panel agreed that it was an important project and integrated well with other efforts to protect and restore riparian and riverine aquatic habitat within the critical habitat of winter-run chinook salmon.

## **B169 –Understanding Tidal Marsh Processes and Patterns**

Applicant: University of Washington  
Amount Requested: \$1,042,246  
Amount Recommended: \$1,042,246

This project extends prior CALFED-supported research to predict the outcome and ecological benefit of restoring shallow water tidal habitat in the Bay-Delta. The Integration Panel felt that this project would provide much needed scientific input by helping resolve some of the scientific uncertainty regarding restoration of tidally influenced habitats. One of the key issues that the Integration Panel has discussed is the balance between research to understand how the ecosystem works and implementing restoration projects. Restoration science is lagging and the Integration Panel feels very strongly that a robust, adaptive restoration program must address ecological uncertainties early in the implementation phase to allow the better design of future restoration projects. This project strongly links to proposal 99-D123 to assess the role of wetland habitat in providing dissolved organic carbon to the base of the ecosystem.

## **B190 – Linked Hydrogeomorphic Ecosystem Models to Support Adaptive Management, Cosumnes-Mokelumne Paired Basin Studies**

Applicant: University of California, Davis  
Amount Requested: \$1,946,016  
Amount Recommended: \$1,546,016

This project develops a demonstration monitoring and assessment program for the Cosumnes and Mokelumne Rivers. The Integration Panel found this proposal to integrate well with other previously funded efforts. The Integration Panel decision was to fund the project without the terrestrial resources study.

## **Local Watershed Stewardship**

The Integration Panel selected three projects from this category. Some of the projects rated highly by the Technical Review Panels (TRP) have previously been funded or were implementation projects with relatively low value for priority species identified by the ERP. In addition, there was a concern that CALFED should fund the start-up of watershed groups, but not be obligated to provide on-going funding. Watershed project contracts originating from the 1998 funding cycle have only recently been completed and funds for these projects have not been expended. The Integration Panel generally felt that additional funding should not be approved at this time when previously approved funds have not been received.

## **B131 – Yuba Tools: Collaborative Watershed Management for Flood Control**

Applicant: Yuba Watershed Council and SYRCL  
Amount Requested: \$216,150  
Amount Recommended: \$216,150

This watershed proposal was the highest rated watershed project from the TRPs. The TRP and the Integration Panel supported the innovative approach to fully identify non-dam methods to increase flood control in the Yuba Basin. This project has the potential of integrating flood control with habitat restoration which will, in the long-term, protect human health and life and contribute to the recovery of threatened and endangered species. The project is linked to the Yuba Watershed Council, which has a very extensive membership established by a 21 signatory collaborative process. The Council has unanimously endorsed the Yuba Tools proposal.

Yuba Tools will also mesh with ongoing watershed planning above Englebright Dam, the Englebright Dam feasibility study process, and with 99-B130, Development of an Implementation Plan for Lower Yuba River Anadromous Fish Habitat.

The Integration Panel was concerned that the Yuba County Water Agency (YCWA) was not a member of the Yuba Watershed Council but observed that YCWA's ongoing structural flood control feasibility analysis could link with this effort.

## **C118 – Biological Agricultural Systems in Cotton-BASIC - Reducing Synthetic Pesticides and Fertilizers in the Northern San Joaquin Valley**

Applicant: Sustainable Cotton Project  
Amount Requested: \$1,388,784  
Amount Recommended: \$460,000

The Integration Panel supported funding one-third of the requested amount for the Merced County portion of this project. Although this proposal was scored by the Watershed TRP, it has a very strong connection to water quality. The Integration Panel supported the strong public outreach and education component to inform cotton growers about alternative farming methods that employ less pesticides and fertilizers. If successful, this project could lead to reduced contamination of the San Joaquin River and its tributaries. This project is consistent with the ERP and Water Quality Program.

## **C121 – Douglas/Long Canyon Paired Watershed Project**

Applicant: Placer County Water Agency  
Amount Requested: \$83,600  
Amount Recommended: \$83,600

This project fills a gap in watershed management activities by conducting a paired watershed evaluation of watershed processes and functions and by evaluating the influences of land use and resource management activities on water yield and flow. Although located in the Upper American River Watershed, the Integration Panel agreed that results of this study would have broad application to other areas, and in the long-term, improve our understanding and ability to wisely manage the upper watershed in the Sacramento and San Joaquin valleys. In addition, this proposal allows comparison of a paired watershed in the upstream areas with the paired watershed approach of proposal 99-B190.

## **Water Quality**

The four projects recommended under this topic area were all focused actions in the 1999 PSP and will provide valuable information on key water quality issues such as chronic toxicity to priority species, low dissolved oxygen in the lower San Joaquin River, and dissolved organic carbon.

## **D113 – Toxicity of Environmental Contaminants in Sacramento Splittail: A Biomarker Approach**

Applicant: UC Davis, Dept. of Animal Science  
Amount Requested: \$673,684  
Amount Recommended: \$673,684

This proposal is important in integrating field and laboratory studies to determine chronic toxicity to splittails, a federally threatened species. A biomarker approach has not been used before and the Integration Panel indicated that there is a high degree of technical feasibility in using this approach. The practical application from the information generated by these studies relates to cost effectiveness of monitoring studies and a guidance for future environmental compliance. This biomarker study will be performed in conjunction with ongoing efforts by Department of Fish and Game, San Francisco Estuary Institute and US Geological Survey.

**D116 – Assessment of Pesticide Effects on Fish and Their Food Resources in the Sacramento-San Joaquin Delta**

Applicant: University of California, Berkeley  
Amount Requested: \$1,875,561  
Amount Recommended: \$1,875,561

This integrated field and laboratory study is important in addressing both indirect (e.g. changes in food abundance) and direct toxic effects to priority species. It is recommended that an oversight committee should be formed, including an agriculture representative to evaluate study results.

**D119 – Determination of the Causes of Dissolved Oxygen Depletion in the San Joaquin River**

Applicant: Department of Water Resources  
Amount Requested: \$866,408  
Amount Recommended: \$866,408

This proposal will develop important information needed to determine the cause of low dissolved oxygen (DO) concentrations in the lower San Joaquin River which are believed to be ecologically damaging and which form a barrier to fall-run chinook salmon preventing migration and spawning. The results of this study could help evaluate or validate models which predict the sources of low DO in the San Joaquin. This proposal received the highest TRP score in the Water Quality category and was a focused action. As requested by the applicant, this funding is for the first year of a three year study. The proposal was well coordinated and represents urban, agricultural, industrial and government stakeholders.

**D123 – Dissolved Organic Carbon Release from Delta Wetlands, Part 1**

Applicant: US Geological Survey  
Amount Requested: \$1,392,669  
Amount Recommended: \$1,392,669

This study focuses on the dissolved fraction -dissolved organic carbon (DOC), which is the predominant form of organic matter exported from wetlands to Delta channels and is most likely to form disinfectant byproducts when present in sources of drinking water. The Integration Panel believed that this study represented a well balanced approach to determining benefits or adverse impacts from wetland development. This is important to determine the possibility of redirected impacts from other parts of the CALFED Program. This study is also needed to determine which portion of the DOC is important at the pumping

plant intakes and which part may become precursors to disinfectant byproducts. This study will be integrated with other previously funded studies on organic matter, which focused on the particulate portion of total organic carbon.

## **Introduced Species**

Four projects were selected in this category which integrate with, or supplement the Non-native Invasive Species (NIS) Directed Programs. The projects target high priority non-native invasive species issues. For projects not recommended for funding in this topic area, there was a concern that some geographic areas targeted by the TRP for implementation projects were relatively low value for CALFED priority species.

### **E101 – An Evaluation of the Potential Impacts of the Chinese Mitten Crab on the Benthic Community in the Delta**

Applicant:	Department of Water Resources
Amount Requested:	\$147,799
Amount Recommended:	\$147,799

The impacts of the introduced Chinese mitten crab on Delta fish facilities is well documented. It is not clear however, how the downstream migration of millions of adult crabs in the late summer/early fall impacts the food webs of the Delta and the northern estuary. Severe disruptions of the food web can have severe effects on native fish and their food supplies. The Integration Panel agreed that there is a need for better understanding the impact of the mitten crab on benthic invertebrate communities within the Delta and Suisun Bay.

The proposed study provides an excellent opportunity to obtain an initial evaluation of the impacts. There are no interventions or control measures feasible for mitten crab at this time and the greatest information gap is a better understanding of potential adverse effects. This proposal will answer a number of important questions at minimal cost by building on the base of ongoing monitoring and assessment. This project integrates well with proposal 99-E104 which addresses the same issue.

### **E103 – Effects of Introduced Species on Zooplankton and Clams**

Applicant:	San Francisco State, Romberg Tiburon Center
Amount Requested:	\$826,930
Amount Recommended:	\$726,930

Many parties have expressed concerns that the drastic change in the benthic ecology of the bay, due to *Potamocorbula amurensis*, may limit the effectiveness of restoration actions. A better understanding of these impacts will help maximize

the effectiveness of future restoration dollars. Phase I of this project is a NIS Directed Action. Therefore, the Integration Panel recommended funding the balance of the proposal. This project is expected to provide a more complete picture of the needs and possibilities of restoration when combined with the results of water quality investigations in proposals 99-D116 and 99-D113.

#### **E 104 - Assessing Ecological and Economic Impact of Chinese Mitten crabs**

Applicant: University of California, Berkeley  
Amount Requested: \$149,429  
Amount Recommended: \$149,429

The Integration Panel found this research proposal to have high value. It is designed to provide a better understanding of the ecology and impacts of the mitten crab in the South Bay, and integrates well with a similar project to evaluate mitten crab impacts in the Delta and Suisun Bay (99-E101). Although this study is in the South Bay, the Integration Panel observed that information gained during this study would be transferrable to other areas and contribute to our overall understanding of the trophic impacts and ecology of this non-native introduced species. Like the other mitten crab proposal (99-E101), this project offers high value for the money by building on ongoing research and academic efforts.

#### **E 116 - Purple Loosestrife Prevention, Detection and Control Action for the Sacramento/San Joaquin River Delta System**

Applicant: Department of Food and Agriculture  
Amount Requested: \$328,779  
Amount Recommended: \$127,473

Purple loosestrife is a perennial plant that poses an aggressive threat to almost all the wetland and riparian habitats in the CALFED geographic area. Causing immense ecological destruction in other parts of the United States, it is now showing up in California in a number of small infestations that are not currently under containment. A NIS Directed Program will be implemented to prevent, detect and eradicate purple loosestrife in the Delta and in nearby hydrologic units. The Integration Panel recommended funding the remainder of this NIS Directed Program, which includes educational outreach, training of professionals, and GPS of existing sites.

### **Improved Fish Management and Hatchery Operations**

The Integration Panel selected three projects from this category, which will provide valuable information and fill some of the gaps in existing data for improved fish

management and hatchery operations.

**F102 - Health Monitoring of Hatchery and Natural Fall-run Chinook in the San Joaquin River**

Applicant: US Fish and Wildlife Service  
Amount Requested: \$37,860  
Amount Recommended: \$37,860

This proposal was ranked as one of the highest in this category by the TRP. The Integration Panel believed the proposal complemented fish health investigations being conducted within the Sacramento River drainage with comparative information from the San Joaquin drainage. This work will also complement contaminant investigations and will confirm or deny the health differences and interactions between hatchery and naturally produced fish, which are important considerations in achieving successful restoration of San Joaquin River chinook salmon populations.

**F103 - Central Valley Steelhead Genetic Evaluation**

Applicant: Department of Fish and Game  
Amount Requested: \$70,636  
Amount Recommended: \$70,636

This proposal was ranked as one of the highest in this category by the TRP. The Integration Panel recognized the lack of genetic information for Central Valley steelhead, one of the basic building blocks for species recovery. Results of this project will support many restoration decisions and actions, such as donor stocks to repopulate barren habitats (Clear Creek and Battle Creek, for instance), and will provide the basis for hatchery operations that aid in recovery.

**F106 - Development of a Comprehensive Implementation Plan for Statistically Designed Marking and Recovery**

Applicant: Department of Fish and Game  
Amount Requested: \$75,951  
Amount Recommended: \$75,951

The measurement of success for restoring natural stocks valley-wide must take into account the contribution and distribution of both naturally produced and hatchery fish. This proposal will define the procedures and costs associated with development of a comprehensive tagging and marking strategy. Development of a constant fractional marking program will assist in the evaluation of successful progress toward CALFED goals. The Integration Panel views this program as an

essential element of CALFED's Comprehensive Monitoring Assessment and Research Program.

## **Environmental Education**

Eight projects were selected in this category, several of which are a continuation of work previously funded, and all of which were deemed to have high environmental education values. The TRP did a thorough job in evaluating projects and recommending partial funding.

### **B158 - Sacramento River Discovery Center CALFED 1999 Proposal**

Applicant: Sacramento River Discovery Center  
Amount Requested: \$174,150  
Amount Recommended: \$38,400

This project funds ongoing work at the Sacramento River Discovery Center in Red Bluff. The TRP recommended funding only Task 2 which continues past CALFED funding of a student intern program that has been very successful.

### **G100 - Estuary Action Challenge Environmental Education Project**

Applicant: Earth Island Institute/Estuary Action Challenge  
Amount Requested: \$50,000  
Amount Recommended: \$50,000

This project provides children with hands-on environmental education. It works with elementary school teachers and students to explore, clean-up, and restore creek and bay habitat, reduce urban runoff pollution, and address issues of water quality and safe bay food consumption. This project is within an under-served area (Richmond School District). It is part of an ongoing school program that appears to be well organized and highly supported locally with an emphasis on urban creeks. The goal of the program is to link urban inner city residents to their environment by understanding the importance of streams and aquatic environments. Though not highly linked to CALFED, the cost-benefit of this program was deemed very valuable.

### **G103 - Water Challenge 2010 Exhibit**

Applicant: US Army Corps of Engineers, San Francisco Bay  
Model Visitor Center  
Amount Requested: \$50,500  
Amount Recommended: \$50,500

This project constructs and installs an interactive, hands-on exhibit that challenges visitors to try apportioning water flowing from a huge tank (representing the total amount of water flowing from the Sierras into the Bay-Delta watershed) into three smaller tanks (representing the water needs of the environment, cities and industry, and agriculture). As visitors allocate water, they receive immediate feedback on the consequences of their choice via video monitors. This proposal ranked very highly for biological/ecological benefits since it reaches an incredible number of people throughout the state. It is a hands-on project with considerable cost share from the Corps of Engineers. CALFED funded the design phase of the project in 1998.

#### **G104 - The Learning Watershed Project**

Applicant: American River Watershed Institute  
Amount Requested: \$58,250  
Amount Recommended: \$55,250

This project provides for watershed education in the American River basin and coordinates watershed education efforts state-wide. The Integration Panel recommended funding Tasks 1, 2, 3, 4, and 6 which will conduct workshops and training, and develop educational exhibits. This proposal exhibited good integration and collaboration among many interests. The Integration Panel did not recommend funding Task 4, to conduct a workshop with the American and Sacramento River Networks, because the ecological/biological benefit of this task was unclear.

#### **G106 - Traveling Film Festival and Exhibit/McCormack-Williamson Restoration Film**

Applicant: Independent Documentary Group  
Amount Requested: \$339,150  
Amount Recommended: \$50,000

This project expands an award-winning, environmental film festival which is currently circulating in the Bay Area into the Sacramento Valley. The film festival is a very valuable way for distributing the message about CALFED and the Bay-Delta to a very large audience. The applicant has a proven record of accomplishments. The IP did not recommend funding the McCormack-Williamson film because the TRP felt the applicant should seek out additional cost share partners to complete other parts of the project.

### **G107 - River Studies Center Exhibits and Programs**

Applicant: San Joaquin River Parkway and Conservation Trust  
Amount Requested: \$110,895  
Amount Recommended: \$68,415

This project will create environmental education exhibits and programs for the Riverview Ranch. It serves the San Joaquin Valley, and it has good links to CALFED objectives. The project already has an advisory group in place and has the potential for reaching a large number of students. The Integration Panel recommended funding Tasks 1, 2 and 5, which develop a program and create exhibits. They did not recommend funding Tasks 3 and 4, a resource room and a school class program, suggesting that additional details need to be worked out.

### **G117 - 1999/2000 Bay-Delta Education Program**

Applicant: Water Education Foundation  
Amount Requested: \$122,500  
Amount Recommended: \$32,300

This project will produce a briefing paper on wetlands and marshes that would include the history of wetlands conversion, how we came to realize that wetlands and marshes serve important water quality and flood management functions, and the importance of habitat for plants and animals. The TRP thought the project would be a good CALFED investment that is relatively inexpensive for a large benefit. The proponent is well positioned to accomplish the project. In addition, the TRP felt the journalism tour was an inexpensive way to get information to the press on Bay-Delta issues that then can be spread to a wide audience. Other parts of the proposal were thought to be less cost effective.

### **G119 - Watershed Educational Training**

Applicant: Colusa County Resource Conservation District  
Amount Requested: \$13,000  
Amount Recommended: \$13,000

This project will increase watershed awareness through environmental education presentations at the Colusa County Farm Show, the Colusa County Farm Day, and 5th grade classrooms throughout the county. The panel noted that the project has good community support and local agencies are major contributors in the training. With the high level of local support and the small amount of funds requested, it is a worthy project.

