

**Second Quarter of FY 1998 Report**  
(January 1998 through March 1998)

**CALIFORNIA BAY-DELTA  
ECOSYSTEM RESTORATION FUND**

May 29, 1998

Bureau of Reclamation  
United States Department of the Interior

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E-035690



# United States Department of the Interior

OFFICE OF THE SECRETARY  
Washington, D.C. 20240

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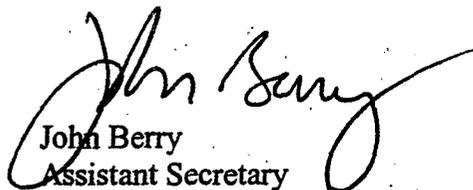
Honorable Pete V. Domenici  
Chairman, Subcommittee on Energy  
and Water Development  
Committee on Appropriations  
United States Senate  
Washington, D.C. 20510

Dear Mr. Chairman:

House Report 105-190, which accompanied H.R. 2203, the Fiscal Year 1998 Energy and Water Development Appropriations Bill, directs that the Department of the Interior submit a quarterly report to the Committees on Appropriations on how the funds appropriated for the California Bay-Delta Ecosystem Restoration program are being utilized. The report is to include a description of each project to be undertaken, its cost, and the agency to which funds were provided to carry out the project.

The Bureau of Reclamation, working with the other Federal agencies participating in the CALFED Bay-Delta Program, has prepared the enclosed report for the second quarter of Fiscal Year 1998.

Sincerely,

  
John Berry  
Assistant Secretary  
Policy, Management and Budget

Enclosure

Identical letters sent to:

Honorable Joseph McDade  
Chairman, Subcommittee on Energy  
and Water Development  
Committee on Appropriations  
House of Representatives  
Washington, D.C. 20515

Honorable Vic Fazio  
Ranking Minority Member  
Subcommittee on Energy  
and Water Development  
Committee on Appropriations  
House of Representatives  
Washington, D.C. 20515

Honorable Harry M. Reid  
Ranking Minority Member  
Subcommittee on Energy  
and Water Development  
Committee on Appropriations  
United States Senate  
Washington, D.C. 20510

cc: Honorable Don Young  
Chairman, Committee on Resources  
House of Representatives  
Washington, D.C. 20515

Honorable George Miller  
Ranking Minority Member  
Committee on Resources  
House of Representatives  
Washington, D.C. 20515

Honorable John T. Doolittle  
Chairman, Water and Power  
Resources Subcommittee  
Committee on Resources  
House of Representatives  
Washington, D.C. 20515

Ranking Minority Member  
Water and Power Resources  
Subcommittee  
Committee on Resources  
House of Representatives  
Washington, D.C. 20515

Honorable Frank Murkowski  
Chairman, Committee on Energy  
and Natural Resources  
United States Senate  
Washington, D.C. 20510

Honorable Dale Bumpers  
Ranking Minority Member  
Committee on Energy and  
Natural Resources  
United States Senate  
Washington, D.C. 20510

Honorable Jon Kyl  
Chairman, Water and Power  
Subcommittee  
United States Senate  
Washington, D.C. 20510

Honorable Daniel K. Akaka  
Ranking Minority Member  
Water and Power Subcommittee  
United States Senate  
Washington, D.C. 20510

bc: Secretary's Reading File  
AS/PMB, ES, CL  
Regional Director, Sacramento, California  
Attention: MP-100  
W-6300, W-6332, W-6330, W-1130, W-6000, W-1000  
(w/enclosure)

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## INTRODUCTION

House Report 105-190, which accompanied H.R. 2203, the FY 1998 Energy and Water Development Appropriations Bill, requires that the Department of the Interior submit a quarterly report to the Committees on Appropriations on how the funds appropriated for the California Bay-Delta Ecosystem Restoration program are being utilized. The report is to include a description of each project to be undertaken, its cost, and the agency to which funds were provided to carry out the project. The First Quarterly Report covering October 1997 through December 1997 was provided on March 24, 1998. This Second Quarterly Report covers the January through March 1998 activities.

The Bureau of Reclamation, working with the other Federal agencies participating in the CALFED Bay-Delta Program, has prepared the following report in response to that requirement. A similar report will be prepared following the conclusion of each quarter and provided to the Committees and other interested parties.

## SECOND QUARTER HIGHLIGHTS

### Current Status of Projects Approved in the First Quarter:

On January 16, 1998, the Bureau of Reclamation (Reclamation) forwarded the initial set of projects that the CALFED Policy Team had recommended for funding from the Federal Bay-Delta Account. The Secretary of the Interior approved these recommendations on February 13. As of March 31, 1998, Interagency Agreements have been executed by Reclamation and the responsible Federal agencies for six projects with a total cost of \$21.0 million; and the CALFED program staff has been authorized to utilize \$2.3 million for four Monitoring, Permit Coordination and Other Special Support Programs.

### Projects Approved in the Second Quarter:

On February 26, 1998, the CALFED Policy Team recommended approval of a second set of recommendations, which had been reviewed by the Bay-Delta Advisory Council and the Ecosystem Roundtable, and which, together with the initial set of projects, would allocate the entire \$85 million appropriated in FY 1998. The package consists of 28 projects and programs with a total cost of \$61.7 million. On March 3, 1998, Reclamation forwarded these recommendations to the Department of the Interior. Assistant Secretary for Water and Science, Patricia Beneke, exercising the authority of the Secretary of the Interior, approved the list on April 28, 1998.

In this second set of recommendations, the CALFED Policy Team identified categories of concern that had not received adequate proposals for specific project selection. Since specific projects had not been defined, the Policy Team decided to select programs identified by the Integration Panel for funding through the Federal Bay-Delta Account. Nine programs included in the March 3 request will require further efforts to select specific projects. CALFED program staff is working with the agencies identified as sponsors for these programs. Four of the programs selected in this second set of recommendations will be ready for public solicitation in May 1998: The Fish Passage Program sponsored by the U.S. Bureau of Reclamation, the

Floodplain Restoration/Habitat Restoration on Existing Conservation Lands Program sponsored by the U.S. Fish and Wildlife Service, the Watershed Restoration Planning Program sponsored by the U.S. Environmental Protection Agency, and the Bay-Delta Education Program sponsored by U.S. Bureau of Reclamation. This report describes and discusses the status of all projects and programs which had been approved or recommended for funding by March 31. A map that shows the location of the projects is attached as Appendix A.

#### Cost Sharing Agreement

Negotiations on an agreement specifying the way in which Bay-Delta ecosystem restoration costs will be shared by the State and Federal Governments were completed by December 31, 1997. The "Agreement for Cost Sharing Related to Ecosystem Restoration Under Proposition 204 and the Bay-Delta Act" was signed by State and Federal representatives in early January 1998. (A copy of the signed cost share agreement was attached to the March 24, 1998, letter that forwarded the report for the first quarter of FY 1998.)

#### Tracking Program Update:

In order to address tracking concerns, Reclamation is in the process of developing a financial reporting system that includes the Federal Bay-Delta Account and the Central Valley Project Improvement Act financial data. There is significant stakeholder interest in developing such a database and, in an effort to provide information in a timely manner, the information will be developed for presentation on the Internet. In coordination with CALFED program staff, Reclamation is proceeding with development of an Internet Website and the underlying financial databases. Current projections have the Internet website created and functional by the end of the third quarter. The Status of the Comprehensive and Coordinated and Research Program (CCMARP) is described on page 17.

#### Memorandum of Understanding:

On December 17, 1997, negotiations were completed regarding a Memorandum of Understanding (MOU) with the Federal agencies participating in the CALFED Bay-Delta Program that describes the process for administering the Federal Bay-Delta Accounts. As of March 31, 1998, seven Federal agencies have signed the MOU, and it is anticipated that the National Marine Fisheries Service (NMFS) will sign by the end of May 1998. Two agencies were not included in the original MOU (the Bureau of Land Management and Western Area Power Administration) because they were late entrants in the CALFED process. A modification to the MOU including these two agencies will be initiated during the third quarter. (A copy of the MOU was attached to the March 24, 1998, letter that forwarded the report for the first quarter of FY 1998.)

#### Federal Bay-Delta Account and the Overall CALFED Process:

This quarterly report deals specifically with projects or programs funded through the Federal Bay-Delta Account. However, in order to show a more complete picture of the CALFED process, Appendix C provides an overview of projects approved for funding from all the various funding sources tied to the CALFED process. A map is also included to provide a frame of reference.

SECOND QUARTER'S STATUS FOR  
THE Federal Bay-Delta Account

This section provides a description of each of the projects and programs that have been recommended for funding by the Federal Bay-Delta Account, as well as a summary of accomplishments and obligations during the second quarter of FY 1998. A summary table showing the status of funds for each project and program as of March 31, 1998, is provided as Appendix B. A definition of each project category is provided as Appendix D.

	<b>Recommended Funding Level</b>	<b>Funds Obligated This Quarter</b>
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<b>Fish Screen Improvements:</b>	\$2,539,000	\$0
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1) <b>Project Title:</b> Woodbridge Fish Screen and Passage	\$1,575,000	\$0
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**Funding provided to:** U.S. Bureau of Reclamation

**Project Description:** The primary goals for this program on the Lower Mokelumne River are to implement key elements of existing resource management plans of CALFED, the U.S. Fish and Wildlife Service, and the California Department of Fish and Game to substantially increase fall-run chinook salmon and steelhead populations, enhance critical and limiting aquatic habitats, and restore riparian ecosystem integrity and diversity. Three specific tasks will be funded through the Bay-Delta Ecosystem Restoration Appropriation: Task One involves the environmental clearance and permitting for fish passage improvements at Woodbridge Dam; Task Two provides the final design of fish passage improvements at Woodbridge Dam; and Task Three provides the final design for the Woodbridge Irrigation District and the North San Joaquin Water Conservation District fish screen improvements. The U.S. Bureau of Reclamation will work in coordination with the Woodbridge Irrigation District and the City of Lodi to accomplish this project.

**Second Quarter Accomplishments:** The Ecosystem Roundtable, BDAC and the CALFED agencies have selected this proposal for funding. As of the end of this reporting period, March 31, final approval by the Department was pending. The Department approved this project on April 28, 1998.

2) <b>Program Title:</b> Small Diversion Fish Screens Program	\$900,000	\$0
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**Funding provided to:** Natural Resource Conservation Service

**Project Description:** The Natural Resource Conservation Service (NRCS) oversees an existing small fish screen program which works with local organizations and diverters to prioritize and screen small diversions from the Sacramento and San Joaquin Rivers and their tributaries. Funding requested under the Bay-Delta Ecosystem Restoration Appropriation will allow NRCS to expand the program. This program will be coordinated with the U.S. Fish and Wildlife Service, the National Marine Fisheries

<b>Recommended Funding Level</b>	<b>Funds Obligated This Quarter</b>
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Service, state and local agencies, other local groups such as the Family Water Alliance, and local watershed conservancies.

**Second Quarter Accomplishments:** The Ecosystem Roundtable, BDAC and the CALFED agencies have selected this program for funding. As of the end of this reporting period, March 31, final approval by the Department was pending. The Department approved this project on April 28, 1998.

3) **Project Title:** Richter Brothers Anadromous Fish Screen \$49,000 \$0

**Funding provided to:** U.S. Bureau of Reclamation

**Project Description:** Richter Brothers operate an unscreened 25 cfs diversion on the Sacramento River near Knights Landing. This project includes evaluating screening alternatives, completing environmental documentation, obtaining permits, and preparing design plans. The U.S. Bureau of Reclamation will coordinate with the Richter Brothers to accomplish this project.

**Second Quarter Accomplishments:** The Ecosystem Roundtable, BDAC and the CALFED agencies have selected this proposal for funding. As of the end of this reporting period, March 31, final approval by the Department was pending. The Department approved this project on April 28, 1998.

