C1028 98

Attachment H

COVER SHEET (PAGE 1 of 2)

May 1998 CALFED ECOSYSTEM RESTORATION PROPOSAL SOLICITATION

Proposal Title: Floodplain Acquisition, Management, and Monitoring on the Sacramento River
Applicant Name: The Nature Conservancy, Wildlife Conservation Board, Dep't of Fish and Game, Fish and Wildlife Service
Mailing Address: 201 Mission St., 4th Flr, San Francisco, CA 94105
Telephone: 415/777-0487
Fax: 415/777-0244

Amount of funding requested: $3,545,800 for three years

Indicate the Topic for which you are applying (check only one box). *Note that this is an important decision:* see page __ of the Proposal Solicitation Package for more information.

- ☐ Fish Passage Assessment
- ☐ Fish Passage Improvements
- ☒ Floodplain and Habitat Restoration
- ☐ Gravel Restoration
- ☐ Fish Harvest
- ☐ Species Life History Studies
- ☐ Watershed Planning/Implementation
- ☐ Education
- ☐ Fish Screen Evaluations - Alternatives and Biological Priorities

Indicate the geographic area of your proposal (check only one box):

- ☒ Sacramento River Mainstem
- ☐ Sacramento Tributary: _____
- ☐ Delta
- ☐ East Side Delta Tributary: _____
- ☐ Suisun Marsh and Bay
- ☐ San Joaquin Tributary: _____
- ☐ San Joaquin River Mainstem
- ☐ Other: _____
- ☐ Landscape (entire Bay-Delta watershed)
- ☐ North Bay: _____

Indicate the primary species which the proposal addresses (check no more than two boxes):

- ☐ San Joaquin and East-side Delta tributaries fall-run chinook salmon
- ☐ Winter-run chinook salmon
- ☒ Spring-run chinook salmon
- ☐ Late-fall run chinook salmon
- ☐ Fall-run chinook salmon
- ☐ Delta smelt
- ☐ Longfin smelt
- ☐ Splittail
- ☒ Steelhead trout
- ☐ Green sturgeon
- ☐ Striped bass
- ☐ Migratory birds

A host of other CALFED primary species are also addressed, and are listed in Section IV-d.

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I-009445

COVER SHEET (PAGE 2 of 2)

May 1998 CALFED ECOSYSTEM RESTORATION PROPOSAL SOLICITATION

Indicate the type of applicant (check only one box):

☐	State agency	☐	Federal agency
☒	Public/Non-profit joint venture	☐	Non-profit
☐	Local government/district	☐	Private party
☐	University	☐	Other: _____

Indicate the type of project (check only one box):

☐	Planning	☒	Implementation
☐	Monitoring	☐	Education
☐	Research		

By signing below, the applicant declares the following:

(1) the truthfulness of all representations in their proposal;

(2) the individual signing the form is entitled to submit the application on behalf of the applicant (if applicant is an entity or organization); and

(3) the person submitting the application has read and understood the conflict of interest and confidentiality discussion in the PSP (Section II.K) and waives any and all rights to privacy and confidentiality of the proposal on behalf of the applicant, to the extent as provided in the Section.

(Signature of Applicant)

II. Executive Summary

a. Project title: Floodplain Acquisition, Management, and Monitoring on the Sacramento River

Applicants: The Nature Conservancy, the California Wildlife Conservation Board, California Department of Fish and Game, and the U.S. Fish and Wildlife Service

b. Project description and primary biological/ecological objectives

The co-applicants request **$3,545,800** for the ***acquisition and management*** of fee title or permanent conservation easement interests on floodplain lands within the Conservation Area (as defined by SB 1086) of the Sacramento River between Keswick and Verona. We will also develop a new project-wide ***floodplain restoration monitoring program*** to enhance existing monitoring programs. This application builds on a similar application submitted to CALFED in 1997. These acquisitions will facilitate the recovery of ecological processes within the floodplain, including the regeneration of native riparian habitat. The primary objectives of the project are to:

- Protect and increase quality and quantity of an essential spawning, rearing, and migratory pathway for a host of aquatic and terrestrial species.
- Protect large continuous blocks of existing and restorable aquatic and riparian habitat for the benefit of these species.
- Protect and allow for the restoration of ecological processes in the floodplain.
- Reduce flood-related losses by moving economic activity out of floodprone areas.
- Involve and inform local landowners of project plans and progress through the SB 1086 process.

There are twelve CALFED ***stressors*** described in the Proposal Solicitation Package that are reduced through this project including ***physical isolation of the floodplain, lack of riparian regeneration potential***, and ***elimination of fine sediment replenishment***, to name three. Others are described in Section IV-c. While the proposed project stands alone, it is a companion to a second proposal submitted by the applicants: **Riparian Habitat Restoration on the Sacramento River: Planting, Monitoring, and Demonstration.**

c. Approach/tasks/schedule

Acquisition The co-applicants will negotiate the acquisition of fee title or easements on lands in the project area with willing sellers. Our goal is to purchase the most cost-effective interest possible, and achieve permanent protection. Easements will be purchased where feasible. Assuming full funding for this project, we anticipate acquiring fee title or easement on up to 500 acres in the three years following the award of funds. Actual acres acquired will depend upon the price of purchased interests.

We will initiate ***start-up stewardship and analysis*** activities including clean-up and repair of infrastructure, fencing as needed, analysis of flood management structures, and development of management plans.

Long-term management Lands will be conserved in the public interest and be managed as part of the Sacramento River National Wildlife Refuge, the Sacramento River Wildlife Area, or some other appropriate reserve system consistent with Department of Fish and Game (DFG) and Service policy and procedures.

