

**SAN JOAQUIN RIVER RIPARIAN HABITAT RESTORATION PROJECT**

**Proposal**

**Submitted in Response to the  
CALFED Bay-Delta Program Request for Proposals  
1997 Category III  
Ecosystem Restoration Projects and Programs**

**July 1997**

**DWR WAREHOUSE**

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## I. Executive Summary

- a. **Project Title** San Joaquin River Riparian Habitat Restoration Project  
**Applicant Name** SJRRHRP Stakeholder Group - NRDC, PCFFA, FWUA, USBR, USFWS - Administered by the U.S. Bureau of Reclamation

b. **Project Description and Primary Biological/Ecological Objectives**

The objective of this program is to develop a master plan for restoration of a continuous riparian corridor along the San Joaquin River from Friant Dam to the confluence with the Merced River and to construct site specific riparian habitat restoration projects. The master plan will establish a series of priority actions that, if implemented, will result in a healthy riparian community. Riparian habitat restoration projects will be implemented concurrently with the planning process as opportunities present themselves.

Important riparian habitat along the San Joaquin River is inadequate to support production and survival of desirable plant and animal species. Riparian vegetation provides habitat for a wide variety of migratory birds, mammals and other wildlife. Shade provided by riparian vegetation helps cool water temperatures for aquatic species. In addition, riparian vegetation stabilizes river banks, helps control erosion and reduces sediment and water quality problems.

c. **Approach/Tasks/Schedule**

The project development will be divided into three phases. Phase one will include completing the Scope of Work and signing a Memorandum of Understanding among the principal parties involved to ensure mutual understandings and developing a Plan of Action (POA) including a Public Involvement Plan (PIP). Phase one will take three months to complete.

Phase two will focus on carrying out the POA and PIP and developing the master plan. The initial tasks will be to develop and analyze data and to compare historic with existing conditions. Phase two will also include implementation of projects that can move forward immediately. Phase two will take approximately 18 months to complete.

Phase three will be the implementation of the preferred alternative that was developed in Phase two. This phase will consist of various on-the-ground activities including an extensive monitoring program to assist in managing the project. Implementation will be an ongoing process.

d. **Justification for Project and Funding by CALFED**

This project focuses on restoration of shaded riverine aquatic habitat which has experienced a great decline along the San Joaquin River between Friant Dam and the

Merced River. This goal is consistent with CALFED Implementation Strategies and addresses many stressor categories identified through the CALFED process.

e. Budget Costs and Third Party Impacts

The total cost for developing the master restoration plan is \$1,000,000, \$300,000 has been committed by the CVPIA restoration fund and another \$700,000 is anticipated from the Department of the Interior. The final cost of implementing projects will not be known until the final plan is developed. However, the cost for planning and implementing immediate actions is \$800,000.

No third party impacts are anticipated as the result of implementing this program. The long-term scope of issues that may be addressed under this program could ultimately include restoration of salmon below Friant. However, this will be accomplished without involuntary reallocation of water or significant economic impacts in the Friant service area.

f. Applicant Qualifications

The Friant Water Users Authority, the Natural Resources Defense Council, the Pacific Coast Federation of Fishermen's Associations, the U.S. Bureau of Reclamation and the U.S. Fish and Wildlife Service all have a long standing interest in this reach of the River. This group is qualified to carry out the proposed project based on the level of interest, participation and support from diverse local groups as well as access to technical expertise. The participants are dedicated to bringing this project to fruition and engineering, planning, biological, and legal expertise are available from within the participating agencies, groups and contract consultants.

g. Monitoring and Data Evaluation

This program will generate a comprehensive body of data and analyses that are now lacking and that are essential tools for making informed planning decisions regarding this reach of the San Joaquin River. Data will include maps and inventories of riparian habitat, land use, and soil types. Analyses will include a comparison of historic and existing conditions plus a hydrologic study.

h. Local Support/Coordination with other Program/Compatibility with CALFED Objectives

This project has significant support from diverse interest groups and is being carried out in close coordination with other programs including, but not limited to the CVPIA, the San Joaquin River Management Program, the San Joaquin River Conservancy, the San Joaquin River Parkway and Conservation Trust. This project is compatible with CALFED objectives related to the loss of habitat, and water quality and temperature problems that negatively impact the Bay-Delta ecosystem.