4) **Project Title:** Boeger Family Farm Screen \$15,000 \$0

**Funding provided to:** U.S. Bureau of Reclamation

**Project Description:** Boeger Family Farm proposes to install fish screens on its pumping plant on the Sacramento River near Colusa. The fish screen would reduce entrainment of priority species at the Boeger Family Farms pumping plant. Priority species include steelhead and various chinook salmon runs (winter-run, spring-run, and late-fall run). The U.S. Bureau of Reclamation will work with the Boeger Family Farm to accomplish this project.

**Second Quarter Accomplishments:** The Ecosystem Roundtable, BDAC and the CALFED agencies have selected this proposal for funding. As of the end of this reporting period, March 31, final approval by the Department was pending. The Department approved this project on April 28, 1998.

**Fish Passage Improvements:** \$8,325,000 \$0

1) **Program Title:** Fish Passage Program \$8,000,000 \$0

**Funding provided to:** U.S. Bureau of Reclamation

**Project Description:** This program will identify and implement additional fish passage projects at locations such as McCormick-Saeltzer Dam on Clear Creek and at Coleman National Fish Hatchery on Battle Creek. The U.S. Bureau of Reclamation will coordinate

<b>Recommended Funding Level</b>	<b>Funds Obligated This Quarter</b>
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with CALFED staff, U.S. Fish and Wildlife, National Marine Fisheries Service, and other interested agencies or private entities to meet the goals of this program.

**Second Quarter Accomplishments:** The Ecosystem Roundtable, BDAC and the CALFED agencies have selected this program for funding. As of the end of this reporting period, March 31, final approval by the Department was pending. The Department approved this project on April 28, 1998.

2) <b>Project Title:</b> Anderson-Cottonwood Irrigation District (ACID) Fish Passage Project	\$325,000	\$0
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**Funding provided to:** U.S. Bureau of Reclamation

**Project Description:** ACID operates a diversion dam on the Sacramento River approximately 3.5 miles south of Keswick Dam. Problems of fish passage and migration of chinook salmon and steelhead have been documented for years. ACID proposes to correct these problems through construction of fish-friendly facilities. This proposal is for the first phase of work (completion of design documents, environmental documentation, and construction bid documents). Facilities will be constructed in a separate phase of work. Funding will be provided to ACID for accomplishment of this task.

**Second Quarter Accomplishments:** The Ecosystem Roundtable, BDAC and the CALFED agencies have selected this proposal for funding. As of the end of this reporting period, March 31, final approval by the Department was pending. The Department approved this project on April 28, 1998.

<b>Habitat Restoration in Floodplains and Marshes:</b>	<b>\$27,342,000</b>	<b>\$10,981,000</b>
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1) <b>Project Title:</b> San Joaquin Floodplain Acquisition and Riparian Restoration	\$10,647,000	\$10,647,000
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**Funding provided to:** U.S. Fish and Wildlife Service

**Project Description:** Acquisition, preservation, and restoration of 6,169 acres of fish and wildlife habitat on the San Joaquin River floodplain for the San Joaquin River National Wildlife Refuge. Benefits to migratory birds and other bird species, splittail, and San Joaquin fall run chinook. Provides some flood protection through widening of floodplain and transient storage of flood waters. The Service is combing Bay-Delta funding with funds from other sources to cover the total cost of this project.

**Second Quarter Accomplishments:** Issued an Interagency Agreement on March 17, 1998.

Fish and Wildlife Service completed an Environmental Assessment and signed the Finding of No Significant Impact on March 17, 1998 to accommodate Task "A" (an intra-agency 3,112 acre acquisition). Appraisals and negotiations are ongoing with landowners of Tasks "B-D" (2,057 acres of fee and conservation easement acquisition).

	<b>Recommended Funding Level</b>	<b>Funds Obligated This Quarter</b>
2) <b>Project Title:</b> Bear Creek Floodplain Restoration Demonstration Project	\$334,000	\$334,000
<b>Funding provided to:</b> U.S. Fish and Wildlife Service		
<b>Project Description:</b> Feasibility analysis for restoring floodplain function along the San Joaquin River and Bear Creek on public lands in order to provide flood protection benefits, enhance shaded riverine aquatic habitat and wetlands, and improve instream habitat for the San Luis National Wildlife Refuge Complex. Benefits to migratory birds, San Joaquin fall run chinook salmon, and several other fish species are expected. Combined funding will cover the total cost of the project.		
<b>Second Quarter Accomplishments:</b> Issued an Interagency Agreement on March 23, 1998.		

Upon notification of obligation of funds, Fish and Wildlife Service began the vendor solicitation process by advertising their requirements in the Commerce Business Daily. They received bids and made a selection as of this report date.

3) <b>Program Title:</b> Floodplain Restoration/Habitat Restoration on Existing Conservation Lands Program	\$14,000,000	\$0
<b>Funding provided to:</b> U.S. Fish and Wildlife Service		
<b>Project Description:</b> This program will focus on opportunities to expand floodways and riparian corridors, providing greater flood management flexibility and ecosystem benefits. It will use the priority species to identify and restore lands within the floodplains of the major rivers or their tributaries. An emphasis will be placed on lands flooded in January 1997. Conservation easements will be given a preference if they meet ecosystem restoration objectives. This program will also implement habitat restoration at existing sites already in conservation ownership. The U.S. Fish and Wildlife Service will work with the U.S. Corps of Engineers, the Natural Resources Conservation Service, and the U.S. Bureau of Land Management.		
<b>Second Quarter Accomplishments:</b> The Ecosystem Roundtable, BDAC and the CALFED agencies have selected this proposal for funding. As of the end of this reporting period, March 31, final approval by the Department was pending. The Department approved this project on April 28, 1998. A public solicitation process is scheduled for May 1998 to select specific projects for funding.		
4) <b>Program Title:</b> Habitat Restoration/Flood Control Bypasses Program	\$1,200,000	\$0
<b>Funding provided to:</b> U.S. Army Corps of Engineers		
<b>Project Description:</b> The current flood control bypasses along the Sacramento River provide seasonally flooded habitat, but also result in stranding of juvenile salmonids and		

<b>Recommended Funding Level</b>	<b>Funds Obligated This Quarter</b>
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other Delta fish. This program will evaluate restoration needs and opportunities to improve habitat, reduce stranding, and to improve connectivity with the Sacramento River and the North Delta. Elements to be evaluated would include: a) improve existing habitats; b) improve streamflows; c) improve wetland, riparian, slough, agricultural, and shaded riverine aquatic habitats; d) eliminate fish barriers; e) reduce fish entrainment and stranding; and f) develop wildlife and fisheries friendly levee maintenance programs. The proposed actions will be developed to avoid conflicts with existing and future flood control needs. The U.S. Army Corps of Engineers will work with CALFED Staff to develop this program in accordance with Ecosystem Roundtable and Policy Team requirements.

**Second Quarter Accomplishments:** The Ecosystem Roundtable, BDAC and the CALFED agencies have selected this proposal for funding. As of the end of this reporting period, March 31, final approval by the Department was pending. The Department approved this project on April 28, 1998.

- 5) **Project Title:** Napa River Wetlands Acquisition      \$1,000,000      \$0  
**Funding provided to:** U.S. Bureau of Reclamation

**Project Description:** This project will allow acquisition of approximately 63 acres of diked, historic wetlands along the Napa River. The land will be restored to estuarine, riparian, and aquatic habitats through a combination of floodplains and marshplains.

**Second Quarter Accomplishments:** The Ecosystem Roundtable, BDAC and the CALFED agencies have selected this proposal for funding. As of the end of this reporting period, March 31, final approval by the Department was pending. The Department approved this project on April 28, 1998.

- 6) **Project Title:** Cache Slough Habitat Enhancement      \$85,000      \$0  
**Funding provided to:** U.S. Bureau of Reclamation

**Project Description:** Reclamation District 2060 proposes restoration of approximately 2,000 linear feet of levee bank where erosion has destroyed shaded riverine aquatic habitat and created erosion pockets. Instead of utilizing traditional erosion repair (i.e., fill and riprap), the Reclamation District 2060 plans to stabilize the bank and encourage habitat which will benefit target priority species including the Delta smelt. The U.S. Bureau of Reclamation will work with Reclamation District 2060 in accomplishing this project.

**Second Quarter Accomplishments:** The Ecosystem Roundtable, BDAC and the CALFED agencies have selected this proposal for funding. As of the end of this reporting period, March 31, final approval by the Department was pending. The Department approved this project on April 28, 1998.

- |  | <b>Recommended<br/>Funding<br/>Level</b> | <b>Funds<br/>Obligated<br/>This Quarter</b> |
|--|--|---|
| 7) <b>Project Title:</b> Regional Wetlands Goals Project   | \$76,000                                 | \$0   |
| <b>Funding provided to:</b> U.S. Environmental Protection Agency   |  |   |
| <b>Project Description:</b> This project is a multi-agency, interdisciplinary planning effort whose main objective is to identify the kinds, amounts, and distribution of wetlands and related habitats needed to sustain diverse and healthy communities of fish and wildlife in the San Francisco Bay area. The habitat restoration goals for this project will provide the biological basis for regional wetlands management and will provide specific information required by the CALFED planning process to meet restoration goals throughout the San Francisco Bay. EPA is working with the San Francisco Estuary Institute to accomplish the goals of this project. |  |   |
| <b>Second Quarter Accomplishments:</b> The Ecosystem Roundtable, BDAC and the CALFED agencies have selected this proposal for funding. As of the end of this reporting period, March 31, final approval by the Department was pending. The Department approved this project on April 28, 1998.   |  |   |

**River Channel Changes:**

- |   |                    |                    |
|---|--------------------|--------------------|
|   | <b>\$9,624,010</b> | <b>\$9,164,010</b> |
| 1) <b>Project Title:</b> Liberty Island Acquisition   | \$8,577,000        | \$8,577,000        |
| <b>Funding provided to:</b> U.S. Fish and Wildlife Service  |                    |                    |
| <b>Project Description:</b> Acquisition of Liberty Island (4,760 acres) for future restoration of native Delta habitats and species. Strategic location in north Delta at southern end of Yolo Bypass provides potential wetlands, shaded riverine aquatic habitat, instream habitat for winter run, Delta smelt, splittail, and other species. Funding will cover full acquisition cost. Restoration funding not identified. |                    |                    |
| <b>Second Quarter Accomplishments:</b> Issued an Interagency Agreement on March 23, 1998.   |                    |                    |

Fish and Wildlife Service held a public scoping meeting on March 4, 1998 to gather comments on the proposed North Delta Refuge which will include Liberty Island. An Environmental Assessment and Conceptual Management Plan are being developed to address Fish and Wildlife Service management. Appraisals of the property have been completed and are being reviewed. Negotiations with the landowner are ongoing, contingent on completion of planning documents.

- |   |             |           |
|---|-------------|-----------|
| 2) <b>Project Title:</b> Sedimentation Movement and Availability and Monitoring in the Delta  | \$1,047,010 | \$587,010 |
| <b>Funding provided to:</b> U.S. Geological Survey  |             |           |
| <b>Project Description:</b> Sediment transport research and monitoring at several sites in Suisun Bay and the Delta to help guide water quality and restoration planning activities. Recommend funding for the first 2 years of the project in the amount of \$587,010 (total estimated project cost is \$1,046,000). |             |           |

<b>Recommended Funding Level</b>	<b>Funds Obligated This Quarter</b>
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**Second Quarter Accomplishments:** Issued an Interagency Agreement on March 19, 1998 for \$587,010. An additional \$460,000 was requested to complete funding for this program. The Ecosystem Roundtable, BDAC and the CALFED agencies have selected this proposal for an additional \$460,000 in funding. As of the end of this reporting period, March 31, final approval by the Department was pending. The Department approved this project on April 28, 1998.

U.S. Geological Survey prepared the suspended-solids sensors and water sample collection equipment at various sites in the San Francisco Bay. They serviced instruments deployed in the Sonoma Creek and Napa River wetland sloughs with the assistance of the University of California, Davis and the state Department of Fish and Game with recovery of instruments in early March for data collection. Review of data to determine the effect of baroclinic mechanisms on sediment transport in Suisun Bay was an assignment accomplished during the second quarter.

