Sub-Reach Planning for the Sacramento River: River Mile 144-164

Project Information

1. **Proposal Title:**

   Sub-Reach Planning for the Sacramento River: River Mile 144-164

2. **Proposal applicants:**

   Greg Golet, The Nature Conservancy
   Mike Roberts, The Nature Conservancy
   Burt Bundy, Sacramento River Conservation Area

3. **Corresponding Contact Person:**

   Wendie Duron
   The Nature Conservancy
   500 Main St. Chico, Ca. 95928
   530 897-6376
   wduron@tnc.org

4. **Project Keywords:**

   Habitat Restoration, Riparian
   Land Use Management, Planning, and Zoning
   Local and Regional Coordination

5. **Type of project:**

   Planning

6. **Does the project involve land acquisition, either in fee or through a conservation easement?**

   No

7. **Topic Area**:

   Riparian Habitat

8. **Type of applicant:**

   Joint Venture

9. **Location - GIS coordinates:**

   Latitude: 39.303

   Longitude: -122.026

   Datum:

Describe project location using information such as water bodies, river miles, road intersections, landmarks, and size in acres.

The project boundary includes the area within the Sacramento River Conservation Area from the Glenn-Colusa Border at the northern end down to the southern edge of the Clousa-Sacramento River Recreation Area (at the northern edge of the town of Colusa). The sub-reach spans from River Mile 145 to 164.

10. **Location - Ecozone:**

    3.3 Chico Landing to Colusa

11. **Location - County:**

    Colusa, Glenn

12. **Location - City:**

    Does your project fall within a city jurisdiction?

    No

13. **Location - Tribal Lands:**

    Does your project fall on or adjacent to tribal lands?

    No

14. **Location - Congressional District:**

    3

15. **Location:**

    California State Senate District Number: 4

    California Assembly District Number: 2

16. **How many years of funding are you requesting?**

    3

17. **Requested Funds:**
    a) Are your overhead rates different depending on whether funds are state or federal?

       No

       If no, list single overhead rate and total requested funds:

       Single Overhead Rate: 22

       Total Requested Funds: 1488009

b) Do you have cost share partners already identified?

No

c) Do you have potential cost share partners?

No

d) Are you specifically seeking non-federal cost share funds through this solicitation?

No

If the total non-federal cost share funds requested above does not match the total state funds requested in 17a, please explain the difference:

18. **Is this proposal for next-phase funding of an ongoing project funded by CALFED?**

No

Have you previously received funding from CALFED for other projects not listed above?

Yes

If yes, identify project number(s), title(s) and CALFED program.

97-NO2	**Ecosystem and Natural Process Restoration on the Sacramento river: Floodplain Acquisition and Management**	**ERP**
97-NO3	**Ecosystem and Natural Process Restoration on the Sacramento River: Active Restoration of Riparian Forest**	**ERP**
97-NO4	**Ecosystem and natural Process Restoration on the Sacramento River: A Meander Belt Implementation Project**	**ERP**
98-F18	**Floodplain Acquisition, Mangement and Monitoring on the Sacramento River**	**ERP**
2000-F03	**Floodplain Acquisition and Sub-Reach/Site Specific Mangement Planning: Sacramento River (Red Bluff to Colusa)**	**ERP**

19. **Is this proposal for next-phase funding of an ongoing project funded by CVPIA?**

No

Have you previously received funding from CVPIA for other projects not listed above?

Yes

If yes, identify project number(s), title(s) and CVPIA program.

00FG200173	**Acquisition of Southam Orchard Properties for Preservation of Riparian Habitat**	**Section 3406 (b)(1)other**
1448-11332-7-G017	**Hartley Island Acquisition**	**AFRP**
11332-0-G014	**Singh Walnut Orchard**	**AFRP**

20. **Is this proposal for next-phase funding of an ongoing project funded by an entity other than CALFED or CVPIA?**

No

Please list suggested reviewers for your proposal. (optional)

Stacy Cepello	**California Department of Water Resources**	**530. 529-7352**	**cepello@water.ca.gov**

21. **Comments:**

Environmental Compliance Checklist

Sub-Reach Planning for the Sacramento River: River Mile 144-164

1. **CEQA or NEPA Compliance**
   a) Will this project require compliance with CEQA?

      No
   b) Will this project require compliance with NEPA?

      No
   c) If neither CEQA or NEPA compliance is required, please explain why compliance is not required for the actions in this proposal.

      This proposal is for planning only

2. **If the project will require CEQA and/or NEPA compliance, identify the lead agency(ies).** *If not applicable, put "None".*

   CEQA Lead Agency: None
   NEPA Lead Agency (or co-lead:) None
   NEPA Co-Lead Agency (if applicable): None

3. **Please check which type of CEQA/NEPA documentation is anticipated.**

   CEQA
   -Categorical Exemption
   -Negative Declaration or Mitigated Negative Declaration
   -EIR
   Xnone

   NEPA
   -Categorical Exclusion
   -Environmental Assessment/FONSI
   -EIS
   Xnone

   If you anticipate relying on either the Categorical Exemption or Categorical Exclusion for this project, please specifically identify the exemption and/or exclusion that you believe covers this project.

4. **CEQA/NEPA Process**
   a) Is the CEQA/NEPA process complete?

      Not Applicable

   b) If the CEQA/NEPA document has been completed, please list document name(s):

5. **Environmental Permitting and Approvals** (*If a permit is not required, leave both Required? and Obtained? check boxes blank.*)

LOCAL PERMITS AND APPROVALS

Conditional use permit

Variance

Subdivision Map Act

Grading Permit

General Plan Amendment

Specific Plan Approval

Rezone

Williamson Act Contract Cancellation

Other

STATE PERMITS AND APPROVALS

Scientific Collecting Permit

CESA Compliance: 2081

CESA Compliance: NCCP

1601/03

CWA 401 certification

Coastal Development Permit

Reclamation Board Approval

Notification of DPC or BCDC

Other

FEDERAL PERMITS AND APPROVALS

ESA Compliance Section 7 Consultation

ESA Compliance Section 10 Permit

Rivers and Harbors Act

CWA 404

Other

PERMISSION TO ACCESS PROPERTY

Permission to access city, county or other local agency land.
Agency Name:

Permission to access state land.
Agency Name:

Permission to access federal land.
Agency Name:

Permission to access private land.
Landowner Name:

6. **Comments.**

Land Use Checklist

Sub-Reach Planning for the Sacramento River: River Mile 144-164

1. **Does the project involve land acquisition, either in fee or through a conservation easement?**

   No

2. **Will the applicant require access across public or private property that the applicant does not own to accomplish the activities in the proposal?**

   No

3. **Do the actions in the proposal involve physical changes in the land use?**

   No

   If you answered no to #3, explain what type of actions are involved in the proposal (i.e., research only, planning only).

   Planning only

4. **Comments.**

   A small portion of the area covered by this planning effort is in Glenn County which has all land along the river, even within the Flood Control Project levee system listed as Prime Farmland. The majority of this effort will occur within Colusa County and is listed by the Farmland Mapping and Monitoring Program as prime, important, or unique.

Conflict of Interest Checklist

Sub-Reach Planning for the Sacramento River: River Mile 144-164

Please list below the full names and organizations of all individuals in the following categories:

- Applicants listed in the proposal who wrote the proposal, will be performing the tasks listed in the proposal or who will benefit financially if the proposal is funded.
- Subcontractors listed in the proposal who will perform some tasks listed in the proposal and will benefit financially if the proposal is funded.
- Individuals not listed in the proposal who helped with proposal development, for example by reviewing drafts, or by providing critical suggestions or ideas contained within the proposal.

The information provided on this form will be used to select appropriate and unbiased reviewers for your proposal.

Applicant(s):

Greg Golet, The Nature Conservancy
Mike Roberts, The Nature Conservancy
Burt Bundy, Sacramento River Conservation Area

Subcontractor(s):

Are specific subcontractors identified in this proposal? Yes

If yes, please list the name(s) and organization(s):

Tom Smith Ayres Associates, Inc.

Helped with proposal development:

Are there persons who helped with proposal development?

Yes

If yes, please list the name(s) and organization(s):

Burt Bundy Sacramento River Conservation Area

Doug White Sacramento River Conservation Area

Ben Carter Sacramento River Conservation Area

Comments:

Budget Summary

Sub-Reach Planning for the Sacramento River: River Mile 144-164

Please provide a detailed budget for each year of requested funds, indicating on the form whether the indirect costs are based on the Federal overhead rate, State overhead rate, or are independent of fund source.

Independent of Fund Source

Year 1												
Task No.	**Task Description**	**Direct Labor Hours**	**Salary *(per year)***	**Benefits *(per year)***	**Travel**	**Supplies & Expendables**	**Services or Consultants**	**Equipment**	**Other Direct Costs**	**Total Direct Costs**	**Indirect Costs**	**Total Cost**
1	Coordination and outreach	1441	40269	14900		4000	60000		2000	121169.0	26657	147826.00
2	Baseline assessments	400	8260	3056		1000	47000			59316.0	13050	72366.00
3	Modeling	320	6973	2580			50000			59553.0	13102	72655.00
4	Site-specific planning	400	9410	3482			50000			62892.0	13836	76728.00
5	Landowner questions	320	6973	2580			50000			59553.0	13102	72655.00
		2881	71885.00	26598.00	0.00	5000.00	257000.00	0.00	2000.00	362483.00	79747.00	442230.00

Year 2												
Task No.	**Task Description**	**Direct Labor Hours**	**Salary *(per year)***	**Benefits *(per year)***	**Travel**	**Supplies & Expendables**	**Services or Consultants**	**Equipment**	**Other Direct Costs**	**Total Direct Costs**	**Indirect Costs**	**Total Cost**
1	Coordination and outreach	1441	42218	15621		4000	60000		2000	123839.0	27245	151084.00
2	Baseline assessments	400	8599	3182		1000	47000			59781.0	13152	72933.00
3	Modeling	320	7266	2688			50000			59954.0	13190	73144.00
4	Focal area planning	400	9795	3624			50000			63419.0	13952	77371.00
5	Landowner questions	320	7266	2688			50000			59954.0	13190	73144.00
		2881	75144.00	27803.00	0.00	5000.00	257000.00	0.00	2000.00	366947.00	80729.00	447676.00

Year 3												
Task No.	**Task Description**	**Direct Labor Hours**	**Salary *(per year)***	**Benefits *(per year)***	**Travel**	**Supplies & Expendables**	**Services or Consultants**	**Equipment**	**Other Direct Costs**	**Total Direct Costs**	**Indirect Costs**	**Total Cost**
1	Coordination and outreach	1441	44167	16342		4000	60000		2000	126509.0	27832	154341.00
2	Baseline assessments	400	8940	3308		1000	47000			60248.0	13255	73503.00
3	Modeling	320	7561	2798			50000			60359.0	13279	73638.00
4	Focal area planning	400	10182	3767			50000			63949.0	14069	78018.00
5	Landowner questions	320	7561	2798			50000			60359.0	13279	73638.00
		2881	78411.00	29013.00	0.00	5000.00	257000.00	0.00	2000.00	371424.00	81714.00	453138.00

Grand Total=1343044.00

Comments.
no comments

Budget Justification

Sub-Reach Planning for the Sacramento River: River Mile 144-164

Direct Labor Hours. Provide estimated hours proposed for each individual.