# 1999 PROPOSALS RECOMMENDED FOR FUNDING

Recommended	TRP Score	Proposal No	Project Title	Applicant/Organization	County	Requested Amt	Recommended Amt
Yes	43	99-F102	Health Monitoring of Hatchery & Natural Fall-run Chinook in SJ River	US Fish & Wildlife Service, California - Nevada Health Center	Merced, San Joaquin	\$37,860	\$37,860
Yes	43	99-F103	Central Valley Steelhead Genetic Evaluation	CA Dept of Fish & Game, WRB	Shasta, Tehama, Butte, Glenn, etc	\$70,636	\$70,636
Yes	41.5	99-B161	Riparian Corridor Acquisition and Restoration Assessment	US Bureau of Land Management	Shasta, Tehama	\$2,175,000	\$2,175,000
Yes	41	99-E116	Purple Loosestrife Prevention, Detection & Control Actions for the Sac/SJ River Delta System	CA Dept of Food & Ag, Integrated Pest Control Branch	Butte, Contra Costa, Fresno, Nevada, cct	\$328,779	\$127,473
Yes	41	99-D119	Determination of the Causes of Dissolved Oxygen Depletion in the SJ River	CA Dept of Water Resources, Environmental Services Offices	San Joaquin, Stanislaus, Merced	\$866,408	\$866,408
Yes	39.25	99-B156	South Napa River Tidal Sough and Floodplain Restoration Project	City of American Canyon	Napa	\$1,520,000	\$1,520,000
Yes	39	99-B131	YUBA TOOLS: Collaborative Watershed Mgmt for Flood Control	Yuba Watershed Council & SYRCL	Yuba, Nevada, Sierra	\$216,150	\$216,150
Yes	38	99-G100	Estuary Action Challenge Environmental Education Project	Earth Island Institute/Estuary Action Challenge	Alameda, Contra Costa	\$50,000	\$50,000
Yes	38	99-A117	Improve the Upstream Ladder & Barrier Weir @ Coleman Nat'l Fish Hatch. in Battle Creek	US Fish & Wildlife Service	Shasta, Tehama	\$1,663,400	\$1,663,400
Yes	38	99-B127	Reintroduction of Endangered Soft Bird's Beak to Restored Habitat - Suisun	University of California at Davis, Dept of Environmental Science & Policy, Wetland Research Lab	Solano, Napa, Contra Costa	\$148,627	\$148,627
Yes	38	99-F106	Development of a Comprehensive Imple. Plan for a Statically Designed Marking & Recovery	CA Dept of Fish & Game	Shasta, Butte, Sacramento, etc	\$75,951	\$75,951

Recommended	TRP Score	Proposal No	Project Title	Applicant/Organization	County	Requested Amt	Recommended Amt
Yes	38	99-E104	Assessing Ecological & Economic Impacts of the Chinese Mitten crab	UC Berkeley	Santa Clara, Sonoma	\$149,429	\$149,429
Yes	37	99-A109	Fish Treadmill Developed Fish Screen Criteria for Native Sacramento-San Joaquin Watershed Fishes	Wildlife, Fish, & Conservation Biology, UC Davis	Yolo	\$1,036,821	\$1,036,821
Yes	37	99-B130	Development of an Implementation Plan for Lower Yuba River Anadromous Fish Habitat Restoration	Surface Water Resources, Inc	Yuba, Nevada	\$171,100	\$171,100
Yes	36	99-B190	Linked Hydrogeomorphic Ecosystem Models to Support Adaptive Mgmt Cosumnes-Mokelumne Paired Basin	University of California, Davis Center for Integrated Watershed Science & Mgmt	Sacramento, San Joaquin, El Dorado, Amador	\$1,946,016	\$1,546,016
Yes	36	99-G103	Water Challenge 2010 Exhibit	US Army Corps of Eng, San Francisco Bay Model Visitor Center	All	\$50,500	\$50,500
Yes	36	99-A105	Fish Passage Improvement Project at the Red Bluff Diversion Dam	Tehama-Colusa Canal Authority	Tehama	\$2,574,000	\$1,000,000
Yes	36	99-D123	Dissolved Organic Carbon Release from Delta Wetlands, Part 1	US Geological Survey	Yolo, Solano, Contra Costa, San Joaquin, Sac	\$1,392,669	\$1,392,669
Yes	35	99-D113	Chronic Toxicity of Environmental Contaminants in Sacramento Splittail: A Biomarker Approach	UC Davis, Dept of Animal Science	Yolo	\$673,684	\$673,684
Yes	35	99-D116	Assessment of Pesticide Effects on Fish & Their Food Resources in the Sac-SJ Delta	UC Berkeley	Contra Costa, Solano, Sac, SJ, Merced, Yolo	\$1,875,561	\$1,875,561
Yes	35	99-G104	The Learning Watershed Project	American River Watershed Institute	Placer, Sacramento, Tehama	\$58,250	\$55,250
Yes	34	99-E101	An Evaluation of the Potential Impacts of the Chinese Mitten crab on the Benthic Comm. in the Delta	CA Dept of Water Resources	Solano, Sacramento, Contra Costa, San Joaquin	\$147,799	\$147,799

Recommended	TRP Score	Proposal No	Project Title	Applicant/Organization	County	Requested Amt	Recommended Amt
Yes	34	99-C118	Biological Ag Systems in Cotton-BASIC-Reducing Synthetic Pesticides & Fertilizers in the No. SJ Vly	Sustainable Cotton Project (SCP)	Merced, Madera, Fresno	\$1,388,784	\$460,000
Yes	34	99-B124	Lake Red Bluff Riparian Area Restoration & Education Support Project	The California Conservation Corps	Tehama	\$29,114	\$29,114
Yes	34	99-G119	Watershed Educational Training	Colusa County Resource Conservaton District	Colusa	\$13,000	\$13,000
Yes	33	99-G117	1999/2000 Bay-Delta Education Program	Water Education Foundation	All	\$122,500	\$32,300
Yes	33	99-B146	Species and Community Profiles of the San Francisco Bay Area Wetlands Ecosystem Goals Project	Friends of the San Francisco Estuary	Alameda	\$44,000	\$44,000
Yes	33	99-B169	Understanding Tidal Marsh Restoration Processes and Patterns	University of Washington, School of Fisheries	Intertidal Bay-Delta	\$1,042,246	\$1,042,246
Yes	33	99-G106	Traveling Film Festival & Exhibit/McCormack-Williamson Restoration Film	Independent Documentary Group (IDG Films)	Sacramento & Bay Area counties	\$339,150	\$50,000
Yes	32	99-B106	East Delta Habitat Corridor (Georgianna Slough)	Habitat Assessment & Restoration Team, Inc.	Sacramento	\$1,100,000	\$1,100,000
Yes	32	99-C121	Douglas/Long Canyon Paired - Watershed Project	Placer County Water Agency PCWA	Placer	\$83,600	\$83,600
Yes	31	99-G107	River Studies Center Exhibits & Programs	San Joaquin River Parkway & Conservation Trust	Fresno, Madera	\$110,895	\$68,415
Yes	30	99-B158	Sacramento River Discovery Center	Sacramento River Discovery Center	Tehama, Butte, Placer, Glenn, etc	\$174,150	\$38,400
Yes	29	99-E103	Effects of Introduced Species of Zooplankton & Clams on the B-D Food Web	San Francisco State University: Romberg Tiburon Center	N/A	\$826,930	\$726,930
No	44	99-B165a	Liberty Island Acquisition and Restoration-Phase I	US Fish & Wildlife Service	Yolo, Solano	\$1,146,717	
No	41	99-B189	Inundation of a Section of the Yolo Bypass to Restore Sac. Splittail & Other Native Species	Natural Heritage Institute	Yolo, Solano	\$820,679	

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Recommended	TRP Score	Proposal No	Project Title	Applicant/Organization	County	Requested Amt	Recommended Amt
No	40	99-B155	Napa Salt Pond Restoration/Water Supply Project	Napa Sanitation District	Napa	\$355,000	
No	40	99-B111	Tuolumne River Special Run Pool 10 Restoration	Turlock Irrigation District	Stanislaus	\$2,179,000	
No	40	99-B120	Tuolumne River Mining Reach Project 3 - Warner Deardorff Segment	Turlock Irrigation District	Stanislaus	\$3,501,000	
No	40	99-F105	Biological Assess. of Green Sturgeon in the Sac/SJ Watershed	UC Davis, Wildlife, Fish & Conservation Biology	Sutter, Yolo	\$205,013	
No	39	99-C100	Last Chance Creek Project - Ferris - Meadowview Reach	Feather River Coordinated Resource Management - Plumas Corp	Plumas	\$980,000	
No	39	99-C132	Battle Creek Watershed Stewardship, Phase 2	Battle Creek Watershed Conservancy	Shasta, Tehama	\$292,662	
No	39	99-E107	Stone Lakes Water Hyacinth Control	Florin Resource Conservation District Economic Development Corporation	Sacramento	\$382,559	
No	39	99-E108	Tamarisk & Arundo on Cache Creek: Removal and Revegetation	Cache Creek Conservancy	Yolo	\$968,700	
No	39	99-B165b	Liberty Island, etc, Phase 2	US Fish & Wildlife Service	Yolo, Solano	\$13,495,605	
No	39	99-B121	South Napa River Acquisition and Restoration Program	Napa County Land Trust	Napa	\$2,970,000	
No	39	99-B144	A Unique Opportunity for Restoration, Research and Education	The Delta Science Center at Big Break	Contra Costa	\$536,313	
No	39	99-E118	Arundo donax Eradication and Coordination	Sonoma Ecology Center	All	\$818,045	
No	38.9	99-B137	Battle Creek Riparian Habitat Protection	The Nature Conservancy	Tehama, Shasta	\$2,820,000	
No	38.64	99-B174	Stone Lakes National Wildlife Refuge Acquisitions	US Fish & Wildlife Service	Sacramento, Yolo	\$5,065,030	
No	38	99-B135	Lower Clear Creek Floodway Restoration Proposal Solicitation	Western Shasta Resource Conservaton District	Sacramento River	\$4,901,553	

Recommended	TRP Score	Proposal No	Project Title	Applicant/Organization	County	Requested Amt	Recommended Amt
No	38	99-A116	Pleasant Grove-Verona Mutual Water Company Fish Screen	Pleasant Grove-Verona Mutual Water Company	Sutter	\$331,000	
No	38	99-C129	Development of a Watershed Management Strategy for Little Chico Creek	CSU, Chico Research foundation - Office of Sponsored Programs	Butte, Glenn	\$293,473	
No	37.2	99-B126	Floodplain Acquisition and Sub-Reach/Site-Specific Mgmt Planning on Sacramento River	The Nature Conservancy	Glenn, Butte, Tehama	\$13,964,900	
No	37	99-C101	Lassen National Forest Watershed Stewardship Anadromous Watersheds of Antelope, Battle, etc	USDA, Forest Service, Lassen National Forest	Butte, Plumas, Shasta, Tehama	\$3,017,695	
No	37	99-A110	City of Redding Water Utility Fish Screen Rehabilitation	City of Redding, Department of Public Works	Shasta	\$495,400	
No	37	99-E111	Introduced Spartina Eradication Program	California Coastal Conservancy, San Francisco Bay Program	Sac, Sol, CC, Santa Clara, etc	\$2,914,300	
No	37	99-E114	Biological Control of Saltcedar & Giant Reed in the Cache Creek Drainage	USDA - Agricultural Research Service	Yolo	\$1,042,885	
No	36	99-C122	Marsh Creek Watershed Science Program	The Delta Science Center at Big Break	Contra Costa	\$163,474	
No	36	99-B145	Culture of Delta Smelt, <i>Hypomesus transpacificus</i> , in Support of Environ. Studies & Restoration	UC Davis, Animal Science Dept, Meye Hall	USA	\$431,606	
No	36	99-C138	Colusa Basin Watershed Project	Colusa County RCD, Colusa Basin Drainage District		\$492,500	
No	35.5	99-B157	Development of a River Corridor Management Plan for the Lower American River	Sacramento City-County Office of Metropolitan Water Planning Forum	Sacramento	\$250,000	
No	35.5	99-B151	Habitat Restoration and Natural Processes: Integrating Riparian Restoration with Flood Plan Mgmt	Sacramento River Partners	Butte, Glenn	\$2,153,574	
No	35	99-C104	Conservation Easements for Agricultural Lands	Ducks Unlimited, Inc., Western Regional Office	Sutter	\$3,120,000	

Recommended	TRP Score	Proposal No	Project Title	Applicant/Organization	County	Requested Amt	Recommended Amt
No	35	99-B184	Arundo donax Control on Burch Creek: Nonnative Invasive Species Eradication.	CA Dept of Water Resouces, Northern District	Tehama	\$39,000	
No	35	99-D100	Real Time Water Quality Management	Grassland Water District	Merced	\$652,330	
No	35	99-A115	Butte Creek/Sanborn Slough Bifurcation Project	California Waterfowl Association, Rob Capriola	Colusa, Butte	\$960,000	
No	35	99-A106	Banta-Carbona Irrig. District Positive Barrier Fish Screen	Banta-Carbona Irrigation District	San Joaquin County	\$1,694,375	
No	34.64	99-B193	McCormick-Williamson Tract Restoration Planning, Design, & Monitoring Program 1	University of California, Davis Center for Integrated Watershed, Science and Mgmt	Sacramento	\$556,200	
No	34.5	99-B154	North Fork Weber Creek Acquisition and Habitat Restoration	American River Conservancy	El Dorado	\$1,150,000	
No	34	99-C105	Panoche/Silver Creek Watershed Management and Action Plan	Westside Resource Conservation District	Fresno, San Benito	\$848,000	
No	34	99-A113	Tracy Fish Facilities, Technology Development to Meet Modern Fish Protection Criteria	Bureau of Reclamation, Mid-Pacific Region	Contra Costa, San Joaquin, Alameda	\$5,700,000	
No	34	99-A101	Sacramento River Small Diversion Fish Screen Mech. Mointoring & Maint. Project	Family Water Alliance	Colusa	\$312,700	
No	34	99-A111	Development of an Optimal Design for Reducing Predation on Delta Smelt at a Large Fish Screen	M. Levent Kavvas, University of California, Davis, UCD Civil Engineer	Yolo	\$788,225	
No	34	99-B102	Tuolumne River Bobcat Flat Floodplain Acquisition	Friends of the Tuolumne, Inc.	Stanislaus	\$1,641,941	
No	34	99-B170	Lower Ranch Wetland Restoration Project	Sonoma Land Trust	not listed	\$1,095,648	
No	34	99-B149	Northwestern Suisun Marsh Habitat Restoration Project	Calif Dept of Water Resources, Environmental Services Office	Solano	\$500,000	
No	34	99-A102	Wildcat Creek Floodplain, Channel and Fisheries Restoraiton	J. Michael Walford, Pub Works Dir & Chief Eng.	Contra Costa County	\$440,000	

Recommended	TRP Score	Proposal No	Project Title	Applicant/Organization	County	Requested Amt	Recommended Amt
No	34	99-A108	Lower Mokelumne River Restoration Program	Woodbridge Irrigation District and City of Lodi	San Joaquin	\$11,916,000	
No	34	99-B172	Holland Land Levee Protection & Habitat Restoration Project	Reclamation District No. 999	Solano	\$295,000	
No	34	99-C120	Continuation of the Lower Mokelumne River Watershed Stewardship Program	San Joaquin Resource Conservation District	San Joaquin, Sacramento	\$654,000	
No	34	99-D117	Implementation of Management Practices that Prevent Offsite Movement of Chlorpyrifos	CA Dept of Pesticide Regulation	Stanislaus, San Joaquin, Merced	\$690,466	
No	33	99-C106	Identificaiton & Characterization of Aquatic Habitat & Water Quality Factors Affecting Priority ...	CA Dept of Water Resources, Northern District	Butte, Sutter	\$297,296	
No	33	99-B153	Merced River Corridor Restoration Project Phase III	Stillwater Sciences	Merced	\$229,000	
No	33	99-D104	Effects of Fires & Sediment Processes in Sierra Nevada Forested Watersheds	USGS/BRD/WERC Sequoia and Kings Canyon Field Station	Tulare	\$390,752	
No	33	99-C116	A Clear Creek Prescription	Western Shasta Resource Conservation District (WSRCD)	Shasta	\$322,960	
No	33	99-D120	Effects of Contam in the Catchment of the SFB Estuary on Redpro Success of Adult Health	Applied Marine Sciences, Inc.	Multiple	\$745,726	
No	32.5	99-B148	Cosumnes River Floodplain Acquisition, Management & Monitoring	The Nature Conservancy	Sacramento	\$7,317,200	
No	32	99-B188	Butte Creek Watershed Education Project	CSU Chico Research Foundation	Butte	\$141,512	
No	32	99-A103	Biological Evaluation of Suisun Marsh Diversions	CA Dept. of Fish & Game	Solano	\$464,000	
No	32	99-C140	Sonoma Creek Watershed Conservancy	Southern Sonoma County Resource Conservation District	Sonoma	\$702,633	

Recommended	TRP Score	Proposal No	Project Title	Applicant/Organization	County	Requested Amt	Recommended Amt
No	32	99-D130	Getting B-D Solutions on the Ground & Online: An Ag Comm. Delivery System to Revitalize Our Water	Yolo County RCD/Calif Assoc of RCDs/DWR co-sponsors	seven counties	\$2,947,676	
No	32	99-D122	Protecting Water Quality in The Sac/SJ River Watershed Through Biological Farming Outreach & Ed.	Community Alliance with Family Farmers (CAFF)	Fresno, Madera, Merced, SJ, Sol, Stanislaus, Yolo	\$1,614,270	
No	32	99-B191	Geomorphic Model for Demonstration and Feasibility Assessment of Set-back Levees B-D River systems	University of California, Davis, Dept of Geology	not specific	\$104,458	
No	32	99-A104	RD 2035 Sac River Positive Barrier Fish Screen Design & Environ. Review	Reclamation District 2035	Yolo	\$1,200,000	
No	32	99-C112	Butte County Water & Natural Resource Coordination	County of Butte	Butte	\$277,107	
No	31	99-A112	Hydraulic Testing Facility for Fish Screens at Small Diversions in the Delta	M. Levent Kavvas, Dept of Civil & Environmental Engineering, UC Davis	Yolo	\$558,394	
No	31	99-A119	Tuttle Pump Relocation Project	Maxwell Irrigation District	Colusa	\$427,900	
No	31	99-C130	Big Chico Creek & Little Chico Watershed Support Project	CSU, Chico Research Foundation - Office of Sponsored Programs	Butte, Glenn, Tehama	\$267,326	
No	31	99-D115	A New Approach to Assess the Effect of Ecosystem Restoration Efforts on Contaminant Bioavailability	UC Berkeley, The Regents of the University of California	Madera, Contra Costa, Solano, SJ, Yolo	\$711,773	
No	31	99-B113	Hill Slough West Habitat Restoration Demonstation Project	Calif Dept of Fish & Game	Solano	\$65,000	
No	31	99-B195	Ball Ranch Habitat Restoration Area Acquisition	San Joaquin River Conservancy	Fresno, Madera	\$7,000,000	
No	31	99-B159	Implementation of Riparian Corridor Management along the Woodson Bridge Subreach of the Sac River	CA Dept of Water Resources, Northern District	Tehama	\$687,000	