**Improved Instream Flows:**

<b>\$20,000,000</b>	<b>\$0</b>
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- 1) **Program Title:** Water Acquisition Program

<b>\$20,000,000</b>	<b>\$0</b>
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**Funding provided to:** U.S. Bureau of Reclamation

**Project Description:** The Water Acquisition Program will be guided by policy principles being developed by the stakeholders through the Ecosystem Roundtable. These principles will focus on fostering local partnerships, ensuring adequate evaluation, avoidance and mitigation of any potential local economic effects, and developing activities which provide the greatest ecosystem benefit relative to cost. The Ecosystem Roundtable is currently in the process of developing these principles. The program will focus on activities to improve instream flows to benefit the priority species in cooperation with the existing Water Acquisition Program operating under the Central Valley Project Improvement Act. Activities under this program can include multi-year water transfers or acquisitions, funding for water use efficiency measures to allow increases instream flows, and funding for foregone power revenues in exchange for increased bypass flows. The U.S. Bureau of Reclamation will coordinate this program with CALFED program staff to accomplish the goals of this program.

**Second Quarter Accomplishments:** The Ecosystem Roundtable, BDAC and the CALFED agencies have selected this proposal for funding. As of the end of this reporting period, March 31, final approval by the Department was pending. The Department approved this project on April 28, 1998.

**Water Quality and Temperature Improvement:**

<b>\$5,003,000</b>	<b>\$517,000</b>
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- 1) **Project Title:** Assessment of Organic Matter in the Habitat and its Relationship to the Food Chain

<b>\$1,400,000</b>	<b>\$517,000</b>
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<b>Recommended Funding Level</b>	<b>Funds Obligated This Quarter</b>
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**Funding provided to:** U.S. Geological Survey

**Project Description:** Research proposal for a comprehensive assessment of the production, import, utilization, and export of the organic matter that serves as food resource for fish in their early life stages. Lower tropic level ecosystem functions potentially limit fish population growth in the Delta. Benefits to multiple fish species. First year of funding was recommended (total estimated project cost is \$1,400,000 for a 3-year project).

**Second Quarter Accomplishments:** Issued an Interagency Agreement on March 23, 1998 for \$517,000. An additional \$883,000 was requested to complete funding for this project. The Ecosystem Roundtable, BDAC and the CALFED agencies have selected this proposal for an additional \$883,000 in funding. As of the end of this reporting period, March 31, final approval by the Department was pending. The Department approved this project on April 28, 1998.

U.S. Geological Survey began preliminary discussions with the University of California, Davis to determine equipment and contract management needs. They are in the process of awarding the various cooperative agreements and/or grants with each partner in this project.

- |  |             |     |
|--|-------------|-----|
| 2) <b>Project Title:</b> Evaluation of Selenium Sources, Levels, and Consequences in the Delta | \$1,589,000 | \$0 |
|--|-------------|-----|

**Funding provided to:** U.S. Geological Survey

**Project Description:** This 3 year study will provide a quantitative description of the different sources of selenium concentrations in the Bay-Delta, a determination of how changes in sources may affect selenium tissue concentrations in primary consumers, a linkage of selenium concentrations in primary consumers to uptake by predators, a direct determination of whether selenium affects reproduction and development in sturgeon, models which can forecast outcomes of alternative selenium remediation/restoration strategies, and a baseline of monitoring data.

**Second Quarter Accomplishments:** The Ecosystem Roundtable, BDAC and the CALFED agencies have selected this proposal for funding. As of the end of this reporting period, March 31, final approval by the Department was pending. The Department approved this project on April 28, 1998.

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|--|-------------|-----|
| 3) <b>Project Title:</b> Bacterial Treatment of Selenium in the Panoche Drainage | \$1,149,000 | \$0 |
|--|-------------|-----|

**Funding provided to:** U.S. Bureau of Reclamation

**Project Description:** The Algal-Bacterial Selenium Removal Facility has been operating for a year in the Panoche Drainage District near Firebaugh. The facility

<b>Recommended Funding Level</b>	<b>Funds Obligated This Quarter</b>
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consists of two identical systems in which algae are grown, harvested, and then used as a bacterial substrate for selenium reduction from subsurface agricultural drainage water. Funding of this project will allow the continued operation of the facility for 3 years. Panoche Drainage District and Enrico Farms, Inc., are hosting the facility. Funding will be provided to the University of California, Berkeley (Lawrence Berkeley Laboratory) for accomplishment of this task.

**Second Quarter Accomplishments:** The Ecosystem Roundtable, BDAC and the CALFED agencies have selected this proposal for funding. As of the end of this reporting period, March 31, final approval by the Department was pending. The Department approved this project on April 28, 1998.

4) **Project Title:** Sand and Salt Creek Watershed Project      \$599,000      \$0

**Funding provided to:** U.S. Bureau of Reclamation

**Project Description:** This watershed management project is designed to assist private landowners in addressing non-point source pollution associated with grazing, almond orchards, and irrigated cropland. Management practices designed to reduce surface runoff containing pesticide residues and sediments will be implemented at twenty selected sites. In addition, grade stabilization structures will be constructed within the watershed. The U.S. Bureau of Reclamation will coordinate this project with the Colusa County Resource Conservation District and the Natural Resources Conservation Service.

**Second Quarter Accomplishments:** The Ecosystem Roundtable, BDAC and the CALFED agencies have selected this proposal for funding. As of the end of this reporting period, March 31, final approval by the Department was pending. The Department approved this project on April 28, 1998.

5) **Project Title:** Integrated Pest Management      \$266,000      \$0  
in Suisun Bay Program

**Funding provided to:** U.S. Bureau of Reclamation

**Project Description:** The program builds on an existing pilot project to educate the public and change their behavior regarding urban pesticide use to move towards integrated pest management. This program uses targeted public information and educational programs developed in the pilot project. This program is designed to reduce runoff of pesticides from this urban area into the Delta near Suisun Bay and will include monitoring and evaluation of effectiveness. The U.S. Bureau of Reclamation will work with the Central Contra Costa Sanitary District to develop this program.

**Second Quarter Accomplishments:** The Ecosystem Roundtable, BDAC and the CALFED agencies have selected this proposal for funding. As of the end of this reporting period, March 31, final approval by the Department was pending. The Department approved this project on April 28, 1998.

	<b>Recommended Funding Level</b>	<b>Funds Obligated This Quarter</b>
<b><u>Introduced and Undesirable Species Control:</u></b>	<b>\$1,250,000</b>	<b>\$0</b>
1) <b>Program Title:</b> Exotic Species Control Program	\$1,250,000	\$0
<b>Funding provided to:</b> U.S. Fish and Wildlife Service		
<b>Project Description:</b> This program will identify and implement measures to prevent additional introduction of exotic, non-native aquatic species. This program will develop an overall strategy which seeks to control various sources of introductions such as ballast water and intentional introductions. The program may also identify specific needs to control previously introduced species if experts can identify effective remedial control measures. The U.S. Fish and Wildlife Service will work with CALFED staff to develop this program.		
<b>Second Quarter Accomplishments:</b> The Ecosystem Roundtable, BDAC and the CALFED agencies have selected this program for funding. As of the end of this reporting period, March 31, final approval by the Department was pending. The Department approved this project on April 28, 1998.		
<b><u>Improved Fish Management and Hatchery Operations:</u></b>	<b>\$625,000</b>	<b>\$0</b>
1) <b>Project Title:</b> Evaluation of Tagging Data	\$625,000	\$0
<b>Funding provided to:</b> U.S. Bureau of Reclamation		
<b>Project Description:</b> This project consists of two integrated components. The first component will evaluate existing coded wire tag and recovery data from the Central Valley, look at hatchery produced salmon contribution toward commercial and recreational harvest, and develop parameters associated with constant fractional or mass marking programs for fish harvest. The second component will demonstrate the feasibility of marking large numbers of fish for release into Central Valley waters. Increasing the tagging levels will provide a much greater definition of juvenile salmon inland distribution, migration rates, growth rates, and origin of fish captured. The U.S. Bureau of Reclamation will work with Northwest Marine Technology, Inc. and the California Department of Fish and Game to accomplish the project goals.		
<b>Second Quarter Accomplishments:</b> The Ecosystem Roundtable, BDAC and the CALFED agencies have selected this proposal for funding. As of the end of this reporting period, March 31, final approval by the Department was pending. The Department approved this project on April 28, 1998.		
<b><u>Watershed Management:</u></b>	<b>\$2,253,000</b>	<b>\$371,000</b>
1) <b>Project Title:</b> Improvement/Sediment Stabilization on Deer, Mill and Antelope Creeks (Lassen National Forest)	\$371,000	\$371,000
<b>Funding provided to:</b> U.S. Forest Service		

<b>Recommended Funding Level</b>	<b>Funds Obligated This Quarter</b>
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**Project Description:** Program to reduce generation of fine sediment from upland, riparian, and road-related sources in three watersheds utilized by spring run salmon and steelhead in Lassen National Forest. Stabilization measures would be implemented in known problem areas, and inventory, design, and planning measures pursued for remaining road-related problems. Includes identification of willing sellers for potential land exchange related to acquisition of riparian areas.

**Second Quarter Accomplishments:** Issued an Interagency Agreement on March 19, 1998.

Upon notification of the obligation of funds, U.S. Forest Service refined their timeline requirements for this project and identified specific staff members to manage this project.

- |   |             |     |
|---|-------------|-----|
| 2) <b>Program Title:</b> Watershed Restoration Planning<br>and Implementation Program | \$1,550,000 | \$0 |
|---|-------------|-----|

**Funding provided to:** U.S. Environmental Protection Agency

**Project Description:** A program to promote locally-led efforts to develop comprehensive restoration plans for key tributaries of the Central Valley and Bay-Delta Watershed. This program will fund the development and implementation of restoration projects or plans by new or existing watershed groups. To promote watershed stewardship throughout the ecosystem and to support an increased understanding of the linkages with the upper watershed, geographic scope of the watershed program will include the upper watershed and the local watersheds below the Delta. Efforts under this program will be coordinated through the CALFED Watershed Management Program.

**Second Quarter Accomplishments:** The Ecosystem Roundtable, BDAC and the CALFED agencies have selected this proposal for funding. As of the end of this reporting period, March 31, final approval by the Department was pending. The Department approved this project on April 28, 1998. A public solicitation process is scheduled for May 1998 to select specific projects for funding.

- |  |           |     |
|--|-----------|-----|
| 3) <b>Project Title:</b> Butte Creek Watershed<br>Restoration Implementation | \$294,000 | \$0 |
|--|-----------|-----|

**Funding provided to:** U.S. Fish and Wildlife Service

**Project Description:** Watershed planning, outreach, and restoration project to be implemented by the Butte Creek Watershed Conservancy. This project will include watershed planning, an education program, an evaluation of the geomorphology of an important segment of Butte Creek, and a road survey in the watershed to identify future erosion control needs. The U.S. Fish and Wildlife Service is working with California State University, Chico and the Butte Creek Watershed Conservancy to develop this program.

<b>Recommended Funding Level</b>	<b>Funds Obligated This Quarter</b>
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**Second Quarter Accomplishments:** The Ecosystem Roundtable, BDAC and the CALFED agencies have selected this proposal for funding. As of the end of this reporting period, March 31, final approval by the Department was pending. The Department approved this project on April 28, 1998.

4) <b>Project Title:</b> Inventory of Forest Road Systems at Cat Creek Watershed	\$38,000	\$0
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**Funding provided to:** U.S. Forest Service.

**Project Description:** An interdisciplinary team will develop a process for reviewing the forest road system within the Cat Creek watershed. The objective is to provide decision makers with recommendations about which roads to repair, relocate, gate, or obliterate. The process developed by this team would be used to review the entire forest road system within the Cosumnes River Basin. Roads are the principle cause of accelerated erosion in forests in the western United States; this project will ultimately improve riparian resources and aquatic habitat by removing sources of sedimentation.