We will develop and begin implementing project-wide ***floodplain restoration monitoring*** to assess the success of channel meander and floodplain habitat restoration efforts in achieving multiple CALFED objectives. The plan will be completed by the end of first year following award of funds. Implementation will begin when the plan is completed and will continue for the remaining two years, and possibly beyond depending on availability of additional funding.

d. Justification for project and funding by CALFED

The loss and degradation of aquatic and riparian habitat on the Sacramento River have reached critical levels. Shaded riverine aquatic, floodplain, and riparian woodland habitats have declined as human demands on the river's resources have intensified, with associated declines in aquatic and terrestrial species. Anadromous fish, including four genetic races of chinook salmon and steelhead trout, depend upon the river as a migration corridor. Resident fish species, as well as migratory birds and other terrestrial species, also depend on a healthy river corridor. Major flood events, including those in the past two years, have had a significant negative impact on levee integrity, agricultural revenue, and infrastructure in the floodplain. This project, and the larger multi-partner Sacramento River restoration effort of which it is a part, will address these problems.

e. Budget costs and third-party impacts

Proposal applicants are requesting $3,545,800 to protect and manage floodplain lands through fee title or permanent easement acquisition. Budget costs include funds for these task categories: fee title and easement acquisition, and part of the following: start-up stewardship and analysis, long-term operations and management, and floodplain restoration monitoring. Potential third-party impacts, such as displacement of local agriculture, flood impacts, and decrease in the local tax base, are discussed in Section V-c.

f. Applicant qualifications

The Nature Conservancy began acquiring land along the Sacramento River in 1988 and has assisted the U.S. Fish and Wildlife Service in acquiring 8,600 acres for conservation in the Sacramento River National Wildlife Refuge. Since then the Conservancy, in partnership with the Service, has dedicated significant resources to do the following: acquire additional Refuge lands; purchase and hold a 2,950-acre conservation easement; implement large-scale riparian forest restoration; and engage the local community in a wildlife-compatible agriculture program. The WCB has acquired interest in more than 6,700 acres, which are managed by DFG and local partners. In addition, WCB and DFG have overseen active restoration projects affecting more than 400 acres on four sites. The proposed project will continue to build on these acquisition and restoration successes.

g. Monitoring and data evaluation

In addition to the project-wide floodplain restoration monitoring program mentioned above, project monitoring and evaluation will be conducted through a number of other programs. Applicants will maintain a chronological record of the amount and types of acreage acquired and will submit quarterly programmatic and financial reports. Other programs are described in Section IV-f.

h. Local support/coordination with other programs/compatibility with CALFED objectives

Acquisition lands will be selected according to existing agency guidelines and procedures set forth in applicant management plans, as well as in regional initiatives focused in the project area (e.g., SB 1086). This project is supported by a host of local public and private entities. The project does not conflict with any CALFED objectives, and directly supports those objectives pertaining to ecosystem health and water quality. Its goals are also consonant with existing agency objectives and programs, some of which have provided project funding in the past: the Central Valley Project Improvement Act (CVPIA), Central Valley Habitat Joint Venture, Riparian Habitat Joint Venture (Partners in Flight), Sacramento River National Wildlife Refuge, National Fish and Wildlife Foundation (NFWF), the US Army Corps of Engineers, and DFG/WCB's Habitat Acquisition and Management Program. This project will be coordinated with local landowners, public agencies and other interested parties through the SB 1086 process.

III. Title Page

a. Project title: Floodplain Acquisition, Management, and Monitoring on the Sacramento River

Applicants: The Nature Conservancy, the California Wildlife Conservation Board, California Department of Fish and Game, and the U.S. Fish and Wildlife Service

b. Name of applicant/principal investigators; address; phone/fax/e-mail; organizational, institutional or corporate affiliations of applicant/principal investigators:

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U.S. Fish and Wildlife Service
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Sacramento National Wildlife Refuge Complex
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California Department of Fish and Game
Randy Benthin, Restoration Coordinator
601 Locust Street
Redding, CA 96001
phone (530)225-2364
fax (530)225-2381

c. Type of organization and tax status

The Nature Conservancy is a non-profit 501(c3) organization.

The U.S. Fish and Wildlife Service is an agency of the United States Department of Interior.

The Wildlife Conservation Board and the California Department of Fish and Game are agencies of the State of California Resources Agency.

d. Tax identification number and/or contractor license, as applicable

The Nature Conservancy's taxpayer identification number: 53-0242652.

e. Participants/collaborators in implementation

Participants in implementation include the U.S. Fish and Wildlife Service, Wildlife Conservation Board, California Department of Fish and Game, and The Nature Conservancy. Applicants will coordinate with the SB 1086 Habitat Committee in implementing this project.

IV. Project Description

a. Project description and approach

The co-applicants request **$3,545,800** for the ***acquisition and management*** of fee title or permanent conservation easement interests on floodplain lands within the Conservation Area (as defined by SB 1086) of the Sacramento River, between Keswick and Verona (see Figure 1, following Section IV). We will also develop a new project-wide ***floodplain restoration monitoring program*** to enhance existing monitoring programs. This application builds on a similar application funded by CALFED in 1997. Permanent protection and adaptive management of these lands are critical steps toward the restoration of natural ecological processes in this system. The long-term objectives of this acquisition and adaptive management program are, in a "good neighbor" context, designed to:

- Allow natural restorative processes of erosion, sedimentation, and flooding to occur.
- Prevent further degradation of riverine and riparian habitats.
- Reduce land use conflicts.
- Reduce flood-related losses by moving economic activity out of floodprone areas.
- Provide for adaptive management and ecological monitoring of key habitats.
- Where needed, provide sites for active restoration programs (tree planting).
- Involve and inform local landowners of project goals through the SB 1086 process.

This project builds upon existing efforts of applicants: acquire additional Refuge and other public lands (see Figure 2, following Section IV) (more than 15,000 acres acquired to date), purchase and hold conservation easements, implement large-scale riparian forest restoration (approximately 2,640 acres restored to date), and implement project-wide floodplain restoration monitoring.

Acquisition A parcel being considered for acquisition will be evaluated based on criteria including its biological and physical integrity, proximity to other intact floodplain lands, value to anadromous and resident fish species, damage sustained in the 1997 floods, biological and economic feasibility of restoration, and consistency of acquisition with the goals of agency management plans and initiatives in the project area. These criteria are drawn from the SB 1086 management plan and designation of the Sacramento River Conservation Area, from the Refuge's and DFG's procedures for evaluating land acquisitions, from the existing management plan for the State's Sacramento River Wildlife Area, and from the Conservancy's site selection criteria.

Lands will be purchased by three of the applicants; those purchased by WCB will require review and approval by the Department of Fish and Game. Lands will be managed in public ownership as part of the Sacramento River National Wildlife Refuge system or some other program consistent with DFG and Service policy and procedures. Management costs will be covered through a combination of CALFED funds, income from revenue generating operations, and existing agency operations budgets.

The values of the targeted lands vary widely, from as little as $500 per acre for gravel bar, to as much as $10,000 per acre for orchard. Assuming an average cost of $5,000 per acre, applicants anticipate acquiring up to 500 acres in the three years following award of funds. However, the number of acres acquired will depend on the actual price of the properties purchased.

