

C1032

Attachment H

COVER SHEET (PAGE 1 of 2)

May 1998 CALFED ECOSYSTEM RESTORATION PROPOSAL SOLICITATION

Proposal Title: Cosumnes River Acquisition, Restoration Planning and Demonstration
 Applicant Name: The Nature Conservancy
 Mailing Address: 13501 Franklin Blvd., Galt, CA 95632
 Telephone: (916)683-1699
 Fax: (916)683-1702

Amount of funding requested: \$ 3,417,000 for 3 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
- Floodplain and Habitat Restoration
- Fish Harvest
- Watershed Planning/Implementation
- Fish Screen Evaluations - Alternatives and Biological Priorities
- Fish Passage Improvements
- Gravel Restoration
- Species Life History Studies
- Education

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

- Sacramento River Mainstem
- Delta
- Suisun Marsh and Bay
- San Joaquin River Mainstem
- Landscape (entire Bay-Delta watershed)
- Sacramento Tributary: _____
- East Side Delta Tributary: _____
- San Joaquin Tributary: _____
- Other: _____
- 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
- Late-fall run chinook salmon
- Delta smelt
- Splittail
- Green sturgeon
- Migratory birds
- Spring-run chinook salmon
- Fall-run chinook salmon
- Longfin smelt
- Steelhead trout
- Striped bass

COVER SHEET (PAGE 2 of 2)

May 1998 CALFED ECOSYSTEM RESTORATION PROPOSAL SOLICITATION

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

- | | |
|--|--|
| <input type="checkbox"/> State agency | <input type="checkbox"/> Federal agency |
| <input type="checkbox"/> Public/Non-profit joint venture | <input checked="" type="checkbox"/> Non-profit |
| <input type="checkbox"/> Local government/district | <input type="checkbox"/> Private party |
| <input type="checkbox"/> University | <input type="checkbox"/> Other: _____ |

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

- | | |
|-------------------------------------|--|
| <input type="checkbox"/> Planning | <input checked="" type="checkbox"/> Implementation |
| <input type="checkbox"/> Monitoring | <input type="checkbox"/> Education |
| <input type="checkbox"/> 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: Cosumnes River Floodplain Acquisition, Restoration Planning, and Demonstration

Applicant: The Nature Conservancy in Cooperation with the Bureau of Land Management and the California Wildlife Conservation Board

b. Project description and primary biological/ecological objectives

The project proposes a block grant totaling \$3,417,000 to help acquire between 300 and 800 acres of fisheries, riparian, and wetland habitats along the lower Cosumnes River floodplain.

Requested funds will be used for (1) land acquisition, (2) start-up stewardship, (3) floodplain restoration plans including engineering and hydrological studies, (4) long-term operations and management, (5) an outreach program designed to demonstrate the techniques used to restore the Cosumnes floodplain and the results achieved, and (6) monitoring. We will seek funding for actual construction of setback levees and/or modification of existing structures from other sources. The primary biological/ecological objectives of this proposal are to:

- protect existing riparian, wetland, and aquatic habitats and associated species.
- reestablish riparian, wetland, and aquatic habitats by restoring natural processes and expanding the floodplain.
- facilitate population expansion of species associated with the Eastside Delta Tributaries Ecological Zone, particularly eastside tributary fall-run salmon, splittail, sandhill cranes, neotropical migrant bird species, and waterfowl.

c. Approach/tasks/schedule

The proposed approach is to acquire fee interests from willing sellers on two properties that are contiguous to the Cosumnes River Preserve, have high habitat values, and/or offer conservation managers excellent opportunities to expand the floodway and restore the mosaic of floodplain habitats of the lower Cosumnes River. We will initiate start-up stewardship and management activities as we acquire the properties, and we will prepare hydrological and engineering plans for levee setback and modification. We will expand our ongoing floodplain restoration demonstration and monitoring programs to better reflect CALFED objectives. We expect to complete all elements of the proposed project within three years. Actual construction and/or modification of levees is outside the scope of this proposal, and we will pursue additional funds from partner agencies or subsequent CALFED funding rounds. We will submit quarterly financial and programmatic reports to CALFED.

d. Justification for project

The land acquisition, stewardship, restoration planning, conservation management, demonstration, and monitoring activities proposed here will protect and expand tidal wetlands, seasonally flooded wetlands, the riparian corridor, perennial grasslands, and farmland of high habitat value. This proposal addresses multiple priority stressors and benefits numerous species of concern to CALFED in the Eastside Delta Tributaries Ecological Zone. These activities will also improve water quality and will have broad ecosystem benefits.

e. Budget costs and third-party impacts

\$3,417,000 is sought from CALFED. An additional \$1,000,000 will be sought from CALFED or other sources to implement the floodplain restoration plans developed in this project. Total funds available for cost sharing are unknown at this time. More than \$35 million has been spent on the Cosumnes project to date.

There are no known negative third-party impacts from the activities for which we are requesting funding. Third-party impacts associated with modification or construction of levees will be evaluated as part of the proposed restoration planning.

f. Applicant qualifications

The Nature Conservancy has extensive experience in property acquisition, habitat restoration, and land management. TNC has successfully implemented the activities described in this proposal at this site and elsewhere.

g. Monitoring and data evaluation

The project proposes to expand the extensive habitat evaluation and species monitoring programs already in operation at the Cosumnes River Preserve to include these new properties as they are added to the Preserve. We will develop specific reporting requirements in consultation with CALFED staff. A specific monitoring element pertaining to floodplain restoration is described in the scope of work.

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

The Cosumnes River Preserve was dedicated in 1987. Preserve staff and volunteers have developed extensive community support in a decade of working with local and regional schools, community groups, and public agencies. The Sacramento County General Plan supports expansion of the Preserve, and the expansion proposed here will in turn help the county achieve some of its objectives.