**Second Quarter Accomplishments:** The Ecosystem Roundtable, BDAC and the CALFED agencies have selected this proposal for funding. As of the end of this reporting period, March 31, final approval by the Department was pending. The Department approved this project on April 28, 1998.

**Monitoring, Permit Coordination, and Other Special**

<b>Support Programs:</b>	\$3,570,000	\$0
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1) <b>Project Title:</b> Integrated Phasing Strategy	\$1,647,000	\$0
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**Funding provided to:** U.S. Bureau of Reclamation

**Project Description:** In order to restore the Bay-Delta ecosystem using adaptive management, a logical set of priorities must be established based on the current understanding of the system. Actions need to be selected to address these priorities and the results of these actions need to be evaluated to refine priorities in future years. The Ecosystem Restoration Program Plan (ERPP) is the "common element" to all alternatives being considered in the Programmatic EIS. A strategy for phased implementation of the ERPP needs to be developed to lay out these priorities and identify the near-term restoration actions to address them. The strategy for phased implementation of ecosystem restoration activities is described in the ERPP, essential to the conservation strategy being developed to comply with the Endangered Species Act, and the basis for setting funding priorities for near-term restoration in the guidance document. The phased implementation strategy will require technical input on three levels including:

- a) additional technical assistance at the staff level;
- b) establishment of a standing science panel composed of independent scientists and local stakeholder, agency, and independent specialists; and
- c) a panel of scientists (without local stakeholder, agency, or other independent specialists).

<b>Recommended Funding Level</b>	<b>Funds Obligated This Quarter</b>
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**Second Quarter Accomplishments:** The Secretary of the Interior approved funding for this project on February 13, 1998. Funding has been made available for CALFED program staff's use.

CALFED program staff has accomplished three tasks during this quarter toward the Integrated Phasing Strategy goals:

- 1) Assembled a team of scientists to assist in the preparation of the Ecosystem Restoration Program Strategic Plan. The outline of the Strategic Plan has been prepared with public input from the Bay-Delta Advisory Council Ecosystem Restoration Work Group and others.
- 2) Circulated the draft species lists for the Conservation Strategy through the stakeholders and CALFED agencies. A compilation of life history information for these species will be input into a database which will track impacts and benefits to these species. The database is currently under development.
- 3) Development of the FY 1999 Action Plan for near-term priorities. They are developing this Action Plan with the assistance of the Bay-Delta Ecosystem Roundtable.

2) <b>Project Title:</b> Coordinated Permitting	\$282,000	\$0
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**Funding provided to:** U.S. Bureau of Reclamation.

**Project Description:** Facilitation of timely review and necessary action on permits will be required for implementation of near-term ecosystem restoration projects. This effort will also lay the groundwork for a coordinated approach on permit coordination for the eventual implementation of the CALFED Bay-Delta Program (CALFED Program).

**Second Quarter Accomplishments:** The Secretary of the Interior approved funding for this project on February 13, 1998. Funding has been made available for CALFED program staff's use.

CALFED program staff has established an interagency team to identify the issues relative to permitting concerns.

3) <b>Program Title:</b> Development of a Watershed Management Program	\$184,000	\$0
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**Funding provided to:** U.S. Bureau of Reclamation

**Project Description:** Successful and durable solutions to complex water quality problems which affect environmental resources are best approached from the perspective of an entire watershed. Through this approach, local pollution prevention and control activities are coordinated with similar activities to enable a concerted effort to alleviate

<b>Recommended Funding Level</b>	<b>Funds Obligated This Quarter</b>
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ecosystem and water quality problems. Coordination of these efforts also results in the exchange of information, sharing of experiences, and development of more efficient solutions.

**Second Quarter Accomplishments:** The Secretary of the Interior approved funding for this program on February 13, 1998. Funding has been made available for CALFED program staff's use.

During this quarter, CALFED program staff has been collecting input from CALFED agencies and stakeholder groups to identify specific watershed management needs within the CALFED geographic area.

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|---|-------------|-----|
| 4) <b>Program Title:</b> Comprehensive and Coordinated Monitoring and Research Program (CCMARP) | \$1,157,000 | \$0 |
|---|-------------|-----|

**Funding provided to:** U.S. Bureau of Reclamation

**Project Description:** The Interagency Ecological Program (IEP) and the San Francisco Estuary Institute are going to be working with the CALFED program staff and stakeholders to develop CCMARP for the Bay-Delta and its watershed. CCMARP will include a structure and process for integrated data management, data analysis, and reporting. Monitoring elements for near-term ecosystem restoration need to be integrated with CCMARP so that restoration proposals contain monitoring elements to determine whether stated objectives have been met and to provide guidance for assessing future restoration needs. This special support program will fund a portion of a system which does the following: reviews monitoring, assessment, and reporting plans prior to implementation; standardizes data collection methodology, format, and storage; and reviews, evaluates, and circulates results to all interested parties. In our January 16, 1998, request, funding was approved to develop the basic framework which is now in draft form. This funding will be used to begin implementation of CCMARP once the framework is complete. CCMARP will incorporate data from the Interagency Ecological Program (IEP), the Central Valley Project, the Comprehensive Assessment Monitoring Program, and data provided by the San Francisco Estuary Institute. CCMARP will include a structure and process for integrated data management, data analysis, and reporting. Monitoring elements for near-term ecosystem restoration need to be integrated with CCMARP so that restoration proposals contain monitoring elements to determine whether stated objectives have been met and to provide guidance for assessing future restoration needs. Funding recipients include the U.S. Bureau of Reclamation, the U.S. Fish and Wildlife Service, the U.S. Geological Survey, and CALFED program staff.

**Second Quarter Accomplishments:** The Secretary of the Interior approved funding of \$157,000 for this program on February 13, 1998. The initial \$157,000 has been made available for CALFED program staff's use. An additional \$1,000,000 was requested to

<b>Recommended Funding Level</b>	<b>Funds Obligated This Quarter</b>
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increase funding for this program in FY 1998. The Ecosystem Roundtable, BDAC and the CALFED agencies have selected this program for additional funding. As of the end of this reporting period, March 31, final approval by the Department was pending. The Department approved this project on April 28, 1998.

CALFED program staff has developed stage 1 of the CCMARP plan including input from the technical and policy level representatives from the agencies and stakeholders. The plan will be submitted to the CALFED agencies for approval. A broad based steering committee has been formed to guide the further development of CCMARP. A project work team has been formed and a chair identified to review monitoring proposals for individual projects approved with state, federal and stakeholder funding.

5) <b>Program Title:</b> Bay-Delta Education Program	\$300,000	\$0
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**Funding provided to:** U.S. Bureau of Reclamation

**Project Description:** Building public understanding of efforts to restore the Bay-Delta ecosystem is critical to the success of these efforts. Many of the concepts in habitat restoration are new and innovative and there is the need to increase public understanding to increase acceptance and facilitate implementation. This program will provide support for educational programs such as Adopt-a-Watershed. The U.S. Bureau of Reclamation will most likely work with the National Fish and Wildlife Foundation to develop the most effective program.

**Second Quarter Accomplishments:** The Ecosystem Roundtable, BDAC and the CALFED agencies have selected this program for funding. A formal request for program approval from the Secretary of the Interior was forwarded to the Department on March 3, 1998. In May 1998, pending the Secretary's approval, a public solicitation will be initiated for specific project selection.

<b>Miscellaneous Expenses/Administration:</b>	\$4,468,990	\$0
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1) <b>Program Title:</b> Restoration Reserve	\$3,318,990	\$0
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**Funding provided to:** U.S. Bureau of Reclamation

**Project Description:** The Cost Share Agreement between the State of California and the United States related to Ecosystem Restoration Under Proposition 204 and the Bay-Delta Act, calls for setting aside up to 5 percent of the available funds in a Restoration Reserve Fund for emergency and single-time expenditures. The Policy Team recommends that \$3.3 million of the FY 1998 Federal Bay-Delta Accounts be set aside for that purpose. Funds will be allocated to the U.S. Bureau of Reclamation and disbursed as determined by the Policy Team.

**Second Quarter Accomplishments:** The Ecosystem Roundtable, BDAC and the CALFED agencies have identified this program for funding. As of the end of this reporting period, March 31, final approval by the Department was pending. The

<b>Recommended Funding Level</b>	<b>Funds Obligated This Quarter</b>
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Department approved this project on April 28, 1998.

2) <b>Program Title:</b> Technical Review and Quality Control Program	\$850,000	\$0
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**Funding provided to:** U.S. Bureau of Reclamation

**Project Description:** While each federal agency is required to monitor the schedule and budget of the activities they undertake with this appropriation, there is a need to have an efficient quality control program to monitor work products to ensure that deliverables are satisfactory. This program will provide the resources needed to technically review work products as needed for the projects.

**Second Quarter Accomplishments:** The Ecosystem Roundtable, BDAC and the CALFED agencies have identified this program for funding. As of the end of this reporting period, March 31, final approval by the Department was pending. The Department approved this project on April 28, 1998.

3) <b>Program Title:</b> Administrative Support Program	\$300,000	\$0
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**Funding provided to:** U.S. Bureau of Reclamation

**Project Description:** Funding is requested for support provided by the U.S. Bureau of Reclamation in coordinating funding activities with other Federal CALFED agencies from the Bay-Delta Ecosystem Restoration Appropriation.

**Second Quarter Accomplishments:** The Ecosystem Roundtable, BDAC and the CALFED agencies have selected this program for funding. As of the end of this reporting period, March 31, final approval by the Department was pending. The Department approved this project on April 28, 1998.

Total for all Categories

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\$85,000,000

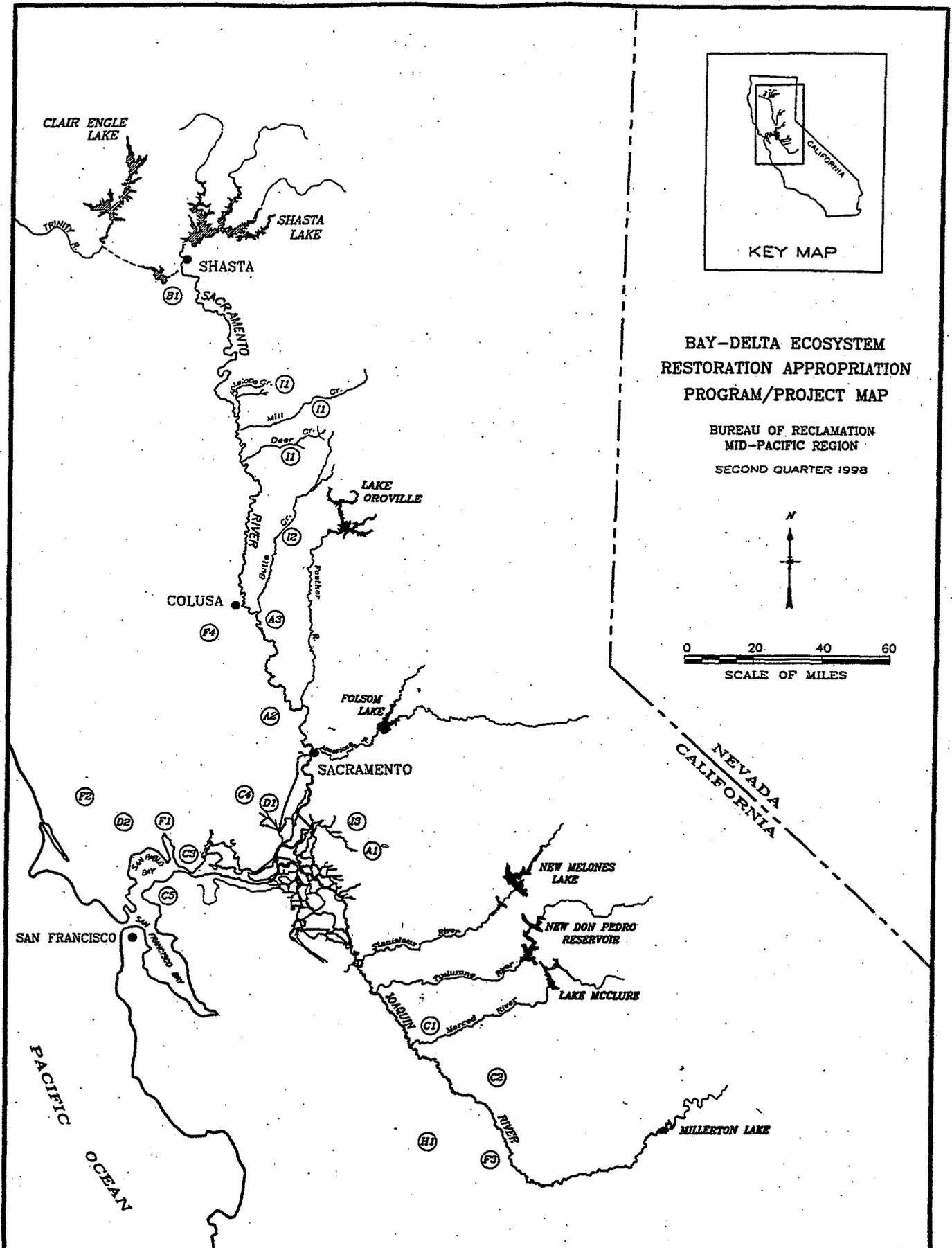
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\$21,033,010