Position Hours Project Director III 480 Field Representative II 480 Science Specialist II 480 Land Stew III 1200 Program Director I 480 Program Director I 480 Conservation Planner 1200 Volunteer Coordinator 1683 Program Assistant II 720 Program Assistant II 1440 Project Manager 2400

Salary. Provide estimated rate of compensation proposed for each individual.

Position Hrly Rate Project Director III $56 Field Representative II $32 Science Specialist II $31 Land Stew III $30 Program Director I $36 Conservation Planner $22 Volunteer Coordinator $21 Program Assistant II $17 Project Manager $36

Benefits. Provide the overall benefit rate applicable to each category of employee proposed in the project.

37% for all categories

Travel. Provide purpose and estimate costs for all non-local travel.

non-local travel is not anticipated

Supplies & Expendables. Indicate separately the amounts proposed for office, laboratory, computing, and field supplies.

office supplies non-office supplies: $2000/yr =$6000 vehicle fuel: $2000/yr = $6,000 printing: $500/yr = $1,500 postage: $500/yr = $1,500

Services or Consultants. Identify the specific tasks for which these services would be used. Estimate amount of time required and the hourly or daily rate.

Task 1: meeting facilitation 150k ($625/d x 80d x 3yr) workshops 30k ($625/d x 8d x 6workshops) Task 2: baseline assessments 140K ($625/d x 56d x 4) Task 3: hydro modeling 75k ($800/d x 93d) veg modeling 50k ($625/d x 80d) land use model 50k (625/d x 80d) Task 4: Site specific planning 150k ($625/d x 240d) Task 5 Large Woody Debris study 150k ($312/d x 480d)

Equipment. Identify non-expendable personal property having a useful life of more than one (1) year and an acquisition cost of more than $5,000 per unit. If fabrication of equipment is proposed, list parts and materials required for each, and show costs separately from the other items.

no equipment purchase is included

Project Management. Describe the specific costs associated with insuring accomplishment of a specific project, such as inspection of work in progress, validation of costs, report preparation, giving presentatons, reponse to project specific questions and necessary costs directly associated with specific project oversight.

contracting: $43,200 ($36/hr x 1200hrs) inspection: $21,600 ($36/hr x 600hrs) reporting: $21,600 ($36/hr x 600hrs)

Other Direct Costs. Provide any other direct costs not already covered.

miscellaneous expenses (fees, permits, workshop costs, etc.): $1,000/yr = $3,000 GPS and boat rental: $1,000/yr =$3,000

Indirect Costs. Explain what is encompassed in the overhead rate (indirect costs). Overhead should include costs associated with general office requirements such as rent, phones, furniture, general office staff, etc., generally distributed by a predetermined percentage (or surcharge) of specific costs.

The Nature Conservancy (TNC) has a Negotiated Indirect Cost Rate (NICRA) of 22% which was negotiated and approved by TNCs cognizant agency, USAID, and calculated in compliance with the requirements of OMB Circular A-122, and bound into our annual OMB Circular A-133 audit reports. TNCs indirect cost per the NICRA includes salaries, fringe benefits, fees and charges, supplies and communication, travel, occupancy, and equipment for general and administrative regional and home office staff. These costs are reflected in the Indirect Costs category of this proposal and are not reflected anywhere else in the proposal budget. Direct staff costs are reflected in the salary and benefits categories of the proposal budget.

Executive Summary

Sub-Reach Planning for the Sacramento River: River Mile 144-164

The Nature Conservancy (TNC) and the Sacramento River Conservation Area Non-Profit Organization (SRCA NPO), as a cooperative partnership, request $1,488,009 to conduct sub-reach planning for the Colusa - Princeton reach (rm 142-164) of the Sacramento River. Sub-reach planning is floodplain management planning that includes a high level of stakeholder involvement to develop plans and analyze potential benefits and impacts of implementation projects on surrounding landowners and land uses. Implementation projects are multi-purpose projects that can include ecosystem restoration, flood damage reduction and agricultural protection. Sub-reach planning provides the tools and information needed to make informed land use decisions regarding the effects (including hydraulic, ecological, economic, and social) of restoration actions that are uniquely designed to correspond to local conditions. The Colusa Princeton sub-reach proposal is a full implementation project for restoration and floodplain management planning. This project will use lessons learned from two previous awards to TNC from CALFED to develop sub-reach planning methods along the Sacramento River. This proposal includes a greater involvement of the SRCA and stakeholders than the previous awards. This planning process coordinates with other planning projects including the ACOE Comprehensive Study and USFWS Comprehensive Conservation Planning (CCP). The five primary objectives of sub-reach planning are: 1) Ensure an open and inclusive planning process consistent with the SRCA principles and guidelines with multiple opportunities for input by local stakeholders, agencies, and private interest groups. 2) Collect baseline data and analyze existing data to inform floodplain management planning and complement long-term monitoring programs. 3) Build tools and calibrate models to evaluate effects of restoration, land management alternatives and flood control infrastructure specific to the Colusa - Princeton Sub-Reach of the Sacramento River. 4) Develop design alternatives and build support among stakeholders and agencies for identified implementation projects within the project area that would demonstrate an equitable balance among the various uses of the river (i.e. restoration, agricultural protection, infrastructure, flood control projects). 5) Address stakeholder concerns and priority research questions. The hypothesis for this project is that a strategic approach to conservation and restoration planning based on the best available science and ensuring stakeholder involvement will improve local support for the protection and restoration of a stream meander corridor along the Sacramento River and will result in a balance between flood protection and ecosystem restoration projects. This proposal directly addresses CALFEDs ERP priority for the Sacramento Region to develop and implement habitat management and restoration actions in collaboration with local groups such as the Sacramento River Conservation Area Non-Profit Organization (SR-1). Planning for the protection and restoration of a river meander zone for the Sacramento River is expected to assist in the recovery and long-term viability of at-risk species and their habitat (Strategic Goals 1, 2, and 4). The geographic scope of this project is within the ERP Sacramento Region (ecoregion 3.3).

Proposal

The Nature Conservancy

Sub-Reach Planning for the Sacramento River: River Mile 144-164

Greg Golet, The Nature Conservancy
Mike Roberts, The Nature Conservancy
Burt Bundy, Sacramento River Conservation Area

Title: Sub-Reach Planning for the Sacramento River: Colusa to Princeton, RM 144-164.

A. Project Description –Project Goals and Scope of Work

A.1. Problem:

Only 18% of the historical riparian zone remains between Red Bluff and Colusa (Golet et al. 2001). Forest clearing and agricultural management have fragmented the remaining forest and encouraged the invasion of non-native invasive species. Two-thirds of the linear extent of the river's banks have been modified and confined by levees, riprap, and flood control projects. Channelization and bank protection eliminate and degrade many aquatic and terrestrial habitats. Current populations of many native species, including splittail, green and white sturgeon, chinook salmon, steelhead trout, western yellow-billed cuckoo, bank swallows and valley elderberry longhorn beetle are critically low. These population declines have been attributed to loss of habitat within the Sacramento River system (ERP Vol. II Ecological Management Zone Visions, pp. 159, ERP PSP 2001, ERP IP 2001).

In 1986, the California State Legislature passed Senate Bill 1086, which called for the development of a management plan for the Sacramento River and its tributaries to protect, restore, and enhance both fisheries and riparian habitat. A Management Plan was completed in 1989, which primarily focused on fisheries issues, and a Riparian Habitat Sub-committee was formed to continue planning for riparian habitat (California Resources Agency 1989). This committee developed "The Sacramento River Conservation Area Handbook" (Handbook, The Resources Agency 1998), to guide restoration efforts, which included the recommendation that a non-profit entity be formed to coordinate voluntary restoration efforts within the 213,000 acre Sacramento River Conservation Area. A Memorandum of Agreement between local, state, and federal agencies formally adopted the Handbook and included the formation of a locally-based nonprofit organization, the Sacramento River Conservation Area, Inc. (SRCA NPO).

Among the goals of the SRCA NPO are preservation of the remaining riparian habitat within the SRCA; reestablishment of a continuous riparian ecosystem (or corridor) along the Sacramento River; and reestablishment of limited river meander with an "inner river zone" (IRZ)[1] where habitat protection would be a priority and the river's physical processes would be allowed to function (Resources Agency 1998).

The Handbook guides the activities of the SRCA NPO and serves as a general plan for ecosystem restoration along the river, but recognizes that additional planning and evaluation will be needed prior to implementing on-the-ground ecosystem and flood damage reduction projects. Site-specific management planning determines specific restoration activities and is central to the implementation of the limited meander corridor to preserve and restore the river's natural processes (Resources Agency 1998).

[1] An area of variable width near the main channel of the river roughly defined as where the channel has been over the past 100 years and where it is projected to meander over the next 50 years.

The CALFED Ecosystem Restoration Program (ERP)'s vision for the Sacramento River Ecological Management Zone calls for: 1) preserving and restoring erosional and depositional channel and floodplain forming processes, riparian and wetland habitats, and spawning gravel recruitment, and 2) reducing the extent and influence of stressors to improve the integrity of the riverine-riparian ecosystem that provide healthy conditions for sustainable fish and wildlife populations and the plant communities on which they depend. However, the protection and restoration of a stream meander corridor along the Sacramento River must be considered within a flood control and agricultural matrix where human uses of the river's floodplain are given equal consideration. Recognizing this need, CALFED has identified collaboration with the SRCA NPO in the development and implementation of habitat management and restoration actions as a restoration priority for the Sacramento Region (ERP 2002 PSP).

The Nature Conservancy (TNC) and the SRCA NPO propose to collaboratively conduct sub-reach planning for the Colusa - Princeton Sub-Reach of the Sacramento River (RM 144-164, ERP Ecozone 3.3, see Figure 1). Sub-reach planning is site-specific planning at a spatial scale of approximately 20 river miles. Colusa – Princeton Sub-Reach Planning represents a comprehensive approach to restoration planning that includes a high level of stakeholder involvement to develop conceptual restoration plans and analyzes potential benefits to, and impacts of, restoration implementation on surrounding landowners and land uses. Sub-reach planning develops the tools and information needed to make informed land use decisions regarding the effects (including hydraulic, ecological, economic, and social) of restoration actions that are uniquely designed to correspond to local conditions.

Goal: Increase citizen stakeholder involvement in determining realistic conservation strategies and projects for protecting and restoring a continuous riparian corridor along the Sacramento River between river miles 144 and 164 that enhances flood control, economic and environmental uses of the floodplain.