**II. Title Page****a.- Title of Project**

San Joaquin River Riparian Habitat Restoration Project

**b. Name of applicant/principle investigators**

SJRRHRP Stakeholder Group - FWUA, NRDC, PCFFA, USBR, USFWS  
Represented by the U.S. Bureau of Reclamation

**c. Type of Organization**

Agency

**d. Tax Identification Number and/or Contractor license**

Not applicable

**e. Technical and Financial Contact person, address, phone/fax e-mail**

Paula J. Landis, P.E.  
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**f. Participants**

Friant Water Users Authority  
Natural Resources Defense Council  
Pacific Coast Federation of Fishermen's Associations  
U.S. Bureau of Reclamation  
U.S. Fish and Wildlife Service  
Riparian Landowners

**g. RFP Project Group Type**

Services and Construction Project

### III. Project Description

#### a. - Project Description and Approach

The features of this project include restoration of shaded riverine aquatic and terrestrial riparian habitat along a reach of the San Joaquin River that has experienced a serious decline. A distinguishing feature of this project is the extensive benefits that can be generated by its implementation in a reach of the River which is largely ignored by most other programs. The project area is the San Joaquin River between Friant Dam and the confluence with the Merced River. Efforts will focus on the river bottom, floodplain terraces and other areas immediately adjacent to the river.

Riparian restoration may take a variety of forms. The goals and objectives of this riparian restoration plan should be consistent with other goals that may be established for future restoration of the San Joaquin River.

Development of a riparian habitat restoration plan will start with an historic and an existing conditions analysis, and a comparison of the two. Areas to be considered will include vegetation, soils, wildlife, adjacent land uses, aquatic conditions, geomorphology, surface and groundwater hydrology, and climatic conditions, including flood flows. Related issues that may affect riparian restoration include recreation, Native American concerns, historical and/or cultural resource considerations, and land use.

#### b. Location and Geographic Boundaries

The project is located in Fresno, Madera and Merced Counties and encompasses portions of the San Joaquin River watershed. It is on the floor of the San Joaquin Valley. The San Joaquin River is the second largest contributor of flow to the Delta after the Sacramento River.

The geographic boundaries of the project are the San Joaquin River between Friant Dam, near Fresno, and the confluence of the San Joaquin and Merced Rivers. (See Figure 1, page 9)

#### c. Expected Benefits

The focus of this proposal is on the restoration of shaded riverine aquatic habitat and riparian habitat for terrestrial species in a geographic area that has experienced a great decline. The restoration of these habitats will contribute significantly to ecological health of the Bay-Delta system and the ability of that system to sustain healthy populations of a numerous priority species.

The many benefits of developing and implementing a riparian restoration plan include improved aquatic and terrestrial wildlife habitats and populations, floodplain management, groundwater recharge, and aesthetics.

The primary stressors are reduced flows, floodplain changes, channel form changes, and land use changes including gravel mining, grazing and urbanization. Shaded riverine aquatic habitat is fragmented or non-existent resulting in a loss of food supply and channel complexity.

Stressor subcategories include hydrological or physical isolation of floodplains, channel aggradations due to fine sediment, loss of existing riparian zone and lack of regeneration potential.

Priority species that will benefit from the implementation of this proposal include striped bass and migratory birds and could ultimately include San Joaquin fall-run chinook salmon, splittail, steelhead trout and striped bass. Many resident fish would also benefit such as hitch and catfish.

The priority habitats addressed by this proposal include shaded riverine aquatic habitat, instream aquatic habitat, and wetland habitat along approximately 150 river miles.

d. **Background and Biological/Technical Justification**

Riparian habitat along the San Joaquin River is inadequate to support production and survival of desirable plant and animal species. The riparian habitat losses in the San Joaquin River system have resulted from dam construction, water diversion, gravel mining and urban encroachment. The need for riparian habitat restoration in this reach of the San Joaquin River is extreme for two reasons; (1) this reach of river has experienced greater environmental damage than other reaches and (2) no other program or forum is focused on this reach of the river.