**BAY-DELTA ECOSYSTEM RESTORATION APPROPRIATION  
PROGRAM/PROJECT MAP INDEX**

- A. Fish Screen Improvements
  - A1 Woodbridge Fish Screen and Passage
  - A2 Richter Brothers Screen
  - A3 Boeger Family Farm Screen
  - A4 Small Diversion Fish Screens Program (*Bay-Delta System-wide Program*)
- B. Fish Passage Improvements
  - B1 Anderson-Cottonwood Irrigation District Fish Passage
  - B2 Fish Passage Program (*Bay-Delta System-wide Program*)
- C. Habitat Restoration in Floodplains and Marshes
  - C1 San Joaquin Floodplain Acquisition and Riparian Restoration
  - C2 Bear Creek Floodplain Restoration Demonstration Project
  - C3 South Napa River Wetlands Acquisition and Restoration Program
  - C4 Cache Slough Habitat Enhancement
  - C5 San Francisco Bay Area Wetlands Ecosystem Goals Project
  - C6 Habitat Restoration/Flood Control Bypasses Program (*Bay-Delta System-wide Program*)
  - C7 Floodplain Restoration/Habitat Restoration on Existing Conservation Lands Program (*Bay-Delta System-wide Program*)
- D. River Channel Changes
  - D1 Liberty Island Acquisition
  - D2 Sedimentation Movement and Availability, and Monitoring in the Delta
- E. Improved Instream Flows
  - E1 Water Acquisition Program (*Bay-Delta System-wide Program*)
- F. Water Quality and Temperature Improvement
  - F1 Assessment of Organic Matter in the Habitat and Its Relationship to the Food Chain
  - F2 Evaluation of Selenium Sources, Levels, and Consequences in the Delta
  - F3 Bacterial Treatment of Selenium in the Panoche Drainage
  - F4 Sand and Salt Creek Watershed Project
- G. Introduced and Undesirable Species Control
  - G1 Exotic species Control Program (*Bay-Delta System-wide Program*)
- H. Improved Fish Management and Hatchery Operations
  - H1 Evaluation of Tagging Data
- I. Watershed Management
  - I1 Watershed Improvement/Sediment Stabilization on Deer, Mill and Antelope Creeks
  - I2 Butte Creek Watershed Road Survey
  - I3 Inventory of Forest Road Systems, Cat Creek Watershed
  - I4 Watershed Planning Program (*Bay-Delta System-wide Program*)
- J. Monitoring, Permit Coordination, and Other Special Support Programs
  - J1 Integrated Phasing Strategy (*Bay-Delta System-wide Program*)

**APPENDIX A**

- J2 Coordinated Permitting (*Bay-Delta System-wide Program*)
- J3 Development of a Watershed Management Program
- J4 Comprehensive and Coordinated Monitoring and Research Program (*Bay-Delta System-wide Program*)
- J5 Bay-Delta Education Program (*Bay-Delta System-wide Program*)



**PROJECT SUMMARY FOR  
CALIFORNIA BAY-DELTA ECOSYSTEM RESTORATION APPROPRIATION**

(Second Quarter of FY 1998)

Refer to the attached Individual Project Progress Reports for project specifics

Category/ Agency/Proposal	Total Estimated Cost of Proposal	Funds Obligated This Quarter	Total Funds Obligated
<b>Fish Screen Improvements</b>	<u><b>\$2,539,000</b></u>	<u><b>\$0</b></u>	<u><b>\$0</b></u>
1) U.S. Bureau of Reclamation: Woodbridge Fish Screen and Passage	1,575,000		
2) U.S. Bureau of Reclamation: Richter Brothers Screen	49,000		
3) U.S. Bureau of Reclamation: Boeger Family Farm Screen	15,000		
4) Natural Resource Conservation Service: Small Diversion Fish Screens Program	900,000		
<b>Fish Passage Improvements</b>	<u><b>\$8,325,000</b></u>	<u><b>\$0</b></u>	<u><b>\$0</b></u>
1) U.S. Bureau of Reclamation: Anderson Cottonwood Irrigation District Fish Passage	325,000		
2) U.S. Bureau of Reclamation: Fish Passage Program	8,000,000		
<b>Habitat Restoration in Floodplains and Marshes'</b>	<u><b>\$27,342,000</b></u>	<u><b>\$10,981,000</b></u>	<u><b>\$10,981,000</b></u>
1) U.S. Fish and Wildlife Service: San Joaquin Floodplain Acquisition and Riparian Restoration	10,647,000	10,647,000	10,647,000
2) U.S. Fish and Wildlife Service: Bear Creek Floodplain Restoration Demonstration Project	334,000	334,000	334,000
3) U.S. Fish and Wildlife Service: Floodplain Restoration/Habitat Restoration on Existing Conservation Lands Program	14,000,000		
4) U.S. Army Corps of Engineers: Habitat Restoration/Flood Control Bypasses Program	1,200,000		
5) U.S. Bureau of Reclamation: Napa River Wetlands Acquisition	1,000,000		
6) U.S. Bureau of Reclamation: Cache Slough Habitat Enhancement	85,000		
7) U.S. Environmental Protection Agency: Regional Wetlands Goals Project	76,000		

APPENDIX B

Category/ Agency/Proposal	Total Estimated Cost of Proposal	Funds Obligated This Quarter	Total Funds Obligated
<b>River Channel Changes</b> 1) U.S. Fish and Wildlife Service: Liberty Island Acquisition 2) U.S. Geological Survey: Sedimentation Movement, and Availability and Monitoring in the Delta	<u>\$9,624,010</u> 8,577,000  1,047,010	<u>\$9,164,000</u> 8,577,000  587,010	<u>\$9,164,000</u> 8,577,000  587,010
<b>Improved Instream Flows</b> 1) U.S. Bureau of Reclamation: Water Acquisition Program	<u>\$20,000,000</u> 20,000,000	<u>\$0</u>	<u>\$0</u>
<b>Water Quality and Temperature Improvement</b> 1) U.S. Geological Survey: Assessment of Organic Matter in the Habitat and Its Relationship to the Food Chain 2) U.S. Geological Survey: Evaluation of Selenium Sources, Levels, and Consequences in the Delta 3) U.S. Bureau of Reclamation: Bacterial Treatment of Selenium in the Panoche Drainage 4) U.S. Bureau of Reclamation: Sand and Salt Creek Watershed Project 5) U.S. Bureau of Reclamation: Integrated Pest Management in Suisun Bay Program	<u>\$5,003,000</u> 1,400,000  1,589,000  1,149,000  599,000  266,000	<u>\$517,000</u> 517,000	<u>\$517,000</u> 517,000
<b>Introduced and Undesirable Species Control</b> 1) U.S. Fish and Wildlife Service: Exotic Species Control Program	<u>\$1,250,000</u> 1,250,000	<u>\$0</u>	<u>\$0</u>
<b>Improved Fish Management and Hatchery Operations</b> 1) U.S. Bureau of Reclamation: Evaluation of Tagging Data	<u>\$625,000</u> 625,000	<u>\$0</u>	<u>\$0</u>
<b>Watershed Management</b> 1) U.S. Forest Service: Watershed Improvement/Sediment Stabilization on Deer, Mill and Antelope Creeks (Lassen National Forest) 2) U.S. Environmental Protection Agency: Watershed Restoration Planning 3) U.S. Fish and Wildlife Service: Butte Creek Watershed Road Survey 4) U.S. Forest Service: Inventory of Forest Road Systems, Cat Creek Watershed	<u>\$2,253,000</u> 371,000  1,550,000  294,000  38,000	<u>\$371,000</u> 371,000	<u>\$371,000</u> 371,000

**APPENDIX B**

Agency/Proposal	Total Estimated Cost of Proposal	Funds Obligated This Quarter	Total Funds Obligated
<b>Monitoring, Permit Coordination, and Other Special Support Programs</b>	<b><u>\$3,570,000</u></b>	<b><u>\$0</u></b>	<b><u>\$0</u></b>
1) U.S. Bureau of Reclamation: Integrated Phasing Strategy*	1,647,000		
2) U.S. Bureau of Reclamation: Coordinated Permitting*	282,000		
3) U.S. Bureau of Reclamation: Development of a Watershed Management Program*	184,000		
4) U.S. Bureau of Reclamation: Comprehensive and Coordinated Monitoring and Research Program (CCMARP)*	1,157,000		
5) U.S. Bureau of Reclamation: Bay-Delta Education Program	300,000		
<b>Miscellaneous Expenses/Administration</b>	<b><u>\$4,468,990</u></b>	<b><u>\$0</u></b>	<b><u>\$0</u></b>
1) U.S. Bureau of Reclamation: Restoration Reserve Fund	3,318,990		
2) U.S. Bureau of Reclamation: Technical Review and Quality Control Program	850,000		
3) U.S. Bureau of Reclamation: Administrative Support Program	300,000		
<b>TOTAL ALLOCATION FOR Federal Bay-Delta Account</b>	<b>\$85,000,000</b>	<b>\$21,033,010</b>	<b>\$21,033,010</b>

\*CALFED program staff have been authorized to utilize these funds (\$2.3 million) but the funds have not yet been obligated.