We will initiate ***start-up stewardship and analysis*** activities including clean-up and repair of infrastructure, fencing as needed, analysis of flood management structures, and development of management plans. If it is anticipated that a modification of flood structures is desirable to meet restoration objectives, applicants will conduct an analysis to determine if modifications at the site would result in significant changes to flood protection and erosion on adjacent properties. Neighboring landowners, flood management agencies, and other stakeholders will provide input to this analysis. If it

is anticipated that modification of flood management structures will have significant off-parcel impacts, we will propose the site to the SB 1086 Committee as a site specific planning project, which involves stakeholders along the river.

Floodplain restoration monitoring We will develop and begin implementing a project-wide monitoring plan to assess the success of channel meander and floodplain habitat restoration efforts in achieving multiple CALFED objectives.

Long-term management Land management practices will include a combination of techniques, depending on the specific site. Where possible, we will allow natural regeneration of vegetation to occur by promoting natural ecological processes. If direct planting of a site is deemed necessary, it will be conducted under the program outlined in our companion restoration proposal. Agricultural lands will be restored over a period of time. Property conditions, flood trends and other factors will determine the order in which the properties are restored. In the interim, local growers may be contracted to conduct wildlife-compatible farming of orchard and row crops. These activities will become part of existing management programs.

While the proposed project stands alone, it is a companion to a second proposal submitted by the applicants: **Riparian Habitat Restoration on the Sacramento River: Planting, Monitoring, and Demonstration** and is a continuation of "Ecosystem and Natural Process Restoration on the Sacramento River: Floodplain Acquisition and Management Project," submitted to CALFED in 1997.

Organizations working to implement acquisition and restoration activities include the California Department of Water Resources (DWR), California State University at Chico (CSUC), Point Reyes Bird Observatory, local private landowners, The Nature Conservancy, U.S. Fish and Wildlife Service, and the Wildlife Conservation Board (California Department of Fish and Game). These organizations have been working in the project area on these and other activities for more than fifteen years.

b. Proposed scope of work

Task 1: Acquisition ($2,838,600)

- **Acquisition goal:** Up to 500 acres over the three-year project.
- **Steps in the acquisition process:**
  1. Identify willing sellers of properties located in the Sacramento River Conservation Area.
  2. Prioritize properties based on selection criteria.
  3. Agree on ownership and management objectives for target properties; address third-party impacts.
  4. Appraise high-priority properties to determine fair market values.
  5. Secure purchase options.
  6. Conduct due diligence.
  7. Submit required documentation for approval of funding.
  8. Open escrow.
  9. Request funds from agency administering CALFED funds.
  10. Close escrow.

All applicants are involved in Steps 1, 2, 3, and 4. Which applicants are involved in the other steps depends on the specific acquisition. On a quarterly basis, the applicants will submit a program report detailing the lands acquired, their characteristics and value, who will manage them and management practices envisioned, as well as financial and other necessary information.

Task 2: Start-up Stewardship and Analysis ($353,600) Initiate stewardship activities including clean-up and repair of infrastructure, fencing as needed, and development of management plans. These activities will be completed over the three-year scope of this project.

If it is anticipated that a modification of existing flood management structures is desirable to meet restoration objectives, analysis of these structure(s) will be conducted. In this instance, applicants will hire an engineering/hydrology firm to analyze impacts of potential levee and bank stabilization modifications on flood elevations and stream morphological changes. Neighboring landowners, flood management agencies and other stakeholders will have opportunity to provide input. Analysis will determine if significant off-parcel impacts would occur; if so, applicants will maintain levees pending further analysis. Deliverables include final parcel analysis with stakeholder comments, and recommendation to proceed with bank protection modifications or referral to SB 1086 site specific planning process.

Task 3: Long-term management ($250,000) Lands will be conserved in the public interest and be managed and monitored as part of the Sacramento River National Wildlife Refuge, the Sacramento River Wildlife Area, or some other appropriate reserve system consistent with Department of Fish and Game (DFG) and Service policy and procedures.

Task 4: Floodplain Restoration Monitoring Program ($103,600) We will develop and begin implementing project-wide floodplain restoration monitoring to assess the success of channel meander and floodplain habitat restoration efforts in achieving multiple CALFED objectives. The plan will be completed by the end of first year following award of funds. Implementation will begin when the plan is completed and will continue for the remaining two years, and possibly beyond depending on availability of additional funding. Deliverables will include the monitoring plan and initial monitoring results. This component is also a part of the "Riparian Habitat Restoration on the Sacramento River: Planting, Monitoring, and Demonstration" proposal--funding reflected here will only be necessary if this monitoring program is not funded in the other proposal.

All elements of the project will be coordinated with landowners, agencies and other interested parties through the SB 1086 process.

c. Location and/or geographic boundaries of project

Acquisitions will be targeted on properties within the Conservation Area of the Sacramento River (as defined by SB 1086) between the towns of Keswick and Verona. Counties in the project area include Shasta, Tehama, Butte, Glenn, Colusa, Sutter, and Yolo.

d. Expected benefits

From an ecosystem process standpoint, this project will ensure the integrity of a large portion of the Sacramento River's ***stream meander corridor*** (between Red Bluff and Chico Landing) (See Figure 3, following Section IV). This corridor, through erosive processes, contributes significantly to ***natural sediment supplies.*** The protection of existing riparian forests and the natural establishment of new forest due to this project will improve Central Valley ***stream temperatures*** on the stretch of river between Keswick to Verona.

- **Stressors**

  Ecosystem stressors (as defined in the PSP) that will be reduced by this program include:

  - The suite of stressors reduced by **ensuring a healthy meander corridor** between Red Bluff and Chico Landing, such as: ***alteration of channel form, physical isolation of the floodplain, reduction of gravel recruitment, lack of riparian vegetation regeneration potential, elimination of fine sediment replenishment,*** and ***elevated predation and competition losses.***
  - The suite of stressors that are reduced by **removing incompatible land uses** from the river's edge and allowing riparian vegetation to establish, such as: ***water temperatures*** that are too high, ***loss of riparian vegetation, channel aggradation*** due to fine sediments captured by the riparian vegetation, ***contaminants, nutrient or carbon input,*** and ***incompatible agricultural practices.***

- **Habitats**
  Priority habitats improved by this project include ***seasonal wetland and aquatic habitat, instream aquatic habitat, shaded riverine aquatic habitat, riparian woodland habitat,*** and ***compatibly managed agricultural lands.***

- **Species**
  The reduction of the stressors noted above and the creation of and improvements in key habitats provide significant benefits for the following priority species during key portions of their life histories: ***winter-run*** (federally and state listed endangered), ***spring-run, late-fall-run*** and ***fall-run chinook salmon; splittail; steelhead trout*** (federally threatened)***;*** and ***green sturgeon.***

  Other CALFED priority species directly benefiting from this project include resident fish, American shad, Swainson's hawk (state listed threatened), western yellow-billed cuckoo (state listed threatened), bank swallow (state listed threatened), shorebird and wading bird guilds, neo-tropical migratory bird guild, upland game, valley elderberry longhorn beetle (federally listed threatened), and bald eagle. (See Figure 4 for species list, following Section IV.)