The activities proposed are compatible with the objectives of CALFED, the ten agencies and partners of the Cosumnes project, the Central Valley Project Improvement Act, the Central Valley Habitat Joint Venture, and the Wetland Reserve Program.

The following CALFED objectives, as indicated in the Ecosystem Restoration Program Plan, Volume II (March 1998) relating to the Eastside Delta Tributaries Ecological Zone are partially achieved through this proposal: Central Valley Streamflows (p. 352); Natural Sediment Supply (p. 354); Natural Floodplain and Flood Processes (p. 356); Central Valley Stream Temperatures (p. 357); Seasonal Wetlands (p. 359); Riparian and Riverine Aquatic Habitats (p. 359); Invasive and Salt Marsh Plants (p. 362); Predation and Competition (p. 363); Contaminants (p. 363); Land Use (p. 365); Sacramento Splittail (p. 366); Chinook Salmon (p. 366); Resident Fish Species (p. 368); Giant Garter Snake and Western Pond Turtle (p. 368); Swainson's Hawk (p. 368); and Greater Sandhill Crane (p. 369).

III. Title Page

a. Title of project: *Cosumnes River Floodplain Acquisition, Restoration Planning and Demonstration*

Applicant:

The Nature Conservancy
201 Mission Street, 4th floor
San Francisco, CA 94105
phone (415) 777-0487; fax (415) 777-0244

b. Name of applicant/principal investigator(s); address; phone/fax/e-mail; organizational, institutional or corporate affiliations of applicant/principal investigator(s).

Mike Eaton, Cosumnes Project Director
phone (916) 683-1699; fax (916) 683-1702
e-mail: <meaton@tnc.org>

c. Type of organization and tax status

The Nature Conservancy is a District of Columbia non-profit corporation with a 501(c)(3) tax-exempt status.

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

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

e. Participants/collaborators in implementation

U.S. Bureau of Land Management and California Wildlife Conservation Board/Department of Fish and Game.

IV. Project Description

a. Project description and approach.

The Nature Conservancy (TNC) requests \$3,417,000 to acquire, plan for restoration of, and adaptively manage lands in the floodplain of the Cosumnes River, and to demonstrate techniques and results to interested practitioners. The activities proposed here will substantially contribute to completion of the Cosumnes River Preserve, a 10-year-old, multi-partner effort that has successfully protected and restored a mosaic of floodplain habitats including riparian forest, seasonal wetland, and tidal habitats along the lower Cosumnes (see maps, Figures 1 & 2). Conservation and restoration action on the Preserve has provided significant benefits for fish, wildlife, flood control, groundwater recharge, scientific research, and public education.

For this project, TNC has drawn up an integrated plan and budget that cover a number of conservation activities in the floodplain. These are:

- **land acquisition** via fee title interests, as well as staff salaries and expenses related to land acquisition;
- **start-up stewardship activities** associated with the acquired property (for example, installing and repairing fences, conducting baseline biological and archaeological surveys, writing management and monitoring plans);
- preparation of **floodplain restoration plans including** hydrological and engineering studies needed to design levee modifications and/or set back levees;
- development of **reliable long-term operations and management** funding, some of which will be covered by a management endowment fund, with the rest being paid for with funds from other sources;
- expansion of a **floodplain restoration demonstration and outreach program**;
- design and implementation of a **monitoring program** designed to identify the effects of floodplain restoration and to gauge the benefits achieved.

These activities make up an ambitious program for addressing CALFED's high-priority objectives relating to the Eastside Delta Ecological Zone, and particularly for protecting and restoring key floodplain habitats. These activities also ensure that the conservation outcomes are permanent, that the effects of our restoration actions are completely documented, and that the lessons learned in this experience are efficiently shared with other organizations doing this kind of work and with the general public. These components of our proposal are described in greater detail below:

Land Acquisition. TNC and partner agencies have employed a number of rigorous biological analyses to identify crucial target properties. TNC has studied all of the properties along the lower floodplain and has contracted with a private hydrological consulting firm to analyze restoration opportunities along the Cosumnes.¹ These analyses have aided us in identifying properties best suited for acquisition and restoration of the floodplain and associated riparian, wetland, native grassland, and aquatic habitats.

We propose pursuing fee interests in land rather than conservation easements due to the nature of the intensive restoration, management, demonstration, and monitoring activities anticipated for

¹ Analysis of Opportunities for Restoring a Natural Flood Regime on the Cosumnes River Floodplain. May, 1997. Philip Williams & Associates, LTD. Consultant report prepared for The Nature Conservancy. 83pp.

such lands. Title will vest with either The Nature Conservancy or another preserve partner such as the Bureau of Land Management or the State Wildlife Conservation Board/California Department of Fish and Game.

Start-Up Stewardship. These activities include biological and cultural surveys, the development and writing of management plans, fencing, signage, repair of infrastructure (including roads), and demolition of any dangerous structures.

Floodplain Restoration Plans. Floodplain restoration will require complete hydrological surveys and fine-detail topographic mapping to properly locate levees and levee breaches; engineering studies will be needed to redesign levees. The objectives will be to restore hydrological processes, reestablish a functioning floodplain, and recreate a viable floodplain ecosystem while ensuring a level of flood safety equal to or higher than the level that currently exists. Planning will therefore include participation by flood management experts, regional and local flood management agencies, and neighboring landowners.

Long-term Operations and Management. These activities include patrolling to limit trespass and vandalism, monitoring and enforcing restrictions, administering farm contracts and habitat restoration agreements, controlling invasive exotic plant and animal species, supervising general visitor activities, and maintenance. Long-term management funding will come from two primary sources: income generated from farming leases, and the annual yield of a permanent endowment fund's invested capital.