**FISCAL YEAR 1998 CALFED ECOSYSTEM INVESTMENT  
PROJECT MAP LEGEND**

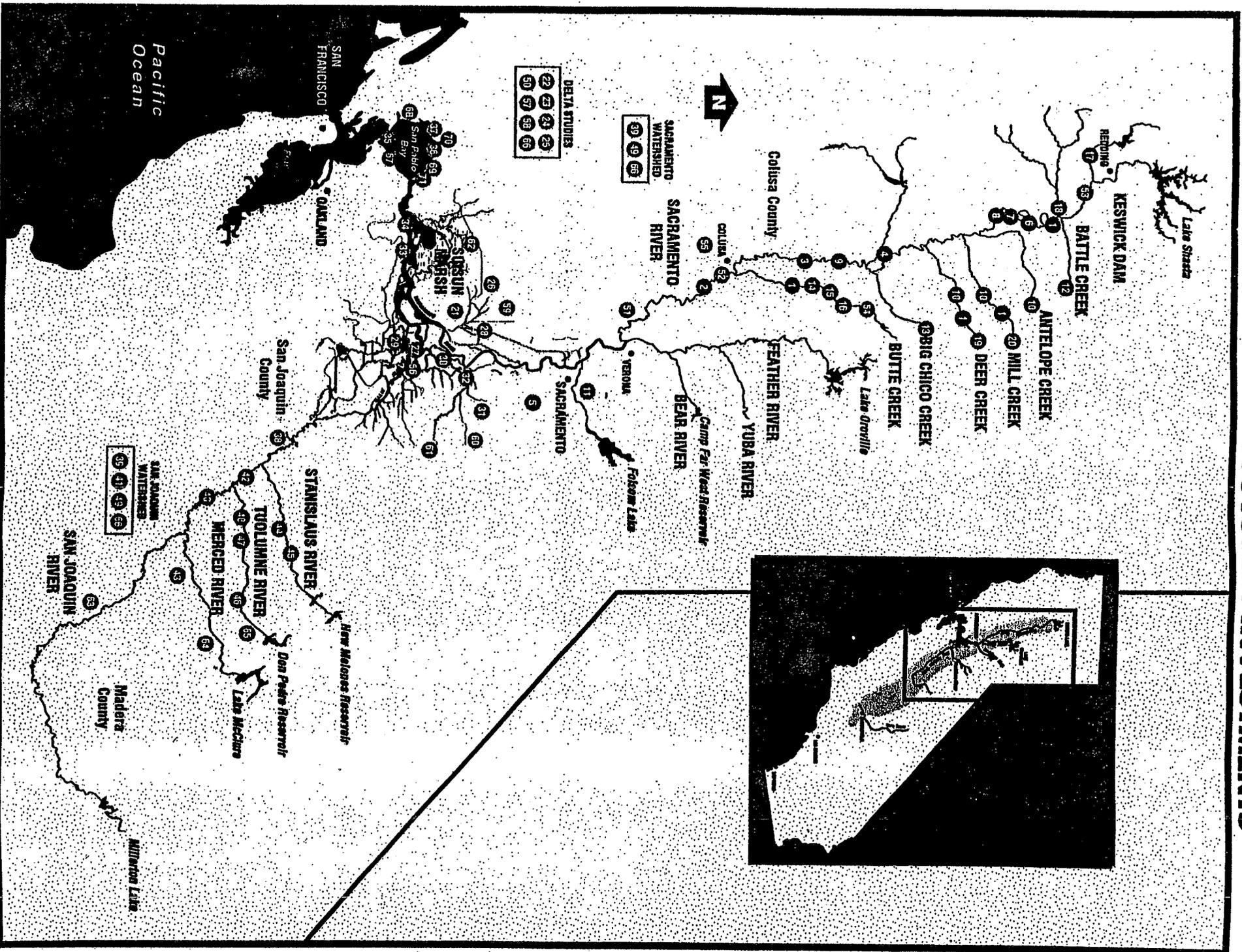
- 1 Sacramento River and Tributary Fish Screens
- 2 Reclamation District 108 Fish Screen
- 3 Princeton Fish Screen
- 4 Wilson Ranch Screen
- 5 Assessment and Implementation of Urban Use Reduction of Diazinon and Chlorpyrifos (Sacramento County)
- 6 Watershed Management Planning - Upper Sacramento River
- 7 Sacramento River Floodplain Acquisition - National Process Restoration
- 8 Sacramento River Floodplain Acquisition - Active Riparian Forest Restoration
- 9 Sacramento River Meander Restoration Project
- 10 Watershed Improvements/Sediment Stabilization (Deer, Mill, and Antelope Creeks)
- 11 Watershed Restoration Planning (Auburn Ravine and Coon Creek)
- 12 Battle Creek Screens and Fish Passage
- 13 Watershed Plan (Big Chico Creek)
- 14 Gorrill Dam Screen and Ladder
- 15 Adams Dam Screen and Passage
- 16 Butte Creek Acquisition and Riparian Restoration
- 17 Saeltzer Dam Fish Passage
- 18 Cottonwood Creek Channel Restoration
- 19 Watershed Plan Implementation (Deer Creek)
- 20 Mill Creek Riparian Restoration - Phase II
- 21 Hastings Tract Fish Screen - Feasibility Study
- 22 Monitoring of Delta Contaminants
- 23 Effects of Wetlands Restoration on Methyl Mercury Levels
- 24 Sedimentation Movement and Availability and Monitoring in Delta
- 25 Contaminant Effects on Smelt
- 26 Jepson Prairie Restoration
- 27 In Channel Island Demonstration Project
- 28 Liberty Island Acquisition
- 29 Franks Tract Wetlands Habitat Restoration
- 30 Tyler Island Levee Protection and Habitat Restoration Pilot Project
- 31 Cosumnes Floodplain Acquisition and Restoration
- 32 Mokelumne River Setback Levee and Habitat Restoration
- 33 Bay Point Shoreline Restoration Plan
- 34 Martinez Regional Shoreline Restoration
- 35 Preventing Exotic Introductions from Ballast Water
- 36 Cullinan Ranch Restoration
- 37 Tolay Creek Restoration
- 38 Banta-Carbona Fish Screen
- 39 Biologically Integrated Orchard System (BIOS) - Pesticide and Fertilizer Reduction/Sacramento and San Joaquin Watersheds
- 40 San Joaquin River Real-Time Water Quality Management Program
- 41 Developing a Genetic Baseline for San Joaquin Salmon
- 42 Acquisition and Restoration of Refuge Lands (San Joaquin River National Wildlife Refuge)
- 43 Bear Creek Floodplain Restoration Demonstration Project (San Luis National Wildlife Refuge)
- 44 Stanislaus River Channel Restoration (Williams Site)
- 45 Knights Ferry Gravel Replenishments
- 46 Gravel Replacement (Basso Bridge)

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- 47 Tuolumne River Channel Restoration (Special Run Pool 9)
- 48 Tuolumne River Setback Levees and Channel Restoration (Mining Reach)
- 49 Evaluation of Alternative Pesticide Use Reduction Practices
- 50 Assessment of Organic Matter in the Habitat and Its Relationship to the Food Chain
- 51 Richter Brother Screen
- 52 Boeger Family Farm Screen
- 53 Anderson-Cottonwood Irrigation District (ACID) Fish Passage
- 54 Butte Creek Watershed
- 55 Sand and Salt Creek Watershed Project
- 56 Twitchell Island Restoration
- 57 Evaluation of Selenium Sources, Levels, and Consequences in the Delta
- 58 Culture of Delta Smelt
- 59 Cache Slough Habitat Enhancement
- 60 Inventory of Forest road Systems at Cat Creek Watershed
- 61 Woodbridge Fish Screen Passage
- 62 Selected Fish Screens - Suisun Marsh
- 63 Bacterial Treatment of Selenium in the Panoche Drainage
- 64 Merced River Ranch Acquisition and Restoration
- 65 Basso Bridge Land Acquisition
- 66 Evaluation of Tagging Data
- 67 San Francisco Bay Area Wetlands Ecosystem Goals Project
- 68 Hamilton Wetlands Restoration Project
- 69 Napa River Watershed Stewardship
- 70 Sonoma Creek Watershed Restoration Project
- 71 South Napa River Wetlands Acquisition and Restoration Program

# CALFED FY 1998 ECOSYSTEM INVESTMENTS

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E-035722

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**PROJECTS APPROVED AS OF MARCH 31, 1998****(CALFED Funding Sources)**

Dollars in thousands

**1. Fish Screen Improvements**

Map Id	Project Title	Applicant	Total Funding Proposed	Bay-Delta Ecosyst Rest Approp	Prop 204 (Category III)	Prop 204 (CVPIA)	CVPIA	Calif Urban Water Assoc	Other State Funding	Other Federal Funding	Other
1	Select Fish Screens on the Sacramento River and Tributaries	State - Department of Fish and Game	\$597		\$446				\$151		
2	RD 108 Fish Screen at Wilkins Slough Pumping Plant	Local - Reclamation District 108	\$8,600		\$2,500	\$2,300	\$3,800				
3	Princeton Fish Screen (RD 1004)	Local - Reclamation District 1004	\$4,969		\$1,750	\$2,675	\$544				
4	Wilson Ranch Fish Screen	Private - Deseret Farms of California	\$200					\$200			
12	Battle Creek Screens and Fish Passage	State - Department of Water Resources	\$790					\$395			\$395
14	Gorrill Dam Screen and Ladder	Private - Gorrill Land Company	\$1,622			\$546	\$656	\$370			\$50
15	Adams Dam Screen and Passage	Non-Profit - Ducks Unlimited	\$1,125			\$374		\$242			\$509
21	Hastings Tract Fish Screen Feasibility Study	Private - Hastings Island Land Company	\$27					\$27			
38	Banta-Carbona Fish Screen	Local - Banta-Carbona Irrigation District	\$3,915			\$939		\$939	\$75	\$1,917	\$45
51	Richter Brothers Screen	Private - Henry D. Richter, Jr.	\$49	\$49							

**1. Fish Screen Improvements Continued**

Information provided by CALFED Program Staff (Draft dated April 22, 1998)

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Map Id	Project Title	Applicant	Total Funding Proposed	Bay-Delta Ecosyst Rest Approp	Prop 204 (Category III)	Prop 204 (CVPIA)	CVPIA	Calif Urban Water Assoc	Other State-Funding	Other Federal Funding	Other
52	Boeger Family Farm Screen	Private - Boeger Family Farm	\$15	\$15							
61	Woodbridge Fish Screen and Passage	Local - Woodbridge Irrigation District	\$1,575	\$1,575							
62	Selected Fish Screens - Suisun Marsh	State - Department of Fish and Game	\$2,936		\$2,785						\$151
Not Listed	Small Diversion Fish Screens Program	Federal - Natural Resources Conservation Service	\$900	\$900							
Not Listed	Alternatives to Fish Screens Research Program	To Be Determined	\$200		\$200						
<b>Total for Fish Screen Improvements</b>			<b>\$27,520</b>	<b>\$2,539</b>	<b>\$7,681</b>	<b>\$6,834</b>	<b>\$5,000</b>	<b>\$2,173</b>	<b>\$226</b>	<b>\$1,917</b>	<b>\$1,150</b>

Information provided by CALFED Program Staff (Draft dated April 22, 1998)

**PROJECTS APPROVED AS OF MARCH 31, 1998**

**(CALFED Funding Sources)**

Dollars in thousands

**2. Fish Passage Improvements**

Map Id	Project Title	Applicant	Total Funding Proposed	Bay-Delta Ecosyst Rest Approp	Prop 204 (Category III)	Prop 204 (CVPIA)	CVPIA	Calif Urban Water Assoc	Other State Funding	Other Federal Funding	Other
17	Saeltzer Dam Fish Passage	Private - Townsend Flat Water Ditch Company	\$538					\$238			\$300
53	Anderson-Cottonwood Irrigation District (ACID) Fish Passage	Local - Anderson-Cottonwood Irrigation District	\$375	\$325							\$50
Not Listed	Fish Passage Program	Federal - U.S. Bureau of Reclamation	\$8,000	\$8,000							
Not Listed	Fish Passage Assessment Program	To Be Determined	\$500		\$500						
<b>Total for Fish Passage Improvements</b>			<b>\$9,413</b>	<b>\$8,325</b>	<b>\$500</b>	<b>\$0</b>	<b>\$0</b>	<b>\$238</b>	<b>\$0</b>	<b>\$0</b>	<b>\$350</b>

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**PROJECTS APPROVED AS OF MARCH 31, 1998  
(CALFED Funding Sources)**

Dollars in thousands

**3. Habitat Restoration in Floodplains and Marshes**

Map Id	Project Title	Applicant	Total Funding Proposed	Bay-Delta Ecosyst Rest Approp	Prop 204 (Category III)	Prop 204 (CVPIA)	CVPIA	Calif Urban Water Assoc	Other State Funding	Other Federal Funding	Other
31	Cosumnes Floodplain Acquisition and Restoration	Non-Profit - Wildlife Conservation Board and The Nature Conservancy	\$18,174		\$10,374						\$7,800
36	Cullinan Ranch Restoration	Non-Profit - Ducks Unlimited	\$1,031		\$369						\$662
37	Tolay Creek Restoration	Non-Profit - Ducks Unlimited	\$705		\$283						\$422
42	San Joaquin River Floodplain Acquisition and Riparian Restoration (SJR NWR)	Federal - U.S. Fish and Wildlife Service	\$20,000	\$10,647						\$9,353	
43	Bear Creek Floodplain Restoration Demonstration Projects (NL NWR)	Federal - U.S. Fish and Wildlife Service	\$414	\$334						\$80	
47	Tuolumne River Channel Restoration (Special Run Pool 9)	Local - Turlock Irrigation District	\$3,055				\$656	\$2,353			\$46
48	Tuolumne River Setback Levees and Channel Restoration (Mining Ranch)	Local - Turlock Irrigation District	\$6,363					\$2,801			\$3,562