  The ecosystem benefits derived from this program use natural processes as the primary agent of restoration. Since the acquisitions and easements afford permanent legal protection, the ecosystem benefits of this project can be expected not only to endure, but also to increase with time as the natural restoration process creates an ever more complex and resilient ecosystem.

- **Third party benefits — economic**
  - Retirement of flood-prone agricultural lands provide growers the opportunity to ***reinvest their capital*** in more productive land. It will also ***prevent loss of agricultural revenue*** caused by flooding. Additionally, retirement of specific croplands like prune orchards will ***help reduce downward price pressures*** and crop surpluses.
  - Planned floodplain restoration will result in more ***cost-effective flood control*** measures in the long-term.
  - ***Insurance claims for flood related damages should decrease*** as agricultural production shifts to higher ground and a greater number of acres are committed to floodplain habitat.

- **Benefits to CALFED non-ecosystem objectives**
  - ***Flood control.*** Observations of previously restored acres in the project area suggest that riparian vegetation will ***slow down the flow of floodwaters*** which will increase the river's capacity to hold water. Riparian vegetation binds the soil, ***minimizing the scouring of soils*** during flood events. Widening the floodplain will allow waters to flow over a greater surface area, ***reducing pressure on existing levee systems.*** Floodplain forest will help ***filter floating debris and sediments from floodwaters,*** thus protecting agricultural lands behind the riparian forest.
  - ***Water quality.*** Acquisition of properties inside the Sacramento River Conservation Area is an important first step toward improving water quality by reducing agricultural inputs into the river (sustainable farming program/land use changes) and by using riparian filter strips to trap run-off containing sediment and pesticides or fertilizers.

- **Benefits to other ecosystem restoration programs**
  Floodplain acquisition and restoration efforts support the goals of the following programs:
  - ***SB 1086***
  - ***Central Valley Project Improvement Act***
  - ***Central Valley Habitat Joint Venture***
  - ***Sacramento River National Wildlife Refuge***
  - ***California Riparian Habitat Conservation Program***
  - ***Riparian Habitat Joint Venture (Partners in Flight)***

e. Background and biological/technical justification

The loss and degradation of aquatic and riparian habitats on the Sacramento River have reached critical levels. Shaded riverine aquatic, floodplain, and riparian woodland habitats have declined as human demands on the river's resources have intensified, with associated declines in aquatic and terrestrial species. Anadromous fish, including four genetic races of chinook salmon and steelhead trout, depend on the river as a migration corridor. Presently, winter-run salmon are listed as threatened under the federal Endangered Species Act, and spring-run salmon and Sacramento splittail (resident) have also declined radically. Migratory birds such as the western yellow-billed cuckoo have also suffered, as have myriad terrestrial species.

The main stem of the Sacramento River is important for anadromous fish in the following ways:

- Fall, late fall, winter, and spring-run chinook salmon and steelhead trout use the main stem to migrate to their respective tributaries.
- Winter-run salmon spawn in the section between Keswick and Red Bluff.
- Fall and late fall-run salmon will also spawn in the main stem.
- All races of salmon use the main stem as rearing and foraging habitat.

Alternatives considered

Given the river's critical importance as a migratory corridor for anadromous fish and migratory birds, as well as native wildlife that depend on riparian areas, the protection and restoration of appropriate habitat is necessary. Several approaches are possible towards this end:

- **Acquisition of a narrow riparian strip of land.** While acquisition of streamside strips would be beneficial to aquatic and riparian species, it would not allow for a full-scale meander belt and floodplain restoration. It does not provide the magnitude and sustainability of benefit of the proposed project. Narrow strips have also been shown to be "sinks" for riparian, especially avian, species. Finally, as the river meanders, this strip would be lost.
- **Voluntary restoration activity by local landowners.** This approach would have limited benefit. It depends entirely on the willingness of an individual landowner. While it is a strategy occasionally employed in the project area, it does not hold the potential for larger-scale restoration over time, and landowners have little continuing incentive to participate.
- **The proposed acquisition project.** The proposed project holds the most promise in terms of larger-scale ecosystem restoration, and it will yield multiple benefits over time. We expect habitat improvements to be self-sustaining and durable.

Relevance to ERPP Objectives (Volume II)

• ***Stream meander objective (p. 147): Maintain, improve, or restore natural stream meander processes.*** The goal of the project is to allow the maintenance or restoration of stream meander through acquisition of flood-prone lands within the floodplain.

• ***Natural floodplain and flood processes objective (p. 148): Modify channel and basin configurations to improve floodplain function.*** With the restoration of ecological processes anticipated by this project, the river channel will be altered over time and will allow for greater areal flooding of floodplain area.

• ***Central Valley stream temperatures objective (p. 149): Maintain, improve, and restore water temperature regimes to meet the life history needs of aquatic organisms.*** Increasing shaded riverine aquatic and riparian woodland habitats will help moderate stream temperatures at the river's edges.

• ***Riparian and riverine aquatic habitats objective (p. 150): Restore riparian scrub, woodland, and forest habitat along largely nonvegetated banks of the Sacramento River.*** Natural recruitment and direct planting of native riparian species will aid in the restoration of riparian forest habitat.

• ***Contaminants objective (p. 154): Reduce concentration and loading of contaminants in the aquatic environment.*** A healthy riparian forest will act as a filter for agricultural and other contaminant run-off.

• ***Species objectives--splittail (p. 158), white and green sturgeon (p. 158), chinook salmon (p. 160), steelhead trout (p. 163), striped bass (p. 164), American shad (p. 165), western yellow-billed cuckoo (p. 165), bank swallow (p. 166): Assist in the recovery of, or restore the distribution of, these species.*** All of the elements of the proposed project, including those listed above, are designed to aid the restoration of these priority species.