The expected benefits from implementing this project are great due to the magnitude of riparian habitat losses that this reach of river has endured. The planning process will assure that the benefits of implementing this project will be long-term and sustainable. This will be accomplished by planting native species where environmental conditions promise success and where landowners' are willing participants.

The San Joaquin River Riparian Habitat Restoration Project was conceived in 1996 and has been moving steadily forward ever since. This project offers a unique opportunity for normally adversarial groups to come together and be productive. The Friant Water Users Authority, the Natural Resources Defense Council and the Pacific Coast Federation of Fishermen's Associations have

agreed to pursue mutually acceptable restoration activities. The group has agreed to work on riparian habitat restoration along the San Joaquin River corridor from Friant Dam to the confluence with the Merced River and may pursue other projects as consensus is reached. An MOU has been drafted to reflect this partnership.

A draft plan of action and scope of work have also been completed and a program manager has been hired. The steering committee meets on a monthly basis and regularly holds conference calls. Work will begin on the historic and existing conditions analyses as soon as task orders are prepared and contracts are awarded.

Outreach efforts to coordinate with other groups has involved making presentations to the San Joaquin River Management Program, CALFED, the CVPIA Restoration Fund Roundtable, the Exchange Contractors, the San Joaquin River Conservancy, the Riparian Habitat Joint Venture, The Reclamation Board and others.

e. Proposed Scope of Work

Project development will be divided into three phases.

Phase one will include finalizing and formally transmitting the Scope of Work from the project sponsors to the Bureau of Reclamation and the U.S. Fish and Wildlife Service. Phase one will also include signing a Memorandum of Understanding among the principal parties to ensure mutual understandings and developing a Plan of Action (POA) including a Public Involvement Plan (PIP). The POA will lay out a step-by-step process to develop an inventory of projects that, if implemented, will result in a healthy riparian community along the San Joaquin River. The PIP includes forming an oversight team and technical workgroups, identifying and prioritizing solutions, preparing environmental compliance and documentation and laying out early implementation actions. This phase is expected to be complete by October 1997 and has full funding of \$300,000 from the CVPIA.

Phase two will focus on carrying out the POA and PIP. The initial efforts will be directed towards developing and analyzing data, including historic and existing conditions. Opportunities for immediate action will be identified and implemented concurrently with the planning process. Explicit in all of these activities is a significant amount of public participation. Since much of the land is in private ownership, it will be requisite to have local landowner involvement.

The historic conditions analysis will include a literature review to locate historical descriptions, maps, photos, and other data needed to understand the extent and condition of historical riparian vegetation along the San Joaquin River. A map

showing the location, extent, density, and species composition of riparian vegetation during the early part of the century will be generated. Historic cross sections will also be analyzed to determine how the riverbed has changed over time.

For the existing conditions analysis, aerial photos will be used to map soils and vegetation to determine where variable communities of riparian vegetation exist and where they can be established. The vegetation mapping will include the extent, age, density and species composition of existing riparian stands. A representative number of transects will be established to verify the aerial photo analysis and to identify regenerating vs. non-regenerating riparian stands.

Land use maps will be reviewed to determine use and zoning for future land use and development.

A hydrologic analysis will be conducted to determine the frequency and extent of flooding, the depth to groundwater, and changes in groundwater elevation and groundwater use.

A GIS will be developed to organize and analyze spatial data on historical and existing conditions. This data could then be used to develop models that describe groundwater levels, annual river flow conditions, changes in extent and composition of riparian vegetation, etc.. The GIS will be useful in analyzing the relationship between vegetation and other processes such as hydrology, soils, land use, etc.. The GIS should also include other data pertinent to design and installation of the riparian restoration project.