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### 3. Habitat Restoration in Floodplains and Marshes Continued

Map Id	Project Title	Applicant	Total Funding Proposed	Bay-Delta Ecosyst Rest Approp	Prop 204 (Category III)	Prop 204 (CVPIA)	CVPIA	Calif Urban Water Assoc	Other State Funding	Other Federal Funding	Other
59	Cache Slough Habitat Enhancement	Local - Reclamation District 2060	\$85	\$85							
64	Merced River Ranch Acquisition and Restoration	State - Department of Fish and Game	\$704		\$658						\$46
67	San Francisco Bay Area Wetlands Ecosystem goals Project (AKA: Regional Wetlands Goals Project)	Federal - U.S. Environmental Protection Agency	\$276	\$76							\$200
68	Hamilton Wetland Restoration	Non-Profit - San Francisco Bay Conservation & Development Commission and the California Coastal Conservancy	\$2,324		\$1,000						\$1,324
71	South Napa River Wetlands Acquisition and Restoration	Local - Napa County Land Trust	\$1,000	\$1,000							
Not Listed	Habitat Restoration/Flood Control Bypasses Program	Federal - U.S. Army Corps of Engineers	\$1,200	\$1,200							
Not Listed	Floodplain Restoration/Habitat Restoration on Existing Conservation Lands Program	Federal - U.S. Fish and Wildlife Service	\$14,000	\$14,000							
<b>Total for Habitat Restoration in Floodplains and Marshes</b>			<b>\$69,331</b>	<b>\$27,342</b>	<b>\$12,684</b>	<b>\$0</b>	<b>\$656</b>	<b>\$5,154</b>	<b>\$0</b>	<b>\$9,433</b>	<b>\$14,062</b>

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**PROJECTS APPROVED AS OF MARCH 31, 1998**  
**(CALFED Funding Sources)**

Dollars in thousands

**4. River Channel Changes**

Map Id	Project Title	Applicant	Total Funding Proposed	Bay-Delta Ecosyst Rest Approp	Prop 204 (Category III)	Prop 204 (CVPIA)	CVPIA	Calif Urban Water Assoc	Other State Funding	Other Federal Funding	Other
6	Watershed Management Planning - Upper Sacramento River (SB 1086)	State - Department of Water Resources	\$200		\$200						
7	Sacramento River Floodplain Acquisition - Natural Process Restoration (SB 1086)	Federal/Non-Profit - U.S. Fish and Wildlife Service, Wildlife Conservation Board, and The Nature Conservancy	\$9,880		\$9,880						
8	Sacramento River Floodplain Acquisition - Active Riparian Forest Restoration (SB 1086)	Federal/Non-Profit - U.S. Fish and Wildlife Service, Wildlife Conservation Board, and The Nature Conservancy	\$3,293		\$1,293						\$2,000
9	Sacramento River Meander Belt Restoration Project (SB 1086)	Non-Profit - The Nature Conservancy	\$899		\$899						
16	Butte Creek Acquisition and Riparian Restoration	Non-Profit - California State University, Chico	\$446		\$186						\$260
18	Cottonwood Creek Channel Restoration	Private - Graham Matthews & Associates	\$71		\$61						\$10

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## 4. River Channel Changes Continued

Map Id	Project Title	Applicant	Total Funding Proposed	Bay-Delta Ecosyst Rest Approp	Prop 204 (Category III)	Prop 204 (CVPIA)	CVPIA	Calif Urban Water Assoc	Other State Funding	Other Federal Funding	Other
20	Lower Mill Creek Riparian Restoration	Non-Profit - Mill Creek Conservancy and The Nature Conservancy	\$238		\$69		\$30				\$139
24	Sedimentation Movement and Availability and Monitoring in the Delta	Federal - U.S. Geological Survey	\$1,047	\$1,047							
26	Jepson Prairie Restoration of Shaded Riverine Aquatic Habitat and Perennial Grasslands	Non-Profit - Solano County Farmlands and the Open Space Foundation	\$244		\$244						
27	In-Channel Island Restoration/Demonstration Project	Local - Association of Bay Area Governments	\$361		\$270						\$91
28	Liberty Island Acquisition	Federal - U.S. Fish and Wildlife Service	\$8,577	\$8,577							
29	Franks Tract Wetlands Habitat Restoration	State and Private - Department of Water Resources, Moffatt and Nichol Engineers, and DPR	\$602		\$232				\$370		
30	Tyler Island Levee Protection and Habitat Restoration Pilot Project	Private - Habitat Assessment and Restoration Team, Inc.	\$885		\$885						

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## 4. River Channel Changes Continued

Map Id	Project Title	Applicant	Total Funding Proposed	Bay-Delta Ecosyst Rest Approp	Prop 204 (Category III)	Prop 204 (CVPIA)	CVPIA	Calif Urban Water Assoc	Other State Funding	Other Federal Funding	Other
32	Mokelumne River Setback Levee and Habitat Restoration	Local - Reclamation District 2110	\$365		\$365						
33	Bay Point Shoreline Restoration Plan	Local - East Bay Regional Park District	\$239		\$185						\$54
34	Martinez Regional Shoreline Restoration	Local - East Bay Regional Park District	\$392		\$325						\$67
44	Stanislaus River Channel Restoration at the Williams Site	State - Department of Fish and Game and Department of Water Resources	\$3,676		\$1,038				\$262		\$2,376
45	Knights Ferry Gravel Replenishment	Private - Carl Mesick Consultants	\$626		\$536						\$90
46	Gravel Replacement (Basso Bridge)	State - Department of Fish and Game	\$273		\$251				\$22		
56	Twitchell Island Restoration	State - Department of Water Resources	\$3,000		\$3,000						
65	Basso Bridge Land Acquisition	State - Department of Fish and Game	\$173		\$173						
Not Listed	Gravel Restoration Program	To Be Determined	\$500		\$500						
<b>Total of River Channel Changes</b>			<b>\$35,987</b>	<b>\$9,624</b>	<b>\$20,592</b>	<b>\$0</b>	<b>\$30</b>	<b>\$0</b>	<b>\$654</b>	<b>\$0</b>	<b>\$5,087</b>

Information provided by CALFED Program Staff (Draft dated April 22, 1998)

**PROJECTS APPROVED AS OF MARCH 31, 1998****(CALFED Funding Sources)**

Dollars in thousands

**5. Improved Instream Flows**

Map Id	Project Title	Applicant	Total Funding Proposed	Bay-Delta Ecosyst Rest Approp	Prop 204 (Category III)	Prop 204 (CVPIA)	CVPIA	Calif Urban Water Assoc	Other State Funding	Other Federal Funding	Other
Not Listed	Water Acquisition Program	Federal - U.S. Bureau of Reclamation	\$20,000	\$20,000							
<b>Total for Improved Instream Flows</b>			<b>\$20,000</b>	<b>\$20,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

Information provided by CALFED Program Staff (Draft dated April 22, 1998)

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**PROJECTS APPROVED AS OF MARCH 31, 1998**

**(CALFED Funding Sources)**

Dollars in thousands

**6. Water Quality and Temperature Improvements**

Map Id	Project Title	Applicant	Total Funding Proposed	Bay-Delta Ecosyst Rest Approp	Prop 204 (Category III)	Prop 204 (CVPIA)	CVPIA	Calif Urban Water Assoc	Other State Funding	Other Federal Funding	Other
5	Assessment and Implementation of Urban Use Reduction of Diazinon and Chlorpyrifors (Sacramento County)	Local - Sacramento Area Stormwater Permittees	\$857		\$664						\$193
22	Monitoring of Delta Contaminants	Non-Profit - San Francisco Baykeeper	\$120		\$100					\$20	
23	Effects of Wetlands Restoration on Methyl Mercury Levels	Non-Profit - University of California, Davis	\$531		\$531						
25	Contaminant Effects on Smelt	Non-Profit - University of California, Davis	\$437		\$437						
39	Biologically Integrated Orchard Systems (BIOS) - Pesticide and Fertilizer Reduction	Private - Community Alliance with Family Farmers	\$1,681		\$1,681						
40	San Joaquin River Real-Time Water Quality Management Program	State - Department of Water Resources	\$932		\$932						

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## 6. Water Quality and Temperature Improvements Continued

Map Id	Project Title	Applicant	Total Funding Proposed	Bay-Delta Ecosyst Rest Approp	Prop 204 (Category III)	Prop 204 (CVPIA)	CVPIA	Calif Urban Water Assoc	Other State Funding	Other Federal Funding	Other
49	Evaluation of Alternative Pesticide Use Reduction Practices for Diazinon and Chlorpyrifos	Non-Profit - University of California, Davis	\$1,705		\$958						\$747
50	Assessment of Organic Matter in the Habitat and Its Relationship to the Food Chain	Federal - U.S. Geological Survey	\$1,400	\$1,400							
55	Sand and Salt Creek Watershed Project	Local - Colusa County Resources Conservation District	\$2,107	\$599							\$1,508
57	Evaluation of Selenium Sources, Levels and Consequences in the Delta	Federal - U.S. Geological Survey	\$2,780	\$1,589							\$1,191
63	Bacterial Treatment of Selenium (Panoche Drainage)	Non-Profit - University of California, Berkeley	\$1,149	\$1,149							
Not Listed	Integrated Pest Management in Suisun Bay Program	Federal - U.S. Bureau of Reclamation	\$266	\$266							
Not Listed	Impacts of Pesticides on Aquatic Invertebrates in the Delta Program	To Be Determined	\$1,500		\$1,500						

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### 6. Water Quality and Temperature Improvements Continued

Map Id	Project Title	Applicant	Total Funding Proposed	Bay-Delta Ecosyst Rest Approp	Prop 204 (Category III)	Prop 204 (CVPIA)	CVPIA	Calif Urban Water Assoc	Other State Funding	Other Federal Funding	Other
Not Listed	Baseline Pesticide Monitoring Program	To Be Determined	\$500		\$500						
Not Listed	Fathead Minnow Toxicity in the Sacramento River Program	To Be Determined	\$400		\$400						
Not Listed	Algal Toxicity Program	To Be Determined	\$500		\$500						
Not Listed	Water Quality Criteria for Chlorpyrifos Program	State - Department of Fish and Game	\$100		\$100						
Not Listed	Chronic Fish Impairment Studies Program	To Be Determined	\$700		\$700						
<b>Total for Water Quality and Temperature Improvements</b>			<b>\$17,665</b>	<b>\$5,003</b>	<b>\$9,003</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$20</b>	<b>\$3,639</b>

Information provided by CALFED Program Staff (Draft dated April 22, 1998)

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**PROJECTS APPROVED AS OF MARCH 31, 1998**  
**(CALFED Funding Sources)**  
Dollars in thousands

**7. Introduced and Undesirable Species Control**

Map Id	Project Title	Applicant	Total Funding Proposed	Bay-Delta Ecosyst Rest Approp	Prop 204 (Category III)	Prop 204 (CVPIA)	CVPIA	Calif Urban Water Assoc	Other State Funding	Other Federal Funding	Other
35	Preventing Exotic Introductions From Ballast Water	Non-Profit - University of California Sea Grant Extension Program	\$287		\$223						\$64
Not Listed	Exotic Species Control Program	Federal - U.S. Fish and Wildlife Service	\$1,250	\$1,250							
<b>Total for Introduced and Undesirable Species Control</b>			<b>\$1,537</b>	<b>\$1,250</b>	<b>\$223</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$64</b>