Project status The acquisition and long-term management components of this project are ongoing; the floodplain restoration monitoring program is new. Since 1988, the Service and the Conservancy have acquired and are managing 8,600 acres of riparian habitat and flood-prone agricultural lands as part of the Sacramento River National Wildlife Refuge. Together, the Service and the Conservancy have restored 2,460 acres at ten different sites. Since 1958, WCB has acquired interest (fee title or easement) in more than 6,700 acres of land along the Sacramento River, and has, with DFG, overseen active restoration projects affecting 400 acres on four sites. Depending upon the designated use or the purpose of acquisition, these lands are managed by local governments, private landowners, or the Department of Fish and Game.

Approximately 27 landowners in the area either have expressed interest in selling or are in the process of negotiation. Collectively, their lands have an estimated cost of more than $33,500,000. The ultimate mix of properties acquired through this program will be determined through negotiations with willing sellers.

Applicants submitted a successful CALFED proposal in 1997 for acquisition and management activities, and expect to receive $9,879,800. Given current landowner interest, we expect that these funds will be quickly committed, and additional funding will be needed.

f. Monitoring and data evaluation

In addition to the project-wide floodplain restoration monitoring program described above, project monitoring and evaluation will be conducted through a number of other programs. Applicants will maintain a chronological record of the amount and types of acreage acquired and will submit quarterly programmatic and financial reports. Other monitoring programs which contribute to our work include:

- Point Reyes Bird Observatory, under a contract with the Conservancy, monitors migratory bird use of Refuge sites annually to determine the success of restoration efforts.
- Erosion studies are currently underway by the California Department of Water Resources. We are using these studies to inform our restoration targets.

g. Implementability

- All land acquisitions will be consistent with the principles of the SB 1086 Handbook and management principles of the Sacramento River Conservation Area, the goals and objectives outlined by CALFED for the Sacramento River, and other agency management plans and initiatives in the project area.
- All acquisitions will comply with existing laws and regulations.
- Applicants have identified willing sellers and are in negotiation with them. Local support for the project comes from growers, neighbors of Refuge lands, environmentalists, and the SB 1086 Advisory Council, among others.
- Applicants will conduct an analysis, as part of start-up stewardship efforts, to determine whether potential management practices at an acquired site would affect neighboring landowners.
- Other funds are being sought (and have previously been awarded) from the CVPIA Restoration Fund, Land and Water Conservation Fund, and US Army Corps of Engineers (which is seeking funding through environmental restoration authorities such as sections 1135 and 206 to participate in this project),among other sources.

Figure 1
SACRAMENTO RIVER LOCATION MAP

The Nature Conservancy

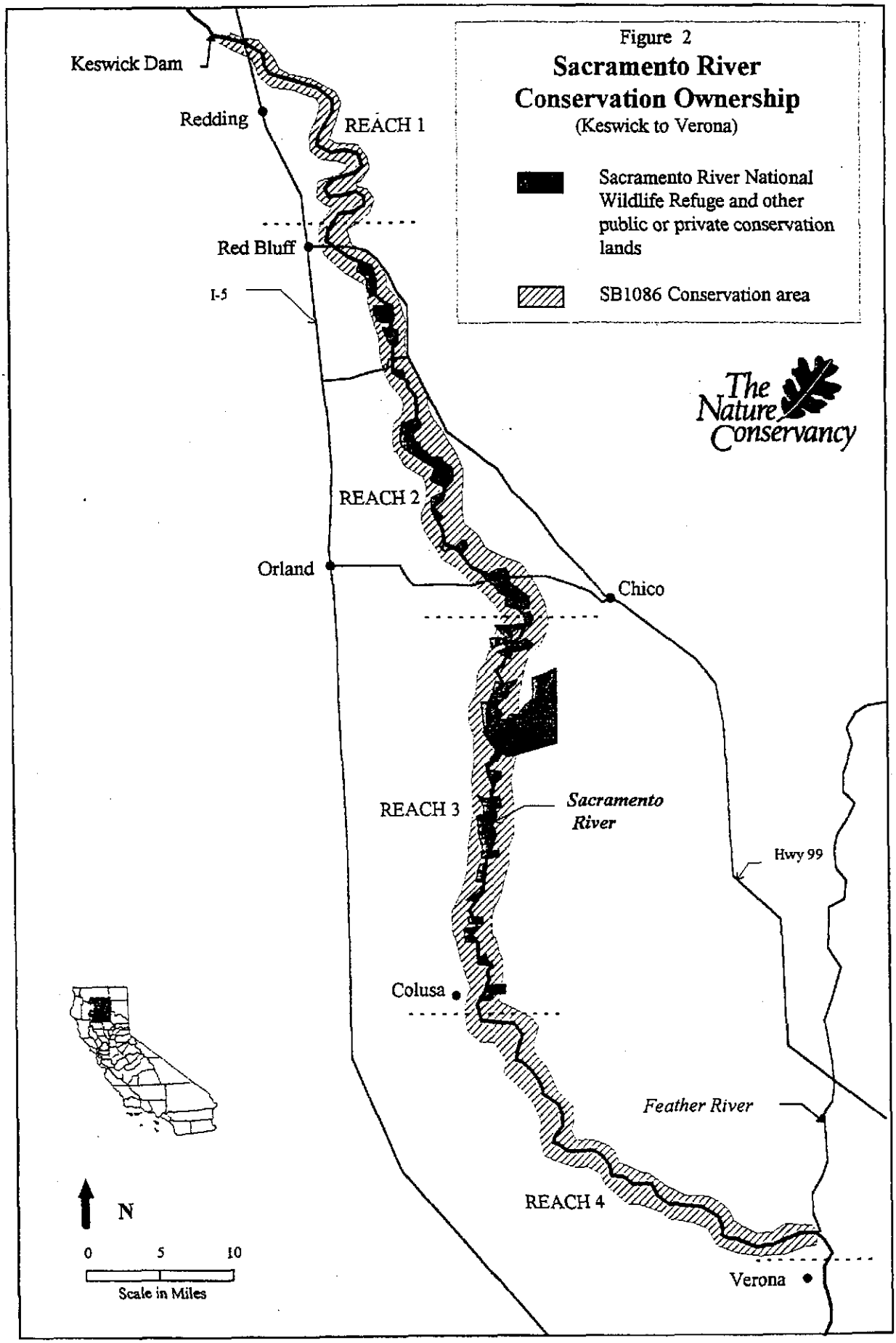
Figure 2
Sacramento River
Conservation Ownership
(Keswick to Verona)
Sacramento River National Wildlife Refuge and other public or private conservation lands
SB1086 Conservation area
The Nature Conservancy
Keswick Dam
Redding
REACH 1
Red Bluff
I-5
REACH 2
Orland
Chico
REACH 3
Sacramento River
Hwy 99
Colusa
Feather River
REACH 4
Verona
N
0 5 10
Scale in Miles