Recommended	TRP Score	Proposal No	Project Title	Applicant/Organization	County	Requested Amt	Recommended Amt
No	31	99-C114	Yuba Watershed Council: A Collaborative Approach	Yuba Watershed Council, Nevada City Resource Conservation District	Nevada, Sierra, Yuba, Placer	\$142,618	
No	31	99-A114	Colusa Basin Drain Adult Salmonid Barrier Project	Surface Water Resources, Inc.	Yolo	\$577,500	
No	31	99-B185	Monitoring Tidal Wetland Rehabilitations in the North Bay Region of the San Francisco Bay & Delta	US Geological Survey, Biological Resources Division	Napa, Solano, Sonoma	\$689,000	
No	31	99-B112	Brickyard Creek Tributary Riparian Restoration and Outdoor Classroom Project	The California Conservation Corps	Tehama	\$104,453	
No	31	99-C115	Upper Trinity River Watershed Stewardship Project	Trinity County Resource Conservaiton District	Trinity	\$150,000	
No	31	99-D102	Adap. Mgmt Strat. for Reservoir of Ag Drainage Discharge: Mitigating Selenium Ecotoxic Risk	UC Davis, Dept of Land, Air & Water Resouces	Yolo, Merced, Fresno	\$749,386	
No	31	99-C109	Napa River Watershed Stewardship Year 2	Napa County Resource Conservation District	Napa	\$191,100	
No	31	99-C133	Developing a Biological & Genetic Mgmt Plan for Chinook Salmon in the No. Sac Vly & Butte Basin Eco	Kier Associates	Shasta, Tehama	\$482,289	
No	31	99-B114	Delta Meadows Nautral Communities Inventory and Habitat Restoration	California Dept of Parks & Recreation/Delta State Parks	Sacramento	\$696,000	
No	30.75	99-B163	Lisbon District Levee & Habitat Protection Project	Reclamation District No. 307	Yolo	\$320,000	
No	30	99-E102	Determining Substrate Requirements for Passive Interdiction, Population Control of C. Mitten crab	US Geological Survey/Davis Field Station	Yolo	\$286,829	
No	30	99-A120	Richter Brothers Anadromous Fish Screen Project	H & L Partnership	Sutter	\$950,000	
No	30	99-B194	Tuolumne River Sediment Mgmt & Implementation Plan	Turlock Irrigation District/Tuolumne River Technical Advisory	Stanislaus	\$411,400	

Recommended	TRP Score	Proposal No	Project Title	Applicant/Organization	County	Requested Amt	Recommended Amt
No	30	99-D109	Reduction of Insecticides Loads in the San Joaquin Watershed	CA Dept of Pesticide Regulation	Stanislaus, San Joaquin, Merced	\$1,041,000	
No	30	99-D124	Dissolved Organic Carbon Release From Delta Wetlands: Pt 2	US Geological Survey, Placer Hall	Yolo, Solano, Contra Costa, SJ, Sac	\$2,740,040	
No	30	99-D107	Real-Time Forecasting of Contaminant Loading From the Panoche/Silver Creek Watershed to the SJ River	Lawrence National Laboratory, Berkeley,		\$628,378	
No	30	99-B139	Phase II: Demonstration Project for the Protection and Enhancement of Delta In-channel Islands	Association of Bay Area Government (ABAG)	not listed	\$3,138,670	
No	30	99-B152	A Mechanistic Approach to Riparian Restoration in the San Joaquin Basin	Stillwater Sciences	Merced, Stanislaus	\$223,666	
No	29.9	99-B125	Big Chico Creek Ecological Preserve	River Network	Butte	\$1,225,666	
No	29.63	99-B192	McCormack-Williamson Tract Restoration Planning, Design, & Monitoirng Program II	CA Dept of Water Resources, Flood Protection Branch	Sacramento	\$355,000	
No	29.25	99-B132	Seasonal Wetlands & Environmental Enhancement Project	Colusa Basin Drainage District	Yolo	\$3,550,000	
No	29	99-B150	River Park	Greater Vallejo Recreaton District	Solano	\$1,000,000	
No	29	99-B167	Restoration of Copper Creek and Newton Copper Mine	Geraldine Cassinelli	Amador	\$122,916	
No	29	99-B168	Venice Island Potato Slough Habitat Creation Demonstration Project	CA. Dept of Water Resources, Flood Protection & Geographic Information	San Joaquin	\$491,223	
No	29	99-B109	Chipps Island Tidal Marsh Project	Fishery Foundation of California	Solano	\$968,810	
No	29	99-D118	Eval. of Cont. Effects of Priority Fish Food Chain Resources in the Sac-SJ River & B-D Estuary	San Francisco Estuary Institute	Contra Costa	\$2,495,770	

Recommended	TRP Score	Proposal No	Project Title	Applicant/Organization	County	Requested Amt	Recommended Amt
No	29	99-E115	Proposal to Conduct an Assess. of Delta Levee Impacts & Aquatic Habitat by C mitten crab	May Consulting Services	Sacramento, Solano, Contra Costa	\$87,415	
No	29	99-E112	Reprod. Life His. of C. Mitten crab, ID of Poss. Repro Disrupters to Reduce Ecol. Impact on Species	California State University of Fresno, Dept of Biology MS#SB73		\$1,095,708	
No	29	99-D101	Rapid-Response Assessment of Selenium 'Fixation' Rate into the Foodchain	Dept of Land, Air & Water Resources, UC Davis	Yolo, San Joaquin, Stanislaus, Merced, Fresno	\$115,029	
No	28.5	99-B123	Implementing the San Jose Riparian Restoration Action Plan	City of San Jose	Santa Clara	\$410,000	
No	28	99-B105	Abandoned Mine Inventory, CALFED's Targeted Watersheds	Dept of Conservation/Office of Mine Reclamation/Abandoned Mine Land Unit	Shasta, Plumas, Lassen, Butte, Yuba, etc	\$2,194,523	
No	28	99-D127	The Efficacy of Public Education Programs in Reducing Aquatic Toxicity From Stormwater Runoff	The San Francisco Baykeeper	San Joaquin	\$1,673,257	
No	28	99-E110	Determining the Biological, Physical & Chemical Characteristics of Ballast Wtr Arriving in SF Bay	San Francisco Estuary Institute	Contra Costa	\$375,905	
No	28	99-E113	Distribution & Status of Arundo donax in the Bay-Delta Watershed	UC Berkeley, Dept of Integrative Biology	Alameda	\$153,750	
No	28	99-G108	Estuary Supplements	Friends of the Estuary	All	\$108,710	
No	28	99-B122	San Joaquin River Riparian Habitat Restoration	U.S. Bureau of Reclamation, Suite 106	not listed	\$1,195,000	
No	28	99-G102	San Joaquin River Public Education Program	CA Dept of Water Resouces, San Joaquin District	All counties of SJ Vly	\$102,500	
No	28	99-C134	American River (Middle & South Forks) Integrated Watershed Stewardship	Georgetown Divide Resource Conservation District	El Dorado	\$203,250	
No	28	99-B115	Franks Tract/Decker Island Wetlands Habitat Restoration	CA Dept of Water Resources	Contra Costa, Solano	\$16,600,580	

Recommended	TRP Score	Proposal No	Project Title	Applicant/Organization	County	Requested Amt	Recommended Amt
No	27	99-F100	Eval. of Hydroacoustics as a Mgmt Tool for Cen. Vly Salmon Producing Rivers & Streams	Merced Irrigation District	Merced	\$731,535	
No	27	99-B141	Dead Horse Island Levee Restoration Project, Sacramento County	Reclamation District #2111, Dead Horse Island	Sacramento	\$315,000	
No	27	99-B134	Spawning Gravel Introduction, Tuolumne River, La Grange Phase 2	CA Dept of Fish & Game	Stanislaus	\$376,421	
No	27	99-B133	Lower Gasburg Creek Sediment Control and Restoration	CA Dept of Fish & Game	Stanislaus	\$175,901	
No	27	99-E100	Assessment of Habitat Use, Trophic Status, Contaminants Distrib. of C. Mitten crab in Freshwater	US Geological Survey, Water Resources Division	Butte, Colusa, Calaveras, Contra Costa, Glenn, Fresno, Madera, Merced, Nevada, Placer, Sacramento, Solano, San Joaquin, Stanislaus, Sutter, Yolo	\$343,083	
No	27	99-B110	East Antioch Creek Marsh Restoration Project	Contra Costa County Flood Control and Water Conservation District	Contra Costa	\$485,000	
No	27	99-C136	Clear Lake Wetlands Restoration	Lake County Sanitation District	Lake	\$1,000,000	
No	27	99-D112	Impacts of Dietary Selenium on Giant Garter Snake Populations in Sacramento-San Joaquin Watershed	UC Davis, The Regents of the University of California	Merced	\$526,083	
No	27	99-A100	Recon, reconfig & relocation of DFG fish screen on the Cordua Irrig Dist & Hallwood Irrig Co div.	CA Dept of Fish & Game and Cordua Irrig & Hallwood Irrig Co.	Yuba	\$150,000	
No	27	99-B160	Developing an Integrated Model for River Restoration and Water Acquisition in the Central Valley	The Trust For Public Lands, Western Rivers Program	All Central Valley	\$294,362	

Recommended	TRP Score	Proposal No	Project Title	Applicant/Organization	County	Requested Amt	Recommended Amt
No	27	99-B128	Proposal to Implement Decker Is. Tidal Wetland Enhancement Pilot Project	Surface Water Resources, Inc.	Solano	\$379,000	
No	26	99-D111	Using Ecological Health & Integrity Indicators to Eff. Monitor the Exposure & Effects	UC Davis, Dept of Land, Air & Water Resources	Delta region	\$200,391	
No	26	99-C108	Cottonwood Creek Watershed Monitoring and Assessment	Cottonwood Creek Watershed Group	Shasta, Tehama	\$935,000	
No	26	99-C126	Watershed Restoration & Implementation Strategy for Dry Creek	Nevada County Resource Conservation District	Nevada, Yuba	\$320,619	
No	26	99-B119	Ecosystem Development at the Cosumnes River Preserve: Model Rstr. Exp. for the Central Vly	San Jose State University Foundation	not listed	\$492,597	
No	26	99-G110	Sacramento River Water Education Center	City of Sacramento	Sacramento	\$46,500	
No	26	99-C128	Upper Butte Creek Road Management Improvement Project	CSU, Chico Research Foundation on behalf of the Butte Creek Watershed, Dept of Geography & Planning	Butte	\$209,476	
No	26	99-A118	Behavior of Anadromous Fishes at Passageways	University of California at Los Angeles	Sonoma, Sacramento	\$350,770	
No	26	99-C131	Northeastern Sacramento Valley Small Streams Mapping Project - Phase I	The Research Foundation, CSU Chico	Butte, Tehama, Shasta	\$80,263	
No	26	99-D125	Improve DPR, Database	EMCON	CALFED B-D Watershed	\$204,753	
No	25	99-B108	Proposal to Create Saline Emergent Wetland at Mare Island	Tetra Tech Inc.	Solano	\$651,443	
No	25	99-B136	Mokelumne Corridor: Acquisition, Management & Monitoring at Staten Island	The Nature Conservancy	San Joaquin	\$15,730,000	
No	25	99-B117	Phylogeographic & Microsatellite Study of West Coast Estuarine Restricted Fish	UC Los Angeles, Dept of Organistic Biology, Ecology and Evolution	All coastal counties	\$385,808	

Recommended	TRP Score	Proposal No	Project Title	Applicant/Organization	County	Requested Amt	Recommended Amt
No	25	99-D108	DPR Pesticide Use Data on an Internet Site	CA Dept of Pesticide Regulation	Sacramento, Yolo	\$343,400	
No	25	99-B143	Loss of Mid-Channel Island Habitat in the Delta: Causes and Rates of Erosion	University of Southern California, Department of Geography	Sacramento, San Joaquin	\$456,781	
No	25	99-D103	Microbial Sensors for Selenium Hazard Assessment & Development of Site-Specific Selenium Objectives	University of California Berkeley	Merced	\$480,000	
No	25	99-C113	Phase I Feasibility Study of the Tracy Wetlands Stormwater Reuse Habitat	City of Tracy, Dept of Public Works	San Joaquin	\$149,580	
No	25	99-C139	Mokelumne & Cosumnes Rivers Coordination	San Joaquin Council of Governments	San Joaquin, Sacramento	\$217,480	
No	25	99-B166	Focused Action to Dev. Eco. based Hydrologic Models & Water Mgmt Strategies in the S. J. basin	Natural Heritage Institute (NHI)	San Joaquin, Stanislaus, Merced, Madera, Fresno	\$295,925	
No	25	99-C124	Butte County Water Inventory/Needs Assessment	Butte County Water Division	Butte	\$770,000	
No	24	99-B101	Habitat Restoration/Floodway Enhancement Wilson Landing to Chico Creek	Glenn County	Glenn, Butte	\$750,000	
No	24	99-B103	Alhambra Creek Habitat Improvements	City of Martinez	Contra Costa	\$355,000	
No	24	99-C107	Expanding Community based Restoraton and Stewardship in Four Watersheds	The Restoration Trust	Sonoma, Solano, Yolo	\$169,000	
No	24	99-B116	Canal Ranch Habitat Resotration Project, Phase II	Calif. Dept of Fish & Game	San Joaquin	\$131,980	
No	24	99-B173	Local Economic Impacts of Public Land Acquisition in the Sacramento River	The CSU, Chico Research Foundation-Office of Sponsored Programs	Glenn	\$63,029	
No	24	99-C135	Digital Soil Survey Mapping & Digital Orthophotoquad For Bay-Delta Region	USDA NRCS & the California Conservation Partnership	Shasta, Tehama, Glenn and others	\$1,612,040	
No	24	99-G109	Bay-Delta Leadership Institute	Adopt-A-Watershed, Inc.	Butte, Tehama	\$203,200	

Recommended	TRP Score	Proposal No	Project Title	Applicant/Organization	County	Requested Amt	Recommended Amt
No	24	99-F104	Comprehensive Implementation Plan for Chinook Salmon	Bailey Environmental	multiple	\$152,400	
No	24	99-B142	Fluvio-Geomorphic Design Criteria for the Cottonwood Creek Watershed	Cotton, Shires and Associates, Inc.	Shasta, Tehama	\$69,300	
No	24	99-F101	Building Strong Leadership for Restoration: Skill Development & Restoration Education	University of Arizona, Society for Ecological Restoraton, Dept EEB	All	\$87,203	
No	23	99-C127	Yuba River Watershed Assessment	Foster Wheeler Environmental Corporation	Nevada, Yuba	\$500,502	
No	23	99-B104	Dev of Prop & Re-intro Techniques for Delta Special Status Plant Species	Bitterroot Restoration, Inc.	Montana	\$114,700	
No	23	99-G115	Brentwood Marsh Habitat & Educational Center	City of Brentwood	Contra Costa	\$435,600	
No	23	99-C123	Calaveras County Watershed Mgmt & Stewardship Program	Calaveras County Water District	Calaveras	\$700,000	
No	23	99-D129	Characterization of Quantity & Quality of Organic Carbon Loading & Transformation Assoc	CA Dept of Water Resources, Water Quality Assessment Branch, DPLA	Yolo, Sacramento	\$722,495	
No	22	99-G112	Wetlands Public Access Demonstration Project	Matterhorn California, Inc.	Napa	\$226,000	
No	22	99-B138	Modeling the influence of Restoration Scenarios on Chan & Flplain Morphology in the Sac River basin	UC Santa Barbara -Donald Bren School of Environ. Science & Management - Office of Research,	Shasta Tehama, Glenn, Butte	\$408,409	
No	22	99-G116	Environmental Education	EMCON	B-D Watershed	\$161,468	
No	22	99-D114	Distinguishing TOC Sources in the Delta Using Complex Chemical Fingerprinting of Organic Matter	UC Davis, Agronomy & Range Science	Solano, Yolo	\$860,865	
No	22	99-B118	Feasibility Study for a Plant Materials & Research Ctr for CALFED Proj. in the No. S.F. Bay Eco zone	Denise Kelly	Napa, Sonoma	\$17,470	