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Information provided by CALFED Program Staff (Draft dated April 22, 1998)

**PROJECTS APPROVED AS OF MARCH 31, 1998**

**(CALFED Funding Sources)**

Dollars in thousands

**8. Improved Fish Management and Hatchery Operations**

Map Id	Project Title	Applicant	Total Funding Proposed	Bay-Delta Ecosyst Rest Approp	Prop 204 (Category III)	Prop 204 (CVPIA)	CVPIA	Calif Urban Water Assoc	Other State Funding	Other Federal Funding	Other
41	Developing a Genetic Baseline for San Joaquin Salmon	State - Department of Fish and Game	\$987		\$387				\$600		
58	Culture of Delta Smelt	Non-Profit - University of California, Davis	\$195		\$195						
66	Evaluation of Tagging Data	Private - Northwest Marine Technology, Inc.	\$625	\$625							
Not Listed	Fish Harvest Research Program	To Be Determined	\$500		\$500						
Not Listed	Fish Hatchery Review Program	To Be Determined	\$250		\$250						
Not Listed	Selected Species Life History Studies Research Program	To Be Determined	\$600		\$600						
<b>Total for Improved Fish Management and Hatchery Operations</b>			<b>\$3,157</b>	<b>\$625</b>	<b>\$1,932</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$600</b>	<b>\$0</b>	<b>\$0</b>

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**PROJECTS APPROVED AS OF MARCH 31, 1998**

**(CALFED Funding Sources)**

Dollars in thousands

**9. Watershed Management**

Map Id	Project Title	Applicant	Total Funding Proposed	Bay-Delta Ecosyst Rest Approp	Prop 204 (Category III)	Prop 204 (CVPIA)	CVPIA	Calif Urban Water Assoc	Other State Funding	Other Federal Funding	Other
10	Watershed Improvements/Sediment Stabilization (Deer, Mill, and Antelope Creeks)	Federal - U.S. Forest Service	\$440	\$371						\$69	
11	Watershed Restoration Planning (Middle and North Fork of the American River, Auburn Ravine, and Coon Creek)	Local - Placer County	\$445		\$223						\$222
13	Watershed Plan Big Chico Creek	Private/Non-Profit - Big Chico Creek Watershed Alliance and California State University, Chico	\$423							\$423 1/	
19	Watershed Plan Deer Creek	Non-Profit - Deer Creek Watershed Conservancy and California State University Research Foundation	\$428							\$197 1/	\$231
54	Butte Creek Watershed	Non-Profit - California State University, Chico	\$294	\$294							
60	Inventory of Forest Road Systems at Cat Creek Watershed	Federal - U.S. Forest Service	\$38	\$38							

1/ Provided through the U.S. Environmental Protection Agency's Watershed Program.

Information provided by CALFED Program Staff (Draft dated April 22, 1998)

## 9. Watershed Management Continued

Map Id	Project Title	Applicant	Total Funding Proposed	Bay-Delta Ecosyst Rest Approp	Prop 204 (Category III)	Prop 204 (CVPLA)	CVPLA	Calif Urban Water Assoc	Other State Funding	Other Federal Funding	Other
69	Napa River Watershed Stewardship	Local - Napa County Resource Conservation District	\$456							\$250 1/	\$206
70	Sonoma Creek Watershed Restoration	Local - Southern Sonoma County Resource Conservation District	\$300							\$300 1/	
Not Listed	Watershed Restoration Planning and Implementation Program	Federal - U.S. Environmental Protection Agency	\$1,550	\$1,550							
<b>Total for Watershed Management</b>			<b>\$4,374</b>	<b>\$2,253</b>	<b>\$223</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,239</b>	<b>\$659</b>

1/ Provided through the U.S. Environmental Protection Agency's Watershed Program.

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**PROJECTS APPROVED AS OF MARCH 31, 1998**

**(CALFED Funding Sources)**

Dollars in thousands

**10. Miscellaneous Expenses/Administration**

Map Id	Project Title	Applicant	Total Funding Proposed	Bay-Delta Ecosyst Rest Approp	Prop 204 (Category III)	Prop 204 (CVPIA)	CVPIA	Calif Urban Water Assoc	Other State Funding	Other Federal Funding	Other
Not Listed	Integrated Phasing Strategy	Federal - Bureau of Reclamation	\$1,647	\$1,647							
Not Listed	Coordinated Permitting	Federal - Bureau of Reclamation	\$282	\$282							
Not Listed	Development of a Watershed Management Program	Federal - Bureau of Reclamation	\$184	\$184							
Not Listed	Comprehensive and Coordinated Assessment Monitoring and Research Program (CCMARP)	Federal - Bureau of Reclamation	\$1,157	\$1,157							
Not Listed	Education Program	Federal - Bureau of Reclamation	\$300	\$300							
Not Listed	Restoration Reserve Fund	Federal - Bureau of Reclamation	\$3,319	\$3,319							
Not Listed	Technical Review Program/Quality Control Program	Federal - Bureau of Reclamation	\$850	\$850							
Not Listed	Administrative Support Program	Federal - Bureau of Reclamation	\$300	\$300							
<b>Total for Miscellaneous Expenses/Administration</b>			<b>\$8,039</b>	<b>\$8,039</b>							

Information provided by CALFED Program Staff (Draft dated April 22, 1998)

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**PROJECTS APPROVED AS OF MARCH 31, 1998**  
**(CALFED Funding Sources)**  
Dollars in thousands  
**Summary**

Project Title	Total Funding Proposed	Bay-Delta Ecosyst Rest Approp	Prop 204 (Category III)	Prop 204 (CVPIA)	CVPIA	Calif Urban Water Assoc	Other State Funding	Other Federal Funding	Other
Fish Screen Improvements	\$27,520	\$2,539	\$7,681	\$6,834	\$5,000	\$2,173	\$226	\$1,917	\$1,150
Fish Passage Improvements	\$9,413	\$8,325	\$500	\$0	\$0	\$238	\$0	\$0	\$350
Habitat Restoration in Floodplains and Marshes	\$69,331	\$27,342	\$12,684	\$0	\$656	\$5,154	\$0	\$9,433	\$14,062
River Channel Changes	\$35,987	\$9,624	\$20,592	\$0	\$30	\$0	\$654	\$0	\$5,087
Improved Instream Flows	\$20,000	\$20,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Water Quality and Temperature Improvements	\$17,665	\$5,003	\$9,003	\$0	\$0	\$0	\$0	\$20	\$3,639
Introduced and Undesirable Species Control	\$1,537	\$1,250	\$223	\$0	\$0	\$0	\$0	\$0	\$64
Improved Fish Management and Hatchery Operations	\$3,157	\$625	\$1,932	\$0	\$0	\$0	\$600	\$0	\$0
Watershed Management	\$4,374	\$2,253	\$223	\$0	\$0	\$0	\$0	\$1,239	\$659
Miscellaneous Expenses/Administration	\$8,039	\$8,039	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Summary Total</b>	<b>\$197,023</b>	<b>\$85,000</b>	<b>\$52,838</b>	<b>\$6,834</b>	<b>\$5,686</b>	<b>\$7,565</b>	<b>\$1,480</b>	<b>\$12,609</b>	<b>\$25,011</b>

Information provided by CALFED Program Staff (Draft dated April 22, 1998)

## CATEGORY DEFINITIONS

**FUNDING CATEGORIES:** Funds are being requested for activities required to comply with the California Bay-Delta Environmental Enhancement Act. The majority of these funds will specifically address ecosystem quality, which includes fish screening and passage, habitat acquisition and restoration, exotic species management, and monitoring of ecosystem health. Additional efforts will be undertaken to coordinate and undertake work on critical areas including water quality, levee system vulnerability, and water supply reliability. Many of these efforts will produce multiple benefits across the following areas:

Fish Screen Improvements - Direct mortality to fisheries resources occurs as a result of unscreened or poorly screened diversions. This is a high priority, especially in areas where threatened or endangered fish are vulnerable. These types of projects are designed to reduce or eliminate losses of fish through entrainment at water diversions. They can include reallocation or consolidation of points of diversion and the construction or rehabilitation of fish screens at diversions.

Fish Passage Improvements - Migration of anadromous fish such as salmon and steelhead can be blocked by dams or other physical obstructions, by water quality conditions, or by insufficient flow over shallow areas blocking access to some of the highest quality spawning habitat and forcing fish to stray into unsuitable habitat. Even incomplete barriers can cause a problem because they can delay migration, stress the fish, or increase risks of poaching or predation. Projects include removal of barriers, construction of fish ladders, improvements to water quality and other modifications to improve fish passage by removing physical or other types of obstructions.

Habitat Restoration in Floodplains and Marshes - Many of the floodplain areas and marshlands in the Bay-Delta ecosystem have become isolated from the river systems through levee construction, land use changes, reduction in stream flows, and through other physical changes in the system. This has caused a loss of seasonal wetlands which function to temporarily store flood waters and provide habitat for many fish and wildlife species. These are restoration actions associated with floodplain area and marshlands. They can include re-connection of the floodplains with the river system through modifications to levee systems, floodplain easements or other methods. They can include restoration of seasonal wetland areas.

River Channel Changes - Many of the river channels in the Bay-Delta watershed have been reconfigured through levee construction, channel deepening, habitat losses, gravel mining, and other changes which have degraded instream habitats important for fisheries resources as well as the riparian habitats along the rivers which provides important fish and wildlife habitats. River channel work includes stream bed alterations to increase channel complexity, additions of suitable spawning gravels, restoration of habitats along sloughs and mid-channel islands, creation of areas to allow river corridors to migrate, re-connection of historical stream channel areas, management to reduce fine sediments such as sand and silt and other actions to restore healthy riparian habitats along the river channels.

Improved Instream Flows - Changes in water flows can have wide ranging effects on the biological resources of the Bay-Delta system. They can affect aquatic habitat through changes in water depth and velocity, water quality, and sediment transport. This is a high priority problem

for many fish species at risk in the Bay-Delta. These actions can include acquisition of drought year water supplies and provision of alternative water sources to increase flows for fish populations. Actions can include replacing lost power generation revenue to allow increased bypasses at hydroelectric facilities, funding water use efficiency measures to allow conserved water to remain instream, as well as other water management actions which can result in improved instream flows during times when there are critical needs.

Water Quality and Temperature Improvement - Increased contaminant loads caused by urban runoff, agricultural runoff, mine drainage, wastewater treatment plants, and other point and non-point sources can stress the ecosystem at both an acute and chronic level. High water temperatures can also act as a stressor on cold water aquatic species such as salmon and steelhead. Work associated with this category will continue action to address water quality and water temperature problems that will include identification of pollution sources, evaluation of effects, remediation, monitoring, education, facilitating safe dredge spoil disposal, and working with local groups to revise land use practices to reduce runoff.

Introduced and Undesirable Species Control - New species can be introduced from a variety of sources such as ballast water discharge and accidental or intentional release. These species can harm the Bay-Delta ecosystem through elevated levels of predation and competition with native species. Existing exotic species can also cause problems where changes in the environment cause elevated levels of predation or competition. Actions include education to prevent new introductions and control of species already introduced.

Improved Fish Management and Hatchery Operations - Population management problems can include inadequate recruitment due to a low number of spawning adults, reduced production of wild stocks due to competition with hatchery fish, genetic implications, and other aspects of hatchery production. Development of tools to improve hatchery operations and fisheries management to avoid impacts on wild fish and to establish or supplement populations which have been drastically reduced.

Watershed Management - Grazing, gravel mining, urbanization, forestry and agricultural practices, and wildfire management stress the Bay-Delta ecosystem. Watershed management actions include planning and implementation of local efforts to improve watershed health. These efforts can include erosion control, improved fire management, modifications of land use practices, education of local landowners, and other actions to assist in the restoration of healthy ecosystems.

Monitoring, Permit Coordination, and Other Special Support Programs - Programs that benefit the CALFED process as a whole but cannot easily be tied to one specific category.