Demonstration and Outreach Program. The Cosumnes River Preserve partners have a great deal of experience with both the practice and demonstration of floodplain restoration. Additional resources sought in this proposal will allow us to expand our demonstration and outreach efforts to reach a broader audience. We expect that a concerted effort to demonstrate the techniques, advantages, and results of floodplain restoration will positively affect conservation along the Cosumnes, throughout the Central Valley, and undoubtedly elsewhere due to the commonality of physical, biological, and political issues involved. Demonstration and outreach efforts will target several key audiences including local landowners; county officials; federal, state, and local agency officials; stakeholders from other watersheds; and the general public. The Cosumnes is a smaller-scale laboratory that is capable of immediately implementing many of the floodplain restoration concepts that are only contemplated elsewhere. Federal, state, and local agency leaders will be encouraged to employ on other waterways techniques demonstrated at the Cosumnes in connection with projects to improve flood control, water quality and quantity, and habitat. Finally, the advantages demonstrated at the Cosumnes may be better appreciated and supported by the general public. No grant funds shall be used for lobbying purposes (see Attachment E, certification form DI-2010).

The specific components of the demonstration and outreach portion of this project include the following:

- improving one-and-one-half miles of preserve roads to permit all-weather access to restoration sites;
- publishing informational brochures and packets for dissemination to a broad audience;
- funding a variety of incidental, but necessary, tour expenses (e.g., vehicle fuel, maps, etc.);
- and

- providing partial salary support for Cosumnes River Preserve staff to enable them to focus on demonstration and outreach activities.

Monitoring. Follow-up documentation of the results of our floodplain restoration work at the Cosumnes River Preserve will be essential both for fine-tuning adaptive management strategies and for demonstrating tangible results of the work. Consequently, the last element of this proposal is to conduct a monitoring effort at a higher level than we presently do on other aspects of Preserve management. This will include (1) a two-year project to monitor the specific effects of floodplain restoration on river meander and biological targets such as native fishes (both anadromous and resident) and riparian vegetation, and (2) a low-level aerial photographic record of restoration progress. Monitoring will cover all floodplain restoration activities at the Preserve.

b. Proposed scope of work

The costs and schedules associated with each of the following tasks is described in Section V.

- **Task One:** Complete the purchase of between 300 and 800 acres in the Cosumnes River's lower floodplain. The Conservancy is presently in negotiations with a number of landowners; each parcel under consideration provides exceptional opportunities to protect and restore the habitats discussed elsewhere in this proposal, and to restore the Cosumnes River floodplain. Provide quarterly report of progress to CALFED.
- **Task Two:** Undertake start-up stewardship activities, including developing adaptive management plans and clean-up and repair of infrastructure for newly acquired properties. Deliverables to include management plans and quarterly report on start-up stewardship activities.
- **Task Three:** Conduct necessary engineering and hydrology studies to prepare for levee reconfiguration and other forms of floodplain restoration. Completed studies will be submitted to CALFED.
- **Task Four:** Establish or add to an endowment account for the long-term management of Cosumnes River Preserve properties, including those newly acquired under Task One.
- **Task Five:** Implement a demonstration program as described in *a.*, above. Provide a quarterly report on tours given, materials developed, and other demonstration activities. Copies of all demonstration materials developed will be submitted to CALFED.
- **Task Six:** Implement a monitoring program to document the results of previous floodplain restoration work conducted at the Cosumnes River Preserve and to monitor the properties acquired under Task One above. Deliverables to include monitoring plan and initial results of monitoring.

c. Location and/or geographic boundaries of project

The properties proposed for acquisition, restoration planning, and management are all located in southern Sacramento County, within the floodplain of the Cosumnes River. See Figures 1 and 2 (maps).

d. Expected benefits

1. Benefits from the acquisition, initial restoration, and stewardship actions

Between 300 and 800 acres of Cosumnes River floodplain habitats are protected, including **tidal perennial aquatic habitat (freshwater), seasonal wetlands and aquatic, North Delta agricultural wetlands and perennial grasslands, and shaded riverine aquatic and in-stream aquatic** along the Cosumnes River, Mokelumne River, backwaters and sloughs. [See Volume II: Ecosystem Restoration Program Plan (hereafter, ERPP) Page 359 Seasonal Wetland Implementation Objective and Riparian and Riverine Aquatic Habitats Implementation Objective.]

This project will also result in a significant reduction of priority stressors, most importantly those related to **floodplain and marshplain changes** (i.e., hydrological isolation of floodplain and physical isolation of floodplain), **channel form changes** (i.e., alteration of channel form, prevention of channel meander and loss of existing riparian zone or lack of regeneration potential), **land use** (i.e., urbanization), **water temperature and undesirable species interactions** (i.e., elevated predation and competition losses). (See ERPP page 362 Invasive Riparian and Salt Marsh Plants Implementation Objective; page 363 Predation and Competition Implementation Objective; page 363 Contaminants Implementation Objective; page 356 Land Use Implementation Objective.)

Reduction of these stressors will result in immediate and long-term benefits for the following priority species: (Primary) **eastside tributary fall-run chinook** and **Sacramento splittail** (Delta smelt are possible, but not confirmed). Other CALFED priority species include **striped bass** and **migratory birds** (i.e., waterfowl, neotropical migratory birds). This project will also beneficially affect nesting and foraging Swainson's hawks, resident fish species, greater sandhill cranes, shorebirds, wading birds, giant garter snakes, and western pond turtles. (See ERPP page 366 Sacramento Splittail Implementation Objective; page 366 Chinook Salmon Implementation Objective; page 368 Resident Fish Species Implementation Objective; page 368 Giant Garter Snake and Western Pond Turtle Implementation Objective; page 368 Swainson's Hawk Implementation Objective; page 369 Greater Sandhill Crane Implementation Objective; page 369 Waterfowl Implementation Objective.)