Objectives: Sub-reach planning identifies, plans and determines implementation alternatives for restoring specific river reaches that includes consideration of existing flood control infrastructure, third party impacts, and local landowner and government concerns. The five primary objectives of sub-reach planning are:

1) Ensure an open and inclusive floodplain management planning process consistent with the SRCA principles and guidelines with multiple opportunities for input by local stakeholders, local agencies, and private interest groups.
2) Collect up-to-date baseline data and analyze existing data to inform floodplain management planning and complement long-term monitoring programs for the entire project area.
3) Build tools and calibrate models to evaluate overall effects of restoration, land management alternatives, and flood control infrastructure within the Colusa - Princeton Sub-Reach of the Sacramento River. These models will be used to explore alternative scenarios and inform future land use decisions.

4) Develop design alternatives and build support among stakeholders and agencies for identified implementation projects within the project area that would demonstrate an equitable balance among the various uses of the river (i.e., restoration, agricultural protection, infrastructure, and flood control projects). A focal area plan, developed as a component of sub-reach planning, is used to evaluate alternatives, provide cost estimates, and serve as the basis for an implementation funding proposal.
5) Address stakeholder concerns and priority research questions regarding the potential effects of restoration actions.

Hypothesis: A strategic approach to conservation and restoration planning that is based on the best available science and ensures stakeholder involvement will improve local support for the protection and restoration of a stream meander corridor along the Sacramento River and will result in a balance between flood protection and ecosystem restoration projects.

A.2. Justification:

Emerging studies demonstrate unequivocally that people and political processes are central features to successful implementation of large-scale restoration and conservation actions (Shindler & Cheek 1999). The authors advance propositions for successfully integrating citizens into adaptive forestry management programs that focus primarily on the early and continuous involvement of the public in the implementation of planning and management. The authors demonstrate that such an inclusive process can result in innovative and publicly supported management objectives. However, they also caution that skilled leadership is a necessary requirement for achieving tangible results. Private interest groups along the Sacramento River have also advocated for comprehensive floodplain management and restoration planning, rather than a piecemeal approach to evaluate the potential for larger-scale impacts to flood control infrastructure.

The protection and restoration of an IRZ for the Sacramento River as outlined in the SRCA Handbook requires an integrated program of land acquisition, private landowner conservation, planning, restoration action, monitoring, and public input. The SRCA Handbook provides a broad conceptual plan for ecosystem restoration. However, additional planning detail is needed to optimize the ecological value of conservation land while simultaneously ensuring that important human needs of the lands are met. Various agencies and organizations working in collaboration with the SRCA NPO support the restoration of the Sacramento River. Developing and implementing habitat management and restoration actions in collaboration with the SRCA NPO is a CALFED restoration priority for the Sacramento Region (ERP 2002 PSP, SR-1).

TNC has developed the technical approach to sub-reach planning through two previous CALFED awards. Models and studies developed for the previous sub-reach planning proposals leverage the success of the Colusa-Princeton sub-reach-reach planning effort. In addition, this application proposes to integrate stakeholder involvement to a greater degree throughout the planning process, which is representative of a change in approach from the last two sub-reach planning efforts. TNC and SRCA NPO will establish an inclusive and interactive forum with stakeholders and citizens for determining

conservation priorities and potential collateral effects of ecosystem protection and restoration. This collaboration brings TNC's project management, technical skills and previously developed tools and information together with SRCA NPO's representation of local stakeholders and interest groups, community outreach, and balanced goals for flood protection and ecosystem restoration.

A.3. Approach:

This is a **full implementation project**. . TNC and SRCA NPO will collaborate on sub-reach planning for the Colusa sub-reach to open up the process to more local involvement and build SRCA NPO's capacity to assist in the creation of the river's meander corridor. . The relationship between the applicants is diagrammed in Figure 3.

The SRCA NPO General Manager will work directly with TNC staff in the development of scopes of work for projects included in sub-reach planning (the workgroup – Figure3). An Advisory Group of private interests, approved by the SRCA Board and chaired by a designated SRCA representative, will review projects for consistency with SRCA principles and guidelines. A consultant will be retained by TNC to assist the SRCA NPO General Manager to coordinate and support sub-committee meetings, communicate study results to the Board and public, facilitate public involvement, initiate education efforts, and prepare planning documents. Expert consultants and researchers will be engaged to fulfill specific information needs. In addition to developing scopes of work and providing project management TNC will serve as the contracting party for the grant and be responsible for all payments, reporting, and accounting to CALFED.

TNC has developed a strategic planning framework called Conservation by Design (TNC 2000), which the organization is applying nationally and internationally, that can be used to fully support the SRCA's principles, priorities, and goals and be integrated with the local development of sub-reach planning. The sub-reach planning process coordinates with agencies and other stakeholder restoration and public lands planning currently active on the Sacramento River, including the ACOE Comprehensive Study and the USFWS Comprehensive Conservation Planning (CCP), through focused meetings and the SRCA Technical Advisory Committee (TAC). The Army Corps of Engineer's Comprehensive Study is providing planning at a valley-wide scale. Sub-reach-reach planning compliments the ACOE effort by providing additional information for developing more detailed restoration alternatives.

TNC received two previous awards from CALFED to support pilot projects for the development of sub-reach planning. TNC has identified the tasks and task components listed in Table 1 as important for informing sub-reach planning. A schematic representation of the sub-reach planning process, or study design, is presented in Figure 4. Outreach and communication is integral throughout the planning process. Numerous steps and opportunities have been developed for coordination, input, and review with private interests and other agency efforts.

Table 1: Task summary for sub-reach planning components. The task components needed for Colusa sub-reach planning are in **bold typeface**. Previous awards, other projects, and existing data are used to provide the balance of the information for planning in *italic typeface*.

Task	Description	Premise	Component
1	Coordination and outreach	Education and building support within the local community and with SRCA will result in balanced and realistic restoration alternatives.	**1. Community education** **2. Advisory Workgroup** 3. **Sub-Reach Plan preparation**
2	Baseline assessments	Making informed land use decisions requires accurate and up to date knowledge of the study area resources and conditions.	**1. Gather and format existing data** **2. Aquatic habitats** **3. Wildlife** **4. Riparian vegetation & land use** *5. Anadromous fish* ***6.*** *Riparian habitat mapping* **7.** *Water quality*
3	Modeling	Models are effective tools for exploring the effects of alternative scenarios and for educating involved parties on how the modeled system works.	1. **Hydraulic model** **2. Vegetation model** 3. **Land use model** *4. Cottonwood recruitment model*
4	Focal Area Planning	Detailed plans and broad public and private involvement is needed to support flood damage reduction and river process restoration implementation projects.	**1. Technical feasibility/ alternatives** 2. **Integrated floodplain management and coordination.**
5	Landowner Questions	Addressing local concerns through research adds to the body of knowledge and objectively evaluates the issue.	1. **Large woody debris** ***2.*** *Wildlife compatible Agriculture* **3.** *Economic effects of restoration*
	Project Management	Effective contract oversight ensures timely and steady progress towards project objectives.	**1. Sub-contract oversight and management** 2. **Grant reporting (quarterly and annual)**

Task 1. Coordination, outreach and plan development. Task 1 will include TNC staff time, working with the SRCA NPO General Manager and vendor contracts to conduct **outreach** and **education** activities, attend meetings, update the SRCA NPO Board and TAC, and **facilitate** an SRCA NPO appointed Advisory Group to ensure that planning is consistent with SRCA Handbook priorities, principles and goals. Technical reports will be subject to peer review as deemed necessary by the SRCA TAC or Advisory Group. Outreach and education activities will be addressed to landowners within the project area. Advisory Group meetings will be quarterly for the duration of the project.

Task 2. Baseline assessment. Vendor contracts and TNC staff time will be used to compile and analyze baseline information to characterize the project area. **Existing data** will be used when available[2]. Available data will be compiled and maps standardized to a consistent datum. Adding physical site characteristics (soils and flooding) to the existing **vegetation** and **land use** mapping is needed to develop empirical relationships for modeling. Additional detailed **aquatic habitat** and **wildlife surveys** for recently

[2] USFWS and DFG collect fish survey data; RWQCB archives water quality data from many sources; Glenn and Colusa County publish landuse data; riparian habitat and NIS mapping was done recently by California State University, Chico; and geomorphic data for the river is available from DWR. UC Cooperative Extension Land Use data for Colusa County.

added conservation lands is needed to complement existing data. Data collection will follow established protocols as applicable. Field data collection is restricted to appropriate public lands or in conjunction with participating private interests. Signed letters granting access will be obtained prior to any fieldwork.

Task 3. Modeling. TNC staff time and vendor contracts will be used to evaluate overall effects of restoration and land management scenarios on the Colusa – Princeton Sub-reach. **Hydraulic modeling** software will be used to evaluate hydrologic effects of restoration alternatives. Ayres Associates, Sacramento, Ca., has assisted in the development of previous restoration modeling efforts and has a high degree of expertise (Jones & Stokes 2000, Ayres 2001a). This modeling will be linked with previous models developed for Chico Landing and Beehive Bend sub-reach planning to provide a consistent picture throughout the system. A predictive **vegetation model** based on physical site characteristics will be developed from the baseline data to inform hydraulic modeling scenarios. A **landuse model** quantifying management costs and crop production values for a range of soil and hydrology characteristics will be developed to inform long-term land management scenarios for conservation lands (Edaw 2001). Appropriate bathimetric data will be collected to aid in development of models to predict the impact of restoration on floodwater conveyance.

Task 4. Focal Area Planning. Staff time and vendor contracts will be used to collect additional data, evaluate alternatives, and build support for specific restoration projects within the Colusa to Princeton Sub-Reach. Initial baseline assessments and modeling (Tasks 2 and 3) identify specific locations where these restoration and flood damage reduction projects are feasible and desired. Potential projects include channel restoration projects that have full support of adjacent landowners and are consistent with the SRCA Handbook's principles and priorities. Focal Area Plans are the basis for future implementation proposals.

Task 5. Landowner Questions. There are a host of unanswered questions local citizens and stakeholders have regarding how the Sacramento River system works and what the effects of ecosystem restoration projects will have on local citizens. For example, there is a perception that restoration actions have increased amounts of large woody debris (LWD) in the channel. Therefore, a vendor contract will be used to initiate a study to determine the source and fate of large woody debris (LWD) in the Sacramento River system. TNC has initiated a study to examine the economic effects of establishing a riparian corridor along the Sacramento River, and a study of wildland effects on agriculture as part of the previous sub-reach planning proposals. The results of these two studies will also be used to inform Colusa – Princeton Sub-Reach Planning.

Project Management. TNC will be responsible for vendor sub-contracts and reporting requirements. Sub-contracts and task orders are prepared according to standard terms and conditions as described in the final project award contract between the funding agency and TNC. TNC will track budgets, prepare required reports, and demonstrate progress towards the project goals.