Recommended	TRP Score	Proposal No	Project Title	Applicant/Organization	County	Requested Amt	Recommended Amt
No	22	99-D110	Sacramento County Urban Runoff OP Pesticide Toxicity Control Program	City of Sacramento, Dept of Utilities, Eng Services Division	Sacramento	\$756,631	
No	22	99-E109	Treating Ballast Water Discharges at Existing Municipal Wastewater Treatment Plants	San Francisco Estuary Institute	San Francisco, Contra Costa	\$118,460	
No	21	99-E106	Treatment of Ballast Water: Towards the Elim. of Alien Aquatic Intro Into the SF Bay	California State University, Hayward, Dept of Biological Sciences	Alameda	\$596,783	
No	21	99-D126	Adaptive Development of a Watershed Specific Pesticide Use Monitoring Strategy	CA Dept of Pesticide Regulation	Sacramento	\$729,726	
No	21	99-D105	Merced River Water Temperature Feasibility Study	Merced Irrigation District	Merced	\$460,000	
No	21	99-C125	South Sacramento County Habitat Conservation Plan	Sacramento County Planning and Community Development	Sacramento	\$125,000	
No	21	99-D106	Real-Time Sensors for Mercuric & Selenate Ions Utilizing Templated	Lawrence Berkeley National Laboratory, MS 936B	Merced	\$793,871	
No	20.8	99-B129	Butte Creek Acquisition, Easement and Restoration Program	Center for Natural Lands Management	Butte	\$575,794	
No	20	99-B140	Sacramento River Bypass Floodplain Habitat Restoration Program	National Audubon Society - California	Colusa, Sacramento, Sutter, Yolo, Yuba	\$422,496	
No	20	99-C117	San Pablo Bay Watershed Capacity Development	North Bay Watershed Association (NBWA) c/o LGVSD	Marin, Sonoma, Napa	\$175,000	
No	20	99-B162	Sacramento River Bank & Habitat Restoration Project	Maxwell Irrigation District	Colusa	\$645,000	
No	20	99-C137	Promoting Stewardship Practices to Reduce Non Point Source Pollution From Prod. Ag in Sac/SJ Wtrshed	Coalition for Urban/Rural Environmental Stewardship (CURES)	Yuba, Sutter, Butte, Col and others	\$3,333,500	
No	19	99-G114	Bay Delta Explorer 2000	ABAG/San Francisco Estuary Project	Bay Delta Estuary & Watershed	\$312,058	
No	19	99-B186	Butte Creek Acquisition, Revegetation and Restoration Assessment Project	The CSU, Chico Research Foundation on behalf of Butte Creek Watershed Conservancy	Butte	\$446,543	

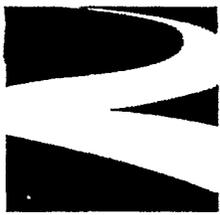
Recommended	TRP Score	Proposal No	Project Title	Applicant/Organization	County	Requested Amt	Recommended Amt
No	19	99-G111	Return to the Source: The Upper Watersheds of the Bay-Delta	Rural California Alliance	several	\$132,230	
No	19	99-C110	Tuolumne River Regional Park Land Use Plan Update/Environmental	City of Modesto, on behalf of the Tuolumne River Regional Park Joint Powers Agency	Stanislaus	\$70,766	
No	18.8	99-B107	Rock Creek - Keefer Slough Environmental Restoration	Butte County	Butte	\$650,000	
No	18	99-D121	Auburn Ravine CRMP Water Quality Monitoring Project	Placer County Resource Conservation District	Placer, Sutter	\$532,287	
No	18	99-G105	The Salmon Run: Eco Res Trails for the Sac/San Joaquin Delta	US Army Corps of Engineers	Yolo, Solano	\$550,135	
No	18	99-B100	Tuolumne River Sediment Management Plan	Sedimentation and River Hydraulics Group, TSC, USBR	Stanislaus, Tuolumne	\$279,000	
No	17	99-G118	The Delta Primer	Jane Wolff	All Delta counties	\$188,500	
No	17	99-C119	American Basin Watershed Station	Dry Creek Conservancy	Placer, Sacramento, Sutter	\$402,600	
No	17	99-B147	Clover Creek Flood Protection and Environmental Project	City of Redding, Dept of Public Works	Shasta	\$3,842,090	
No	17	99-E105	Bay Delta Crab Control	Aquallife Electrical Barriers, Inc	N/A	\$154,489	
No	16	99-C111	Granite Watershed Restoration Pilot Project	USDA Forest Service, Stanislaus National Forest	Tuolumne	\$4,555,000	
No	16	99-B187	Howard Slough Riparian Restoration Project	The CSU, Chico Research Foundation-Office of Sponsored Programs	Butte	\$265,288	
No	15	99-C102	Wildcat Canyon Western Slope Restoration Project	City of El Cerrito	Contra Costa	\$1,046,000	
No	14	99-A107	Battle Creek Salmon & Steelhead Restoration Program	Mt. Lassen Trout Farms, Inc	Tehama, Shasta	\$4,136,297	
No	13	99-G113	Napa Living Rivers Conference and Field Tours	Matterhorn California, Inc.	Napa	\$45,000	
No	13	99-C141	Integrating Ecosystem Restoration program Objectives with Instream Gravel Mining	Resource Design Technology, Inc.	Sol, Tehama, Sac, Shasta, Yolo	\$388,950	

Recommended	TRP Score	Proposal No	Project Title	Applicant/Organization	County	Requested Amt	Recommended Amt
No	13	99-B164	Sacramento River Public Information Internet Server - Phase 1	CA Dept of Water Resources, Northern District	All along Sac River from Collinsville to Keswick	\$400,000	
No	12	99-E117	Development of a Research Program for the Invasive Aquatic Plant, Egeria densa	CA Dept of Boating & Waterways	Sacramento, SJ, Contra Costa	\$4,000,000	
No	12	99-G101	Delta Information Center	CA Dept of Parks & Recreation, Brannan Island State Recreation Area	Sacramento	\$2,500,000	
No	11	99-G120	CALFED Bay-Delta Program Activities	Eco Action	San Joaquin, B-D Watershed	\$480,000	
No		99-C103	Duplicate Proposal 99-B102	Friends of the Tuolumne, Inc.	Stanislaus		

Draft EIS/EIR

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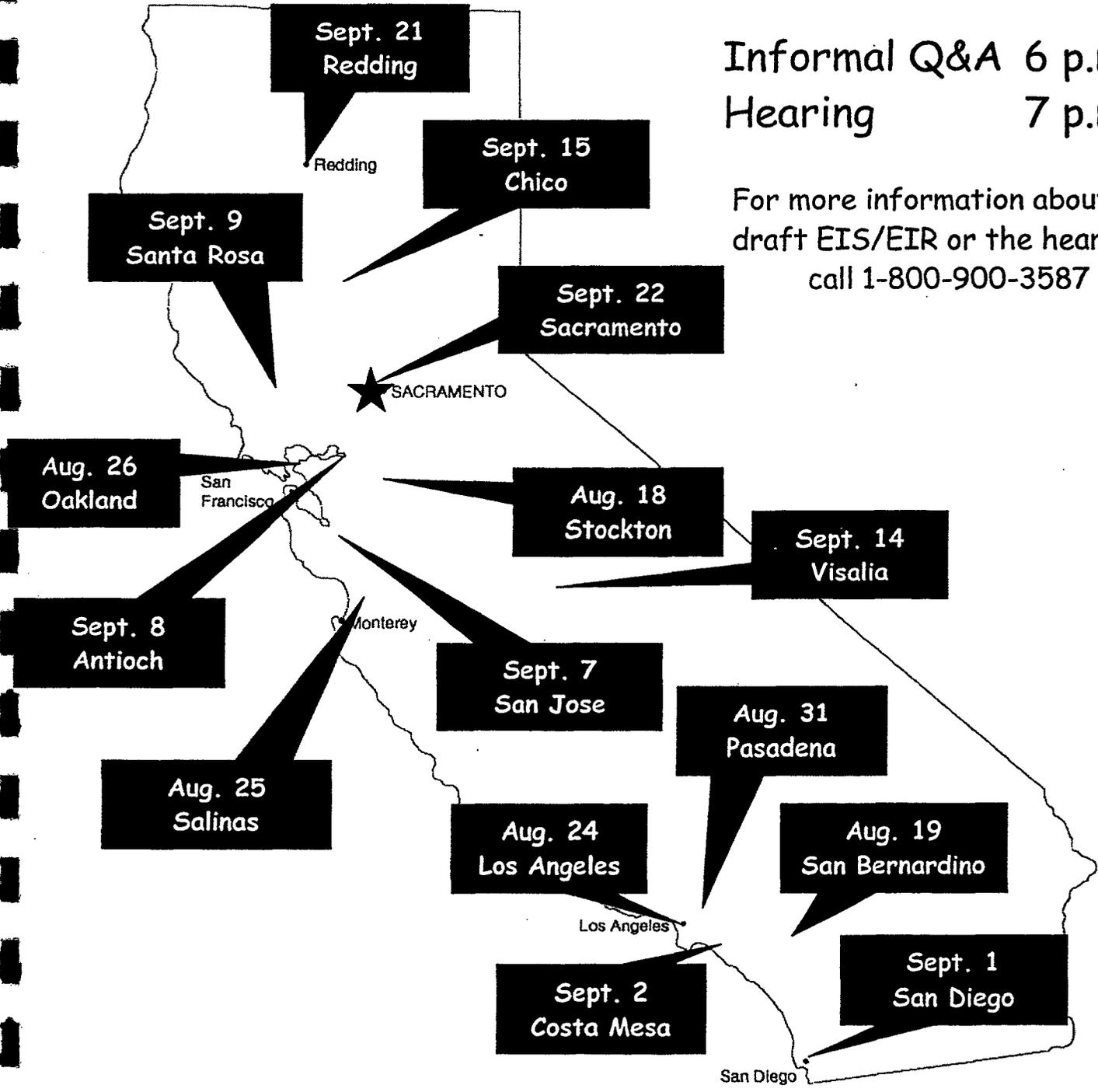
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**CALFED  
BAY-DELTA  
PROGRAM**

# Public Hearings Schedule

CALFED will hold 15 public hearings to gain input on the draft Programmatic Environmental Impact Statement/Environmental Impact Report.



**Informal Q&A 6 p.m.  
Hearing 7 p.m.**

For more information about the draft EIS/EIR or the hearings, call 1-800-900-3587

For more information ■ (916) 657-2666 ■ (916) 654-9780 FAX ■ 1-800-700-5752 Information Line ■ <http://calfed.ca.gov>

**CALFED Bay-Delta Program  
Draft Programmatic EIS/EIR  
Public Hearing Locations**

**Stockton, Wednesday, Aug. 18**

U.C. Cooperative Extension  
420 South Wilson Way  
Stockton, CA 95205

**San Bernardino, Thursday, Aug. 19**

City Council Chambers  
300 North D Street  
San Bernardino, CA 92418

**Los Angeles, Tuesday, Aug. 24**

To be announced

**Salinas, Wednesday, Aug. 25**

Rodeo Inn  
808 North Main Street  
Salinas, CA 93906

**Oakland, Thursday, Aug. 26**

Preservation Park, Nile Hall  
1233 Preservation Park Way  
Oakland, CA 94612

**Pasadena, Tuesday, Aug. 31**

Holiday Inn, Magnolia Room  
303 East Cordova Street  
Pasadena, CA 91101

**San Diego, Wednesday, Sept. 1**

Ruben H. Fleet Science Center  
Community Forum  
Balboa Park  
1875 El Prado  
San Diego, CA 92101

**Costa Mesa, Thursday, Sept. 2**

Westin Southcoast Plaza Hotel  
1400 Bristol Street  
Costa Mesa, CA 92628

**San Jose, Tuesday, Sept. 7**

San Jose Unified School District Board Room  
855 Lenzen Avenue  
San Jose, CA 95126

**Antioch, Wednesday, Sept. 8**

Rodriguez Community Center Theater  
213 F Street  
Antioch, CA 94509

**Santa Rosa, Thursday, Sept. 9**

Burbank Center for the Arts Merlot Theater  
50 Mark West Springs Road  
Santa Rosa, CA 95403

**Visalia, Tuesday, Sept. 14**

Visalia Convention Center, San Joaquin Room  
303 E. Acequia  
Visalia, CA 93291

**Chico, Wednesday, Sept. 15**

Community Center  
545 Vallombrosa Avenue  
Chico, CA 95927

**Redding, Tuesday, Sept. 21**

Doubletree Hotel  
Sierra Room  
1830 Hilltop Drive  
Redding, CA 96002

**Sacramento, Wednesday, Sept. 22**

Convention Center, Room 203  
1030 15th Street  
Sacramento, CA 95814



## Memorandum

Date: June 23, 1999

To: Bay-Delta Advisory Council

From: Lester A. Snow

Subject: Message Points for Draft EIS/EIR Release

This memo contains CALFED's message points that may be helpful to you as we release the draft EIS/EIR, including:

- Major Message Points
- Benefits of the CALFED Program
- Recent Program Refinements
- Contents of the CALFED Program Plan.

CALFED will use these points to present a consistent message and description of the Plan as we talk with agencies, stakeholders, and the media.

### I. Major Message Points

- **Solving Bay-Delta problems is crucial.** A plan to resolve Bay-Delta problems is crucial to Californians' health and prosperity. Ecosystem restoration is an essential part of the plan, both to protect the unique natural resources of the Bay-Delta and to improve water supply reliability.
- **CALFED Plan is comprehensive.** CALFED's program plan includes strategies to solve problems in four interrelated resource areas: ecosystem restoration, water quality, levee system integrity, water supply reliability.
- **Plan development is collaborative.** The CALFED program plan is the result of unprecedented collaboration among state and federal agencies and stakeholders. Example: *fifteen* hearings on the Draft Programmatic EIS/EIR.

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#### CALFED Agencies

**California** The Resources Agency  
Department of Fish and Game  
Department of Water Resources  
California Environmental Protection Agency  
State Water Resources Control Board  
Department of Food and Agriculture

**Federal** Environmental Protection Agency  
Department of the Interior  
Fish and Wildlife Service  
Bureau of Reclamation  
U.S. Geological Survey  
Bureau of Land Management  
U.S. Army Corps of Engineers

Department of Agriculture  
Natural Resources Conservation Service  
U.S. Forest Service  
Department of Commerce  
National Marine Fisheries Service  
Western Area Power Administration

- **Plan offers improvements for all interests.** Water suppliers, agriculture, business, and the environment will all see improvements with CALFED implementation.
- **2 + 2 = 5.** Most program actions will help solve problems in more than one resource area. A comprehensive solution is more efficient, more broadly supported, more successful than previous more narrowly focused efforts.

## II. Benefits of the CALFED Program

The CALFED Program will provide benefits to all Californians. Here are significant benefits from the perspective of six major interest groups:

### Agriculture

- All of CALFED's four strategies include a range of solutions to increase water supply reliability.
- Environmental improvements for listed fish species in the Delta will allow easing of current restrictions on Delta pumping.
- CALFED's adaptive management approach ensures a responsive and scientifically based environmental restoration program.
- Water quality improvements will reduce salt loads in irrigation water in some regions of the state.
- Expanded water use efficiency programs will help pay for cost-effective conservation measures through loans and grants, helping farmers to retain access to the least expensive water while putting that water to its best agricultural use. Efficiency efforts can reduce agricultural costs by reducing water and energy costs and reducing pesticide and fertilizer use.
- Expansion of groundwater and/or surface storage and improvement of conveyance will provide greater operational flexibility and access to existing and new water supplies.
- The new Environmental Water Account will stabilize conditions in the Delta to maximize both fish protections and Delta exports.

### Delta

- CALFED's levee stabilization program will establish a framework for funding for repair and maintenance of critical levees in the Delta for the next 30 years.
- CALFED will form a Delta Drinking Water council to ensure Delta stakeholders are centrally involved in the assessment of the performance of through-Delta conveyance in meeting goals for Delta water quality and drinking water quality.
- CALFED will minimize impacts on Delta agricultural land use by focusing ecosystem restoration on public lands before private lands and using conservation easements where feasible rather than land acquisition.
- The Preferred Program Alternative includes Delta conveyance using existing channels with some modifications, coupled with a suite of actions, including south Delta barriers, to manage Delta fisheries, water quality, and water supply reliability concerns. These actions are consistent with the CALFED adaptive management approach and the "common pool" concept recommended by Delta interests.

### Urban Water Users

- CALFED's ecosystem restoration program will promote recovery of endangered fish species in the Delta, thereby lifting the current pumping restrictions and making urban water supplies more reliable.
- CALFED's adaptive management approach ensures a responsive and scientifically based environmental restoration program.
- CALFED's water quality program will bring continuous improvements in Delta source water quality for urban water users.
- CALFED's Water Use Efficiency Program will provide assistance and incentives to urban water agencies to maximize their water conservation and water recycling activities in both the near-term and throughout the life of the Program.
- CALFED will improve overall water management in California through an expedited transfers market, re-operation of existing facilities, including hydropower reservoirs, and

constructions of new groundwater and/or surface storage. All of these tools will benefit urban water users.

- CALFED's levee program will protect Delta water quality from the effects of a catastrophic levee failure.

### **Environmental**

- CALFED's plan to restore the Bay-Delta ecosystem and upstream habitat is the most comprehensive environmental restoration program ever undertaken in the United States, possibly in the world.
- CALFED's Watershed Program will coordinate the multitude of local programs in the watersheds to restore streams and terrestrial habitat throughout the watersheds including areas above California's major dams and in the Bay Area.
- CALFED's Water Use Efficiency Program provides funding and technical assistance to help local agricultural and urban water districts to meet measurable performance objectives in conservation and recycling. These actions will help to stabilize the state's water supplies in dry years.
- CALFED's Water Management Strategy calls for aggressive implementation of all water management tools, including water use efficiency and water transfers. Additional storage will be developed only in concert with active implementation of all the water management tools in the CALFED strategy.
- CALFED's Environmental Water Account will provide focused improvements in Delta conditions that exceed protections offered by prescriptive standards alone.
- CALFED's Water Quality Program will produce instream water quality improvement which will benefit both water users and wildlife.
- CALFED's principle of "beneficiaries pay" will help ensure that only water management actions which are cost effective will be implemented.
- Improvements in Delta conveyance will yield benefits for both fisheries and water quality.
- CALFED's adaptive management approach ensures a responsive and scientifically based environmental restoration program.

- CALFED has developed comprehensive strategies for solving problems in the Bay-Delta system. These comprehensive strategies, such as the restoration of ecological processes and functions, will provide benefits to San Francisco Bay as well as the Program's defined problem area which includes the Delta, Suisun Marsh, and Suisun Bay extending down to Carquinez Strait.