2. Benefits from floodplain restoration

Benefits from hydrologic restoration actions, when implemented, include significant increases in **tidal perennial aquatic habitat** (through setting-back, removing, and breaching levees on secured properties), restoration of basic hydraulic conditions, increasing natural sediment supply, improvements in floodplain function and improving water temperature through the re-establishment of riparian vegetation. (See ERPP page 352 Central Valley Streamflows Implementation Objective; page 354 Natural Sediment Supply Implementation Objective; page 356 Natural Floodplain and Flood Processes Implementation Objective; and page 357 Central Valley Stream Temperatures Implementation Objective.)

Reduction of these stressors and development of this priority habitat will provide additional benefits to the species listed above especially natal and non-natal rearing of **east-side tributary fall-run chinook salmon** (and possibly other races as well) and significant new benefits to **splittail, delta smelt, and possibly green sturgeon and striped bass**.

Other benefits of floodplain restoration include greater and more permanent flood protection than the current inadequate levee system, and greater floodplain inundation will encourage aquifer recharge. Expansion of the Preserve will provide additional appropriate recreational opportunities such as birdwatching, hunting, hiking, and fishing. Direct production and enhanced survival of juvenile chinook salmon will benefit the commercial fishing industry. Educational opportunities for local schools will be increased.

3. Benefits from demonstration of floodplain restoration techniques and results

The funds requested for demonstrating levee setbacks and other forms of floodplain restoration will be used to make both the projects presently completed at the Cosumnes River Preserve, as well as those completed through this proposal, more accessible to and better understood by local landowners public agency officials, political leaders, other decisionmakers and the general public. Benefits of this added exposure include advancing the state-of-the-art in floodplain restoration technology, land management, and flood management systems, as well as attracting new partners to this and similar projects.

e. Background and biological/technical justification

The plan presented here proposes to expand an existing project, the multi-partner Cosumnes River Preserve. Current holdings within the Cosumnes Preserve total approximately 13,000 acres and represent a cumulative investment in land, management, planning, and scientific investigation of approximately \$35 million to date. Of this funding, approximately one fifth has been raised from private sources. The balance represents a mix of federal, state, local, and mitigation funding. The Nature Conservancy, the Bureau of Land Management, and other partners provide the approximately \$750,000 needed annually for management of the Preserve. Ongoing private fundraising by the Conservancy continues to generate substantial revenues for management and special projects, as well as for an endowment to support long-term management. This endowment currently stands at \$1 million.

Obtaining the requested funding will allow us to add substantially to the Preserve's holdings within the Cosumnes floodplain. Long-term benefits from the proposed land acquisitions will be particularly significant because controlling these properties will enable us to expand the river's floodway and undertake natural-process restoration at particularly advantageous locations and on a much larger scale than has been possible so far. Acquiring the targeted properties will also help allow us to create a habitat corridor from the Valensin Ranch to a point downstream from the Mokelumne-Cosumnes confluence.

Extensive supporting documentation is available on the habitats, species, and hydrology of the Cosumnes River Preserve. A partial bibliography is included as Figure 3. Ongoing scientific research is summarized in Figure 4.

f. Monitoring and data evaluation

In addition to the monitoring program described in *IV a.*, the Cosumnes River Preserve has extensive, well-established programs for monitoring species population trends, vegetation changes, and indices of ecosystem health (see Figure 5). Much of the monitoring effort is supported by the Preserve's extensive volunteer network. Many of these monitoring programs,

such as bird monitoring, will be immediately extended to the newly acquired lands. Additionally, we will conduct baseline habitat mapping for each property acquired as part of the development of a conservation management plan (funds requested as part of stewardship startup). The resulting maps will allow the Preserve staff to track restoration as a result of conservation management.

g. Implementability

The proposed project and program complies with existing laws and regulations.

There are no known encumbrances or environmental compliance problems associated with the properties proposed for acquisition. It is The Nature Conservancy's standard practice, prior to closing on any acquisition, to assure that there is no contamination, pollution, or other condition on the subject property that would create a liability or unforeseen expense.

The benefits of this program will be durable over time and under most scenarios concerning possible changes in the climate.

The properties proposed here for addition to the Cosumnes River Preserve may contain archaeological resources. To assure the protection of these resources, Preserve staff work closely with The Archaeological Conservancy, the Sacramento County Historical Society, and the local Miwok community, many of whom are likely descendants of the native Americans who used these village and burial sites. These organizations and individuals strongly support the Preserve and our land acquisition program. Many of the associated individuals are directly involved as volunteers in stewardship of the Preserve's cultural resources.

The programs of the Cosumnes River Preserve have generated substantial public awareness of and support for the Preserve in the local communities of Galt and Elk Grove and in the greater Sacramento region, as evidenced by favorable treatment in the local press and ongoing support from local elected officials. The Preserve is supported by Sacramento County's General Plan, and the program proposed here will assist the county in implementing that plan.

The Nature Conservancy engages in property transactions only with willing sellers. All transactions proposed here are in that category.