A.4. Feasibility:

The Colusa – Princeton sub-reach planning proposal has been developed in conjunction with the SRCA NPO General Manager, under the direction of the SRCA NPO Board of Directors. TNC will work with the SRCA General Manager and NPO Board to develop local support and involvement for this process. Local input will be continuous throughout the process, improving the feasibility and support for future restoration actions that are identified. The collaboration between TNC and SRCA NPO helps ensure that local input will be a strong component of the planning process. TNC and SRCA NPO staff will develop scopes of work and manage contracts with input from the Advisory Group. This proposal is for planning only and is unlikely to be affected by external factors such as high or low water years, progress of other projects or proposals, and/or changes in legislative or agency structures and budgets. Also, no 3rd party impacts are anticipated and no environmental documentation (NEPA or CEQA) is required.

TNC developed the sub-reach planning process to be consistent with the SRCA Handbook's principles and priorities (Resources Agency 1998). Two previous pilot-level sub-reach planning projects (97-N02 and 2000-F03) have demonstrated that the tools developed can evaluate alternatives and improve stakeholder support for projects to restore river processes and improve flood safety (Ayres 2001a, Ayres 2001b). The scope and budget for Colusa sub-reach planning reflects lessons learned from the initial pilot-level approaches to sub-reach planning. The list of study tasks, components and budget for Colusa sub-reach planning was developed from an analysis of these ongoing efforts.

TNC and SRCA NPO staff have the experience necessary to implement the components of sub-reach planning. The SRCA NPO General Manager and Board are local landowners, farmers, and politicians that are familiar with the local cultural priorities. TNC staff has expertise with the ecological systems and available technical tools.

A.5. Performance Measures:

Measuring the success of a project is important for 1) ensuring contractual compliance, 2) determining the effectiveness of the approach, and 3) providing an objective evaluation for improving the process. In addition, evaluating sub-reach planning adds value to other aspects of Sacramento River restoration projects by measuring stakeholder support, compiling biological baselines, calibrating models, and adding to understanding ecosystem dynamics. Table 2 outlines the performance measures that will be used to evaluate the success of this proposed project.

Table 2. Performance measures for sub-reach planning. Detailed task components are included in Table 1.

Task	Description	Performance measures	Metrics
1	Coordination and Outreach	Citizen participation	Advisory group meeting attendance (12 quarterly meetings)
		Evaluation of outreach materials	Pre & post project survey of landowners within the Colusa to Princeton sub-reach.
		Compatibility with SRCA principles and guidelines	SRCA advisory group support for final sub-reach plan
2	Baseline Assessments	Data reports and GIS coverages	Completion of 4 baseline study reports

Task	Description	Performance measures	Metrics
3	Modeling	Applicability of models	Model sensitivity and accuracy
4	Focal Area Planning	Additional data reports	Report completion (2-3)
		Participation and coordination with Federal, state and local flood management agencies	Agency support for ecosystem restoration and flood damage reduction projects
		Compatibility with SRCA and CALFED ecosystem restoration goals	Evaluation of restoration project's ecosystem benefits
5	Stakeholder Questions	Research publications and presentations	Completion of research and stakeholder evaluation of process
	Project Management	Quarterly and annual reporting	Quarterly reports (12) Annual progress reports (3)

A.6. Data Handling and Storage:

All final data, reports and plans will be made available in electronic (.pdf) format. Hard copies will be archived at TNC Sacramento River Project office and the SRCA NPO office in Red Bluff for at least three years following the completion of this project. Also, information will be posted on the SRCA website when possible. All GIS formatted data will be in the same projections and added to the SRCA GIS database.

A.7. Expected Products/Outcomes.

The proposed project will provide some immediate and tangible results that further ecosystem restoration, flood damage reduction, and socioeconomic enhancement goals for the Sacramento River. The products and outcomes listed below can be considered milestone accomplishments within the planning process. Task orders will be developed specifying quantifiable deliverables and due dates following initial scoping and prioritization meetings with the advisory group (1st and 2nd quarters).

1. Task 1 will establish a model forum for proposing and evaluating restoration alternatives and the configuration of the "IRZ" for the Sacramento River between rm 144-164 that assures private interest involvement by collaborating with the SRCA NPO. We envision this could serve as a framework for additional reaches of the river. Specifically, the following products are expected:
    - Landowner survey results. An analysis of the attitudes and concerns regarding management of the river's floodplain of landowners within the Colusa Sub-Reach before and after project implementation.
    - Local Involvement: Quarterly Colusa Sub-Reach Advisory Group meetings to evaluate progress and set priorities and work schedules.
    - Quarterly Newsletters updating landowners on sub-reach planning efforts.
    - A sub-reach plan summarizing study results and evaluating restoration, flood damage reduction, and socioeconomic enhancement alternatives, long term monitoring, management plans and recommended actions.
2. Task 2 will add more information to the SRCA GIS database, the key information tool for all stakeholders along the Sacramento River (in Arcview format). Specifically:
    - Existing data study report and associated GIS coverages.
    - Aquatic habitat study report and associated GIS coverages.

- Riparian habitat and landuse site characterizations study report and GIS coverages.
- Wildlife study report and associated GIS coverages.

3. Task 3 will provide models calibrated to evaluate current and future restoration and flood damage reduction actions within the Colusa Sub-Reach of the Sacramento River. These models include:
    - HEC-RAS hydraulic model and restoration and flood damage reduction alternatives evaluation report.
    - Riparian habitat - physical site characteristics model and report.
    - Land use model demonstrating relationship between alternative land uses and management costs as a function of frequency of flood inundation.
4. Task 4 develops concept level designs for integrated flood damage reduction/ecosystem restoration projects and builds private and public support. These are envisioned to initiate the scope and cost estimates for future restoration implementation projects that focus on the protection and restoration of river processes. Specific outcomes of focal area planning can include:
    - Study reports for detailed hydraulic and geomorphic analysis.
    - An evaluation of alternative restoration designs with cost, environmental, and flood damage reduction estimates; a focal area plan is anticipated to form the foundation of future implementation proposals.
    - Cooperation or support from flood control and water management agencies, local government, and private interests to implement the ecosystem –flood damage reduction project.
5. Task 5 will develop an understanding of the source and impact of large woody debris (LWD) on infrastructure and its role in the riparian ecosystem.
    - Submission of research results to the CALFED Science Conference, or other appropriate venue, for publication and presentation.

Project management ensures timely and steady progress towards achieving project goals. The following products are included in project management:

- Submission of task orders, quarterly reports (12), annual reports (3), and copies of study reports to the funding agency.
- Sub-contract oversight and coordination and review by funding agency in compliance with standard terms and conditions.
- Submission of written monthly progress reports to SRCA Board of Directors, one week prior to Board meeting.

A.8. Work Schedule.

Work can commence immediately upon contract signing. Table 3 outlines time estimates for completing Tasks 1-5.

Table 3. Anticipated timeline for completing Tasks for Colusa Sub-Reach Planning.

	Year 1				Year 2				Year 3			
	Qtr1	Qtr2	Qtr3	Qtr4	Qtr1	Qtr2	Qtr3	Qtr4	Qtr1	Qtr2	Qtr3	Qtr4
Task 1												
Task 2												
Task 3												
Task 4												
Task 5												

This proposal is for full implementation of integrated floodplain management planning with continuous stakeholder involvement. The tasks, scope, and budget for this proposal were developed based on an analysis of the previous awards to develop sub-reach planning. Each task is necessary for integrated floodplain planning and therefore inseparable. However, incremental funding is acceptable with a concomitant reduction to the scope and precision of the data collection, modeling, and planning efforts.

B. Applicability to CALFED ERP and Science Program goals and Implementation Plan and CVPIA Priorities.

B.1. ERP, Science and CVPIA Priorities.

A primary focus of The Nature Conservancy's Sacramento River Project is to "**develop and implement management and restoration actions in collaboration with local groups such as the Sacramento River Conservation Area Non-Profit Organization.**" (SR-1). TNC and the SRCA NPO aim to work collaboratively with stakeholders in the Colusa Sub-Reach to plan restoration activities in the IRZ of the Sacramento River that are *consistent with SRCA Principles and Priorities* (SRCA Handbook 1998) in Colusa and Glenn counties. This type of collaborative planning is an important initial step towards the protection and restoration of a *stream meander corridor* along the Sacramento River (2002 PSP SR-1, SR-4 and ERP Goals 1 and 4). In addition, this proposal *implements ERP priorities through a locally based watershed group* (SRCA NPO) consistent with CALFED's Framework for Action (2000). This proposal *builds capacity* of the SRCA non-profit with TNC providing technical assistance (CALFED California's Water Future: A Framework for Action 2000).

A foundation of the ERP is the restoration of ecological processes associated with streamflow, stream channels, watersheds, and floodplains. In addition, the public, academia and stakeholders are encouraged to participate in carrying out restoration actions (ERP Draft Stage I Implementation Plan). Throughout CALFED ERP, Science Program, and CVPIA strategic goals, an integrated, comprehensive and thoughtful approach to restoration are identified for priority. Sub-reach planning is a collaborative, inclusive approach to *floodplain management planning* that ensures participation by a wide variety of perspectives and will result in innovative and integrated river restoration projects.

Colusa – Princeton Sub-Reach Planning ensures that restoration actions are consistent with the principles and priorities of the SRCA Handbook. Sub-reach planning also initiates studies that will determine where river processes can be restored to provide the optimal ecosystem benefit without negatively impacting adjacent landowners. Identified implementation projects will *improve in-stream complexity* and improve *rearing habitat, natural floodplains and flood processes, and fish passage*—all important factors in anadromous fish reproduction success (PSP SR-2 and SR-4, ERP Goal 2). Focal area planning also provides a mechanism for *coordinating with the ACOE Comprehensive Study* and improving consistency with CALFED Bay-Delta Program goals (CALFED California's Water Future: A Framework for Action 2000, CALFED Bay-Delta Program 2000).

CALFED Science Program Goals

The goal of ecological restoration, as described in the Ecosystem Restoration Program Plan (ERPP), is to return this altered ecosystem to a more natural condition (ERP-IP). Colusa Sub-Reach Planning will help further the CALFED Science Program Goals in a number of ways. By collecting baseline data and analyzing *existing data* (PSP SR-7) we intend to adaptively develop our restoration principles and guidelines. Sub-reach planning also builds tools and calibrates models that inform current and future restoration actions in an adaptive management loop to make informed land use decisions that are specific to each river reach *and establish integrated science programs in complicated field settings.* By looking at a larger scale of river, sub-reach planning addresses issues that extend beyond restoration at individual sites and promotes a long-term, coordinated, landscape scale approach to restoration which advances process understanding, addresses societal issues related to restoration and address landscape scale issues (ERP-IP)

CVPIA Priorities

The proposed project addresses the following Central Valley Project Improvement Act goals and Anadromous Fish Restoration Program objectives:

- Protect, restore, and enhance fish, wildlife, and associated habitats in the Central Valley and Trinity River basins of California (Sec 3402-a, p 145 ERP-IP).
- Improve habitat for all life stages of anadromous fish by providing flows of suitable quality, quantity, and timing, and improved physical habitat.
- Involve partners in the implementation and evaluation of restoration actions (similar one sited below although not specific to AFRP) (This one is under Sec.3406 (b)(1), p 17 of the ERP-IP).
- Program shall include re-establishment of meander belts and limits on bank protection to avoid further losses of instream and riparian habitat (Sec 3406-b13, p 147 ERP-IP).
- The Secretary shall develop ecological and hydrologic models, with supporting data, for the facilities and systems in the Central Valley and Trinity watersheds (Sec 3406-g, p 150 ERP-IP).
- Fully involve the public and stakeholders in the implementation process (p159 ERP-IP).
- Develop partnerships with others in implementing actions to achieve CVPIA goals (p159 ERP-IP).