When all of the data has been gathered and the analyses are complete, a restoration plan will be developed. The plan will include project screening criteria, restorations alternatives, an implementation plan for selected options, the establishment of long-term coordination and oversight, and environmental documentation and permitting.

The deliverables produced during Phase two will be a restoration plan and construction of several on the ground restoration projects. This phase is expected to be completed by December 1998. The \$700,000 for the development of the restoration plan is anticipated from the Department of the Interior and an additional \$450,000 is being requested with this CALFED Proposal along with \$350,000 for construction of early implementation projects.

Phase three will be the implementation of the restoration plan that was developed in Phase two. This phase will consist of various on-the-ground activities including an extensive monitoring program to assist in managing the project. Phase three will be an ongoing effort to construct site specific restoration projects.

Included in Phase three will be established criteria for contractors and coordinators, project maintenance program, a plan for monitoring, evaluation and feedback and a public education and information program.

f. Monitoring and Data Evaluation

New data will be gathered through this effort and existing data will be compiled. Efforts are underway to determine the extent of relevant data that already exists and where new data needs to be obtained.

A plan for monitoring, evaluation and feedback will be developed as part of the final restoration plan. Input from existing groups and agencies such as the Department of Fish and Game and the U.S. Fish and Wildlife Service will be incorporated in the monitoring plan.

g. Implementability

The final restoration plan will address the requirements for COE, State Lands Commission and California Department of Fish and Game, and other regulatory requirements as appropriate. All the necessary environmental documentation and permitting including NEPA/CEQA will be part of the final restoration plan. The final plan will also include ideas on how to streamline permitting for projects identified in the plan. Such as, permit the whole plan, or develop a tiered approach for simplified individual project reviews, or some other innovative process.

The Bureau of Reclamation, with input from the U.S. Fish and Wildlife Service, has appointed a project manager. The project manager is working closely with the stakeholder group. This includes regular briefings and discussions with stakeholders to ensure strong input by them and encourages and ensures stakeholder involvement and collaboration in development and implementation of the plan. Early in the process, riparian landowners, agencies, districts, environmental groups and other stakeholders and interested parties will be identified. These parties will be notified of the proposed plan developments so that they may participate.