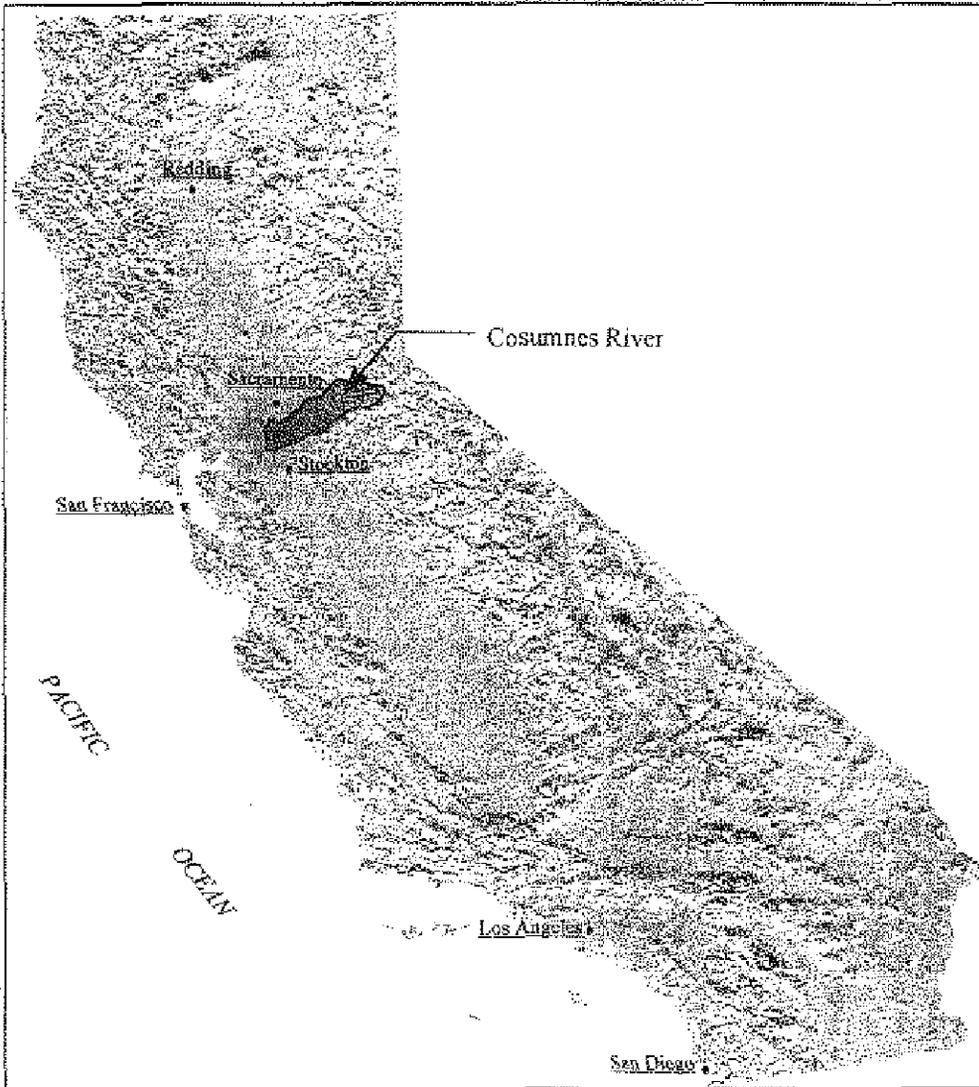


Figure 1:
COSUMNES RIVER LOCATION MAP



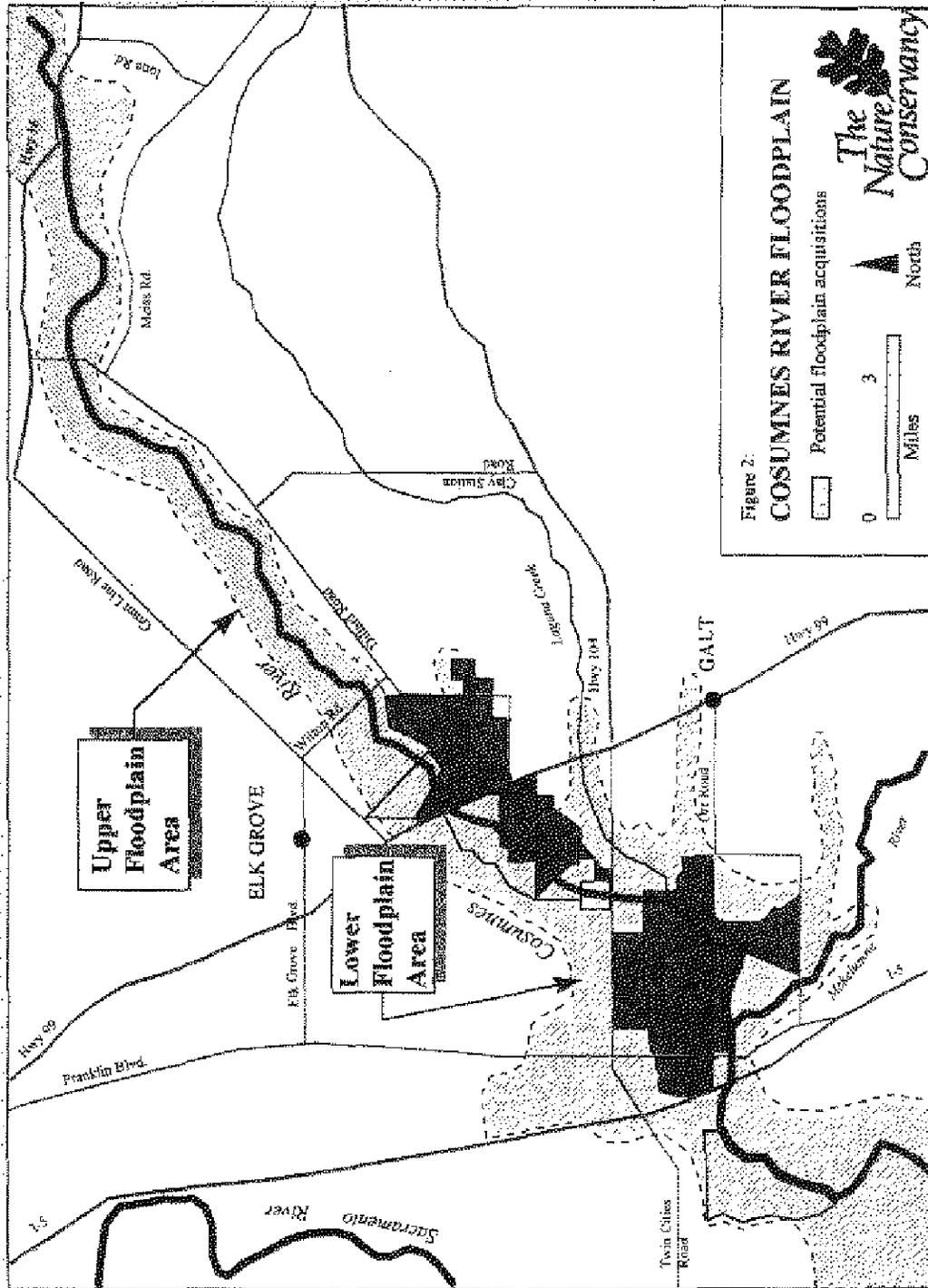


Figure 2:
COSUMNES RIVER FLOODPLAIN

Potential floodplain acquisitions

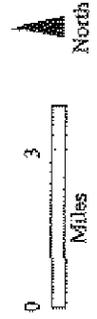


Figure 3
Bibliography
Cosumnes River Project-Related Documents

INTERNAL PLANNING DOCUMENTS

TNC, 1992. Cosumnes River Project Strategic Plan. The Nature Conservancy of California, San Francisco, CA. 100 pages.

TNC, 1996. Cosumnes River Watershed Project, Sacramento County Vernal Pool Protection Strategy. The Nature Conservancy of California, San Francisco, California.

TNC, 1995. The Cosumnes River Preserve Farm Center, Sustainable Farm Plan, A three Year Transition to Wildlife Friendly Organic Farming. The Nature Conservancy of California. 83 pages.

INVENTORY, SCOPING, RECONNAISSANCE

Bennett, K. L. 1997. The River That Got Away; An investigation into the development projects, the players and the political climate that helped shape the fate of the Cosumnes River. Masters Thesis. Sacramento State University. Sacramento Calif.

ESA. 1991. Cosumnes River Study. The Nature Conservancy of California, San Francisco, CA. 124 pages.

Geupel, G.R., G. Ballard and A. Kiener. 1996. Songbird Monitoring on the Cosumnes River Preserve: Results form the 1995 field season. Point Reyes Bird Observatory. Stinson Beach , CA. 32 pages.

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Hart, J. A. and A. Engilis. 1995. Middle Cosumnes River Watershed : River Corridor and Vernal Pool / Grassland Study Areas. The Nature Conservancy of California, San Francisco, CA. 124 pages.

Jones and Stokes Associates, Inc. 1990. Sacramento County Vernal Pools: Their distribution, Classification, Ecology and Management. Prepared for the County of Sacramento, Planning and Community development department.

Jones and Stokes Associates, 1974. Final Report: Cosumnes River basin resources study. Jones and Stokes Associates, Inc. Sacramento, California.

Jones and Stokes. 1974. Modification of Natural Habitat by Agricultural Operations in the Cosumnes River Basin. Jones and Stokes Associates, Sacramento, California. 9 pages.