#### **Business**

- CALFED's Water Transfers Program will form the foundation for a more active and responsive water transfers market, thus helping to inject more direct market signals into the state's water management.
- CALFED's Water Management Strategy includes a protocol for investigating and constructing the most needed and cost-effective additional storage to benefit both the state's water users and the environment.
- CALFED's principle of "beneficiaries pay" will help to ensure that only the most cost-effective water management tools will be used to stabilize and stretch the state's water supply.
- California's economy depends on reliable water supplies and high quality water for business and industry, and CALFED will improve water supply reliability and water quality

#### **Rural**

- CALFED's Integrated Storage Investigation includes assessing the potential for re-operating upstream hydropower reservoirs for local water supply as well as potential environmental and downstream water use.
- CALFED's Watershed Program coordinates a multitude of local watershed programs and will support the activities to restore and protect watersheds.
- CALFED's Water Transfers Program includes an information clearinghouse so that complete and timely information is available to those who might be affected by a proposed transfer, additional analysis requirements for proposed transfers so that relevant information is generated, and assistance to local agencies so they can implement local groundwater management programs.

### III. Recent Program Refinements

The *Phase II Report* is a detailed summary of Program status that CALFED has published periodically. The last *Phase II Report* was published in December 1998. An updated report is being distributed as part of the draft programmatic EIS/EIR released on June 25, 1999. Here is a summary of program refinements as reflected in the latest *Revised Phase II Report, June 1999*:

- There is more emphasis on CALFED's four comprehensive strategies for solving problems related to ecosystem restoration, water quality, water supply reliability, and levee system integrity. As a result, the program elements are better integrated.
- The specific plans for the ecosystem restoration, water quality, levees, watersheds, and water use efficiency program elements have been refined and more specificity has been added regarding proposed actions, particularly for Stage 1a, the first two years of the program.
- The Stage 1a actions have been grouped into seven bundles, based mainly on geography, to better link program elements and provide for cohesive packages for permitting purposes.
- The drinking water quality improvement strategy is more refined than in December 1998, better describing how improvements will be achieved and future decisions will be made.
- There is a specific proposed approach and set of actions for South Delta Improvements. These improvements are critical to improving flexibility in the system and represent a breakthrough in an area of inter-agency conflict since 1982.
- The report contains a detailed introduction to CALFED's Water Management Strategy. This includes CALFED's goals for water supply reliability and is the first real integration of the various water management actions into a comprehensive strategy.
- The Water Management Strategy includes a description of CALFED's Integrated Storage Investigation which was first developed in February 1999.
- The focus for groundwater development has changed to emphasize local development of projects using CALFED support and has expanded to include Southern California. A solicitation of interest this year resulted in identification of 25 potential projects.
- The report includes a discussion of how the Water Management Strategy can be implemented early in Stage 1 to provide an Environmental Water Account. There has been substantial effort put into "gaming" or making an EWA work using real time scenarios with

participants from fisheries management and water operations. Data have been developed which have shown the utility of an EWA.

- There is an introduction to CALFED work on Program governance, both interim and long-term, and on financing the Program. These are coupled with the Stage 1a actions in CALFED's draft Implementation Plan.
- There is a description of CALFED's draft Multi-species Conservation Strategy. The Strategy is a new document which describes how ESA assurances can and will be developed for program actions.

#### IV. Program Content

- **CALFED Phase II Products.** CALFED has issued a draft programmatic EIS/EIR describing a preferred program alternative. After public hearings and program refinement, CALFED will select a final preferred program alternative, issue a final programmatic EIS/EIR, Record of Decision, and Certification.
- **Implementation Planning.** Concurrently with EIS/EIR preparation, CALFED is planning for implementation over a period of 30 years or more. Actions are being outlined for Stage 1 (the first seven years of implementation) and identified specifically for Stage 1a (the first two years).
- **The Preferred Program Alternative.** The Preferred Program Alternative is a CALFED Plan that includes both actions and studies, carried out in a context of adaptive management. This means that actions will be structured to test hypotheses about how to solve Bay-Delta problems, with subsequent actions modified according to what is learned.
- **CALFED Strategies and Program Elements.** The CALFED Plan includes strategies for solving problems in four resource areas:

Ecosystem Restoration	Water Quality
Water Supply Reliability	Levee System Integrity

Program actions included in the strategies are drawn from eight elements:

Ecosystem Restoration	Water Quality
Water Use Efficiency	Watershed Management
Water Transfers	Levee System Integrity
Storage	Conveyance

Three of the strategies (ecosystem, water quality, levees) have corresponding program elements. The fourth strategy is CALFED's Water Management Strategy for water supply reliability, which is still being refined.

- **Water Management Strategy.** This strategy will provide a long-term decision-making framework for improving water supply reliability, relying on many program elements. Like other parts of the CALFED Plan, the Water Management Strategy will include some actions that are ready for implementation or project level environmental review (conservation, recycling, transfers, water quality improvements, south Delta modifications) and some studies (storage, other conveyance modifications).
- **Environmental Water Account.** One early application of the CALFED Water Management Strategy will be an Environmental Water Account. The EWA is based on the concept that flexible management of water could achieve fishery and ecosystem benefits more efficiently than a completely prescriptive regulatory approach. The optimum approach may include standards to provide a broad baseline of ecosystem protection and address certain specific needs. The EWA can then "fine-tune" environmental protection guided by real-time monitoring. As envisioned, assets including water and money would be managed for the benefit of fish just as water managers now use such assets for the benefit of other water users. CALFED will implement and evaluate an EWA in Stage 1 and, based on performance, consider whether and to what extent the EWA can subsequently be applied to a broader range of regulatory programs protecting Bay-Delta resources.
- **Integrated Storage Investigation.** CALFED and the CALFED agencies will carry out a comprehensive assessment of alternative storage options and their utility to overall water management. Parts of the Integrated Storage Investigation will include these evaluations:

Surface Storage Investigations	Groundwater/Conjunctive Use Programs
Power Facilities Reoperation	Fish Migration Barrier Removal

The Integrated Storage Investigation will extend into the implementation phase of CALFED. New storage will be developed, together with aggressive implementation of water conservation, water recycling, and water transfers as appropriate to meet CALFED goals.

- **Conveyance.** CALFED's draft preferred program alternative includes through-Delta conveyance with some modifications to Delta channels. In the south Delta, actions include a new screened intake to Clifton Court Forebay, a new screened diversion at Tracy and/or expansion of Clifton Court, and operable barriers to improve conditions for migrating

salmon and improve south Delta water quality and stage conditions. In the north Delta, CALFED will study and evaluate a screened diversion on the Sacramento River or equivalent water quality actions to improve drinking water quality and protect public health. If other Program actions are not achieving drinking water quality goals and a screened diversion of up to 4000 cfs would help achieve goals without adversely affecting fish, such a pilot facility would be constructed.

- **Future Conveyance Actions.** The Preferred Program Alternative includes a process for determining the conditions under which any additional water management or conveyance actions such as an isolated facility might be constructed, based on CALFED progress toward meeting measurable drinking water quality objectives and/or CALFED progress toward ecosystem restoration objectives, with particular emphasis on fisheries recovery.
- **Financing the Program.** CALFED has drafted a finance plan that lays the initial groundwork for financing the Program. A fundamental philosophy is that costs should, to the extent possible, be paid by beneficiaries of the Program actions. Other funding will come from state and federal appropriations and bonds. The preliminary estimate is that Stage 1 Program costs will exceed \$5 billion.
- **Program Governance.** The governance and decision-making structure for implementation of the CALFED Plan is a key feature in assuring successful program implementation. CALFED is developing a long-term governance plan that will be completed by the time a final Record of Decision is issued in mid-2000. While the long-term structure is being established, an interim governance structure similar to existing program governance structure will need to be in place.



# Summary

*of the*

## **Joint Meeting of the BDAC Ecosystem Restoration and Watershed Work Groups**

### *Morning Session*

The Bay-Delta Advisory Council (BDAC) Work Groups of the CALFED Watershed Program (Watershed Program) and the CALFED Ecosystem Restoration Program (ERP) met on April 16, 1999, in Sacramento. The purpose of the joint meeting was to obtain and share information of the two Programs and begin to explore opportunities for collaboration.

#### **Introductions**

Watershed Work Group co-chair, Martha Davis (Californians and the Land) began the meeting by introducing the meeting facilitator, Dave Ceppos (Jones & Stokes Associates). Introductions of the attendees followed. A list of meeting participants (Attachment A) and handouts (Attachment B) is included.

#### **Approaches of the Watershed and Ecosystem Restoration Programs**

Steve Ritchie (CALFED Bay-Delta Program) introduced the first agenda item by illustrating some of the similarities of the two programs. He stated that the CALFED Bay-Delta Program is a "watershed program" in total. He added that a watershed approach can be viewed as a triangle with management, public participation, and science at the three corners. Although both the ERP and Watershed Program contain all three elements, they have taken different approaches in the formation and coordination of the Programs. Mr. Ritchie stated that the ERP originally concentrated heavily on management and moved toward the science and public participation elements. The Watershed Program, on the other hand, has focused heavily on public participation and is moving towards management and science. Mr. Ritchie expressed the need for interface between the two programs to create a better balance. However, he added that one Program should not be consumed by another.

Roberta Borgonovo (BDAC/ERP Work Group Chair) stated that there is integrity to each of the Programs - each has its' own value; however, there are some areas of overlap. She explained that the joint meeting is a beginning to address the need for integration among the Programs and improve the communication among them. Martha Davis concurred with Ms. Borgonovo's comments.

## ***Ecosystem Restoration Program***

Dick Daniel (ERP Manager) presented an overview of the ERP. He explained that over the ERP's four-year history, CALFED has facilitated meetings all over the state to gain opinions and information to include in a comprehensive plan. A draft of the ERP Plan was originally released in March 1998 for public review, of which CALFED received hundreds of comments. Mr. Daniel explained that the ERP Plan is focused on science and management because the Program staff feel those elements are necessary in order to protect the integrity of the ERP.

The current ERP Plan has had significant scientific review. In addition, a core group of scientists gathered together to draft the Strategic Plan for ERP. The Strategic Plan describes a framework and guidelines for implementing the ERP. Chapter 6 of the Strategic Plan illustrates the Stage 1 Action Plan.

Mr. Daniel provided an overview of the Draft ERP Work Plan. The work plan is composed of three principal work efforts:

- The development of **White Papers** on key scientific issues by work teams of Bay-Delta scientists to provide a scientific context for ERP actions (the first papers completed by mid-July, others prepared as needed for scientific workshops);
- Convening **Scientific Workshops** attended by Bay-Delta scientists and resource managers to select and design high-priority restoration actions in an adaptive management approach (convened by UC Davis starting mid-July and continuing through winter of 1999); and
- **Regional Meetings** with scientists, local government officials and stakeholders to evaluate proposed adaptive management strategies and identify restoration opportunities (convened by CALFED staff and local groups starting in the winter of 1999/2000 and continuing until completion of the Final Programmatic EIS/EIR in late spring of 2000).

## ***Watershed Program***

John Lowrie (Watershed Program Manager) presented an overview of the Watershed Program. Mr. Lowrie explained that the intent of the Watershed Program is to put in place a community led framework for watersheds of the Bay-Delta system, focusing on the four broad objectives of CALFED: ecosystem quality, water supply, water quality, and levee system integrity.

Mr. Lowrie stated that the Watershed Program Plan is composed of three primary components: elements, principles, and desired outcomes. The Watershed Program staff are currently working on the desired outcomes which will be included in the Revised Draft Watershed Program Plan. The elements of the Watershed Program are: Coordination and Assistance; Adaptive Management and Monitoring; Education and Outreach; Integration with Other Common

Programs; and Understanding Watershed Processes. Interwoven in these elements are a set of guiding principles which were developed in close collaboration with the Watershed Program Work Group. The Principles state that CALFED supports watershed activities that:

- Are community based;
- Collaborate and are consistent with CALFED;
- Address multiple watershed issues;
- Are coordinated with and supported at multiple levels;
- Provide for ongoing implementation;
- Include monitoring protocols; and
- Increase learning and awareness.

### *Discussion*

A discussion followed the overview of the ERP and Watershed Program. The discussion focused on the following points/questions:

- Integration between CALFED objectives and local programs.
- Need for a mechanism to make coordination happen.
- How will CALFED prioritize areas of implementation?
- How to improve the relationship between macro- and micro-land managers?
- What does "integration" of Programs mean? How is it done? How far does it go?

The following are specific questions and comments made by the meeting attendees:

- A meeting participant asked Mr. Daniel about the level of local participation in the ERP. He responded that the ERP staff members have met with various land use managers. For example, staff has met with Shasta County regarding gravel management and harvest, and discussed how those activities may affect zoning. ERP staff members have also met with Butte County regarding actions on Butte Creek. Mr. Daniel also offered an example in the Delta where ERP scientists developed a model regarding tidal action. The model was presented to the Delta Protection Commission who raised concerns that implementation

of the model would affect the land use practices. CALFED and the Delta Protection Commission worked very hard together to develop a new plan focusing on public land and willing landowners.

Mr. Daniel also recognized that it is important to coordinate ERP actions with the local land managers because some actions could be undone. The ERP would like to "match-up" with local General Plans to ensure that both parties are on the same track. Mr. Daniel acknowledged that such an effort will be a substantial task, which further increases the need for ERP actions to be based on sound science.

- Mr. Daniel was asked about interaction among the ERP and county officials with regard to watershed planning. He responded that CALFED has had an intense relationship with counties. In the northern areas a group of county supervisors has assembled to work with CALFED - primarily focusing on the ERP and storage.
- A comment was made by a meeting attendee regarding CALFED's reluctance to address issues related to the San Joaquin River. Mr. Daniel replied that CALFED does have aggressive plans for areas in the Delta to the mouth of the Merced River. However, he added, because of pending litigation it does not make sense to propose restoration actions above Friant Dam. Mr. Daniel explained that as part of the Program's adaptive management process, CALFED would become involved if the courts decide to re-water.
- A meeting participant inquired about CALFED's involvement in decision making processes at the state level. Mr. Daniel responded that when CALFED was originally formed, the Program staff was intentionally not given any regulatory authority. Furthermore, it has been concluded that it is inappropriate for the CALFED Program to be involved in governmental decision making processes. Mr. Daniel added that various state and federal agencies do have close communication through the Policy Group.
- A comment was noted about the disconnect between the ERP and Watershed Program - CALFED not only needs to be connected at the local level, but also needs to be aware of what is occurring internally. Ms. Borgonovo responded that the joint meeting is an attempt to improve the integration.
- Mr. Daniel was asked how the ERP would prioritize restoration actions. He responded that although the CALFED Program is a 30-year endeavor, focus is heavily placed on Stage 1 (first seven years of implementation). The ERP is focusing on recovery of endangered species in Stage 1.
- A meeting participant noted that the ERP was necessary because there was not a systemic view at a macro-scale. However, after focusing on a macro-scale view, it can be difficult to identify activities at a micro-level. What is lacking is how to improve the relationship between macro- and micro-land managers. How can CALFED make this a collaborative

approach?

- A comment was noted regarding the importance of adaptive management and monitoring - a component of both the ERP and the Watershed Program. It was added that science is also critical to both programs; it is necessary to identify what is known, as well as unknown.
- A meeting participant stated that CALFED needs to know what is going on at a finer level because the actions that they propose may affect activities at a local level. A process is needed to aid this communication.
- A suggestion was made by a meeting attendee that the CALFED scientists should work in concert with the local land managers and groups. These individuals can provide local expertise and knowledge to the process. Mr. Daniel responded that it would be helpful to compile a list of local resources to contact.
- A meeting participant commented that combining the ERP and the Watershed Program was not a good idea. It is important to establish strong links, but collapsing the Programs would cause objectives to get lost. Although there are some similarities among the two Programs, the Watershed Program is more process and relationship driven. Another meeting attendee added that the ERP is more focused on specific problems, whereas the Watershed Program is more focused on building local relationships.
- A meeting attendee commented that the Consumnes River has been identified as a prototype by the Comprehensive Monitoring Assessment and Research Program (CMARP). It was suggested that this watershed could be a place where CMARP, ERP, and the Watershed Program could all work together.

The following items were identified as common themes and understandings:

- CALFED will be implemented at the local level.
- Need to develop a process to pursue regional implementation.
- Need for sound science.
- Need for adaptive management and monitoring.
- Need for education and outreach.
- Need to marry CALFED goals with that of local goals.
- Need to integrate solutions for all species (e.g. wildlife and humans).
- Need to apply a holistic view of watersheds as a basis for developing solutions.

### *Next Steps*

It was suggested that an additional joint meeting of the ERP and the Watershed Program be

scheduled before the Regional Meetings. This will provide an opportunity to more fully discuss how the ERP and Watershed Program can collaborate to host successful and effective Regional Meetings.

In addition the following items were identified as possible future steps to better integrate the ERP and the Watershed Program:

- Involve local technical specialists as part of the ERP "white paper" process and scientific workshops.
- Incorporate the Interagency Watershed Advisory Team (IWAT) into scientific workshops.
- Set up a list server amongst the ERP and Watershed Program Work Groups to facilitate communication.
- Compile a list of contacts for local expertise; provide to ERP staff.
- Identify one to two liaisons/ambassadors from each Work Group to disseminate information.

### *Afternoon Session*

The Watershed Work Group continued to meet after the lunch break to discuss matters related to the Watershed Program.