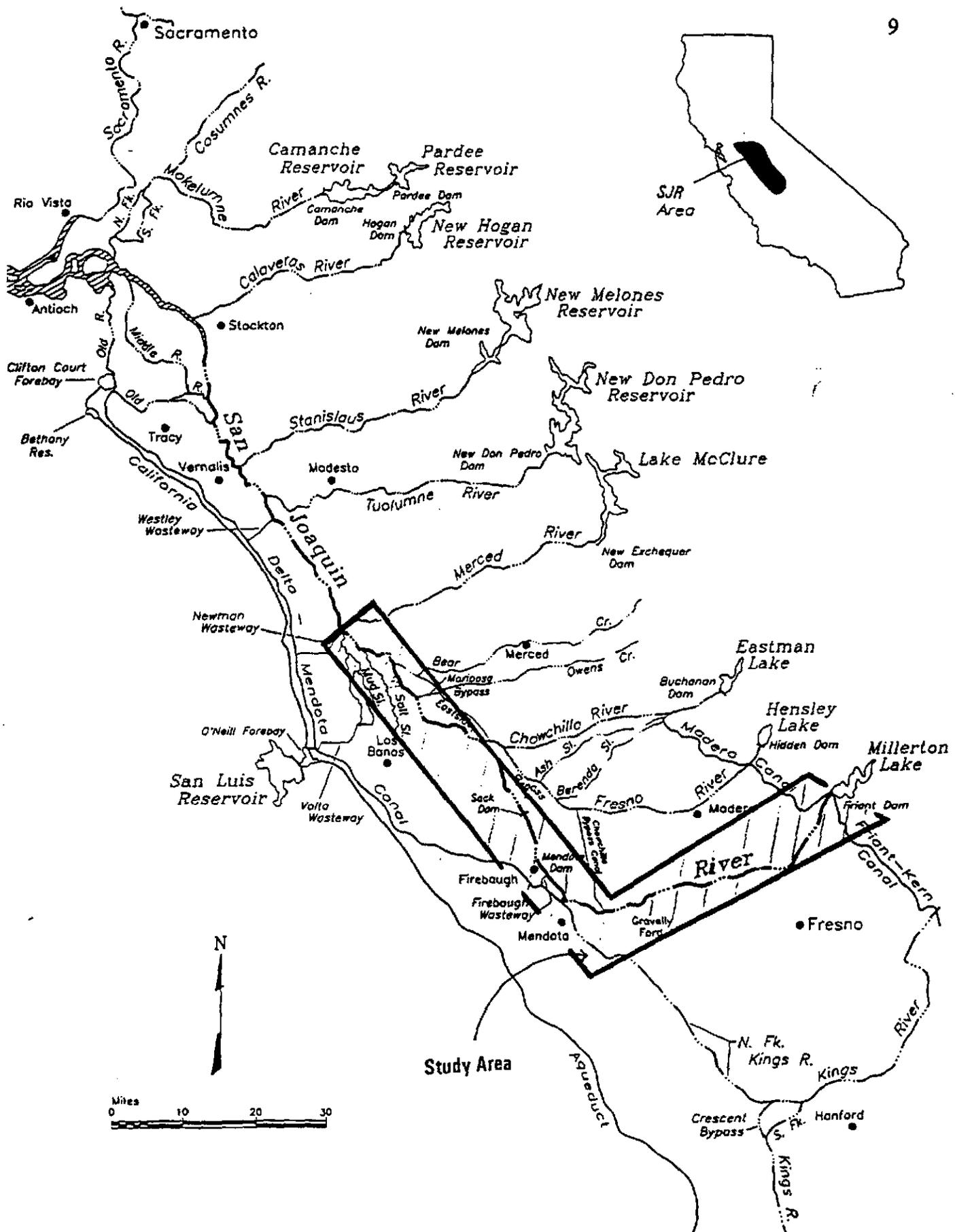


Figure 1 San Joaquin River System

#### IV. Costs and Schedule to Implement Proposed Project

##### a. Budget Costs

This funding request addresses two CALFED project groups (1) services and (2) construction. Both funding requests are for block grants; \$450,000 for services and \$350,000 for construction.

Services funding will be used to develop a site specific plan for a continuous riparian corridor between the City of Firebaugh and Mendota Pool. The plan will provide the foundation for a clearly defined project approach that seeks to optimize stakeholder needs and integrate these with the river's ability to meet them. The results will be a scope of work, realistic budget and time line for an implementable and successful project. This plan will build upon the Andrew Firebaugh Historical Park Master Plan, July 1994.

Construction funds will be used for early implementation of site specific restoration projects. Projects have been identified at locations along the San Joaquin River where fee title or easements already exist. The U.S. Fish and Wildlife Service and the San Joaquin River Parkway and Conservation Trust have dedicated land, management and monitoring for site specific riparian habitat restoration projects. One example is the 13 acre site at Camp Pashayan below Friant Dam. An estimated \$350,000 will be needed to acquire permits, finalize designs and complete vegetation planting on approximately 100 acres at five similar sites.

Significant cost share partners exist for both projects including the City of Firebaugh, the San Joaquin River Parkway and Conservation Trust, the Trust for Public Land, the San Joaquin River Conservancy, the Urban Streams Program and the Wildlife Conservation Board. However, CALFED funding is needed to guarantee that all aspects of the projects are adequately addressed and that no significant opportunities for restoration are omitted from the plan or denied construction.

## b. Schedule Milestones

<b>Task</b>	<b>Completion Date</b>	<b>Product</b>	<b>CVPIA/ DOI Funding</b>	<b>CALFED Funding</b>	<b>Funding Date</b>
Planning: Phase One	Oct. 1997	Plan of Action Scope of Work	\$300,000	None	May 1997
Planning: Phase Two	Dec. 1998	Master Plan Site Specific Plan	\$700,000	\$450,000	Upon Award
Construction	Ongoing	Site specific riparian restoration	To be requested	\$350,000	Upon Award
<b>Total</b>			<b>\$1,000,000</b>	<b>\$800,000</b>	

## c. Third Party Impacts

No third party impacts are anticipated as the result of implementing this program. The long-term scope of issues that may be addressed under this program could ultimately include restoration of salmon below Friant. However, this will be accomplished without involuntary reallocation of water or significant economic impacts in the Friant service area.