TNC. 1996. Birds of the Cosumnes River Preserve. A field Checklist. 4 pages.

U.S.F.W.S., 1990 Mokelumne River and Tributaries Reconnaissance Study. Department of the Interior. United States Fish and Wildlife Service. 47 pages.

Werschikull, G.J. Wood. 1996. Valensin Bird Species List, February 18, 1996. TNC report. 2 pages.

RESTORATION

Chirman, D.B., 1993. Restoration Plan for Mixed Riparian Forest, Cosumnes River Preserve. The Nature Conservancy of California, San Francisco. 31 pages.

D.F.G., 1995. Conceptual Habitat Plan For Grizzly Slough Project Area. Bay-Delta Special Water Projects Division, California Department of Fish and Game. 22 pages.

Swanson, M., J. Hart. 1994. The Cosumnes River Preserve, Hydrologic Analysis of Planned Restoration From Interstate-5 to Twin Cities Road Crossing. The Nature Conservancy of California, San Francisco. 25 pages.

TNC, 1991. History of the Riparian Forest Restoration Project 1988-1990. Compiled by T. Griggs. The Nature Conservancy, San Francisco. 61 pages.

TNC, 1991. Cosumnes River Preserve, Restoration Project, Year-end Report (Denny and Griggs). 53 pages.

TCN, 1993. Biological Inventory Program, Cosumnes River Preserve, Preliminary Species Lists. 48 pages.

TNC, 1994. Cosumnes River Preserve Restoration End of Year Report, 1993-1994. 30 pages.

SCIENCE

Chirman, D.B. 1994. Nutrient Dynamics During Establishment of Understory Woody Species in California Central Valley Riparian Habitats. Thesis University of California Davis. 126 Pages.

Hart, J. 1997. Regeneration of Blue Oaks on Lone Formation Derived Soils in Amador County, Calif. TNC final report.

McGurk, B.J., George H. Leavesley. 1996. Hydrologic Characterization of the Cosumnes: Evaluation of Diversions using the USGS modular Modeling System. USDA Forest Service, PSW Research Station, Albany, California. 73 pages.

TNC, 1996. A Riparian Valley Oak Ecosystem: Seasonal Flooding effects on Key Species Establishment and Succession in the Cosumnes River Preserve, California. 1995 progress report. 12 pages.