- Emphasis will be on...riparian and shaded riverine aquatic habitat restoration (p166 ERP-IP).

B.2. Relationship to Other Ecosystem Restoration Projects.
Sub-reach planning is a mechanism developed to ensure that lands purchased and managed by TNC are integrated into the larger landscape of flood control, social concerns, and agricultural issues. Coordination and collaboration is sought with the following other agencies and programs involved in restoration and resource management of the Sacramento River:

- US Army Corps of Engineers (ACOE): Comprehensive Study, Implementation Projects (IP) and Ecosystem Function Modeling (EFM).
- US Fish & Wildlife Service (FWS): Comprehensive Conservation Planning for the Sacramento River National Wildlife Refuge (SRNWR) and Endangered Species Division.
- California Department of Parks and Recreation (DPR)
- California Department of Fish & Game (DFG), Wildlife Conservation Board (WCB).
- California Department of Water Resources (DWR), Integrated Storage Investigation (ISI) and Off-Stream Storage Investigation (OSI).
- Sacramento River Partners non-profit organization

Both TNC and SRCA NPO have established an effective working relationship with these other efforts. Coordination will happen through focused meetings and SRCA NPO TAC meetings.

B.3. Requests for Next Phase Funding.
This proposal is not a request for next phase funding. However, this project will identify and develop concept level design for ecosystem restoration and flood damage reduction projects that will be consistent with CALFED and CVPIA goals and objectives. TNC and SRCA NPO anticipate that additional funding may be sought to implement these projects.

B.4. Previous Recipients of CALFED Program or CVPIA funding.
To date The Sacramento River Project of The Nature Conservancy (TNC) has been awarded 5 CALFED and 3 CVPIA grants to further the goals of protection and restoration within the Sacramento River Conservation Area. Two grants focused on restoration planning, and the remaining 6 grants have been used to plan and implement protection and restoration actions on approximately 2985 acres. SRCA NPO has been awarded 1 CALFED grant that supports the staff of the NPO. Project titles and numbers, specific accomplishments, and progress to date are summarized in Table 4.

B.5. System-Wide Ecosystem Benefits.
TNC's Sacramento River Project works with public agencies and private organizations to restore a riparian corridor and limited river meander within the Sacramento River Conservation Area. Four programmatic phases comprise TNC's Sacramento River

Project synergistic approach to ecosystem restoration in an adaptive management framework (see Figure 4):

1) cooperative integrative floodplain management planning;
2) habitat acquisition and baseline assessment;
3) horticultural and process restoration; and
4) ecosystem response monitoring and research.

This framework furthers the goals of the following programs: SRCA Non-Profit, Central Valley Project Improvement Act, Central Valley Habitat Joint Venture, Sacramento River National Wildlife Refuge, Department of Fish and Game's Sacramento River Wildlife Area, California Riparian Habitat Conservation Program, Riparian Habitat Joint Venture (Partners in Flight), and the Army Corps of Engineers Comprehensive Study.

Sub-reach planning, TNC's integrated floodplain management planning, identifies opportunities for restoring the Sacramento River ecosystem within existing flood control and land use infrastructure. TNC and SRCA NPO anticipate that integrated approaches to floodplain management will result in a balance between ecosystem restoration and ensure safe and reliable cultural uses of the floodplain. Particular emphasis is placed on determining opportunities for restoring the river's natural fluvial and hydrologic processes.

Through our work with partners and stakeholders, this approach offers substantial system-wide ecosystem benefits. By using both horticultural and natural-process restoration in an adaptive management framework, these collective efforts are successfully restoring the viability of native species and reducing the proliferation and adverse impacts of non-native invasive species. Specifically, the effort to establish a continuous riparian corridor along the Sacramento River is already improving the health of local wildlife populations by promoting the recolonization of areas where local extirpations have taken place. Several taxa, including the state threatened yellow-billed cuckoo and the federally threatened Valley elderberry longhorn beetle, have colonized and successfully bred on restoration sites.

The ecological benefits of our restoration activities extend far beyond the reaches of the project area. For many species the main stem of the Sacramento River is a migratory pathway. By making the habitat in this region more supportive of migratory species this project will bolster breeding and wintering populations in areas physically removed, but ecologically linked to the Sacramento River. Examples include the habitat benefits to neotropical migratory birds and anadromous fish. Additionally, improvements in water quality as a result of restoration efforts have positive impacts all the way down the Sacramento River into the Bay-Delta.

B.6. Additional Information for Proposals Containing Land Acquisition.
This proposal does not include land acquisition.

C. Qualifications.
The project will be conducted under the guidance and management of The Nature Conservancy's Sacramento River Project and the Sacramento River Conservation Area, Inc.

The Nature Conservancy. The Nature Conservancy is an international non-profit organization; our mission is to preserve the plants, animals, and natural communities that represent the diversity of life on Earth by protecting the lands and waters they need to survive. Founded in 1951, The Nature Conservancy and its one million members have safeguarded more than 11.6 million acres in the United States. The Nature Conservancy of California, headquartered in San Francisco, has 110,000 members and has protected nearly one million acres in the state.

The Nature Conservancy employs an integrated conservation framework called "Conservation By Design" to fulfill its long-term vision and achieve its goals. Conservation by Design directs the organization to systematically identify the array of places around the globe that embrace the full spectrum of the Earth's natural diversity; to develop the most effective strategies to achieve tangible, lasting results; and to work collaboratively to catalyze action at a scale great enough to ensure the survival of entire ecosystems (Conservation by Design 2001).

Our strength and reputation are built on the policy and practice of applying the best conservation science available and of building partnerships to achieve mutual conservation goals. We respect the needs of local communities by pursuing strategies that conserve biological diversity while at the same time enabling humans to live productively and sustainably on the landscape. We know that lasting conservation success requires the active involvement of individuals from diverse backgrounds and beliefs, and we value the participation of individuals in the conservation of their communities and environments.

The Nature Conservancy's Sacramento River Project. Headquartered in Chico, California for more than ten years, The Sacramento River Project has a proven track record, having helped protect more than 18,000 acres of riparian land within the Sacramento River Conservation Area, and having restored more than 2,800 of marginal agricultural land along the Sacramento River to riparian habitats. An active participant in the SB 1086 process and now the Sacramento River Conservation Area non-profit, The Nature Conservancy is collaborating with federal and state agencies, local government, landowners, and other stakeholders and nonprofit organizations to achieve the SRCA goal of restoring a continuous riparian corridor with limited river meander between Red Bluff and Colusa.

The Sacramento River Project is organized into teams focused on planning, science, restoration, acquisition, government relations and outreach, and administration. Legal, finance, and government contracting are overseen by TNC's regional office in San Francisco.

Overall project management is the responsibility of TNC's Sacramento River Project Director, Sam Lawson, with more than thirty years experience in community and economic development, transactional real estate, enterprise development, and organizational management. Dr. Greg Golet, Project Ecologist; manages the planning, science, and restoration teams. The project lead for this proposal is Mike Roberts, the Sacramento River Project's Sub-Reach Project Manager.

Mike Roberts has worked in the natural resource management field for thirteen years, including ten years of evaluation and restoration of aquatic and riverine ecosystems. Mike has implemented and managed restoration and planning projects on the Sacramento River for six years. Mike's educational background includes a B.S. Natural Resource Management from Rutger's University and a Master's degree in hydrology, geomorphology and riparian ecology from Utah State University, Logan UT. Mike has led the development of The Nature Conservancy's large-scale restoration planning and integrated floodplain management (sub-reach planning) on the Sacramento River in California.

Gregory H. Golet has degrees from Bates College (B.S. Biology 1987), and the University of California, Santa Cruz (M.S. Marine Sciences 1994, Ph.D. Biology 1999). His doctoral research focused on the behavioral and physiological adjustments that long-lived birds make during their breeding seasons, and the effects that these adjustments have on subsequent survival and future fecundity. Dr. Golet was a wildlife biologist for the U.S. Fish and Wildlife Service before joining The Nature Conservancy of California's Sacramento River Project as senior ecologist. He provides scientific input for the design of conservation strategies and studies ecosystem responses to management actions. He has eleven refereed publications, and has extensive experience coordinating and conducting research in California and Alaska.

The Sacramento River Conservation Area, Inc. The SRCA NPO was incorporated in 1998 following the recommendation of the Sacramento River Conservation Area Handbook to create a non-profit entity to coordinate management and restoration activities on the Sacramento River. The SRCA NPO coordinates management activities on the Sacramento River through a Memorandum of Agreement (MOA) signed by most agencies and organizations involved in management activities along the river. A board of directors which includes both private landowner and public interest representatives from each of the involved counties, including Board of Supervisors of all seven counties, as well as ex-officio members from six state and federal resources agencies govern the SRCA NPO. A technical advisory committee (TAC) composed of agency and academic scientists from relevant disciplines has been established to advise the board on issues related to river management and site-specific planning. The SRCA NPO helps the participants to work within the principles and guidelines in the Handbook and to represent landowner and public interests from each county and agency. Through the Sacramento River Conservation Area process, the questions of dealing with the biological, physical and cultural aspects of a dynamic ecosystem can be addressed.

Burt Bundy, the SRCA NPO General Manger, grew up in Los Molinos, a small town in Tehama County, where he was active in the 4-H and FFA programs. He spent four years in the US Air Force, then attended Shasta College where he received an AA Degree in Agricultural Business. He and his wife, Joyce, owned and operated a feed and farm supply business for several years and also ran their small family farm. Burt was elected to the Tehama County Board of Supervisors in 1981, where he was active in water and resource issues, and served until 1993. He participated in the initial SB1086 planning process and later represented landowners on the Advisory Council. He is one of the founding members of Mill Creek Conservancy, a watershed group concerned with local resource and water issues. Burt is a member of the California Farm Bureau Federation Board of Directors, representing Tehama, Shasta, Trinity, and Siskiyou Counties, and is a graduate of the California Agricultural Leadership Fellowship program. In 1998, Governor Wilson appointed Burt to the State Reclamation Board. Burt has served as Coordinator and Manager of the Sacramento River Conservation Area since October 1998.

Potential Conflicts of Interest or Problems with Availability: The Sacramento River Project and the SRCA NPO do not have any conflicts of interest or any potential problems with availability to do the proposed work within the proposed timeline.

D. Cost.

The total estimated cost for sub-reach and site-specific planning is $2,167,110. However, TNC and SRCA NPO request **$1,488,009** to complete sub-reach planning for the Colusa to Princeton Sub-Reach. The balance is provided through the use of data and tools developed from other sub-reach planning, research projects and existing data. See Budget and Budget Justification forms for cost details.