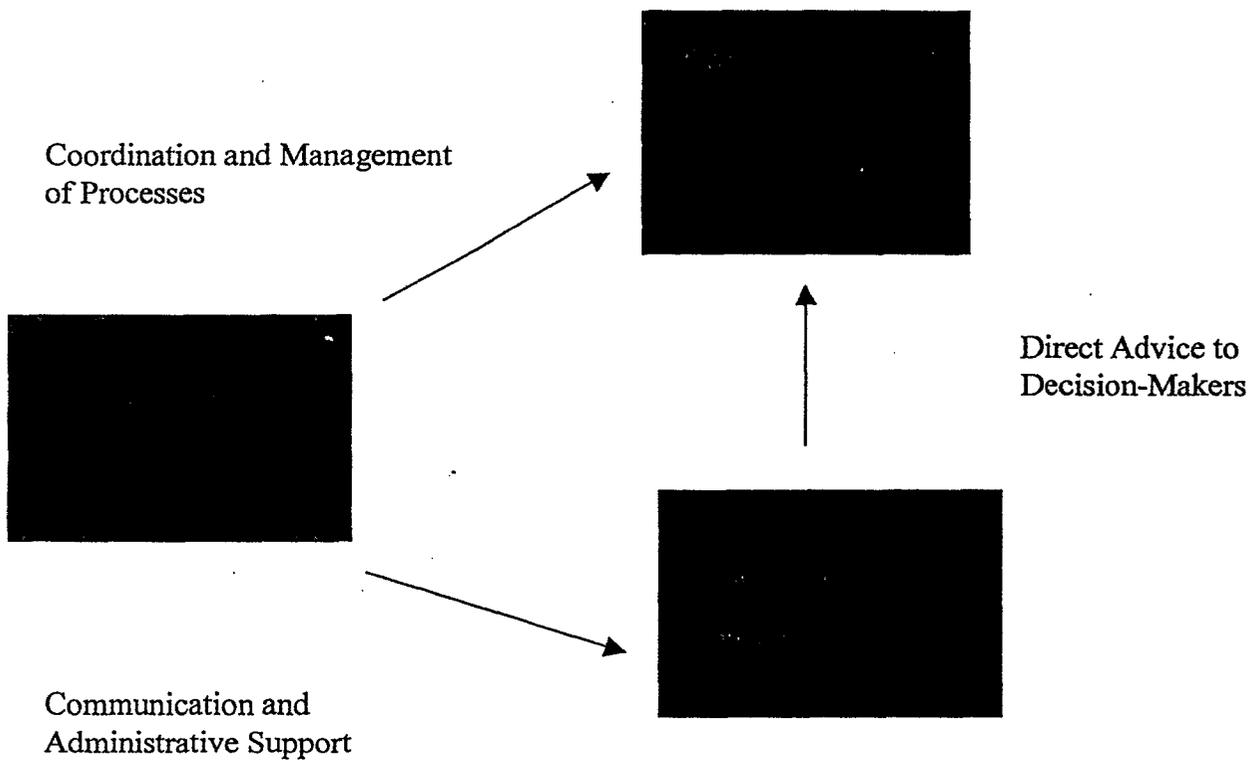
#### Governance

Mr. Lowrie began a discussion on Watershed Program governance for both the interim and long-term. He stated that for the interim it is assumed that the CALFED Policy Group will remain in place; CALFED Program staff will remain as the management/coordination role; and there will be no new legislation. The interim period may last approximately three years. For the long-term it was assumed that some form of oversight will continue to exist. It was noted that this will likely require legislation.

Mr. Lowrie explained that currently there are three advisory groups to the Watershed Program, the Watershed Work Group and agency representatives which make up both the Policy Group and IWAT. Based on these advisory roles, an organizational diagram was proposed (see Figure 1). Mr. Lowrie explained that the IWAT was included in both the box illustrating the Policy Group and Watershed Work Group to ensure that there is effective communication among the agencies and stakeholders.

- A meeting participant asked how this proposed governance structure differs from the current scenario. Mr. Lowrie replied that CALFED is in a planning phase now, the proposed governance structure is for implementation. During implementation the

Watershed Work Group, Policy Group, and IWAT will have a more substantial role. The



Watershed Program staff's role will be refined to coordination and management responsibilities.

**Figure 1. Proposed Governance Organization for the Watershed Program**

- A question was asked regarding how on-the-ground projects will be funded and implemented. Mr. Lowrie responded that watershed projects could go through a proposal process, be directed actions, and/or be implemented by agencies. Mr. Lowrie added that if activities were assigned to agencies they would be very specific actions.
- A comment was noted expressing appreciation for the attendance of IWAT members at the Watershed Work Group meetings. The close interaction among the IWAT representatives and stakeholders is very important.

It was agreed that the discussion on Watershed Program governance would be continued at the next Watershed Work Group meeting.

### Watershed Legislation

Laurel Ames provided an update on Assembly Bill No. 730 (AB730). A group of stakeholders meet earlier to discuss elements of the bill. Some stakeholders volunteered to draft the following concepts for the watershed legislation.

- Proposed scope;
- Purposes and assumptions;
- Coordination of local watershed groups and government agencies;
- Roles and responsibilities; and
- Funding.

The draft concepts will be given to Assembly Member Dickerson as comments/suggestions for AB730. A future meeting to discuss the legislation was planned for Friday, May 21, 1999. The draft concepts will be presented at this time. Ms. Ames agreed to present the results of this meeting and the draft concepts at the next Watershed Work Group meeting.

### Watershed Presentation

Nettie Drake (Panoche/Silver Creek Watershed CRMP) gave a presentation on her experiences in overseeing the Panoche/Silver Creek Watershed Coordinated Resource Management Program (CRMP). The watershed is approximately 300,000 acres and located on the westside of San Joaquin Valley. Mendota is the only municipality located in the watershed.

Ms. Drake explained that when she came on board the CRMP had been in existence for six years. The landowners were very upset with flooding problems, in addition to erosion, water quality, and soil problems. Ms. Drake explained that the CRMP now works closely with the landowners, and landowner involvement has increased from 2 to 200 since she began working with the CRMP. The CRMP's charge is to develop projects to address problems identified by the landowners. In 1996, the CRMP received a grant to conduct a sedimentation study. The study evolved into modeling and field work. The CRMP is now applying for grants to conduct a multitude of projects including implementation of best management practices (BMPs); addressing water quality problems on Silver Creek; and working with landowners, CA Department of Fish and Game, and the U.S. Army Corps of Engineers on a 12-mile stretch of Panoche Creek.

### Meeting Wrap-Up

The next Watershed Work Group was scheduled for Friday, May 21, 1999, location to be announced. The Watershed Work Group will continue to meet on the third Friday of every month.

*Attachment A*

<b>Name</b>	<b>Affiliation</b>
Allen, Bob	Burney Forest Products
Ames, Laurel	Sierra Nevada Alliance
Aumack, Laurie	Battle Creek Watershed Conservancy
Barris, Lynn	Friends of the River
Bobker, Gary	The Bay Institute
Borgonovo, Roberta	League of Women Voters/BDAC
Ceppos, Dave	Jones & Stokes Associates
Cervantes, Rick	Lake County
Clamurro, Lori	Delta Protection Committee
Cowdin, Steve	California Department of Water Resources
Crooks, Bill	City of Sacramento
Daniel, Dick	CALFED Bay-Delta Program
Davis, Martha	Californians and the Land
Dawley, Vicky	Tehama County Resource Conservation District
deAlba, Fernando	City of Mendota
Denzler, Sara	California Department of Water Resources
Dingfelder, Jacqueline	For the Sake of the Salmon
Drake, Nettie	Panoche/Silver Creek Watershed CRMP
Fainter, Michael	CALFED Bay-Delta Program
Fitch, Steve	Office of Assembly Member Dickerson
Harthorn, Allen	Butte Creek Watershed Conservancy
Heiman, Dennis	Regional Water Quality Control Board
Henly, Russ	California Department of Forestry
Jerauld, Frank	Amador Resource Conservation District
Kiel, Peter	CALFED Bay-Delta Program
Knecht, Mary Lee	Jones & Stokes Associates
Laycheck, Eugenia	California Center for Public Dispute Resolution/CALFED
Letl, Dennis	California Department of Water Resources
Liebersbach, Debbie	Turlock Irrigation District
Lindquist, Donna	Plumas Corporation/Feather River CRM
Madison, Mary	UC Davis



Mar, David  
Meacher, Robert  
Miyamoto, Joe  
Morrison, Douglas  
Nakamura, Gary  
Nelson, Earl  
Nutting, Ray  
O'Connor, Dennis  
Ohlson, Grace  
Pacheco, Teresa  
Parkin, Ann Marie  
Pendleton, Dennis  
Petry, Edward  
Pyle, Stuart  
Rentz, Mark  
Reynolds, Rogene  
Roberts, James  
Robinson, Dave  
Schultz, Sara  
Sime, Fraser  
Smerlser, Mark  
Smith, Larry  
Smythe, Tome  
Thomas, Rick  
Tuma, D.A.  
Tupper, Julie  
Vargas, Al  
Turner, Martha  
Wehri, Tom  
Wollan, Otis  
Zuckerman, Tom

Westlands Water District  
Regional Council of Rural Counties/BDAC  
East Bay Municipal Utility District  
U.S. Fish and Wildlife Service  
Shasta Tehama Bioregional Council  
Western Area Power Administration  
Regional Council of Rural Counties/El Dorado Co. Supervisor  
California Research Bureau  
  
U.S. Army Corps of Engineers  
Metropolitan Water District  
University of California Davis  
  
Kern County Water Agency  
California Forestry Association  
San Joaquin Resource Conservation District  
Sacramento Environment Commission  
U.S. Bureau of Reclamation  
U.S. Army Corps of Engineers  
California Department of Water Resources  
Cotton, Shires and Associates  
U.S. Geological Survey  
Lake County  
Metropolitan Water District  
Libertarian Party  
U.S. Forest Service  
Regional Water Quality Control Board  
  
California Association of Resource Conservation Districts  
American River Watershed Institute  
Central Delta Water Agency

**Meeting Handouts**

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- ✓ Meeting Agenda;
- ✓ Memorandum re: Description of the Draft ERP Work Plan and Program Integration;
- ✓ Draft Watershed Program Implementation Strategy dated March 12, 1999;
- ✓ Proposed Governance Organization for the Watershed Program;
- ✓ Assembly Bill No. 730;
- ✓ Proposed Scope for Assembly Bill No. 730;
- ✓ Senate Bill No. 1088;
- ✓ BDAC Watershed Work Group Meeting Summary - February 19, 1999;
- ✓ BDAC Watershed Work Group Meeting Summary - March 19, 1999; and
- ✓ BDAC Watershed Work Group Meeting Participants (as of March 19, 1999).

**CALFED Ecosystem Roundtable  
Meeting Notes for May 18, 1999**

**Roundtable members (or their alternates) and liaisons present:**

Gary Bobker (The Bay Institute)	Steve Macauly (SWC)
Steve Evans (FOR)	John Mills (RCRC)
Dan Fults (Friant Water Users)	Jason Peltier (CVPWA)
Bill Gaines (CWA)	Doug Wallace (EBMUD)
Greg Gartrell (CCWD)	David Yargas (EDF)
Dan Keppen (NCWA)	Tom Zuckerman (CDWA)
Cynthia Koehler (Save the Bay)	

**Announcements**

- 1) There is a June 9 CVPIA Restoration Fund Roundtable Meeting, 9 a.m. - 3 p.m. at ACWA. See Jason Peltier for details if you are interested in attending.
- 2) Copies of a letter sent to Senator Feinstein by the CVP Water Association were distributed by Jason Peltier.

**Restoration Coordinator's Update**

- 1) There are two proposed new members to the Roundtable. Doug Lovell of Streamborn is proposed to replace John Beuttler of United Anglers. Walt Hoyer of Metropolitan Water District is proposed to replace Steve Hirsch as Tim Quinn's alternate.
- 2) Tentative Roundtable meeting dates through October 1999 are included in the meeting packet.
- 3) Review of last month's meeting notes: Tom Zuckerman thought he was to be on the Issues Subcommittee. He will be included on the subcommittee in future meetings.

**Discussion of Conflict of Interest**

Wendy Halverson Martin discussed the Roundtable policy regarding "perceived conflict of interest" (in contrast to legal conflict of interest), with specific reference to a Roundtable decision recorded in the notes of the May 9, 1997, meeting of the Roundtable. The notes indicate that the Roundtable decided that Roundtable member organizations should not apply for funds through the proposal process. The law on conflicts of interest provides public agency representatives, staff of non-profit organizations, and some others, with exceptions to the legal prohibition on self-dealing in the making of contracts. Thus, the issue of whether Roundtable member organizations should be able to apply for funds generally presents a policy issue and not a legal issue. There are concerns related to any "perceived" conflict of interest that could negatively affect the goals and objectives of the CALFED program. Wendy Halverson Martin and Danae Aitchison (Legal Counsel) confirmed that proposals have been received under the 1999 PSP that involve organizations represented on the Roundtable, either as applicants, participants/collaborators, or supporters. Public comment was received regarding a perception that individuals involved in the evaluation process (particularly technical review panels) are also heavily involved in submitting proposals to CALFED.

The Roundtable discussed whether or not Roundtable member organizations should be able to submit proposals. One member said he opposes any funding of Roundtable member organization's proposals for funding in this round. Another member distinguished the technical review input from the type of policy input the Roundtable provides and suggested that barring Roundtable member organizations from competing would eliminate potentially worthy proposals. Public comment was received suggesting that cooperation/collaboration of Roundtable member organizations in a proposal is not the primary issue, but rather the personal conflicts of individuals associated with those organizations.

Wendy Halverson Martin cited that there is no legal basis for excluding proposals that involve some level of participation from Roundtable member organizations in this round. In the future, additional guidance about this issue will be published in the Proposal Solicitation Package.

Danae Aitchison will revisit the issue of Roundtable representation during Integration Panel meetings. The Roundtable recommended, pending Danae's legal review, that the Roundtable co-chairs recruit a Roundtable member to serve as a liaison to the Integration Panel.

At the June meeting, Roundtable members will need to go through declarations of legal conflict of interest prior to the discussion of the recommended proposals.

### **Battle Creek Presentation**

Steve Hirsch gave a presentation on the current status of the Battle Creek Project. During last month's meeting, the Roundtable requested that a public meeting be held to discuss the MOU. The meeting was held on May 11, and was attended by six Roundtable members. The meeting served to: 1) provide background information on the Battle Creek effort; 2) inform Roundtable members of substantive issues which still need to be resolved; and 3) provide Roundtable members with a progress report on the MOU. The Roundtable members provided valuable comments to be addressed in the MOU. Roundtable members also expressed a number of concerns, including: 1) establishing biological objectives for the adaptive management component of the project; and 2) economic assumptions.

At the May 13 Policy Group meeting, a request was granted to extend the deadline for finalizing the MOU. The MOU Parties (PGE, NMFS, USFWS, CDFG, and USBR) have a number of days this week dedicated to reach closure on the MOU. They intend to have the Final MOU available at the June 16 Roundtable meeting, and have formal approval of funding at the June 17 Policy Group meeting.

### **Butte Creek Proposal Update**

The Integration Panel reviewed the proposal again, and did not recommend it for funding. A one page summary of the issue was distributed. There is some disagreement over the level of local support and/or opposition to the project and the representation of the local stakeholders in the process. There is concern among Roundtable members about the degree to which local support (versus more "scientific" criteria) should be considered by the Integration Panel in their evaluation. The Roundtable agreed to support the IP's decision to not fund the current Butte Creek Proposal, but agreed to remain neutral on the "project concept" in the event that acceptable future (or modified) proposals come forward.

### **Environmental Water Acquisition Proposal**

An Environmental Assessment (EA) has been made public regarding the acquisition of 50,000 acre feet on the Stanislaus River (for temperature benefits for steelhead) and 75,000 acre feet on the Yuba River (benefits spring run in the Delta by shifting pumping periods). The total cost would be \$6-7 million. The Stanislaus River water would improve conditions in the Stanislaus and then be used for "make up" water to the State further downstream. To avoid problems with pumping and spring run impacts, the Yuba River water would help protect spring run by reducing pumping in the future in exchange for water already stored in the Stanislaus. [The Yuba River water would be available for export after serving its environmental purpose]. The EA is on the Web, and has a 15 day review period. No workshop is currently planned.

Several Roundtable members had serious concerns about the acquisition, due in part to the potentially inappropriate use of "environmental water."

### **Issues Subcommittee Report**

Gary Bobker, Steve McCauly, CALFED staff, and Wendy Halverson Martin attended the subcommittee meeting. They discussed integration issues between short and long-term programs, and monitoring of funded restoration actions and contracts. They will reconvene at a date when better attendance (including Tom Zuckerman) is possible.

### **Public Comment**

Greg Gartrell thanked staff for quarterly reports that were provided. He raised concerns regarding projects with signed contracts that have had no funds expended. Any project-specific issues regarding this situation should be addressed to Wendy. Tom Zuckerman has concerns regarding the reporting information and format that he will discuss with Wendy and other staff. There are also concerns about the volume of the quarterly reports.

### **Future Meetings**

June 14 (workshop), June 16, July 22, August 26, September 22, October 8 (workshop), October 13.

**BDAC Letters and  
Responses**

99-160  
MAY 24 1999



CALIFORNIA URBAN WATER AGENCIES

May 20, 1999

Mr. Lester Snow  
Executive Director  
CALFED Bay-Delta Program  
1416 Ninth Street, Suite 1155  
Sacramento, CA 95814

Subject: Early Implementation Actions for Water Quality

*Lester*  
Dear Mr. Snow:

The California Urban Water Agencies (CUWA) has reviewed the March 11, 1999 Draft Bundles of Early Implementation Actions report and the Water Quality Early Implementations Actions contained in the April 8, 1999 memorandum from Rick Woodard to the CALFED Water Quality Policy Team. CUWA agency staff and consultants participated in the development of the Water Quality Program and the early implementation actions. The comments detailed in this letter focus on the source control actions addressing drinking water parameters which are of most concern to urban water agencies, and on other CALFED actions that are important to move forward early in Stage 1 to achieve drinking water quality improvement.

While this letter focuses on drinking water quality issues, CUWA is supportive of the ecosystem water quality actions that are contained in the two documents referenced above. We support the efforts of the California Regional Water Quality Control Board, Central Valley Region (Regional Board) to develop total maximum daily loads (TMDLs) for water quality parameters which are impairing the beneficial uses of the surface waters in the Sacramento and San Joaquin River basins. We urge CALFED to support these efforts as a means of addressing key ecosystem water quality problems.

CUWA supports CALFED's concept for a drinking water quality improvement strategy, that includes a combination of source control actions developed as part of the Water Quality Program and other CALFED actions and studies that will help improve drinking water quality. We believe it is important that the strategy include a mix of source control actions, operational modifications, storage and conveyance facilities improvements, health effects research, treatment research, and water exchanges to effectively improve

the quality of Bay-Delta drinking water supplies. In addition, it is critical that all elements of this strategy move forward in the first two years of Stage 1. The benefits of implementing these actions needs to be verified through monitoring and modeling. CUWA endorses developing water quality milestones as a way of verifying continuous water quality improvement through implementation of these actions.