Figure 4
Cosumnes River Preserve:
Recent (1994-1997) Science and Research Projects

Effects of flooding on valley oak forest, Dr. Jim Richards, U.C. Davis (\$40,000, TNC ecosystem research grant program, 1995-97)

Effects of flooding on root dynamics of valley oak forest species, Dr. Caroline Bledsoe, U.C. Davis (\$40,000, TNC ecosystem research grant program, 1995-97)

Old field succession in the Cosumnes River floodplain, Dr. Marcel Rejmanek, U. C. Davis (\$40,000, TNC ecosystem research grant program, 1995-97)

Songbird breeding success in Cosumnes River floodplain habitat, Dr. Geof Geupel, Point Reyes Bird Observatory (1995-97)

Opportunities for Restoring a Natural Flood Regime on the Cosumnes River Floodplain, Philip Williams and Associates (TNC contract, \$66,000, 1997)

Middle Cosumnes River Watershed: River Corridor and Vernal Pool / Grassland Study; Cosumnes River Vernal Pool Conservation Plan, Jeff Hart and Associates and TNC staff (TNC contract, \$60,000, 1995)

Cosumnes River watershed blue oak habitat investigation and regeneration of blue oak study, Jeff Hart and Associates (TNC contract, \$45,000, 1995)

Preliminary fisheries survey of lower Cosumnes River, Amy Harris (TNC contract, \$10,000, 1995)

Inventory of fish and herptiles, Cosumnes River Watershed, Kathy Hill, DFG (TNC augmentation of an EPA 319 grant, \$10,000, 1994)

Design of a Cosumnes River water quality monitoring system; Survey of aquatic macro-invertebrates, Jim Herrington, DFG (TNC contract, \$9,000, 1995)

Planning Scale GIS of the Cosumnes River Watershed, Tim Dwane, UC Berkeley (TNC contract, \$10,000, 1994)

Survey of giant garter snakes on the Cosumnes River Preserve
Glen Wiley, USBS (\$9,000 in TNC funding, 1995-1997)

Computer hydrologic flow model for the Cosumnes River Watershed, Bruce McGurk, USFS Forest and Range Experiment Station (\$80,000, Bechtel Grant, 1996)

Restoration of Badger Creek, Valensin Ranch, Steve Burton, Ducks Unlimited (Packard Foundation Grant, \$87,000, 1997)

Monitoring of wildlife recovery on a restored reach of Badger Creek, Sacramento County, Dr. John Eadie, UC Davis and California Waterfowl Association (Packard Foundation Grant, \$87,000, 1997)

Comparisons of arthropod diversity in soil samples from a mature riparian valley oak forest and a restoration site at the Cosumnes River Preserve, Dr. Alice Hunter, Univ. of the Pacific (ongoing)

Survey of nocturnal Lepidoptera at the Cosumnes River Preserve, Richard Hunter, Pacific Coast Entomology Society (ongoing)

Survey of Cynipid gall wasps the Cosumnes River Preserve, Kathy Shick, U.C. Davis 1991 -1997 (ongoing)

Monitoring of feral honey bees before the arrival of Africanized bees, Dr. Robin Thorpe, U.C. Davis Entomology Dept. (ongoing)

Monitoring of solitary bees at the Cosumnes River Preserve. Dr. Robin Thorpe, U.C. Davis Entomology Dept. (ongoing)

Figure 5
Cosumnes River Preserve
Monitoring Activities that Support Adaptive Management

SPECIES / PARAMETER	TYPE	FREQUENCY	CONDUCTED BY	LOCATION
Waterfowl	Ground and Aerial	Monthly in winter	DU and CRP Staff	CRP wetland units/ farm
Sandhill Cranes	Counts	Monthly in Winter	DU and CRP Staff	CRP wetland units/ farm
Shore birds	Counts	Monthly in winter	DU and CRP Staff	CRP wetland units/farm
All birds	Counts along transect	Monthly all year	Stockton Audubon	Willow slough trail
Wetland unit vegetation	Photo points	Quarterly	CRP volunteers	CRP wetland units/farm
Restoration plots (veg.)	Counts / tree height	Annual 3yrs. then 5 yrs.	CRP staff	All restoration sites
Invasive / rare plants	Field search	Annual in summer	CRP staff / volunteers	CRP
Butterflies	Transect count	Annual in spring	CRP staff / volunteers	Tall Forest transect
Acorn Production	Field search	Annual in summer	CRP staff/ volunteers	CRP
Songbird nesting success	mist net, point counts	Each 2 weeks	Point Reyes Bird Obs.	Tall forest / Valensin
Veg. succession	transects, quadrants	Annual	U.C. Davis	Tall forest / Valensin
Aquatic Macro Inverts.	Kick samples at stations	Annual last 3 years	D.F.G. water lab	12 points in Watershed
Domestic native and solitary bees	counts /collections	Monthly	U.C. Entomology	Tall forest
Wildlife	Direct counts	Monthly	U.C. Davis	Badger Creek

V. Costs and Schedules to Implement Proposed Project

a. Budget costs

TNC requests the following:

1. To acquire floodplain land under negotiation	\$2,627,6000
2. For start-up stewardship:	35,800
3. For engineering and hydrological studies	100,000
4. For O&M endowment:	512,000
5. For demonstration	96,600
6. Monitoring	45,000
TOTAL:	\$3,417,000

Figure 6 contains budget detail.

We also anticipate that additional funding will be obtained from other sources, such as the U.S. Army Corps of Engineers or the Natural Resources Conservation Service, to supplement the total costs of the floodplain work, particularly for levee setback construction. We currently estimate that cost to be \$1,000,000. It is not necessary that we have these funds committed before completing the tasks described in this proposal. The actual cost of the project cannot be determined until the engineering, hydrological, and other planning studies have been completed.

Land acquisition expenses include direct salary and benefits for The Nature Conservancy staff to carry out the project as described in the Scope of Work. Service Contracts includes the costs of appraisals, toxics studies, surveys/mapping for the planned acquisitions, and escrow fees. Overhead is calculated on salaries and benefits only, at a rate of 20.0 percent, The Nature Conservancy's federally-approved rate.

Start-up stewardship costs include biological and cultural surveys, plan development, fencing, signage, necessary repair of infrastructure including roads, and demolition of any dangerous structures. Habitat restoration needs (not related to floodplain restoration *per se*) will be assessed by Preserve staff. For properties under negotiation, we estimate an average cost for start-up stewardship.

Floodplain Restoration Planning (including engineering and hydrological studies) will be conducted under contract with private consultants. Preserve staff will absorb the cost of administering these contracts.