Figure 3: Sacramento River Stream Meander: Between Red Bluff and Los Molinos

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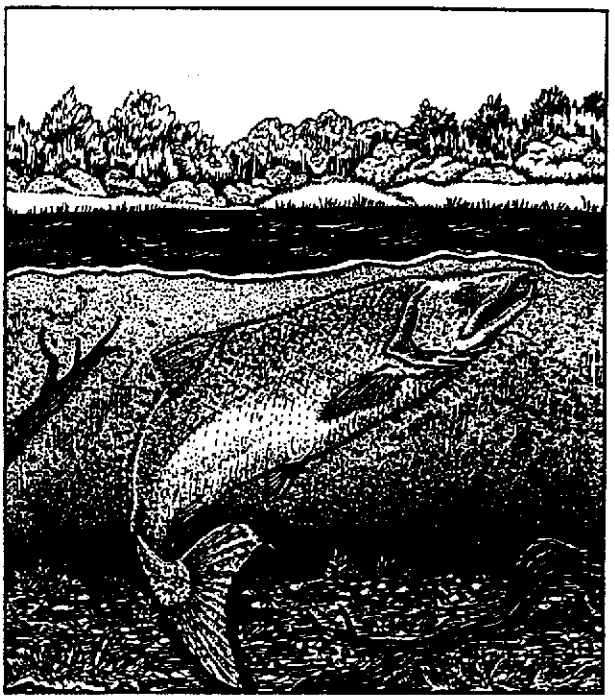
FIGURE 4: SPECIES AND HABITATS THAT WILL BENEFIT FROM PROJECT

The following list represents species and habitats of particular interest or concern that are found within the Sacramento River Conservation Areaand will benefit from land acquisition and habitat restoration.

Species and Species Groups

White and green sturgeon
Winter-run chinook salmon
(federally and state listed endangered)
Spring-run chinook salmon
Fall-run chinook salmon
Late-Fall run chinook salmon
Steelhead trout *(federally threatened)*
Resident fish guild including Sacramento perch,
Sacramento blackfish and Sacramento splittail
Giant garter snake
(federally and state listed threatened)
Red-legged frog *(federally listed threatened)*
Western pond turtle
Long-eared owl
Sharp-shinned hawk
Cooper's hawk
Swainson's hawk *(state listed threatened)*
White-tailed kite
Clapper rail
Western yellow-billed cuckoo *(state listed threatened)*
Bank swallow *(state listed threatened)*
Neo-tropical migratory bird guild including riparian obligates like the Blue grossbeak,
Willow fly catcher, cuckoos
Shore bird guild
Wading bird guild
Water fowl guild such as mallard, teal and wood ducks
Valley elderberry long-horned beetle *(federally listed threatened)*



Winter-run chinook salmon and habitat

Many of the above species are designated as California Species of Concern.

Habitats

Seasonal wetland and aquatic habitat
Instream aquatic habitat
Shaded riverine aquatic habitat
Riparian woodland habitat
Compatibly managed agricultural lands

TABLE 1: BIBLIOGRAPHY OF PROJECT-RELATED REPORTS, DOCUMENTS, AND PUBLICATIONS

Academic

Hubbell, J. 1997. Competitive effects of alfalfa on survival, growth, and water relations of Quercus lobata seedlings. Master of Arts Degree, California State University, Chico.

*McAlexander, L.B. 1994 Species-area relations of breeding birds on the Sacramento River, California. Master of Science degree, California State University, Chico.

*Souza, J.S. 1995. Species richness of medium-sized carnivores in response to riparian patch size on the middle Sacramento River. Master of Science Degree in Agriculture, Calif State Univ., Chico.

**Funded by The Nature Conservancy*

Inventory and Monitoring

Buer, Kohl. 1994. Sacramento River Bank Erosion Investigation Memorandum Progress Report. CA Dept. of Water Resources, Red Bluff.

Buer, Kohl. 1994. Sacramento River Future Erosion Investigation Red Bluff to Chico Landing Memorandum Progress Report. CA Dept. of Water Resources, Red Bluff.

Geupel, G.R. and G. Ballard. 1995. Status and distribution of the landbird avifauna along riparian corridors of the Sacramento River national wildlife refuge: results of the1994 field season.

Geupel, G.R. 1995. Population status and habitat associations of songbirds along riparian corridors of the lower Sacramento River: Results from the1995 season and summary of results 1993 to 1995. A report of the Point Reyes Bird Observatory, Stinson Beach, CA.

Kiener, A. and G.R. Geupel. 1997. Songbird response to revegetation efforts at Stony Creek and other Nature Conservancy sites along the Sacramento River: Results from the 1996 field season. A report of the Point Reyes Bird Observatory, Stinson Beach, CA.

Publications

Griggs, T. 1990. Valley oaks: Can they be saved? Fremontia 18(3):48-51.

Griggs, F.T. 1993. Protecting biological diversity through partnerships: The Sacramento river Project. in Interface between ecology and land development in California, edited by J.E. Keeley. Pub. by Southern California Academy of Sciences, Los Angeles.

Griggs, F.T., V. Morris, E. Denny. 1993. Five years of valley oak riparian forest restoration. Fremontia 22(2):13-17.

Griggs, F.T. 1993. Restoration returns moments of wildness to the banks of the Sacramento River. Pacific Discovery 46(1):12-20.

Griggs, F.T. 1994. Adaptive management strategy helps assure cost-effective, large-scale riparian forest restoration (California). Restoration and Management notes 12:1 pg. 80.

Griggs, F.T. and D.R. Peterson. 1997. Evaluation and Costs for Valley oak riparian forest restoration on the Sacramento River. Proc. of a Symp. on Oak Woodlands: Ecology, Management, and Urban interface issues. USDA Forest Service General Technical Report PSW-GTR-160.

Hujik, P. and F.T. Griggs. 1995. Cutting size, horticultural treatments affects survival and growth of riparian species (California). Restoration and Management Notes 13:2, pp. 219-220.

Hujik, P. and F. T. Griggs. 1995. Field-seeded riparian trees and shrubs thrive in non-irrigated plots (California). Restoration and Management Notes 13:2, pp. 220-221.