E. Local Involvement.

The SRCA NPO General Manager, Board Chair, and Colusa County representative have been involved in the preparation and scope of this proposal. This proposal was presented to the SRCA NPO Technical Advisory Committee and Board on August 16th and 23rd, 2001, respectively. An executive summary was given to the Board members for review and comment.

Colusa – Princeton sub-reach planning is structured to facilitate local involvement in determining and evaluating ecosystem restoration alternatives. Figure 2 illustrates how SRCA NPO staff and Board members will be directly involved in sub-reach planning. Retaining a primary consultant will add to SRCA NPO's capacity by providing coordination, outreach and communication support. In addition, a private interest Advisory Group will have multiple and on-going opportunities to provide input and review to the planning process (Figure 3). This Advisory Group will be approved by the SRCA NPO Board and is anticipated to remain involved throughout the term of this project.

F. Compliance with Standard Terms and Conditions

Regarding Attachment D, Section 4, Expenditure of Funds, TNC requests the following language currently being negotiated for the CALFED 2001 agreements with TNC:

"Contractor shall expend funds in the manner described in the approved Budget. As long as the total contract amount does not increase, the Contractor may adjust (1) the Budget between individual tasks by no more than 10% and (2) the Budget between individual line items within a task by no more than 10%. Any other variance in the budgeted amount among tasks, or between line items within a task, requires approval in writing by CALFED or NFWF. The total amount to be funded to Contractor under this Agreement may not be increased except by amendment of this Agreement. Any increase in the funding for any particular Budget item shall mean a decrease in the funding for one or more other Budget items unless there is a written amendment to this Agreement."

For Section 5, Subcontracts, TNC requests the following language currently being negotiated for the CALFED 2001 agreements with TNC: "Contractor is responsible for all subcontracted work. Subcontracts must include all applicable terms and conditions as presented herein. An approved sample subcontract is attached as [an exhibit]. Contractor must obtain NFWF's approval prior to entering into any subcontract that will be funded under this Agreement, which approval shall not be unreasonably withheld if (1) contracted work is consistent with the Scope of Services and the Budget; and (2) the subcontract is in writing and in the form attached to this Agreement as [an exhibit]. Contractor must subsequently provide NFWF with a copy of the signed subcontract. Contractor must (a) obtain at least 3 competitive bids for all subcontracted work, or (b) provide a written justification explaining how the services are being obtained at a competitive price and submit such justification to NFWF with copy of the signed subcontract.

Notwithstanding the foregoing, the CALFED Program has acknowledged that the Contractor generally does not use a subcontract for routine land appraisals, surveys, and hazardous materials reports. For these one-time services, Contractor uses a group of vendors on a regular basis and pays no more than fair market value for such services by one-time invoice rather than written contract. Contractor will not be required to obtain competitive bidding for such services or to provide any further justification to NFWF."

For Section 9, Rights in Data, TNC requests the following language currently being negotiated for the CALFED 2001 agreements with TNC:

"All data and information obtained and/or received under this Agreement shall be publicly disclosed only in accordance with California law. All appraisals, purchase and sale agreements and other information regarding pending transactions shall be treated as confidential and proprietary until the transaction is closed. Contractor shall not sell or grant rights to a third party who intends to sell such data or information as a profit-making venture.

Contractor shall have the right to disclose, disseminate and use, in whole or in part, any final form of data and information received, collected, and/or developed under this

Agreement, subject to inclusion of appropriate acknowledgment of credit to the State, NFWF, to the CALFED Program, and to all cost-sharing partners for their financial support. Contractor must obtain prior approval from CALFED to use draft data. Permission to use draft data will not be unreasonably withheld. CALFED will not disseminate draft data, but may make draft data available to the public upon request with an explanation that the data has not been finalized."

For Section 13, Termination Clause, TNC requests the following language currently being negotiated for the CALFED 2001 agreements with TNC:
"Default and Remedies.

1. In the event of Contractor's breach of any of Contractor's obligations under this Agreement, NFWF shall deliver to Contractor written notice, which shall describe the nature of such breach (the "Default Notice"). If Contractor has not cured the breach described in a Default Notice prior to the expiration of the twenty (20) day period immediately following Contractor's receipt of such Default Notice, or, in the event the breach is not curable within such twenty (20) day period, Contractor fails to commence and diligently proceed with such cure within such twenty (20) day period, then Contractor shall be deemed to be in default under this Agreement, and NFWF shall have the right, after receiving approval from CALFED, to terminate this Agreement by delivering to Contractor a written notice of termination, which shall be effective immediately upon receipt by Contractor (the "Termination Date"). Upon and following the Termination Date, NFWF shall be relieved of the obligation under this Agreement to make any payments to Contractor for any work that has been performed prior to the Termination Date; however, NFWF shall continue to be obligated to make any payments to Contractor for work properly performed and invoiced in accordance with the terms and conditions of this Agreement prior to the Termination Date. In no event shall Contractor be required to refund to NFWF, CALFED, the Agency or DWR any of the funds that have been forwarded to Contractor under this Agreement, except as provided in Section 10.I.2 below.

2. In the event of any termination of this Agreement by NFWF pursuant to Section 10.I.1 above prior to close of escrow of Contractor's acquisition of any real property interest funded by this Agreement, NFWF's sole remedy shall be to obtain the return of those funds that have been forwarded to Contractor under this Agreement to fund Contractor's acquisition of the Property. "

G. Literature Cited.

Ayres Associates. 2001a. Hydraulic Analysis of Riparian Habitat Conservation on the Sacramento River From Princeton to Beehive Bend. Unpublished report prepared for The Nature Conservancy. Chico, Ca. 16 pp.

Ayres Associates. 2001b. Geotechnical Investigation of the "J" Levee; Sacramento River at Hamilton City. Unpublished report prepared for The Nature Conservancy, Chico, Ca. 20 pp.

California Resources Agency. 1998. Sacramento River Conservation Area Handbook. Sacramento, CA. Revised January 2001. [online]
URL: http://www.sacramentoriver.ca.gov/publications/handbook/handbook.html

California Resources Agency. 1989. Upper Sacramento River fisheries and Riparian Habitat Management Plan. [online]
URL: http://elib.cs.berkeley.edu/cgi-bin/doc_home?elib_id=1165

CALFED Ecosystem Restoration Program (ERP). 2001. Stage 1 Implementation Plan.

CALFED Ecosystem Restoration Program (ERP). 2001b. 2002 Proposal Solicitation Package.

CALFED Ecosystem Restoration Program Plan (ERPP). Vol. II, July 2000. Final Programmatic EIS/EIR Technical Appendix.

CALFED Bay – Delta Program. 2000. Programmatic Record of Decision. [online] URL: http://calfed.ca.gov/current/ROD.html

EDAW, Inc. 2001. Jewett Creek Integrated Farm Plan. DRAFT August 2001. Unpublished report prepared for The Nature Conservancy Chico, Ca. 49 pp.

Golet GH, MD Roberts, DR Peterson, DE Jukkola, EE Crone, GR Geupel, SL Small, SE Greco, KD Holl, EW Larsen, FK Ligon, BK Orr, JC Vick, ME Power, WE Rainey, JG Silveira, & DS Wilson. *In review*. Using science to evaluate restoration efforts and ecosystem health on the Sacramento River Project, California. *In* P.M. Faber (ed). Proceedings of the Riparian Habitat and Floodplains Conference. March 12-15, 2001. Sacramento, CA.

Jones & Stokes Associates. 2000. The Sul Norte Project: Hydraulic Analysis and Restoration Design. Unpublished report prepared for The Nature Conservancy. Chico, Ca. 13 pp.

Shindler, B., and K.Aldred Cheek. 1999. Integrating Citizens in Adaptive Management: A Prepositional Analysis. Conservation Ecology 3(1):9. [online]
URL: http://www.consecol.org/vol3/iss1/art9

The Nature Conservancy. 2000. Conservation by Design: A Framework for Mission Success. [online] URL: http://nature.org/cbd/index.html

Table 4. Section B.4. Previous Recipients of CALFED Program or CVPIA funding.
(continued next 2 pages)

Project Title	CALFED Program/ CVPIA Project	Term	Progress and Accomplishments	Status
Ecosystem and Natural Process Restoration on the Sacramento River: Floodplain Acquisition and Management	CALFED 97-NO2 ERP	1/1/98-9/30/02	Four properties along the Sacramento River totaling approximately 1,628 acres have been purchased (Kaiser, Dead Man's Reach, Gunnhill, RX Ranch). Task orders are in progress to fund portions of the purchase of two additional properties: 238-acre Ward property purchased in April 2001, and 77-acre Clendenning property under option and anticipated to close in September. Start up stewardship activities are underway, including preliminary hydrologic and geomorphic modeling that will help identify short and long-term conservation and management actions for these properties.	The Clendenning property will complete the acquisition terms of this grant. Restoration of 3 of the purchased properties is the subject of a 2002 CALFED proposal. A request was recently approved by CALFED for an extension of the term date and the shifting of funds under the agreement from Task 1 (direct acquisition costs) to Task 3 (Startup Stewardship) in order to complete the management and monitoring plans called for under Task 3.
Ecosystem and Natural Process Restoration on the Sacramento River: Active Restoration of Riparian Forest	CALFED 97-NO3 ERP	12/1/98-6/30/02	Site preparation and planting of two sites (River Vista and Flynn) to riparian habitat totaling 264 acres is complete.	Restoration terms of this grant are completed; monitoring is currently in progress. Maintenance will be complete fall of 2001.
Ecosystem and Natural Process Restoration on the Sacramento River: A Meander Belt Implementation Project	CALFED 97-NO4 ERP	2/25/98-12/1/01	The 94+ acre Flynn property and adjacent levee were purchased in December 1998. The levee was subsequently removed; as a result this site now supports one of the largest bank swallow colonies recorded on the Sacramento River. Restoration was implemented under CALFED 97-NO3 and 97-NO4.	Acquisition and restoration terms of this grant are complete; monitoring is currently in progress. Maintenance will be complete in the fall of 2001.
Floodplain Acquisition, Management and Monitoring on the Sacramento River	CALFED 98-F18, FWS Agreement #11420-9-J074 ERP	7/20/99-6/30/02	Funding was awarded for the acquisition portion of this grant. The 104+ acre Jensen property located in Colusa County was purchased in July 2000. This property is located within the setback levees of the Sacramento River Flood Control Project. Two additional properties, totaling 183+ acres will be wholly or partially funded under this agreement upon official approval of the agency, including: the 129 acre Boeger property scheduled to close by December, and 54 acre Hayes property purchased in May 2001.	The Boeger and Hays properties will complete this acquisition grant. Additional CVPIA funding has been obligated to complete the purchase of the Boeger property.