### **CALFED Source Control Actions**

**Veale Tract Drainage Discharge Study (Action 6)** – CUWA supports inclusion of this project in the early implementation actions. As stated in the April 15, 1999 letter from Richard Denton of Contra Costa Water District (CCWD) to Lester Snow, this project is needed in part to offset the water quality impacts of other South Delta actions. If this project is needed to mitigate adverse water quality impacts resulting from other CALFED actions, CCWD should not be required to share the cost of the mitigation portion of the project. We support CCWD's request that an evaluation of the relocation and/or treatment of the RD 800 drain be included in the early implementation actions.

**Study of Non-Seawater Sources of Bromide (Action 11)** – CALFED's Bromide Expert Panel concluded that seawater accounts for nearly all of the bromide in the Delta. Bromide levels in the San Joaquin River are elevated due to the recirculation of bromide derived from the Delta. A simple desk-top analysis of salt loading in the Delta and San Joaquin Basin could be performed to determine if there are other minor sources of bromide in the San Joaquin Basin. This analysis would most appropriately be conducted by the Department of Water Resources (DWR) Municipal Water Quality Investigations (MWQI) Program or the U.S. Geological Survey (USGS). CALFED should not spend up to \$1 million investigating non-seawater sources of bromide. These funds can better be used on other source control actions and studies that are warranted.

**Barker Slough Watershed Restoration (Action 25)** – CUWA supports the inclusion of the Barker Slough Watershed Management Program in the early implementation actions list. Solano County Water Agency has obtained partial funding to investigate BMPs to improve organic carbon and turbidity levels at the Barker Slough Pumping Plant. Additional funding will be needed to implement the project if the on-going study indicates that water quality can be improved through watershed management. A number of ecosystem improvement projects are planned in the vicinity of the Barker Slough Pumping Plant. CALFED must monitor these projects to determine their impacts on water quality at the pumping plant and the potential loss of supply reliability due to pumping restrictions at the pumping plant.

**Sources and Loadings of Drinking Water Constituents (Action 36)** – This action is a high priority action that must be completed to determine methods of controlling total organic carbon (TOC), total dissolved solids (TDS), bromide, pathogens, and nutrients. CUWA is currently working with DWR's MWQI Program to analyze historic data and determine what is known about the concentrations and loadings of key drinking water parameters. This current analysis will identify what must be included in

the more comprehensive evaluation. The cost estimate of \$0.5 to \$1.0 million per year should be adequate when combined with existing monitoring being conducted by the MWQI Program, DWR Operations and Maintenance Division, and USGS. A combined effort of DWR and USGS will be needed to properly conduct this study. These data would also be used in the development of TMDL's for drinking water contaminants.

**Total Organic Carbon Evaluation (Action 33)** – The scope of this action needs to be broadened from an evaluation of treating agricultural drainage to a more comprehensive analysis of all of the potential options for improving Delta water quality through management of agricultural drainage. This would include an evaluation of treating Delta agricultural drainage, relocating agricultural drains, collection and discharge of drainage from multiple islands at downstream locations that would not adversely affect drinking water quality or ecosystem water quality, retirement of Delta agricultural land, and active land management (reduced leaching, holding drainage for discharge, alternative crops, water conservation, etc.). After an evaluation of all of the options is conducted, pilot scale studies of the most feasible actions should be conducted. The study will likely cost about \$1 million per year for the first two years to evaluate the options. At that point, pilot projects could potentially cost \$4 to \$6 million.

**San Joaquin Salt Management (Action 7)** – CUWA supports real time management of salt in the San Joaquin Basin; however, the scope of this action should be broadened to include additional actions such as on-farm water conservation, tiered pricing, drainage recirculation systems, land management, and land retirement where other options are not feasible. Many of these actions have been implemented in the Grasslands area. These actions could be implemented on a much broader scale in the San Joaquin Basin if CALFED provided financial assistance. Also, the CALFED Program should provide funding and track the progress of the Central Valley Regional Water Quality Control Board's effort to develop a Basin Plan Amendment addressing salt and boron in the lower San Joaquin River. As part of this effort, Regional Board staff will be developing an implementation plan that will include strategies to reduce salt discharges to the San Joaquin River. It will be important that CALFED support and provide funding for San Joaquin Basin salt management actions that are consistent with the Regional Board Basin Plan Amendment.

Note that oversight of the Grassland Bypass project is through an Oversight Committee consisting of representatives of USBR, USFWS, USEPA, DFG, and the Central Valley Regional Board. This might be a better way of describing the project rather than saying the project is headed up by the California Resources Agency and Department of the Interior.

#### **Additional Source Control Actions**

Additional source control actions that CUWA recommends be included in the first two years of Stage 1 are discussed below.

**Byron Tract Drainage Discharge Study** – CUWA supports CCWD's April 15, 1999 request that an evaluation of the relocation and/or treatment of the RD 800 drain be included in the early implementation actions. This project would also serve to offset the water quality impacts of other South Delta actions.

**Study of Recreational Impacts on Drinking Water** – Recreation in the Delta and on the State Water Project reservoirs may contribute pathogens and other contaminants to drinking water supplies. CALFED should support an investigation of strategies to address water quality impacts of recreation (boating and body-contact recreation) on SWP reservoirs as one of the early implementation actions. This study would likely take two years to complete and should be funded at about \$0.5 million per year.

**South Bay Aqueduct Watershed Management Project** – The water agencies taking water from the South Bay Aqueduct do not have the benefit of large storage reservoirs to moderate fluctuations in water quality. CALFED should fund a watershed management project to identify potential methods of improving water quality along the South Bay Aqueduct. A budget of about \$100,000 should be adequate to identify potential control methods. Additional funding would be needed in later years to implement the watershed management program.

**Support for Drinking Water Protection Policy** - CUWA is requesting that the California Regional Water Quality Control Board, Central Valley Region develop a Drinking Water Protection Policy for the Sacramento and San Joaquin basins. We are recommending that water quality objectives be established for TOC, TDS, bromide and pathogens and that a management plan be developed to meet the objectives. Development of this strategy is important for achieving drinking water quality improvement and needs to be linked to development of a coordinated strategy to reduce and mitigate the impacts of urban wastewater discharges into the Delta and its tributaries. Establishing these objectives is key to the future development of TMDLs for drinking water parameters of concern. Although this action should be implemented by the Regional Board, working with the State Water Resources Control Board (State Board), the Department of Health Services (DHS), and the Environmental Protection Agency (EPA), we recommend that CALFED provide political and financial support for this effort.

### **Drinking Water Quality Improvement Strategy**

As stated above, CUWA is supportive of the CALFED drinking water quality improvement strategy that includes a combination of source control and non-source control actions to improve water quality. We recommend that the following actions be initiated in the first two years of Stage 1.

**Health Effects Studies** - CALFED must identify needed public health effects studies to more specifically identify the potential health effects of bromide related disinfection by-products, and provide financial and technical support to ensure that these studies are completed and the results are incorporated in the CALFED process. Although the American Water Works Research Foundation and EPA are conducting health effects research, CALFED must focus on the specific health effects research needed to answer Bay-Delta issues. Some of these studies can take many years to conduct, so CALFED should identify the needed studies and support initiation of these studies in the first two years of Stage 1. This area of work is important as EPA enters the rule-making process for the Stage 2 Disinfectants/Disinfection By-products (D/DBP) Rule.

**Water Treatment Research** - CALFED must identify needed studies on brominated and chlorinated disinfection by-product operational controls at water treatment plants and provide financial and technical support to implement incremental improvements as warranted in subsequent sub-stages of Stage 1. CALFED should also provide financial and technical support to investigate advanced treatment technologies for the removal of TDS, bromide, TOC, and pathogens in urban water supplies.

**Alternative Sources of High Quality Water** - CALFED should investigate alternative sources of and means of providing high quality water supply for urban users of Delta water, and identify legal, water rights, institutional, and physical constraints that currently prevent development of integrated systems. It is important that this work move forward early in Stage 1, as water exchanges and blending programs will likely become an important and necessary tool for achieving water quality improvement for drinking water supplies, especially in Stage 1.

**Operational Modifications** - CALFED should evaluate and implement changes in upstream and Delta operations to continuously improve water quality for Bay-Delta drinking water supplies and for other beneficial uses of water in the Delta, without impacting CALFED's goal of continuous improvement in water supply reliability.

**Evaluation of Physical Modifications to Improve Water Quality** - CALFED should evaluate and conduct feasibility studies on modifications to conveyance facilities that could improve water quality. In particular, CUWA recommends that CALFED conduct feasibility studies for the Hood Test Screens and Diversion Facility, and potential south of Delta improvements such as the O'Neill bypass and San Luis Reservoir bypass facilities to improve water quality for the California Aqueduct and the San Felipe Project. It is important that this work move forward in the first two years of Stage 1, since implementation of operational changes and facilities improvements is likely to be the primary means of achieving drinking water quality improvement early in Stage 1.

**Comprehensive Monitoring, Assessment, and Research Program (CMARP)** - CALFED must commit to fund and implement sufficient monitoring and assessment procedures to monitor drinking water quality parameters at major urban water supply intakes and determine effectiveness of source control actions as well as areas where

additional improvement in water quality is required. CMARP should be included as an early implementation action for funding in the first two years of Stage 1.

We appreciate the opportunity to comment on the early implementation actions and look forward to working with CALFED to further develop these actions over the next several months.

Sincerely,



Byron M. Buck  
Executive Director

cc:

Mr. Steve Ritchie  
Ms. Judy Heath  
Mr. Paul Marshall

MAY 24 1999

99-159



CALIFORNIA URBAN WATER AGENCIES

May 20, 1999

Mr. Lester Snow  
Executive Director  
CALFED  
1416 Ninth Street, Suite 1155  
Sacramento, CA

Subject: Proposed Source Water Quality Milestones for the CALFED Bay-Delta Program

Dear Mr. Snow:

CALFED has committed to continuous improvement in source water quality for Delta drinking water supplies so that water agencies will be able to meet current and future regulatory requirements and protect public health. Although CALFED set long-term targets at 3.0 mg/L for total organic carbon (TOC) and 50 ug/L for bromide, there was recognition in the Revised Phase II report that interim milestones are needed to measure continuous improvement in water quality during Stage 1 implementation. CALFED committed to "work with stakeholders prior to the Record of Decision to develop agreed upon measurable milestones to be used as indicators of continuous improvement in water quality during Stage 1." We believe a dual approach will be needed to measure the effectiveness of the Stage 1 water quality actions and to assess the impacts on water quality of other CALFED actions. One approach could consist of development of the milestones and comparison of water quality conditions at the export/diversion locations to the milestones. The second approach could consist of an evaluation of actions taken. For example, has a management plan for salinity in the Sacramento and San Joaquin basins been developed and implemented? Both approaches will be needed to measure the success of the CALFED program in improving drinking water quality in Stage 1. This will provide needed information for future decisions on the CALFED Program.

CUWA has developed recommended milestones for bromide and TOC for consideration by CALFED and the stakeholders participating in CALFED's Water Quality Technical Group. While we have focused on milestones for public health protection, it is also essential to develop water quality milestones for salinity to ensure continuous improvement in salinity levels and sufficient water quality to support local water management programs. CUWA is currently undertaking an effort to evaluate the cost implications and water resource management implications of source water salinity levels, and will develop proposed source water quality milestones for salinity for CALFED consideration.

CUWA has considered possible milestones and recommends the adoption of the following source water quality milestones for bromide and TOC:

**Proposed Source Water Quality Milestones for the CALFED Program**

<b>Safe Drinking Water Act Regulation</b>	<b>Promulgation/ Effective Date</b>	<b>Source Water Quality Milestones at the Effective Date *</b>
Stage 1 D/DBP Rule IESWTR	December 1998/ December 2001	Bromide < 300 µg/L TOC < 4.0 mg/L (Values are quarterly averages.)
Stage 2 D/DBP Rule LT2ESWTR	May 2002/ 2005-2007	Bromide < 100-150 µg/L ** TOC < 3.5 mg/L ** (Values are quarterly averages.)
Stage 3 D/DBP Rule	December 2006/ 2009-2011	Bromide < 50 µg/L ** TOC < 3.0 mg/L ** (Values are monthly averages.)

- \* Assumes compliance with existing and proposed drinking water regulations using current best available technology, which is enhanced coagulation or ozone at pH 6.5.
- \*\* An equivalent level of public health protection may be achieved using a cost-effective combination of alternative source waters, source control and treatment.

We recommend that these proposed source water quality milestones apply in all source waters. If blending opportunities are not available, the milestones would apply at the drinking water intakes that deliver Delta water supplies to urban water agencies (e.g., H.O. Banks Pumping Plant, Tracy Pumping Plant, San Felipe intake on San Luis Reservoir, North Bay Aqueduct intake, and CCWD's Rock Slough and Los Vaqueros intakes). If higher quality sources are available to blend with Delta water, the milestones would apply at the location where supplies are blended. The milestones represent targets for source water quality improvement, assuming compliance with existing and proposed drinking water regulations using current best available technology, which is enhanced coagulation or ozone disinfection at pH 6.5. Alternatively, an equivalent level of public health protection may be met by utilizing a cost-effective combination of alternative source waters, source control and treatment technologies. Public health protection would be assessed by a comparison of treated water quality supplied to the consumer.

Urban water agencies using Delta water supplies may adopt difference approaches for meeting Safe Drinking Water Act requirements in the near term, including upgrading treatment facilities to include more advanced water treatment technology (e.g., ozone disinfection, enhanced coagulation), blending programs, water exchanges and storage. As a result, specific source water

needs for protecting public health in the near term may be different for different urban water agencies.

### Basis of Recommended Milestones

The recommended source water quality milestones for bromide and TOC are based on technical evaluations contained in the Bay-Delta Water Quality Evaluation Draft Final Report prepared by CUWA's Expert Panel. Source water quality characteristics for Delta water supplies, which would allow water agencies implementing defined treatment technologies to comply with near term and long term regulatory scenarios were identified. The proposed milestones are supported by the need to protect public health and reduce health risks associated with exposure to disinfection by-products (DBPs). The milestones represent our best assessment of future drinking water regulatory requirements addressing DBPs and microbial pathogens. Because the milestones are also based on recently promulgated Safe Drinking Water Act requirements, they are defensible to other stakeholder groups. It is recognized that the drinking water regulations and treatment assumptions that these milestones are based on may change over time. Therefore, consistent with the CALFED adaptive management approach, it will be appropriate to reevaluate and adjust the milestones as the CALFED Program moves forward. The attached Table 1 provides more detail on the assumptions for the development of the milestone values and time frames.

The time periods for the bromide and TOC milestones are not fixed, but rather reflect the likely schedule of rule promulgation and effective dates for DBP rules over the next twelve years. This is important because urban water agencies must plan their strategies for compliance with future drinking water regulations and require significant lead-time to implement strategies for compliance, such as installation of advanced water treatment technology.

It should be noted that the proposed milestones for the time period 2005-2007 could change depending on requirements for *Cryptosporidium* inactivation and/or on the MCL for bromate in the Stage 2 D/DBP Rule. Higher MCLs for bromate (e.g., 10 µg/L) provide some relief for source water bromide concentrations, while *Cryptosporidium* inactivation requirements place emphasis on lowering allowable source water bromide levels. Further, potential regulation of individual DBP species (e.g., bromodichloromethane) will focus source water quality needs more closely on bromide, particularly in those cases where chlorination disinfection strategies are used. Another factor that may affect source water quality requirements for bromide and TOC is a possible future scenario in which distribution system averaging for compliance with the trihalomethane standard is eliminated.

It will be important to meet the milestones most of the time. Although individual treatment plants may be able to tolerate occasional excursions above the milestones and still comply with drinking water standards, the ability to do so will vary among the many treatment plants treating Delta water. The averaging periods for the 2001 and 2005-2007 water quality milestones are defined as maximum quarterly averages. It may be necessary to define the milestones as maximum monthly averages if the Stage 2 D/DBP and LT2ESWTR regulations are more stringent than currently anticipated. The water quality milestones for 2009-2011 are defined as maximum monthly averages to reflect the possible future decision to regulate DBPs based on both acute and

chronic impacts, if findings of future health effects studies warrant such a decision. In CALFED's December 18, 1998 Revised Phase II Report, the averaging period for the bromide and TOC water quality targets is not defined. This is an important issue that will also need to be resolved by CALFED working with CUWA and other stakeholders in the near future.

The source water quality milestones are targets to aim for, and progress toward achieving the milestones will help define needed adjustments in the CALFED Program. A critical issue associated with establishing source water quality milestones is how to determine whether or not milestones have been achieved. Due to natural variation in hydrology, changes in Delta operations and the impacts of other CALFED activities, it will not be possible in the short-term to measure definitively whether or not the milestones have been achieved in source water. As a result, evaluation of progress toward achieving milestones will need to include a combination of qualitative and quantitative evaluation. In the short-term, measurement of progress in achieving milestones should include an assessment of whether or not commitments for implementing water quality actions have been executed, and an evaluation of the effectiveness and water quality improvement resulting from implementation of specific actions. In the long-term, an overall assessment of changes in source water quality will need to be completed to evaluate progress toward meeting source water quality milestones and targets for the CALFED Program. This will require the implementation of a comprehensive monitoring and assessment program focused on drinking water parameters of concern.

#### Actions Required to Achieve Continuous Water Quality Improvement

To ensure protection of public health and continuous water quality improvement, CALFED needs to identify and commit to the implementation of a set of Stage 1 actions (e.g., source control, operating rules, water exchanges, and storage/conveyance improvements) that are linked to the achievement of the milestones, before releasing the Final Programmatic EIS/EIR. CUWA has developed a detailed matrix of Stage 1 actions that will be provided to CALFED after it has been reviewed by the CUWA Board of Representatives. While water agencies have essentially been meeting the 2001 milestones in normal and wet years, achievement of these near term milestones will require implementation of a strategy to reduce significant excursions in TOC and bromide levels, especially during dry years. This strategy is primarily based on operational modifications for water quality improvement. Based upon what we know now, implementation of source control actions and operational modifications will not be sufficient to achieve the milestones for the 2005-2007 and 2009-2011 time periods. Achievement of these intermediate and long term milestones will require a cost-effective combination of actions, including source control, water quality exchanges, new facilities and cost-effective treatment technologies.