Sheehan, R. and T. Griggs. 1994. Adaptive management strategy used to determine duration of irrigation in riparian forest restoration (California). Restoration and Management Notes 12:1, pg.81.

Internal Reports and Plans

Hubbell, J.G. 1994. First and second year results of riparian restoration experiments and suggestions for future experiments at Parrott Ranch, Sacramento River, CA.

V. Costs and Schedules to Implement Proposed Project

a. Budget costs

The total request for CALFED funds is **$3,545,800** (see Table 2: Budget, following Section V).

For "Land acquisition", the column "Material and Acquisition Contracts" includes capital costs. "Service Contracts" includes the costs of appraisals, toxics studies, easement documentation reports (for easement only) and surveys and mapping for the planned acquisitions. "Start-Up Stewardship and Analysis" costs include clean-up and repair of infrastructure, fencing as needed, analysis of flood management structures, and development of management plans. Operations and Management funding is calculated at 10% of the capital cost. The applicants intend to hold longterm management funds in an endowment, using interest to supplement existing agency operations budgets and revenue streams. Annual income will be used for ongoing management costs, including compliance and biological monitoring on all acquired lands.

Many of the tasks will be carried out by applicants, though some may be carried out by sub-contractors. Some of the due diligence tasks related to acquisition (i.e. appraisals and surveys) will most likely be carried out by subcontractors with whom the applicant has an established relationship. In such cases, there is an increased efficiency and most often a related savings in cost and time in engaging a subcontractor who is already familiar with the project area and with the applicant's requirements.

In an effort to reduce overhead costs, the budgets allocate overhead and direct costs to each party based on the anticipated acquisition and management costs each party will bear. However, in the event it becomes more effective for one party to implement a greater share of activities, we request the flexibility to reallocate a proportionately larger amount of direct costs and/or overhead to that partner. A memorandum of understanding has been developed by the partners to implement this project.

Funds for other acquisition efforts:

CVPIA	$1,584,000
Category III	$9,879,800

To date, more than $35,000,000 have been spent through Land and Water Conservation Fund appropriations and other sources on the acquisition of lands in the project area. With these funds, 24,000 acres have been brought into public ownership. Project proponents estimate that it will cost an additional $100,000,000 to complete proposed acquisitions in the floodplain.

The Nature Conservancy will be the applicant which executes the contract with CALFED for receipt of grant funds. The Conservancy will assume decision-making authority and liability with regard to expenditure of these funds and the overall success of the project.

If CALFED and its allied funding sources are unable to fulfill our entire funding needs on this project, we will raise additional funds from other sources and, if necessary, scale down the project to match the available funds.

b. Schedule milestones

Over the life of this three-year project, the milestones include acquisition of up to 500 acres after three years. The exact number of acres acquired depends on the timing of the acquisitions and actual price of the purchased properties. The floodplain restoration management plan will be completed by the end of year one. Start-up stewardship and analysis and long-term management will be conducted over the three-year scope of this project.

c. Third-party impacts

There are several potential third-party impacts which have been considered and addressed in developing this proposal:

- **Displacement of local agriculture.** The applicants' goal is to have a gradual transition from farming to wildlands and to involve local growers in this process as much as possible. Following acquisition, local growers are contracted to conduct wildlife-compatible farming of orchards and row crops until property conditions, flood trends or other factors make it appropriate fore restoration. When this happens, we will transition these farmlands into wildlands through restoration contracts with the local community. Riparian restoration has become a new agricultural enterprise for growers along the northern Sacramento River. In addition, retirement of flood-prone agricultural lands will help reduce downward price pressures caused by overproduction of certain crops (e.g., prunes).
- **Introduction of pest species problematic to adjacent farm lands due to reduced pesticide use on Refuge lands.** The Service and the Conservancy currently manage 3,150 acres of farmland using integrated pest management practices. Notwithstanding very restrictive lease requirements on pesticide use and farming practices, the program has had a waiting list for the last five years of growers interested in leasing these properties. It is also important to note that we have received very few pest-related complaints from other landowners during this period. The California State University-Chico School of Agriculture has been actively engaged in working with TNC, the Service and DFG in this area.
- **Decrease in local tax base.** The Service pays *in lieu* taxes on Refuge lands. The state also pays *in lieu* taxes on the lands it acquires.
- **Flood management impacts.** Observations of previously restored acres in the project area suggest that this acquisition program will slow down the flow of floodwaters which will increase the river's capacity to hold water. It is hoped that acquisition and management practices will result in more cost-effective flood control measures in the long run. Widening the floodplain will allow waters to flow over a greater surface area, reducing pressure on the existing levee systems. A floodplain forest will filter floating debris and sediments from floodwaters, thus protecting adjacent farmlands. As a result of these benefits, we hope that the costs of flood insurance will eventually decline.
- **Impacts on downstream uses, diversion points, and bridges.** Evaluation of potential impacts on downstream uses will be conducted on a site-by-site basis. In cases where analysis reveals that proposed management practices would adversely impact downstream users, we will recommend the site to the SB 1086 committee for further site-specific analysis.

TABLE 2: PROJECT BUDGET TABLE

The Nature Conservancy (TNC)
Wildlife Conservation Board/Department of Fish and Game (WCB)
Fish and Wildlife Service (FWS)

Project Phase and Task	Direct Labor Hours	Direct Salary and Benefits	Overhead Labor (General, admin and fee)	Service Contracts	Material and Acquisition Contracts	Miscellaneous and other Direct Costs	Total Cost
Land Acquisition				80,000	2,500,000		2,838,600
TNC	1820	78,000	15,600				
WCB	n/a		15,000				
FWS	2500	100,000	50,000				
Start-up Stewardship	n/a	33,000	10,600[1]	200,000		110,000	353,600
Floodplain Restoration Monitoring	75	3,000	600	100,000*			103,600
O&M						250,000	250,000
TOTAL	**4395 (partial)**	**214,000**	**91,800**	**380,000**	**2,500,000**	**360,000**	**3,545,800**

TOTAL REQUEST: $3,545,800

*This component is also a part of the "Riparian Habitat Restoration on the Sacramento River: Planting, Monitoring, and Demonstration" proposal--the $100,000 reflected in the above budget will only be necessary if this monitoring program is not funded in the other proposal.

[1] Includes TNC and FWS overhead. TNC overhead is calculated at 20%, the Conservancy's federally approved indirect cost rate. FWS uses a different calculation for overhead.