Project Title	CALFED Program/ CVPIA Project	Term	Progress and Accomplishments	Status
Floodplain Acquisition and Sub-Reach/Site Specific Management Planning: Sacramento River (Red Bluff to Colusa)	CALFED 2000-F03, FWS Agreement #11420-1-J001 ERP	6/1/01-5/31/03	Funding was awarded to implement the Sub-reach/Site Specific Planning portion of this proposal. Four tasks are currently in progress to develop comprehensive conservation and management strategies for multiple benefits and uses of the river floodplain. Under Task 1 data collection is in progress, and the Beehive Bend Hydraulic analysis has been completed for RM 167-172. Under Task 2, a Socioeconomic Assessment for the riparian corridor of the SRCA between Red Bluff and Colusa is in progress with involvement from SRCA, stakeholders and local governments. Under Task 3 a newsletter went out to all stakeholders; stakeholder meetings have been conducted; updates are regularly provided to the SRCA.	During the first year of this 3-year grant, all tasks were initiated and are making good progress. A report to be developed under Task 4 will outline future conservation and management actions for the Beehive Bend sub-reach based on information developed within Tasks 1 – 3.
Acquisition of Southam Orchard Properties for Preservation of Riparian Habitat	CVPIA grant, BuRec Agreement #00FG200173 b(1)"other"	9/12/00-9/30/02	A portion of the grant was applied to the purchase of the 76+-acre Southam property, purchased in July 2000. The remainder of the funding was applied to the purchase of the 238-acre Ward property purchased in April 2001.	The grant is complete. Additional funding was used to purchase each of these properties. CVPIA (AFRP) and private funding was used to complete the purchase of the Southam property. CALFED 97-NO2 and private funding was used to complete the Ward purchase.
Hartley Island Acquisition	CVPIA grant, FWS Agreement #1448-11332-7-G017 AFRP	8/14/97-9/30/01	Funding was used toward the purchase of two parcels on Hartley Island, including the 321-acre Sandgren parcel. The remaining funds available were applied to the purchase of the 76+-acre Southam parcel.	The grant is complete.
Singh Walnut Orchard	CVPIA grant, FWS Agreement #11332-0-G014 AFRP	9/18/00-12/31/01	Completed tasks for this pre-acquisition and planning grant includes: pre-acquisition due diligence and signed option for Singh property, baseline assessment, and local stakeholder meeting conducted to discuss restoration plans.	A report will be submitted fall 2001 that outlines baseline and ecological considerations with restoration alternatives. This will complete the terms of this grant. Acquisition and restoration of this property is the subject of a 2002 CALFED proposal.
Sacramento River Conservation Area Program	ERP Agreement 01-N28	10/01-10/03	Supports the SRCA NPO General Manager and Administrative Assistant of the SRCA non-profit to facilitate coordination among the MOA participants.	On-going.

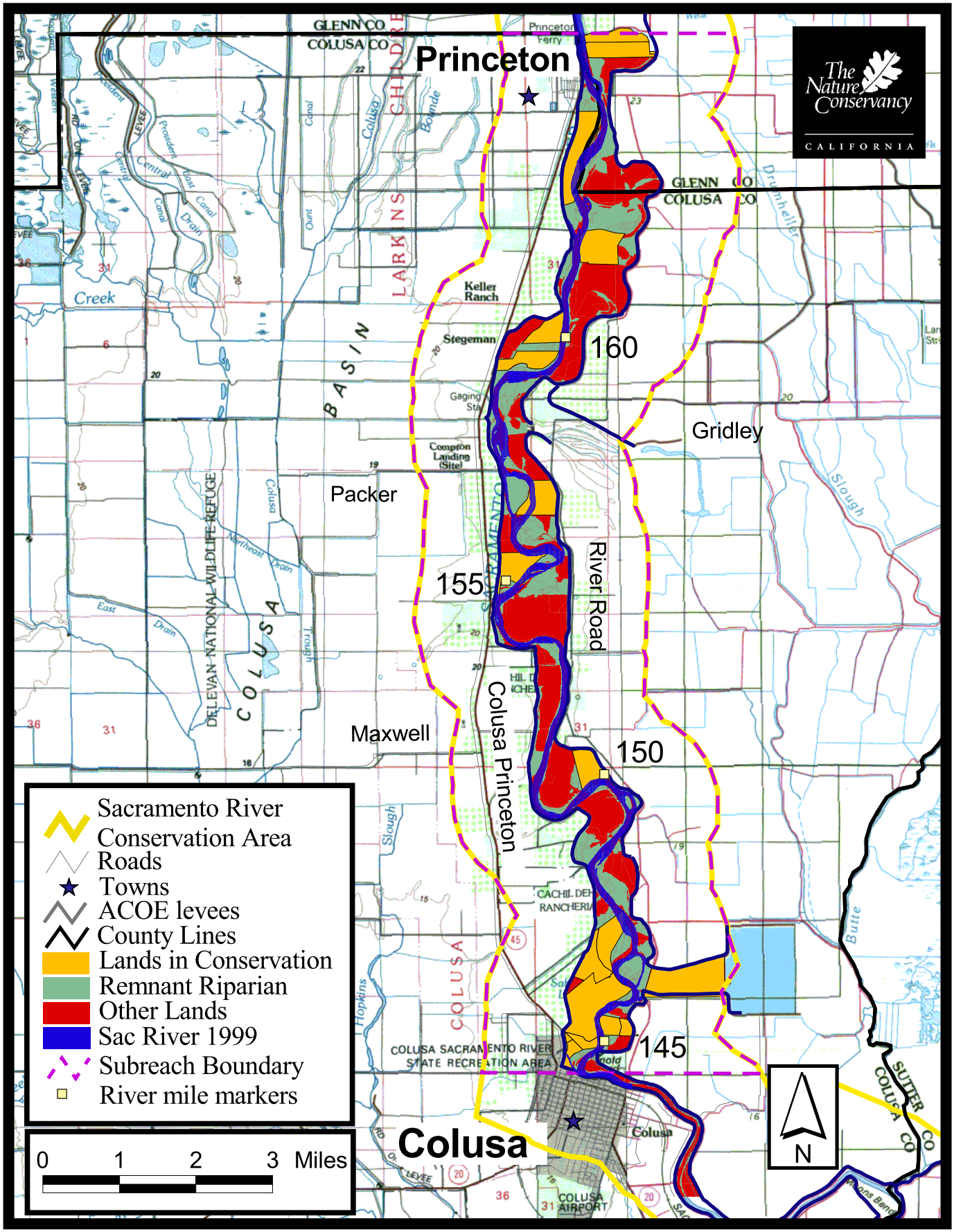

Figure 1. Colusa Subreach Planning Boundary

Prepared by: The Nature Conservancy Sacramento River Project
Sources: USGS, DWR, TNC, FWS, CSUC-GIC, and DFG.

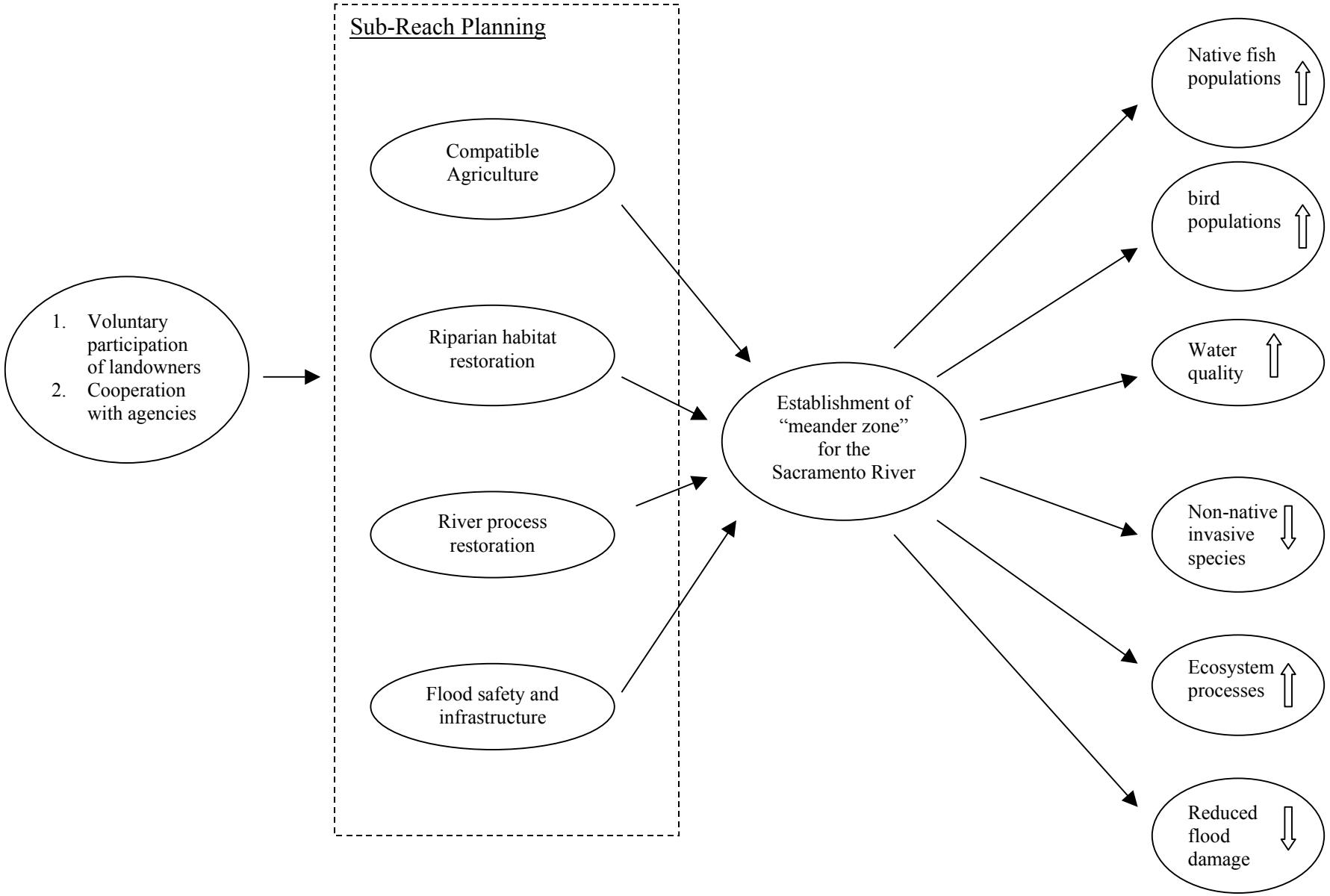

Figure 2. Conceptual Model for Sacramento River Sub-Reach Planning.