Long-term operations and management expenses include patrolling to limit trespass and vandalism, biological monitoring, enforcement of restrictions (particularly for easements), administering farm and habitat restoration contracts, controlling invasive exotic plant and animal species, supervising visitor activities, and general maintenance. Long-term management funding will come from two primary sources: **income** generated from farming leases, and the annual yield of invested capital of a permanent **endowment fund**. Endowment calculations assume that properties leased for farming will pay for themselves and that non-farmed habitat lands (which will not generate revenue) will require endowment support of management costs. This proposal requests endowment contributions equal to 20 percent of the acquisition cost of the properties; additional funds have been and will continue to be raised from other sources.

Note: Land acquisitions have limited value if the owning agencies lack funding for appropriate management. Before we can implement our program, we need to have a proportional share of funding for each of the above activities, although it is not necessary for all the funds to come from a single source. 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.

The **Demonstration and Outreach Program** will be administered by Preserve staff and will occupy a significant amount of staff time (e.g., we propose .25 FTE). Therefore the budget contains staff salary, benefits, and overhead for that portion of the project. The elements of the project, including all-weather road improvements and publishing, are expected to be handled through private contracts with appropriate vendors.

Monitoring will be conducted under contract with private consultants. Preserve staff will absorb the costs of administering these contracts.

b. Schedule milestones

- 1. Acquire floodplain properties** as funding becomes available and negotiation successfully concluded; properties are expected to be optioned and purchased within approximately one year.
- 2. Undertake start-up stewardship, engineering and hydrological studies, and monitoring program** immediately upon close of escrow on each property acquired.
- 3. Initiate design of a comprehensive monitoring program** to monitor the effects of floodplain restoration, and begin implementation within one year after signing agreement with CALFED or granting agency.
- 4. Undertake demonstration and outreach programs** immediately on existing projects at the Cosumnes River Preserve, and on new projects as they are completed.

c. Third-party impacts

The activities proposed here have no anticipated negative third-party impacts. Any activities such as levee removal or setback will be subject to site-specific analysis, environmental review, and permitting and will not proceed if there are negative third-party impacts.

Figure 5 Budget Detail

BLOCK GRANT to support acquisition of floodplain properties under negotiation, stewardship, restoration planning, O&M, demonstration, and monitoring.

Funds are requested for a **block grant** to provide for acquisition of properties not yet under option, but which are foreseen to be available for purchase in the near future. Land acquisition involves the purchase of fee simple. Fee simple acquisition prices are averaging around \$3,200 per acre. However, some of the property may contain expensive improvements, such as vineyards; in these cases, the price could be much higher. Other funds requested are to cover the costs of activities related to start-up stewardship of these lands, planning for the restoration of their floodplains, long-term operations and maintenance, demonstration of restoration results, and biological/ hydrological monitoring.

Funding requested from CALFED would be expended generally as follows:

<u>Acres</u>	<u>Cost/acre</u>	<u>Total Cost</u>
800	\$3,200	\$2,560,000

Funding distribution:

CAPITAL	\$2,560,000
<u>EXPENSES</u>	<u>\$ 857,000</u>
Total:	\$3,417,000

GRANT REQUEST: \$3,417,000

Project Phase and Task	Direct Labor Hours	Direct Salary & Benefits	Overhead Labor (General, admin and fee)	Service Contracts	Material and Acquisition Contracts	Miscellaneous and other Direct Costs	Total Cost
Land Acquisition	1,000	43,000	8,600	16,000	2,560,000		2,627,600
Start-up Stewardship	500	21,500	4,300	10,000			35,800
Floodplain Restoration Planning				100,000			100,000
O&M Funds						512,000	512,000
Demonstration	500	22,200	4,440	65,000		5,000	96,600
Monitoring				45,000			45,000
TOTALS	2,000	86,700	17,340	236,000	2,560,000	517,000	3,417,000

VI. Applicant qualifications

The Nature Conservancy is an international, private, non-profit membership organization. Its 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, and managing significant natural areas. Its strength and reputation are built on the organization's policy and practice of applying the best available conservation science and of 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 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 Conservancy's landmark conservation projects have focused on riparian ecosystems. Conservation efforts aimed at 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 Nature Conservancy: A Scorecard (as of December 1996)

<i>Acres Protected in the U.S. since 1953:</i>	10,088,000
<i>Acres Protected outside the U.S. with TNC Assistance:</i>	44,000,000
<i>Acres Managed:</i> (Acres the Conservancy owns or has under conservation easement)	1,500,000
<i>Membership:</i>	900,704
<i>Corporate Associates:</i>	1,500
<i>Preserves Under Conservancy Management:</i> (each preserve may be composed of a number of land conservation projects owned in fee or protected by conservation easements)	1,500
<i>Natural Heritage Inventory Programs and Conservation Data Centers:</i>	86

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**

Persons signing this form should refer to the regulations referenced below for complete instructions:

Certification Regarding Debarment, Suspension, and Other Responsibility Matters - Primary Covered Transactions - The prospective primary participant further agrees by submitting this proposal that it will include the clause titled, "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transaction," provided by the department or agency entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions. See below for language to be used or use this form for certification and sign. (See Appendix A of Subpart 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.

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

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

- (1) 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.
- (2) 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.

PART 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

- (1) 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.
- (2) 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 1988
 (This form replaces DI-1987, DI-1964,
 DI-1986, DI-1968 and DI-1967)

**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.*

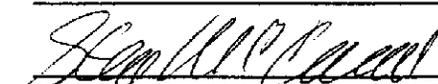
*CHECK IF CERTIFICATION IS FOR THE AWARD OF A FEDERAL
LOAN EXCEEDING THE AMOUNT OF \$150,000, OR A SUBGRANT OR
SUBCONTRACT EXCEEDING \$100,000, UNDER THE LOAN.*

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

DR-2010
June 1988
(This form replaces DR-1963, DR-1964,
DR-1965, DR-1969 and DR-1943)