VI. Applicant Qualifications

The ***U.S. Fish and Wildlife Service*** manages the Sacramento River National Wildlife Refuge (Refuge), a system of floodplain properties along the river between Red Bluff and Colusa. The agency's ultimate goal is the protection of 18,000 acres for rare species (8,600 acres have been acquired to date). These efforts include acquisition and restoration of native riparian habitat, and monitoring habitat use by wildlife.

The Nature Conservancy is an international, private, non-profit membership organization whose mission is to preserve plants, animals and natural communities that represent the diversity of life on Earth by protecting the lands and waters they need to survive. The Conservancy has more than 45 years of experience in identifying, protecting, managing, and restoring significant natural areas. The operator of the largest private system of nature sanctuaries in the world, the Conservancy owns and manages more than 1,500 preserves throughout the US. Its strength and reputation are built on the application of the best conservation science available and building partnerships with local communities, private organizations, and public agencies to achieve mutual conservation goals.

The Nature Conservancy of California uses a wide variety of tools to help forge solutions to conservation issues. We employ the following four methods most frequently: land acquisition; land management and restoration; land-use planning and conflict resolution; and community education and outreach.

Several of The Nature Conservancy's landmark conservation projects — in the Cosumnes River, Santa Margarita River, and Sacramento River watersheds — have focused on protection and restoration of riparian ecosystems. Conservation efforts for these complex natural communities must include maintaining and restoring the natural processes that are essential to the long-term health of the hydrological system. In addition, The Nature Conservancy strives to balance the protection and restoration of natural communities with compatible human uses.

The Conservancy began acquiring land along the Sacramento River in 1988 and has assisted the Service in acquiring 8,600 acres for conservation in the Refuge. Since then, the Conservancy has increased its efforts on the river, dedicating significant resources to: assist in the acquisition of additional Refuge lands, purchase and hold conservation easements, implement large scale riparian forest restoration; and engage the local community in a wildlife-compatible agriculture program. The Conservancy hopes that successes here will provide a sustainable land use model for the region.

The ***California Department of Fish and Game*** and ***Wildlife Conservation Board*** have been working to acquire and protect environmentally sensitive lands on the Sacramento River since 1958. Using acquisition of fee title and conservation easements, WCB has protected more than 6,700 acres of riparian land along the river. These acquisitions are managed for a variety of uses, including public fishing access (managed by local governments under long-term cooperative agreements with WCB), protection of riparian and agricultural land (managed by private landowners in coordination with DFG), and protection and management of riparian habitat (the Sacramento River Wildlife Area is the largest example, with 3,165 acres under management by CDFG). The CDFG also manages agricultural lands within the Wildlife Area in cooperation with the demonstration farm of California State University at Chico (CSUC).

Efforts to restore the Sacramento River ecosystem have been on-going for many years and have been supported by a broad array of public and private partners. In addition to the applicants for this project, partners include the US Bureau of Land Management, DWR, CSUC, Point Reyes Bird Observatory, and local landowners and growers. Critical to the success of the project has been the diversity of partner support, and the inclusion of local landowners and other entities having a strong investment in the environmental and economic health of the region.

VII. Compliance with standard terms and conditions

While The Nature Conservancy's systems comply with OMB Circulars A-110, A-122 and A-133, our accounting systems do not currently comply with all provisions of the cost accounting standards (which are applicable to federal procurement contracts). Therefore, the Conservancy would strongly prefer a grant or cooperative agreement. In addition, given the definitions in federal law, it would appear that this type of project would most reasonably fall under a grant or cooperative agreement.

U.S. Department of the Interior

Certifications Regarding Debarment, Suspension and Other Responsibility Matters, Drug-Free Workplace Requirements and Lobbying

ersons signing this form should refer to the regulations eferenced below for complete instructions:

ertification Regarding Debarment, Suspension, and Other esponsibility Matters - Primary Covered Transactions - The rospective primary participant further agrees by submitting is proposal that it will include the clause titled, Certification Regarding Debarment, Suspension, Ineligibility nd Voluntary Exclusion - Lower Tier Covered Transaction," rovided by the department or agency entering into this overed transaction, without modification, in all lower tier overed transactions and in all solicitations for lower tier overed transactions. See below for language to be used or se this form for certification and sign. (See Appendix A of ubpart D of 43 CFR Part 12.)

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transactions - (See Appendix B of Subpart D of 43 CFR Part 12.)

Certification Regarding Drug-Free Workplace Requirements - Alternate I. (Grantees Other Than Individuals) and Alternate II. (Grantees Who are Individuals) - (See Appendix C of Subpart D of 43 CFR Part 12)

Signature on this form provides for compliance with certification requirements under 43 CFR Parts 12 and 18. The certifications shall be treated as a material representation of fact upon which reliance will be placed when the Department of the Interior determines to award the covered transaction, grant, cooperative agreement or loan.

ART A: Certification Regarding Debarment, Suspension, and Other Responsibility Matters - Primary Covered Transactions

CHECK X IF THIS CERTIFICATION IS FOR A PRIMARY COVERED TRANSACTION AND IS APPLICABLE.

The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:

(a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded by any Federal department or agency;

(b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and

(d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

RT B: Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transactions

CHECK__ IF THIS CERTIFICATION IS FOR A LOWER TIER COVERED TRANSACTION AND IS APPLICABLE.

The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

DI-2010
June 1995
(This form replaces DI-1953, DI-1954, DI-1956, DI-1958 and DI-1962)

PART E: Certification Regarding Lobbying
Certification for Contracts, Grants, Loans, and Cooperative Agreements

CHECK__ IF CERTIFICATION IS FOR THE AWARD OF ANY OF THE FOLLOWING AND THE AMOUNT EXCEEDS $100,000: A FEDERAL GRANT OR COOPERATIVE AGREEMENT; SUBCONTRACT, OR SUBGRANT UNDER THE GRANT OR COOPERATIVE AGREEMENT.

CHECK__ IF CERTIFICATION IS FOR THE AWARD OF A FEDERAL LOAN EXCEEDING THE AMOUNT OF $150,000, OR A SUBGRANT OR SUBCONTRACT EXCEEDING $100,000, UNDER THE LOAN.

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, and officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

As the authorized certifying official, I hereby certify that the above specified certifications are true.

SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL

Steve McCormick, California Regional Director, The Nature Conservancy

TYPED NAME AND TITLE

DATE

DI-2010
June 1995
(This form replaces DI-1953, DI-1954, DI-1955, DI-1956 and DI-1963)