#### Next Steps

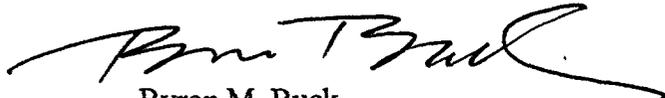
CUWA is prepared to work with CALFED and other stakeholders to further develop the Water Quality Program. We believe that the following work must be completed promptly:

- 1) Evaluate the cost-effectiveness, feasibility and timing of water quality improvement actions, and develop a detailed matrix of actions to achieve continuous water quality improvement.

- 2) Define existing water quality conditions for the purpose of evaluating progress in meeting source water quality milestones, and work to ensure that CMARP includes sufficient monitoring and assessment actions to evaluate progress in source water quality improvement.
- 3) Define a process for determining how milestones can be achieved by providing an "equivalent level of public health protection".
- 4) Define the process for the Delta Drinking Water Council, including Council representation and responsibilities, and determine the role of the Council in evaluating progress in achieving continuous water quality improvement.

CUWA welcomes the opportunity to discuss our proposed milestones with CALFED and the other stakeholders participating in the CALFED process. Please call me if you have any questions on our proposal.

Sincerely,



Byron M. Buck  
Executive Director

cc: Steve Ritchie, CALFED  
Judy Heath, CALFED  
Paul Marshall, CALFED

**Table 1. Proposed Source Water Quality Milestones for the CALFED Bay-Delta Program**

Regulation	Promulgation / Effective Date	MCL or Treatment Requirement <sup>1</sup>	Treatment Assumptions	Source Water Quality Milestones at Effective Date <sup>2</sup>
Stage 1 D/DBP Rule IESWTR	December 1998/ December 2001	TTHMs = 80 µg/L HAA5 = 60 µg/L Bromate = 10 µg/L TOC removal requirement for source water w/ TOC ≥ 4.0 mg/L 2-log <i>Giardia</i> inactivation	Enhanced coagulation with chlorine/ chloramines or Ozone at pH 6.5	Bromide < 300 µg/L TOC < 4.0 mg/L (Values are quarterly averages)
Stage 2 D/DBP Rule LT2ESWTR	May 2002/ 2005 - 2007	TTHMs = 40 µg/L HAA5 = 30 µg/L Bromate = 5 µg/L 2-log <i>Giardia</i> inactivation	Ozone at pH 6.5	Bromide < 100-150 µg/L TOC < 3.5 mg/L (Values are quarterly averages)
Stage 3 D/DBP Rule (Based on very tentative EPA timeline for future rulemaking)	December 2006/ 2009 - 2011	TTHMs = 40 µg/L HAA5 = 30 µg/L Bromate = 5 µg/L 1-log <i>Cryptosporidium</i> inactivation	Ozone at pH 6.5	Bromide < 50 µg/L TOC < 3.0 mg/L (Values are monthly averages)

1. MCLs indicated for Stage 2 and Stage 3 D/DBP Rules represent the current best assessment of likely future regulations, and are not an endorsement of these values.
2. Milestones for source water quality improvement to meet existing and proposed MCLs using current best available technology. Milestones may be met by providing an equivalent level of public health protection using a cost-effective combination of alternative source waters, source control and treatment.

Abbreviations: D/DBP = Disinfectants and Disinfection By-products; IESWTR = Interim Enhanced Surface Water Treatment Rule; LT2ESWTR = Long Term 2 Enhanced Surface Water Treatment Rule; MCL = maximum contaminant level; TTHMs = total trihalomethanes; HAA5 = haloacetic acids; TOC = total organic carbon.

99-169

**SOUTH DELTA WATER AGENCY**

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June 3, 1999

Mr. Lester Snow, Executive Director  
CALFED Bay-Delta Program  
1416 Ninth Street, Suite 1155  
Sacramento, CA 95814

Re: CALFED South Delta Investigation Decision

Dear Mr. Snow:

The South Delta Water Agency has regrettably concluded that the public should be aware of the extent to which CALFED has abandoned its own publically announced principles in its treatment of the San Joaquin Watershed, the South Delta, and San Joaquin County. CALFED's proposals seriously and unnecessarily benefit some interests by impacting others. They show a callous disregard for the survival of South Delta's agriculture, which at the very least is contrary to statutory law, such as the Delta Protection Act. CALFED's actions and inactions unnecessarily threaten the welfare of most water dependant interests along the main stem of the San Joaquin River and South Delta, as well as throughout San Joaquin County.

Our Agency has therefore prepared the attached press release.

Very truly yours,

ALEX HILDEBRAND

cc: See attached fax cover

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	Thomas Hannigan		916 653-6985
	Fish and Wildlife		916 979-2723
	Department of Fish and Game		916 653-1856

MATTER: SDWA PRESS RELEASE

FROM: JOHN HERRICK, ESQ.

MESSAGE

Press Release to follow.

Number of pages (including a cover page): 6 Date Sent: 3 June 99 Time Sent: 4:40 pm

         Original WILL NOT follow X Original WILL follow by:  
X U.S. Mail  
         Overnight Service

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Gerald T. Orlob

June 3, 1999

## **News Release by the South Delta Water Agency CALFED Has Abandoned Its Publicly Promised Principles**

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### **Introduction**

CALFED has repeatedly assured the public that in developing its program it will abide by publically stated principles. It has now violated a long list of those principles in its plans for the watershed of the San Joaquin River system, including the South Delta.

### **Abandoned Principles**

Each of the following publicly committed principles has either been abandoned or seriously distorted from what any reasonable person would have understood after attending CALFED's numerous public meetings. CALFED's December 18 Phase II report indicates the following:

- CALFED commits that improvements for some problems will not be made without corresponding improvements for all problems.
- CALFED will not solve problems in the Bay-Delta system by redirecting significant negative impacts (to other interests' problems).
- CALFED will reduce conflicts in the systems by solving problems in water supply.
- In choosing among alternatives a "distinguishing characteristic" will be provision for local access to water in South Delta channels with regard to water levels and water quality.

CALFED has also stated repeatedly that:

- Solutions to problems will be based on the best available technical and scientific information.

- "Stakeholder" (affected party) involvement is important in developing viable problem solutions.

Although less specifically stated a reasonable person is also left with the impression that:

- CALFED will protect the State's natural resources of land and water.
- CALFED's program will comply with the State Water Resources Control Board's salinity standards for protection of diverters from Delta channels.
- CALFED's program will comply with existing water rights and water priorities in State and Federal law.

Every one of these commitments has now been violated.

### Specific Violations

- 1) Exclusion of a substantially affected party.

CALFED recently decided to substantially alter the 1991 agreement among the South Delta Water Agency (SDWA), the US Bureau of Reclamation (USBR), and the Department of Water Resources (DWR) which was intended to settle a lawsuit. The agreement allowed full exports while protecting South Delta's in-channel water supplies. CALFED undertook to develop a different plan. It insisted on excluding SDWA from participation in developing what they call a South Delta Improvement Plan. It developed a plan that will substantially increase the already serious impacts of export pumping on the South Delta's in-channel water supply. The SDWA and others were told at a late April CALFED public meeting that we were merely being informed and that nothing we might say would alter the plan. SDWA and others wrote to Secretary Nichols and CALFED Executive Director Lester Snow expressing our concerns over the poor science and the damaging impacts of the plan. SDWA also wrote to the CALFED Policy Committee asking for an opportunity to be heard before a decision was made. There was no response to that request, but the CALFED Policy Committee proceeded to accept the Staff's plan.

- 2) Violation of no redirection of negative impacts principle:  
Exports and fishery are benefitted in CALFED's plan by substantially impacting the South Delta's in-channel water supply.

- a) By increasing export rates and increasing the export of water during low tides, the impact of export pumping on water levels in the South Delta will be substantially increased. No analysis of this further reduction in water levels has been presented.

- b) CALFED proposes to operate the Head of Old River fish protection barrier at times when it denies operation of the agricultural tidal barriers. This fish barrier dewateres downstream channels, destroys circulation, and creates problems of inadequate dissolved oxygen in channels downstream of the barrier.

- 3) Violation of the commitment to be guided by the best available "science".
- a) CALFED proposes to dredge some South Delta channel reaches and to lower local pumps to accommodate drawdown of water levels caused by export pumping, and also to install fish screens. CALFED has not analyzed and fails to understand that without tidal barriers this will further dewater the channels that are not dredged. It will also increase reverse flows in the San Joaquin River south of Stockton. This increase in reverse flow will exacerbate the problem of inadequate dissolved oxygen for fish and may result in unnecessary impacts on agricultural drainers and city sewer systems in an attempt to offset the problem caused by reverse flow.
  - b) CALFED proposes to deny use of a tidal barrier in Grantline Canal. The tidal barriers serve to capture and hold high tide water for local use during the low tides that are being further lowered by export pumping. CALFED's plan is like trying to hold water in a bathtub which has three outlets with only two closed.
  - c) There are about 150 local diversion facilities in the South Delta scattered over 75 miles of channels. CALFED's proposal to consolidate a significant number of diversions and discharges is technically very impractical, costly, and would be very difficult to operate. Consolidation would require agreement by all of the diverters, but no such agreement has been sought. In addition, consolidation would probably require a switch from riparian to appropriative rights and thus a corresponding reliance on those inferior rights.
  - d) Most local diversions are by small, submerged turbine pumps. The available data indicates that fish evade these pumps and there are too few losses to justify the huge expense and technical difficulty of screening this type of diversion.
  - e) CALFED has not said how it would dispose of screened fish when the fish barrier destroys the flow circulation past the screens.
  - f) The fish barrier can not be installed for technical reasons in a year like 1999 when river flows are maintained at high rates for VAMP tests. However, the three tidal barriers could be installed at these times and would provide substantial fish protection. Information submitted to the CALFED Ops Group showed substantial losses of salmon smolts from April 1 through late May. CALFED has ignored the fact that many of these smolts would have been saved if the three tidal barriers had been operated. Delta Smelt were only being lost during a portion of this time, and there is no convincing data to substantiate the belief that the barriers would have increased smelt losses even when smelt were present.
- 4) Violations of agreements, permits, and laws
- a) CALFED has adopted the San Joaquin River Agreement (SJRA) method of providing VAMP fish flows without first examining less damaging methods of providing those flows, such as by recirculating water released from the Delta Mendota Canal or by purchases from CVP and SWP contractors.

- b) The SJRA method of providing fish flows incorporates a USBR operating plan for New Melones. Analyzes of this plan show that it will frequently and substantially violate the State's permit condition which requires the USBR to release water to dilute CVP salts, and thereby control the salinity of the inflow into the South Delta.
- c) This USBR operating plan also violates the priority in use of water that is stipulated in its 1987 agreement with the Department of Fish and Game, and also the priority in Federal Law (the CVPIA).
- d) Furthermore, CALFED has adopted a USBR/SJRA plan that fails to provide the summer flow required to protect the South Delta's superior riparian rights and public trust needs. Deficiencies in summer flow and quality are further degraded by water acquisitions from San Joaquin tributaries that are ongoing and proposed by CALFED, USBR, and SJRA. This could be avoided by making purchases from sources, such as CVP contractors, that would augment, instead of deplete the overcommitted river system.
- 5) CALFED fails to protect the State's soil and land and water resources:
- a) CALFED has not effectively addressed the need to replace the unsustainable overdraft of groundwater. We can not long continue to get through drought years by massive overdraft of groundwater.
- b) CALFED has refused to address the need to stop the ongoing accumulation of tens of millions of tons of imported salt in the soils and groundwaters of the San Joaquin Valley. Those accumulations will ultimately destroy this fertile valley.
- c) CALFED's Plan does not propose to eliminate the need to drain hundreds of thousands of tons of this imported salt into the river each year as a necessity of continuing westside valley agriculture in the absence of a salt disposal system.
- d) CALFED ignores the fact that this refusal to restore a salt balance results in a need for dilution water from New Melones that then reduces water available for other purposes. It also results in impacts on all water-related beneficial uses downstream of Salt and Mud Sloughs. Furthermore, these impacts include an increase in the salinity of the exported urban water supply. This is contrary to CALFED's commitment to reduce the salinity of urban source water.

JERRY ROBINSON, President  
ALEX HILDEBRAND, Secretary

 JOHN HERRICK, Counsel

# Southern California Water Committee, Inc.

99-170

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W. ANDERSON DYM

June 1, 1999

JUN 03 1999

The Honorable Gray Davis  
Governor  
State of California  
State Capitol, 1<sup>st</sup> Floor  
Sacramento, California 95814

Dear Governor Davis:

## SOUTHERN CALIFORNIA INTERESTS CRUCIAL TO RESOLVING BAY-DELTA

A May 1999 *USA Water News* article quoted the Director of Water Resources, Tom Hannigan as saying he doesn't see the need for a Peripheral Canal...ever. Your Resource Secretary, Mary Nichols was quoted as agreeing with this sentiment at a recent meeting of the Association of California Water Agencies. If they are referring to the old concept of a peripheral canal, we agree. However, we are deeply concerned they are recommending permanently dismissing CALFED's isolated conveyance alternative. At the very least, statements such as these are premature and threaten to undercut a process that might offer the last opportunity in helping solve California's water problem.

Southern California depends on a full third of its imported supplies from the State Water Project. A cornerstone of Southern California's successful \$500 billion economy and well being is a high quality and dependable water supply from the Delta. As you know, it is absolutely essential that our water supplies be dependable and be able to meet current and future drinking water standards.

A dual conveyance system as defined in Alternative Three was identified by CALFED in the final EIS/EIR last year as technically the best alternative. The dual conveyance alternative was said to be most promising for California in many ways, including water quality, fisheries, water supply opportunities, and operational flexibility. We believe this alternative still offers the best assurances for Southern California.

We agree with Tom Hannigan's assertion that recycling and groundwater storage programs and transfers should be part of the overall solution. However, Southern California which already has some of the most aggressive water recycling and groundwater recharge programs in California depends greatly on high quality, low salinity supplies from the Delta for its success. As water sources become more saline, the options for recycling become increasingly prohibitive and costly. The solution to the California water problem requires a mix of possible solutions, including an isolated facility.

*A cooperative effort of business, government, water agencies, agriculture, and public interests.*

The Honorable Gray Davis  
June 1, 1999  
Page 2

Southern California demands the assurances that it will have a high quality water supply. We are willing to shoulder our fair share of the financial responsibility for a solution that will assure Southern California's needs while also meeting CALFED's overall objectives as a whole. However, unless another solution is put forth that will offer real assurances of water quality and dependability, we feel that it would be a mistake to take off the table perhaps the best overall solution to these issues.

More importantly, we want a solution that is not only balanced, but is achieved through technically supportable conclusions and not arrived at through political considerations that seem to placate vocal shortsighted interest groups. Recommending second or third best options is contrary to CALFED's own solution principles and not the way to manage California's water resources.

The CALFED process must continue with all elements on the table. Southern California expects nothing less than a fair and balanced solution, as was promised when this process started. CALFED must proceed with a balanced approach that includes linkages and assurances that all necessary planning activities be undertaken to insure a fair review of new storage options along with the necessary studies that support a dual conveyance system.

You stated that no one would get all they want from CALFED. We want construction of the isolated facility to begin tomorrow; however in the spirit of compromise we are willing to wait for the "right time" to begin serious consideration of the isolated facility, but we must protest the total elimination of this alternative.

We would appreciate an opportunity to meet with you or your staff to discuss these important issues of concern to Southern California.

Very truly yours,



Stephen A. Zapotichny  
Chairman

cc: Senator Jim Costa  
Assemblyman Michael Machado  
Lester Snow, CALFED Bay-Delta Program  
Linda Adams, Deputy Legislative Secretary  
Thomas Hannigan, Director, Dept. of Water Resources  
Mary Nichols, Secretary, Resources Agency  
SCWC Board of Trustees

Southern California Water Committee, Inc.

99-179

23443 S. Hays Road  
Manteca, CA 95337  
June 9, 1999

Lester Snow, Executive Director  
CALFED Bay-Delta Program  
1416 9th St., Suite 1155  
Sacramento, CA 95814

Dear Lester:

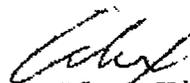
My June 3 letter attached a press release by the South Delta Water Agency which focused on CALFED's violation of its declared principles, its failure to apply good science, and the serious increase in degradation that its South Delta plan would impose on the South Delta's inchannel water supply. However, the release also called attention to the potential impact of CALFED's newly adopted South Delta plan on the salinity of SWP exports. This point apparently needs explanation.

The CVP imports both water and a large tonnage of dissolved salt into the west side of the San Joaquin watershed. Several hundred thousand tons of this imported salt then drains into the San Joaquin River each year. When the tidal barrier in Grantline Canal is permitted to operate, this salt is shunted toward the Bay as it flows into the South Delta. When the Grantline barrier is not permitted, this river salt load flows through Old River and Grantline Canal to the CVP pumps. It is then re-exported. The SWP does not take water into Clifton Court during the low tide and receives very little of this river salt.

Under CALFED's newly adopted plan, the Grantline barrier would be eliminated, and the SWP would take water into Clifton Court during the low tide. It would then compete with the CVP for capture and export of this salt load. If the CVP intake is moved into Clifton Court, as tentatively proposed, the SWP will capture a majority of the salt load. Furthermore, CALFED has no plan to significantly reduce this river salt load.

CALFED held a public information meeting just before this new CALFED plan was adopted. There was no indication at that meeting that CALFED had analyzed, or even considered, this potential impact on the salinity of SWP exports. And it had been announced that no public comment would result in an alteration of the plan.

Sincerely,



Alex Hildebrand



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