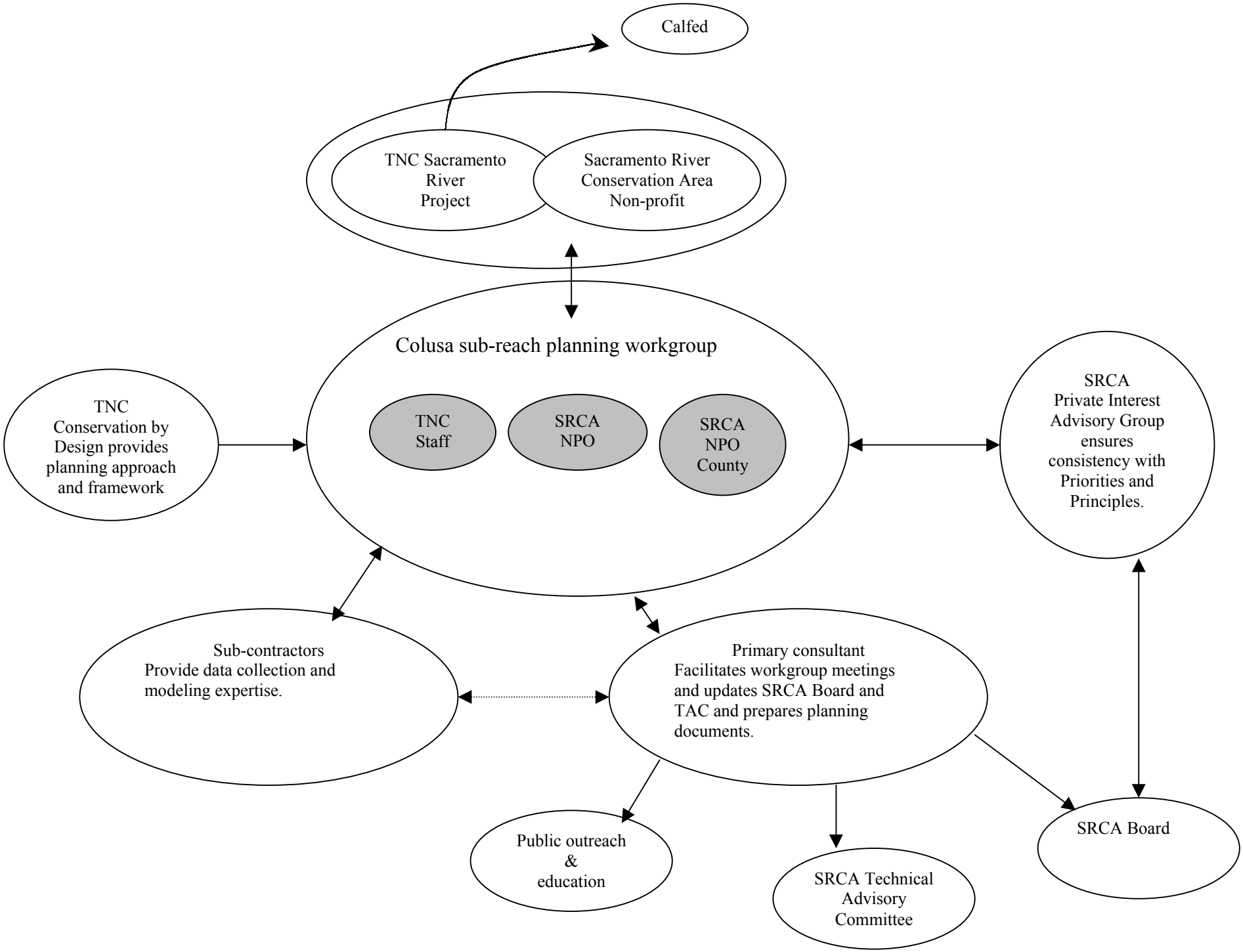

Figure 3. Conceptual Model 2. TNC and SRCA Cooperative Partnership Relationships

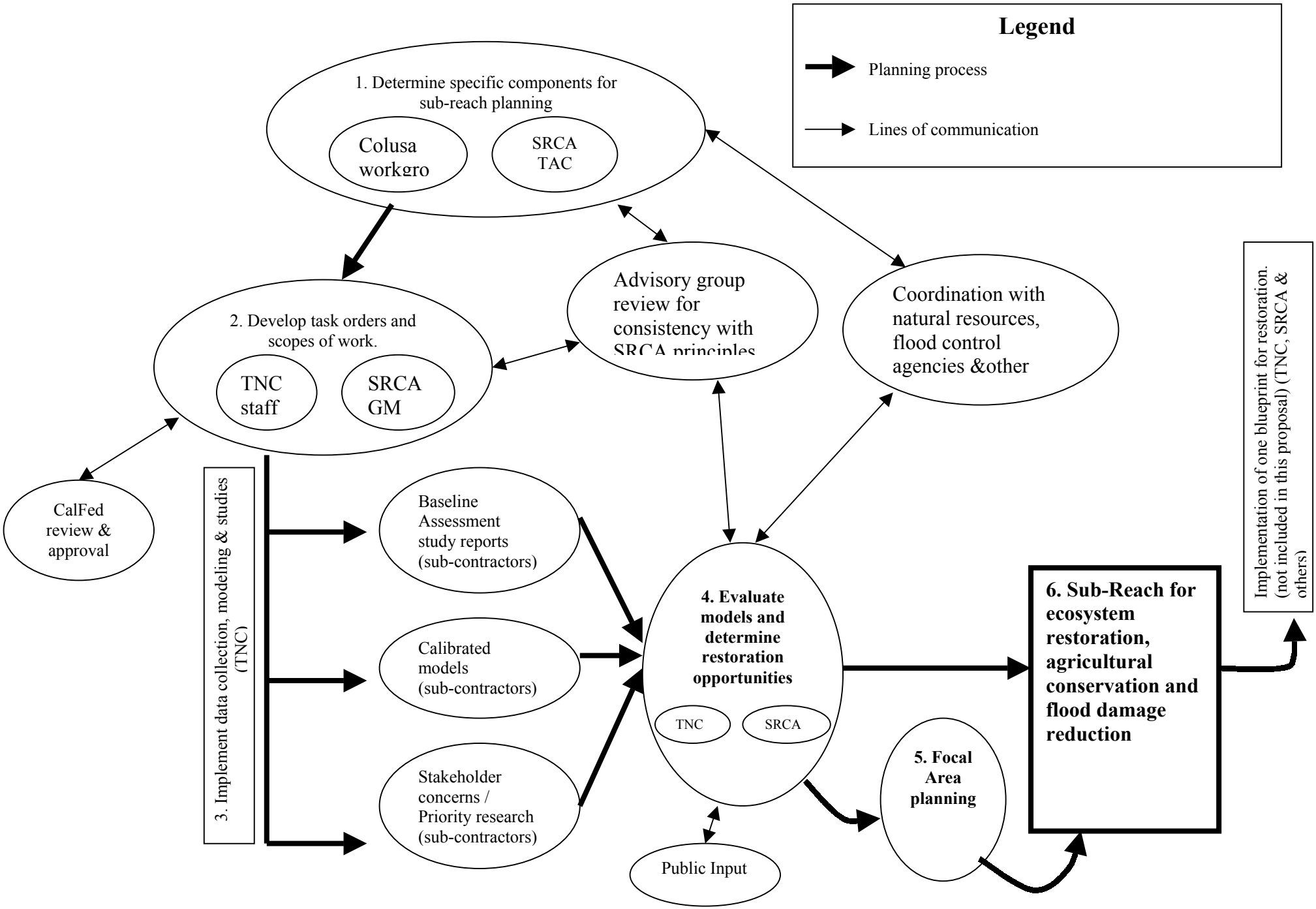

Figure 4. Study Design for Sub-reach Planning

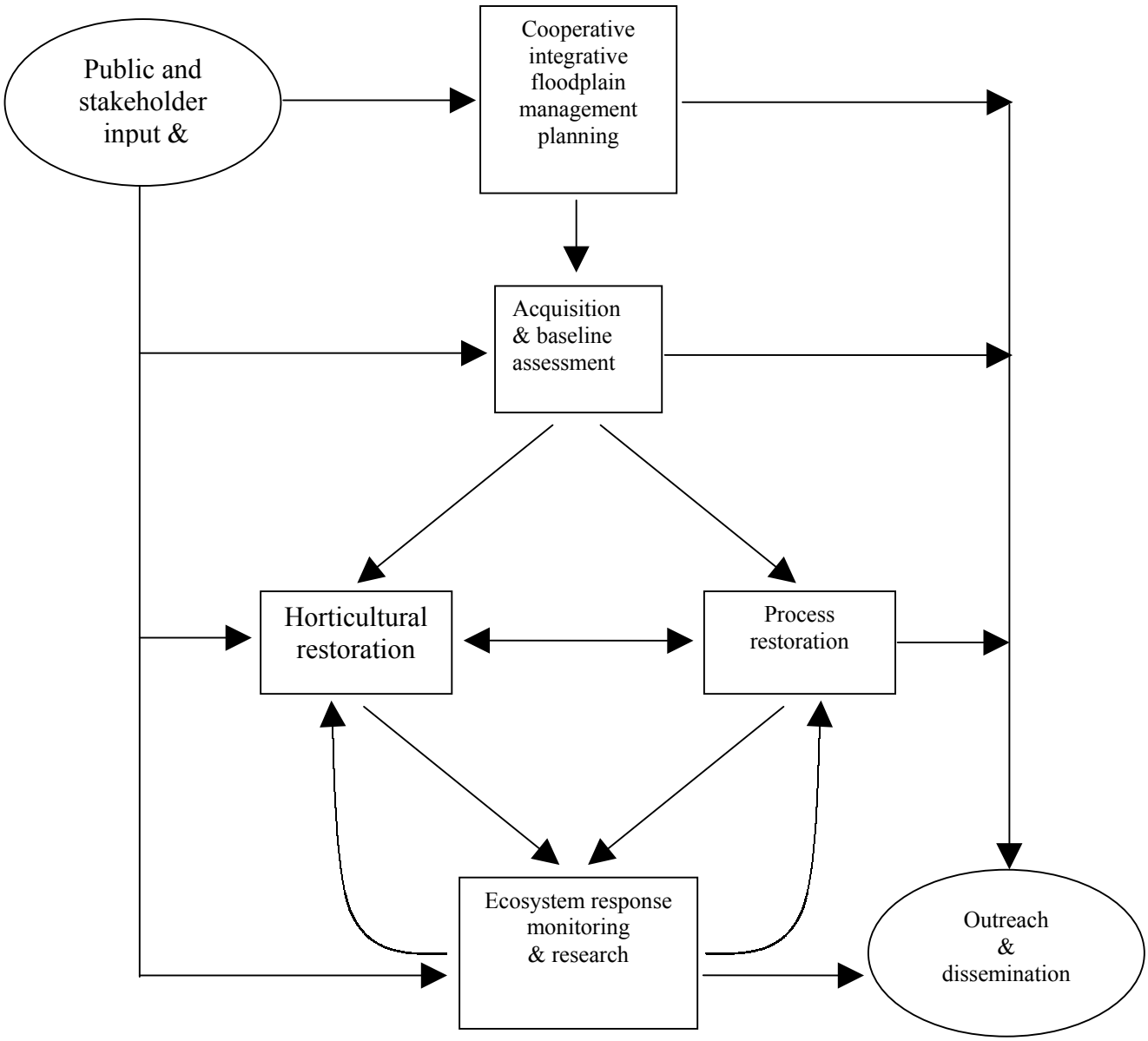

Figure 5. Conceptual Model of TNC Sacramento River Project's programmatic structure