## V. Applicant Qualifications

This group is qualified to carry out the proposed project based on the level of interest, participation and support from diverse local groups as well as access to technical expertise. The participants are dedicated to bringing this project to fruition and engineering, planning, biological, and legal expertise are available from within the participating agencies, groups and contract consultants.

Public involvement in the planning process will be assured by direct membership of various user groups and individuals in the stakeholder group and by conducting public hearings during preparation of the plan. User groups will include land owners, urban and agricultural water users, environmental groups, flood control entities, and federal, state and local agencies.

Significant collaboration is taking place between the SJRRHRP and other groups actively pursuing the restoration of the San Joaquin River. These groups include the San Joaquin River Management Program, the San Joaquin River Parkway Land Acquisition Program, the Wildlife Conservation Board, the Department of Fish and Game, the San Joaquin River Conservancy, the San Joaquin River Parkway and Conservation Trust the Trust for Public Land.

The core group that is currently steering this process consists of representatives from five key organizations and will be expanding to include other interested groups. The program organization will eventually consist of an advisory committee, a technical committee and subcommittees.

The core group responsible for this current effort consists of the U.S. Bureau of Reclamation, the Friant Water Users Authority, the Natural Resources Defense Council, the Pacific Coast Federation of Fishermen's's Association, and the U.S. Fish and Wildlife Service. Below is a brief paragraph on each of these participants.

The Bureau of Reclamation is acting as the agency lead for the SJRRHRP, and backs the Program with its technical, administrative, and management resources and expertise. Included in that expertise is a significant understanding and knowledge of the San Joaquin River gathered over 60 years of water resources planning and management in the San Joaquin Valley. Under an Interagency Personnel Agreement with the California Department of Water Resources, Reclamation has appointed Ms. Paula Landis, P.E., to act as the Program Manager. Ms. Landis is a Registered Civil Engineer with ten years experience in river management and planning. She has had responsibility planning and developing habitat restoration projects, for scheduling and tracking budgets, and for design and construction, and evaluation and monitoring of restoration projects. In addition, she served as program manager for the San Joaquin River Management Program and has extensive experience coordinating and collaborating with multiple interest groups.

Representatives of the Friant Water Users Authority have been participating in the riparian restoration project. FWUA is a public agency of the State of California with the responsibility for operating and maintaining the Friant-Kern Canal and associated facilities. The FWUA also represents its 25 member agencies on water issues of statewide significance. Richard Moss, General Manager and Dan Fuels, Resources Analyst have been the FWUA's primary representatives on the SJRRHRP.

The Natural Resources Defense Council, (NRDC) is a national non-profit public interest organization dedicated to protecting the earth's natural resources. With the support of over 350,000 members, including 83,000 in California, staff of environmental attorneys, scientists, and resource specialists address a broad spectrum of environmental issues. NRDC's Western Water Projects works to encourage the conservation and rational use of scarce western water resources, with special emphasis on improving the health of California's waterways. NRDC has been working for protection of the San Francisco Bay/Delta Estuary, including restoration of the San Joaquin River for over a decade. Specific staff involved with the San Joaquin River Riparian Habitat Restoration Project include the following:

Hamilton Candee is a Senior Staff Attorney in the San Francisco office of NRDC and the Director of NRDC's Western Water Project. He is involved in a variety of efforts to promote environmental reforms in federal and state water policy. Mr. Candee is a graduate of Princeton University and New York University Law School.

Ronnie Cohen is a Senior Project Resources Specialist with NRDC. Her work focuses on promoting urban and agricultural water conservation and broad ecosystem restoration, particularly in the San Francisco Bay/Delta. Prior to her work with NRDC, Ms. Cohen worked as a water resources consultant doing Integrated Resources Planning for urban water agencies. Ms. Cohen holds a B.A. in Environmental Studies from Brown University, and a Master's in Public Policy from the University of California at Berkeley.

The Pacific Coast Federation of Fishermen's Association was established twenty years ago and is now the West Coast's primary lobbying organization for commercial fishermen. The Association works to improve conditions for fish including clean water, fishing restrictions and environmental restoration. The two individuals that represent the PCFFA on the San Joaquin River Riparian Habitat Restoration Project are Zeke Grader and William Kier. Grader, an attorney, helped form the PCFFA and has been the group's executive director since its founding. William Kier is a biological consultant with years of experience working on the restoration of watersheds in California including the Klamath and Trinity.

The United States Fish and Wildlife Service has an active involvement and interest in the development and implementation of the San Joaquin River Riparian Habitat Restoration Program. The Service has contributed funding through the CVPIA for initial development of this Program. The Service is responsible for the continuing benefit of the

people. The agency's major responsibilities are for migratory birds, and candidate, threatened and endangered species. The Service provides technical assistance for projects associated with this Program. Furthermore, the agency may also provide financial assistance for specific project implementation.

**VI. Compliance with Standard Terms and Conditions**

This proposal is being submitted by the U.S. Bureau of Reclamation on behalf of a groups of stakeholders. Therefore, according to Table D-1: Standard Contract Clauses and Related Proposal Submittal Requirements, page 37, of the CALFED Bay-Delta Program RFP, no additional forms need to be submitted until the final contract is awarded.

Consultants and subcontractors will be hired according to state and federal regulations and requirements for all government agencies.

**SAN JOAQUIN RIVER RIPARIAN HABITAT RESTORATION PROJECT**

Letters of Support and Collaboration

July 25, 1997

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

RE: Acquisition and Restoration of Riparian Habitat and Floodplain Lands along  
the San Joaquin River

Dear Mr. Snow:

The San Joaquin River Parkway Land Acquisition Program and the San Joaquin River Riparian Habitat Restoration Program share the common goal of restoring and permanently protecting the river's habitat resources. Each program has submitted a separate request for funding from Category III of the CALFED Bay-Delta Program for activities related to restoration of riparian habitat and floodplain lands along the San Joaquin River. The two proposals complement and advance the overall river protection effort, both for the benefit of the riparian habitat and floodplain and the Bay-Delta ecosystem. The two programs have formed a joint committee to coordinate our efforts and ensure that progress to date along the river continues. We are hopeful that CALFED will support this collaborative effort by approving these requests for funding.

Sincerely,

Wildlife Conservation Board  
Department of Fish and Game  
San Joaquin River Conservancy  
San Joaquin River Parkway and  
Conservation Trust  
The Trust for Public Land

Friant Water User's Authority  
Natural Resources Defense Council  
Pacific Coast Federation of  
Fishermen's Associations



FRESNO METROPOLITAN FLOOD CONTROL DISTRICT

File No. 720.62

July 24, 1997

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

Dear Mr. Snow,

**Acquisition and Restoration of Riparian and Floodplain Habitat  
Lands Along the San Joaquin River**

The Fresno Metropolitan Flood Control District has interest in the preservation of the natural flood conveyance capabilities of the San Joaquin River. It is our understanding that the San Joaquin River Parkway Land Acquisition Program and the San Joaquin River Riparian Habitat Restoration Program share this objective and have submitted separate requests for funding from Category III of the CALFED Bay-Delta Program. The requests, as we understand them, are for acquisition and restoration of riparian and floodplain habitat lands along the San Joaquin River which are consistent with the District's interest.

It is our understanding the two programs have formed a joint committee to coordinate efforts and ensure that progress to date along the river continues.

We are hopeful that CALFED will support this collaborative effort by approving requests for funding for critical reaches of the San Joaquin River below Friant Dam.

Very truly yours

Doug Harrison  
General Manager-Secretary

DH/ems

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CELEBRATING

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YEARS OF  
SERVICE

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